



# City of Stockton

## Legislation Text

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**File #:** 18-4949, **Version:** 1

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### **ENVISION STOCKTON 2040 GENERAL PLAN UPDATE, UTILITY MASTER PLAN SUPPLEMENTS, FINAL ENVIRONMENTAL IMPACT REPORT, AND ADOPTION OF STATEMENT OF OVERRIDING CONSIDERATIONS**

#### RECOMMENDATION

Staff and the Planning Commission recommend that the City Council approve two resolutions to:

1. Certify the Envision Stockton 2040 General Plan Update Final Environmental Impact Report (FEIR) adopting the findings of fact, adopting a mitigation monitoring program, rejecting land use alternatives, and adopting a Statement of Overriding Considerations; and
2. Approve the Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements (UMPS).

It is further recommended that the City Manager be authorized to take appropriate and necessary actions to carry out the purpose and intent of the resolutions.

#### Summary

Adoption of the recommended resolutions will approve the Envision Stockton 2040 General Plan Update. In 2016, the City initiated Envision Stockton 2040 General Plan Update with a commitment to updating the General Plan in a sustainable manner. As a result of robust public engagement, staff received extensive input and guidance from the community. Community input was received from residents, stakeholders, the Planning Commission, and the City Council. In April 2017, the City Council provided guidance to adopt infill standards using a city core intensification alternative. This infill alternative (also referred to as Alternative "C") has the smallest urban footprint of the three alternatives considered. In July 2017, the City Council indicated the desire to continue with the Infill Focus Alternative, with some modifications. The modifications by the Council included allowing flexibility for a project in a reduced urban area north of Eight Mile Road along Interstate 5, subject to specified criteria. Future development in the area north of Eight Mile Road is limited to an economic catalyst project as specified. The area designated for urban land use north of Eight Mile Road is reduced by nearly 3,000 acres east of Davis Road in the recommended General Plan Update. The recommended General Plan represents the first time in Stockton's history that the proposed urban footprint is smaller than the existing General Plan. In total, the urban footprint is reduced by approximately 8,000 acres, all of which is proposed to be returned to Open Space/Agriculture designation.

On June 26, 2018, drafts of the General Plan Update, Environmental Impact Report (EIR), and related utility master plan documents were released for public review and comment. The 45-day

comment period for the EIR ended on August 10, 2018. EIR comments and responses are contained in the Final EIR which can be found at: [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton). On October 25, 2018, the Planning Commission received a summary of community engagement efforts and a presentation on the proposed draft Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements, and the Final Environmental Impact Report, inclusive of proposed changes based on comments/input from the community, stakeholders, the Commission, and the City Council. At the October 25, 2018 meeting, the Planning Commission voted 4-1 (Jobrack dissenting, Mallett and Rizvi absent) to continue the public hearing to the regularly scheduled November 15, 2018 meeting.

On November 15, 2018, after consideration of the draft General Plan, public input, and all proposed changes recommended by staff, the Planning Commission recommended approval of the General Plan Update. The recommendation included changing the Village designation within the Sphere of Influence located north of Eight Mile Road to the more restrictive Economic and Education Enterprise designation (EEE). The EEE designation contains criteria that must be met for development applications to be accepted. The recommendation also included policy changes resulting from input received from the Healthy Neighborhoods Collaborative, Campaign for Common Ground and the Sierra Club (Attachment A). The Planning Commission adopted a Resolution (Attachment B) by a vote of 6-1, Davie dissenting, to recommend that the City Council approve:

1. Certification of the Draft and Final Environmental Impact Report (FEIR);
2. Envision Stockton 2040 General Plan Update; and, Utility Master Plan Supplements (UMPS).

The Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements (UMPS), July/August 2018 workshop summaries, and the Final Environmental Impact Report (FEIR), and all related findings, statement of overriding considerations (SOC), and mitigation monitoring and reporting program (MMRP) can be viewed at: [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton).

The staff reports for the October 25, 2018 and November 15, 2018 Planning Commission meetings are attached at Attachments C and D. Staff and the Planning Commission recommend that the City Council approve the two resolutions as proposed.

## DISCUSSION

### Background

State law requires each city and county to adopt and periodically update a General Plan that provides a comprehensive long-range plan for its physical development. The General Plan is important because it contains goals, policies and implementation measures to guide development within the city limit and beyond in a Sphere of Influence where City services may someday be provided. The City's current 2035 General Plan was adopted in 2007. Since its adoption, significant economic and demographic changes occurred, prompting the City to update its growth and development assumptions.

In 2016, the City initiated the Envision Stockton 2040 General Plan Update with a commitment to updating the General Plan in a sustainable manner. This General Plan Update provides guidance for reevaluation of the City's public infrastructure such as the City's roadways and water and sewer distribution systems and whether the cost (capital and maintenance) of that infrastructure is

sustainable. This update provides an opportunity to revisit and reset the goals, policies, and implementation measures for development in the City limits and for future growth areas where City services may eventually be provided within a Sphere of Influence. Policy guidance is provided to reevaluate the level of service goals regarding public infrastructure such as water, sewer and transportation improvements. The level of service goals associated with these types of improvements and its relationship to land use growth projections determines the cost of development impact fees associated with the cost of building a home or undertaking a development project.

## **Public Outreach and Feedback**

This update has been developed with extensive input and guidance from the community, including citizens, stakeholders, Planning Commission, and City Council. Thus far, there have been more than 30 opportunities (including workshops, open houses, and community events) for public input including a recent series of five public workshops held in locations throughout the City in July and August 2018. Approximately 500 people attended these workshops and meetings. One of the key issues brought up by the community was the need for employment. The general plan update reflects this key objective in its policies.

In April 2017, Council provided guidance to adopt infill standards using a city core intensification alternative. This infill alternative (referred to as Alternative “C”) has the smallest urban footprint of the three alternatives considered and contains the following attributes:

- Preservation of agricultural lands at City periphery
- Infill focused with a Downtown emphasis
  - Higher intensity mixed-use Downtown
  - High density in and near Downtown
- Professional offices on South Airport Way
- Increased opportunities for a grocery store(s) along South Airport Way
- Opportunities for medical offices near Weston Ranch
- Flexibility for employment/economic generator north of Eight Mile Road

On July 25, 2017, the City Council considered and provided guidance to staff on the development of the General Plan goals and policies. The goals, policies, and actions in a General Plan guide service levels that directly influence the costs related to development projects and operation of city government. The following are highlights of some of the recommended policy changes included in the draft General Plan policy document:

- An increase of allowable densities and intensity of development in both downtown and the greater downtown areas; the addition of new infill policies particularly as it relates to downtown, the city’s core and south Stockton.
- Weaving of environmental justice policies throughout the General Plan affecting land use, transportation, and community health policies.
- Incorporating public health policies throughout the General Plan as it relates to land use, transit, and safety policies.
- Limiting development north of Eight Mile Road to projects that provide economic development and improved employment opportunities.

On June 26, 2018, the following draft documents were released for public review and comment:

- Draft Envision Stockton 2040 General Plan policy and land use map documents,
- Draft EIR, and
- Draft Utility Master Plan Supplements (water, wastewater, and stormwater).

On July 16, 2018, the City Council held a Study Session and staff presented an overview of the draft Envision Stockton 2040 General Plan, Draft EIR, and draft Utility Master Plan Supplements. The presentation covered housing and potential policy and program options for increasing affordable housing within the City of Stockton. Key housing policy/program options discussed included:

- Housing Trust funds
- Inclusionary housing
- Rent stabilization
- Rent Control Ordinances
- Just cause for eviction

## **Economic and Education Enterprise Designation**

Many comments received on the Draft General Plan centered on the Economic and Education Enterprise designation. The following is a summary of the history of the development of this designation, as well as a staff-recommended change in response to public comments.

- On April 4, 2017, the City Council directed staff to proceed with Alternative C, the Infill Focus Alternative, with some modifications, to serve as the land use map in the Draft General Plan. This option reduced the urban footprint by approximately 8,000 acres. Council modifications also limited development in the reduced urban area north of Eight Mile Road along Interstate 5 to an economic development catalyst project.
- On June 8, 2017, the Planning Commission considered four map and policy options presented by staff to implement the Council's direction for the area north of Eight Mile Road. The Planning Commission discussed the options and continued the discussion to its June 22, 2017 meeting. At the June 22, 2017 meeting, the Planning Commission provided comments but did not come to a consensus on a preferred option.
- On July 25, 2017, in a Council study session on the Envision Stockton 2040 General Plan, the Council considered the same four map and policy options and provided guidance to staff to proceed with the Map A + Policy 2 option. This option would maintain the existing Sphere of Influence (SOI) and provide an urban land use designation for the economic development catalyst area and establish policy language requiring above-median wage jobs, VMT reductions, environmental impact mitigation, and housing linked to jobs with housing costs correlated to job wage levels. Following City Council's guidance on July 25, 2017, staff proceeded with the preparation of the Draft General Plan which includes a new Economic and Education Enterprise designation applied to the area north of Eight Mile Road within the existing SOI and specified development attributes and criteria. The Draft General Plan reduces by 2,972 acres, land designated for urban uses north of Eight Mile Road (east of

Davis Road). Overall, the Draft General Plan reduces land designated for urban uses by almost 8,000 acres (more than 12 square miles).

### Community Input and Recommended Changes to Economic and Education Enterprise Designation

During the public review of the Draft EIR and Draft General Plan that commenced on June 26, 2018, the City received a series of comments on the Economic and Education Enterprise designation. In response to the series of comments on the Economic and Education Enterprise designation, staff recommends changing the text of the Economic and Education Enterprise designation to clarify the process that will be required to proceed with development projects within this designation. Below is the original text from the Draft General Plan with proposed changes shown (underline denotes additions; ~~strikethrough~~ denotes deletions):

Development in this designation is intended to support the City's economic development goals by attracting new businesses, industries, and/or educational institutions that provide high-quality jobs to the local workforce. By bringing major job-generators to Stockton, this designation supports the City's Economic Development Strategic Plan and State Executive Orders regarding greenhouse gas (GHG) reduction, Senate Bill (SB) 32, and the San Joaquin Sustainable Communities Strategy.

Businesses envisioned for this designation include:

- Those within a Core Business Cluster industry, as specified in the City's Economic Development Strategic Plan;
- That provides a significant number of jobs offering wages averaging above Area Median Income, and that cannot be reasonably accommodated elsewhere within the city limit.

In support of a major job-generator, this designation promotes:

- Linked transportation and housing options so that future employees can live close to their jobs and commute using transportation modes that support the City's vehicle miles traveled (VMT) reduction goals;
- Businesses that reduce VMT by providing vanpool programs, car share services, and active transportation alternatives are encouraged; and
- Proximate housing stock that supports the job-generator, including single-family, multi-family, and/or mixed-use dwellings at various levels of affordability, with housing costs that generally correspond to the income levels of the jobs generated by the project.

Projects proposed in the Economic and Education Enterprise designation will be required to:

- Adhere to the City's existing development review process including consideration by the Planning Commission and City Council of a General Plan Amendment; (It should be noted that a general plan amendment process will require subsequent discretionary decisions before the planning commission and the city council and will also include a corresponding environmental analysis).
- The City will negotiate with applicants to develop community benefit through

development agreements that identify desired community amenities in the area of development; and

- The City, as Lead Agency, and will ensure that development mitigates its environmental impacts as feasible, pursuant to the California Environmental Quality Act (CEQA).

The maximum anticipated floor area ratio (FAR) for non-residential building is 0.6, and the maximum anticipated residential density is 24 dwelling units per gross acre; however, the designation allows variation from these standards with City approval to achieve the economic development goals and complete communities described above. Development proponents are encouraged to propose creative and innovative master plans to further the City's economic development goals consistent with the policies outlined above.

## Clear Boundaries

On September 24, 2018, staff received a memo from the Sierra Club and Campaign for Common Ground (Attachment E) that had been originally sent in an earlier correspondence to Mayor Tubbs regarding agricultural lands and open space between Stockton and Lodi. Prior to receipt of the memo, staff had proactively considered a change to the action language contained in the public draft General Plan policy document. Below is the existing City General Plan policy language, and staff's recommended modification, as developed in consultation with San Joaquin County Community Development Department staff. For the Council's information, the 2016 adopted County General Plan Clear Boundaries policy language is also provided.

*Page 3-20. In response to a comment from the Eric Parfrey, representing the Sierra Club and Campaign for Common Ground, revise Action LU-5.3B as follows:*

*“Coordinate with San Joaquin County to ~~develop a plan for a greenbelt or community separator around the city~~ preserve agricultural land and open space areas in the unincorporated County that contribute to maintaining clear boundaries between cities.”*

Adopted San Joaquin County General Plan Language reads as the following:  
LU-1.5 Clear Boundaries

The County shall strive to preserve agricultural and open space areas that contribute to maintaining clear boundaries among cities and unincorporated communities.

## Draft Environmental Impact Report and General Plan Comments and Responses

As a result of the public review of the Draft Environmental Impact Report and Draft General Plan, staff received written comments, some of which included suggested specific text edits to the Draft General Plan. Staff carefully considered all the comments received on the Draft EIR and responses are addressed separately in the proposed Final EIR.

## Revisions to the Utility Master Plan Supplements

Each Utility Master Plan Supplement (UMPS) Technical Memorandum (TM) contains the General Plan land use map. Because of the changes to the General Plan Map, the UMPS TM have been revised to show the updated version of the land use map. Also, based on comments from the City Municipal Utilities Department, the text in Section 8.2 on page 19 of the UMPS for Potable Water has

been revised (Attachment F).

### Climate Action Plan Advisory Committee

On September 20, 2018, the Climate Action Plan Advisory Committee (CAPAC) met to consider making a recommendation to the Planning Commission and City Council on supportive policies for balanced infill/outskirt development consistent with the 2008 Settlement Agreement with the Sierra Club and the state Attorney General (Attachment G). With three members absent (Nelson, Pedroza, Terhune) the CAPAC voted 5-2 (Hatch, Leek dissenting) to recommend approval of staff recommended infill/outskirt policies with amendments to address minor text edits to Actions 6.1e, 6.1f, and 2.2c. However, a minimum of six affirmative votes is needed to forward an approval recommendation.

### Planning Commission Public Hearing Discussion

Three comment letters were received during the weeks leading up to the October 25 Planning Commission Public Hearing. The following briefly summarizes the subject of the comments.

- On October 10, 2018, a comment letter was received from the League of Women Voters indicating opposition to housing and industrial development north of Eight Mile Road (Attachment H).
- On October 22, 2018, a comment letter was received from the Campaign for Common Ground and the Sierra Club proposing amendments to several policies and actions contained in the draft General Plan (Attachment I).
- On October 24, 2018, a comment letter was received from Healthy Neighborhoods Collaborative proposing modifications and additions to several policies and actions contained in the draft General Plan (Attachment J).

Public comments were received that were primarily related to opposition of development north of Eight Mile Road, air quality and public health policies, disadvantaged communities and the need for a greenbelt separator. The Planning Commission voted 4-1 (Jobrack dissenting, Mallett and Rizvi absent) to continue the public hearing to the regularly scheduled November 15<sup>th</sup> meeting.

On November 13, 2018, the Community Development Department received a letter from the A.G. Spanos Companies regarding the proposed Economic Education Enterprise designation (Attachment K).

On November 15, 2018, the Planning Commission continued to hold a Public Hearing on the proposed Envision Stockton 2040 General Plan. Staff provided an additional presentation on the comment letters received weeks prior to the October 25<sup>th</sup> Public Hearing and comments received from the Planning Commissioners. More public comments were received which were primarily related to a letter submitted by A. G. Spanos, General Plan implementation priority on the downtown and south Stockton, and opposition to development north of Eight Mile Road.

After thoughtful consideration of the proposed General Plan, public input, and all proposed changes recommended by staff, the Planning Commission recommended approval of the General Plan Update. Their action included changing the Village designation within the Sphere of Influence

located north of Eight Mile Road to the more restrictive Economic and Education Enterprise designation (EEE). The EEE designation contains criteria that must be met for development applications to be accepted. Their recommendation also included policy changes resulting from input received from the Healthy Neighborhoods Collaborative, Campaign for Common Ground and the Sierra Club (Attachment A). The Planning Commission adopted a Resolution (Attachment B) by a vote of 6-1, Davie dissenting, to recommend that the City Council approve:

1. Certification of the Draft and Final Environmental Impact Report (FEIR);
2. Envision Stockton 2040 General Plan Update; and, Utility Master Plan Supplements (UMPS).

Present Situation:

The recommended General Plan represents the first time in Stockton's history that the proposed urban footprint is smaller (by approximately 8,000 acres) than the existing adopted General Plan. The City Council will receive a staff presentation on the proposed draft Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements, and the Final Environmental Impact Report. This presentation will include proposed changes based on comments/input received from the community, stakeholders, the Commission, and City Council. After consideration of the public draft General Plan documents and proposed changes, staff and the Planning Commission recommend that the City Council approve two Resolutions to:

1. Certify the Final Environmental Impact Report (FEIR), and adoption of Statement of Overriding Considerations; and
2. Approve the Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements (UMPS).

A Public Notice of this hearing was published in The Record on November 20, 2018.

Financial Summary

Sufficient funds were encumbered in the FY 2018-19 annual budget to pay for Envision Stockton 2040 General Plan Update costs (048-1825-510). The General Plan Update contains Policy LU-6.5, and four Actions LU-6.5A-D aimed at improving and maintaining the City's fiscal health in relation to the City's future considerations of new development.

Attachment A - Policy/Action Recommended Changes Table  
Attachment B - Approved Planning Commission Resolution  
Attachment C - October 25, 2018, Planning Commission Staff Report  
Attachment D - November 15, 2018, Planning Commission Staff Report  
Attachment E - September 24, 2018, AG Belt Memo  
Attachment F - Revised Utility Technical Memorandums  
Attachment G - CAPAC General Plan - Settlement Agreement Consistency Memo  
Attachment H - October 10, 2018, League of Women Voters Letter  
Attachment I - October 22, 2018, CCG/Sierra Club Letter  
Attachment J - October 24, 2018, Healthy Neighborhoods Letter  
Attachment K - November 8, 2018, A.G. Spanos Companies Letter





## MEMORANDUM

DATE November 16, 2018

TO David Stagnaro  
City of Stockton Community Development Department

FROM Tanya Sundberg

SUBJECT List of Recommended Changes to the Draft General Plan

This memorandum provides a list of the staff-recommended changes to the Draft Envision Stockton General Plan, as presented to the Planning Commission at the hearing that was held on October 25 and continued to November 15, 2018.

Recommended changes to policy and action text are provided in Table 1 (starting on page 4 of this memo). Additional recommended changes are listed below:

- » The following paragraph on page 1-5 was only intended for the public review draft; for the adopted General Plan, staff recommends deleting it: ~~“For this Public Review Draft of the 2040 General Plan, goals, policies, and actions that are carried forward from the prior 2035 General Plan, either verbatim or with modifications, are identified by the 2035 General Plan goal, policy, or implementation measure number in parentheses following the goal, policy, or action text (e.g., “(ED 3)” after Goal LU 1 refers to Goal ED 3 in the Economic Development Element of the 2035 General Plan). This is intended to help reviewers understand the context, but will be removed in the final, adopted 2040 General Plan.”~~ In addition, staff recommends deleting references to existing 2035 General Plan goals, policies, and implementation measures that are provided in parentheses following goals, policies, and actions in the Draft 2040 General Plan.
- » Reformat the text describing the Economic and Education Enterprise designation on pages 2-14 and 2-15, and add the requirement for a General Plan Amendment. The full text of the revised designation is as follows:

**Economic and Education Enterprise.** Development in this designation is intended to support the City’s economic development goals by attracting new businesses, industries, and/or educational institutions that provide high-quality jobs to the local workforce. By bringing major job-generators to Stockton, this designation supports the City’s Economic Development Strategic Plan and State Executive Orders regarding greenhouse gas (GHG) reduction, Senate Bill (SB) 32, and the San Joaquin Sustainable Communities Strategy.

Businesses envisioned for this designation include:

- Those within a Core Business Cluster industry, as specified in the City’s Economic Development Strategic Plan, and



- Those that provide a significant number of jobs offering wages averaging above Area Median Income, and that cannot be reasonably accommodated elsewhere within the city limit.

In support of a major job-generator, this designation promotes:

- Linked transportation and housing options so that future employees can live close to their jobs and commute using transportation modes that support the City's vehicle miles traveled (VMT) reduction goals.
- Businesses that reduce VMT by providing vanpool programs, car share services, and active transportation alternatives are encouraged.
- Proximate housing stock that supports the job-generator, including single-family, multi-family, and/or mixed-use dwellings at various levels of affordability, with housing costs that generally correspond to the income levels of the jobs generated by the project.

Projects proposed in the Economic and Education Enterprise designation will be required to:

- Adhere to the City's existing development review process including consideration by the Planning Commission and City Council of a General Plan Amendment.
- The City will negotiate with applicants to develop community benefit through development agreements that identify desired community amenities in the area of development.
- The City as Lead Agency will ensure that development mitigates its environmental impacts as feasible, pursuant to the California Environmental Quality Act (CEQA).

The maximum anticipated FAR is 0.6 and the maximum anticipated density is 24 dwelling units per gross acre; however, the designation allows variation from these standards with City approval to achieve the economic development goals and complete communities described above. Development proponents are encouraged to propose creative and innovative master plans to further the City's economic development goals consistent with the policies outlined above.

- » As a correction, revise Figure 2-8, General Plan Land Use Map, to show the Institutional designation on the portion of a parcel that is located along the western boundary of the Sphere of Influence (SOI) and General Plan Planning Area, and to designate the entire University of the Pacific campus property as Institutional. The updated version of Figure 2-8 is shown in Attachment D of the October 25, 2018 staff report.
- » As a correction, revise the text on page 3-15 to reference the Delta Plan (instead of Delta Reform Plan).
- » As a correction, revise the text on page 4-4 to reference the Regional Congestion Management Program (draft text had omitted "Program").



- » Replace Figure 6-1, Disadvantaged Communities, with the color-scheme version that is shown in Attachment C of the November 15, 2018, staff report per the request of the Stockton Healthy Neighborhoods Collaborative.
- » Replace Appendix B with the updated version that is shown in Attachment F of the staff report.


**TABLE 1 RECOMMENDED POLICY/ACTION EDITS**

Policy/Action Number	June 2018 Draft Policy/Action	Recommended Revised Policy/Action
Policy LU-1.1	Encourage retail businesses in mixed-use developments along regional transportation routes and in areas that serve local residents.	Encourage retail businesses and housing development in mixed-use developments along regional transportation routes and in areas that serve local residents.
Action LU-1.1C	Continue to study and consider repealing the “Big Box Ordinance” that was adopted in 2007, and if big-box stores are allowed in the future, require applicants to fund an analysis of economic and blight-inducement impacts of the proposed development on retail businesses in the market area, employment, City revenues and services, and any other relevant economic considerations.	Continue to study and consider repealing the “Big Box Ordinance” that was adopted in 2007, and if big-box stores are allowed in the future, require applicants to fund an analysis of economic and blight-inducement impacts of the proposed development on retail businesses in the market area, employment, City revenues and services, and any other relevant economic considerations. Prohibit the siting of any additional big-box “power centers” at the edges of the city to limit growth inducing impacts to adjacent farmlands.
<b>New</b> Action LU-1.1D	n/a	Encourage the redevelopment of struggling under-utilized commercial strips into multi-family housing opportunities.
<b>New</b> Action LU-2.2D	n/a	Discourage urban development at the edges of the city that would detract from or compete with the housing goals of the Greater Downtown.
Action LU-3.1E	Maintain and periodically update the City’s historical resources inventory.	Maintain and periodically update the City’s historical resources inventory and adopt a priority list to protect the most important resources.
<b>New</b> Action LU-3.3F	n/a	Allow developers to develop pocket parks that function as social gathering places and/or children’s play areas, and which can count towards the park standard requirements for new development.
Policy LU-4.1	Encourage large-scale development proposals in appropriate locations that include significant numbers of higher-wage jobs and local revenue generation.	Encourage large-scale development proposals in appropriate locations that include significant numbers of higher-wage jobs and local revenue generation. Such development may utilize the Economic and Education Enterprise land use designation, if the proposal meets all of the criteria listed under the definition of the designation.
<b>New</b> Action LU-4.1D	n/a	Consider future amendments to the General Plan for extraordinary growth plans outside the Urban Services Boundary that include significant



Policy/Action Number	June 2018 Draft Policy/Action	Recommended Revised Policy/Action
		job generators or public institutions such as a college campus.
<b>New</b> Action LU-5.2H	n/a	Comply with applicable water conservation measures.
<b>New</b> Action LU-5.2I	n/a	Coordinate with water agencies and non-profit organizations to promote public awareness on water quality and conservation issues and consistency in water quality impacts analyses.
Action LU-5.3B	Coordinate with San Joaquin County to develop a plan for a greenbelt or community separator around the city.	Coordinate with San Joaquin County and property owners in unincorporated areas to preserve agricultural land and open space areas in the unincorporated county that contribute to maintaining clear boundaries between cities.
Action LU-6.2A	Develop and implement an infill incentive program that encourages infill development through expedited permitting, changes in fee structures, prioritizing infrastructure improvements in infill areas, and/or other strategies.	Develop and implement an infill incentive program that encourages infill development through expedited permitting, changes in fee structures, prioritizing infrastructure improvements in infill areas, property owner and/or landlord incentives to maintain property and reduce blight, and/or other strategies. As part of this program, define and prioritize categories of infill types based on land use, and residential density or non-residential intensity.
<b>New</b> Action LU-6.2C	n/a	Ensure prioritization of development and redevelopment of vacant, underutilized, and blighted infill areas be considered through strategies such as zoning changes and strategies to avoid gentrification.
<b>New</b> Action LU-6.3E	n/a	Comply with State requirements that limit the idling of motor vehicles.
Policy LU-6.4	Ensure that land use decisions balance travel origins and destinations in as close proximity as possible.	Ensure that land use decisions balance travel origins and destinations in as close proximity as possible, and reduce vehicle miles traveled (VMT).
Action LU-6.4B	Maintain a reasonable proximity and balance (i.e., magnitude) between job generating uses, housing opportunities, and resident services and amenities.	Maintain a reasonable proximity and balance (i.e., magnitude) between job generating uses, housing opportunities, and resident services and amenities, including transit and active transportation.
<b>New</b> Action LU-6.4C	n/a	Reduce Vehicle Miles Traveled (VMT) per household by planning new



Policy/Action Number	June 2018 Draft Policy/Action	Recommended Revised Policy/Action
		housing in closest proximity to employment centers, improving and funding public transportation and ridesharing, and facilitating more direct routes for pedestrians and bicyclists.
Action LU-6.6B	Participate in the San Joaquin Council of Governments' (SJCOG) regional planning programs and coordinate City plans and programs with those of SJCOG, including the Regional Transportation Plan/Sustainable Communities Strategy, among others.	Participate in the San Joaquin Council of Governments' (SJCOG) regional planning programs and coordinate City plans and programs with those of SJCOG, including the Regional Transportation Plan/Sustainable Communities Strategy, among others, and work with non-profit organizations also engaging in these planning programs.
Action LU-6.7A	Work with community-based organizations to develop and implement a comprehensive long-term strategy to engage the Stockton community in planning decisions.	Work with community-based organizations to develop and implement a comprehensive and accountable long-term strategy to engage the Stockton community in planning decisions.
Action TR-1.1A	Direct truck traffic to designated truck routes that facilitate efficient goods movement and minimize risk to areas with concentrations of sensitive receptors and vulnerable road users, like pedestrians and bicyclists.	Direct truck traffic to designated truck routes that facilitate efficient goods movement and minimize risk to areas with concentrations of sensitive receptors, such as schools, for example by disallowing any new truck routes to pass directly on streets where schools are located, and vulnerable road users, like pedestrians and bicyclists.
Action TR-1.1E	Work with local school districts to enhance pedestrian crossings near schools, encourage activities like a walking school bus, and create educational programs that teach students bicycle safety.	Work with local school districts to implement pedestrian crossing enhancements like stop signs within neighborhoods around schools, encourage activities like a walking school bus, and create educational programs that teach students bicycle safety.
Action TR-1.3A	Protect the Airport and related aviation facilities from encroachment by ensuring that all future development within the Airport Influence Area (AIA) is consistent with the policies adopted by the San Joaquin County Airport Land Use Commission (ALUC), except in cases where the City Council concludes that project approval would provide for the orderly development of the Airport and the areas surrounding it while protecting the public health, safety, and welfare by minimizing the public's exposure to excessive noise and safety hazards.	Protect the Airport and related aviation facilities from encroachment by ensuring that all future development within the Airport Influence Area (AIA) is consistent with the policies adopted by the San Joaquin County Airport Land Use Commission (ALUC), except in cases where the City Council concludes that project approval would provide for the orderly development of the Airport and the areas surrounding it while protecting the public health, safety, and welfare by minimizing the public's exposure to excessive noise and safety hazards, consistent with the San Joaquin County Airport Land Use Compatibility Plan and the Stockton Metropolitan Airport Land Use Compatibility Plan.



Policy/Action Number	June 2018 Draft Policy/Action	Recommended Revised Policy/Action
Action TR-1.3B	<p>Where substantial development already exists within the AIA and is incompatible with ALUC policies, only allow additional infill development of similar land uses if projects meet all of the following criteria to be an infill project:</p> <ul style="list-style-type: none"> <li>▪ The project site is bounded on at least three sides by uses similar to those proposed.</li> <li>▪ The proposed project would not extend the perimeter of the area developed with incompatible uses.</li> <li>▪ The proposed project does not otherwise increase the intensity and/or incompatibility of use through use permits, density transfers, or other strategies.</li> </ul>	<p>Where substantial development already exists within the AIA and is incompatible with ALUC policies, only allow additional infill development of similar land uses if projects meet all of the following criteria to be an infill project:</p> <ul style="list-style-type: none"> <li>▪ The project site is bounded on at least three sides by uses similar to those proposed.</li> <li>▪ The proposed project would not extend the perimeter of the area developed with incompatible uses.</li> <li>▪ The proposed project does not otherwise increase the intensity and/or incompatibility of the use with respect to the criteria identified in the San Joaquin County Airport Land Use Compatibility Plan and in the Stockton Metropolitan Airport Land Use Compatibility Plan through use permits, density transfers, or other strategies.</li> </ul>
<b>New</b> Action TR-2.1C	n/a	Maintain and implement the City of Stockton Safe Route to School plan.
Policy TR-2.2	Connect housing and employment development in areas with good transit access.	Connect housing and employment development in areas with good transit access through open and inclusive processes where appropriate.
Action TR-2.2A	Require major new development to incorporate design features to promote safe and comfortable access to transit, such as a circulation network that facilitates efficient and connected bus travel, clear pedestrian and bicycle routes connecting origins and destinations to transit stops, sheltered bus stops, park-and-ride facilities, and highly visible transit information and maps.	Require major new development to incorporate and fund design features to promote safe and comfortable access to transit, such as a circulation network that facilitates efficient and connected bus travel, clear pedestrian and bicycle routes connecting origins and destinations to transit stops, sheltered bus stops, park-and-ride facilities, and highly visible transit information and maps.
Action TR-2.2B	Obtain input from local and regional transit operators on major new development projects to ensure projects are designed to support transit and provide adequate transit service and access.	Obtain input from community residents, non-profit organizations, and local and regional transit operators on major new development projects, and support transit operators by ensuring major projects are designed to support transit and provide fair share funding of the cost of adequate transit service and access.



Policy/Action Number	June 2018 Draft Policy/Action	Recommended Revised Policy/Action
Action TR-2.2C	Request that public transit service providers expand routes and increase frequency and operational hours consistent with current short- and long-range transit planning, as financially feasible.	Request that public transit service providers expand routes and increase frequency and operational hours consistent with current short- and long-range transit planning, with the assistance of new development funding.
<b>New</b> Action TR-2.2D	n/a	Support efforts to electrify buses.
Action TR-3.1B	Where feasible and appropriate, reduce the width of existing streets using bulb-outs, medians, pedestrian islands, shade tree landscaping, and similar methods, while not jeopardizing emergency response.	Where feasible and appropriate, reduce the width of existing streets using bulb-outs, medians, pedestrian islands, shade tree landscaping, appropriate signage, and similar methods, while not jeopardizing emergency response.
Action TR-3.1C	Preserve right-of-way for transit and bicycle uses when designing new roadways and improving existing roadways.	Preserve right-of-way for transit and bicycle uses when designing new roadways and improving existing roadways, and ensuring adequate and clear signage.
Policy TR-3.2	Require new development and transportation projects to reduce travel demand, support electric vehicle charging, and accommodate multi-passenger autonomous vehicle travel as much as feasible.	Require new development and transportation projects to reduce travel demand and greenhouse gas emissions, support electric vehicle charging, and accommodate multi-passenger autonomous vehicle travel as much as feasible.
<b>New</b> Action TR-3.2D	n/a	Continue to coordinate with the San Joaquin Council of Governments to increase opportunities for additional park and ride facilities, consistent with the San Joaquin County Regional Park and Ride Lot Master Plan.
Action TR-4.1A	<p>Strive for Level of Service (LOS) D or better for both daily roadway segment and peak hour intersection operations, except when doing so would conflict with other land use, environmental, or economic development priorities, and with the following additional exceptions:</p> <ul style="list-style-type: none"> <li>▪ In the Greater Downtown, strive for LOS E or better, but LOS F may be acceptable after consideration of physical or environmental constraints and other City goals and policies.</li> <li>▪ Strive for different LOS standards along the following corridors due to physical constraints that limit the improvements that can be constructed:</li> </ul>	<p>Strive for Level of Service (LOS) D or better for both daily roadway segment and peak hour intersection operations, except when doing so would conflict with other land use, environmental, or economic development priorities, and with the following additional exceptions:</p> <ul style="list-style-type: none"> <li>▪ In the Greater Downtown, strive for LOS E or better, but LOS F may be acceptable after consideration of physical or environmental constraints and other City goals and policies.</li> <li>▪ Strive for different LOS standards along the following corridors due to physical constraints that limit the improvements that can be constructed:</li> </ul>





Policy/Action Number	June 2018 Draft Policy/Action	Recommended Revised Policy/Action
	<ul style="list-style-type: none"> <li>○ Benjamin Holt Drive, Plymouth Road to Gettysburg Place – LOS F</li> <li>○ Eight Mile Road, Trinity Parkway to I-5 – LOS E</li> <li>○ Eight Mile Road, Lower Sacramento Road to West Lane – LOS E</li> <li>○ Eighth Street, I-5 to El Dorado Street – LOS E</li> <li>○ Eighth Street, Airport Way to Mariposa Road – LOS E</li> <li>○ French Camp Road, Manthey Road to I-5 LOS E</li> <li>○ French Camp Road, I-5 to Val Dervin Parkway- LOS F</li> <li>○ Hammer Lane, I-5 to Kelly Drive – LOS E</li> <li>○ Hammer Lane, West Lane to Holman Road – LOS E</li> <li>○ Interstate 5, Hammer Lane to Benjamin Holt Drive – LOS E</li> <li>○ Interstate 5, Benjamin Holt Drive to Downing Avenue – LOS F</li> <li>○ Interstate 5, Downing Avenue to French Camp Road – LOS E</li> <li>○ Otto Drive, I-5 to Thornton Road – LOS F</li> </ul> <ul style="list-style-type: none"> <li>▪ Accept worse than adopted-standard LOS at intersections where widening the intersection would reduce bicycle and pedestrian safety and/or increase pedestrian crossing times such that they would create longer traffic delays due to signal timing.</li> </ul>	<ul style="list-style-type: none"> <li>○ Benjamin Holt Drive, Plymouth Road to Gettysburg Place – LOS F</li> <li>○ Eight Mile Road, Trinity Parkway to I-5 – LOS E</li> <li>○ Eight Mile Road, Lower Sacramento Road to West Lane – LOS E</li> <li>○ Eighth Street, I-5 to El Dorado Street – LOS E</li> <li>○ Eighth Street, Airport Way to Mariposa Road – LOS E</li> <li>○ French Camp Road, Manthey Road to I-5 LOS E</li> <li>○ French Camp Road, I-5 to Val Dervin Parkway- LOS F</li> <li>○ Hammer Lane, I-5 to Kelly Drive – LOS E</li> <li>○ Hammer Lane, West Lane to Holman Road – LOS E</li> <li>○ Interstate 5, Hammer Lane to Benjamin Holt Drive – LOS E</li> <li>○ Interstate 5, Benjamin Holt Drive to Downing Avenue – LOS F</li> <li>○ Interstate 5, Downing Avenue to French Camp Road – LOS E</li> <li>○ Otto Drive, I-5 to Thornton Road – LOS F</li> <li>○ Roadway segments determined to be operating at deficient LOS by the San Joaquin Council of Governments in the Regional Congestion Management Program.</li> </ul> <ul style="list-style-type: none"> <li>▪ Accept worse than adopted-standard LOS at intersections where widening the intersection would reduce bicycle and pedestrian safety and/or increase pedestrian crossing times such that they would create longer traffic delays due to signal timing.</li> </ul>
Policy SAF-4.3	Coordinate with the San Joaquin Valley Air Pollution Control District to promote public awareness on air quality issues and consistency in air quality impacts analyses.	Coordinate with the San Joaquin Valley Air Pollution Control District and non-profit organizations to promote public awareness on air quality issues and consistency in air quality impacts analyses.



Policy/Action Number	June 2018 Draft Policy/Action	Recommended Revised Policy/Action
Action CH-1.1A	Plant and maintain shade trees along all City streets to reduce heat exposure and provide a buffer between the travel way and bicycle and pedestrian facilities, and provide other amenities like well-marked crosswalks, bulb-outs, and pedestrian-scale street lighting.	Plant and maintain appropriate shade trees along all City streets to reduce heat exposure, prioritizing areas of the city with significantly less tree canopy, and provide a buffer between the travel way and bicycle and pedestrian facilities, and provide other amenities like well-marked crosswalks, bulb-outs, and pedestrian-scale street lighting.
Action CH-1.1B	Prepare a parks master plan that assesses the quality and distribution of existing parks, facilities, and community centers throughout the city relative to the population served (i.e., within a set walking distance) and their needs (i.e., considering age, income, and abilities), and, based on this information, identifies and prioritizes new, renovation, and expansion park and community center projects and describes funding means and timelines.	Prepare a parks master plan through an open and engaging process inclusive of community residents that assesses the quality and distribution of existing parks, facilities, and community centers throughout the city relative to the population served (i.e., within a set walking distance) and their needs (i.e., considering age, income, and abilities), and, based on this information, identifies and prioritizes new, renovation, and expansion park and community center projects and describes funding means and timelines.
Action CH-1.2B	Prepare a healthy food ordinance that creates incentives and guidelines that support access to healthy food, such as standards requiring that a percent of sales area in neighborhood food and beverage stores be devoted to healthy foods and/or requiring acceptance of CalFresh and WIC.	Prepare a healthy food ordinance that creates incentives and guidelines that support access to healthy food, such as standards requiring that a percent of sales area in neighborhood food and beverage stores be devoted to healthy foods and/or requiring acceptance of CalFresh and WIC. As part of this ordinance, collect geographic data about current health conditions, and discourage unhealthy food establishments (e.g., mini markets and fast food restaurants) in neighborhoods with high rates of obesity and/or diabetes.
Action CH-1.2C	Collaborate with non-profit partners and San Joaquin County Public Health Services to attract full-service grocery stores in areas that lack access to fresh food.	Collaborate with non-profit partners and San Joaquin County Public Health Services to attract full-service grocery stores in areas that lack access to fresh food and/or are at a high risk of obesity and diabetes.
Action CH-1.2D	Prioritize pedestrian improvement projects that connect residential areas to retail locations that sell healthy food.	Prioritize pedestrian and active transportation improvement projects in low-income/disadvantaged communities that connect residential areas to retail locations that sell healthy food.
<b>New Action CH-1.3D</b>	n/a	Adopt and Implement an Urban Agriculture Incentive Zone (per AB 551) to allow privately-owned vacant property to be productively used for growing food.



Policy/Action Number	June 2018 Draft Policy/Action	Recommended Revised Policy/Action
New Action CH-1.3E n/a		Partner with nonprofits, local farmers and San Joaquin County Public Health Services to conduct public outreach and education to aid in the development of an urban agriculture ordinance.
New Action CH-1.3F n/a		Identify new potential locations for farmers' markets in low-income and nutrient deficient neighborhoods, including opportunities to hold markets on publicly owned land.
Policy CH-2.1	Prioritize maintenance of streets and improvement of sidewalks, parks, and other infrastructure in areas of the city that historically have been comparatively underserved by public facilities.	Prioritize maintenance of streets and improvement of sidewalks, parks, and other infrastructure in areas of the city that historically have been comparatively underserved by public facilities, including implementation of complete streets where needed, especially in conjunction with infrastructure maintenance and improvement projects.
Action CH-2.1A	<p>When considering parks and infrastructure maintenance and improvement projects, consider the following:</p> <ul style="list-style-type: none"> <li>▪ Whether the affected community is underserved or disadvantaged.</li> <li>▪ What the priority needs of the community are and whether the project would address those needs.</li> <li>▪ Whether the project would negatively impact the community, such as through increased exposure to pollutants or displacement of residents or local businesses.</li> </ul>	<p>When considering parks and infrastructure maintenance and improvement projects, consider the following through an open and engaging process inclusive of community residents:</p> <ul style="list-style-type: none"> <li>▪ Whether the affected community is underserved or disadvantaged.</li> <li>▪ What the priority needs of the community are and whether the project would address those needs.</li> <li>▪ Whether the project would negatively impact the community, such as through increased exposure to pollutants or displacement of residents or local businesses.</li> </ul>
Action CH-2.1B	Provide incentives for rehabilitation or redevelopment of distressed properties.	Provide incentives for rehabilitation or redevelopment of distressed properties that takes into consideration strategies to avoid gentrification.
Action CH-2.1C	Develop incentives to promote reuse of distressed areas, such as through permit streamlining, density bonuses, and other appropriate tools.	Develop incentives to promote reuse of distressed areas, such as through re-zoning, permit streamlining, density bonuses, and other appropriate tools.
Action CH-2.1D	Conduct marketing to potential developers to encourage the redevelopment and conversion of distressed commercial strips into housing and mixed-use areas	Conduct marketing to potential developers to encourage the redevelopment and conversion of distressed commercial strips into housing and mixed-use areas that includes strategies to avoid



Policy/Action Number	June 2018 Draft Policy/Action	Recommended Revised Policy/Action
		gentrification.
Action CH-2.1F	Work with transit agencies to maintain and improve transit service in underserved and disadvantaged neighborhoods to connect residents with jobs, shopping, and services.	Work with transit agencies, non-profit organizations, and communities to maintain and improve transit service in underserved and disadvantaged neighborhoods to connect residents with jobs, shopping, and services.
Action CH-2.2A	<p>Aggressively facilitate the conservation and rehabilitation of older neighborhoods through the following approaches:</p> <ul style="list-style-type: none"> <li>▪ Utilize all federal, State, and local programs for conservation and rehabilitation projects.</li> <li>▪ Prioritize older neighborhoods for investment using funds such as the Community Development Block Grants.</li> <li>▪ Encourage private investment in older neighborhoods.</li> <li>▪ Cooperate in joint public-private partnerships to invest in older neighborhoods.</li> </ul>	<p>Aggressively facilitate the conservation and rehabilitation of older neighborhoods through the following approaches:</p> <ul style="list-style-type: none"> <li>▪ Utilize all federal, State, and local programs for conservation and rehabilitation projects.</li> <li>▪ Prioritize older disadvantaged neighborhoods for investment using funds such as the Community Development Block Grants.</li> <li>▪ Encourage private investment in older neighborhoods.</li> <li>▪ Cooperate in joint public-private partnerships to invest in older neighborhoods.</li> </ul>
Action CH-2.3A	<p>Build strong ties with disadvantaged communities to ensure that local residents can make significant contributions to planning decisions through the following:</p> <ul style="list-style-type: none"> <li>▪ Use culturally appropriate approaches.</li> <li>▪ Consider the convenience of the timing and locations of meetings to community members.</li> <li>▪ Use social media and other communication techniques for those without time to attend public meetings.</li> <li>▪ Provide translation services when needed.</li> </ul>	<p>Build strong ties with disadvantaged communities to ensure that local residents can make significant contributions to planning decisions through the following:</p> <ul style="list-style-type: none"> <li>▪ Use culturally appropriate approaches.</li> <li>▪ Consider the convenience of the timing and locations of meetings to community members.</li> <li>▪ Use social media and other communication techniques for those without time to attend public meetings.</li> <li>▪ Provide translation services and translated materials when needed.</li> <li>▪ Partner with non-profit organizations who are already active within the community.</li> </ul>
Action CH-2.3B	Expand efforts to repair and rehabilitate substandard housing in disadvantaged communities.	Expand efforts to repair and rehabilitate substandard housing in disadvantaged communities, taking into consideration strategies to avoid



Policy/Action Number	June 2018 Draft Policy/Action	Recommended Revised Policy/Action
		gentrification.
Action CH-2.3D	Focus enforcement of public health-related codes in disadvantaged communities.	Focus enforcement of public health-related codes in disadvantaged communities, including on properties that are managed by homeowners associations.
Action CH-2.3E	Work with wastewater and water utilities to seek funding to complete sewer and water systems in areas within the SOI where parcels still rely on septic systems and wells.	Work with wastewater, water, and stormwater utilities to seek funding to complete sewer, water, and stormwater systems in areas within the SOI where parcels still rely on septic systems, wells, and roadside ditches.
Action CH-3.1A	Coordinate with the Small Business Development Centers and other agencies to provide well-tailored services and resources for small businesses.	Coordinate with the Small Business Development Centers and other agencies to provide well-tailored services and resources for small and minority-owned businesses.
<b>New</b> Action CH-3.1B	n/a	Provide training, promotion, and technical, financial, and business assistance to small and minority-owned businesses.
Policy CH-3.2	Encourage neighborhood-serving commercial uses in areas where frequently needed goods and services are not widely available.	Encourage neighborhood-serving commercial uses in areas where frequently needed goods and services are not widely available, especially for those areas with no availability within a 2-mile radius.
Action CH-3.2B	Consider options and develop an ordinance to restrict check-cashing establishments and tobacco stores in areas with high existing concentrations of similar establishments, and continue to restrict over-concentrations of liquor stores through the City's Alcohol Ordinance.	Consider options and develop an ordinance to restrict mini markets, gas stations, fast food restaurants, check-cashing establishments, and tobacco stores in areas with high existing concentrations of similar establishments, and continue to restrict over-concentrations of liquor stores through the City's Alcohol Ordinance. To inform the development of this ordinance, create a map that identifies the locations of current establishments of these types, and regularly maintain it so that it continues to aid in decision-making about such uses.
<b>New</b> Action CH-3.2D	n/a	Work with the California Department of Alcoholic Beverage Control to avoid over concentration of liquor stores.
Policy CH-5.1	Accommodate a changing climate through adaptation and resiliency planning and projects.	Accommodate a changing climate through adaptation, mitigation, and resiliency planning and projects.



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<b>New</b> Action CH-5.1C	n/a	Accommodate a changing climate through adaptation and resiliency planning and projects.
Action CH-5.2C	Expand educational and outreach efforts to promote recycling by residents of multi-family housing.	Expand educational and outreach efforts to promote recycling by occupants of multi-family housing, businesses, and schools.

Resolution No. **2018-11-15-0501**

## **STOCKTON PLANNING COMMISSION**

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### **RESOLUTION FORWARDING A RECOMMENDATION TO THE CITY COUNCIL TO APPROVE THE ENVISION STOCKTON 2040 GENERAL PLAN UPDATE, UTILITY MASTER PLAN SUPPLEMENTS, AND RELATED FINAL ENVIRONMENTAL IMPACT REPORT**

The City of Stockton has formulated a comprehensive, long-term General Plan Update, and related Utility Master Plan Supplements (UMPS) for the physical development of the City, which the General Plan contains each of the elements required by law to be a part of it; and

An update to the City's 2035 General Plan has been initiated to maintain compliance with State law; and

The Planning Commission held a duly noticed public hearing to consider the Envision Stockton 2040 General Plan Update, UMPS, and related Final Environmental Impact Report (FEIR) on October 25, 2018 and was continued to the regularly scheduled meeting on November 15, 2018; now, therefore,

**BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF STOCKTON, AS FOLLOWS:**

1. The Planning Commission hereby forwards a recommendation to the City Council to adopt the Envision Stockton 2040 General Plan Update, and UMPS, as set forth in Exhibit 1, attached hereto and incorporated by this reference, and related FEIR, based on the following findings. All findings below are supported by the corresponding evidence in the administrative record:

- a. The proposed Envision Stockton 2040 General Plan Update establishes appropriate goals, objectives, policies, and actions to address such issues as land use, housing, economic development, community health, community design, transportation and circulation, public facilities and services, recreation, safety, youth, education, and natural and cultural resources;
- b. The General Plan has been updated in conformity with the provisions of State law requirements of California Code section 65300 et seq.;
- c. The proposed amendment will not endanger, jeopardize, or otherwise constitute a hazard to the public convenience, health, interest, safety, or general welfare of persons residing or working in the City;
- d. The Planning Commission has reviewed and considered the FEIR for the Envision Stockton 2040 General Plan Update, and UMPS and


- has recommended certification of the FEIR as being adequate under the California Environmental Quality Act (CEQA); and
- e. The mitigation measures, the monitoring program to be implemented for each mitigation measure, the findings, and statement of overriding considerations as set forth in the Findings, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program documents on file at [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton) are hereby recommended for adoption in relation to the proposed Envision Stockton 2040 General Plan Update and UMPS.

The statements, findings, and mitigation monitoring provisions are based on the above-referenced FEIR for the Envision Stockton 2040 General Plan Update and UMPS and other information available to the City Council are recommended for adoption in compliance with sections 15091 and 15093 of the State CEQA Guidelines.

2. The Planning Commission hereby adopts a resolution recommending that the City Council approve:

- a. Certification of the Final Environmental Impact Report (FEIR);
- b. Envision Stockton 2040 General Plan Update;
- c. Utility Master Plan Supplements (UMPS).

PASSED, APPROVED, and ADOPTED: November 15, 2018.

  
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DON M. AGUILLARD, CHAIR  
CITY OF STOCKTON PLANNING COMMISSION

ATTEST:

  
\_\_\_\_\_  
DAVID W. KWONG, SECRETARY  
CITY OF STOCKTON PLANNING COMMISSION



Exhibit 1

[www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton)



# City of Stockton

## Legislation Text

**File #:** 18-4868, **Version:** 1

### **ENVISION STOCKTON 2040 GENERAL PLAN UPDATE, UTILITY MASTER PLAN SUPPLEMENTS, AND FINAL ENVIRONMENTAL IMPACT REPORT**

#### RECOMMENDATION

Staff recommends that the Planning Commission adopt a Resolution recommending that the City Council approve:

1. Certification of the Final Environmental Impact Report (FEIR);
2. Envision Stockton 2040 General Plan Update;
3. Utility Master Plan Supplements (UMPS).

#### Summary

In 2016, the City initiated Envision Stockton 2040 General Plan Update with a commitment to updating the General Plan in a sustainable manner. As a result of robust public engagement, staff received extensive input and guidance from the community, including citizens, stakeholders, the Planning Commission, and City Council. In April 2017, the City Council provided guidance to adopt infill standards using a city core intensification alternative. This infill alternative (referred to as Alternative “C”) has the smallest urban footprint of the three alternatives considered. In July 2017, the City Council indicated the desire to continue with the Infill Focus Alternative, with some modifications. The modifications by the Council included allowing flexibility for an economic development catalyst project in the Sphere of Influence (SOI) area north of Eight Mile Road along Interstate 5.

On June 26, 2018, drafts of the General Plan Update, Environmental Impact Report (EIR), and related utility master plan documents were released for public review and comment. The 45-day comment period for the EIR ended on August 10, 2018. EIR comments and responses are contained in the Final EIR [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton) [<http://www.stocktongov.com/envisionstockton>](http://www.stocktongov.com/envisionstockton). The Planning Commission will receive a summary of community engagement efforts and a presentation on the proposed draft Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements, and the Final Environmental Impact Report, inclusive of proposed changes based on comments/input from the community, stakeholders, the Commission, and City Council. Staff recommends that after consideration of the public draft General Plan and any proposed changes that the Planning Commission adopt a Resolution recommending that the City Council approve:

- Certification of the Final Environmental Impact Report (FEIR);
- Envision Stockton 2040 General Plan Update; and,

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➤ **Utility Master Plan Supplements (UMPS).**

The Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements (UMPS), July/August 2018, workshop summaries, and the Final Environmental Impact Report (FEIR), and related findings, statement of overriding considerations (SOC), and mitigation monitoring and reporting program (MMRP) can be viewed at: [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton)  
<<http://www.stocktongov.com/envisionstockton>>

## DISCUSSION

### Background

State law requires each city and county to adopt and periodically update a General Plan that provides a comprehensive, long-range plan for its physical development. The General Plan is important because it contains goals, policies and implementation measures to guide development within the city limit and beyond in a Sphere of Influence where City services may someday be provided. The City's current 2035 General Plan was adopted in 2007. Since its adoption, significant economic and demographic changes occurred, prompting the City to update its growth and development assumptions.

In 2016, the City initiated Envision Stockton 2040 General Plan Update with a commitment to updating the General Plan in a sustainable manner. This General Plan Update provides guidance for reevaluation of the City's public infrastructure such as the City's roadways and water and sewer distribution systems and whether the cost (capital and maintenance) of that infrastructure is sustainable. This update provides an opportunity to revisit and reset the goals, policies, and implementation measures for development in the City limits and for future growth areas where City services may eventually be provided within a Sphere of Influence. Policy guidance is provided to reevaluate level of service goals regarding public infrastructure such as water, sewer and transportation improvements. The level of service goals associated with these particular types of improvements and its relationship to land use growth projections determines the cost of development impact fees associated with the cost of building a home or undertaking a development project.

### **Public Outreach and Feedback**

This update has been developed with extensive input and guidance from the community, including citizens, stakeholders, Planning Commission, and City Council. Thus far, there have been more than 30 opportunities (including workshops, open houses, and community events) for public input including a recent series of five public workshops held in locations throughout the City in July and August 2018.

In April 2017, Council provided guidance to adopt infill standards using a city core intensification alternative. This infill alternative (referred to as Alternative "C") has the smallest urban footprint of the three alternatives considered and contains the following attributes:

- Preservation of agricultural lands at City periphery
- Infill focused with a Downtown emphasis
  - Higher intensity mixed-use Downtown
  - High density in and near Downtown

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- Professional offices on South Airport Way
- Increased opportunities for a grocery store(s) along South Airport Way
- Opportunities for medical offices near Weston Ranch
- Flexibility for employment/economic generator north of Eight Mile Road

On July 25, 2017, the City Council considered and provided guidance to staff on the development of the General Plan goals and policies. The goals, policies, and actions in a General Plan guide service levels that directly influence the costs related to development projects and operation of city government. The following are highlights of some of the recommended policy changes included in the draft General Plan policy document:

- An increase of allowable densities and intensity of development in both downtown and the greater downtown areas; addition of new infill policies particularly as it relates to downtown and within the city's core and south Stockton.
- Weaving of environmental justice policies throughout the General Plan affecting land use, transportation, and community health policies.
- Incorporating public health policies throughout the General Plan as it relates to land use, transit, and safety policies.

On June 26, 2018, the following draft documents were released for public review and comment:

- Draft Envision Stockton 2040 General Plan policy document,
- Draft EIR, and
- Draft Utility Master Plan Supplements (water, wastewater, and stormwater).

On July 16, 2018, the City Council held a Study Session and staff presented an overview of the draft Envision Stockton 2040 General Plan, Draft EIR, and draft Utility Master Plan Supplements. The presentation covered housing and potential policy and program options for increasing affordable housing within the City of Stockton. Key housing policy/program options discussed included:

- Housing Trust funds
- Inclusionary housing
- Rent stabilization
- Rent Control Ordinances
- Just cause for eviction

## **Economic and Education Enterprise Designation**

Many comments received on the Draft General Plan have centered on the Economic and Education Enterprise designation. This section of the staff report provides a summary of the history of the development of this designation, as well as a staff-recommended change in response to public comments.

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## History of Designation

On April 4, 2017, City Council held a study session on the Envision Stockton 2040 General Plan preferred land use alternative. The City Council directed staff to proceed with Alternative C, the Infill Focus Alternative, with some modifications, to serve as the land use map in the Draft General Plan. Council's modifications included allowing flexibility for an economic development catalyst project in the Sphere of Influence (SOI) area north of Eight Mile Road along Interstate 5. Council directed staff to return with options to implement this modification.

On June 8, 2017, the Planning Commission considered four options presented by staff to implement the Council's direction for the area north of Eight Mile Road. The four options are provided in Table 1 below. The Planning Commission discussed the options, and continued the discussion to its June 22, 2017 meeting. At the June 22, 2017 meeting, the Planning Commission provided comments, but did not come to consensus on a preferred option. Comments from the Planning Commission at this meeting included the following:

- Focus on economic/job generators, not retail or residential
- Consider a policy requiring development to show that it couldn't be located elsewhere in Stockton
- Establish high-standard for projects, such as criteria related to:
  - Creation of jobs with wages above median income
  - Equity in hiring practices
  - Minimum number of jobs
  - Vehicle Miles Traveled (VMT)

**Table 1 Options for the Area North of Eight Mile Road**

<b>Land Use Map Options A or B</b>	<b>Map Option A:</b> Keep existing SOI boundary and maintain Village land use or change to other urban type designation.	<b>Map Option B:</b> Remove area 1 boundary and SOI boundary at designation.
<b>Policy Options 1 or 2</b>		

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<p><b>Policy Option 1:</b> Add language to consider development in the area, provided that the plans include significant job generators.</p>	<p><b>Map A + Policy 1:</b> This combination would allow the most streamlined approach to approving potential new development by keeping the area within the existing SOI inside the Urban Services boundary, simplifying boundary issues, with proposals subject to general policy criteria.</p>	<p><b>Map B + Policy 1:</b> This combination would allow an extensive approval process by request amendments to the SC boundary, with proposals subject to general policy criteria.</p>
<p><b>Policy Option 2:</b> Same as #1 with requirements that jobs have above-median wage levels, reduce vehicle miles traveled, fully mitigate environmental impacts, and additional housing is linked to the additional jobs created and housing cost is correlated with job wage levels.</p>	<p><b>Map A + Policy 2:</b> This combination would streamline the boundary portion of the approval process by keeping the area within the existing SOI inside the Urban Services boundary, but would require compliance with policy criteria that set high performance standards to allow potential new development in the area.</p>	<p><b>Map B + Policy 2:</b> This combination would allow an extensive approval process by request amendments to the SC boundary, and would require criteria that set high performance standards to allow potential new development in the area.</p>

Note: SOI = Sphere of Influence.

On July 25, 2017, in a City Council study session on the Envision Stockton 2040 General Plan, the Council considered the same four map and policy options and provided guidance to staff to proceed with the Map A + Policy 2 option. This option would maintain the existing SOI and provide an urban land use designation for the economic development catalyst area and establish policy language requiring above-median wage jobs, VMT reductions, environmental impact mitigation, and housing linked to jobs with housing costs correlated to job wage levels.

During the timeframe in which the Planning Commission and City Council discussed the options for the area North of Eight Mile Road, the Healthy Neighborhoods Collaborative submitted a letter, dated June 21, 2017, in which the Collaborative enumerated specific components that its members would like included in the General Plan regarding development in the area north of Eight Mile Road (Attachment A ). Representatives of the Healthy Neighborhoods Collaborative also provided similar verbal comments at the Planning Commission and City Council study sessions on this topic.

Following City Council's guidance on July 25, 2017, staff proceeded with the preparation of the Draft General Plan which includes a new designation called the Economic and Education Enterprise designation and is applied to the area north of Eight Mile Road within the SOI. In developing this designation, staff considered the letter from the Healthy Neighborhoods Collaborative which

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contained well-conceived recommendations and incorporated most of the components, as shown in Table 2. The primary difference is that the draft Economic and Education Enterprise designation does not specify that jobs must provide wages that are 120 percent of area median income (see the third row).

**Table 2 Healthy Neighborhoods Collaborative Recommendations**

<b>Healthy Neighborhoods Collaborative Recommendation</b>	<b>Related Text from the Draft Economic and Education Enterprise Designation</b> <i>(emphasis added as appropriate)</i>
A transparent process or policy that guarantees, with documentation, that the “anchor employer” cannot be reasonably accommodated within existing city limits.	Businesses envisioned for this designation include those within a Core Business Cluster industry, as specified in the City’s Economic Development Strategic Plan, that provide a significant number of jobs offering wages averaging above Area Median Income, <b>and that cannot be reasonably accommodated elsewhere within the city limit.</b>
The “anchor employer” must provide a significant number of new jobs in a Core Business Cluster industry as specified in the city’s Economic Development Strategic Plan.	Businesses envisioned for this designation include <b>those within a Core Business Cluster industry, as specified in the City’s Economic Development Strategic Plan, that provide a significant number of jobs</b> offering wages averaging above Area Median Income, and that cannot be reasonably accommodated elsewhere within the city limit.
New jobs created must be of high quality, defined as full-time equivalent and on average offering wages of 120% of Area Median Income.	Businesses envisioned for this designation include those within a Core Business Cluster industry, as specified in the City’s Economic Development Strategic Plan, that provide a significant number of <b>jobs offering wages averaging above Area Median Income,</b> and that cannot be reasonably accommodated elsewhere within the city limit.

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The new project must demonstrate development that will reduce Vehicle Miles Traveled (for example, through the provision of vanpool or car share services and/or the promotion of active transportation alternatives) and ensure proportionate amounts of diverse housing stock are available (single family, multifamily, mixed use).

In support of a major job-generator, this designation promotes linked transportation and housing options so that future employees can live close to their jobs and commute ***using transportation modes that support the City's vehicle miles traveled (VMT) reduction goals. Businesses that reduce VMT by providing vanpool programs, car share services, and active transportation alternatives are encouraged.*** The designation also allows ***proximate housing stock that supports the job-generator, including single-family, multi-family, and/or mixed-use dwellings at various levels of affordability, with housing costs that generally correspond to the income levels of the jobs generated by the project.***

Projects proposed north of Eight Mile Road or anywhere outside of existing city limits must be required to go through the city's existing development review process (environmental review, Planning Commission, City Council, and annexation) and include a community benefits analysis.

The City will negotiate with applicants to develop ***community benefit through development agreements that identify desired community amenities in the area of development***, and will ensure that development ***mitigates its environmental impacts as feasible, pursuant to the California Environmental Quality Act (CEQA)...*** Development proponents are ***encouraged to propose creative and innovative master plans*** to further the City's economic development goals consistent with the policies outlined above.

A Community Benefits Agreement must be negotiated with any "anchor employer" to ensure specific amenities or benefits are included to the neighborhoods impacted (for example, local hire initiatives, creation of a community fund, workforce training, etc.).

The City will negotiate with applicants to develop ***community benefit through development agreements that identify desired community amenities in the area of development***, and will ensure that development mitigates its environmental impacts as feasible, pursuant to the California Environmental Quality Act (CEQA).



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Note: See pages 2-14 and 2-17 of the Draft General Plan for the full text of the Economic and Education Enterprise designation.

The Draft General Plan was published on June 26, 2018, including the Economic and Education Enterprise designation. Since then, numerous comments on the Economic and Education Enterprise designation have been submitted.

### **Staff-Recommended Change To Economic and Education Enterprise Designation**

In response to the series of community comments on the Economic and Education Enterprise designation, staff recommends changing the text of the Economic and Education Enterprise designation to clarify the process that will be required to proceed with a development project within this designation, as shown below (underline denotes additions; ~~strikethrough~~ denotes deletions):

Development in this designation is intended to support the City's economic development goals by attracting new businesses, industries, and/or educational institutions that provide high-quality jobs to the local workforce. By bringing major job-generators to Stockton, this designation supports the City's Economic Development Strategic Plan and State Executive Orders regarding greenhouse gas (GHG) reduction, Senate Bill (SB) 32, and the San Joaquin Sustainable Communities Strategy.

Businesses envisioned for this designation include:

- Those within a Core Business Cluster industry, as specified in the City's Economic Development Strategic Plan;
- That provide a significant number of jobs offering wages averaging above Area Median Income, and that cannot be reasonably accommodated elsewhere within the city limit.

In support of a major job-generator, this designation promotes:

- ~~I~~Linked transportation and housing options so that future employees can live close to their jobs and commute using transportation modes that support the City's vehicle miles traveled (VMT) reduction goals;
- Businesses that reduce VMT by providing vanpool programs, car share services, and active transportation alternatives are encouraged; and
- ~~The designation also allows p~~Proximate housing stock that supports the job-generator, including single-family, multi-family, and/or mixed-use dwellings at various levels of affordability, with housing costs that generally correspond to the income levels of the jobs generated by the project.

Projects proposed in the Economic and Education Enterprise designation will be required to:

- Adhere to the City's existing development review process including consideration by the Planning Commission and City Council of a General Plan Amendment; (It should be noted that a general plan amendment process will require subsequent discretionary decisions before the planning commission and the city council and will also include a corresponding environmental analysis ).

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- The City will negotiate with applicants to develop community benefit through development agreements that identify desired community amenities in the area of development; and
- The City as Lead Agency, and will ensure that development mitigates its environmental impacts as feasible, pursuant to the California Environmental Quality Act (CEQA).

The maximum anticipated floor area ratio (FAR) for non-residential building is 0.6 and the maximum anticipated residential density is 24 dwelling units per gross acre; however, the designation allows variation from these standards with City approval to achieve the economic development goals and complete communities described above. Development proponents are encouraged to propose creative and innovative master plans to further the City's economic development goals consistent with the policies outlined above.

Staff does not recommend changing the language about job wages to specify that jobs must be 120 percent of area median income. Rather, staff recommends maintaining the current language of requiring wages that are above area median income to maintain some flexibility to facilitate future economic development.

### **September 13, 2018 Planning Commission Study Session Discussion**

At its September 13, 2018 study session on the Draft General Plan, the Planning Commission discussed specific policies and actions in the Draft Envision Stockton 2040 General Plan. During this discussion, the Commission requested that staff prepare potential policy language options to respond to comments made by the Commission at the meeting so that the Commission could consider potential revisions to the Draft General Plan at the recommendation hearing. The policy options prepared by staff are provided below and organized by General Plan chapter.

#### **Chapter 3: Land Use**

The Commission discussed Action LU-6.2A, which directs the City to develop and implement an infill incentive program. Commissioners requested that this action prioritize different categories of infill and include incentives to address blight. Based on these comments, the action could be revised as follows (underline denotes additions; ~~strikethrough~~ denotes deletions):

**Action LU-6.2A:** Develop and implement an infill incentive program that encourages infill development through expedited permitting, changes in fee structures, prioritizing infrastructure improvements in infill areas, property owner and/or landlord incentives to maintain property and reduce blight, and/or other strategies. As part of this program, define and prioritize categories of infill types based on land use, and residential density or non-residential intensity.

#### **Chapter 6: Community Health**

The Commission discussed Action CH-2.3D, which directs the City to focus enforcement of public health-related codes in disadvantaged communities. Commissioners requested that this action consider properties that are governed by homeowners associations, many of which are not being maintained. Based on Commissioner comments, the action could be revised as follows:

**Action CH-2.3D:** Focus enforcement of public health-related codes in disadvantaged communities,

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including on properties that are managed by homeowner's associations.

The Commission discussed the need to promote the growth of small and minority-owned businesses. Policy CH-3.1 directs the City to promote entrepreneurial development and small business expansion. Options to address the Commission's discussion include the following revisions to Action CH-3.1A and/or a new action CH-3.1B, as follows:

**Action CH-3.1A:** Coordinate with the Small Business Development Centers and other agencies to provide well-tailored services and resources for small and minority-owned businesses.

**New - Action CH-3.1B:** Provide training, promotion, and technical, financial, and business assistance to small and minority-owned businesses.

The Commission discussed Action CH-3.2B, which directs the City to develop an ordinance to restrict check-cashing establishments and tobacco stores in areas with high concentrations of similar establishments, and to continue to restrict over-concentration of liquor stores through the Alcohol Ordinance. Commissioners discussed the need for a map that illustrates the locations of these target uses, plus mini markets, gas stations, and fast food restaurants. Such map could be used to inform decision-making about whether to allow these uses and where to target efforts to attract a grocery store or other options that would provide access to healthy food. Options to address the Commission's discussion include the following revisions:

**Action CH-1.2B:** Prepare a healthy food ordinance that creates incentives and guidelines that support access to healthy food, such as standards requiring that a percent of sales area in neighborhood food and beverage stores be devoted to healthy foods and/or requiring acceptance of CalFresh and WIC. As part of this ordinance, collect geographic data about current health conditions, and discourage unhealthy food establishments (e.g., mini markets and fast food restaurants) in neighborhoods with high rates of obesity and/or diabetes.

**Action CH-1.2C:** Collaborate with non-profit partners and San Joaquin County Public Health Services to attract full-service grocery stores in areas that lack access to fresh food and/or are at a high risk of obesity and diabetes.

**Action CH-3.2B:** Consider options and develop an ordinance to restrict mini markets, gas stations, fast food restaurants, check-cashing establishments, and tobacco stores in areas with high existing concentrations of similar establishments and continue to restrict over-concentrations of liquor stores through the City's Alcohol Ordinance. To inform the development of this ordinance, create a map that identifies the locations of current establishments of these types, and regularly maintain it so that it continues to aid in decision-making about such uses.

**New - Action CH-3.2D:** Work with the California Department of Alcoholic Beverage Control to avoid over concentration of liquor stores.

### **Staff Recommended Changes to the Draft General Plan**

This section of the staff report lists specific staff-recommended changes to the Draft General Plan based on public comments received to date. The staff-recommended changes are provided below and organized by General Plan chapter. Staff also recommends deleting the references to the

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existing General Plan goals, policies, and implementation measures that are provided in parentheses following policies and actions. Such references were intended only for the public review draft. Proposed changes are as follows (underline denotes additions; ~~strikethrough~~ denotes deletions):

### Chapter 1: Introduction

- *Page 1-5.* The following paragraph was only intended for the public review draft; for the adopted General Plan, staff recommends deleting it: “~~For this Public Review Draft of the 2040 General Plan, goals, policies, and actions that are carried forward from the prior 2035 General Plan, either verbatim or with modifications, are identified by the 2035 General Plan goal, policy, or implementation measure number in parentheses following the goal, policy, or action text (e.g., “(ED-3)” after Goal LU-1 refers to Goal ED-3 in the Economic Development Element of the 2035 General Plan). This is intended to help reviewers understand the context, but will be removed in the final, adopted 2040 General Plan.~~”

### Chapter 2: Planning Framework

- *Page 2-15:* As a correction, revise Figure 2-8, General Plan Land Use Map, to show the Institutional designation on the portion of a parcel that is located along the western boundary of the Sphere of Influence (SOI) and General Plan Planning Area. In response to a comment from the University of the Pacific (UOP), revise Figure 2-8 to designate the entire UOP campus property as Institutional (Attachment D).

### Chapter 3: Land Use

- *Page 3-15.* In response to a comment from the City of Stockton Public Works Department, add the following new action:  
“Action LU-3.3F. Allow developers to develop pocket parks that function as social gathering places and/or children’s play areas, and which can count towards the park standard requirements for new development.”
- *Page 3-17.* In response to a comment from the Delta Stewardship council, revise second paragraph as follows: “To aid regional conservation efforts, California’s Delta Stewardship Council adopted the Delta Reform Plan in 2013, which includes rules and recommendations to improve water supply, protect the Delta ecosystem, and preserve, protect, and enhance agricultural, cultural, and recreational features. As shown on Figure 3-6, the western portion of the Planning Area is located within the “Legal Delta,” the area subject to State oversight through the Delta Plan, including actions such as ensuring that the Stockton General Plan is consistent with the Delta Plan.”

### Clear Boundaries

On September 24, 2018, staff received a memo from Eric Parfrey, representing the Sierra Club and Campaign for Common Ground (Attachment B) that had been originally sent to Mayor Tubbs regarding agricultural lands and open space between Stockton and Lodi. Prior to receipt of the memo, staff had been proactively considering a change to the action language contained in the public draft Envision Stockton 2040 policy document. Below is the existing policy language, as modified through consultation with San Joaquin County Community Development Department staff. For the Planning Commission’s information, the 2016 adopted County General Plan Clear Boundaries policy language is also provided.

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*Page 3-20. In response to a comment from the Eric Parfrey, representing the Sierra Club and Campaign for Common Ground, revise Action LU-5.3B as follows: “Coordinate with San Joaquin County to develop a plan for a greenbelt or community separator around the city preserve agricultural land and open space areas in the unincorporated County that contribute to maintaining clear boundaries between cities.”*

Adopted San Joaquin County General Plan Language reads as the following:

#### LU-1.5 Clear Boundaries

The County shall strive to preserve agricultural and open space areas that contribute to maintaining clear boundaries among cities and unincorporated communities.

## CHAPTER 4: TRANSPORTATION

- *Page 4-4.* In response to a comment from SJCOG, revise the last paragraph as follows: “Stockton is a regional transportation hub. Residents and commuters have access to a variety of transit options for both inter-city and regional travel. The San Joaquin Council of Governments (SJCOG) coordinates transportation planning and financing for the region and administers regional plans that promote sustainable growth, including the Regional Transportation Plan & Sustainable Communities Strategy that guides funding and policy decisions, the Regional Congestion Management Program that identifies regionally significant roadways, and the Smart Growth Transit-Oriented Development Plan that promotes transit-friendly land use planning and development. Together, these plans intend to enhance multi-modal opportunities in Stockton for both passengers and freight.”
- *Page 4-5.* In response to a comment from SJCOG, revise Action TR-1.3A as follows: “Protect the Airport and related aviation facilities from encroachment by ensuring that all future development within the Airport Influence Area (AIA) is consistent with the policies adopted by the San Joaquin County Airport Land Use Commission (ALUC), except in cases where the City Council concludes that project approval would provide for the orderly development of the Airport and the areas surrounding it while protecting the public health, safety, and welfare by minimizing the public’s exposure to excessive noise and safety hazards, consistent with the San Joaquin County Airport Land Use Compatibility Plan and the Stockton Metropolitan Airport Land Use Compatibility Plan.”
- *Page 4-7.* In response to a comment from SJCOG, revise Action TR-1.3B as follows: “Where substantial development already exists within the AIA and is incompatible with ALUC policies, only allow additional infill development of similar land uses if projects meet all of the following criteria to be an infill project:
  - The project site is bounded on at least three sides by uses similar to those proposed.
  - The proposed project would not extend the perimeter of the area developed with incompatible uses.
  - The proposed project does not otherwise increase the intensity and/or incompatibility of the use with respect to the criteria identified in the San Joaquin County Airport Land Use Compatibility Plan and in the Stockton Metropolitan Airport Land Use Compatibility

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Plan through use permits, density transfers, or other strategies.”

- *Page 4-11.* In response to a comment from SJCOG, add the following as a new Action: “Action TR-3.2D: Continue to coordinate with the San Joaquin Council of Governments to increase opportunities for additional park and ride facilities, consistent with the San Joaquin County Regional Park and Ride Lot Master Plan.”
- *Page 4-12.* In response to a comment from SJCOG, revise Action TR-4.1A as follows: “Strive for Level of Service (LOS) D or better for both daily roadway segment and peak hour intersection operations, except when doing so would conflict with other land use, environmental, or economic development priorities, and with the following additional exceptions:
  - In the Greater Downtown, strive for LOS E or better, but LOS F may be acceptable after consideration of physical or environmental constraints and other City goals and policies.
  - Strive for different LOS standards along the following corridors due to physical constraints that limit the improvements that can be constructed:
    - Benjamin Holt Drive, Plymouth Road to Gettysburg Place – LOS F
    - Eight Mile Road, Trinity Parkway to I-5 – LOS E
    - Eight Mile Road, Lower Sacramento Road to West Lane - LOS E
    - Eighth Street, I-5 to El Dorado Street - LOS E
    - Eighth Street, Airport Way to Mariposa Road - LOS E
    - French Camp Road, Manthey Road to I-5 LOS E
    - French Camp Road, I-5 to Val Dervin Parkway- LOS F
    - Hammer Lane, I-5 to Kelly Drive – LOS E
    - Hammer Lane, West Lane to Holman Road – LOS E
    - Interstate 5, Hammer Lane to Benjamin Holt Drive – LOS E
    - Interstate 5, Benjamin Holt Drive to Downing Avenue - LOS F
    - Interstate 5, Downing Avenue to French Camp Road – LOS E
    - Otto Drive, I-5 to Thornton Road - LOS F
  - Roadway segments determined to be operating at deficient LOS by the San Joaquin Council of Governments in the Regional Congestion Management Program.
  - Accept worse than adopted-standard LOS at intersections where widening the intersection would reduce bicycle and pedestrian safety and/or increase.”

## CHAPTER 6: COMMUNITY HEALTH

- In response to a comment from the Catholic Charities Diocese of Stockton, revise Figure 6-1, Disadvantaged Communities, to change the way the data is shown on the map (i.e., adjust the colors used for each category), as shown on Attachment C .

## APPENDIX B: SB244 ANALYSIS

- *Page B-14.* As a correction, revise the discussion of drainage as follows: “~~Storm drain services are provided by the City of Stockton through an underground storm main. There are no storm drain deficiencies in this area.~~ Roadside ditches are used to manage stormwater for the community by the County, along with some underground storm mains managed by the City.”

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There are locations within this area that are prone to flooding during sizeable storms.”

- *Page B-28.* As a correction, revise the conclusion as follows: “Although there are several communities in and around Stockton that meet the State definition of a disadvantaged unincorporated community, the City serves most of these communities with City services. The analysis showed that there are no deficiencies within most of the communities and that infrastructure services are sufficient. However, some communities rely on septic systems and lack wastewater collection infrastructure, and one community currently lacks water supply infrastructure, and one ten communities lack adequate storm drainage facilities; therefore, the City should work with the County and other utility providers to seek funding to complete sewer, and water, and storm drainage systems in these areas. As described above, there are funding opportunities available to address these deficiencies.”

## **Full Buildout of the General Plan**

A number of comments on the Draft Environmental Impact Report (EIR) for the General Plan express concern about theoretical full buildout beyond the timeframe of the General Plan, which are reported in Chapter 3 of the Draft EIR, including in Table 3-3 on page 3-26. Although detailed responses to these comments are provided in Chapter 5 of the Final EIR, the following is to provide clarity on the General Plan planning horizon:

The General Plan EIR evaluates the impacts associated with the amount of development that is anticipated to occur by 2040, the “horizon” or targeted final year of the General Plan. The General Plan caps development to that year 2040 amount, noting that further development would require additional environmental review separate from that done for the General Plan EIR (see Action LU-6.1A).

The reason that the theoretical full buildout of the General Plan (which could take hundreds of years to achieve) is reported in Chapter 3 of the Draft EIR is to explain the methodology that was used to develop the 2040 horizon-year development projections. Specifically, to estimate the 2040 development projection, a percentage of the full theoretical buildout potential was distributed amongst the geographic “study areas” defined through the community participation process for the General Plan update.

As shown in Chapter 3 of the Final EIR, staff has refined the formatting of Table 3-3 on page 3-26 of the Draft EIR to highlight how the full theoretical buildout numbers relate to the 2040 horizon-year projection that was evaluated in the EIR. The original and revised versions are shown below. In the revised version, the formatting has been changed to clarify how a specific percentage of the full theoretical buildout capacity was assumed to occur by 2040 within each study area. Those 2040 development projections reported in Table 3-3, combined with pending and approved projects, constitute the entirety of the development that was analyzed in the EIR, in conformance with CEQA Guidelines Section 15378(a), which requires that an EIR consider the reasonably foreseeable indirect physical changes in the environment resulting from a project.

It is also important to note that the General Plan EIR does not establish City policy. The *General Plan* provides policy guidance for how much development can occur and where, including the overall development cap established in Action LU-6.1A. The *General Plan EIR* discloses the potential

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impacts associated with implementation of the General Plan. Its assumptions about where and how much development will occur do not in any way “pre-approve” future development, nor do they prohibit development. They are assumptions that factor into the analysis presented in the EIR with the purpose of disclosing the potential environmental impacts resulting from adoption and implementation of the General Plan.

**Original Version of Table 3-3 in the Draft EIR**

2040 GENERAL PLAN UPDATE AND UTILITY MASTER PLAN SUPPLEMENTS  
DRAFT ENVIRONMENTAL IMPACT REPORT  
CITY OF STOCKTON

**PROJECT DESCRIPTION****TABLE 3-3 2040 DEVELOPMENT BY STUDY AREA**

Study Area #/Name	Net New Single-Family Units (Full Buildout)	Percent Applied to 2040	Net New Single-Family Units (2040)	Net New Multi-Family Units (Full Buildout)	Percent Applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (Full Buildout)	Percent Applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (Full Buildout)	Percent Applied to 2040	Net New Industrial Square Feet (2040)
1. Eight Mile Rd	3,940	35%	1,380	25,350	5%	1,200	197,000	20%	39,000	74,095,000	0%	0
2. Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
3. West Ln and Alpine Rd	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
4. Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
5. El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
6. Miner/Weber Corridors <sup>a</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
7. Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
8. I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
9. Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
10. I-5 and Charter Way	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
11. Charter Wy/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
12. Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
13. Mariposa and Charter	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
14. East Weston Ranch <sup>b</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
15. South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
16. E French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>c</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>d</sup></b>	<b>20,480</b>		<b>3,060</b>	<b>70,400</b>		<b>9,040</b>	<b>45,773,000</b>		<b>8,739,000</b>	<b>208,796,000</b>		<b>2,033,000</b>

a. Excludes Open Window approved project.

b. Excludes Weston Ranch Town Center approved project.

c. Excludes approved/pending projects.

d. Numbers do not always add up due to rounding.

Source: PlaceWorks, 2017.

**Revised Table 3-3.**



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TABLE 3-3 (AS REVISED IN THE FINAL EIR) 2040 DEVELOPMENT BY STUDY AREA

Study Area #/Name	Net New Single-Family Units (Full Buildout)	Percent Applied to 2040	Net New Single-Family Units (2040)	Net New Multi-Family Units (Full Buildout)	Percent Applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (Full Buildout)	Percent Applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (Full Buildout)	Percent Applied to 2040	Net New Industrial Square Feet (2040)
1. Eight Mile Rd	3,940	35%	1,380	25,350	5%	1,200	197,000	20%	39,000	74,095,000	0%	0
2. Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
3. West Ln and Alpine Rd	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
4. Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
5. El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
6. Miner/Weber Corridors <sup>a</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
7. Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
8. I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
9. Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
10. I-5 and Charter Way	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
11. Charter Wy/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
12. Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
13. Mariposa and Charter	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
14. East Weston Ranch <sup>b</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
15. South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
16. E French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>c</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>d</sup></b>			<b>3,060</b>			<b>9,040</b>			<b>8,739,000</b>			<b>2,033,000</b>

Note: To estimate the 2040 development, a percentage of the full theoretical buildout potential was assumed for each study area, as shown in the gray, italicized columns.

a. Excludes Open Window approved project.

b. Excludes Weston Ranch Town Center approved project.

c. Excludes approved/pending projects.

d. Numbers do not always add up due to rounding.

## Climate Action Plan Advisory Committee

On September 20, 2018, the Climate Action Plan Advisory Committee (CAPAC) met to consider making a recommendation to the Planning Commission and City Council on supportive policies for balanced infill/outskirt development consistent with the 2008 Settlement Agreement with the Sierra Club and the state Attorney General (Attachment E). With three members absent (Nelson, Pedroza, Trehune) the CAPAC voted 5-2 (Hatch, Leek dissenting) to recommend approval of staff recommended infill/outskirt policies with amendments to address minor text edits to Actions 6.1e, 6.1f and 2.2c. However, a minimum of six affirmative votes is needed to forward an approval recommendation.

## DRAFT GENERAL PLAN COMMENTS AND RESPONSES

This section of the staff report responds to written comments on the Draft General Plan that suggested specific text edits. This section is organized by comment letter, with a reference to the comment letter number from the Final EIR. Staff responses are provided below each comment. Note that responses to comments made on the Draft EIR are addressed separately in the Final EIR.

### 7/23/18 SIERRA CLUB LETTER (LETTER #A03 IN FINAL EIR)

The Sierra Club suggested the following changes to the Draft General Plan. As explained in the responses provided below, the recommended goals and policies are already addressed in the Draft General Plan and/or other programs, so staff does not recommend any changes.

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- Add a “Sustainability/Climate Change” (or similar title) section and put in relevant goals, as noted below.
  - *Response:* Background information about climate change is provided on page 6-12 of the Draft General Plan. Policies and actions that address climate change are denoted with a globe symbol and summarized in Appendix A. In addition, the City has adopted a standalone Climate Action Plan (CAP), which remains in effect.
- Add goals that address climate change, greenhouse gas reduction, and clean energy (there are a few related goals and policies in the draft plan, e.g., POLICY CH-5.1 “Accommodate a changing climate through adaptation and resiliency planning and projects,” but several more should be added from the Climate Action Plan (we appreciate that the city has committed to updating the CAP).
  - *Response:* As indicated in the comment, Policy CH-5.1 addresses climate change. Other policies and actions that address climate change, including greenhouse gas (GHG) reduction and clean energy, are denoted with a globe symbol and summarized in Appendix A. The CAP is a standalone document that remains in effect, and it would be redundant to repeat GHG reduction measures from the CAP in the General Plan.
- Add a goal that addresses need for City resiliency programs to combat climate changes due to rising sea levels and increased flood risk.
  - *Response:* Action CH-5.1A directs the City to conduct a comprehensive climate change vulnerability assessment to inform the development of adaptation and resilience policies and strategies, and incorporate them into the Safety Element. This assessment and the associated policies and strategies will consider rising sea levels and increased flood risk. In addition, Policies SAF-2.3 and SAF-2.4 and their associated actions address flood risk.
- Add a goal that addresses jobs/housing balance (POLICY LU-6.4 “Ensure that land use decisions balance travel origins and destinations in as close proximity as possible” is a start, but more specificity and consistency with the land use map is needed).
  - *Response:* Action LU-6.4A provides specificity and Action LU-6.4B addresses land use patterns related to a jobs/housing balance, as follows:
    - Action LU-6.4A: Maintain a reasonable balance between potential job generation and local workforce availability with a goal of one job for each employed resident.
    - Action LU-6.4B: Maintain a reasonable proximity and balance (i.e., magnitude) between job generating uses, housing opportunities, and resident services and amenities.
- Add goals and policies
- (from Housing Element?) that address affordable housing and inclusionary housing.
  - *Response:* Goal CH-4 - Ensure that all residents have a safe, high-quality, and stable place to call home - and its associated policies and actions address affordable housing. Action CH-4.1B directs the City to conduct a study to explore the feasibility of inclusionary housing requirements, and to implement the feasible approaches identified

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in the study.

- Add goals and policies that specifically support the redevelopment of struggling shopping centers into mixed use projects with a strong component of affordable housing.
  - *Response:* The following actions support redevelopment, including for struggling shopping centers:
    - Action LU-1.1B: Evaluate the City’s parking policies, and amend the Development Code to provide more flexibility as appropriate to facilitate mixed-use redevelopment.
    - Action CH-2.1B: Provide incentives for rehabilitation or redevelopment of distressed properties.
    - Action CH-2.1C: Develop incentives to promote reuse of distressed areas, such as through permit streamlining, density bonuses, and other appropriate tools.
    - Action CH-2.1D: Conduct marketing to potential developers to encourage the redevelopment and conversion of distressed commercial strips into housing and mixed-use areas.
    - Action CH-2.2A: Aggressively facilitate the conservation and rehabilitation of older neighborhoods through the following approaches:
      - Utilize all federal, State, and local programs for conservation and rehabilitation projects.
      - Prioritize older neighborhoods for investment using funds such as the Community Development Block Grants.
      - Encourage private investment in older neighborhoods.
      - Cooperate in joint public-private partnerships to invest in older neighborhoods
- Add goals and policies that specifically address City/developer funding for increased transit services (this is required by the Settlement Agreement).
  - *Response:* As part of the City’s commitments under the 2008 Settlement Agreement, the City has approved a transit gap study and program that involves the transmittal of 100 percent of the City’s Local Transportation Fund (LTF) to the San Joaquin Regional Transit District (RTD) for transit purposes, as they are the acknowledged transit provider in Stockton.
- Add more specific goals related to crime prevention as recommended by Commissioners and members of the public.
  - *Response:* Crime prevention is addressed through Goal SAF-1 - Create a safe and welcoming environment in all areas of the city at all times of day - and its associated policies and actions.

**7/25/18 CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC) (LETTER #A04 IN FINAL EIR)**

The CPUC suggested the following change to the Draft General Plan. As explained in the response provided below, the recommended change is already addressed in the Draft General Plan, so staff does not recommend any further changes.

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- Add language to the Stockton 2040 General Plan Update so that any future development adjacent to or near the rail right-of-way (ROW) is planned with the safety of the rail corridor in mind.
  - *Response:* Actions TR-1.1C and TR-1.2C address safety around rail corridors, as shown below. In addition, individual projects that are adjacent to or near the rail ROW will be subject to project-specific design review to consider safety around rail corridors, among other issues.
    - Action TR-1.1C: Require roadways in new development areas to be designed with multiple points of access and to address barriers, including waterways and railroads, in order to maximize connectivity for all modes of transportation.
    - Action TR-1.2C: Provide grade separations at railroad crossings on arterial streets where feasible to ensure public safety and minimize traffic delay.

**8/9/18 SIERRA CLUB, DELTA-SIERRA GROUP MOTHER LODGE CHAPTER (LETTER #A08 IN FINAL EIR)**

The Delta-Sierra Group Mother Lode Chapter of the Sierra Club suggested the following changes to the Draft General Plan. As explained in responses provided below, the recommended text changes are already addressed in the Draft General Plan, so staff does not recommend any further changes.

- Policy TR 2.3 states “wheel” more frequently. Wheel should be changed to bicycle.
  - *Response:* The term “wheel” conveys the meaning adequately, particularly including wheelchair access for disabled persons, and changing to “bicycle” is not necessary.
- Action SAF-2.4.C in the proposed General Plan directs the City to preserve waterways and floodplains for non-urban uses to maintain flood carrying capacity. Additionally, language should be included that commits the City of Stockton to enhance these environments where wildlife migration has been identified as feasible, such as the Calaveras River.
  - *Response:* The following actions in the Draft General Plan address habitat enhancement, including in and along waterways and floodplains:
    - Action LU-5.1B: Protect, preserve, and improve riparian corridors and incorporate them in the City’s parks, trails, and open space system.
    - Action LU-5.1C: Require landscape plans to incorporate native and drought-tolerant plants in order to preserve the visual integrity of the landscape, conserve water, provide habitat conditions suitable for native vegetation, and ensure that a maximum number and variety of well-adapted plants are maintained.
    - Action LU-5.2A: Continue to coordinate with the San Joaquin Council of Governments and comply with the terms of the Multi-Species Habitat Conservation and Open Space Plan to protect critical habitat areas that support endangered, threatened, and special-status species.
    - Action LU-5.2B: For projects on or within 100 feet of sites that have the potential to contain special-status species or critical or sensitive habitats, including wetlands, require preparation of a baseline assessment by a qualified biologist following appropriate protocols, such as wetland delineation protocol defined by the US Army Corps of Engineers. If such sensitive species or habitats are found to be present, development shall avoid impacting the resource, and if avoidance

is not feasible, impacts shall be minimized through project design or compensation identified in consultation with a qualified biologist.

- Action LU-5.2C: Require new development to implement best practices to protect biological resources, including incidental take minimization measures and other federal and State requirements and recommendations that are consistent with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.
  - Action SAF-2.3A: Coordinate with appropriate State, federal, and local flood control agencies to develop a flood protection plan for the levee systems protecting the city that:
    - Identifies the levees protecting the city and the entities responsible for the operation and maintenance of the levees;
    - Determines the flood levels in the waterways and the level of protection offered by the existing levees along the waterways;
    - Identifies a long-term plan to upgrade the system as necessary to provide at least a 100-year level of flood protection to the city, and 200-year level of flood protection, where feasible;
    - Encourages multi-purpose flood management projects that, where feasible, incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the city's streams, creeks, and lakes; and
    - Includes provisions for updates to reflect future State or federally mandated levels of flood protection.
- Policy SAF-3.2: Protect the availability of clean potable water from groundwater sources. Revise to include from groundwater contamination sources.
  - *Response:* The following actions in the Draft General Plan address water quality:
    - Action SAF-3.1A: Actively participate in appropriate forums designed to discuss and solve regional water supply and quality issues.
    - Action SAF-3.2B: Require new development to employ low impact development (LID) approaches, including:
      - Conserving natural areas and reducing imperviousness.
      - Runoff storage.
      - Hydro-modification (to mimic pre-development runoff volume and flow rate).
      - Reducing trash accumulation.
      - Public education and outreach.
    - Action SAF-3.4A: Require all new urban development to be served by an adequate wastewater collection system to avoid possible contamination of groundwater from onsite wastewater disposal systems.

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- Action CH-2.3E: Work with wastewater and water utilities to seek funding to complete sewer and water systems in areas within the SOI where parcels still rely on septic systems and wells.

**8/10/18 SJCOG (LETTER #A12 IN FINAL EIR)**

SJCOG suggested the following changes to the Draft General Plan. Staff does not recommend these changes, as explained in responses provided below.

- Include the Federal Aviation Administration (FAA) notification requirement, as found in page 3-40 of SMALUCP and page 3-28 of SJCALUCP, in Action TR-1.3B.
  - *Response:* The City will comply with all FAA notification requirements. Adding a reference to comply with such requirements would be redundant with federal and State law.
- SJCOG provided the following comments related to transportation demand management (TDM):
  - “Commercial, retail, office, industrial and multifamily residential development should be required to prepare a Transportation Demand Management Plan, to support the Active and Mobile Community Goals, that may include on-site amenities, bike parking, shower facilities, lockers, preferential parking, transportation information kiosks, EV charging stations and park and ride spaces as much as feasible.”
  - “Mitigate potential air quality impacts by requiring large employers and business parks based on employment size to submit a Transportation Demand Management Plan.”
  - “SJCOG recommends modifying the Policy SAF-4.2 language as follows: Require all new large employers to work with the San Joaquin Council of Governments dibs program to implement a transportation demand management plan to address elements such as California's Parking Cash-Out Program, vanpooling/carpooling, transit, Emergency Ride Home Program, Preferential Parking, telecommuting, bicycle parking and on-site amenities, and rideshare and transit incentives.”
  - “SJCOG recommends adding the following new policy: Support San Joaquin Valley Air Pollution Control District Rule 9410 by requiring employers of 100 or more employees to work with the San Joaquin Council of Government's dibs program to develop and implement a Trip Reduction Program (eTrip).”
  - *Response:* San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 9410 and Policy SAF-4.2 in the Draft General Plan, which are cited in the comments, already address TDM. SJVAPCD Rule 9410 requires TDM for employers with over 100 employees. According to Rule 9410, such employers must implement an Employer Trip Reduction Implementation Plan (ETRIP) that meets specific targets. Draft General Plan Policy SAF-4.2 supports this rule as follows: “Encourage major employers to participate in a transportation demand management program (TDM) that reduces vehicle trips through approaches such as carpooling, vanpooling, shuttles, car-sharing, bike-sharing, end-of-trip facilities like showers and bicycle parking, subscription bus service, transit

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subsidies, preferential parking, and telecommuting.” In addition, Draft General Plan Action SAF-4.2A further supports the rule as follows: “Provide information and conduct marketing and outreach to major existing and new employers about the transportation demand management (TDM) program facilitated by the San Joaquin Council of Governments.” No changes to the policy and action are required in order to support TDM.

- SJCOG encourages the addition of “high-quality” transit facilities, as defined by Senate Bill (SB) 375, to Action LU-2.2B, which directs the City to establish a Transit Oriented Development (TOD) Overlay Zone around the Robert J. Cabral ACE Train Station and the San Joaquin Street Amtrak Station.
  - *Response:* According to the 2018 Regional Transportation Plan/Sustainable Communities Strategy, “high-quality” transit facilities in Stockton include bus transit hubs and transfer stations and bus rapid transit (BRT) routes. Given the extent of these facilities, adding the TOD Overlay would cover too broad of an area and reduce the effectiveness of the overlay. Therefore, staff does not recommend any changes.
- Policy SAF-2.5 and/or its associated actions, which relate to noise exposure, should include a reference to the noise exposure contour maps that are included as Exhibit 3B in the Stockton Municipal Airport Land Use Compatibility Plan.
  - *Response:* Referring to the airport noise contour maps in the Stockton Municipal Airport Land Use Compatibility Plan would not change the effectiveness of the draft policy or actions; therefore, staff does not recommend this change.

#### 8/1/18 COLLEEN FOSTER (LETTER #B02 IN FINAL EIR)

Colleen Foster requested that the introduction starting on page 3-22 of the Draft General Plan related to fiscal health be revised, as indicated below. Staff does not recommend this change, as explained in the response provided below.

- Revise the introduction to the section about fiscal health on page 3-22 to state that new housing does not generate adequate revenue to support City services.
  - *Response:* Fiscal impacts of new development are project-specific, including to the specific development agreement for a project. Action LU-6.5A requires the preparation of a fiscal impact analysis for large development projects and proposed annexations to ensure a full accounting of infrastructure and public service costs and to confirm whether revenue enhancement mechanisms are necessary to ensure net fiscal balance or better. The action also directs the City to require appropriate fiscal mitigations, when necessary, to ensure the City’s ongoing fiscal health. Action LU-6.5A would ensure that new residential development provide any needed fiscal mitigations to support the City’s fiscal health.

#### Revisions to the Utility Master Plan Supplements

Each Utility Master Plan Supplement (UMPS) Technical Memorandum (TM) contains the General Plan land use map. Because of the changes to the General Plan Map, the UMPS TM have been revised to show the updated version of the land use map. Also, based on comments from the City Municipal Utilities Department, the text in Section 8.2 on page 19 of the UMPS for Potable Water has

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been revised (Attachment F).

On October 10, 2018, as this staff report was being written, a comment letter was received from the League of Women Voters indicating opposition to housing and industrial development north of Eight Mile Road. The noted letter is attached to this staff report for the Planning Commission's information (Attachment G).

Present Situation:

The Planning Commission will receive a staff presentation on the proposed draft Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements, and the Final Environmental Impact Report. This presentation will include proposed changes based on comments/input received from the community, stakeholders, the Commission, and City Council. After consideration of the public draft General Plan and proposed changes, staff recommends that the Planning Commission adopt a Resolution recommending that the City Council approve: Certification of the Final Environmental Impact Report (FEIR); Envision Stockton 2040 General Plan Update; and Utility Master Plan Supplements (UMPS) (Attachment F).

Public Hearing Notice

A Public Notice of this hearing was published in The Record on October 10, 2018.

Attachment A - Healthy Neighborhoods Letter

Attachment B - Memorandum on Ag Belt

Attachment C - Revised Fig. 6-1 - Disadvantaged Communities

Attachment D - UOP Letter - General Plan Designation Request

Attachment E - CAPAC Settlement Agreement Consistency Table

Attachment F - Revised Utility Technical Memorandums

Attachment G - League of Women Voters October 10, 2018, Comment Letter





Healthy Neighborhoods Collaborative  
1106 N. El Dorado Street  
Stockton, CA 95202

June 21, 2017

Mr. David Kwong  
Community Development Director  
City of Stockton  
345 N. El Dorado Street  
Stockton, CA 95202

Dear Mr. Kwong,

The Healthy Neighborhoods Collaborative would like to thank you for the opportunity to provide input on the Stockton General Plan.

The Healthy Neighborhoods Collaborative is made up of public health, environmental, environmental justice, housing, and transportation advocates as well as community and faith groups. Together we are working toward a more healthful, equitable, and sustainable city.

As a Collaborative, we would like to provide comments on the proposed options for allowing growth north of Eight Mile Road. Our Collaborative recognizes the need for flexibility in the General Plan should the opportunity for a truly catalytic anchor institution present itself, and we believe the General Plan should include policies to prepare the city to attract such an entity. However, we believe that the city must also incorporate strong and definitive language to ensure that any project that requires a location outside of the existing city boundaries reflects the goals of the city at large.

During the city's public input process, there has been a clear preference for Land Use Alternative C, which prioritizes investment and growth in our existing neighborhoods rather than through expanding our city limits. If the city decides to allow development of an "anchor employer" in an area outside of the existing boundaries against the spirit of Alternative C, we believe that this development must be held to a very high standard. Specifically, our Collaborative would like to see the following components memorialized in any General Plan language permitting growth north of Eight Mile Road.

- A transparent process or policy that guarantees, with documentation, that the "anchor employer" cannot be reasonably accommodated within existing city limits
- The "anchor employer" must provide a significant number of new jobs in a Core Business Cluster industry as specified in the city's Economic Development Strategic Plan
- New jobs created must be of high quality, defined as full-time equivalent and on average offering wages of 120% of Area Median Income
- The new project must demonstrate development that will reduce Vehicle Miles Traveled (for example, through the provision of vanpool or car share services and/or the promotion of active transportation alternatives) and ensure proportionate amounts of diverse housing stock are available (single family, multifamily, mixed use)
- Projects proposed north of Eight Mile Road or anywhere outside of existing city limits must be required to go through the city's existing development review process (environmental review, Planning Commission, City Council, and annexation) and include a community benefits analysis
- A Community Benefits Agreement must be negotiated with any "anchor employer" to ensure specific amenities or benefits are included to the neighborhoods impacted (for example, local hire initiatives, creation of a community fund, workforce training, etc.)

Thank you for this opportunity to provide comment. We look forward to your response as well as continuing to provide public input as the General Plan process continues to move forward.

Sincerely,

A handwritten signature in cursive script that reads "Yolanda Park".

Yolanda Park, Co-Chair  
Healthy Neighborhoods Collaborative

Eric Parfrey, Steering Committee Chair  
Campaign for Common Ground

Elvira Ramirez, Executive Director  
Catholic Charities Diocese of Stockton

Richard Abood, Executive Committee  
Delta Sierra Group

Kristine Williams, Central Valley Program Officer  
Enterprise Community Partners

Pastor Curtis Smith, Chapter Director  
Faith in San Joaquin

Jeri Bigbee  
First Unitarian Universalist Social Justice Committee

LaCresia Hawkins, Program Manager  
Public Health Advocates

Jeremey Terhune, Co-Founder and Executive Director  
PUENTES

Hector Lara, Executive Director  
Reinvent South Stockton

Christina D. B. Frankel, Executive Director  
Save Downtown Stockton Foundation

Tammy Evans, RN, PHN, MSN, PhD, Director  
SJC Public Health Services

David Garcia, Chief Operating Officer  
TenSpace

Jasmine Leek, Director  
Third City Coalition

CC:

Mayor Michael Tubbs  
Vice Mayor Elbert Holman  
Councilmember Dan Wright  
Councilmember Susan Lofthus  
Councilmember Susan Lenz  
Councilmember Christina Fugazi  
Councilmember Jesus Andrade  
Planning Commissioner Don Aguillard  
Planning Commissioner Elizabeth Hull  
Planning Commissioner Sol Jobrack  
Planning Commissioner D'Adrea Davie  
Planning Commissioner Kimberly Warmsley  
Planning Commissioner Waqar Rizvi  
Planning Commissioner Anne Mallett  
David Stagnaro, Community Development Department

## M\_E\_M\_O\_R\_A\_N\_D\_U\_M

TO: Mayor Michael Tubbs  
 FR: Eric Parfrey  
 RE: Proposed "Ag Belt" and Ag Conservation Easements  
 DATE: September 20, 2018

Following up on our meeting on August 20, 2018, you asked to be given some background information on agricultural conservation easements and how a proposed "Ag Belt" between Stockton and Lodi would work. (The term "Ag Belt" is more appropriate than "greenbelt," which implies public parkland.)

First, Sierra Club and Campaign for Common Ground have advocated for the establishment of an Ag Belt north of Eight Mile Road and south of the Lodi Sphere of Influence for the over a decade. We made this strong request as part of the last 2007 General Plan and we were ignored by the staff and the City Council. Once again, we are asking that one or more strong policies and action measures be included in this updated 2040 plan in place of the existing weak and ineffective Policy LU-5.3 and Action LU-5.3B, as follows:

Policy LU-5.3 **Actively work to conserve prime agricultural lands outside the City boundaries and** Define discrete and clear city edges that preserve agriculture, open space, and scenic views.

Action LU-5.3B The City, in ~~Coordinate with~~ **coordination with San Joaquin County to develop a plan for a greenbelt or community separator around the city, the City of Lodi, the California Farmland Trust, residents and affected landowners, shall prepare an Agricultural Belt Action Plan that addresses, among other items, how to target the agricultural mitigation fees that are collected by the two cities and the County toward purchasing easements within a defined buffer area between Stockton and Lodi. The location of the Agricultural Belt area shall be identified in a non-parcel specific, general fashion on the Plan Land Use Diagram map.**

There is a long, failed history over the last decades of half-hearted attempts by the City of Stockton, the County, and Lodi to establish an Ag Belt. Now is the time to see that it actually gets done. It is incumbent upon the City of Stockton to take a strong leadership position on this project since it is the irresponsible sprawling land use practices of Stockton in the past that have kept these ag lands under so much threat of urbanization.

### How Do Agricultural Conservation Easements Work?

The creation of an Ag Belt can only be accomplished through strong political leadership and the reliance on existing and new funding sources. Agricultural separators between communities are created using a common tool called an agricultural conservation easement.

An agricultural conservation easement is a deed restriction landowners voluntarily place on their property to protect the farm from development. They are used by landowners (the “grantor”) to authorize a qualified conservation organization or public agency (“grantee”) to monitor and enforce the restrictions set forth in the agreement. Conservation easements are flexible documents tailored to each property and the needs of individual landowners. Agricultural conservation easements are designed to keep land available for farming.

In general, agricultural conservation easements limit subdivision, non-farm development and other uses that are inconsistent with commercial agriculture. Some easements allow lots to be reserved for family members. Agricultural conservation easements often permit commercial development related to the farm operation and the construction of farm buildings. Most do not restrict farming practices, although some grantees ask landowners to implement soil and water conservation plans. For example, landowners who receive federal funds for farm easements must implement an agricultural land easement conservation plan approved by the USDA Natural Resources Conservation Service (see the attached “Agricultural Conservation Easements” fact sheet prepared by the American Farmland Trust and USDA).

Landowners that enter into voluntary conservation easements are compensated for giving up or selling their “development rights.” The value of the compensation to the landowner for entering into the easement is determined by an appraisal. In the Central Valley the value of development rights to a typical large parcel of prime agricultural land may be about 60% to 80% of the fee simple value of the land without an easement. Thus, the landowner of a prime property that is valued at \$15,000 to \$20,000 per acre could be reimbursed for selling an easement at a rate of approximately \$9,000 to \$16,000 per acre.

### How Are Purchases of Conservation Easements Funded?

The purchase of easements for agricultural, habitat, and other types of conservation easements is typically coordinated through a local land trust. Land trusts California is home to more than 150 land trusts that have protected more than 2.5 million acres. Land trusts use a variety of funding sources to pay farmers for the purchase of easements, including grants from State and federal agencies and funds collected by local ag mitigation fee programs.

The City of Stockton, as well as San Joaquin County and the cities of Manteca, Lathrop, and Tracy, have an ongoing relationship with the most active land trust that is operating in the county, the California Central Valley Farmland Trust (formerly called the Central Valley Farmland Trust). Over the last two decades, the Trust has protected 50 family farms covering

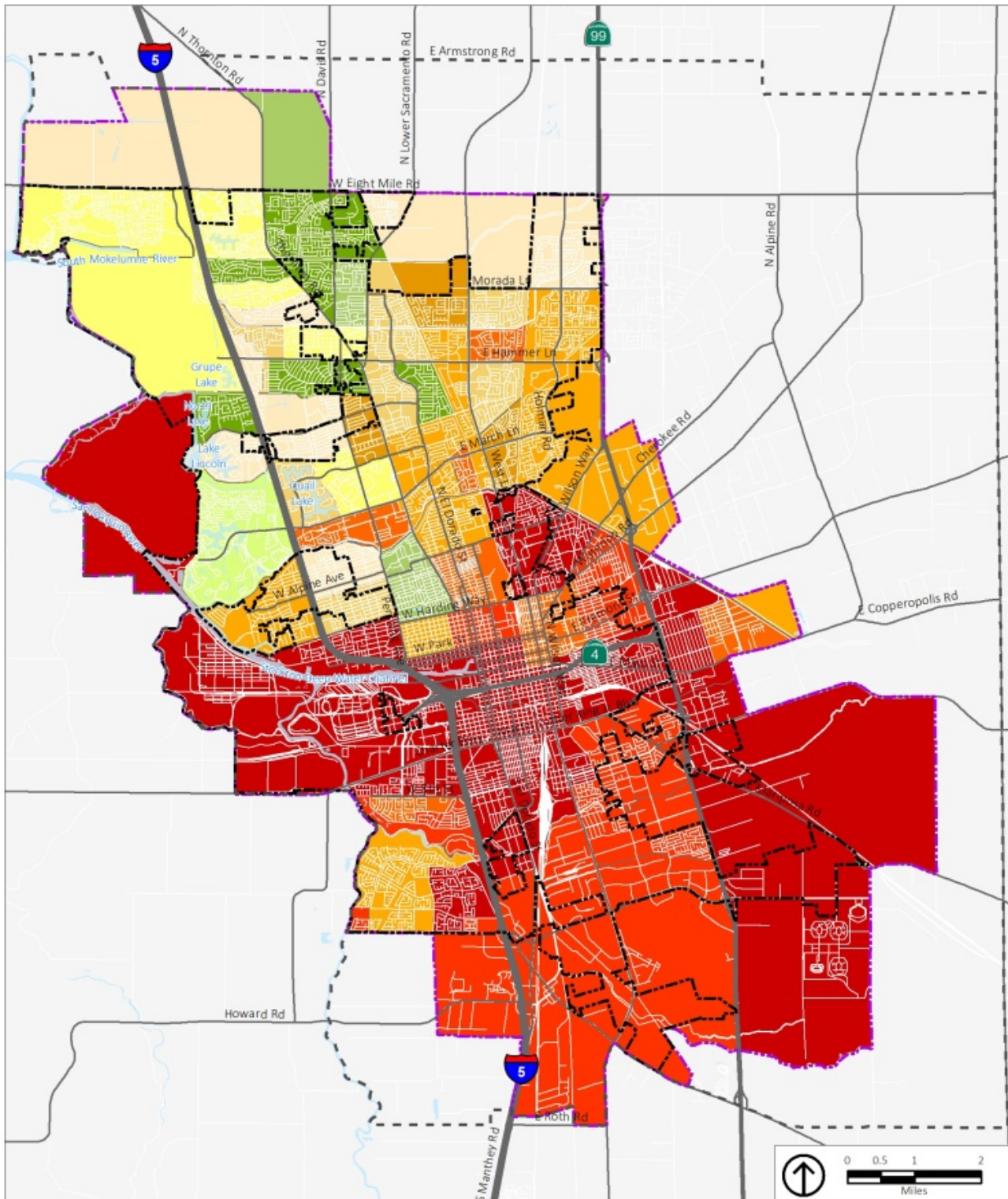
nearly 15,000 acres in San Joaquin, Sacramento, Stanislaus, and Merced counties (see <http://cafarmtrust.org/all-properties/>).

Another very successful example of a local land trust is located in Yolo County. Since its founding in 1988, Yolo Land Trust has permanently conserved nearly 11,000 farmland acres (see <http://theyololandtrust.org/>).

#### Next Steps

1. City Council adopts the new General Plan with a clear and unambiguous policy to prepare an Ag Belt Action Plan that will result in the establishment of an Ag Belt. The Council must appoint a task force or action team to oversee that effort. The task force or team should include representatives from the City of Stockton, the County, the City of Lodi, the California Farmland Trust, as well as residents and affected landowners.
2. Charge the action team with a detailed work plan that sets forth specific items to accomplish and strict deadlines to prepare the Ag Belt Action Plan. For example, the action team should be directed to review the existing agricultural fee mitigation programs adopted by the City of Stockton and the County and to make any recommended changes to the programs to ensure that funds are directed specifically to purchase easements on properties located with the proposed Ag Belt. Similarly, the action team should meet with representatives of the California Farmland Trust to review their strategic plan and to negotiate with them to amend the strategic plan to target properties within the Ag Belt. An updated Memorandum of Understanding should be negotiated between the City of Stockton, the County, and the Trust, and adding in the City of Lodi.
3. Following the preparation of a first draft Ag Belt Action Plan the documents should be subject to public review including workshops or hearings at the Planning Commission and City Council. The plan would presumably be subject to CEQA, so an environmental analysis would be required.

**Figure 6-1**  
**Disadvantaged Communities**



Source: California Office of Environmental Health Hazard Assessment, 2018; PlaceWorks, 2018.

**Percent of Disadvantaged Communities**





*Sent Via E-Mail  
September 26, 2018*

David Stagnaro  
Planning Manager  
City of Stockton Community Development Department  
425 North El Dorado Street  
Stockton, California 95202  
David.Stagnaro@stocktonca.gov

RE: Envision Stockton EIR  
Amended Comments (follow-up to Letter dated 8.10.18)

#### FACILITIES

Real Estate Management  
Physical Planning  
Space Management

3601 Pacific Avenue  
Stockton, California 95211  
Tel 209.946.2319

Dear Mr. Stagnaro,

As a follow-up to our original comments sent to your attention via e-mail on August 10, 2018 and subsequent discussions with City staff and representatives, University of the Pacific is amending its request related to our parcels. At this time, University of the Pacific is requesting that all Pacific parcels (shown on the attached **Campus Base Map**) be assigned the General Plan land use designation of "Institutional". There is a second attachment entitled **Exhibit "B" LLA 16-03**, which was part of the lot line adjustment requested and made to Parcel APN 110-260-04 in 2016.

Pacific staff and administration will continue to work with City staff and representatives to further develop the land use zoning designation(s) of these parcels over the coming months. It is anticipated that the zoning district of "University/College" is likely to be requested for all parcels; however, that will be determined as the City and Pacific refine and clarify the anticipated development of our parcels, as well as the "University/College" zoning district.

As noted in our original comments, University of the Pacific is grateful for the opportunity to review and provide comments on this General Plan Update. We appreciate the collaborative work over the past months and look forward to continuing discussions with City staff, one of the University's critical local partners, as the Update is finalized.

Respectfully Submitted,

*Priscilla Meckley-Archuleta*

Priscilla Meckley-Archuleta  
Executive Director







## 2008 SETTLEMENT AGREEMENT CONSISTENCY

2008 SETTLEMENT AGREEMENT PROVISION	DRAFT ENVISION STOCKTON 2040 GENERAL PLAN POLICY/ACTION
6a: Require 4,400 units of new housing growth to be in Greater Downtown Stockton.	Policy LU-2.2: Facilitate the development of at least 4,400 units in the Greater Downtown by 2040.
	Action LU-2.2A: Provide more flexibility for residential development, including through a streamlined permit process, and to contribute to the “charm” of the Downtown.
	Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.
6b: Require an additional 14,000 units of new housing growth to be in 2008 city limit.	Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
	Action LU-6.2A: Implement an infill incentive program that encourages infill through expedited permitting, changes in fee structures, and other strategies.
	Action 6.2B: Do not approve future annexations or City utility connections unless they are consistent with the overall goals and policies of the General Plan and do not adversely impact the City’s fiscal viability, environmental resources, infrastructure and services, and quality of life.
6c: Provide incentives to promote infill development in the Greater Downtown.	Action LU-2.1A: Develop and utilize all available financing tools and incentives to stimulate Downtown investment.
	Action LU-2.1B: Provide flexibility for redevelopment of historic structures in the Downtown.
	Policy LU-2.2: Facilitate the development of at least 4,400 units in the Greater Downtown by 2040.
	Action LU-2.2A: Provide more flexibility for residential development, including through a streamlined permit process, and to contribute to the “charm” of the Downtown.
	Action LU-2.2B: Establish Transit Oriented Development (TOD) Overlay Zones around the ACE and Amtrak train stations to promote high-density residential and TOD.
	Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.
	Action LU-2.3A: Establish an entertainment district in the Downtown with strategies to promote entertainment uses, including reducing permit requirements and other incentives.
6d: Provide incentives for infill development within the existing city limit but outside the Greater Downtown.	Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
	Action LU-6.2A: Implement an infill incentive program that encourages infill through expedited permitting, changes in fee structures, and other strategies.
7a: Establish criteria for minimum levels of transportation efficiency, transit availability and level of service (LOS), City service capacity, water availability, and other urban services performance measures.	Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
	Action LU-6.2B: Do not approve future annexations or City utility connections unless they are consistent with the overall goals and policies of the General Plan and do not adversely impact the City’s fiscal viability, environmental resources, infrastructure and services, and quality of life.
	Action LU-6.3A: Require development to mitigate any impacts to existing sewer, water, stormwater, street, fire station, park, or library infrastructure that would reduce service levels.

## 2008 SETTLEMENT AGREEMENT CONSISTENCY

	Policy TR-4.1: Utilize level of service (LOS) information to aid understanding of potential major increases to vehicle delay at key signalized intersections.
	Action TR-4.1A: Strive for traffic LOS D or better.
	Policy TR-4.2: Replace LOS with: (1) vehicle-miles traveled (VMT) per capita; and (2) impacts to non-automobile travel modes, as the metrics to analyze impacts related to land use proposals under the California Environmental Quality Act, in accordance with SB 743.
	Action TR-4.2A: Require projects to evaluate per capita vehicle miles traveled (VMT) and impacts to transit, bicycle, and pedestrian modes.
	Action TR-4.2B: Amend the Transportation Impact Analysis Guidelines to include alternative travel metrics and screening criteria.
	Action TR-4.3A: Amend the Transportation Impact Analysis Guidelines to establish a threshold of 15 percent below baseline VMT per capita to determine a significant impact under CEQA.
	Policy SAF-3.2: Protect the availability of clean potable water from groundwater sources.
	Action SAF-3.2A: Continue to cooperate with San Joaquin County, Stockton East Water District, and CalWater to monitor groundwater withdrawals and ensure that they fall within the target yield for the drinking water aquifer.
	Policy SAF-3.4: Ensure adequate collection, treatment, and safe disposal of wastewater.
	Action SAF-3.4A: Require all new development to be served by an adequate wastewater collection system to avoid possible contamination of groundwater from onsite disposal systems.
7b: Establish criteria for firm, effective milestones that will assure infill, jobs/housing, GHG, and VMT reduction goals are met before new entitlements can be granted.	Policy LU-6.1: Carefully plan for future development and proactively mitigate potential impacts.
	Action LU-6.1A: Require that environmental review for any development project that would exceed the development anticipated in the General Plan EIR address associated growth impacts.
	Action LU-6.1B: Monitor the rate of growth to ensure that it does not overburden the City's infrastructure and services.
	Action LU-6.1C: Require that vacant unincorporated properties be annexed prior to provision of City services.
	Action LU-6.1D: Require that all utility connections outside the city limit be for land uses that are consistent with the General Plan.
	Action LU-6.1E: Do not approve new development unless there is adequate infrastructure in place or planned and funded.
	Action LU-6.1F: Adjust the Public Facilities Fee structure to encourage development in areas where infrastructure is already present and ensure that non-infill pays its fair share of anticipated citywide capital facilities and operational costs.
7c: Establish impact fees on new development or alternative financing mechanisms that will ensure the milestones identified in 7a and 7b are met. Such fees shall be structured to ensure that development is revenue-neutral to the City, may be in addition to mitigation measures required by	Policy LU-2.2: Facilitate the development of at least 4,400 new housing units in the Greater Downtown by 2040.
	Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.
	Policy LU-3.3: Maintain or expand the currently available amount of public park and open space area in each neighborhood.
	Action LU-3.3-D: Periodically review the City's Development Impact Fee requirements to determine whether they should be adjusted to reflect the City's recreation priorities.

**2008 SETTLEMENT AGREEMENT CONSISTENCY**

CEQA, and shall be based on a fiscal impact analysis and a public facilities financing plan.	Policy LU-6.1: Carefully plan for future development and proactively mitigate potential impacts.
	Action LU-6.1F: Adjust the Public Facilities Fee structure to encourage development in areas where infrastructure is already present and ensure that non-infill pays its fair share of anticipated citywide capital facilities and operational costs.
	Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
	Action LU-6.2A: Implement an infill incentive program that encourages infill through expedited permitting, changes in fee structures, and other strategies.
	Policy LU-6.5: Improve and maintain the City's fiscal health.
	Action LU-6.5A: Require preparation of a fiscal impact analysis for large development projects and annexations to ensure a full accounting of infrastructure and public service costs, and require fiscal mitigations when necessary.
	Action LU-6.5B: Utilize development agreements to implement public facilities financing plans and secure fiscal mitigations.
	Action LU-6.5C: Utilize developer fees, the City's public facilities fees, and other methods to finance public facilities.
7d: Explore the feasibility of enhancing the financial viability of infill development in the Greater Downtown, through the use of such mechanisms as an infill mitigation bank.	Policy LU-2.1: Promote the Downtown and waterfront as a hub for regional commerce and entertainment, with high-quality housing to complement commercial activity and to infuse the area with daytime, evening, and weekend activity.
	Action LU-2.1A: Develop and utilize all available financing tools and incentives to stimulate Downtown investment.
	Action LU-2.1B: Provide flexibility for redevelopment of historic structures in the Downtown.
	Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.



## MEMORANDUM

DATE        October 1, 2018

TO            David Stagnaro  
                  City of Stockton Community Development Department

FROM        Tanya Sundberg and Charlie Knox

SUBJECT     Revisions to Utility Master Plan Supplements

Each Utility Master Plan Supplement (UMPS) Technical Memorandum (TM) shows the General Plan land use map as an attachment to the TM. Because staff has recommended changes to the land use map, the UMPS TM have been revised to show the updated version of the land use map in the attachments to those reports.

Also, based on comments from the City of Stockton Municipal Utilities Department, the text in Section 8.2 on page 19 of the UMPS for Potable Water (prepared by West Yost Associates) has been revised as follows:

### 8.2 COSMUD Northern and Southern Systems

The COSMUD water system includes a northern system and a southern system, essentially separated by the Cal Water system serving the center of the City. Since the completion of the Delta Water Treatment Project, COSMUD operates the two systems essentially as two separate, distinct systems. There is an eastern connection between the two systems, but the connection is kept closed. Evaluating the northern and southern COSMUD systems as if they were operated as a single system would allow the storage and pumping facilities to be evaluated collectively. However, additional studies of the potential benefits and impacts of connecting the north and south systems would need to be prepared.

To allow the northern and southern COSMUD systems to be operated as a single system, it is recommended that:

- ~~A western connection between the northern and southern COSMUD systems be constructed,~~
- ~~The water provided by Stockton East Water District (SEWD) to the southern COSMUD system be treated to the same standards as the water in the northern COSMUD system. This could be done by either SEWD or COSMUD, and~~



- ~~The eastern connection be opened.~~

The full versions of the revised UMPS are provided as Attachments 1, 2, and 3 to this memorandum.

**ATTACHMENT 1**  
**REVISED POTABLE WATER MASTER PLAN SUPPLEMENT**





## **TECHNICAL MEMORANDUM**

DATE: December 12, 2017 Project No.: 425-10-16-04.006  
 TO: City of Stockton, Municipal Utilities Department SENT VIA: EMAIL  
 FROM: Patrick Johnston, PE, RCE #59028  
 REVIEWED BY: Doug Moore, PE, RCE #58122  
 SUBJECT: Stockton General Plan Update—Potable Water Master Plans Supplement

This Technical Memorandum (TM) presents the Supplement for the Stockton General Plan Update (GPU) to the City of Stockton's Water Master Plan (2008) and California Water Service Company's (Cal Water) Water Master Plan (2009). Where appropriate, information related to the Service Area of the Cal Water is also included in this TM. This TM includes the following Sections:

- Summary
  - Demand Projection Summary by Development Area
  - Demand Projection Summary by Service Area
  - Required New Infrastructure Evaluations Summary
  - Cost Evaluations Summary
- Demand Projection Estimates by Development Area
  - GPU Land Uses by Development Area
  - Water Demand Factors
  - Average Day Demands by Development Area
  - Maximum Day Demands by Development Area
  - Peak Hour Demands by Development Area
  - Demand Projection Estimates by Service Area
- Infrastructure Evaluations
  - City of Stockton Municipal Utilities District (COSMUD) Infrastructure Evaluation
    - Water Storage Capacity
    - Pumping Facility Capacity
    - Distribution Pipeline Capacity

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- Cal Water Infrastructure Evaluation
  - Water Storage Capacity
  - Pumping Facility Capacity
  - Distribution Pipeline Capacity
- Cost Evaluations by Service Area
  - COSMUD
  - Cal Water
- Recommended Future Actions
  - Water Distribution System
  - COSMUD Northern and Southern Systems
  - Future Development-Specific Potable Water Improvements

The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

## SUMMARY

A summary of this TM is presented below. The development of the summary data is presented in the following sections of this TM. The 2040 land uses are shown on Figure 1 as well as the COSMUD Service Areas and the Cal Water Service Area, and the General Plan Update buildout land use map is provided in Attachment A.

### Demand Projection Summary by Development Area

The estimated Average Day Demands, Maximum Day Demands and Peak Hour Demands are summarized in Table 1 and discussed below:

- The total Average Day Demands are estimated to increase from about 48.6 million gallons per day (mgd) for existing land uses to 66.3 mgd for the 2040 land uses.
- The total Maximum Day Demands are estimated to increase from about 85.0 mgd for existing land uses to 115.4 mgd for the 2040 land uses.
- The total Peak Hour Demands are estimated to increase from about 137.3 mgd for existing land uses to 196.1 mgd for the 2040 land uses.

### Demand Projection Summary by Service Area

Demands within the City are distributed between the service areas for COSMUD and Cal Water as described below:

- For the existing land uses, the COSMUD service area contains 52 percent of the demands, while the Cal Water service area contains 48 percent of the demands.
- The ratio is different with the 2040 land uses, with the COSMUD service area containing 61 percent of the demands and the Cal Water service area containing 39 percent of the demands.

<b>Table 1. Summary of Water Demand Estimates</b>			
<i>Land Use</i>	<i>Demand (mgd)</i>		
	<i>Existing</i>	<i>Net New</i>	<i>2040</i>
<b>Average Day Demand</b>			
Study Areas	2.09	2.42	4.51
Approved/Pending Development Projects Within City Limit	2.05	5.15	7.20
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.34	7.27	7.61
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects(e)	44.16	2.84	46.99
<b>Total</b>	<b>48.63</b>	<b>17.68</b>	<b>66.32</b>
<b>Maximum Day Demand</b>			
Study Areas	3.68	4.27	7.95
Approved/Pending Development Projects Within City Limit	3.49	8.78	12.27
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.57	12.36	12.94
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	77.27	4.96	82.23
<b>Total</b>	<b>85.01</b>	<b>30.37</b>	<b>115.38</b>
<b>Peak Hour Demand</b>			
Study Areas	5.95	6.99	12.94
Approved/Pending Development Projects Within City Limit	7.16	17.87	25.03
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	1.18	25.45	26.63
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	123.01	8.51	131.53
<b>Total</b>	<b>137.30</b>	<b>58.83</b>	<b>196.13</b>

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## Required New Infrastructure Evaluations Summary

Preliminary infrastructure evaluations were performed for water storage facilities, booster pumping facilities, and the pipeline facilities for the COSMUD and Cal Water Service Areas. These infrastructure evaluations were developed by:

- Estimating the water demands for the GPU 2040 level of development within the COSMUD and Cal Water Service Areas. The 2040 level of development is significantly less than full buildout of the land uses in the GPU.
- Comparing the 2040 estimated water demands with the demands in the COSMUD and Cal Water WMPs. The COSMUD and Cal Water WMPs were based on full buildout the 2035 General Plan.
- The required infrastructure needed for the 2040 level of development was estimated by comparison with the infrastructure identified in the WMPs, but revised based on the changes in water demands.

For COSMUD:

- The 2035 buildout average day demands from the COSMUD WMP were 98.2 mgd. The 2040 average day demands from this study are 39.9 mgd, representing a decrease of approximately 60 percent.
- The required new storage is 24.9 mg for the 2040 GPU development. For comparison, the required new storage from the WMP for buildout of the 2035 General Plan is 142.9 mg.
- Potentially, no new booster pumping capacity is needed for the 2040 GPU development, depending on the existing booster pumps ability (depending on location) to serve the new development. For comparison, the required new pumping capacity from the WMP for buildout of the 2035 General Plan is 150,087 gpm.
- Water distribution piping will be needed for many of the new growth areas. However, in comparison to the buildout of the 2035 General Plan, significant reductions of the water distribution piping should occur for some study areas.

For Cal Water:

- The 2035 buildout average day demands from the Cal Water WMP were 35.1 mgd. The 2040 average day demands from this study are 26.4 mgd, representing a decrease of approximately 25 percent.
- The required new storage is 0.5 mg for the 2040 GPU development. For comparison, the required new storage from the WMP for buildout of the 2035 General Plan is 13.5 mg.
- The required new booster pumping capacity needed for the 2040 GPU development is 3,057 gpm. For comparison, the required new pumping capacity from the WMP for buildout of the 2035 General Plan is 13,925 gpm.
- The existing water distribution piping, along with recent and ongoing system improvements should be adequate for the GPU 2040 development.

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## Cost Evaluations Summary

Preliminary infrastructure cost estimates for water storage facilities and booster pumping facilities were developed for the COSMUD and Cal Water Service Areas.

For COSMUD:

- The 2040 GPU required new water storage is 24.9 mg, which has an estimated cost of \$37.9 million. For comparison, from the WMP (for buildout of the 2035 General Plan), the required new storage was estimated to be 109.2 mg, which has an estimated cost of \$166.4 million.
- No new booster pumping capacity was needed for the 2040 GPU land uses (if the locations of the existing booster pumps will result in adequate service to the new development). For comparison, from the WMP (for buildout of the 2035 General Plan), the required new booster pumping was estimated to be 150,087 gpm, which has an estimated cost of \$65.5 million.

Cal Water:

- The 2040 GPU required new water storage is 0.5 mg, which has an estimated cost of \$0.8 million. For comparison, from the WMP (for buildout of the 2035 General Plan), the required new storage was estimated to be 13.5 mg, which has an estimated cost of \$21.5 million.
- The 2040 GPU required new booster pumping capacity of 3,057 gpm, which has an estimated cost of \$2.2 million. For comparison, from the WMP (for buildout of the 2035 General Plan), the required new booster pumping was estimated to be 13,925 gpm, which has an estimated cost of \$9.8 million.

## DEMAND PROJECTION ESTIMATES BY DEVELOPMENT AREA

### GPU Land Uses by Development Area

The land use data for this evaluation was provided by Placeworks, and is provided in Attachment A (including the buildout land use map, the dwelling unit data, acreage data, and 2040 percent development data). The land use data has been reorganized in Table 2 to be suitable for water demand estimating. The reorganized land use data includes existing land use data, net new land use data for 2040, and 2040 land use data. For single family and multi-family residential land uses, Table 2 includes both the dwelling unit data and the acreage data. For commercial and industrial land uses, Table 2 includes only acreage data. All the water demands were based on gross areas shown in Table 2.

Table 2. Land Use Data

Study Area or Development Name	Single Family (Dwelling Units)			Single Family (Gross Acres)			Multi Family (Dwelling Units)			Multi Family (Gross Acres)			Commercial (Gross Acres)			Industrial (Gross Acres)			Total Area (Gross Acres)		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																					
Study Area 1 - Eight Mile Rd Area	121	1,379	1,500	17.2	232.1	249.3	96	1,198	1,294	8.4	73.2	81.6	17.9	0.6	18.5	4.0	0.0	4.0	47.5	305.9	353.4
Study Area 2 - Pacific Ave Corridor	22	0	22	4.3	0.0	4.3	114	110	224	3.5	4.7	8.2	115.8	3.6	119.4	0.1	0.0	0.1	123.7	8.3	132.1
Study Area 3 - West Ln and Alpine Rd Area	208	77	285	38.7	51.6	90.2	94	680	774	5.8	29.9	35.7	68.4	6.2	74.6	54.5	0.0	54.5	167.4	87.7	255.1
Study Area 4 - Port/Waterfront	54	17	71	8.0	11.2	19.2	288	1,770	2,058	8.6	26.7	35.3	10.3	2.9	13.2	44.3	5.6	49.9	71.1	46.5	117.6
Study Area 5 - El Dorado/Center Corridors	45	0	45	5.5	0.0	5.5	359	1,196	1,555	8.3	17.2	25.5	8.1	1.8	9.9	9.9	0.0	9.9	31.8	19.0	50.8
Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	47	0	47	4.4	0.0	4.4	219	1,248	1,467	4.8	18.0	22.8	6.5	3.4	9.9	7.2	0.0	7.2	22.9	21.3	44.3
Study Area 7 - Wilson Way Corridor	12	0	12	1.6	0.0	1.6	6	234	240	0.2	6.8	7.1	2.1	5.1	7.2	14.9	0.0	14.9	18.9	12.0	30.9
Study Area 8 - I-5/Highway 4 Interchange	8	0	8	1.0	0.0	1.0	1	659	660	0.1	38.0	38.1	0.9	0.9	1.8	13.2	0.0	13.2	15.2	38.9	54.1
Study Area 9 - Railroad Corridor at California St	19	0	19	2.3	0.0	2.3	23	1,340	1,363	1.3	19.3	20.6	4.8	1.5	6.3	7.0	0.0	7.0	15.4	20.7	36.2
Study Area 10 - I-5 and Charter Way Area	228	86	314	42.8	57.9	100.7	29	98	127	4.1	4.2	8.3	26.3	2.6	28.9	4.6	2.7	7.3	77.8	67.4	145.2
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	5	0	5	0.3	0.0	0.3	0	396	396	0.0	7.7	7.7	2.9	0.4	3.3	0.0	0.0	0.0	3.2	8.2	11.3
Study Area 12 - Airport Way Corridor	53	0	53	7.2	0.0	7.2	4	108	112	0.4	4.7	5.1	6.8	10.2	17.0	89.5	13.1	102.6	103.9	28.0	131.9
Study Area 13 - Mariposa and Charter Area	12	0	12	3.9	0.0	3.9	77	0	77	5.9	0.0	5.9	5.6	1.5	7.2	0.0	0.0	0.0	15.5	1.5	17.0
Study Area 14 - East Weston Ranch <sup>(b)</sup>	1	0	1	1.1	0.0	1.1	0	0	0	0.0	0.0	0.0	4.9	14.8	19.8	0.0	0.0	0.0	6.1	14.8	20.9
Study Area 15 - South of French Camp Rd	89	0	89	75.7	0.0	75.7	9	0	9	6.1	0.0	6.1	0.0	0.0	0.0	0.1	0.0	0.1	81.8	0.0	81.8
Study Area 16 - E French Camp Rd Area	59	0	59	122.7	0.0	122.7	4	0	4	9.1	0.0	9.1	0.1	0.0	0.1	0.2	0.0	0.2	132.2	0.0	132.2
<b>Subtotal (Study Areas)</b>	<b>983</b>	<b>1,558</b>	<b>2,541</b>	<b>336.9</b>	<b>352.8</b>	<b>689.7</b>	<b>1,323</b>	<b>9,036</b>	<b>10,359</b>	<b>66.8</b>	<b>250.5</b>	<b>317.3</b>	<b>281.5</b>	<b>55.6</b>	<b>337.1</b>	<b>249.5</b>	<b>21.4</b>	<b>270.8</b>	<b>934.6</b>	<b>680.2</b>	<b>1,614.8</b>
<b>Approved/Pending Development Projects Within City Limit</b>																					
Westlake Villages	0	2,630	2,630	0.0	680.0	680.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	680.0	680.0
Delta Cove	0	1,164	1,164	0.0	132.7	132.7	0	381	381	0.0	47.6	47.6	0.0	2.6	2.6	0.0	0.0	0.0	0.0	182.9	182.9
North Stockton Projects III	235	2,220	2,455	38.0	355.0	393.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.0	355.0	393.0
Cannery Park	0	981	981	0.0	272.0	272.0	0	210	210	0.0	16.0	16.0	0.0	104.0	104.0	0.0	0.0	0.0	0.0	392.0	392.0
Nor Cal Logistics Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crystal Bay	0	951	951	0.0	19.4	19.4	0	392	392	0.0	78.7	78.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.1	98.1
Sanctuary	0	5,452	5,452	0.0	1,026.0	1,026.0	0	1,618	1,618	0.0	67.4	67.4	0.0	35.5	35.5	0.0	0.0	0.0	0.0	1,128.9	1,128.9
Tidewater Crossing	310	-310	0	869.6	-869.6	0.0	0	0	0	0.0	0.0	0.0	0.0	16.0	16.0	0.0	0.0	0.0	869.6	-853.6	16.0
Open Window <sup>(c)</sup>	0	0	0	0.0	0.0	0.0	9	1,391	1,400	0.0	11.9	11.9	12.9	-1.0	11.9	0.0	0.0	0.0	12.9	10.9	23.8
Weston Ranch Town Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	41.5	41.5	0.0	0.0	0.0	0.0	41.5	41.5
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>545</b>	<b>13,088</b>	<b>13,633</b>	<b>907.6</b>	<b>1,615.5</b>	<b>2,523.1</b>	<b>9</b>	<b>3,992</b>	<b>4,001</b>	<b>0.0</b>	<b>221.6</b>	<b>221.6</b>	<b>12.9</b>	<b>198.6</b>	<b>211.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>920.5</b>	<b>2,035.7</b>	<b>2,956.2</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																					
Mariposa Lakes	5	8,955	8,960	151.0	939.3	1,090.3	3	1,553	1,556	0.0	585.0	585.0	0.0	150.0	150.0	0.0	0.0	0.0	151.0	1,674.3	1,825.3
Airpark 599	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	128.0	128.0	0.0	0.0	0.0	0.0	128.0	128.0
Tra Vigne <sup>(d)</sup>	0	1,244	1,244	0.0	846.4	846.4	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	846.4	846.4
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>5</b>	<b>10,199</b>	<b>10,204</b>	<b>151.0</b>	<b>1,785.7</b>	<b>1,936.7</b>	<b>3</b>	<b>1,553</b>	<b>1,556</b>	<b>0.0</b>	<b>585.0</b>	<b>585.0</b>	<b>0.0</b>	<b>278.0</b>	<b>278.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>151.0</b>	<b>2,648.7</b>	<b>2,799.7</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects <sup>(e)</sup>	76,463	1,501	77,964	13,870.5	1,270.5	15,141.0	33,183	0	33,183	1,915.9	0.0	1,915.9	546.6	0.0	546.6	1,783.8	0.0	1,783.8	18,116.8	1,270.5	19,387.3
<b>Grand Total</b>	<b>77,996</b>	<b>26,346</b>	<b>104,342</b>	<b>15,266.0</b>	<b>5,024.6</b>	<b>20,290.5</b>	<b>34,518</b>	<b>14,581</b>	<b>49,099</b>	<b>1,982.7</b>	<b>1,057.1</b>	<b>3,039.8</b>	<b>841.0</b>	<b>532.1</b>	<b>1,373.1</b>	<b>2,033.2</b>	<b>21.4</b>	<b>2,054.6</b>	<b>20,122.9</b>	<b>6,635.1</b>	<b>26,758.0</b>

## Water Demand Factors

The 2008 COSMUD WMP and the 2009 Cal Water WMP provided water demand factors for both existing land uses (Figures 3-8 through 3-16 of the COSMUD WMP and Figures 3-10 through 3-22 of the Cal Water WMP) and for future land uses (Table 3-8 of the COSMUD WMP and Table 3-11 of the Cal Water WMP) for use in estimating demands in the water distribution system. Demand factors used for estimating water distribution system demands are intentionally conservative, meaning they are higher than the corresponding actual demands may be, to allow for a range of different demands within a land use category. For example, actual commercial demands would be very low for rental storage units to very high for restaurants. To allow for this range of actual possible demands, conservative (high) demand factors are used for estimating water demands, resulting in pipeline sizes that can accommodate either low or high actual demands.

The gross area demand factors used in this GPU water demand estimate are summarized in Table 3, which includes factors for single family residential, multi-family (including a higher factor for downtown multi-family) residential, commercial, and industrial land uses.

## Average Day Demands by Development Area

The Average Day Demand estimates are calculated in Table 4. Average Day demands are the estimate of the water used by the residents and businesses in the water system service area. The Average Day Demands are calculated by multiplying the appropriate land use data by the appropriate demand factor. The following Average Day Demands are calculated for existing, net new, and 2040 land use conditions:

- Average Day Demand from exiting land uses: 48.6 mgd
- Average Day Demand from net new land uses: 17.7 mgd
- Average Day Demand from 2040 land uses: 66.3 mgd

## Maximum Day Demands by Development Area

The Maximum Day demand estimates are calculated in Table 5. Maximum Day demands are the estimate of the water used by the residents and businesses in the water system service area on the day of the year when the demands are the highest. The Maximum Day demands are calculated by multiplying the Average Day Demands by the appropriate maximum day peaking factor (see Table 3). The Maximum Day peaking factor for the COSMUD service area is 1.7. The Maximum Day peaking factor for the Cal Water service area is 1.8. The following Maximum Day demands are calculated for existing, net new, and 2040 demands:

- Maximum Day demand from exiting land uses: 85.0 mgd
- Maximum Day demand from net new land uses: 30.4 mgd
- Maximum Day demand from 2040 land uses: 115.3 mgd

<b>Table 3. Water Demand Factors and Peaking Factors</b>		
<b>Land Use Category</b>	<b>Units</b>	<b>Factor</b>
<b>City of Stockton and Cal Water Demand Factors</b>		
Single Family Residential	gpd/ gross acre	2,232
Multi-Family Residential	gpd/ gross acre	4,642
Multi-Family Residential (Downtown)	gpd/ gross acre	13,927
Commercial	gpd/ gross acre	2,053
Industrial	gpd/ gross acre	1,785
<b>City of Stockton Peaking Factors</b>		
Maximum Day Peaking Factor (Maximum Day to Average Day)		1.7
Peak Hour Peaking Factor (Peak Hour to Average Day)		3.5
<b>Cal Water Peaking Factors</b>		
Maximum Day Peaking Factor (Maximum Day to Average Day)		1.8
Peak Hour Peaking Factor (Peak Hour to Average Day)		2.5



Table 4. Average Day Demand

Study Area Name	Water District	Percent Cal Water	Percent City	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
				Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																		
Study Area 1 - Eight Mile Rd Area	No District	0%	100%	38,425	517,995	556,420	39,109	339,673	378,782	36,693	1,238	37,931	7,200	0	7,200	121,427	858,907	980,333
Study Area 2 - Pacific Ave Corridor	California Water	95%	5%	9,689	0	9,689	16,141	21,943	38,084	237,866	7,382	245,248	135	0	135	263,831	29,325	293,157
Study Area 3 - West Ln and Alpine Rd Area	California Water	90%	10%	86,297	115,113	201,409	27,109	138,818	165,926	140,544	12,704	153,248	97,252	0	97,252	351,201	266,634	617,835
Study Area 4 - Port/Waterfront	California Water	100%	0%	17,756	25,082	42,838	39,899	310,294	350,193	21,051	6,040	27,091	79,152	9,920	89,073	157,858	351,336	509,195
Study Area 5 - El Dorado/Center Corridors	California Water	100%	0%	12,357	0	12,357	38,412	132,726	171,138	16,645	3,706	20,351	17,646	0	17,646	85,060	136,432	221,492
Study Area 6 - Miner/Weber Corridors	California Water	100%	0%	9,805	0	9,805	22,438	166,973	189,411	13,401	6,896	20,297	12,795	0	12,795	58,439	173,869	232,308
Study Area 7 - Wilson Way Corridor	California Water	100%	0%	3,679	0	3,679	1,151	31,767	32,918	4,318	10,522	14,840	26,666	0	26,666	35,814	42,289	78,103
Study Area 8 - I-5/Highway 4 Interchange	California Water	100%	0%	2,301	0	2,301	635	176,391	177,027	1,832	1,832	3,664	23,521	0	23,521	28,289	178,224	206,513
Study Area 9 - Railroad Corridor at California St	California Water	100%	0%	5,132	0	5,132	6,207	89,381	95,588	9,816	3,062	12,878	12,478	0	12,478	33,633	92,443	126,076
Study Area 10 - I-5 and Charter Way Area	California Water	100%	0%	95,618	129,215	224,834	18,890	19,551	38,441	54,035	5,258	59,293	8,216	4,859	13,075	176,759	158,883	335,642
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	California Water	100%	0%	630	0	630	0	35,911	35,911	5,930	894	6,824	0	0	0	6,560	36,805	43,365
Study Area 12 - Airport Way Corridor	California Water	80%	20%	16,017	0	16,017	1,634	21,837	23,471	13,974	20,902	34,875	159,884	23,376	183,261	191,510	66,115	257,625
Study Area 13 - Mariposa and Charter Area	California Water	100%	0%	8,800	0	8,800	27,566	0	27,566	11,521	3,180	14,701	0	0	0	47,887	3,180	51,067
Study Area 14 - East Weston Ranch	City of Stockton	0%	100%	2,534	0	2,534	0	0	0	10,151	30,452	40,602	0	0	0	12,685	30,452	43,137
Study Area 15 - South of French Camp Rd	No District	0%	100%	168,856	0	168,856	28,345	0	28,345	0	0	0	116	0	116	197,317	0	197,317
Study Area 16 - E French Camp Rd Area	No District	0%	100%	273,929	0	273,929	42,440	0	42,440	240	0	240	335	0	335	316,944	0	316,944
<b>Subtotal (Study Areas)</b>				<b>751,827</b>	<b>787,406</b>	<b>1,539,233</b>	<b>309,975</b>	<b>1,485,266</b>	<b>1,795,240</b>	<b>578,016</b>	<b>114,067</b>	<b>692,083</b>	<b>445,397</b>	<b>38,156</b>	<b>483,553</b>	<b>2,085,215</b>	<b>2,424,894</b>	<b>4,510,109</b>
<b>Approved/Pending Development Projects Within City Limit</b>																		
Westlake Villages	City of Stockton	0%	100%	0	1,517,661	1,517,661	0	0	0	0	0	0	0	0	0	0	1,517,661	1,517,661
Delta Cove	City of Stockton	0%	100%	0	296,234	296,234	0	220,925	220,925	0	5,298	5,298	0	0	0	0	522,457	522,457
North Stockton Projects III	City of Stockton	0%	100%	84,810	792,309	877,119	0	0	0	0	0	0	0	0	0	84,810	792,309	877,119
Cannery Park	City of Stockton	0%	100%	0	607,065	607,065	0	74,276	74,276	0	213,544	213,544	0	0	0	0	894,885	894,885
Nor Cal Logistics Center	City of Stockton	0%	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	City of Stockton	0%	100%	0	43,298	43,298	0	365,346	365,346	0	0	0	0	0	0	0	408,644	408,644
Sanctuary	City of Stockton	0%	100%	0	2,289,883	2,289,883	0	312,888	312,888	0	72,954	72,954	0	0	0	0	2,675,725	2,675,725
Tidewater Crossing	City of Stockton	0%	100%	1,940,866	-1,940,866	0	0	0	0	0	32,853	32,853	0	0	0	1,940,866	-1,908,013	32,853
Open Window	California Water	100%	0%	0	0	0	0	165,749	165,749	26,491	-2,053	24,437	0	0	0	26,491	163,696	190,186
Weston Ranch Town Center	City of Stockton	0%	100%	0	0	0	0	0	0	0	85,111	85,111	0	0	0	85,111	85,111	85,111
<b>Subtotal (Approved/Pending Development Projects Within City Limit)</b>				<b>2,025,676</b>	<b>3,605,584</b>	<b>5,631,260</b>	<b>0</b>	<b>1,139,184</b>	<b>1,139,184</b>	<b>26,491</b>	<b>407,706</b>	<b>434,197</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,052,167</b>	<b>5,152,474</b>	<b>7,204,641</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																		
Mariposa Lakes	No District	0%	100%	337,010	2,096,381	2,433,392	0	2,715,721	2,715,721	0	307,996	307,996	0	0	0	337,010	5,120,099	5,457,109
Airpark 599	No District	0%	100%	0	0	0	0	0	0	0	262,823	262,823	0	0	0	0	262,823	262,823
Tra Vigne	No District	0%	100%	0	1,889,150	1,889,150	0	0	0	0	0	0	0	0	0	0	1,889,150	1,889,150
<b>Subtotal (Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence)</b>				<b>337,010</b>	<b>3,985,531</b>	<b>4,322,541</b>	<b>0</b>	<b>2,715,721</b>	<b>2,715,721</b>	<b>0</b>	<b>570,819</b>	<b>570,819</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>337,010</b>	<b>7,272,071</b>	<b>7,609,082</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects		50%	50%	30,956,888	2,835,553	33,792,441	8,894,162	0	8,894,162	1,122,394	0	1,122,394	3,184,912	0	3,184,912	44,158,357	2,835,553	46,993,910
<b>Grand Total</b>				<b>34,071,402</b>	<b>11,214,074</b>	<b>45,285,476</b>	<b>9,204,137</b>	<b>5,340,171</b>	<b>14,544,308</b>	<b>1,726,900</b>	<b>1,092,592</b>	<b>2,819,492</b>	<b>3,630,310</b>	<b>38,156</b>	<b>3,668,466</b>	<b>48,632,749</b>	<b>17,684,993</b>	<b>66,317,741</b>
<b>Total Cal Water</b>				15,663,904	1,669,236	17,333,140	4,623,119	1,291,995	5,915,114	1,087,328	74,504	1,161,832	1,981,260	33,481	2,014,741	23,355,611	3,069,215	26,424,826
<b>Total City of Stockton</b>				18,407,498	9,544,838	27,952,336	4,581,018	4,048,176	8,629,194	639,572	1,018,088	1,657,660	1,649,050	4,675	1,653,725	25,277,138	14,615,778	39,892,916

Note: The water demands, analyses, and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

Table 5. Maximum Day Demand

Study Area Name	Water District	Percent Cal Water	Percent City	Maximum Day Factor	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
					Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																			
Study Area 1 - Eight Mile Rd Area	No District	0%	100%	1.70	65,322	880,592	945,914	66,485	577,444	643,929	62,378	2,105	64,483	12,241	0	12,241	206,425	1,460,142	1,666,567
Study Area 2 - Pacific Ave Corridor	California Water	95%	5%	1.80	17,393	0	17,393	28,973	39,388	68,361	426,969	13,250	440,219	243	0	243	473,577	52,639	526,216
Study Area 3 - West Ln and Alpine Rd Area	California Water	90%	10%	1.79	154,471	206,051	360,522	48,524	248,484	297,008	251,574	22,739	274,314	174,081	0	174,081	628,650	477,274	1,105,925
Study Area 4 - Port/Waterfront	California Water	100%	0%	1.80	31,961	45,148	77,109	71,818	558,529	630,347	37,891	10,872	48,763	142,474	17,857	160,331	284,144	632,406	916,550
Study Area 5 - El Dorado/Center Corridors	California Water	100%	0%	1.80	22,243	0	22,243	69,141	238,907	308,048	29,961	6,670	36,631	31,762	0	31,762	153,108	245,577	398,685
Study Area 6 - Miner/Weber Corridors	California Water	100%	0%	1.80	17,648	0	17,648	40,389	300,551	340,940	24,121	12,413	36,535	23,032	0	23,032	105,190	312,965	418,155
Study Area 7 - Wilson Way Corridor	California Water	100%	0%	1.80	6,623	0	6,623	2,071	57,181	59,252	7,772	18,939	26,712	47,999	0	47,999	64,465	76,121	140,586
Study Area 8 - I-5/Highway 4 Interchange	California Water	100%	0%	1.80	4,142	0	4,142	1,143	317,505	318,648	3,298	3,298	6,596	42,338	0	42,338	50,921	320,802	371,723
Study Area 9 - Railroad Corridor at California St	California Water	100%	0%	1.80	9,238	0	9,238	11,173	160,885	172,058	17,668	5,512	23,180	22,461	0	22,461	60,540	166,397	226,937
Study Area 10 - I-5 and Charter Way Area	California Water	100%	0%	1.80	172,113	232,588	404,701	34,002	35,191	69,194	97,262	9,465	106,727	14,788	8,746	23,534	318,166	285,990	604,156
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	California Water	100%	0%	1.80	1,134	0	1,134	0	64,640	64,640	10,674	1,609	12,283	0	0	0	11,808	66,249	78,057
Study Area 12 - Airport Way Corridor	California Water	80%	20%	1.78	28,511	0	28,511	2,909	38,871	41,779	24,874	37,205	62,078	284,594	41,610	326,204	340,887	117,685	458,573
Study Area 13 - Mariposa and Charter Area	California Water	100%	0%	1.80	15,840	0	15,840	49,619	0	49,619	20,738	5,723	26,461	0	0	0	86,197	5,723	91,920
Study Area 14 - East Weston Ranch	City of Stockton	0%	100%	1.70	4,309	0	4,309	0	0	0	17,256	51,768	69,023	0	0	0	21,564	51,768	73,332
Study Area 15 - South of French Camp Rd	No District	0%	100%	1.70	287,055	0	287,055	48,186	0	48,186	0	0	0	197	0	197	335,438	0	335,438
Study Area 16 - E French Camp Rd Area	No District	0%	100%	1.70	465,680	0	465,680	72,148	0	72,148	409	0	409	569	0	569	538,805	0	538,805
<b>Subtotal (Study Areas)</b>					<b>1,303,683</b>	<b>1,364,379</b>	<b>2,668,062</b>	<b>546,580</b>	<b>2,637,576</b>	<b>3,184,157</b>	<b>1,032,846</b>	<b>201,569</b>	<b>1,234,415</b>	<b>796,779</b>	<b>68,213</b>	<b>864,992</b>	<b>3,679,889</b>	<b>4,271,738</b>	<b>7,951,626</b>
<b>Approved/Pending Development Projects Within City Limit</b>																			
Westlake Villages	City of Stockton	0%	100%	1.70	0	2,580,024	2,580,024	0	0	0	0	0	0	0	0	0	0	2,580,024	2,580,024
Delta Cove	City of Stockton	0%	100%	1.70	0	503,598	503,598	0	375,573	375,573	0	9,006	9,006	0	0	0	0	888,176	888,176
North Stockton Projects III	City of Stockton	0%	100%	1.70	144,178	1,346,924	1,491,102	0	0	0	0	0	0	0	0	0	144,178	1,346,924	1,491,102
Cannery Park	City of Stockton	0%	100%	1.70	0	1,032,010	1,032,010	0	126,269	126,269	0	363,025	363,025	0	0	0	0	1,521,304	1,521,304
Nor Cal Logistics Center	City of Stockton	0%	100%	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	City of Stockton	0%	100%	1.70	0	73,607	73,607	0	621,088	621,088	0	0	0	0	0	0	0	694,694	694,694
Sanctuary	City of Stockton	0%	100%	1.70	0	3,892,801	3,892,801	0	531,910	531,910	0	124,022	124,022	0	0	0	0	4,548,733	4,548,733
Tidewater Crossing	City of Stockton	0%	100%	1.70	3,299,472	-3,299,472	0	0	0	0	0	55,850	55,850	0	0	0	3,299,472	-3,243,622	55,850
Open Window	California Water	100%	0%	1.80	0	0	0	0	298,348	298,348	47,683	-3,696	43,987	0	0	0	47,683	294,652	342,335
Weston Ranch Town Center	City of Stockton	0%	100%	1.70	0	0	0	0	0	0	0	144,689	144,689	0	0	0	0	144,689	144,689
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>					<b>3,443,650</b>	<b>6,129,493</b>	<b>9,573,143</b>	<b>0</b>	<b>1,953,188</b>	<b>1,953,188</b>	<b>47,683</b>	<b>692,895</b>	<b>740,578</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,491,333</b>	<b>8,775,576</b>	<b>12,266,909</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																			
Mariposa Lakes	No District	0%	100%	1.70	572,917	3,563,848	4,136,766	0	4,616,726	4,616,726	0	523,593	523,593	0	0	0	572,917	8,704,168	9,277,085
Airpark 599	No District	0%	100%	1.70	0	0	0	0	0	0	0	446,800	446,800	0	0	0	0	446,800	446,800
Tra Vigne	No District	0%	100%	1.70	0	3,211,554	3,211,554	0	0	0	0	0	0	0	0	0	0	3,211,554	3,211,554
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>					<b>572,917</b>	<b>6,775,403</b>	<b>7,348,320</b>	<b>0</b>	<b>4,616,726</b>	<b>4,616,726</b>	<b>0</b>	<b>970,393</b>	<b>970,393</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>572,917</b>	<b>12,362,521</b>	<b>12,935,439</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects		50%	50%	1.75	54,167,524	4,961,574	59,129,098	15,562,764	0	15,562,764	1,963,934	0	1,963,934	5,572,874	0	5,572,874	77,267,095	4,961,574	82,228,669
<b>Grand Total</b>					<b>59,487,773</b>	<b>19,230,849</b>	<b>78,718,622</b>	<b>16,109,345</b>	<b>9,207,490</b>	<b>25,316,835</b>	<b>3,044,463</b>	<b>1,864,857</b>	<b>4,909,320</b>	<b>6,369,653</b>	<b>68,213</b>	<b>6,437,866</b>	<b>85,011,234</b>	<b>30,371,409</b>	<b>115,382,643</b>
<b>Total Cal Water</b>					27,420,042	2,932,701	30,352,743	8,098,917	2,323,888	10,422,805	1,926,513	133,623	2,060,136	3,483,213	59,891	3,543,104	40,928,685	5,450,103	46,378,788
<b>Total City of Stockton</b>					32,067,732	16,298,148	48,365,880	8,010,428	6,883,602	14,894,029	1,117,950	1,731,234	2,849,184	2,886,439	8,322	2,894,761	44,082,549	24,921,306	69,003,855

Note: The water demands, analyses, and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

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### Peak Hour Demands by Development Area

The Peak Hour demand estimates are calculated in Table 6. Peak Hour demands are the estimate of the water used by the residents and businesses in the water system service area for the single hour during the year when the demands are the highest. The Peak Hour demands are calculated by multiplying the Average Day Demands by the appropriate peak hour peaking factor. The Peak Hour peaking factor for the COSMUD service area is 3.5. The Peak Hour peaking factor for the Cal Water service area is 2.5. The following Peak Hour demands are calculated for existing, net new, and 2040 demands:

- Peak Hour demand from exiting land uses: 137.3 mgd
- Peak Hour demand from net new land uses: 58.8 mgd
- Peak Hour demand from 2040 land uses: 196.1 mgd

### Demand Projection Estimates by Service Area

Demands within the City are distributed between the service areas for COSMUD and Cal Water. For the existing land uses, the COSMUD service area contains 52 percent of the demands, while the Cal Water service area contains 48 percent of the demands. The ratio is different with the 2040 land uses, with the COSMUD service area containing 61 percent of the demands and the Cal Water service area containing 39 percent of the demands.

The majority of the Study Areas are within the Cal Water Service Area. However, the Eight Mile Study area constitutes about 22 percent of the demands for all of the study areas, and is assigned to the COSMUD Service Area. The majority of the approved or pending development projects within the City limits or outside of the City limits are within the COSMUD Service Area, or are expected to be served by COSMUD. The result of this is that, while the existing demands are split almost evenly between the COSMUD and Cal Water Service Areas, the 2040 land use demands are more skewed to the COSMUD Service Area. Overall, 85 percent of the increases in demands from new development occur within areas that will be served by COSMUD.

As stated above, the demand analyses presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these demand analyses should be refined and updated through detailed evaluations of each specific development project.

Table 6. Peak Hour Demand

Study Area Name	Water District	Percent Cal Water	Percent City	Peak Hour Factor	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
					Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																			
Study Area 1 - Eight Mile Rd Area	No District	0%	100%	3.50	134,487	1,812,984	1,947,471	136,880	1,188,856	1,325,736	128,425	4,334	132,759	25,201	0	25,201	424,993	3,006,174	3,431,167
Study Area 2 - Pacific Ave Corridor	California Water	95%	5%	2.55	24,708	0	24,708	41,160	55,956	97,115	606,558	18,824	625,381	345	0	345	672,770	74,779	747,549
Study Area 3 - West Ln and Alpine Rd Area	California Water	90%	10%	2.60	224,371	299,293	523,664	70,482	360,926	431,408	365,415	33,029	398,444	252,855	0	252,855	913,123	693,248	1,606,371
Study Area 4 - Port/Waterfront	California Water	100%	0%	2.50	44,390	62,706	107,095	99,747	775,735	875,482	52,627	15,100	67,727	197,881	24,801	222,682	394,645	878,341	1,272,986
Study Area 5 - El Dorado/Center Corridors	California Water	100%	0%	2.50	30,893	0	30,893	96,030	331,815	427,845	41,613	9,264	50,877	44,114	0	44,114	212,650	341,079	553,729
Study Area 6 - Miner/Weber Corridors	California Water	100%	0%	2.50	24,512	0	24,512	56,095	417,432	473,528	33,502	17,241	50,743	31,989	0	31,989	146,097	434,673	580,771
Study Area 7 - Wilson Way Corridor	California Water	100%	0%	2.50	9,198	0	9,198	2,877	79,418	82,295	10,795	26,305	37,100	66,666	0	66,666	89,535	105,723	195,258
Study Area 8 - I-5/Highway 4 Interchange	California Water	100%	0%	2.50	5,753	0	5,753	1,588	440,979	442,567	4,580	4,580	9,160	58,802	0	58,802	70,724	445,559	516,283
Study Area 9 - Railroad Corridor at California St	California Water	100%	0%	2.50	12,831	0	12,831	15,518	223,451	238,969	24,539	7,656	32,195	31,196	0	31,196	84,083	231,107	315,190
Study Area 10 - I-5 and Charter Way Area	California Water	100%	0%	2.50	239,046	323,038	562,084	47,226	48,877	96,102	135,087	13,146	148,233	20,539	12,148	32,687	441,897	397,209	839,106
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	California Water	100%	0%	2.50	1,575	0	1,575	0	89,777	89,777	14,825	2,235	17,060	0	0	0	16,401	92,012	108,413
Study Area 12 - Airport Way Corridor	California Water	80%	20%	2.70	43,247	0	43,247	4,412	58,961	63,373	37,730	56,434	94,164	431,688	63,116	494,804	517,076	178,512	695,588
Study Area 13 - Mariposa and Charter Area	California Water	100%	0%	2.50	22,000	0	22,000	68,915	0	68,915	28,803	7,949	36,751	0	0	0	119,718	7,949	127,667
Study Area 14 - East Weston Ranch	City of Stockton	0%	100%	3.50	8,871	0	8,871	0	0	0	35,527	106,580	142,107	0	0	0	44,397	106,580	150,978
Study Area 15 - South of French Camp Rd	No District	0%	100%	3.50	590,996	0	590,996	99,206	0	99,206	0	0	0	406	0	406	690,609	0	690,609
Study Area 16 - E French Camp Rd Area	No District	0%	100%	3.50	958,752	0	958,752	148,540	0	148,540	841	0	841	1,172	0	1,172	1,109,305	0	1,109,305
<b>Subtotal (Study Areas)</b>					<b>2,375,630</b>	<b>2,498,021</b>	<b>4,873,651</b>	<b>888,674</b>	<b>4,072,184</b>	<b>4,960,858</b>	<b>1,520,866</b>	<b>322,676</b>	<b>1,843,542</b>	<b>1,162,854</b>	<b>100,065</b>	<b>1,262,919</b>	<b>5,948,024</b>	<b>6,992,946</b>	<b>12,940,970</b>
<b>Approved/Pending Development Projects Within City Limit</b>																			
Westlake Villages	City of Stockton	0%	100%	3.50	0	5,311,815	5,311,815	0	0	0	0	0	0	0	0	0	0	5,311,815	5,311,815
Delta Cove	City of Stockton	0%	100%	3.50	0	1,036,819	1,036,819	0	773,238	773,238	0	18,541	18,541	0	0	0	0	1,828,599	1,828,599
North Stockton Projects III	City of Stockton	0%	100%	3.50	296,837	2,773,080	3,069,917	0	0	0	0	0	0	0	0	0	296,837	2,773,080	3,069,917
Cannery Park	City of Stockton	0%	100%	3.50	0	2,124,726	2,124,726	0	259,966	259,966	0	747,404	747,404	0	0	0	0	3,132,096	3,132,096
Nor Cal Logistics Center	City of Stockton	0%	100%	3.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	City of Stockton	0%	100%	3.50	0	151,543	151,543	0	1,278,710	1,278,710	0	0	0	0	0	0	0	1,430,253	1,430,253
Sanctuary	City of Stockton	0%	100%	3.50	0	8,014,591	8,014,591	0	1,095,109	1,095,109	0	255,339	255,339	0	0	0	0	9,365,039	9,365,039
Tidewater Crossing	City of Stockton	0%	100%	3.50	6,793,030	-6,793,030	0	0	0	0	114,985	114,985	0	0	0	0	6,793,030	-6,678,045	114,985
Open Window	California Water	100%	0%	2.50	0	0	0	0	414,372	414,372	66,227	-5,133	61,093	0	0	0	66,227	409,239	475,465
Weston Ranch Town Center	City of Stockton	0%	100%	3.50	0	0	0	0	0	0	0	297,889	297,889	0	0	0	0	297,889	297,889
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>					<b>7,089,867</b>	<b>12,619,544</b>	<b>19,709,411</b>	<b>0</b>	<b>3,821,395</b>	<b>3,821,395</b>	<b>66,227</b>	<b>1,429,025</b>	<b>1,495,252</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,156,093</b>	<b>17,869,964</b>	<b>25,026,058</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																			
Mariposa Lakes	No District	0%	100%	3.50	1,179,535	7,337,335	8,516,870	0	9,505,024	9,505,024	0	1,077,986	1,077,986	0	0	0	1,179,535	17,920,345	19,099,880
Airpark 599	No District	0%	100%	3.50	0	0	0	0	0	0	0	919,881	919,881	0	0	0	0	919,881	919,881
Tra Vigne	No District	0%	100%	3.50	0	6,612,024	6,612,024	0	0	0	0	0	0	0	0	0	0	6,612,024	6,612,024
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>					<b>1,179,535</b>	<b>13,949,358</b>	<b>15,128,894</b>	<b>0</b>	<b>9,505,024</b>	<b>9,505,024</b>	<b>0</b>	<b>1,997,867</b>	<b>1,997,867</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,179,535</b>	<b>25,452,250</b>	<b>26,631,785</b>
<b>Remaining City Outside of Study Areas and Outside of Approved/Pending Projects</b>																			
<b>Grand Total</b>					<b>103,586,003</b>	<b>37,580,022</b>	<b>141,166,025</b>	<b>27,591,361</b>	<b>17,398,603</b>	<b>44,989,964</b>	<b>4,956,822</b>	<b>3,749,569</b>	<b>8,706,391</b>	<b>10,724,824</b>	<b>100,065</b>	<b>10,824,889</b>	<b>137,297,039</b>	<b>58,828,259</b>	<b>196,125,298</b>
Total Cal Water					46,909,612	4,892,323	51,801,935	13,784,759	3,247,017	17,031,776	3,025,097	191,097	3,216,194	5,783,703	87,442	5,871,145	64,743,901	8,417,880	73,161,781
Total City of Stockton					56,676,391	32,687,699	89,364,090	13,806,602	14,151,586	27,958,187	1,931,726	3,558,471	5,490,197	4,941,121	12,623	4,953,744	72,553,138	50,410,379	122,963,518

Note: The water demands, analyses, and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

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## INFRASTRUCTURE EVALUATIONS

The difference in demands that results from the changes in development areas causes changes in the required infrastructure in the Capital Improvement Programs from the WMPs. There are different changes for the COSMUD Service Area and the Cal Water Service Area.

The infrastructure evaluations and conclusions presented below are preliminary. These evaluations and conclusions should be verified through the preparation of updates to the COSMUD and Cal Water WMPs when the GPU process is completed and the final land uses have been adopted.

### COSMUD Infrastructure Evaluation

The decreases in projected demands from the COSMUD WMP, within the COSMUD Service Area, change the infrastructure needs for water storage capacity, pumping facility capacity and distribution pipeline capacity. The projected demands in the COSMUD WMP and for this study are:

- Average Day Demand – 2035 WMP: 98.2 mgd. This study for 2040: 39.9 mgd
- Maximum Day Demand – 2035 WMP: 166.9 mgd. This study for 2040: 69.0 mgd
- Peak Hour Demand – 2035 WMP: 343.7 mgd. This study for 2040: 123.0 mgd

The demands estimated for the 2040 land uses are approximately 60 percent lower than the demands from the COSMUD WMP.

#### Water Storage Capacity

Required storage volume decreases are based on decreased need for operational and emergency storage due to the lower projected demands. Required fire flow storage would not change with the decrease in demands. The operational storage requirement is 25 percent of maximum day demands. The emergency storage requirement is 100 percent of the average day demands.

Based on the COSMUD WMP (based on the 2035 General Plan buildout):

- The current total available storage is 33.7 mg, according to the COSMUD WMP.
- The required total storage at buildout of the 2035 General Plan is 142.9 mg.
- The required new storage is 109.2 mg.

Based on the current GPU 2040 land use demands:

- The current total available storage is 33.7 mg (according to the COSMUD WMP).
- The required total storage for the 2040 development is 58.6 mg.
- The required new storage is 24.9 mg.

Thus, the required new storage for 2040 development is 24.9 mg, which is a reduction of 84.3 mg from the storage needed for buildout of the 2035 General Plan.

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### Pumping Facility Capacity

Sufficient water system pumping capacity should be provided to meet the greater of these two demand conditions:

1. A maximum day demand concurrent with a maximum fire flow event with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity.
2. A peak hour demand with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity,

Given that the peak hour demands are significantly larger than the maximum fire flow demands, the second set of conditions will control the decrease in required pumping facility capacity.

Based on the COSMUD WMP (based on the 2035 General Plan buildout):

- The current total available pumping capacity is 88,592 gpm (according to the COSMUD WMP).
- The required total pumping capacity at buildout of the 2035 General Plan is 238,679 gpm.
- The required new pumping capacity is 150,087 gpm.

Based on the GPU 2040 land use demands:

- The current total available pumping capacity is 88,592 gpm (according to the COSMUD WMP).
- The required total pumping capacity for the 2040 development is 85,416 gpm.
- As the current pumping capacity exceeds the required pumping capacity, no new pumping capacity may be needed. However, pumping capacity may be still needed if the existing booster pumps are not in the correct locations to effectively serve the 2040 development.

Thus, there is potentially no new required pumping capacity for 2040 development (unless additional pumping is needed based on the locations of the new development). This represents a reduction of 150,087 gpm from the pumping capacity needed for buildout of the 2035 General Plan.

### Distribution Pipeline Capacity

The COSMUD distribution system is split into the North and South areas. Each area was evaluated separately regarding the effect of the lower projected demands for the 2040 land uses. The COSMUD WMP does not provide specific projected demands for each study area or development project, which means that direct comparisons of the demands for specific areas are not possible. However, qualitative assessments have been made of the difference in required distribution and transmission pipelines within these areas by comparing the land uses. The areas where significant differences have been identified are discussed below.

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- Within Study Area 1, the Eight Mile Road Area, the 2040 land uses show no new development north of Eight Mile Road. The COSMUD WMP was based on all of this area developing by 2035. It can be assumed that most of the distribution and transmission pipelines within Study Area 1 (north of Eight Mile Road) will not be needed. No specific amount of pipelines or dollar value was identified in the COSMUD WMP for this Study Area.
- Within Study Area 15, the South of French Camp Road Area, the 2040 land uses show this area as Open Space/Agriculture, whereas the 2035 land uses showed this area as Residential Estate. It can be assumed that all of the distribution and transmission pipelines within Study Area 15 shown in the COSMUD WMP will not be needed. No specific amount of pipelines or dollar value was identified in the COSMUD WMP for this Study Area.
- Within Study Area 16, the East of French Camp Road Area, the 2040 land uses show this area as Open Space/Agriculture, whereas the 2035 land uses showed this area as Residential Estate. It can be assumed that all of the distribution and transmission pipelines within Study Area 15 shown in the COSMUD WMP will not be needed. No specific amount of pipelines or dollar value was identified in the COSMUD WMP for this Study Area.
- For the Tra Vigne development project, the 2040 land uses show this area as Residential Estate, whereas the 2035 land uses showed this area with portions of higher density housing land uses. It can be assumed that the lower housing density for the 2040 land uses will result in lower demands. The developed area will not change, meaning that there would be no expected change in the extent of the distribution and transmission pipeline network planned for this area. However, the lower demands could result in smaller diameter pipelines being needed throughout this area.

Other changes in land uses within Study Areas or development areas are not expected to result in significant changes in the required COSMUD distribution or transmission pipelines planned for these areas.

### Cal Water Infrastructure Evaluation

The decrease in projected demands within the Cal Water Service Area change the infrastructure needs for water storage capacity, pumping facility capacity, and distribution pipeline capacity.

- Average Day Demand – 2035 WMP: 35.1 mgd. This study for 2040: 26.4 mgd
- Maximum Day Demand – 2035 WMP: 63.1 mgd. This study for 2040: 46.4 mgd
- Peak Hour Demand – 2035 WMP: 87.7 mgd. This study for 2040: 73.2 mgd

### Water Storage Capacity

Required storage volume decreases are based on decreased need for operational and emergency storage due to the lower projected demands. Required fire flow storage would not change with the decrease in demands. The operational storage requirement is 25 percent of maximum day demands. The emergency storage requirement is 100 percent of the average day demands.

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Based on the Cal Water WMP (based on the 2035 General Plan buildout):

- The current total available storage is 38.4 mg (according to the Cal Water WMP).
- The required total storage at buildout of the 2035 General Plan is 51.9 mg.
- The required new storage is 13.5 mg.

Based on the current GPU 2040 land use demands:

- The current total available storage is 38.4 mg (according to the Cal Water WMP).
- The required total storage for the 2040 development is 38.9 mg.
- The required new storage is 0.5 mg.

Thus, the required new storage for 2040 development is 0.5 mg, which is a reduction of 13.0 mg from the storage needed for buildout of the 2035 General Plan.

#### Pumping Facility Capacity

Sufficient water system pumping capacity should be provided to meet the greater of these two demand conditions:

1. A maximum day demand concurrent with a maximum fire flow event with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity.
2. A peak hour demand with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity.

Given that the peak hour demands are significantly larger than the maximum fire flow demands, the second conditions will control the decrease in required pumping facility capacity.

Based on the Cal Water WMP (based on the 2035 General Plan buildout):

- The current total available pumping capacity is 47,012 gpm (according to the Cal Water WMP).
- The required total pumping capacity at buildout of the 2035 General Plan is 60,937 gpm.
- The required new pumping capacity is 13,925 gpm.

Based on the GPU 2040 land use demands:

- The current total available pumping capacity is 47,012 gpm (according to the Cal Water WMP)
- The required total pumping capacity for the 2040 development is 50,069 gpm
- The required new pumping capacity is 3,057 gpm.



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Thus, the required new pumping capacity for 2040 development is 3,057 gpm, which is a reduction of 10,868 gpm from the pumping capacity needed for buildout of the 2035 General Plan.

### Distribution Pipeline Capacity

The Cal Water distribution system generally covers the downtown area of the City with a well-looped, grid system that provides adequate capacity in the inner downtown area where most of the changes in development are expected to occur. Cal Water has been and will continue to upgrade their distribution system. These upgrades will help Cal Water supply the future water demand. The projects that are included in the Cal Water WMP are expected to be adequately sized to support the 2040 land uses, as there is no change expected in the fire flow demands, and there is relatively little change in the peak hour demands. No changes to the pipeline CIP are expected.

The infrastructure analyses presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these analyses should be refined and updated through detailed evaluations of each specific development project.

## **COST EVALUATIONS BY SERVICE AREA**

Preliminary infrastructure cost estimates for water storage facilities and booster pumping facilities were developed for the COSMUD and Cal Water Service Areas. The cost analyses presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these analyses should be refined and updated through detailed evaluations of each specific development project.

### **COSMUD**

The COSMUD costs for water storage for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new storage is 109.2 mg, which has an estimated cost of \$166.4 million (based on \$1.52 per gallon of storage).
- The 2040 GPU required new storage is 24.9 mg, which has an estimated cost of \$37.9 million (based on \$1.52 per gallon of storage).
- The reduction in estimated storage costs from 2035 buildout to 2040 development land uses is \$128.5 million.

The COSMUD costs for pumping capacity for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new pumping capacity is 150,087 gpm, which has an estimated cost of \$65.5 million (based on \$303,000 per mgd of pumping capacity).
- The 2040 GPU required new pumping capacity is 0 gpm, which has no cost.
- The reduction in estimated pumping capacity costs from 2035 buildout to 2040 development land uses is \$65.5 million.

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Costs were taken from the COSMUD WMP, which were developed with a July 2008 ENR index of 8293, and then adjusted to current dollars using a December 2016 ENR index of 10530.

The infrastructure evaluation also showed an expected reduction of required pipeline projects within certain study areas. As these pipeline projects are not listed in the COSMUD WMP by the study areas, it is not possible to estimate the amount of reduction in pipeline projects, or the associated costs from the available information.

### Cal Water

The Cal Water costs for water storage for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new storage is 13.5 mg, which has an estimated cost of \$21.5 million (based on \$1.60 per gallon of storage).
- The 2040 GPU required new storage is 0.5 mg, which has an estimated cost of \$0.8 million (based on \$1.60 per gallon of storage).
- The reduction is estimated storage costs from 2035 buildout to 2040 development land uses is \$20.7 million.

The Cal Water costs for pumping capacity for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new pumping capacity is 13,925 gpm, which has an estimated cost of \$9.8 million (based on \$490,000 per mgd of pumping capacity).
- The 2040 GPU required new pumping capacity is 3,057 gpm, which has an estimated cost of \$2.2 million (based on \$490,000 per mgd of pumping capacity).
- The reduction is estimated pumping capacity costs from 2035 buildout to 2040 development land uses is \$7.7 million.

Costs were taken from the Cal Water WMP, which were developed with an ENR CCI of 8549 (20 Cities Average), and then adjusted to current dollars using a December 2016 ENR index of 10530.

## RECOMMENDED FUTURE ACTIONS

The recommended actions to address potable water infrastructure needs are addressed in this section.

### Water Distribution Systems

The projected land uses for 2040 are different that the buildout land uses from the 2035 General Plan. Consequently, the water infrastructure identified in the previous master plans (City and Cal Water) may no longer be appropriate. This could result in some water infrastructure being undersized, which could lead to inadequate water deliveries or inadequate water pressures. Some water infrastructure could be oversized, which could lead to operational problems and unnecessary infrastructure capital and operation & maintenance expenditures.

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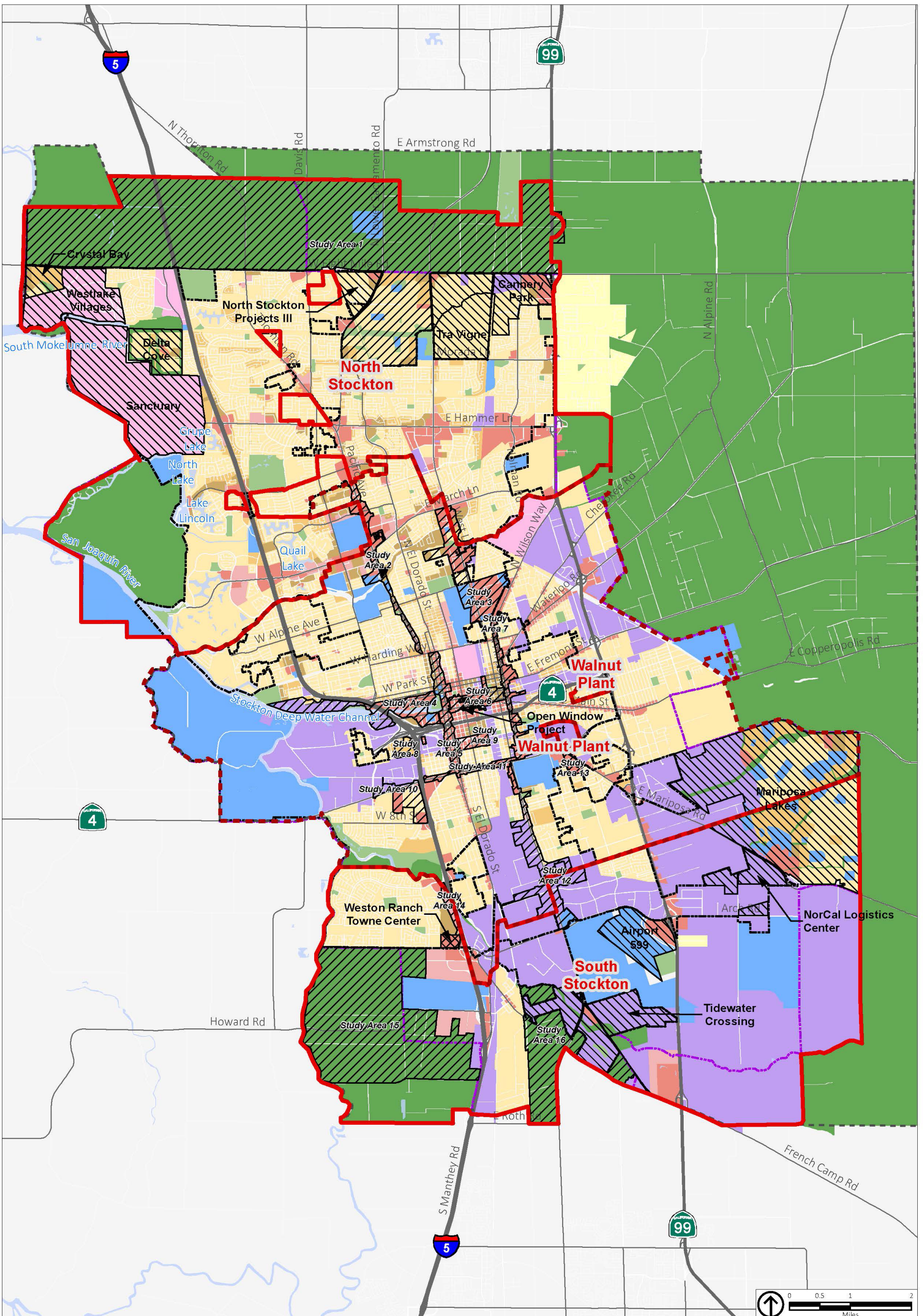
The previous water master plans (City and Cal Water) and associated water system models should be updated based on the 2040 land uses, and appropriately sized infrastructure should be developed and included in the City's and Cal Water's Capital Improvement Plans. The City's and Cal Water's Development Impact Fees should be revised based on the updated water master plans to ensure the City and Cal Water collect enough money to construct the required infrastructure.

### **COSMUD Northern and Southern Systems**

The COSMUD water system includes a northern system and a southern system, essentially separated by the Cal Water system serving the center of the City. Since the completion of the Delta Water Treatment Project, COSMUD operates the two systems essentially as two separate, distinct systems. There is an eastern connection between the two systems, but the connection is kept closed. Evaluating the northern and southern COSMUD systems as if they were operated as a single system would allow the storage and pumping facilities to be evaluated collectively. However, additional studies of the potential benefits and impacts of connecting the north and south systems would need to be prepared.

### **Future Development-Specific Potable Water Improvements**

This TM is a high-level assessment of required potable water facilities for the Study Areas and Approved/Pending Development Projects. These water demands and associated facility requirements are sized based on generalized land use data and preliminary engineering evaluations. These evaluations do not assess specific facilities needed for the Study Areas and Pending/Approved Development Projects. It is difficult to size potable water facilities without knowing the layout of the development and site-specific constraints. As specific developments occur, the specific potable water infrastructure serving the developments should be reviewed and verified using the updated water system models. The required infrastructure should be evaluated and identified as needed for the specific development projects.



Source: City of Stockton, June & August 2017.

- Major Development Areas
- Study Areas
- General Plan Planning Area
- City Limit
- Sphere of Influence
- Cal Water Service Area Boundary
- City of Stockton Water Service Area Boundary

- Residential Estate
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Mixed Use
- Commercial
- Administrative Professional
- Industrial
- Economic and Education Enterprise
- Institutional
- Parks and Recreation
- Open Space/Agriculture

Figure 1  
2017 Preferred 2040 Land Uses  
and Development Areas

# **ATTACHMENT A**

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Land Use Data Received from Placeworks

ATTACHMENT C

Acreage Gross or Net	Study Area Name	Single Family Net New 2040	Single Family Net New 2040	Single Family Net New 2040 + Existing	Single Family Net New 2040 + Existing	Multi Family Net New 2040	Multi Family Net New 2040	Multi Family Net New 2040 + Existing	Multi Family Net New 2040 + Existing	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040 + Existing	Commercial Net New 2040 + Existing	Industrial Net New 2040	Industrial Net New 2040 + Existing
		Units	Acres	Units	Acres	Units	Acres	Units	Acres	Units	Acres	Total Square Feet	0.3 FAR Sq Ft	0.5 FAR Sq Ft	5.0 FAR Sq Ft	0.3 FAR Acres	0.5 FAR Acres	5.0 FAR Acres	Sq Ft	Acres
Gross	Study Area 1 - Eight Mile Rd Area	1,379	646	1,500	663	1,198	209	1,294	217	39,408	39,408	0	0	15	0	0	241,408	20	0	105,400
Net	Study Area 2 - Pacific Ave Corridor	0	0	22	4	110	19	224	22	93,961	93,961	0	0	17	0	0	1,560,846	103	0	1,980
Net	Study Area 3 - West Ln and Alpine Rd Area	77	13	285	52	680	120	774	125	323,399	323,399	0	0	102	0	0	975,325	163	0	1,423,576
Net	Study Area 4 - Port/Waterfront	17	3	71	11	1,770	33	2,058	42	2,040,010	6,100	0	2,033,911	2	0	31	2,865,512	62	580,859	1,739,495
Net	Study Area 5 - El Dorado/Center Corridors	0	0	45	6	1,196	22	1,555	30	1,310,216	0	0	1,310,216	0	0	21	2,158,663	53	0	258,300
Net	Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	0	0	47	4	1,248	22	1,467	27	1,463,025	0	0	1,463,025	0	0	14	2,152,972	33	0	187,300
Net	Study Area 7 - Wilson Way Corridor	0	0	12	2	234	27	240	28	606,716	103,753	0	502,963	19	0	5	1,321,076	65	0	390,342
Net	Study Area 8 - I-5/Highway 4 Interchange	0	0	8	1	659	47	660	48	388,671	0	0	388,671	0	0	4	388,671	4	0	344,300
Net	Study Area 9 - Railroad Corridor at California St	0	0	19	2	1,340	24	1,363	25	1,299,279	0	0	1,299,279	0	0	24	1,365,999	26	0	182,658
Net	Study Area 10 - I-5 and Charter Way Area	86	15	314	58	98	42	127	46	133,864	133,864	0	0	42	0	0	377,363	77	83,678	203,939
Net	Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0	0	5	0	396	15	396	15	323,733	9,597	0	314,135	6	0	7	703,670	38	0	0
Net	Study Area 12 - Airport Way Corridor	0	0	53	7	108	19	112	19	205,461	135,225	70,236	0	14	4	0	272,544	48	1,368,744	3,709,140
Net	Study Area 13 - Mariposa and Charter Area	0	0	12	4	0	0	77	6	80,944	80,944	0	0	25	0	0	93,560	28	0	0
Net	Study Area 14 - East Weston Ranch <sup>(b)</sup>	0	0	1	1	0	0	0	0	430,677	0	430,677	0	0	26	0	430,677	26	0	0
Net	Study Area 15 - South of French Camp Rd	0	0	89	76	0	0	9	6	0	0	0	0	0	0	0	0	0	0	1,700
Net	Study Area 16 - E French Camp Rd Area	0	0	59	123	0	0	4	9	0	0	0	0	0	0	0	5,100	17	0	4,900
Net	Outside of Study Areas <sup>(c)</sup>	1,501	246	77,964	14,117	0	0	33,183	1,916	0	0	0	0	0	0	0	23,811,089	1,607	0	46,620,901
	<b>Grand Total</b>	<b>3,059</b>	<b>923</b>	<b>80,505</b>	<b>15,131</b>	<b>9,036</b>	<b>600</b>	<b>43,542</b>	<b>2,583</b>	<b>8,739,364</b>	<b>926,252</b>	<b>500,913</b>	<b>7,312,200</b>	<b>242</b>	<b>31</b>	<b>105</b>	<b>38,724,475</b>	<b>2,371</b>	<b>2,033,281</b>	<b>55,173,931</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

<sup>(c)</sup> Excludes approved/pending projects.

Acreage Gross or Net	Approved/Pending Projects Details	Net New						Full Build (2040)					
		Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres	Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres
Approved within city limit													
Gross	Westlake Villages	2,630	680	0		0		2,630	680	0		0	
Gross	Delta Cove	1,164	133	381	48	31,000	3	1,164	133	381	48	31,000	2.6
Gross	North Stockton Projects III	2,220	355	0		0		2,455	393	0		0	
Gross	Cannery Park	981	272	210	16	1,078,762	104	981	272	210	16	1,078,762	104
Gross	Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0
Gross	Crystal Bay	951	19	392	79	0		951	19	392	79	0	0
Gross	Sanctuary	5,452	1,026	1,618	67	692,256	36	5,452	1,026	1,618	67	692,256	36
Gross	Tidewater Crossing	-310	-870	0		186,200	16	0	0	0	0	186,200	16
Net	Open Window <sup>(a)</sup>	0	0	1,391	12	-68,800	-1	0	0	1,400	12	290,000	12
Gross	Weston Ranch Town Center	0	0	0	0	481,000	41	0	0	0	0	481,000	41
Approved/pending outside city limit, inside SOI													
Gross	Mariposa Lakes	8,955	939	1,553	585	1,009,503	150	8,960	1,090	1,556	585	1,009,503	150
Gross	Airpark 599	0	0	0	0	1,678,500	128	0	0	0	0	1,678,500	128
Gross	Tra Vigne <sup>(b)</sup>	1,244	846	0	0	0	0	1,244	846	0	0	0	0

<sup>(a)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand the capacity to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.

<sup>(b)</sup> Pending; not approved.

2040 Development Study Area												
	Net New Single Family Units (full buildout)	Percent applied to 2040	Net New Single Family Units (2040)	Net New Multi-Family Units (full buildout)	Percent applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (full buildout)	Percent applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (full buildout)	Percent applied to 2040	Net New Industrial Square Feet (2040)
Study Area 1 – Eight Mile Rd Area	3,940	35%	1,380	3,420	35%	1,200	197,000	20%	39,000	0	0%	0
Study Area 2 – Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
Study Area 3 – West Ln and Alpine Rd Area	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
Study Area 4 – Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
Study Area 5 – El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
Study Area 6 – Miner/Weber Corridors <sup>(a)</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
Study Area 7 – Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
Study Area 8 – I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
Study Area 9 – Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
Study Area 10 – I-5 and Charter Way Area	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
Study Area 11 – Charter Way/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
Study Area 12 – Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
Study Area 13 – Mariposa and Charter Area	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
Study Area 14 – East Weston Ranch <sup>(b)</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
Study Area 15 – South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Study Area 16 – E French Camp Rd Area	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>(c)</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>(d)</sup></b>	<b>20,480</b>		<b>3,060</b>	<b>48,470</b>		<b>9,040</b>	<b>45,773,000</b>		<b>8,739,000</b>	<b>134,701,000</b>		<b>2,033,000</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

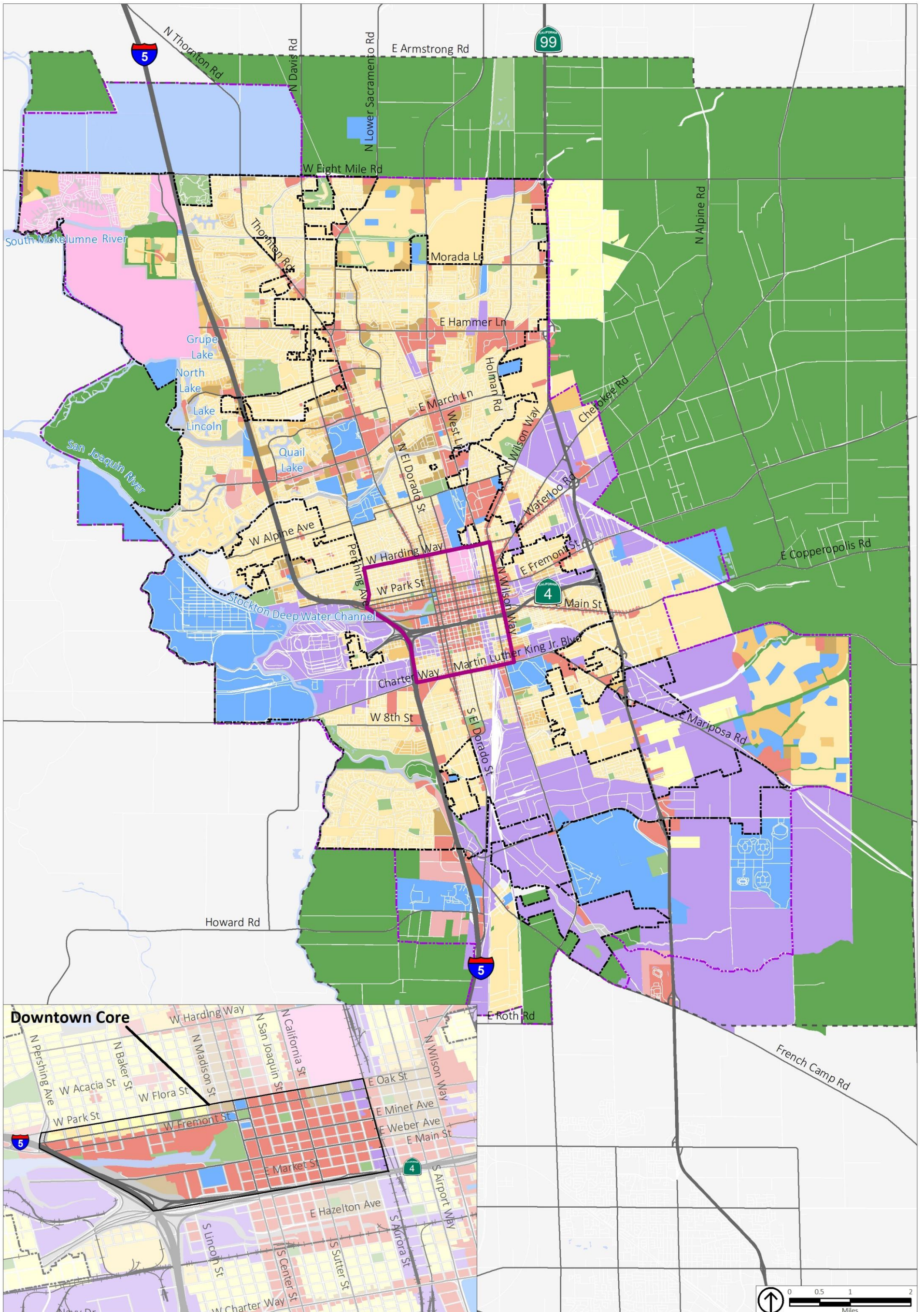
<sup>(c)</sup> Excludes approved/pending projects

<sup>(d)</sup> Numbers do not always add up due to rounding.

The "full buildout" of the proposed General Plan assumes the maximum development of every parcel, combined with approved and pending developments throughout the Planning Area. The 2040 land uses are based on realistic land use demand projections. The full buildout of the General Plan would result in almost three times more new housing units and over 24 times more new non-residential development than estimated for 2040. Therefore, it is extremely unlikely that the full buildout would occur by the year 2040. Full buildout may not occur until well beyond the useful lifespan of the proposed infrastructure (for example, the lifespan of concrete structures is typically 50 to 75 years). Consequently, this infrastructure planning was based on the estimated 2040 level of development. This table is included in this TM to document the relationship between the buildout land uses and the 2040 land uses.

Source: PlaceWorks, 2017.

**Figure 2-8**  
**General Plan Land Use Map**



Source: City of Stockton, 2017; PlaceWorks, 2017.

- |                            |                            |                          |                                   |                        |
|----------------------------|----------------------------|--------------------------|-----------------------------------|------------------------|
| City Limit                 | Residential Estate         | High Density Residential | Administrative Professional       | Institutional          |
| Sphere of Influence        | Low Density Residential    | Mixed Use                | Industrial                        | Parks and Recreation   |
| General Plan Planning Area | Medium Density Residential | Commercial               | Economic and Education Enterprise | Open Space/Agriculture |
| Greater Downtown Boundary  |                            |                          |                                   |                        |



**ATTACHMENT 2**  
**REVISED SEWER MASTER PLAN SUPPLEMENT**



## TECHNICAL MEMORANDUM

DATE: December 13, 2017 Project No.: 425-10-16-04.006  
 TO: City of Stockton, Municipal Utilities Department SENT VIA: EMAIL  
 FROM: Jeffrey D. Pelz, PE, RCE #46088  
 REVIEWED BY: Douglas T. Moore, PE, RCE #58122  
 SUBJECT: Stockton General Plan Update – Sewer Master Plan Supplement

This Technical Memorandum (TM) presents the Sewer Master Plan Supplement for the Stockton General Plan Update (GPU). This TM is based on the 2035 Wastewater Master Plan (2035 WWMP) prepared in 2008, with updated flows using GPU land uses. This TM includes the following Sections:

- Summary
  - Existing Sewer and Wastewater Treatment Facilities
  - Flow Projection Summary by Development Area
  - Flow Projection Summary by System
  - Required New Infrastructure Evaluations Summary
  - Approximate Regional Wastewater Control Facility Flows
  - Infrastructure Cost Evaluation Summary
- Existing Sewer and Wastewater Treatment Facilities
  - Sewer System
  - Regional Wastewater Control Facility
- Wastewater Flow Estimates by Development Area
  - GPU Land Uses by Development Area
  - Wastewater Flow Factors
  - Average Dry Weather Flows by Development Area
  - Peak Hour Wet Weather Flows by Development Area
- Comparison of GPU 2040 and 2035 WWMP Flows and Costs
- Regional Wastewater Control Facility Flows and Costs
- Recommended Future Actions
  - Sewer System
  - Regional Wastewater Control Facility

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The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

## **SUMMARY**

Figure 1 shows the 2040 land uses based on the GPU. Figure 2 shows the City's wastewater sub-collection system boundaries, and Figure 3 show the existing pipelines and pump stations that comprise the wastewater collection systems. The basis of the summary data is presented in the sections following the summary, and the General Plan Update buildout land use map is provided in Attachment A.

### **Existing Sewer and Wastewater Treatment Facilities**

The City's sewer system is shown on Figure 3 and includes approximately 914 miles of gravity sewers and force mains (pressure pipelines) ranging from less than 6-inches to 72-inches in diameter and 28 sewer pump stations<sup>1</sup>. The sewer system generally flows from the north, east, and south to the Stockton Regional Wastewater Control Facility (RWCF), where it is treated and discharged to the San Joaquin River.

### **Flow Projection Summary by Development Area**

The estimated average dry weather flow (ADWF) and peak hour wet weather flow (PHWWF) for the collection system are summarized in Table 1. Based on land use information from the GPU and standard flow factors, the total estimated ADWF used for collection system planning is estimated to increase from about 37 million gallons per day (mgd) for existing land uses to 60 mgd for the 2040 land uses. The total PHWWF used for collection system planning is estimated to increase from about 80 mgd for existing land uses to 132 mgd for the 2040 land uses. The total of all flows used for planning collection system facilities is substantively higher than actual existing flows at the RWCF due to the need for conservative planning of collection system flows to minimize the potential for wastewater overflows.

### **Flow Projection Summary by System**

As described in the 2035 WWMP, the City's sewer system was divided into 10 existing sub-collection systems (Systems 1 through 10) and four future sub-collection systems (Systems 12 through 15). The Systems are shown on Figure 2. Improvements were identified for each of the Systems. In general, the 2040 ADWF for each System is lower than the ADWFs developed for the 2035 WWMP, which were based on buildout of the 2035 General Plan. There are three exceptions where the 2040 flows are higher than those projected in the 2035 WWMP (System 5 – serving the downtown area, System 10, and System 12). No flow from System 15 is anticipated by 2040, and about half the previously planned flow is anticipated in Systems 9, and 13.

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<sup>1</sup> City of Stockton Sewer System Management Plan 2016-2020; January 2016, City of Stockton.

<b>Table 1. Summary of Wastewater Flow Estimates for Collection System Planning</b>			
Land Use	Flow, mgd		
	Existing	Net New	2040
<b>Average Dry Weather Flow</b>			
Study Areas	1.4	3.6	5.1
Approved/Pending Development Projects Within City Limit	0.1	7.1	7.2
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.0	8.3	8.3
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	35.6	3.6	39.1
<b>Total</b>	<b>37.1</b>	<b>22.5</b>	<b>59.7</b>
<b>Peak Hour Wet Weather Flow</b>			
Study Areas	8.3	10.1	18.4
Approved/Pending Development Projects Within City Limit	2.6	18.0	20.6
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.0	19.0	19.0
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	68.6	5.6	74.2
<b>Total</b>	<b>79.5</b>	<b>52.7</b>	<b>132.1</b>

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## Required New Infrastructure Evaluations Summary

The infrastructure evaluations were developed by:

- Estimating the ADWFs for the GPU 2040 level of development by sewer sub-collection system.
- Comparing the 2040 estimated ADWFs with the ADWFs in the 2035 WWMP, which were based on full buildout the 2035 General Plan.
- Using changes in projected flows for each sub-collection system as an indicator of how costs associated with the required infrastructure needed for the 2040 level of development would compare to the infrastructure identified in the 2035 WWMP, adjusted based on the nature of growth and planned infrastructure for each area.

The improvements anticipated within existing Systems 1, 2, 4, and 7, and future System 12 are not expected to change as a result of the GPU. Improvements needed within the other systems are expected to change as follows:

- System 3: Slightly fewer trunk sewer improvements are likely to be needed as the projected flows are reduced. The Smith Canal Pump Station, which is shared with Systems 2 and 9, will still require capacity upgrades and force main improvements. While the ultimate design flow may be slightly lower, this is unlikely to significantly reduce the cost of the needed improvements.
- System 5: The projected flows are about 30 percent higher, which may affect the size of some future improvements. The future Lincoln Street Pump Station and force main will also need to have a slightly higher capacity than previously planned.
- System 6: Lower projected flows will result in some reduction in future costs for planned upsizing and sewer extensions. The planned pump station needed for the eastern portion of System 6 would be slightly larger.
- System 8: Fewer trunk sewer upsizing projects and extensions into new service area will be needed by 2040 than previously identify for 2035 buildout.
- System 9: Some of the planned trunk sewer extensions into new service area may not be needed, and it is likely that none of the previously identified upsizing projects will be needed by 2040. The future Newton Road Pump Station would be somewhat smaller.
- System 10: Many of the previously identify trunk sewer extension have been constructed, so the projected costs will be lower. System 10 shares the 14-Mile Slough Pump Station with Systems 1, 2 and 15. Due to changes in growth planned for Systems 10 and 15, the 2040 capacity required at 14-Mile Slough Pump Station would be about 65 percent of the previously identified build-out flow. (No flow is anticipated from System 15 by 2040.)

- System 13: New pipelines and pump stations are required to serve this new service area. 2040 flows are about one half of the previously projected buildout flows, so the size of pump stations and some pipeline improvements will be less. The quantity (and cost) of infrastructure will be related to the size of new service area being added, and to the relative timing of development in the western portion versus the eastern portion. Development to the east in advance of development in the western portion will have disproportionately higher sewer infrastructure improvements due to the need to extend the collection system into the new service area.
- System 14: Most previously anticipated growth will not occur by 2040, and the infrastructure already constructed will not require improvements. The relevant facilities include the Weston Ranch Pump Station and force mains, which are shared with a portion of System 8.
- System 15: System 15 is not expected to require any sewer service by 2040, so no improvements will be needed.

### Approximate Regional Wastewater Control Facility Flows

The three-month average influent flow entering the RWCF is reported to be 27.0 mgd for May through July 2017<sup>2</sup>. The ADWF and Annual Average flow in 2016 were both 29 mgd, and the maximum month and maximum week flow were 37.7 mgd and 42.1 mgd, respectively<sup>3</sup>. These flow records compare to an ADWF of 37 mgd estimated using land uses and flow factors (above). The flow rate of 37 mgd is intended to be relatively high to reduce potential wastewater overflows in the collection system. Also, the lower reported ADWF from 2016 and 2017 reflect significant reductions from water conservation as well as areas counted as “developed” that are not currently occupied. In the absence of City-wide flow monitoring and additional analysis, adjustments to collection system flow projections are not recommended. For treatment plant planning, the City has adopted a predicted ADWF of 40.2 mgd for 2035 and 46.3 mgd for 2045<sup>4</sup>. The actual ADWF at 2040 will vary depending on the pace of development and changes in water conservation activities.

### Infrastructure Cost Evaluation Summary

Costs presented in the 2008 WWMP were adjusted based on the estimated reduction or increase in flow for each sub-collection system. Collection system total project costs associated with growth are predicted to be about \$727 million in 2007 dollars, with an additional \$67 million in 2007 dollars to address existing deficiencies. Costs for improvements at the RWCF through 2040 were not adjusted from the estimate prepared in 2011 for the Capital Improvement and Energy Management Plan, which totaled \$221 million in 2011 dollars. All costs estimates are planning level estimates based on broad assumptions and limited information, and do not necessarily reflect the economic conditions at the time a project is constructed.

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<sup>2</sup> Source: State of California CIWQS Data (self-monitoring reports); <http://ciwqs.waterboards.ca.gov>

<sup>3</sup> Source: Stockton RWCF Design Build Project; “Advanced Package 3a & 3b” of the Basis of Design Report; AECOM, October 2017.

<sup>4</sup> Ibid.

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## EXISTING SEWER AND WASTEWATER TREATMENT FACILITIES

These descriptions of the existing sewer system and RWCF are based on the 2035 Wastewater Master Plan (2035 WWMP), which was prepared to identify how to collect and treat the wastewater flows from buildout of the 2035 General Plan. Additionally, these descriptions are updated based on discussions with City staff.

### Sewer System

As described in the 2035 WWMP, the City's sewer system is divided into 10 existing sub-collection systems (Systems 1 through 10) and four future sub-collection systems (Systems 12 through 15). There is no System 11. A System comprises a relatively large area that is generally tributary to a single major trunk sewer or flow route to the RWCF. System 15 will remain undeveloped at 2040, based on the GPU. The boundaries of the Systems referenced throughout this TM are shown on Figure 2.

The area labeled as System 90 is not served by the City's sewer system. Collection system planning does not incorporate flows from the area as there is no plan to connect it to the City's sewer in the future.

The City's wastewater collection infrastructure is shown on Figure 3. The sewer system generally flows from the north, east, and south toward the RWCF located on Navy Drive adjacent to the San Joaquin River. The City's sewer system, based on GIS mapping includes approximately 30 miles of force mains (pressure sewers) and 884 miles of gravity sewers<sup>5</sup>. The gravity sewers receive flow from approximately 554 miles of services laterals currently in use. The gravity sewers and force mains range in size from less than 6 inches to 72 inches in diameter. There are 28 pump stations (also shown on Figure 3) that range in capacity from 0.46 to 21.6 mgd. The capacity of each pump station is normally expressed in terms of firm capacity, which is the capacity with the largest pump on standby as a backup pump.

The wastewater infrastructure is of various ages and conditions. The City conducts regular inspection, maintenance and repairs to address deterioration and keep the system operational. Maintenance practices for the collection system are documented in the Sewer System Management Plan 2016-2020, prepared by the City in compliance with the requirements of the State Water Resources Control Board (SWRCB) Order No. 2006-003-DWQ, Statewide General Waste Discharge Requirement (WDR), dated May 2, 2006.

### Regional Wastewater Control Facility

Figure 3 depicts the location of the RWCF in relation to the collection systems. The RWCF is located on the San Joaquin River and consists of the main treatment plant, which has a design ADWF of 48 mgd, and the tertiary treatment plant, which has a designed ADWF and permitted capacity of 55 mgd. The tertiary treatment plant includes approximately 630 acres of facultative oxidation ponds surrounded by distribution canals and groundwater interceptor ditches; an engineered wetland; disinfection facilities; and a river outfall discharge system<sup>6</sup>. Solids are treated by anaerobic digestion,

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<sup>5</sup> City of Stockton Sewer System Management Plan 2016-2020; January 2016, City of Stockton.

<sup>6</sup> Ibid.

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dewatered, and disposed of off-site. Effluent is discharged into the San Joaquin River adjacent to the RWCF.

Past and current flows to the RWCF are summarized below:

- 1997 ADWF: 28.4 mgd
- 2000 ADWF: 31.6 mgd
- 2005 ADWF: 35.0 mgd
- 2016 ADWF: 29.0 mgd
- 2017 ADWF (based on May, June, July): 27.0 mgd (a recent decrease in wastewater flows has occurred in many cities in California and is generally attributed to the recent drought, associated mandated water conservation, and the economic recession).

The RWCF discharges treated water to the Sacramento/San Joaquin River Delta in accordance with National Pollutant Discharge Elimination System (NPDES) permit No. CA0079138, State Water Resources Control Board Order R5-2014-0070-03. A major upgrade to the RWCF is currently in design that will improve the headworks and secondary treatment system as part of a long-term plan to address rehabilitation and replacement needs while improving treatment reliability and upgrading to provide the currently permitted capacity of 55 mgd.

## WASTEWATER FLOW ESTIMATES BY DEVELOPMENT AREA

Wastewater flow projections were calculated using two different methodologies. The first was based on summary data tables developed by Placeworks listing the land uses in each GPU Study Area and planned development projects (Development Areas). Projections were also developed for each wastewater collection System, as described later in this TM, to facilitate an update to the 2035 WWMP infrastructure cost analysis.

### GPU Land Uses by Development Area

The land use data provided by Placeworks is presented in Attachment A (including the buildout land use map, dwelling unit data, acreage data, and 2040 percent development data). The land use data was reorganized to facilitate application of wastewater flow factors. The reorganized data is provided in Table 2, which includes existing land use, net new land use for 2040, and 2040 land use. For single family and multi-family residential land uses, Table 2 includes both dwelling unit data and acreage data. For commercial and industrial land uses, Table 2 includes only acreage data.

### Wastewater Flow Factors

The 2035 WWMP provided flow factors for both existing land uses (Table 2-10 of the WWMP) and for future land uses (Table 2-11 of the WWMP) for use in estimating flow in the sewer system. Flow factors used for estimating sewer system flows are intentionally conservative, meaning they are intended to result in predicted flows that are higher than the corresponding actual flows, to allow for a range of different flow rates within a land use category. For example, actual commercial flows will generally range from very low for rental storage units to very high for restaurants. To allow for this range of actual flows, conservative (high) flow factors are used for estimating collection system flows in order to reduce the risk of undersized sewers and associated wastewater outflows.



ATTACHMENT C

Table 2. Land Use Data

Study Area or Development Name	Single Family (Dwelling Units)			Single Family (Gross Acres)			Multi Family (Dwelling Units)			Multi Family (Gross Acres)			Commercial (Gross Acres)			Industrial (Gross Acres)			Total Area (Gross Acres)		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																					
Study Area 1 - Eight Mile Rd Area	121	1,379	1,500	17.2	232.1	249.3	96	1,198	1,294	8.4	73.2	81.6	17.9	0.6	18.5	4.0	0.0	4.0	48	306	353
Study Area 2 - Pacific Ave Corridor	22	0	22	5.8	0.0	5.8	114	110	224	4.3	5.9	10.3	114.9	4.5	119.4	0.1	0.0	0.1	125	10	136
Study Area 3 - West Ln and Alpine Rd Area	208	77	285	51.6	68.8	120.3	94	680	774	7.3	37.4	44.7	66.9	7.7	74.6	68.1	0.0	68.1	194	114	308
Study Area 4 - Port/Waterfront	54	17	71	10.6	15.0	25.6	288	1,770	2,058	10.7	33.4	44.2	9.5	3.7	13.2	55.4	6.9	62.4	86	59	145
Study Area 5 - El Dorado/Center Corridors	45	0	45	7.4	0.0	7.4	359	1,196	1,555	10.3	21.5	31.9	7.7	2.3	9.9	12.4	0.0	12.4	38	24	62
Study Area 6 - Miner/Weber Corridors	47	0	47	5.9	0.0	5.9	219	1,248	1,467	6.0	22.5	28.5	5.7	4.2	9.9	9.0	0.0	9.0	27	27	53
Study Area 7 - Wilson Way Corridor	12	0	12	2.2	0.0	2.2	6	234	240	0.3	8.6	8.9	0.8	6.4	7.2	18.7	0.0	18.7	22	15	37
Study Area 8 - I-5/Highway 4 Interchange	8	0	8	1.4	0.0	1.4	1	659	660	0.2	47.5	47.7	0.7	1.1	1.8	16.5	0.0	16.5	19	49	67
Study Area 9 - Railroad Corridor at California St	19	0	19	3.1	0.0	3.1	23	1,340	1,363	1.7	24.1	25.7	4.4	1.9	6.3	8.7	0.0	8.7	18	26	44
Study Area 10 - I-5 and Charter Way Area	228	86	314	57.1	77.2	134.3	29	98	127	5.1	5.3	10.4	25.7	3.2	28.9	5.8	3.4	9.2	94	89	183
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	5	0	5	0.4	0.0	0.4	0	396	396	0.0	9.7	9.7	2.8	0.5	3.3	0.0	0.0	0.0	3	10	13
Study Area 12 - Airport Way Corridor	53	0	53	9.6	0.0	9.6	4	108	112	0.4	5.9	6.3	4.3	12.7	17.0	111.9	16.4	128.3	126	35	161
Study Area 13 - Mariposa and Charter Area	12	0	12	5.3	0.0	5.3	77	0	77	7.4	0.0	7.4	5.2	1.9	7.2	0.0	0.0	0.0	18	2	20
Study Area 14 - East Weston Ranch	1	0	1	1.5	0.0	1.5	0	0	0	0.0	0.0	0.0	1.2	18.5	19.8	0.0	0.0	0.0	3	19	21
Study Area 15 - South of French Camp Rd	89	0	89	100.9	0.0	100.9	9	0	9	7.6	0.0	7.6	0.0	0.0	0.0	0.1	0.0	0.1	109	0	109
Study Area 16 - E French Camp Rd Area	59	0	59	163.6	0.0	163.6	4	0	4	11.4	0.0	11.4	0.1	0.0	0.1	0.2	0.0	0.2	175	0	175
<b>Subtotal (Study Areas)</b>	<b>983</b>	<b>1,558</b>	<b>2,541</b>	<b>443.4</b>	<b>393.0</b>	<b>836.5</b>	<b>1,323</b>	<b>9,036</b>	<b>10,359</b>	<b>81.4</b>	<b>294.8</b>	<b>376.2</b>	<b>267.8</b>	<b>69.3</b>	<b>337.1</b>	<b>310.8</b>	<b>26.7</b>	<b>337.5</b>	<b>1,103</b>	<b>784</b>	<b>1,887</b>
<b>Approved/Pending Development Projects Within City Limit</b>																					
Westlake Villages	0	2,630	2,630	0.0	680.0	680.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	680	680
Delta Cove	0	1,164	1,164	0.0	132.7	132.7	0	381	381	0.0	47.6	47.6	0.0	2.6	2.6	0.0	0.0	0.0	0	183	183
North Stockton Projects III	235	2,220	2,455	38.0	355.0	393.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38	355	393
Cannery Park	0	981	981	0.0	272.0	272.0	0	210	210	0.0	16.0	16.0	0.0	104.0	104.0	0.0	0.0	0.0	0	392	392
Nor Cal Logistics Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0
Crystal Bay	0	951	951	0.0	19.4	19.4	0	392	392	0.0	78.7	78.7	0.0	0.0	0.0	0.0	0.0	0.0	0	98	98
Sanctuary	0	5,452	5,452	0.0	1,026.0	1,026.0	0	1,618	1,618	0.0	67.4	67.4	0.0	35.5	35.5	0.0	0.0	0.0	0	1,129	1,129
Tidewater Crossing	310	-310	0	869.6	-869.6	0.0	0	0	0	0.0	0.0	0.0	0.0	16.0	16.0	0.0	0.0	0.0	870	-854	16
Open Window	0	0	0	0.0	0.0	0.0	11	1,739	1,750	0.0	14.9	14.9	16.1	-1.3	14.9	0.0	0.0	0.0	16	14	30
Weston Ranch Town Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	41.5	41.5	0.0	0.0	0.0	0	41	41
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>545</b>	<b>13,088</b>	<b>13,633</b>	<b>907.6</b>	<b>1,615.5</b>	<b>2,523.1</b>	<b>11</b>	<b>4,340</b>	<b>4,351</b>	<b>0.0</b>	<b>224.6</b>	<b>224.6</b>	<b>16.1</b>	<b>198.3</b>	<b>214.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>924</b>	<b>2,038</b>	<b>2,962</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																					
Mariposa Lakes	5	8,955	8,960	151.0	939.3	1,090.3	3	1,553	1,556	0.0	585.0	585.0	0.0	150.0	150.0	0.0	0.0	0.0	151	1,674	1,825
Airpark 599	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	128.0	128.0	0.0	0.0	0.0	0	128	128
Tra Vigne	0	1,244	1,244	0.0	846.4	846.4	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	846	846
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>5</b>	<b>10,199</b>	<b>10,204</b>	<b>151.0</b>	<b>1,785.7</b>	<b>1,936.7</b>	<b>3</b>	<b>1,553</b>	<b>1,556</b>	<b>0.0</b>	<b>585.0</b>	<b>585.0</b>	<b>0.0</b>	<b>278.0</b>	<b>278.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>151</b>	<b>2,649</b>	<b>2,800</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	76,463	1,501	77,964	18,494	1,694	20,188	33,183	0	33,183	2,395	0	2,395	683	0	683	2,230	0	2,230	23,802	1,694	25,496
<b>Grand Total</b>	<b>77,996</b>	<b>26,346</b>	<b>104,342</b>	<b>19,996</b>	<b>5,488</b>	<b>25,484</b>	<b>34,520</b>	<b>14,929</b>	<b>49,449</b>	<b>2,476</b>	<b>1,104</b>	<b>3,581</b>	<b>967</b>	<b>546</b>	<b>1,513</b>	<b>2,541</b>	<b>27</b>	<b>2,567</b>	<b>25,980</b>	<b>7,165</b>	<b>33,145</b>

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The flow factors used in this GPU wastewater estimate are summarized in Table 3, and include factors for single family residential, multi-family residential, commercial, and industrial for both existing land uses and for future land uses. Flow projected for 2040 is based on both sets of factors, those listed under “Flow Factors for Existing Development Areas” are applied to currently developed areas, and those listed under “Flow Factors for Areas Planned for Future Development” are applied to currently undeveloped areas where growth is planned. A limited number of industries that produce flows well in excess of the flow that would be predicted using the standard flow factors are considered on a case-by-case basis in the 2035 WWMP.

### **Average Dry Weather Flows by Development Area**

The ADWF estimates for the Development Areas are calculated in Table 4. The ADWFs are calculated by multiplying the land use (in terms of acres or residential dwelling units) by the appropriate flow factor. The following ADWFs are calculated for existing, net new, and 2040 flows using the land use data and flow factors adopted for collection system planning:

- ADWF from exiting land uses: 37.1 mgd
- ADWF from net growth between 2017 and 2040: 22.5 mgd
- ADWF from 2040 land uses: 59.7 mgd

The average of the actual May, June, and July 2017 daily flows entering the RWCF was 27.0 mgd<sup>7</sup>. The ADWF estimated using land use data and flow factors of 37.1 mgd is 37 percent higher than the actual flow into the RWCF. As discussed above, the flow factors used in estimating the ADWFs for sewer system planning and sizing are intentionally conservative (high). It is likely that flows observed in the summer of 2017 reflect substantive residual water conservation efforts that were initiated during the recent drought and continue to result in lower than historical wastewater flows. To the extent such conservation efforts are not permanent, flows from existing users can be expected to rebound to higher values in the future, even in the absence of growth. In addition, it is likely that a portion of the areas identified as “developed” are not fully occupied. Therefore, the ratio of the total of estimated flows used in collection system planning compared to actual current dry weather flow at the treatment plant is appropriate and expected.

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<sup>7</sup> California Integrated Water Quality System Project (CIWQS); State of California ([https://www.waterboards.ca.gov/water\\_issues/programs/ciwqs/publicreports.shtml](https://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.shtml)).

<b>Table 3. Sewer Flow Factors for Existing and Future Development<sup>(a)</sup></b>		
<b>Land Use Category</b>	<b>Flow Factor</b>	<b>Units</b>
Flow Factors for Existing Development Areas from Table 2-10 from City of Stockton 2035 Wastewater Master Plan (West Yost, October 2008)		
Single Family Residential	240	gpd/DU
Multi-Family Residential	5,568	gpd/acre
Commercial	1,100	gpd/acre
Industrial	1,400	gpd/acre
Flow Factors for Areas Planned for Future Development Table 2-11 from City of Stockton 2035 Wastewater Master Plan (West Yost, October 2008)		
<b>Land Use Category</b>	<b>Flow Factor</b>	<b>Units</b>
Single Family Residential	2,100	gpd/acre
Multi-Family Residential	6,800	gpd/acre
Multi-Family Residential (Downtown)	20,400	gpd/acre
Commercial	2,000	gpd/acre
Industrial	3,000	gpd/acre
<sup>(a)</sup> Flow projected for 2040 is based on both sets of factors, those listed under "Flow Factors for Existing Development Areas" are applied to currently developed areas, and those listed under "Flow Factors for Areas Planned for Future Development" are applied to currently undeveloped areas where growth is planned.		

**Table 4. Average Dry Weather Flows**

Study Area Name	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>															
Study Area 1 - Eight Mile Rd Area	29,040	487,393	516,433	46,908	497,555	544,462	19,657	1,206	20,863	5,646	0	5,646	101,250	986,154	1,087,404
Study Area 2 - Pacific Ave Corridor	5,280	0	5,280	24,200	40,178	64,378	126,441	8,988	135,429	133	0	133	156,053	49,166	205,220
Study Area 3 - West Ln and Alpine Rd Area	49,920	144,416	194,336	40,643	254,176	294,819	73,591	15,467	89,058	95,319	0	95,319	259,473	414,059	673,532
Study Area 4 - Port/Waterfront	12,960	31,467	44,427	59,819	568,150	627,969	10,468	7,354	17,822	77,579	20,835	98,415	160,827	627,806	788,633
Study Area 5 - El Dorado/Center Corridors	10,800	0	10,800	57,590	243,022	300,612	8,421	4,512	12,933	17,295	0	17,295	94,106	247,534	341,640
Study Area 6 - Miner/Weber Corridors	11,280	0	11,280	33,641	305,728	339,369	6,255	8,397	14,652	12,541	0	12,541	63,717	314,125	377,842
Study Area 7 - Wilson Way Corridor	2,880	0	2,880	1,725	58,166	59,891	904	12,811	13,715	26,136	0	26,136	31,645	70,977	102,622
Study Area 8 - I-5/Highway 4 Interchange	1,920	0	1,920	952	322,974	323,926	736	2,231	2,967	23,053	0	23,053	26,662	325,204	351,866
Study Area 9 - Railroad Corridor at California St	4,560	0	4,560	9,306	163,656	172,962	4,848	3,728	8,577	12,230	0	12,230	30,945	167,385	198,329
Study Area 10 - I-5 and Charter Way Area	54,720	162,109	216,829	28,322	35,797	64,119	28,243	6,402	34,646	8,052	10,205	18,258	119,337	214,514	333,851
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	1,200	0	1,200	0	65,753	65,753	3,057	1,088	4,146	0	0	0	4,257	66,842	71,099
Study Area 12 - Airport Way Corridor	12,720	0	12,720	2,450	39,984	42,434	4,687	25,449	30,135	156,707	49,097	205,804	176,564	114,530	291,094
Study Area 13 - Mariposa and Charter Area	2,880	0	2,880	41,329	0	41,329	5,746	3,871	9,617	0	0	0	49,955	3,871	53,826
Study Area 14 - East Weston Ranch	240	0	240	0	0	0	1,359	37,076	38,436	0	0	0	1,599	37,076	38,676
Study Area 15 - South of French Camp Rd	21,360	0	21,360	42,496	0	42,496	0	0	0	114	0	114	63,970	0	63,970
Study Area 16 - E French Camp Rd Area	14,160	0	14,160	63,629	0	63,629	161	0	161	328	0	328	78,278	0	78,278
<b>Subtotal (Study Areas)</b>	<b>235,920</b>	<b>825,385</b>	<b>1,061,305</b>	<b>453,009</b>	<b>2,595,141</b>	<b>3,048,150</b>	<b>294,576</b>	<b>138,580</b>	<b>433,157</b>	<b>435,134</b>	<b>80,138</b>	<b>515,272</b>	<b>1,418,640</b>	<b>3,639,243</b>	<b>5,057,883</b>
<b>Approved/Pending Development Projects Within City Limit</b>															
Westlake Villages	0	1,428,000	1,428,000	0	0	0	0	0	0	0	0	0	0	1,428,000	1,428,000
Delta Cove	0	278,733	278,733	0	323,612	323,612	0	5,160	5,160	0	0	0	0	607,505	607,505
North Stockton Projects III	56,400	745,500	801,900	0	0	0	0	0	0	0	0	0	56,400	745,500	801,900
Cannery Park	0	571,200	571,200	0	108,800	108,800	0	208,000	208,000	0	0	0	0	888,000	888,000
Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	0	40,740	40,740	0	535,160	535,160	0	0	0	0	0	0	0	575,900	575,900
Sanctuary	0	2,154,600	2,154,600	0	458,320	458,320	0	71,060	71,060	0	0	0	0	2,683,980	2,683,980
Tidewater Crossing	74,400	-74,400	0	0	0	0	0	32,000	32,000	0	0	0	74,400	-42,400	32,000
Open Window	0	0	0	0	101,162	101,162	17,739	-1,375	16,364	0	0	0	17,739	99,787	117,527
Weston Ranch Town Center	0	0	0	0	0	0	0	82,902	82,902	0	0	0	0	82,902	82,902
<b>Subtotal (Approved/Pending Development Projects Within City Limit)</b>	<b>130,800</b>	<b>5,144,373</b>	<b>5,275,173</b>	<b>0</b>	<b>1,527,054</b>	<b>1,527,054</b>	<b>17,739</b>	<b>397,747</b>	<b>415,486</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>148,539</b>	<b>7,069,174</b>	<b>7,217,713</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>															
Mariposa Lakes <sup>(a)</sup>	0	1,972,530	1,972,530	0	3,978,000	3,978,000	0	300,000	300,000	0	0	0	0	6,250,530	6,250,530
Airpark 599	0	0	0	0	0	0	0	256,000	256,000	0	0	0	0	256,000	256,000
Tra Vigne	0	1,777,541	1,777,541	0	0	0	0	0	0	0	0	0	0	1,777,541	1,777,541
<b>Subtotal (Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence)</b>	<b>0</b>	<b>3,750,071</b>	<b>3,750,071</b>	<b>0</b>	<b>3,978,000</b>	<b>3,978,000</b>	<b>0</b>	<b>556,000</b>	<b>556,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,284,071</b>	<b>8,284,071</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	18,351,120	3,557,377	21,908,497	13,334,753	0	13,334,753	751,613	0	751,613	3,121,617	0	3,121,617	35,559,103	3,557,377	39,116,479
<b>Grand Total</b>	<b>18,717,840</b>	<b>13,277,205</b>	<b>31,995,045</b>	<b>13,787,762</b>	<b>8,100,195</b>	<b>21,887,957</b>	<b>1,063,929</b>	<b>1,092,327</b>	<b>2,156,255</b>	<b>3,556,751</b>	<b>80,138</b>	<b>3,636,889</b>	<b>37,126,282</b>	<b>22,549,865</b>	<b>59,676,147</b>

<sup>(a)</sup> Small amount of existing development accounts for zero flow since the collection system is not yet constructed.

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### Peak Hour Wet Weather Flows by Development Area

The Peak Hour Wet Weather Flows estimates (PHWWFs) for sewer design purposes are the sum of the ADWF and the Infiltration and Inflow (I&I) multiplied by a peaking factor<sup>8</sup>.

- Derivation of ADWF was discussed above.
- I&I accounts for rainfall and groundwater that enters the sewer systems during storm events. The I&I is estimated by multiplying the land use area by the I&I factor (400 gallons per day per acre). The estimated I&I flows are presented in Table 5.
- The peaking factor is multiplied by the sum of the ADWF and I&I flows. The peaking factor accounts for variations in the flow during the daily cycle of activity. For example, on weekdays, the residential ADWFs are typically highest in the morning as people wake up and getting ready to go to work. Commercial and industrial ADWFs are often highest in the day time when many people are at work. The peaking factor accounts for the variation in flows during the daily cycle and the aggregate effect of differences in flow patterns from different land uses. The peaking factor is dependent on the total ADWF, and as the ADWF increases, the peaking factor decreases. Peaking factors are calculated in Table 6 using the equations from the City's design standards and reported on page 2-19 of the 2035 WWMP. The maximum allowed peaking factor is 5.0. Where a study area comprises multiple independent sewer sub-sheds, the listed aggregate peaking factor is lower than the peaking factor that would be applied to individual sub-sheds.
- The PHWWF presented in Table 7 is calculated by multiplying the peaking factor by the sum of the ADWF and I&I flows for the existing land uses and for the 2040 land uses. The net new PHWWFs are the difference between the 2040 values and the existing values. These PHWWFs are used to size sewer system pipelines and pump stations.

A more thorough flow study and calibrated model would be needed for a more reliable estimate of PHWWFs based on historical flow patterns and I&I measurements throughout the collection system. The City has projected that the PHWWF at the RWCF will be 104.5 mgd in 2035 and 120.5 mgd in 2045<sup>9</sup>. Assuming linear growth from 2035 to 2045, the corresponding PHWWF for 2040 would be 112.5 mgd.

As stated above, the flow estimates presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these flow estimates should be refined and updated through detailed evaluations of each specific development project.

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<sup>8</sup> Standard Drawing No. S-1, City of Stockton, 2016.  
([http://www.stocktongov.com/files/Standard\\_Drawings\\_2016.pdf](http://www.stocktongov.com/files/Standard_Drawings_2016.pdf))

<sup>9</sup> Source: Stockton RWCF Design Build Project; "Advanced Package 3a & 3b" of the Basis of Design Report; AECOM, October 2017.

**Table 5. Infiltration and Inflow**

Study Area Name	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>															
Study Area 1 - Eight Mile Rd Area	6,887	92,837	99,723	3,370	29,268	32,638	7,148	241	7,389	1,613	0	1,613	19,018	122,346	141,363
Study Area 2 - Pacific Ave Corridor	2,315	0	2,315	1,738	2,363	4,102	45,979	1,798	47,776	38	0	38	50,070	4,161	54,231
Study Area 3 - West Ln and Alpine Rd Area	20,622	27,508	48,130	2,920	14,952	17,871	26,760	3,093	29,854	27,234	0	27,234	77,536	45,553	123,089
Study Area 4 - Port/Waterfront	4,243	5,994	10,237	4,297	13,368	17,666	3,807	1,471	5,277	22,166	2,778	24,944	34,513	23,611	58,123
Study Area 5 - El Dorado/Center Corridors	2,953	0	2,953	4,137	8,612	12,749	3,062	902	3,964	4,941	0	4,941	15,094	9,514	24,608
Study Area 6 - Miner/Weber Corridors	2,343	0	2,343	2,417	8,992	11,409	2,275	1,679	3,954	3,583	0	3,583	10,618	10,671	21,289
Study Area 7 - Wilson Way Corridor	879	0	879	124	3,422	3,545	329	2,562	2,891	7,468	0	7,468	8,799	5,984	14,783
Study Area 8 - I-5/Highway 4 Interchange	550	0	550	68	18,998	19,067	268	446	714	6,587	0	6,587	7,473	19,445	26,917
Study Area 9 - Railroad Corridor at California St	1,226	0	1,226	669	9,627	10,295	1,763	746	2,509	3,494	0	3,494	7,152	10,373	17,525
Study Area 10 - I-5 and Charter Way Area	22,849	30,878	53,727	2,035	2,106	4,140	10,270	1,280	11,551	2,301	1,361	3,661	37,455	35,625	73,080
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	151	0	151	0	3,868	3,868	1,112	218	1,329	0	0	0	1,262	4,086	5,348
Study Area 12 - Airport Way Corridor	3,828	0	3,828	176	2,352	2,528	1,704	5,090	6,794	44,773	6,546	51,320	50,481	13,988	64,469
Study Area 13 - Mariposa and Charter Area	2,103	0	2,103	2,969	0	2,969	2,090	774	2,864	0	0	0	7,161	774	7,936
Study Area 14 - East Weston Ranch	606	0	606	0	0	0	494	7,415	7,910	0	0	0	1,100	7,415	8,515
Study Area 15 - South of French Camp Rd	40,351	0	40,351	3,053	0	3,053	0	0	0	33	0	33	43,436	0	43,436
Study Area 16 - E French Camp Rd Area	65,459	0	65,459	4,571	0	4,571	59	0	59	94	0	94	70,183	0	70,183
<b>Subtotal (Study Areas)</b>	<b>177,364</b>	<b>157,216</b>	<b>334,580</b>	<b>32,544</b>	<b>117,927</b>	<b>150,471</b>	<b>107,119</b>	<b>27,716</b>	<b>134,835</b>	<b>124,324</b>	<b>10,685</b>	<b>135,009</b>	<b>441,351</b>	<b>313,544</b>	<b>754,895</b>
<b>Approved/Pending Development Projects Within City Limit</b>															
Westlake Villages	0	272,000	272,000	0	0	0	0	0	0	0	0	0	0	272,000	272,000
Delta Cove	0	53,092	53,092	0	19,036	19,036	0	1,032	1,032	0	0	0	0	73,160	73,160
North Stockton Projects III	15,200	142,000	157,200	0	0	0	0	0	0	0	0	0	15,200	142,000	157,200
Cannery Park	0	108,800	108,800	0	6,400	6,400	0	41,600	41,600	0	0	0	0	156,800	156,800
Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	0	7,760	7,760	0	31,480	31,480	0	0	0	0	0	0	0	39,240	39,240
Sanctuary	0	410,400	410,400	0	26,960	26,960	0	14,212	14,212	0	0	0	0	451,572	451,572
Tidewater Crossing	347,848	-347,848	0	0	0	0	0	6,400	6,400	0	0	0	347,848	-341,448	6,400
Open Window	0	0	0	0	5,951	5,951	6,451	-500	5,951	0	0	0	6,451	5,451	11,901
Weston Ranch Town Center	0	0	0	0	0	0	0	16,580	16,580	0	0	0	0	16,580	16,580
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>363,048</b>	<b>646,204</b>	<b>1,009,252</b>	<b>0</b>	<b>89,827</b>	<b>89,827</b>	<b>6,451</b>	<b>79,324</b>	<b>85,775</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>369,499</b>	<b>815,355</b>	<b>1,184,854</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>															
Mariposa Lakes	60,400	375,720	436,120	0	234,000	234,000	0	60,000	60,000	0	0	0	60,400	669,720	730,120
Airpark 599	0	0	0	0	0	0	0	51,200	51,200	0	0	0	0	51,200	51,200
Tra Vigne	0	338,579	338,579	0	0	0	0	0	0	0	0	0	0	338,579	338,579
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>60,400</b>	<b>714,299</b>	<b>774,699</b>	<b>0</b>	<b>234,000</b>	<b>234,000</b>	<b>0</b>	<b>111,200</b>	<b>111,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60,400</b>	<b>1,059,499</b>	<b>1,119,899</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	7,397,586	677,596	8,075,182	957,956	0	957,956	273,314	0	273,314	891,891	0	891,891	9,520,747	677,596	10,198,343
<b>Grand Total</b>	<b>7,998,399</b>	<b>2,195,315</b>	<b>10,193,714</b>	<b>990,500</b>	<b>441,754</b>	<b>1,432,254</b>	<b>386,883</b>	<b>218,240</b>	<b>605,123</b>	<b>1,016,215</b>	<b>10,685</b>	<b>1,026,900</b>	<b>10,391,997</b>	<b>2,865,994</b>	<b>13,257,991</b>

<b>Table 6. Peaking Factors</b>		
Study Area Name	Peaking Factor	
	<i>Existing</i>	<i>2040</i>
<b>Study Areas</b>		
Study Area 1 - Eight Mile Rd Area	5.0	2.5
Study Area 2 - Pacific Ave Corridor	4.3	3.9
Study Area 3 - West Ln and Alpine Rd Area	3.6	2.7
Study Area 4 - Port/Waterfront	4.2	2.6
Study Area 5 - El Dorado/Center Corridors	5.0	3.3
Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	5.0	3.2
Study Area 7 - Wilson Way Corridor	5.0	4.9
Study Area 8 - I-5/Highway 4 Interchange	5.0	3.3
Study Area 9 - Railroad Corridor at California St	5.0	4.0
Study Area 10 - I-5 and Charter Way Area	4.7	3.3
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	5.0	5.0
Study Area 12 - Airport Way Corridor	4.1	3.5
Study Area 13 - Mariposa and Charter Area	5.0	5.0
Study Area 14 - East Weston Ranch <sup>(b)</sup>	5.0	5.0
Study Area 15 - South of French Camp Rd	5.0	5.0
Study Area 16 - E French Camp Rd Area	5.0	5.0
<b>Approved/Pending Development Projects Within City Limit</b>		
Westlake Villages	0.0	2.3
Delta Cove	0.0	2.8
North Stockton Projects III	5.0	2.6
Cannery Park	0.0	2.6
Nor Cal Logistics Center	0.0	0.0
Crystal Bay	0.0	2.8
Sanctuary	0.0	2.1
Tidewater Crossing	5.0	5.0
Open Window <sup>(a)</sup>	5.0	4.7
Weston Ranch Town Center	0.0	5.0
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>		
Mariposa Lakes	0.0	1.9
Airpark 599	0.0	3.6
Tra Vigne <sup>(b)</sup>	0.0	2.2
<b>Remaining City Outside of Study Areas and Outside of Approved/Pending Project</b>	1.5	1.5
<b>RWCF</b>	1.5	1.4
Note: A peaking factor of 0.0 is used for development areas with no existing wastewater flow.		
<sup>(a)</sup> Peaking factors based on City of Stockton 2016 Standard Drawing No. S-1.		
<sup>(b)</sup> As flows combine with flows from onther areas, the applicable peaking factor will be lower than listed.		

## COMPARISON OF GPU 2040 AND 2035 WWMP FLOWS AND COSTS

Wastewater collection infrastructure improvements were grouped by the numbered collection Systems identified in the 2035 WWMP. In order to assess potential changes to the planned facilities resulting from the GPU, it is useful to evaluate the change in projected flows for each System.

A summary of the ADWFs for the current GPU evaluations (2040 ADWF estimates, representing partial build-out) and the 2035 WWMP evaluation (2035 General Plan buildout) is provided in Table 8. As shown, there are significant differences between the 2040 projection and the 2035 WWMP buildout ADWFs. Some of the changes can be attributed to updated land use data and differing flow calculation methodologies, but they provide a reliable indication of the magnitude of differences associated with the new planning horizon and General Plan land use diagram. These differences potentially result in changes to the previously planned sewer system improvements. The changes are discussed in the following paragraphs by System. Costs are planning level estimates of construction cost without contingencies based on Table 8-2 of the 2035 WWMP. The adjusted costs applying the following changes are provided in Table 9:

- System 1: In this System, the change in ADWF is a decrease of 0.1 mgd out of a 2035 WWMP estimated flow of 3.0 mgd (a decrease of 3.0 percent). This small change results in no significant change in the planned sewer system infrastructure for this shed. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 2: In this System, the change in ADWF is a decrease of 1.1 mgd out of a 2035 WWMP estimated flow of 13.6 mgd (a decrease of 7.8 percent). This small change results in no significant change in the planned sewer system infrastructure for this shed. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 3: In this System, the change in ADWF is a decrease of 3.0 mgd out of a 2035 WWMP estimated flow of 10.3 mgd (a decrease of 29 percent). A significant portion of the apparent decrease in projected flow appears to be associated with a revision to the existing conditions land use data. Nevertheless, this change will likely result in a reduction of the planned sewer system improvements, including:
  - Trunk Sewers: All pipeline improvements comprised upsizing of existing pipelines. Approximately 20 percent of the previously estimated cost was associated with existing deficiencies. Based on the reduced estimate of existing flows, a relatively small reduction (10 percent) in the projected trunk sewer costs for this System is warranted.
  - Pump Stations: System 3 shares a major pumping facility with Systems 2 and 9, the Smith Canal Pump Station, which will require major upgrades in the future. One additional small pump station, Kirk and Del Rio (County) Pump Station, is also expected to require upgrades and eventual replacement to accommodate growth. Any change in cost to planned improvements at these pumping facilities attributable to changes in System 3 is expected to be minor and a change in the planning level estimate of costs is not warranted.

The costs associated with System 3 exclude the cost of improvements to Smith Canal Pump Station, which are accounted for separately as a shared facility, below.



Table 7. Peak Hour Wet Weather Flow

Study Area Name	Single Family, gpd		Multi Family, gpd		Commercial, gpd		Industrial, gpd		Total, gpd		
	Existing	2040	Existing	2040	Existing	2040	Existing	2040	Existing	Net New	2040
<b>Study Areas</b>											
Study Area 1 - Eight Mile Rd Area	178,413	1,512,761	249,680	1,416,872	133,116	69,365	36,048	17,822	597,257	2,419,562	3,016,820
Study Area 2 - Pacific Ave Corridor	32,588	29,707	111,288	267,837	739,769	716,544	731	667	884,377	130,377	1,014,754
Study Area 3 - West Ln and Alpine Rd Area	254,870	660,183	157,394	851,391	362,574	323,773	442,788	333,687	1,217,626	951,408	2,169,034
Study Area 4 - Port/Waterfront	73,062	143,852	272,306	1,699,033	60,627	60,789	423,620	324,626	829,615	1,398,686	2,228,300
Study Area 5 - El Dorado/Center Corridors	68,765	45,278	308,635	1,031,654	57,415	55,629	111,183	73,208	545,997	659,771	1,205,769
Study Area 6 - Miner/Weber Corridors	68,115	43,349	180,287	1,116,186	42,651	59,205	80,622	51,308	371,675	898,374	1,270,048
Study Area 7 - Wilson Way Corridor	18,796	18,584	9,245	313,600	6,164	82,092	168,019	166,121	202,224	378,172	580,396
Study Area 8 - I-5/Highway 4 Interchange	12,350	8,051	5,103	1,118,008	5,019	11,997	148,201	96,614	170,673	1,063,998	1,234,670
Study Area 9 - Railroad Corridor at California St	28,932	22,894	49,873	725,072	33,057	43,861	78,623	62,216	190,485	663,557	854,042
Study Area 10 - I-5 and Charter Way Area	364,398	897,701	142,604	226,484	180,925	153,279	48,636	72,727	736,562	613,628	1,350,190
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	6,753	6,753	0	348,105	20,844	27,374	0	0	27,597	354,635	382,232
Study Area 12 - Airport Way Corridor	68,095	57,508	10,806	156,257	26,300	128,341	829,117	893,582	934,318	301,370	1,235,688
Study Area 13 - Mariposa and Charter Area	24,915	24,915	221,488	221,488	39,179	62,406	0	0	285,582	23,228	308,809
Study Area 14 - East Weston Ranch	4,228	4,228	0	0	9,269	231,726	0	0	13,497	222,457	235,954
Study Area 15 - South of French Camp Rd	308,553	308,553	227,745	227,745	0	0	732	732	537,030	0	537,030
Study Area 16 - E French Camp Rd Area	398,096	398,096	341,000	341,000	1,098	1,098	2,109	2,109	742,303	0	742,303
Subtotal (Study Areas)	1,910,929	4,182,412	2,287,455	10,060,733	1,718,006	2,027,478	2,370,429	2,095,417	8,286,818	10,079,222	18,366,041
<b>Approved/Pending Development Projects Within City Limit</b>											
Westlake Villages	0	3,935,207	0	0	0	0			0	3,935,207	3,935,207
Delta Cove	0	923,852	0	953,985	0	17,239			0	1,895,076	1,895,076
North Stockton Projects III	358,000	2,514,861	0	0	0	0			358,000	2,156,861	2,514,861
Cannery Park	0	1,744,182	0	295,485	0	640,217			0	2,679,884	2,679,884
Nor Cal Logistics Center	0	0	0	0	0	0			0	0	0
Crystal Bay	0	136,599	0	1,595,924	0	0			0	1,732,523	1,732,523
Sanctuary	0	5,378,573	0	1,017,588	0	178,808			0	6,574,969	6,574,969
Tidewater Crossing	2,111,240	0	0	0	0	192,000			2,111,240	-1,919,240	192,000
Open Window	0	0	0	505,792	120,951	105,373			120,951	490,214	611,165
Weston Ranch Town Center	0	0	0	0	0	497,410			0	497,410	497,410
Subtotal (Approved/Pending Projects Within City Limit)	2,469,240	14,633,274	0	4,368,774	120,951	1,631,047	0	0	2,590,191	18,042,904	20,633,095
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>											
Mariposa Lakes	0	4,548,083	0	7,953,220	0	679,762			0	13,181,066	13,181,066
Airpark 599	0	0	0	0	0	1,114,992			0	1,114,992	1,114,992
Tra Vigne	0	4,672,178	0	0	0	0			0	4,672,178	4,672,178
Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)	0	9,220,260	0	7,953,220	0	1,794,754	0	0	0	18,968,235	18,968,235
<b>Remaining City Outside of Study Areas and Outside of Approved/Pending Projects</b>	39,190,957	45,100,427	21,754,295	21,498,606	1,559,995	1,541,659	6,108,780	6,036,981	68,614,027	5,563,646	74,177,673
<b>Estimated Total at RWCF</b>									<b>71,939,687</b>	<b>32,167,306</b>	<b>104,106,993</b>

**Table 8. Summary of Flows by Sewer Shed**

Collection System	Current General Plan Update Evaluation	2035 WWMP Evaluation	Change in Estimated ADF for 2040 versus 2035 Buildout	Change as a percent of the Estimated 2035 Buildout Flow <sup>(a)</sup>
	Estimated 2040 ADF	Estimated 2035 Buildout ADF		
1	2.9	3.0	(0.1)	-3.0%
2	12.6	13.6	(1.1)	-7.8%
3	7.3	10.3	(3.0)	-29.1%
4	2.4	2.5	(0.12)	-4.9%
5	3.7	2.8	0.91	32.6%
6	5.6	8.0	(2.5)	-30.6%
7	6.2	8.8	(2.6)	-29.2%
8	14.6	22.7	(8.0)	-35.5%
9	3.2	7.0	(3.7)	-53.4%
10	16.9	16.2	0.79	4.9%
12	10.4	9.7	0.69	7.1%
13	7.7	15.3	(7.6)	-49.8%
14	0.9	10.5	(9.6)	-91.4%
15 <sup>(b)</sup>	-	24.1	(24.1)	-100.0%

<sup>(a)</sup> Reductions or increases in predicted future flows do not change the analysis of existing flows and capacities. The analysis of existing pipes identified in the 2008 Master Plan with potential existing limitations has not changed as a result of changes in future development assumptions.

<sup>(b)</sup> System 15 will remain unserved at 2040.

**Table 9. GPU Planning-Level Estimate of Collection System Cost for 2040**

Improvements	Existing Deficiencies <sup>(a)</sup>		Growth Related	Buildout	
	Comments	Budget Costs, dollars	Budget Costs, dollars	Comments	Budget Costs, dollars
<b>COLLECTION SYSTEM 1 FACILITIES</b>					
Improvements to Existing Gravity Sewers		\$ 138,000	\$ -		\$ 138,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Pump Stations					
<i>Plymouth &amp; 5 Mile Cr. P.S.</i>	Construct new pump station with required additional capacity	\$ 573,000	\$ 66,000	Construct new pump station with required additional capacity	\$ 639,000
<i>Cumberland &amp; 5 Mile Cr. P.S.</i>	No Upgrade	\$ -	\$ -	No Upgrade	\$ -
Subtotals		\$ 711,000	\$ 66,000		\$ 777,000
<b>COLLECTION SYSTEM 2 FACILITIES</b>					
Existing Gravity Sewers		\$ 9,962,000	\$ 3,886,000		\$ 13,848,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Force Mains					
<i>Thornton &amp; Davis P.S. FM</i>		\$ 14,000	\$ -		\$ 14,000
Pump Stations					
<i>Kelly &amp; Mosher P.S.</i>	Replace pumps and controls	\$ 645,000	\$ -	Replace pumps and controls	\$ 645,000
<i>Thornton &amp; Davis P.S. (Stonewood)</i>	Construct new pump station with required additional capacity	\$ 847,000	\$ 154,000	Construct new pump station with required additional capacity	\$ 1,001,000
<i>Don Ave. &amp; Santiago L.S.</i>	Construct new pump station with required additional capacity	\$ 1,003,000	\$ 116,000	Construct new pump station with required additional capacity	\$ 1,119,000
<i>Swenson &amp; 5 Mile Cr. P.S. (North P.S.)</i>	Replace pumps and controls	\$ 5,155,000	\$ 839,000	Replace pumps and controls	\$ 5,994,000
<i>Blossom Ranch P.S.</i>	Replace pumps and controls	\$ 183,000	\$ 91,000	Replace pumps and controls	\$ 274,000
<i>Camanche P.S.</i>	Replace pumps and controls	\$ 467,000	\$ 321,000	Construct new pump station with required additional capacity	\$ 788,000
<i>Alexandria &amp; 14 Mile Sl. P.S. (Quail Lake)</i>	Replace pumps and controls	\$ 386,000	\$ 36,000	Replace pumps and controls	\$ 422,000
<i>March-Brookside &amp; I-5 P.S.</i>	No Upgrade. Monitor actual run-times and/or flows	\$ 25,000	\$ 199,000	Replace pumps and controls	\$ 224,000
Subtotals		\$ 18,687,000	\$ 5,642,000		\$ 24,329,000
<b>COLLECTION SYSTEM 3 FACILITIES</b>					
Existing Gravity Sewers		\$ 9,221,000	\$ 39,929,000		\$ 49,150,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Pump Stations					
<i>Kirk &amp; Del Rio (County P.S.)</i>	Replace pumps and controls	\$ 291,000	\$ 700,000	Construct new pump station with required additional capacity	\$ 991,000
Subtotals		\$ 9,512,000	\$ 40,629,000		\$ 50,141,000
<b>COLLECTION SYSTEM 4 FACILITIES</b>					
Existing Gravity Sewers		\$ 2,829,000	\$ 13,521,000		\$ 16,350,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Pump Stations					
<i>Waterloo &amp; Roosevelt/North P.</i>	No Upgrade	\$ -	\$ 366,000	Replace pumps and controls	\$ 366,000
<i>Drake &amp; Hwy. 99/South P.S.</i>	No Upgrade	\$ -	\$ -	No Upgrade	\$ -
Subtotals		\$ 2,829,000	\$ 13,887,000		\$ 16,716,000
<b>COLLECTION SYSTEM 5 FACILITIES</b>					
Existing Gravity Sewers		\$ 3,762,000	\$ 5,009,000		\$ 8,771,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 61,000		\$ 61,000
Force Mains					
<i>Lincoln Street PS FM</i>		\$ -	\$ 1,274,000	Construct new force main to accommodate growth	\$ 1,274,000
Pump Stations					
<i>Lincoln Street PS</i>		\$ -	\$ 2,587,000	Construct new pump station to accommodate growth	\$ 2,587,000
Subtotals		\$ 3,762,000	\$ 8,931,000		\$ 12,693,000
<b>COLLECTION SYSTEM 6 FACILITIES</b>					
Existing Gravity Sewers		\$ 254,000	\$ 19,742,000		\$ 19,996,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 7,800,000		\$ 7,800,000
Force Mains					
<i>System 6 North PS FM</i>		\$ -	\$ 937,000		\$ 937,000
Backpressure Sustaining Facilities					
Pump Stations					
<i>System 6 North PS</i>		\$ -	\$ 1,172,000	Future Pump Station	\$ 1,172,000
Crossings					
Subtotals		\$ 254,000	\$ 32,881,000		\$ 33,135,000
<b>COLLECTION SYSTEM 7 FACILITIES</b>					
Existing Gravity Sewers		\$ 12,000	\$ 5,591,000		\$ 5,603,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 6,084,000		\$ 6,084,000
Pump Stations					
<i>Duck Creek PS</i>		\$ -	\$ 1,348,000	Future Pump Station	\$ 1,348,000
Crossings					
Subtotals		\$ 12,000	\$ 13,823,000		\$ 13,835,000
<b>COLLECTION SYSTEM 8 FACILITIES</b>					
Existing Gravity Sewers		\$ 125,000	\$ 25,173,000		\$ 25,298,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 24,147,000		\$ 24,147,000
Force Mains					
<i>Arch Road PS FM</i>		\$ -	\$ -	Completed	\$ -
Backpressure Sustaining Facilities					
Pump Stations					
<i>Arch Road Industrial Park P.S.</i>		\$ -	\$ -	Completed	\$ -
<i>County P.S. (Hospital)</i>	Monitor actual run-times and/or flows	\$ -	\$ -	Assume removed from service at buildout. Must confirm grades are adequate for gravity flow.	\$ -
Crossings					
Subtotals		\$ 125,000	\$ 52,760,000		\$ 52,885,000

Table 9. GPU Planning-Level Estimate of Collection System Cost for 2040

Improvements	Existing Deficiencies <sup>(a)</sup>		Growth Related		Buildout	
	Comments	Budget Costs, dollars	Budget Costs, dollars	Comments	Budget Costs, dollars	
<b>COLLECTION SYSTEM 9 FACILITIES</b>						
Existing Gravity Sewers		\$ -	\$ -		\$ -	
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 5,100,000		\$ 5,100,000	
Force Mains						
<i>Newton Road FM</i>		\$ -	\$ 287,000		\$ 287,000	
<i>Backpressure Sustaining Facilities</i>		\$ -	\$ -		\$ -	
Pump Stations						
<i>Origone PS</i>	No Upgrade	\$ -	\$ -	Replace pumps and controls	\$ -	
<i>Sanguinetti PS</i>	No Upgrade	\$ -	\$ -	Replace pumps and controls	\$ -	
<i>Newton Rd PS</i>		\$ -	\$ 2,131,000	Future Pump Station	\$ 2,131,000	
Crossings		\$ -	\$ 4,000,000		\$ 4,000,000	
Subtotals		\$ -	\$ 11,518,000		\$ 11,518,000	
<b>COLLECTION SYSTEM 10 FACILITIES</b>						
Existing Gravity Sewers		\$ 55,000	\$ 16,380,000		\$ 16,435,000	
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 21,368,000		\$ 21,368,000	
Pump Stations						
<i>Brookside Pumping Station</i>	No Upgrade	\$ -	\$ -	No Upgrade	\$ -	
<i>Westlake P.S.</i>	No Upgrade	\$ -	\$ -	No Upgrade	\$ -	
<i>Sanctuary PS</i>		\$ -	\$ 2,094,000	Future Pump Station	\$ 2,094,000	
Crossings		\$ -	\$ 8,585,000		\$ 8,585,000	
Subtotals		\$ 55,000	\$ 48,427,000		\$ 48,482,000	
<b>COLLECTION SYSTEM 12 FACILITIES</b>						
Existing Gravity Sewers		\$ -	\$ -		\$ -	
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 26,768,000		\$ 26,768,000	
Force Mains						
<i>Central Stockton FM</i>		\$ -	\$ 23,232,000		\$ 23,232,000	
<i>Backpressure Sustaining Facilities</i>		\$ -	\$ 500,000		\$ 500,000	
Pump Stations						
<i>Mariposa PS</i>	Future Pump Station	\$ -	\$ 7,268,000	Future Pump Station	\$ 7,268,000	
Crossings		\$ -	\$ 6,600,000		\$ 6,600,000	
Subtotals		\$ -	\$ 64,368,000		\$ 64,368,000	
<b>COLLECTION SYSTEM 13 FACILITIES</b>						
Existing Gravity Sewers		\$ -	\$ -		\$ -	
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 34,178,000		\$ 34,178,000	
Force Mains						
<i>System 13 East PS FM</i>		\$ -	\$ 282,000		\$ 282,000	
<i>Tidewater PS FM</i>		\$ -	\$ 7,765,000		\$ 7,765,000	
<i>Backpressure Sustaining Facilities</i>		\$ -	\$ 800,000		\$ 800,000	
Pump Stations						
<i>System 13 East PS</i>		\$ -	\$ 4,622,000	Future Pump Station	\$ 4,622,000	
<i>Tidewater PS</i>		\$ -	\$ 7,168,000	Future Pump Station	\$ 7,168,000	
Crossings		\$ -	\$ 9,760,000		\$ 9,760,000	
Subtotals		\$ -	\$ 64,575,000		\$ 64,575,000	
<b>COLLECTION SYSTEM 14 FACILITIES</b>						
Existing Gravity Sewers		\$ -	\$ -		\$ -	
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -	Area not developed by 2040	\$ -	
Force Mains						
<i>System 14 PS FM</i>		\$ -	\$ -	Area not developed by 2040	\$ -	
<i>Backpressure Sustaining Facilities</i>		\$ -	\$ -	Area not developed by 2040	\$ -	
Pump Stations						
<i>System 14 PS</i>		\$ -	\$ -	Area not developed by 2040	\$ -	
Crossings		\$ -	\$ -	Area not developed by 2040	\$ -	
Subtotals		\$ -	\$ -		\$ -	
<b>COLLECTION SYSTEM 15 FACILITIES</b>						
Existing Gravity Sewers		\$ -	\$ -		\$ -	
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -	Area not developed by 2040	\$ -	
Force Mains						
<i>Thompson PS FM</i>		\$ -	\$ -	Area not developed by 2040	\$ -	
<i>System 15 East PS FM</i>		\$ -	\$ -	Area not developed by 2040	\$ -	
<i>Gateway PS FM</i>		\$ -	\$ -	Area not developed by 2040	\$ -	
<i>System 15 FM</i>		\$ -	\$ -	Area not developed by 2040	\$ -	
<i>Backpressure Sustaining Facilities</i>		\$ -	\$ -	Area not developed by 2040	\$ -	
Pump Stations						
<i>Thompson PS</i>		\$ -	\$ -	Area not developed by 2040	\$ -	
<i>Gateway PS</i>		\$ -	\$ -	Area not developed by 2040	\$ -	
<i>System 15 East PS</i>		\$ -	\$ -	Area not developed by 2040	\$ -	
Crossings		\$ -	\$ -	Area not developed by 2040	\$ -	
Subtotals		\$ -	\$ -		\$ -	
<b>SHARED FACILITIES</b>						
Force Mains						
<i>Westside Parallel FM</i>		\$ -	\$ -	Would have served System 15	\$ -	
<i>Smith Canal FM West</i>		\$ 551,000	\$ 3,689,000	Primarily serve Systems 3 & 9	\$ 4,240,000	
<i>Smith Canal FM East</i>		\$ 328,000	\$ 6,154,000	Primarily serve Systems 3 & 9	\$ 6,482,000	
<i>Weston Ranch P.S. FM</i>	Exceeds capacity; however other FM facilities exist to address this issue	\$ -	\$ -	Serves Systems 8 and 14	\$ -	
<i>Backpressure Sustaining Facilities</i>		\$ -	\$ -	Would have served System 15	\$ -	

Table 9. GPU Planning-Level Estimate of Collection System Cost for 2040

Improvements	Existing Deficiencies <sup>(a)</sup>		Growth Related Budget Costs, dollars	Buildout	
	Comments	Budget Costs, dollars		Comments	Budget Costs, dollars
<b>Pump Stations</b>					
<i>Smith Canal Pump Station</i>	Monitor flow split. Adjust as appropriate	\$ -	\$ 9,885,000	Replace pumps and controls; primarily serve Systems 3 and 9	\$ 9,885,000
<i>Weston Ranch P.S.</i>	No Upgrade	\$ -	\$ -	Construct new pump station with required additional capacity; Serves Systems 8 and 14	\$ -
<i>14 Mile Slough PS</i>	No Upgrade	\$ -	\$ 11,362,000	Construct new pump station with required additional capacity; Serves Systems 10, 1, and 15	\$ 11,362,000
Crossings		\$ -	\$ 3,600,000		\$ 3,600,000
Subtotals		\$ 879,000	\$ 34,690,000		\$ 35,569,000
<b>SUMMARY</b>					
Existing Gravity Sewers		\$ 26,400,000	\$ 129,200,000		\$ 155,600,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 125,500,000		\$ 125,500,000
Force Mains		\$ 900,000	\$ 44,900,000		\$ 45,800,000
Pump Stations		\$ 9,600,000	\$ 52,500,000		\$ 62,100,000
Crossings		\$ -	\$ 40,000,000		\$ 40,000,000
TOTAL (Construction Costs) <sup>(d)</sup>		\$ 36,900,000	\$ 392,100,000		\$ 429,023,000
Estimating Contingency (Level of Planning and Construction Contingency), 35%		\$ 12,900,000	\$ 137,200,000		\$ 150,100,000
TOTAL CONSTRUCTION BUDGET (2007 dollars)		\$ 49,800,000	\$ 529,300,000		\$ 579,123,000
Engineering, Administration and Other Project Costs, 35%		\$ 17,400,000	\$ 185,300,000		\$ 202,700,000
TOTAL PROJECT COSTS w/o Land (2007 dollars)		\$ 67,200,000	\$ 714,600,000		\$ 781,823,000
Property Acquisition Allowance (7% of bare growth pipeline construction)		\$ -	\$ 11,900,000		\$ 11,900,000
TOTAL PROJECT COSTS (2007 dollars)		\$ 67,200,000	\$ 726,500,000		\$ 793,723,000

(a) Only fractional quantities of each gravity sewer total are used for projecting CIP costs (2035 WWMP). Findings from the City's ongoing condition assessment activities and additional flow

(b) Costs provided for gravity sewers 18 inches and larger only and for all force mains (irrespective of diameter).

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- System 4: In this System, the change in ADWF is a decrease of 0.12 mgd out of a 2035 WWMP estimated flow of 2.54 mgd (a decrease of 4.9 percent). This small change would result in no significant change in the planned sewer system infrastructure for this shed. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 5: In this System, the change in ADWF is an increase of 0.91 mgd out of a 2035 WWMP estimated flow of 2.8 mgd (an increase of 33 percent). A portion of this increase may be attributed to an updated and improved identification of existing land uses; nevertheless, this change will likely result in some additional improvements being needed to accommodate the planned growth, including:
  - Trunk Sewers: Approximately 30 percent of the previously estimated cost was associated with existing deficiencies and the remainder is associated with growth. Several significant pipeline upsizing projects were predicted. It is assumed that the higher projected flows will result in a slight increase in a portion of the previously predicted upsizing projects resulting in an assumed 10 percent increase in the previously estimated cost. In addition, it is possible that some additional sewers will need to be upsized, so it is assumed that the previously estimated cost will increase an additional 10 percent, for a total increase of 20 percent.
  - Pump Stations: One new pump station, the Lincoln Street Pump Station, and an associated force main were planned to serve the downtown area only. Due to the apparent increase in buildout flows, it is assumed the cost of this pump station and force main project will increase approximately 10 percent.
- System 6: In this System, the change in ADWF is a decrease of 2.5 mgd out of a 2035 WWMP estimated flow of 8.0 mgd (a decrease of about 31 percent). This change will likely result in a reduction of the planned sewer system improvements, including:
  - Trunk Sewers: Pipeline improvements include upsizing of existing pipelines as well as extension of new sewers into the eastern portions of System 6 that are currently undeveloped. It is assumed about half of the future sewer extensions will be approximately 15 percent lower cost than previously estimated and that the cost of the remaining half will not be affected. For the upsizing of existing sewers, it is assumed the cost will be approximately 20 percent lower than previously estimated, based on the lower predicted flows.
  - Pump Stations: The eastern portions of System 6 will require a new pump station and force main. Any change in the cost of these new facilities attributable to the lower flow projections is expected to be small, so a five percent reduction in the planning level estimate of costs is assumed.
- System 7: In this System, the change in ADWF is a decrease of 2.6 mgd out of a 2035 WWMP estimated flow of 8.8 mgd (a decrease of about 29 percent). One major new trunk relief sewer was attributed to System 7, a 5,600 ft. long 54" diameter pipeline primarily located along Tillie Lewis Drive. In addition, some gravity sewer extensions into growth areas and one associated pump station at the eastern end of the System were identified, as well as improvements to existing sewers to correct apparent grade issues or localized capacity concerns. However, the apparent decrease in flows from the System are not expected to substantively affect the costs previously

identified improvements for System 7. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.

- System 8: In this System, the change in ADWF is a decrease of 8.0 mgd out of a 2035 WWMP estimated flow of 22.7 mgd (a decrease of about 36 percent). Major costs associated with upsizing of existing sewers as well as major extensions east of State Highway 99 were identified. This reduction in planned flow is likely attributed to a decrease in the rate of development, and depending on the location of the development that occurs by 2040, it is likely that substantial portions of the future extensions will not be needed by 2040. The change will likely result in a reduction of the planned sewer system improvements, including:
  - Trunk Sewers: The need for both new sewer extensions and upsizing in existing sewers will likely be reduced, unless development begins at the eastern end of the System 8, requiring long extensions into those areas. Therefore, it is assumed that the cost of trunk sewer improvements will be reduced by approximately 20 percent.
  - Pump Stations: The Arch Road Industrial Park Pump Station identified in the 2035 WWMP has been constructed.
- System 9: In this System, the change in ADWF is a decrease of 3.7 mgd out of a 2035 WWMP estimated flow of 7.0 mgd (a decrease of about 53 percent). Costs associated with upsizing of existing sewers as well as major extensions into areas not currently served by the sewer system were identified. The reduction in planned flow is likely attributed to a decrease in the rate of development, and depending on the location of the development that occurs by 2040, it is likely that some of the future extensions will not be needed by 2040. The change will likely result in a reduction of the planned sewer system improvements, including:
  - Trunk Sewers: It is assumed the need for upsizing existing trunk sewers will be eliminated by the decrease in projected flow. The need for new sewer extensions might be reduced slightly; however, the new sewer extensions are primarily smaller diameter trunks necessary in each portion of the Shed that begins to develop. Therefore, costs reductions will only be realized where portions of the Shed do not develop. It is assumed that most or all areas of the Shed will begin to develop by 2035, and therefore no substantive reduction in the cost of new trunk sewer extensions is appropriate.
  - Pump Stations: It is assumed the need for upsizing existing pumps stations will be eliminated by the decrease in projected flow. A new pump station, the Newton Road Pump Station is needed to connect a significant portion of the Shed. The Pump Station would likely require smaller pumping equipment sized for lower flows early in its useful life, so a 10 percent reduction in the planning level estimate of costs is assumed.
- System 10: In this System, the change in ADWF is an increase of 0.79 mgd over a 2035 WWMP estimated flow of 16.2 mgd (an increase of about 5 percent). This change is not likely to result in a substantive reduction in the cost of the planned sewer system improvements. The following changes will likely affect the projected cost of improvements:

- Trunk sewers: Approximately 15 to 20 percent of trunk extensions planned in the 2035 WWMP have been completed since 2008, so the estimated cost of the future extensions should be reduced by about 15 percent. Improvements to existing trunk sewers are dominated by a large upsizing project along Whistler Way and extending east from Lower Sacramento Road along Bear Creek. The cost of this improvement or other upsizing projects is not likely to be affected.
- Pump Stations: System 10 shares the 14-Mile Slough Pump Station, which is discussed separately.
- System 12: In this System, the change in ADWF is an increase of 0.69 mgd out of a 2035 WWMP estimated flow of 9.7 mgd (an increase of about 7 percent). This small change is not likely to result in a substantive increase in the cost of planned sewer system infrastructure. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 13: In this System, the change in ADWF is a decrease of 7.6 mgd out of a 2035 WWMP estimated flow of 15.3 mgd (a decrease of about 50 percent). New sewers and pump stations are required to serve the System 13 area. The reduction in projected flow may result in somewhat smaller sewer diameters and pump capacities; however, costs will primarily be related to the extent of new service area being added within the 2040 planning horizon. For example, if the eastern portion of the service area develops first, a disproportionate cost would be triggered to extend the collection system to the new service area. Therefore, for the purposes of this analysis, it is assumed that the cost of new trunk sewers and pump stations will be reduced by 20 percent, reflecting fewer facilities constructed than those identified for build out in the 2035 WWMP.
- System 14: In this System, the change in ADWF is a decrease of 9.6 mgd out of a 2035 WWMP estimated flow of 10.5 mgd (a decrease of about 91 percent). Most of this growth area has been eliminated from the 2040 sewer service area, and the planned trunk sewers for developing areas have already been constructed. Therefore, all planned costs for System 14 are eliminated.
- System 15: Nearly all of System 15 will remain undeveloped at 2040. A small area adjacent to the existing 14-Mile Slough Pump Station is planned for institutional land use; however, only a small diameter sewer would be needed to serve the area by connecting it to the pump station if the small area ever develops. It is assumed that the Delta Water Supply Project treatment facility will remain disconnected from the collection system, and that no other existing or future development will be served by 2040. Therefore, all costs associated with System 15 identified in the 2035 WWMP are eliminated.
- Shared Facilities: Each shared facility is critical component in more than one System. The largest shared facility is the RWCF. The GPU is expected to have the following impacts on shared facilities:



- 14-Mile Slough Pump Station: This pump station serves Systems 1, 2 and 10, and was designed for expansion to serve System 15. The modeled ratio of peak to average flow was about 2.4 in the 2035 WWMP. The revised 2040 average flow for Systems 1 and 10 is 19.2 mgd, and the peak flow can be estimated using the same 2.4 peaking factor to be 46 mgd, or about 65 percent of the buildout peak flow projected in the 2035 WWMP. The current peak flow capacity of the pump station is 14.5 mgd, so even though the future peak flow is substantially lower, a major upgrade will be necessary. For the purposes of this analysis, it is assumed that the cost of increased capacity will be 80 percent of the previously estimated cost for future expansion.
- Westside Parallel Force Main: The existing West Side Force Main receives flow from the 14-Mile Slough Pump Station as well as the Brookside Pump Station, and serves Systems 1, 2 and 10. A parallel force main was planned to serve System 15, but will not be needed for capacity reasons.
- Smith Canal Pump Station and Force Mains: Two force mains receive flow from the Smith Canal Pump Station, primarily serving Systems 3 and 9. Replacement and upsizing of the force mains, pumps and controls will be needed to serve planned growth. The required upsizing may be slightly reduced and is potentially deferred as a result of reduced growth planned for 2040; however, it is likely that most or all of the anticipated improvements will be needed by 2040 and for the purposes of this analysis no reduction in the planned cost is recommended.
- Weston Ranch Pump Station and Force Main: Pump station and force main improvements were identified in the 2035 WWMP primary triggered by planned development in System 14, which is no longer planned for 2040. It is assumed that no significant upgrade will be needed for serving growth within the existing pump station service area.

The adjusted costs are presented in Table 9 which is adapted from Table 8-2 of the 2035 WWMP. All costs estimates are planning level estimates based on broad assumptions and limited information, and do not necessarily reflect the economic conditions at the time a project is constructed.

The planning level estimate of construction costs (without contingencies, engineering, administration, land acquisition for pipeline extensions or other project costs) can be compared to the 2035 WWMP buildout estimates as follows in terms of 2007 dollars:

- Construction costs for existing deficiencies decreased slightly from \$38 million to \$36.9 million.
- Construction costs for growth-related improvements decreased from \$599 million to \$392 million.
- The corresponding updated planning level estimates of total project costs (total capital costs) are \$67.2 million to address existing deficiencies and \$727 million for growth-related improvements, as shown in Table 9.

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## REGIONAL WASTEWATER CONTROL FACILITY FLOWS AND COSTS

As presented previously, actual flow to the RWCF in the summer of 2017 averaged about 27 mgd, and the ADWF for 2016 was 29 mgd. It is assumed these flows reflect significant water conservation originating from the recent drought conditions, which would be consistent with most other communities in California. Furthermore, it is assumed that flow would rebound upward over time, even in the absence of growth. Nevertheless, it is likely that standard flow factors used to predict flows for prudent collection system planning will over predict the aggregate combined flow at the RWCF. Indeed, the 2017 land uses with standard flow factors applied would generate an average flow of about 37 mgd.

The 2035 WWMP included a predicted buildout influent flow of 70 mgd, based on population of 580,717, a per capita flow of 112 gallons per day, and an analysis of industrial flows in excess of the per capita flow factor. (For treatment plant design purposes, plant recycle flows must also be considered.) The total estimated project cost to accommodate the buildout flow, based on very preliminary planning analysis was about \$417 million in 2007 dollars.

The City prepared a Capital Improvement and Energy Management Plan (CIEMP) for the RWCF in 2011 which predicted flows would reach 49.3 mgd by 2035, which did not represent a general plan buildout value<sup>10</sup>. The CIEMP is being implemented through a series of projects, and the projection of future flows was recently updated as part of the CIEMP implementation work. The adopted flow projection is based on a population of 401,961 (from the San Joaquin Council of Governments) and a per capita flow rate of 100 gallons per day for 2035<sup>11</sup>. As noted above, the revised projected ADWF is 40.2 mgd for 2035 and 46.3 mgd for 2045. Assuming linear growth from 2035 to 2045, the corresponding ADWF for 2040 would be 43.3 mgd.

Existing treatment facilities have a rated secondary ADWF treatment capacity of 48 mgd, and a rated tertiary treatment capacity of 55 mgd. Preparation of the CIEMP involved an extensive analysis of existing treatment facilities, both capacity and condition. The CIEMP recommended a series of short-term and long-term improvements to address rehabilitation and replacement needs while improving treatment reliability. The total project cost for the short and long-term projects, excluding energy-related projects, was about \$221 million, based on 2011 dollars<sup>12</sup>.

For the purposes of this analysis, the CIEMP estimate of costs to achieve a reliability at the permitted capacity should be used as the cost to accommodate flows at the 2040 planning horizon.

All costs estimates are planning level estimates based on broad assumptions and limited information, and do not necessarily reflect the economic conditions at the time a project is constructed.

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<sup>10</sup> City of Stockton RWCF Capital Improvement and Energy Management Plan; Carollo Engineers, August 2011.

<sup>11</sup> Information provided by City staff, and resulting 40.2 mgd ADWF for 2035 is reported in the Stockton RWCF Design Build Project; "Advanced Package 3a & 3b" of the Basis of Design Report; AECOM, October 2017.

<sup>12</sup> Ibid. (Table 19.2)

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The infrastructure analyses and cost evaluations presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these analyses should be refined and updated through detailed evaluations of each specific development project.

## **RECOMMENDED FUTURE ACTIONS**

The recommended actions to address wastewater infrastructure needs are addressed in this section.

### **Sewer System**

The projected land uses for 2040 are different that the buildout land uses from the 2035 General Plan. Consequently, the collection system improvements identified in the 2035 WWMP may no longer be appropriate. This could result in some sewer system infrastructure being undersized, which could lead to sanitary sewer overflows. Some sewer system infrastructure could be oversized, resulting in unnecessary capital expenditures and increased operations and maintenance efforts and costs. Therefore, it is recommended that an updated citywide collection system model and capital improvement plan be developed and periodically updated. The model and plan should,

- a) Incorporate industry standard calibration procedures, which will require additional flow monitoring throughout the collection system and peak wet weather flow analysis;
- b) Be based on field-verified sewer invert elevation data where existing data indicates anomalies such as pipes with adverse or unexpected slopes; and
- c) Use software capable of dynamic hydraulic computations so that surcharging conditions can be more accurately represented.

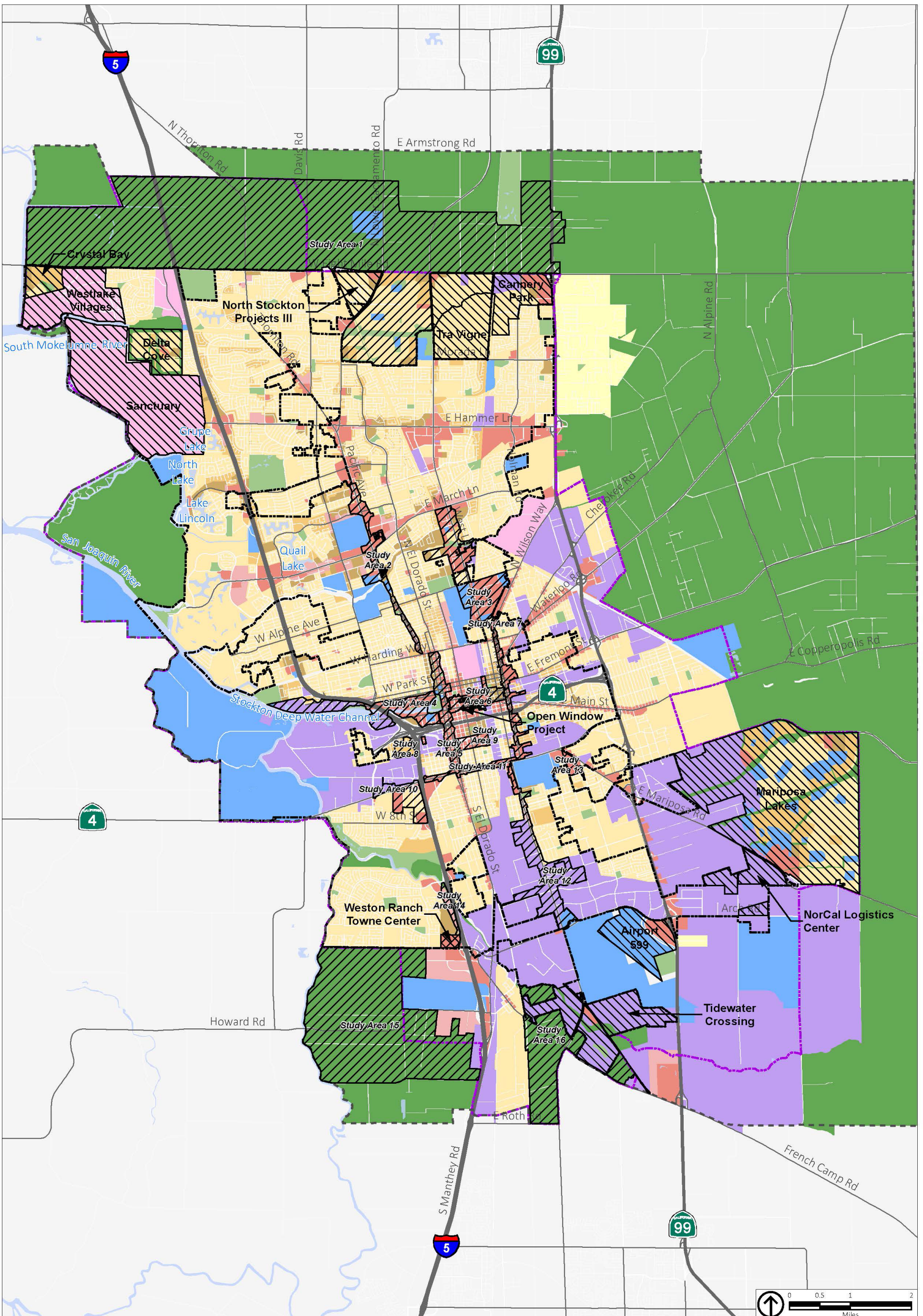
Routine inspection and maintenance should be conducted in order to maintain capacity and reliability in existing facilities. Such activities should include completion (and future updates) of ongoing efforts to assess the condition of gravity sewers, and a thorough condition assessment of pumping facilities. The condition assessment data should be used to quantify and prioritize rehabilitation needs, including an analysis of annual funding required to restore and maintain system reliability.

Beyond the need for collection system model calibration, a long-term program of wet and dry weather flow monitoring is recommended as a tool for detecting excessive infiltration and inflow problems that develop over time as pipelines deteriorate.

### **Regional Wastewater Control Facility**

Major improvements to the RWCF have been identified as necessary to address rehabilitation needs and provided sufficient capacity for the planned growth. Current RWCF planning is based on providing capacity for flows and loads predicted for partial buildout, which is appropriate. However, it is also recommended that as the layout and orientation of new or replacement facilities are designed, consideration is given to how the plant can be efficiently increased in the future. A plant layout reflecting flows at General Plan buildout should be configured to avoid unnecessarily increasing the cost of future improvements.

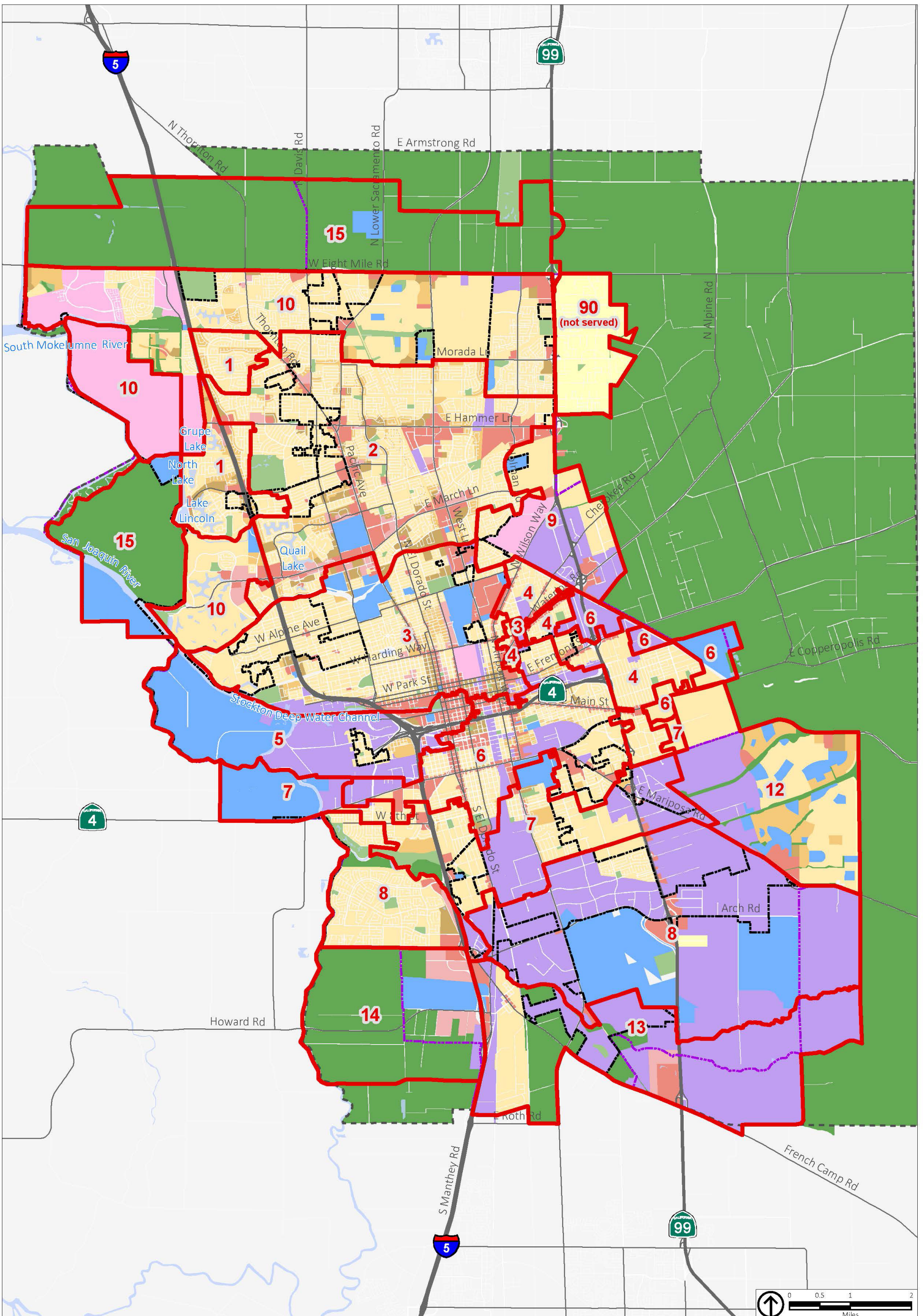
The CIEMP, which is serving as a long-term facilities plan for the RWCF, should be periodically updated to reflect actual flows and loads measured for existing conditions, operational experience with recently constructed facilities, and improvements in treatment and energy management technologies.



Source: City of Stockton, June & August 2017.



Figure 1  
2017 Preferred 2040 Land Uses  
and Development Areas



Source: City of Stockton, June & August 2017.

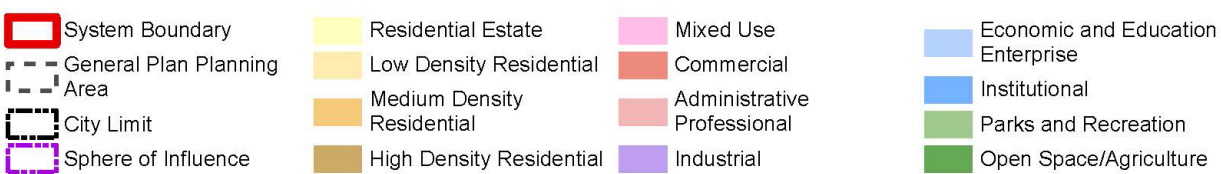
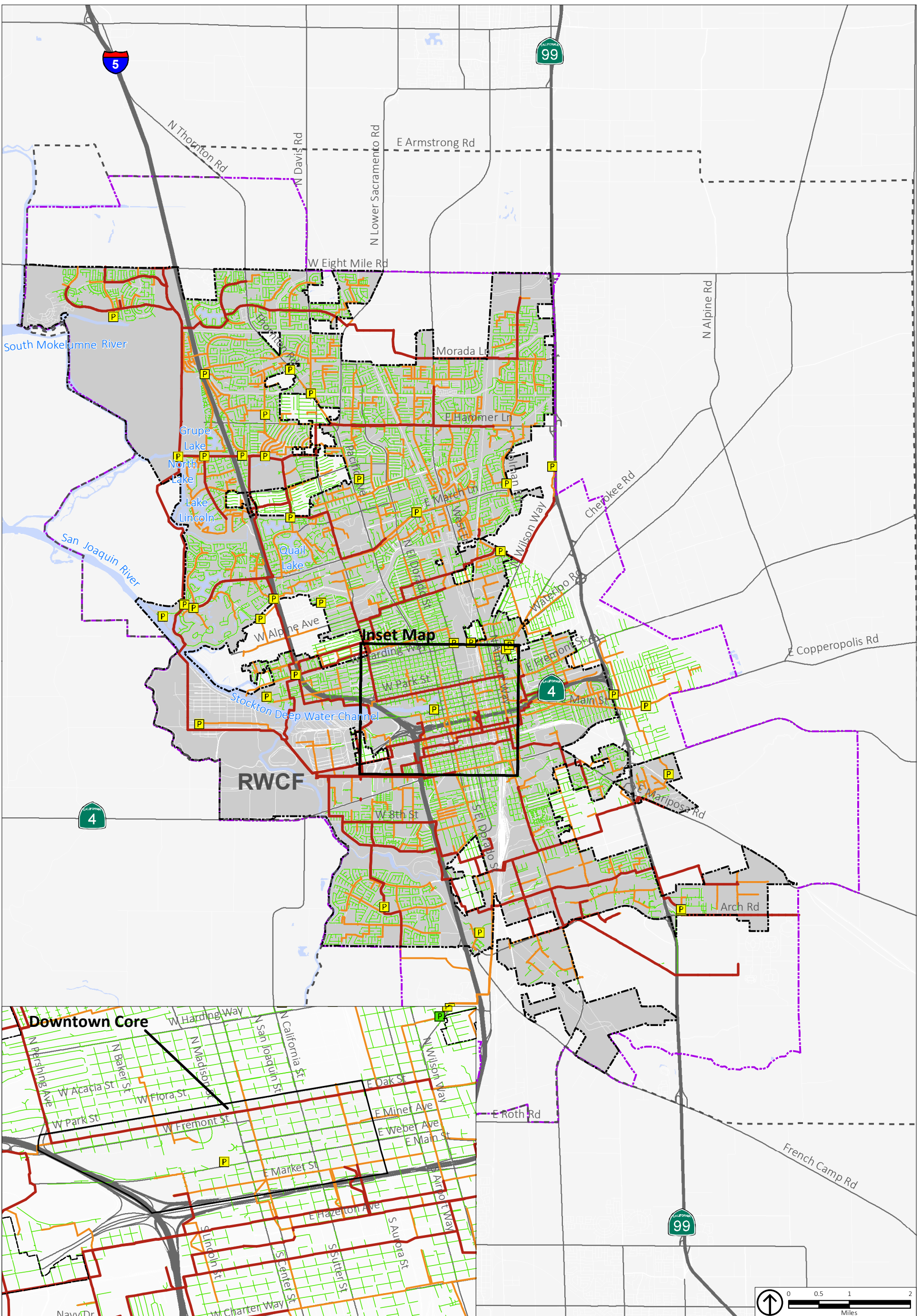


Figure 2  
2017 Preferred 2040 Land Uses and Sewer  
Sub - Collection System Boundaries



Source: City of Stockton, April 2016.

- P Sanitary Pump Station
- General Plan Planning Area
- Existing Sewer Line (Diameter)**
- < 8 Inches
- 10 - 18 Inches
- > 18 Inches
- City Limit
- Sphere of Influence

Figure 3  
Sewer System Facilities

## ATTACHMENT A

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Land Use Data Received from Placeworks and Buildout Land Use Map

ATTACHMENT C

Acreage Gross or Net	Study Area Name	Single Family Net New 2040	Single Family Net New 2040	Single Family Net New 2040 + Existing	Single Family Net New 2040 + Existing	Multi Family Net New 2040	Multi Family Net New 2040	Multi Family Net New 2040 + Existing	Multi Family Net New 2040 + Existing	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040 + Existing	Commercial Net New 2040 + Existing	Industrial Net New 2040	Industrial Net New 2040 + Existing
		Units	Acres	Units	Acres	Units	Acres	Units	Acres	Total Square Feet	0.3 FAR Sq Ft	0.5 FAR Sq Ft	5.0 FAR Sq Ft	0.3 FAR Acres	0.5 FAR Acres	5.0 FAR Acres	Sq Ft	Acres	Sq Ft	Sq Ft
Gross	Study Area 1 - Eight Mile Rd Area	1,379	646	1,500	663	1,198	209	1,294	217	39,408	39,408	0	0	15	0	0	241,408	20	0	105,400
Net	Study Area 2 - Pacific Ave Corridor	0	0	22	4	110	19	224	22	93,961	93,961	0	0	17	0	0	1,560,846	103	0	1,980
Net	Study Area 3 - West Ln and Alpine Rd Area	77	13	285	52	680	120	774	125	323,399	323,399	0	0	102	0	0	975,325	163	0	1,423,576
Net	Study Area 4 - Port/Waterfront	17	3	71	11	1,770	33	2,058	42	2,040,010	6,100	0	2,033,911	2	0	31	2,865,512	62	580,859	1,739,495
Net	Study Area 5 - El Dorado/Center Corridors	0	0	45	6	1,196	22	1,555	30	1,310,216	0	0	1,310,216	0	0	21	2,158,663	53	0	258,300
Net	Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	0	0	47	4	1,248	22	1,467	27	1,463,025	0	0	1,463,025	0	0	14	2,152,972	33	0	187,300
Net	Study Area 7 - Wilson Way Corridor	0	0	12	2	234	27	240	28	606,716	103,753	0	502,963	19	0	5	1,321,076	65	0	390,342
Net	Study Area 8 - I-5/Highway 4 Interchange	0	0	8	1	659	47	660	48	388,671	0	0	388,671	0	0	4	388,671	4	0	344,300
Net	Study Area 9 - Railroad Corridor at California St	0	0	19	2	1,340	24	1,363	25	1,299,279	0	0	1,299,279	0	0	24	1,365,999	26	0	182,658
Net	Study Area 10 - I-5 and Charter Way Area	86	15	314	58	98	42	127	46	133,864	133,864	0	0	42	0	0	377,363	77	83,678	203,939
Net	Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0	0	5	0	396	15	396	15	323,733	9,597	0	314,135	6	0	7	703,670	38	0	0
Net	Study Area 12 - Airport Way Corridor	0	0	53	7	108	19	112	19	205,461	135,225	70,236	0	14	4	0	272,544	48	1,368,744	3,709,140
Net	Study Area 13 - Mariposa and Charter Area	0	0	12	4	0	0	77	6	80,944	80,944	0	0	25	0	0	93,560	28	0	0
Net	Study Area 14 - East Weston Ranch <sup>(b)</sup>	0	0	1	1	0	0	0	0	430,677	0	430,677	0	0	26	0	430,677	26	0	0
Net	Study Area 15 - South of French Camp Rd	0	0	89	76	0	0	9	6	0	0	0	0	0	0	0	0	0	0	1,700
Net	Study Area 16 - E French Camp Rd Area	0	0	59	123	0	0	4	9	0	0	0	0	0	0	0	5,100	17	0	4,900
Net	Outside of Study Areas <sup>(c)</sup>	1,501	246	77,964	14,117	0	0	33,183	1,916	0	0	0	0	0	0	0	23,811,089	1,607	0	46,620,901
	<b>Grand Total</b>	<b>3,059</b>	<b>923</b>	<b>80,505</b>	<b>15,131</b>	<b>9,036</b>	<b>600</b>	<b>43,542</b>	<b>2,583</b>	<b>8,739,364</b>	<b>926,252</b>	<b>500,913</b>	<b>7,312,200</b>	<b>242</b>	<b>31</b>	<b>105</b>	<b>38,724,475</b>	<b>2,371</b>	<b>2,033,281</b>	<b>55,173,931</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

<sup>(c)</sup> Excludes approved/pending projects.

Acreage Gross or Net	Approved/Pending Projects Details	Net New						Full Build (2040)					
		Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres	Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres
<b>Approved within city limit</b>													
Gross	Westlake Villages	2,630	680	0		0		2,630	680	0		0	
Gross	Delta Cove	1,164	133	381	48	31,000	3	1,164	133	381	48	31,000	2.6
Gross	North Stockton Projects III	2,220	355	0		0		2,455	393	0		0	
Gross	Cannery Park	981	272	210	16	1,078,762	104	981	272	210	16	1,078,762	104
Gross	Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0
Gross	Crystal Bay	951	19	392	79	0		951	19	392	79	0	0
Gross	Sanctuary	5,452	1,026	1,618	67	692,256	36	5,452	1,026	1,618	67	692,256	36
Gross	Tidewater Crossing	-310	-870	0		186,200	16	0	0	0	0	186,200	16
Net	Open Window <sup>(a)</sup>	0	0	1,391	12	-68,800	-1	0	0	1,400	12	290,000	12
Gross	Weston Ranch Town Center	0	0	0	0	481,000	41	0	0	0	0	481,000	41
<b>Approved/pending outside city limit, inside SOI</b>													
Gross	Mariposa Lakes	8,955	939	1,553	585	1,009,503	150	8,960	1,090	1,556	585	1,009,503	150
Gross	Airpark 599	0	0	0	0	1,678,500	128	0	0	0	0	1,678,500	128
Gross	Tra Vigne <sup>(b)</sup>	1,244	846	0	0	0	0	1,244	846	0	0	0	0

<sup>(a)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand the capacity to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.

<sup>(b)</sup> Pending; not approved.



2040 Development Study Area												
	Net New Single Family Units (full buildout)	Percent applied to 2040	Net New Single Family Units (2040)	Net New Multi-Family Units (full buildout)	Percent applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (full buildout)	Percent applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (full buildout)	Percent applied to 2040	Net New Industrial Square Feet (2040)
Study Area 1 – Eight Mile Rd Area	3,940	35%	1,380	3,420	35%	1,200	197,000	20%	39,000	0	0%	0
Study Area 2 – Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
Study Area 3 – West Ln and Alpine Rd Area	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
Study Area 4 – Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
Study Area 5 – El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
Study Area 6 – Miner/Weber Corridors <sup>(a)</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
Study Area 7 – Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
Study Area 8 – I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
Study Area 9 – Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
Study Area 10 – I-5 and Charter Way Area	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
Study Area 11 – Charter Way/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
Study Area 12 – Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
Study Area 13 – Mariposa and Charter Area	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
Study Area 14 – East Weston Ranch <sup>(b)</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
Study Area 15 – South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Study Area 16 – E French Camp Rd Area	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>(c)</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>(d)</sup></b>	<b>20,480</b>		<b>3,060</b>	<b>48,470</b>		<b>9,040</b>	<b>45,773,000</b>		<b>8,739,000</b>	<b>134,701,000</b>		<b>2,033,000</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

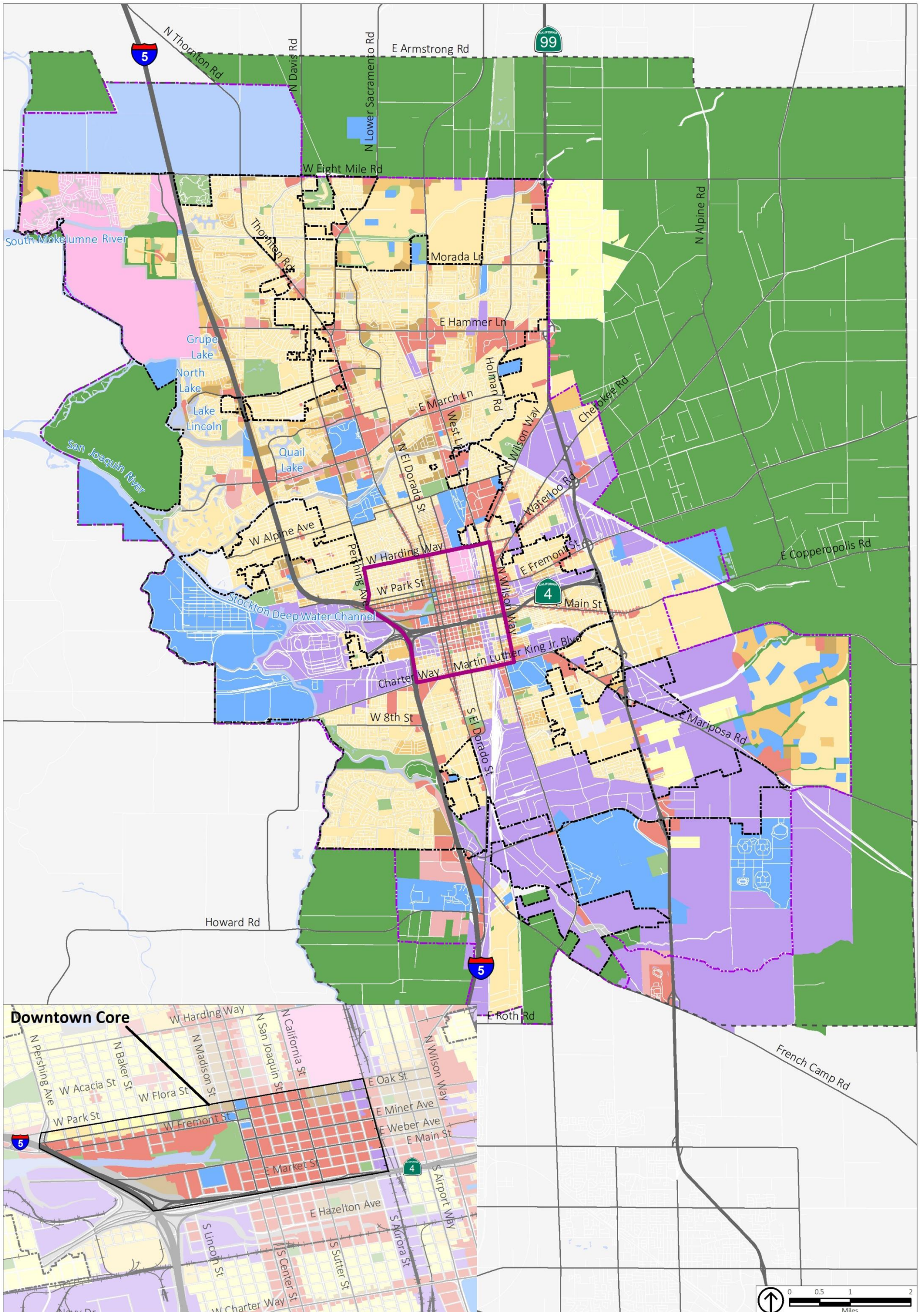
<sup>(c)</sup> Excludes approved/pending projects

<sup>(d)</sup> Numbers do not always add up due to rounding.

The "full buildout" of the proposed General Plan assumes the maximum development of every parcel, combined with approved and pending developments throughout the Planning Area. The 2040 land uses are based on realistic land use demand projections. The full buildout of the General Plan would result in almost three times more new housing units and over 24 times more new non-residential development than estimated for 2040. Therefore, it is extremely unlikely that the full buildout would occur by the year 2040. Full buildout may not occur until well beyond the useful lifespan of the proposed infrastructure (for example, the lifespan of concrete structures is typically 50 to 75 years). Consequently, this infrastructure planning was based on the estimated 2040 level of development. This table is included in this TM to document the relationship between the buildout land uses and the 2040 land uses.

Source: PlaceWorks, 2017.

**Figure 2-8**  
**General Plan Land Use Map**



Source: City of Stockton, 2017; PlaceWorks, 2017.

- |                            |                            |                          |                                   |                        |
|----------------------------|----------------------------|--------------------------|-----------------------------------|------------------------|
| City Limit                 | Residential Estate         | High Density Residential | Administrative Professional       | Institutional          |
| Sphere of Influence        | Low Density Residential    | Mixed Use                | Industrial                        | Parks and Recreation   |
| General Plan Planning Area | Medium Density Residential | Commercial               | Economic and Education Enterprise | Open Space/Agriculture |
| Greater Downtown Boundary  |                            |                          |                                   |                        |

**ATTACHMENT 3**  
**REVISED STORMWATER MASTER PLAN SUPPLEMENT**



## **TECHNICAL MEMORANDUM**

DATE: December 6, 2017 Project No.: 425-10-16-04.006  
 TO: City of Stockton, Municipal Utilities Department SENT VIA: EMAIL  
 FROM: Douglas T. Moore, PE, RCE #58122  
 REVIEWED BY: Mark Kubik, PE, RCE #50963  
 SUBJECT: Stockton General Plan Update – Stormwater Master Plan Supplement

This Technical Memorandum (TM) presents the Stormwater Master Plan Supplement for the Stockton General Plan Update (GPU). This TM includes the following sections:

- Summary
  - Existing Conditions Summary
  - Detention Storage and Pumping Requirements for the Study Areas Summary
  - Cost Evaluations Summary
  - Potential Environmental Impacts and Mitigation Measures Summary
- Existing Conditions
- Detention Storage and Pumping Requirements for the Study Areas
  - GPU Land Uses by Development Area
  - Assumptions and Methodology
  - Storage Requirements
  - Pump Station Requirements
- Detention Storage and Pumping Cost Evaluations
  - Detention Storage Construction Costs
  - Pumping Construction Costs
  - Total Capital Costs
- Recommended Future Actions
- Conclusions

The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

Technical Memorandum

December 6, 2017

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## SUMMARY

A summary of this TM is presented below. The development of the summary data is presented in the following sections of this TM. The 2040 land uses are shown on Figure 1, and the General Plan Update buildout land use map is provided in Attachment A.

### Existing Conditions Summary

The City's storm drain system is shown on Figure 2. The storm drain system includes 620 miles of 4-inch to 96-inch storm drains and over 22,500 drain inlets. A total of 58 pump stations and 19 lift stations are used to pump drainage into receiving waters, as shown on Figure 2.

The City of Stockton (City) is characterized by flat topography with a complex network of streams and rivers running through it. The northern portion of the City is protected by levees, and drainage is typically pumped into receiving waters. The southern portion of the City does not have many levees and is characterized by various floodplain designations by FEMA (Peterson Brustad Inc., 2008). A few of the waterways in the central and northern parts of the City, namely Bear Creek, Pixley Slough, Mosher Slough, and the Calaveras River, have sufficient capacity to handle buildout flows based on the 1990 General Plan, but do not have capacity to handle additional development beyond that. The creeks in the southeast portion of the planning area, (North Littlejohns Creek, Weber Slough, South Littlejohns Creek, and Lone Tree Creek) do not have capacity to contain the existing 100-year flows, resulting in overbank flooding predicted in much of those watersheds (West Yost Associates [West Yost], 2004).

### Detention Storage and Pumping Requirements for the Study Areas Summary

Several development Study Areas were identified by Placeworks, as shown on Figure 2. Little infrastructure planning has been done for the Study Areas; consequently, detention storage and pumping requirements have been estimated for the Study Areas. Stormwater plans have been or will be prepared by others for the Approved/Pending Development Projects. To avoid conflicting infrastructure plans, no storage and pumping requirements have been estimated for the Approved/Pending Development Projects.

The detention storage volumes required per the City of Stockton's standards range from 0.5 to 50.4 acre-feet (ac-ft). The total new development tributary area that needs detention storage facilities is 547.8 acres of various land uses.

The San Joaquin County Improvement Standards requires that detention basins shall have outlet facilities providing terminal drainage capable of emptying a full basin in 24 hours in urban areas. Firm pumping capacity is the combined capacity of the individual pumps in the pump station, except the largest pump (assuming the largest pump is out of service). The firm pumping capacities for the Study Areas range from 0.3 to 25.4 cubic feet per second (cfs), and the combined firm capacity is 50.3 cfs. Total pumping capacity is the combined capacity of all the individual pumps in the pump station, including the largest pump (assuming the largest pump is in service). Total pumping capacity is included in this evaluation for estimating pump station costs. The total pumping capacities range from 0.5 to 38.1 cfs, and the combined total capacity is 88.0 cfs. The total tributary area is 547.8 acres of various land uses. On average, this results in about 0.09 cfs/acre of firm pumping capacity needed per acre of development.

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## Cost Evaluations Summary

Capital costs range from approximately \$95,000 to \$5.8 million, with a total of \$12.2 million. Land costs make up approximately \$2.8 million of the \$12.2 million. The cost per acre of development is approximately \$22,400.

## Potential Environmental Impacts and Mitigation Measures Summary

This study is a high-level assessment to analyze detention basin and pumping capacity requirements based on increases in the volume of stormwater runoff resulting from development in the Study Areas. No hydraulic or hydrologic modeling was performed for this study, storm drainage pipe facilities were not sized, and water quality control measures were not considered. To address the potential impacts of development, a comprehensive City-wide storm drainage master plan should be completed. In addition, each development project should complete a drainage plan to appropriately size storm drainage facilities based on site specific constraints. Each drainage study should also consider stormwater quality control measures and trash control measures as applicable.

## EXISTING CONDITIONS

The City's storm drain system is shown on Figure 2. The storm drain system includes 620-miles of 4-inch to 96-inch storm drains. Multiple pump stations and lift stations are used to pump drainage into receiving waters. Figure 2 shows the locations of the 58 pump stations and the 19 lift stations, and various sizes of storm drain pipes.

Major receiving waters include Pixley Slough, Bear Creek, Mosher Slough, Five Mile Slough, Calaveras River, Fourteen Mile Slough, Smith Canal, Stockton Deep Water Ship Channel, San Joaquin River, Walker/French Camp Slough, Duck Creek, and North Littlejohns Creek.

The information for the existing condition storm drains is compiled from a 2008 Conceptual Storm Drain Master Plan by Peterson Brustad Inc. and a 2004 Conceptual Storm Drain Master Plan by West Yost. The City of Stockton is situated on the eastern boundary of the Sacramento/San Joaquin River Delta. The City is characterized by flat topography with a complex network of streams and rivers running through it. The northern portion of the City is protected by levees, and drainage is typically pumped into receiving waters. The southern portion of the City does not have many levees and is characterized by various floodplain designations by FEMA (Peterson Brustad Inc., 2008). A few of the waterways in the central and northern parts of the city, namely Bear Creek, Pixley Slough, Mosher Slough, and the Calaveras River, have sufficient capacity to handle buildout flows based on the 1990 General Plan, but do not have capacity to handle additional development beyond that. The creeks in the southeast portion of the planning area (North Littlejohns Creek, Weber Slough, South Littlejohns Creek, and Lone Tree Creek) do not have capacity to contain the existing 100-year flows, resulting in overbank flooding in much of those watersheds (West Yost, 2004).

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## DETENTION STORAGE AND PUMPING REQUIREMENTS FOR THE STUDY AREAS

The development of the detention storage and pumping requirements are discussed below:

### GPU Land Uses by Development Area

The land use data for this evaluation was provided by Placeworks and is provided in Attachment A (including the buildout land use map, the dwelling unit data, acreage data, and 2040 percent development data). The land use data has been reorganized in Table 1 to be suitable for estimating the stormwater detention storage and pumping requirements. The reorganized land use data includes existing land use data, net new land use data for 2040, and 2040 land use data in terms of gross acreages. The 2040 land use data is shown on Figure 1, and the Study Areas and the Approved/Pending Development Projects are shown on Figure 2.

### Assumptions and Methodology

The following assumptions were made for this stormwater evaluation:

- Little infrastructure planning has been done for the Study Areas, consequently, detention storage and pumping requirements have been estimated for the Study Area.
- Stormwater plans have been or will be prepared by others for the Approved/Pending Development Projects. To avoid conflicting infrastructure plans, no storage and pumping requirements have been estimated for the Approved/Pending Development Projects.
- Without existing drainage models, it is not possible to accurately evaluate the need for detention storage and new pumping. Also, re-development projects will use the existing stormwater infrastructure, resulting in minimal new infrastructure requirements. Consequently, if the re-development project results in increased impervious coverage, detailed evaluations will need to be prepared in the future, including preparation of hydrologic and hydraulic models which can be used to accurately determine best drainage approach and size the required infrastructure.
  - Study areas that consisted primarily of new development or infill projects were assumed to need detention facilities if they did not already have detention basins.
  - Study areas that consisted primarily of re-development projects were assumed to not need detention facilities.
  - Study areas that had both re-development and infill projects were assumed to need detention facilities unless they already drained to a detention basin or if the receiving system appears to have adequate capacity for buildout conditions.
- Net new development areas were used to size stormwater facilities. Net new development areas do not include areas that are already developed and will not change as a result of new development.

The following methodology was used for evaluating the required stormwater detention storage and pumping requirements for the Study Areas.

**Table 1. Land Use Data**

Study Area or Development Name	Single Family, Gross Acres			Multi Family, Gross Acres			Commercial, Gross Acres			Industrial, Gross Acres		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>												
Study Area 1 - Eight Mile Rd Area	17.2	232.1	249.3	8.4	73.2	81.6	17.9	0.6	18.5	4.0	0.0	4.0
Study Area 2 - Pacific Ave Corridor	4.3	0.0	4.3	3.5	4.7	8.2	115.8	3.6	119.4	0.1	0.0	0.1
Study Area 3 - West Ln and Alpine Rd Area	38.7	51.6	90.2	5.8	29.9	35.7	68.4	6.2	74.6	54.5	0.0	54.5
Study Area 4 - Port/Waterfront	8.0	11.2	19.2	8.6	26.7	35.3	10.3	2.9	13.2	44.3	5.6	49.9
Study Area 5 - El Dorado/Center Corridors	5.5	0.0	5.5	8.3	17.2	25.5	8.1	1.8	9.9	9.9	0.0	9.9
Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	4.4	0.0	4.4	4.8	18.0	22.8	6.5	3.4	9.9	7.2	0.0	7.2
Study Area 7 - Wilson Way Corridor	1.6	0.0	1.6	0.2	6.8	7.1	2.1	5.1	7.2	14.9	0.0	14.9
Study Area 8 - I-5/Highway 4 Interchange	1.0	0.0	1.0	0.1	38.0	38.1	0.9	0.9	1.8	13.2	0.0	13.2
Study Area 9 - Railroad Corridor at California St	2.3	0.0	2.3	1.3	19.3	20.6	4.8	1.5	6.3	7.0	0.0	7.0
Study Area 10 - I-5 and Charter Way Area	42.8	57.9	100.7	4.1	4.2	8.3	26.3	2.6	28.9	4.6	2.7	7.3
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0.3	0.0	0.3	0.0	7.7	7.7	2.9	0.4	3.3	0.0	0.0	0.0
Study Area 12 - Airport Way Corridor	7.2	0.0	7.2	0.4	4.7	5.1	6.8	10.2	17.0	89.5	13.1	102.6
Study Area 13 - Mariposa and Charter Area	3.9	0.0	3.9	5.9	0.0	5.9	5.6	1.5	7.2	0.0	0.0	0.0
Study Area 14 - East Weston Ranch <sup>(b)</sup>	1.1	0.0	1.1	0.0	0.0	0.0	4.9	14.8	19.8	0.0	0.0	0.0
Study Area 15 - South of French Camp Rd	75.7	0.0	75.7	6.1	0.0	6.1	0.0	0.0	0.0	0.1	0.0	0.1
Study Area 16 - E French Camp Rd Area	122.7	0.0	122.7	9.1	0.0	9.1	0.1	0.0	0.1	0.2	0.0	0.2
<b>Subtotal (Study Areas)</b>	<b>336.9</b>	<b>352.8</b>	<b>689.7</b>	<b>66.8</b>	<b>250.5</b>	<b>317.3</b>	<b>281.5</b>	<b>55.6</b>	<b>337.1</b>	<b>249.5</b>	<b>21.4</b>	<b>270.8</b>
<b>Approved/Pending Development Projects Within City Limit</b>												
Westlake Villages	0.0	680.0	680.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delta Cove	0.0	132.7	132.7	0.0	47.6	47.6	0.0	2.6	2.6	0.0	0.0	0.0
North Stockton Projects III	38.0	355.0	393.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cannery Park	0.0	272.0	272.0	0.0	16.0	16.0	0.0	104.0	104.0	0.0	0.0	0.0
Nor Cal Logistics Center	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crystal Bay	0.0	19.4	19.4	0.0	78.7	78.7	0.0	0.0	0.0	0.0	0.0	0.0
Sanctuary	0.0	1,026.0	1,026.0	0.0	67.4	67.4	0.0	35.5	35.5	0.0	0.0	0.0
Tidewater Crossing	869.6	-869.6	0.0	0.0	0.0	0.0	0.0	16.0	16.0	0.0	0.0	0.0
Open Window <sup>(c)</sup>	0.0	0.0	0.0	0.0	11.9	11.9	12.9	-1.0	11.9	0.0	0.0	0.0
Weston Ranch Town Center	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.5	41.5	0.0	0.0	0.0
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>907.6</b>	<b>1,615.5</b>	<b>2,523.1</b>	<b>0.0</b>	<b>221.6</b>	<b>221.6</b>	<b>12.9</b>	<b>198.6</b>	<b>211.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>												
Mariposa Lakes	151.0	939.3	1,090.3	0.0	585.0	585.0	0.0	150.0	150.0	0.0	0.0	0.0
Airpark 599	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.0	128.0	0.0	0.0	0.0
Tra Vigne <sup>(d)</sup>	0.0	846.4	846.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>151.0</b>	<b>1,785.7</b>	<b>1,936.7</b>	<b>0.0</b>	<b>585.0</b>	<b>585.0</b>	<b>0.0</b>	<b>278.0</b>	<b>278.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects <sup>(e)</sup>	13,870.5	1,270.5	15,141.0	1,915.9	0.0	1,915.9	546.6	0.0	546.6	1,783.8	0.0	1,783.8
<b>Grand Total</b>	<b>15,266.0</b>	<b>5,024.6</b>	<b>20,290.5</b>	<b>1,982.7</b>	<b>1,057.1</b>	<b>3,039.8</b>	<b>841.0</b>	<b>532.1</b>	<b>1,373.1</b>	<b>2,033.2</b>	<b>21.4</b>	<b>2,054.6</b>

<sup>(a)</sup> Excludes Open Window approved project.  
<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.  
<sup>(c)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.  
<sup>(d)</sup> Pending; not approved.  
<sup>(e)</sup> Excludes approved/pending projects.



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City of Stockton Standard Specifications, Section 77 requires:

- Detention basins be sized using the equation  $\text{Volume (acre-feet)} = C \cdot A \cdot R / 12$ , where
  - C = runoff coefficient,
  - A = area of the site (acres), and
  - R = rainfall depth (inches). Rainfall depths are shown in Table 2 and differ between areas that have discharge limitations or not.
- Discharge limitations were explained in the 2008 Conceptual Storm Drain Master Plan as receiving waters that had discharge constraints based on the existing capacity of the channel. Many Study Areas do not have a known receiving water, and therefore, it was assumed they were discharge limited unless otherwise noted in the PBI report (2008).
- Runoff coefficients were obtained from City Standard Drawing Number 76, as shown in Table 3.

Receiving Water Status	Rainfall <sup>(a)</sup> , inches
No discharge limitations	3.12
Discharge limitations	Use safety factor of 1.5 applied to size calculated for No Discharge Limitations

<sup>(a)</sup> From City of Stockton Standard Specifications, Section 77m

Land Use Category	C-Value
Single Family Residential	0.35
Multi-Family Residential	0.65
Commercial	0.90
Industrial	0.90

<sup>(a)</sup> From City of Stockton Standard Drawing Number 76.

Neither the City's Specifications Section 74 nor 77 provided guidance on how to size pump stations to empty detention basins; therefore, guidance from San Joaquin County Improvement Standards were used. Section 3-4.05.C of the San Joaquin County Improvement Standards requires that detention basins shall have outlet facilities providing terminal drainage capable of emptying a full basin in 24 hours in urban areas. Although the San Joaquin County Improvement Standards encourage the use of gravity drained detention basins, it is difficult to know if a system will drain by gravity without additional modeling or design. Therefore, all detention basins were assumed to require pumping facilities.

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### **Storage Requirements**

Using the methodology described above, the required detention storage volumes are summarized in Table 4 for the Study Areas. As shown, the required detention storage volumes range from 0.5 to 50.4 ac-ft. The total combined detention storage volume for all of the Study Areas is 99.8 ac-ft. Storage volume was also included in Table 4 for extended detention basins located with the flood control basin assuming there were no volume reduction measures implemented. The total new development tributary area that needs facilities is 547.8 acres of various land uses.

### **Pumping Requirements**

Using the methodology described above, the pumping requirements are summarized in Table 4. As shown, the firm pumping capacities range from 0.3 to 25.4 cfs, and the combined firm capacity is 50.3 cfs. The total pumping capacities range from 0.5 to 38.1 cfs, and the combined total capacity is 88.0 cfs. The total tributary area is 547.8 acres of various land uses. As stated above, the analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

Additionally, the pump stations that discharge into open channels, creek, or rivers may require acquisition of several permits such as Clean Water Act Section 401 and 404 permits/certification, California Department of Fish and Wildlife Stream Bed Alteration Agreement, Central Valley Flood Protection Board encroachment permit, and the San Joaquin County Flood Control and Water Conservation District permits.

**Table 4. Detention Basin Volumes and Pump Station Capacities<sup>(f)</sup>**

Study Area Name	Location of Discharge	Limited or Unlimited Discharge	New Development, Re-development, or Infill	Facilities Needed? <sup>(d)</sup> (Yes or No)	Single	Multi Family,	Industrial,	Total Areas of Study Areas that Need Facilities, acres	Area Weighted C-Value	Extended Detention Basin Volume, ac-ft	Volume <sup>(c)</sup> (discharge limitations), ac-ft	Firm Pumping Capacity <sup>(b)</sup> for basins with discharge limitations, cfs	Total Pumping Capacity <sup>(b, e)</sup> for basins with discharge limitations, cfs
					Family, acres	acres	acres						
<b>Study Areas</b>													
Study Area 1 - Eight Mile Rd Area	Pixley Slough	Limited	100% new development	Yes	232.1	73.2	0.0	305.9	0.42	5.6	50.4	25.4	38.1
Study Area 2 - Pacific Ave Corridor	Unknown from PBI	Limited	100% re-development	No	0.0	4.7	0.0	0.0	--	--	--	--	--
Study Area 3 - West Ln and Alpine Rd Area	Unknown from PBI	Limited	50% re-development, 50% infill	Yes	51.6	29.9	0.0	87.7	0.49	1.9	16.8	8.5	16.9
Study Area 4 - Port/Waterfront	Unknown from PBI	Limited	60% re-development, 40% infill	Yes	11.2	26.7	5.6	46.5	0.62	1.3	11.3	5.7	11.4
Study Area 5 - El Dorado/Center Corridors	Unknown from PBI	Limited	80% re-development, 20% infill	No	0.0	17.2	0.0	0.0	--	--	--	--	--
Study Area 6 - Miner/Weber Corridors	Unknown from PBI	Limited	90% re-development, 10% infill	No	0.0	18.0	0.0	0.0	--	--	--	--	--
Study Area 7 - Wilson Way Corridor	Unknown from PBI	Limited	90% re-development, 10% infill	No	0.0	6.8	0.0	0.0	--	--	--	--	--
Study Area 8 - I-5/Highway 4 Interchange	Unknown from PBI	Limited	10% re-development, 90% infill	Yes	0.0	38.0	0.0	38.9	0.66	1.1	9.9	5.0	10.0
Study Area 9 - Railroad Corridor at California St	Unknown from PBI	Limited	60% re-development, 40% infill	No	0.0	19.3	0.0	0.0	--	--	--	--	--
Study Area 10 - I-5 and Charter Way Area	Unknown from PBI	Limited	60% re-development, 40% infill	Yes	57.9	4.2	2.7	67.4	0.41	1.2	10.8	5.5	10.9
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	Unknown from PBI	Limited	100% re-development	No	0.0	7.7	0.0	0.0	--	--	--	--	--
Study Area 12 - Airport Way Corridor	Unknown from PBI	Limited	50% re-development, 50% infill	No	0.0	4.7	13.1	0.0	--	--	--	--	--
Study Area 13 - Mariposa and Charter Area	Potentially Calaveras River	Limited	30% redevelopment, 70% infill	Yes	0.0	0.0	0.0	1.5	0.90	0.1	0.5	0.3	0.5
Study Area 14 - East Weston Ranch	Unknown from PBI	Limited	100% infill	No	0.0	0.0	0.0	0.0	--	--	--	--	--
Study Area 15 - South of French Camp Rd	San Joaquin River	Limited	95% new development, 5% re-development	Yes	0.0	0.0	0.0	0.0	--	--	--	--	--
Study Area 16 - E French Camp Rd Area	Potentially French Camp Slough <sup>(a)</sup>	Limited	90% new development, 10% re-development	Yes	0.0	0.0	0.0	0.0	--	--	--	--	--
Total					352.8	250.5	21.4	547.8		11.1	99.8	50.3	88.0

<sup>(a)</sup> PBI concluded that no proper hydraulic modeling existed for this conveyance system and comprehensive flood management was recommended for this area, and thus discharge constraints could not be developed. A limited discharge was assumed for this Study Area.

<sup>(b)</sup> Detention basins should have outlet facilities capable of draining a basin in 24 hours in urban areas (per San Joaquin County Improvement Standards, 2014)

<sup>(c)</sup> Volume (in acre-feet) is calculated using  $V = C \cdot A \cdot R / 12$ , where C = area weighted runoff coefficient, A = total area (acres), and R = rainfall depth (in)

<sup>(d)</sup> Facilities are needed for areas where there is new development or infill with no existing facilities or capacity for buildout. Facilities are not needed if there is primarily re-development or the system already has the capacity for buildout conditions.

<sup>(e)</sup> Total pumping capacity is included in this evaluation for estimating pump station costs.

<sup>(f)</sup> The analyses and conclusions presented in this TM are based on limited land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

## DETENTION STORAGE AND PUMPING COST EVALUATIONS

Approximate stormwater infrastructure unit costs are presented in Table 5 and discussed below. These unit costs were taken/developed from previous West Yost planning engineering studies, design, bid, construction projects, and general West Yost cost estimating experience from projects located in the California Central Valley for construction associated with medium to large development projects.

- The detention basin unit cost of \$28,000 per ac-ft is from actual construction costs for a detention basin project in the City of Dixon, but inflated from Spring 2005 to December 2016 (using the Engineering News Record 20 Cities Average). This unit cost includes detention basin excavation, an all-weather access road around the basin, inlet and outlet headwalls, and other facilities for a complete, urban detention basin. The basins are assumed to be 12 feet deep, with a water depth of 10 feet, a freeboard of 2 feet, and side slopes of 4H:1V.
- The pump station unit cost of \$37,000 per cfs is from actual construction costs for the Natomas Area of Sacramento, but inflated from October 1998 to December 2016.
- The land cost for detention basins was assumed to be \$200,000 per acre.
- The Engineering, Environmental, Administration, Construction Management, etc. multiplier of 40 percent is from West Yost Associates' experience with similar, typical projects.

Facility Type	Unit	Cost per Unit, dollars
Detention Basin (Storage Capacity)	Acre-feet	28,000
Pump Station (Total Pumping Capacity)	cfs	37,000
Land Acquisition	Acres	200,000
Engineering, Environmental, Administration, Construction Management, etc.	--	40 percent of construction cost

The estimated construction costs for the Study Areas are summarized in Table 6. The quantities for the cost calculations are also provided in Table 6. The construction costs are developed by multiplying the infrastructure quantities from Table 6 by the approximate unit costs from Table 5. The total capital costs additionally include the cost of Engineering, Environmental, Administration, Construction Management, etc., and the land acquisition for the detention basins.

**Table 6. Estimated Stormwater Infrastructure Construction and Total Capital Costs**

Study Area	Volume of required water storage	Excavation Volume <sup>(a)</sup>	Area of Basin	Total Pumping Capacity	Detention Basin Cost	Pump Station Cost	Construction Cost	Land Cost	Engineering, Administration, CM	Total Capital Cost
<i>Units, Unit Costs, and Multipliers</i>	<i>ac-ft</i>	<i>ac-ft</i>	<i>ac</i>	<i>cfs</i>	<i>\$28,000/ac-ft</i>	<i>\$37,000/cfs</i>	<i>dollars</i>	<i>\$200,000/ac</i>	<i>40%</i>	<i>dollars</i>
Study Area 1 - Eight Mile Rd Area	56.0	66.1	5.9	38.1	\$1,851,737	\$1,411,396	\$3,263,000	\$1,185,678	\$1,305,000.00	\$5,754,000
Study Area 2 - Pacific Ave Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 3 - West Ln and Alpine Rd Area	18.7	22.0	2.2	16.9	\$616,464	\$626,492	\$1,243,000	\$439,722	\$497,000.00	\$2,180,000
Study Area 4 - Port/Waterfront	12.5	14.8	1.6	11.4	\$414,630	\$421,375	\$836,000	\$311,814	\$334,000.00	\$1,482,000
Study Area 5 - El Dorado/Center Corridors	--	--	--	--	--	--	--	--	--	--
Study Area 6 - Miner/Weber Corridors	--	--	--	--	--	--	--	--	--	--
Study Area 7 - Wilson Way Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 8 - I-5/Highway 4 Interchange	11.1	13.0	1.4	10.0	\$365,106	\$371,046	\$736,000	\$279,785	\$294,000.00	\$1,310,000
Study Area 9 - Railroad Corridor at California St	--	--	--	--	--	--	--	--	--	--
Study Area 10 - I-5 and Charter Way Area	12.0	14.2	1.5	10.9	\$397,379	\$403,844	\$801,000	\$300,694	\$320,000.00	\$1,422,000
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 12 - Airport Way Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 13 - Mariposa and Charter Area	0.6	0.8	0.2	0.5	\$22,997	\$20,278	\$43,000	\$35,424	\$17,000.00	\$95,000
Study Area 14 - East Weston Ranch	--	--	--	--	--	--	--	--	--	--
Study Area 15 - South of French Camp Rd	--	--	--	--	--	--	--	--	--	--
Study Area 16 - E French Camp Rd Area	--	--	--	--	--	--	--	--	--	--
<b>Total</b>	<b>110.9</b>	<b>131.0</b>	<b>12.8</b>	<b>88.0</b>	<b>\$3,668,312</b>	<b>\$3,254,432</b>	<b>\$6,922,000</b>	<b>\$2,553,116</b>	<b>\$2,767,000</b>	<b>\$12,243,000</b>

<sup>(a)</sup> Excavation values based on:  
 1) San Joaquin County Improvement Standards requires the depth of basin to be 2 feet above groundwater, detention basin side slopes be at least 4H:1V, and that the water surface be a minimum of 2-feet below all ground surface elevations upstream from the basin.  
 2) City of Stockton and County of San Joaquin Final Stormwater Quality Control Criteria Plan, March 2009.  
 3) Sizing assumptions include: A depth to groundwater of 12 feet, a square detention basin shape, and a maximum water depth of 10 feet.

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### **Detention Storage Construction Costs**

Detention basin construction costs range from approximately \$23,000 to \$1.8 million, with a total of \$3.7 million.

### **Pump Station Construction Costs**

Pump station construction costs range from approximately \$20,000 to \$1.4 million, with a total of \$3.3 million.

### **Total Capital Costs**

Capital costs range from approximately \$95,000 to \$5.8 million, with a total of \$12.2 million. Land costs make up approximately \$2.8 million of the \$12.2 million. The cost per acre of development is approximately \$22,400.

## **RECOMMENDED FUTURE ACTIONS**

The recommended actions to address stormwater infrastructure needs are addressed in this section.

### **City-Wide Stormwater Master Plan for the Existing City**

The City does not have a City-wide storm drainage master plan with hydrologic and hydraulic models. The previous storm drain master plans did not incorporate modeling and therefore lacked information critical to infrastructure planning for the existing City. Consequently, the storm drain system improvements for the existing City areas identified in previous storm drain master plans may no longer be appropriate. This could result in some storm drain infrastructure being undersized, which could lead to flooding, or oversized which could lead to unnecessary infrastructure capital expenditures and increased operations and maintenance efforts and costs.

The City should complete a City-wide storm drainage master plan, including hydrologic and hydraulic models for existing land use conditions. The master plan should identify the future stormwater infrastructure needs to solve existing stormwater system deficiencies. The City's current stormwater fee program is insufficient to fund the required operations and maintenance needs of the City's aging stormwater and flood control infrastructure and insufficient to fund the required future repairs and replacements for the existing facilities. The City stormwater fee program should be revised based on the updated storm drainage master plan, operations and maintenance requirements, and future repairs and replacements to ensure the City collects enough money to adequately operate and maintain the existing system and construct the required future repairs and replacements.

### **City-Wide Stormwater Master Plan for the Future Development**

The City does not have a City-wide storm drainage master plan with hydrologic and hydraulic models. The previous storm drain master plans did not incorporate modeling and therefore lacked information critical to infrastructure planning for future development. In addition, the projected land uses for 2040 are different than the buildout land uses from the 2035 General Plan. Consequently, the storm drain system improvements identified in previous storm drain master plans may no longer be appropriate. This could result in some storm drain infrastructure being

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undersized, which could lead to flooding, or oversized which could lead to unnecessary infrastructure capital expenditures and increased operations and maintenance efforts and costs.

The City should complete a City-wide stormwater master plan, including hydrologic and hydraulic models for the 2040 land uses. The master plan should identify the future stormwater infrastructure needs and develop a capital improvement plan that is adequate to fund improvements needed for the City to serve the future development, including both infrastructure capital costs and future system operation and maintenance costs.

### **Future Development-Specific Stormwater Drainage and Flood Control Plans**

This stormwater study is a high-level assessment of required detention volume and pumping capacity for the Study Areas, and does not assess storm drainage piping facilities. These facilities are sized based on generalized land use data and preliminary engineering evaluations, and it is difficult to size stormwater facilities without knowing the layout of the development and site-specific constraints.

The City should require each new development to prepare a stormwater drainage and flood control plan covering drainage (storm drains, detention basins, pump stations, and associated hydrologic and hydraulic models *etc.*) and flood control. As development projects progress, the specific infrastructure serving the development should be reviewed and verified using the updated storm drain master plan models. The models should be used to identify both on-site and off-site development related infrastructure requirements. The development projects should be required to construct the identified on-site and to fund or construct the off-site infrastructure.

### **Future Development-Specific Stormwater Quality and Permitting Plans**

This study does not fully consider the sizing of detention basins or other facilities to address stormwater quality and stormwater pollution control measures. Stockton has a Phase 1 Municipal Separate Storm Sewer System permit that requires stormwater quality be considered. In addition, the State of California recently mandated that trash should be captured from stormwater runoff in high generating trash land use areas, including commercial, industrial, and high density residential areas. It is difficult to size these trash capture and stormwater quality systems without knowing the layout plan of the developing area.

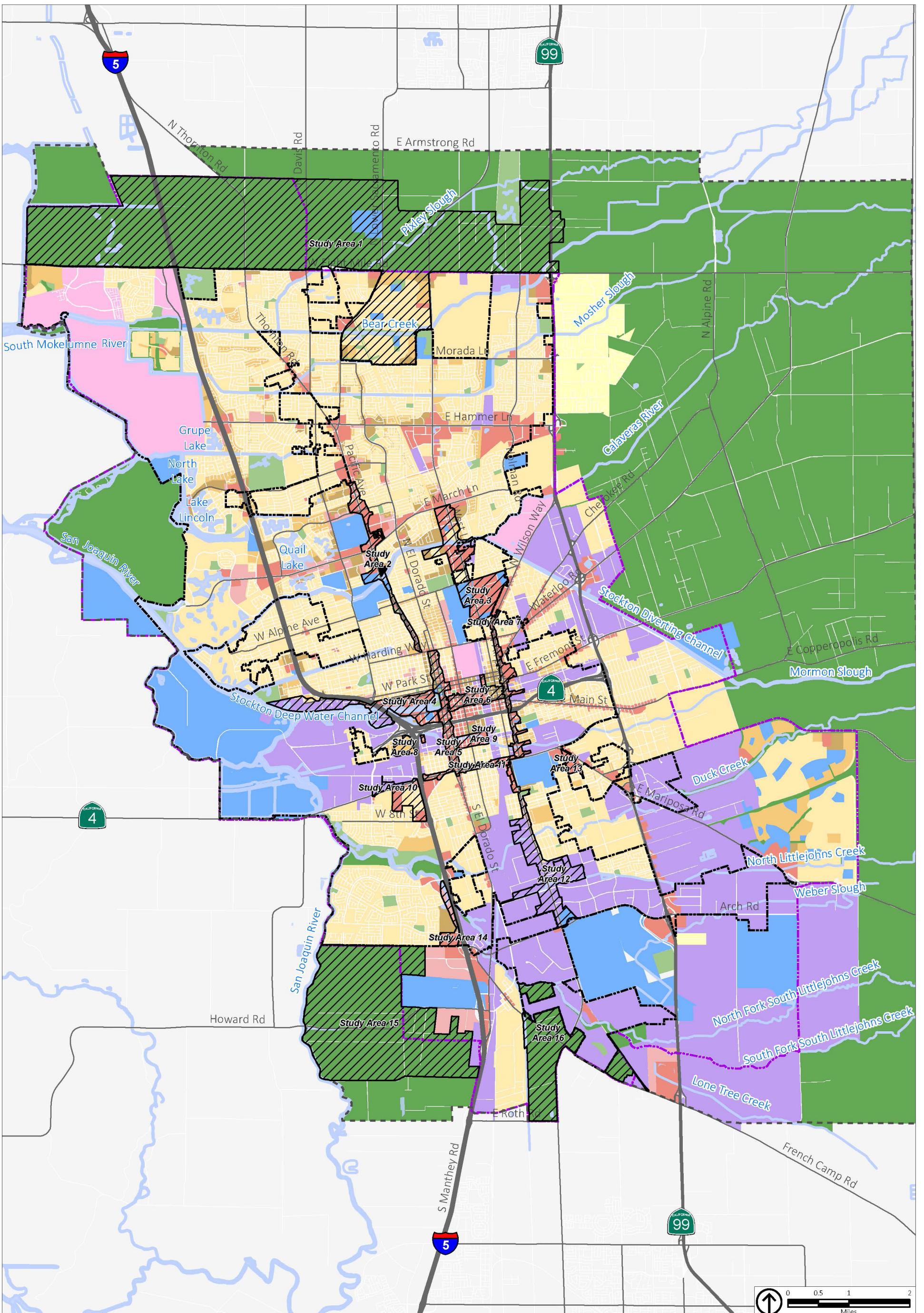
Each Study Area should develop a Stormwater Quality and Permitting Plan that is consistent with Stockton's Stormwater Quality Control Criteria Plan (March 2009) and is consistent with the City's trash control requirements. The Stormwater Quality and Permitting Plans could be combined with the Stormwater Drainage and Flood Control Plans into a single document.

## CONCLUSIONS

Stormwater infrastructure conclusions are provided below:

- Detention basins and pump stations were sized to account for the net increase in the Study Areas.
- Areas that are already developed and/or already have capacity for buildout conditions were assumed to not need additional detention facilities.
- The estimated total capital costs of storm drain detention basins and pump stations is \$11.8 million.
- The estimated cost of detention basins and pumping facilities for developing areas was estimated to be approximately \$21,600 /acre of development.
- The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.





Source: City of Stockton, August 2017.

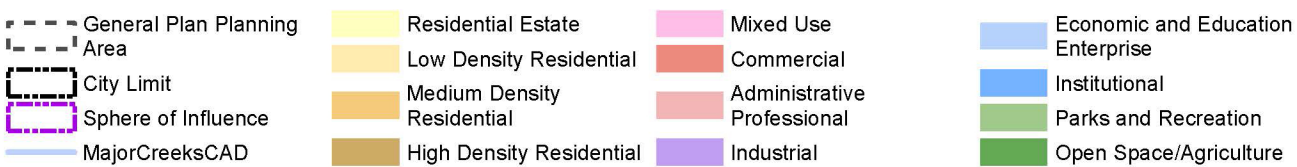
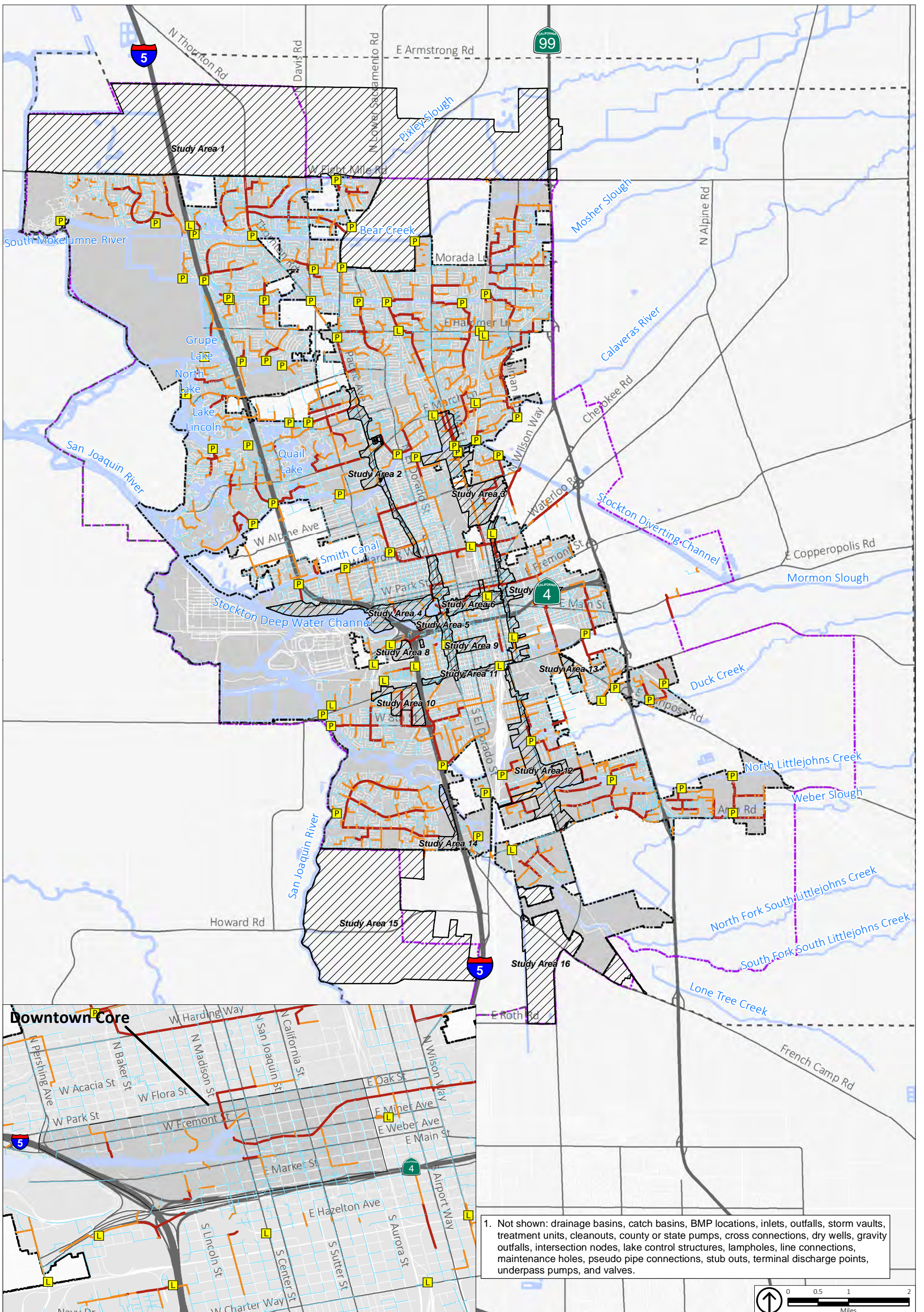


Figure 1

2017 Preferred 2040 Land Uses



**Existing Storm Facility Existing Storm Drain (Diameter)**

Lift Station	< 22 Inches
Pump Station	24 - 36 Inches
Study Areas	>39 Inches
	Major Creeks/CAD

Figure 2  
Storm System Facilities

# **ATTACHMENT A**

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Land Use Data Received from Placeworks and Buildout Land Use Map

ATTACHMENT C

Acreage Gross or Net	Study Area Name	Single Family Net New 2040	Single Family Net New 2040	Single Family Net New 2040 + Existing	Single Family Net New 2040 + Existing	Multi Family Net New 2040	Multi Family Net New 2040	Multi Family Net New 2040 + Existing	Multi Family Net New 2040 + Existing	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040 + Existing	Commercial Net New 2040 + Existing	Industrial Net New 2040	Industrial Net New 2040 + Existing
		Units	Acres	Units	Acres	Units	Acres	Units	Acres	Units	Acres	Total Square Feet	0.3 FAR Sq Ft	0.5 FAR Sq Ft	5.0 FAR Sq Ft	0.3 FAR Acres	0.5 FAR Acres	5.0 FAR Acres	Sq Ft	Acres
Gross	Study Area 1 - Eight Mile Rd Area	1,379	646	1,500	663	1,198	209	1,294	217	39,408	39,408	0	0	15	0	0	241,408	20	0	105,400
Net	Study Area 2 - Pacific Ave Corridor	0	0	22	4	110	19	224	22	93,961	93,961	0	0	17	0	0	1,560,846	103	0	1,980
Net	Study Area 3 - West Ln and Alpine Rd Area	77	13	285	52	680	120	774	125	323,399	323,399	0	0	102	0	0	975,325	163	0	1,423,576
Net	Study Area 4 - Port/Waterfront	17	3	71	11	1,770	33	2,058	42	2,040,010	6,100	0	2,033,911	2	0	31	2,865,512	62	580,859	1,739,495
Net	Study Area 5 - El Dorado/Center Corridors	0	0	45	6	1,196	22	1,555	30	1,310,216	0	0	1,310,216	0	0	21	2,158,663	53	0	258,300
Net	Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	0	0	47	4	1,248	22	1,467	27	1,463,025	0	0	1,463,025	0	0	14	2,152,972	33	0	187,300
Net	Study Area 7 - Wilson Way Corridor	0	0	12	2	234	27	240	28	606,716	103,753	0	502,963	19	0	5	1,321,076	65	0	390,342
Net	Study Area 8 - I-5/Highway 4 Interchange	0	0	8	1	659	47	660	48	388,671	0	0	388,671	0	0	4	388,671	4	0	344,300
Net	Study Area 9 - Railroad Corridor at California St	0	0	19	2	1,340	24	1,363	25	1,299,279	0	0	1,299,279	0	0	24	1,365,999	26	0	182,658
Net	Study Area 10 - I-5 and Charter Way Area	86	15	314	58	98	42	127	46	133,864	133,864	0	0	42	0	0	377,363	77	83,678	203,939
Net	Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0	0	5	0	396	15	396	15	323,733	9,597	0	314,135	6	0	7	703,670	38	0	0
Net	Study Area 12 - Airport Way Corridor	0	0	53	7	108	19	112	19	205,461	135,225	70,236	0	14	4	0	272,544	48	1,368,744	3,709,140
Net	Study Area 13 - Mariposa and Charter Area	0	0	12	4	0	0	77	6	80,944	80,944	0	0	25	0	0	93,560	28	0	0
Net	Study Area 14 - East Weston Ranch <sup>(b)</sup>	0	0	1	1	0	0	0	0	430,677	0	430,677	0	0	26	0	430,677	26	0	0
Net	Study Area 15 - South of French Camp Rd	0	0	89	76	0	0	9	6	0	0	0	0	0	0	0	0	0	0	1,700
Net	Study Area 16 - E French Camp Rd Area	0	0	59	123	0	0	4	9	0	0	0	0	0	0	0	5,100	17	0	4,900
Net	Outside of Study Areas <sup>(c)</sup>	1,501	246	77,964	14,117	0	0	33,183	1,916	0	0	0	0	0	0	0	23,811,089	1,607	0	46,620,901
	<b>Grand Total</b>	<b>3,059</b>	<b>923</b>	<b>80,505</b>	<b>15,131</b>	<b>9,036</b>	<b>600</b>	<b>43,542</b>	<b>2,583</b>	<b>8,739,364</b>	<b>926,252</b>	<b>500,913</b>	<b>7,312,200</b>	<b>242</b>	<b>31</b>	<b>105</b>	<b>38,724,475</b>	<b>2,371</b>	<b>2,033,281</b>	<b>55,173,931</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

<sup>(c)</sup> Excludes approved/pending projects.

Acreage Gross or Net	Approved/Pending Projects Details	Net New						Full Build (2040)					
		Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres	Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres
<b>Approved within city limit</b>													
Gross	Westlake Villages	2,630	680	0		0		2,630	680	0		0	
Gross	Delta Cove	1,164	133	381	48	31,000	3	1,164	133	381	48	31,000	2.6
Gross	North Stockton Projects III	2,220	355	0		0		2,455	393	0		0	
Gross	Cannery Park	981	272	210	16	1,078,762	104	981	272	210	16	1,078,762	104
Gross	Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0
Gross	Crystal Bay	951	19	392	79	0		951	19	392	79	0	0
Gross	Sanctuary	5,452	1,026	1,618	67	692,256	36	5,452	1,026	1,618	67	692,256	36
Gross	Tidewater Crossing	-310	-870	0		186,200	16	0	0	0	0	186,200	16
Net	Open Window <sup>(a)</sup>	0	0	1,391	12	-68,800	-1	0	0	1,400	12	290,000	12
Gross	Weston Ranch Town Center	0	0	0	0	481,000	41	0	0	0	0	481,000	41
<b>Approved/pending outside city limit, inside SOI</b>													
Gross	Mariposa Lakes	8,955	939	1,553	585	1,009,503	150	8,960	1,090	1,556	585	1,009,503	150
Gross	Airpark 599	0	0	0	0	1,678,500	128	0	0	0	0	1,678,500	128
Gross	Tra Vigne <sup>(b)</sup>	1,244	846	0	0	0	0	1,244	846	0	0	0	0

<sup>(a)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand the capacity to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.

<sup>(b)</sup> Pending; not approved.

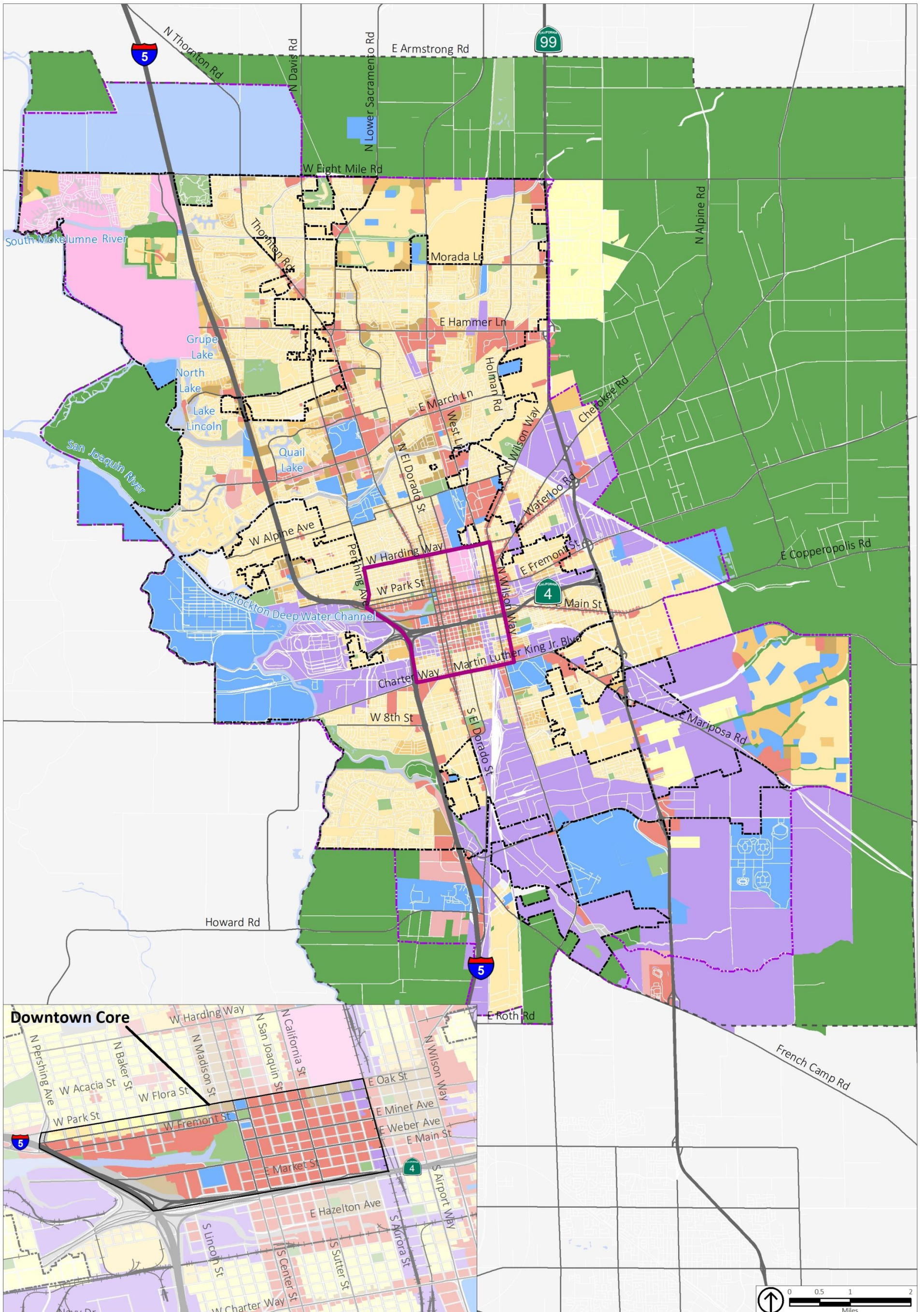
2040 Development Study Area												
	Net New Single Family Units (full buildout)	Percent applied to 2040	Net New Single Family Units (2040)	Net New Multi-Family Units (full buildout)	Percent applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (full buildout)	Percent applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (full buildout)	Percent applied to 2040	Net New Industrial Square Feet (2040)
Study Area 1 – Eight Mile Rd Area	3,940	35%	1,380	3,420	35%	1,200	197,000	20%	39,000	0	0%	0
Study Area 2 – Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
Study Area 3 – West Ln and Alpine Rd Area	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
Study Area 4 – Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
Study Area 5 – El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
Study Area 6 – Miner/Weber Corridors <sup>(a)</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
Study Area 7 – Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
Study Area 8 – I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
Study Area 9 – Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
Study Area 10 – I-5 and Charter Way Area	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
Study Area 11 – Charter Way/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
Study Area 12 – Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
Study Area 13 – Mariposa and Charter Area	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
Study Area 14 – East Weston Ranch <sup>(b)</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
Study Area 15 – South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Study Area 16 – E French Camp Rd Area	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>(c)</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>(d)</sup></b>	<b>20,480</b>		<b>3,060</b>	<b>48,470</b>		<b>9,040</b>	<b>45,773,000</b>		<b>8,739,000</b>	<b>134,701,000</b>		<b>2,033,000</b>

<sup>(a)</sup> Excludes Open Window approved project.  
<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.  
<sup>(c)</sup> Excludes approved/pending projects  
<sup>(d)</sup> Numbers do not always add up due to rounding.

The "full buildout" of the proposed General Plan assumes the maximum development of every parcel, combined with approved and pending developments throughout the Planning Area. The 2040 land uses are based on realistic land use demand projections. The full buildout of the General Plan would result in almost three times more new housing units and over 24 times more new non-residential development than estimated for 2040. Therefore, it is extremely unlikely that the full buildout would occur by the year 2040. Full buildout may not occur until well beyond the useful lifespan of the proposed infrastructure (for example, the lifespan of concrete structures is typically 50 to 75 years). Consequently, this infrastructure planning was based on the estimated 2040 level of development. This table is included in this TM to document the relationship between the buildout land uses and the 2040 land uses.

Source: PlaceWorks, 2017.

**Figure 2-8**  
**General Plan Land Use Map**



Source: City of Stockton, 2017; PlaceWorks, 2017.

- |                            |                            |                          |                                   |                        |
|----------------------------|----------------------------|--------------------------|-----------------------------------|------------------------|
| City Limit                 | Residential Estate         | High Density Residential | Administrative Professional       | Institutional          |
| Sphere of Influence        | Low Density Residential    | Mixed Use                | Industrial                        | Parks and Recreation   |
| General Plan Planning Area | Medium Density Residential | Commercial               | Economic and Education Enterprise | Open Space/Agriculture |
| Greater Downtown Boundary  |                            |                          |                                   |                        |



## League of Women Voters of San Joaquin County

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Post Office Box 4548 ■ Stockton, California 95204 ■ lwvsjc@gmail.com

October 8, 2018

Stockton Planning Commission  
Draft Envision Stockton 2040 General Plan.

Re: Adoption of Updated General Plan

Chairman Don Aguillard and Members of the Commission:

The League of Women Voters of San Joaquin County is opposed to housing and industrial development on the 3800 acres north of Eight Mile Road included in the proposed Envision Stockton 2040 General Plan Update.

A substantial amount of development is already approved and pending in North Stockton. According to General Plan Table 3-4, of the 29,300 housing units, 17,300 (59%) are in North Stockton- 12,700 in Northwest Stockton (Hammer to south of 8 Mile Road) and 4,600 in North Central and North East Stockton (Davis to Highway 99, south of 8 Mile Road). Additionally, there are 1,802,000 square feet of commercial space and 1,442,000 square feet of industrial space.

The area north of 8 Mile Road was added later in the planning process after discussion about locating a Stockton state university there. However the websites of several universities demonstrate that a university would consume very little of the 3800 acres:

- Chico, 119 acres
- Stanislaus, Turlock, 228 acres
- Stanislaus, Stockton, 102 acres
- Sacramento, 300 acres
- Fresno, 388 acres

Furthermore, the state's policy regarding enrollment growth is to maximize the capacity at existing campuses before adding new ones. (Legislative Analyst report, "Assessing UC and CSU Enrollment and Capacity", Jan 2017). The 102 acres in University Park is underutilized and, if the state's policy does not change, would be a candidate for future build out. It is interesting to note that the newest CSU-- Channel Islands-- was established on the grounds of the old Camarillo State Hospital. It replaced an off-campus center connected to CSU Northridge.

The League is of the opinion that the proposed 3800 acre addition will jeopardize growth and redevelopment in existing "infill" neighborhoods in other parts of Stockton. We support

reclassifying this to open space/agriculture with the idea of establishing a permanent buffer between Stockton and Lodi.

We appreciate the opportunity to submit our concerns for the updated Stockton General Plan and DEIR.

Sincerely yours



Kathy Casenave, President  
League of Women Voters of San Joaquin County

Cc: Stockton City Council  
Stockton Planning Department  
San Joaquin County Board of Supervisors



Resolution No.

## **STOCKTON PLANNING COMMISSION**

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### **RESOLUTION FORWARDING A RECOMMENDATION TO THE CITY COUNCIL TO APPROVE THE ENVISION STOCKTON 2040 GENERAL PLAN UPDATE, UTILITY MASTER PLAN SUPPLEMENTS, AND RELATED FINAL ENVIRONMENTAL IMPACT REPORT**

The City of Stockton has formulated a comprehensive, long-term General Plan Update, and related Utility Master Plan Supplements (UMPS) for the physical development of the City, which the General Plan contains each of the elements required by law to be a part of it; and

An update to the City's 2035 General Plan has been initiated to maintain compliance with State law; and

The Planning Commission held a duly noticed public hearing to consider the Envision Stockton 2040 General Plan Update, UMPS, and related Final Environmental Impact Report (FEIR) on October 25, 2018; now, therefore,

BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF STOCKTON, AS FOLLOWS:

1. The Planning Commission hereby forwards a recommendation to the City Council to adopt the Envision Stockton 2040 General Plan Update, and UMPS, as set forth in Exhibit 1, attached hereto and incorporated by this reference, and related FEIR, based on the following findings. All findings below are supported by the corresponding evidence in the administrative record:

- a. The proposed Envision Stockton 2040 General Plan Update establishes appropriate goals, objectives, policies, and actions to address such issues as land use, housing, economic development, community health, community design, transportation and circulation, public facilities and services, recreation, safety, youth, education, and natural and cultural resources;
- b. The General Plan has been updated in conformity with the provisions of State law requirements of California Code Section 65300 et seq.
- c. The proposed amendment will not endanger, jeopardize, or otherwise constitute a hazard to the public convenience, health, interest, safety, or general welfare of persons residing or working in the City;
- d. The Planning Commission has reviewed and considered the FEIR for the Envision Stockton 2040 General Plan Update, and UMPS

- and has recommended certification of the FEIR as being adequate under the California Environmental Quality Act (CEQA);
- e. The mitigation measures, the monitoring program to be implemented for each mitigation measure, the findings, and statement of overriding considerations as set forth in the Findings, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program documents on file at [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton) are hereby recommended for adoption in relation to the proposed Envision Stockton 2040 General Plan Update and UMPS.

The statements, findings, and mitigation monitoring provisions are based on the above-referenced FEIR for the Envision Stockton 2040 General Plan Update and UMPS and other information available to the City Council are recommended for adoption in compliance with Sections 15091 and 15093 of the State CEQA Guidelines.

2. The Planning Commission hereby adopts a resolution recommending that the City Council approve:

- a. Certification of the Final Environmental Impact Report (FEIR);
- b. Envision Stockton 2040 General Plan Update;
- c. Utility Master Plan Supplements (UMPS).

PASSED, APPROVED, and ADOPTED: October 25, 2018.

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DON M. AGUILLARD, CHAIR  
CITY OF STOCKTON PLANNING COMMISSION

ATTEST:

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DAVID KWONG, SECRETARY  
CITY OF STOCKTON PLANNING COMMISSION

Exhibit 1

[www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton)



# City of Stockton

## Legislation Text

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### **CONTINUED PUBLIC HEARING - ENVISION STOCKTON 2040 GENERAL PLAN UPDATE, UTILITY MASTER PLAN SUPPLEMENTS, AND FINAL ENVIRONMENTAL IMPACT REPORT**

#### RECOMMENDATION

Staff recommends that the Planning Commission adopt a Resolution recommending that the City Council approve:

1. Certification of the Final Environmental Impact Report (FEIR);
2. Envision Stockton 2040 General Plan Update;
3. Utility Master Plan Supplements (UMPS).

#### Summary

On October 25, 2018, the Planning Commission held a public hearing to consider a staff recommendation for the Planning Commission's recommendation of approval to the City Council for approval of the Final Environmental Impact Report, Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements. The Planning Commission received a staff presentation that covered the contents of the Planning Commission Staff Report (See Attachment A). The presentation included a summary of community engagement efforts and an overview of the proposed draft Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements, and the Final Environmental Impact Report, inclusive of proposed changes based on comments/input from the community, stakeholders, the Commission, and City Council. The Planning Commission received public comments, deliberated and voted 4-1 (Jobrack dissenting, Mallett and Rizvi absent) to continue the public hearing to the regularly scheduled November 15, 2018 meeting.

For a brief overview, in 2016, the City initiated Envision Stockton 2040 General Plan Update with a commitment to updating the General Plan in a sustainable manner. As a result of robust public engagement, staff received extensive input and guidance from the community, including citizens, stakeholders, the Planning Commission, and City Council. In April 2017, the City Council provided guidance to adopt infill standards using a city core intensification alternative. This infill alternative (referred to as Alternative "C") has the smallest urban footprint of the three alternatives considered. In July 2017, the City Council directed staff to continue with the Infill Focus Alternative, with some modifications. The modifications by the Council included allowing flexibility for an economic development catalyst project in the Sphere of Influence (SOI) area north of Eight Mile Road along Interstate 5. The recommended General Plan represents the first time in Stockton's history that the proposed urban footprint is smaller (by approximately 9,000 acres) than the existing, approved General Plan.

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On June 26, 2018, drafts of the General Plan Update, Environmental Impact Report (EIR), and related utility master plan documents were released for public review and comment. The 45-day comment period for the EIR ended on August 10, 2018. EIR comments and responses are contained in the Final EIR [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton).

On November 15, the Planning Commission will receive a presentation which responds to letters received during the two weeks prior to the October 25 meeting, and an overview on specific subject matter requested by the Planning Commissioners to provide greater clarification. Staff recommends that after consideration of the public draft General Plan and any proposed changes, the Planning Commission adopt a Resolution recommending that the City Council approve:

- Certification of the Final Environmental Impact Report (FEIR);
- Envision Stockton 2040 General Plan Update; and,
- Utility Master Plan Supplements (UMPS).

The Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements (UMPS), July/August 2018, workshop summaries, and the Final Environmental Impact Report (FEIR), and related findings, statement of overriding considerations (SOC), and mitigation monitoring and reporting program (MMRP) can be viewed at: [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton)

## DISCUSSION

### Background

State law requires each city and county to adopt and periodically update a General Plan that provides a comprehensive, long-range plan for its physical development. The General Plan is important because it contains goals, policies and implementation measures to guide development within the city limit and beyond in a Sphere of Influence where City services may someday be provided. The City's current 2035 General Plan was adopted in 2007. Since its adoption, significant economic and demographic changes occurred, prompting the City to update its growth and development assumptions.

In 2016, the City initiated Envision Stockton 2040 General Plan Update with a commitment to updating the General Plan in a sustainable manner. This General Plan Update provides guidance for reevaluation of the City's public infrastructure such as the City's roadways and water and sewer distribution systems and whether the cost (capital and maintenance) of that infrastructure is sustainable. This update provides an opportunity to revisit and reset the goals, policies, and implementation measures for development in the City limits and for future growth areas where City services may eventually be provided within a Sphere of Influence. Policy guidance is provided to reevaluate level of service goals regarding public infrastructure such as water, sewer and transportation improvements. The level of service goals associated with these particular types of improvements and its relationship to land use growth projections determines the cost of development impact fees associated with the cost of building a home or undertaking a development project.

In April 2017, the City Council provided guidance to adopt infill standards using a city core intensification alternative. This infill alternative (referred to as Alternative "C") has the smallest urban

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footprint of the three alternatives considered. In July 2017, the City Council directed staff to continue with the Infill Focus Alternative, with some modifications. The modifications by the Council included allowing flexibility for an economic development catalyst project in the Sphere of Influence (SOI) area north of Eight Mile Road along Interstate 5. The recommended Envision Stockton 2040 General Plan Update represents the first time in Stockton's history that the proposed urban footprint is smaller (by approximately 9,000 acres) than the existing, approved 2035 General Plan.

### Planning Commission Public Hearing Discussion and Response to Comments

This section of the report contains staff recommendations and responses to comments and questions raised by the Planning Commission at its October 25, 2018 public hearing on the Envision Stockton 2040 General Plan, Utility Master Plan Supplements, and Environmental Impact Report (EIR), as well as subsequent questions raised by a few of the Commissioners which were submitted via phone and email correspondence.

The second section of this report provides staff recommendations and responses to comments raised in letters submitted during the two weeks prior to the October 25, 2018 hearing.

### Planning Commission Comments and Questions

#### Economic and Education Enterprise Designation

**Comment:** During the 10/25/18 hearing, Commissioner Davie requested a discussion of the Economic and Education Enterprise designation, in particular to address the public comments regarding this land use designation that were provided during the public comment portion of the hearing, and an explanation of why staff recommends one minor change to the designation in response to public comment.

**Response:** Please see Attachment A (October 25, 2018, Planning Commission Public Hearing Staff Report with attachments) for a history of the development of the Economic and Education Enterprise designation, how it relates to the recommendations from the Healthy Neighborhoods Collaborative in their June 21, 2017 letter, and a staff-recommended change that clarifies the need for a General Plan Amendment. This staff-recommended change was developed in response to public comments suggesting language confirming that a General Plan Amendment would be required prior to development within this designation.

Public comments about the Economic and Education Enterprise designation at the October 25, 2018, Planning Commission hearing stated that the designation does not align with community input, covers a land area that is too extensive, and would allow too much residential development.

- **Alignment with Community Input.** As indicated in Attachment A, the City Council directed staff to maintain an urban land use designation in the area north of Eight Mile Road at its July 25, 2017 Study Session on the Envision Stockton General Plan. Prior to providing this direction, the City Council reviewed the community input from the land use alternatives process, which supported Alternative C, the Infill Focus Alternative. The City Council directed that staff proceed with Alternative C, with some minor modifications to promote better access to healthy food and medical care in South Stockton, plus the modification to maintain an urban

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designation in the area North of Eight Mile Road.

- **Land Area.** During the July 25, 2018 meeting, the City Council discussed applying the designation to a targeted area that would accommodate a catalyst project, such as a technology company, hospital, or campus, but ultimately directed staff to apply the designation over a larger area to allow flexibility for the locations of potential future projects based on the needs of individual projects.
- **Quantity of Residential Development.** As discussed in the Final EIR, the Economic and Education Enterprise designation itself does not allow development. Any development in that area would require a General Plan Amendment, and most likely also a Specific Plan, along with project-specific environmental review. The designation is considered a “holding designation” for future development that would undergo additional City review once a development project is identified. Comments about the designation allowing too much residential development are based on the maximum theoretical capacity for development reported in Table 3-3 of the Draft EIR. As explained in the Final EIR and the staff report for the 10/25/18 hearing, the reason that the theoretical full buildout of the General Plan is reported in the Draft EIR Project Description is to explain the methodology that was used to develop the 2040 horizon-year development projections. As explained on pages 3-22 to 3-23 of the Draft EIR, the reported theoretical full buildout values assume that every parcel is developed with the maximum amount of development allowed under the General Plan. Therefore, for all vacant and underutilized parcels, full buildout is estimated by applying the maximum floor area ratio (FAR) and maximum residential density allowed by the designation. That simplified calculation was conducted for the area designated Economic and Education Enterprise, consistent with the rest of Study Area 1 and the other study areas, but such development could not occur without a General Plan Amendment, CEQA review, and LAFCO review. Furthermore, the Economic and Education Enterprise designation itself limits residential development to that in support of a major job-generator. Any housing would have to be proximate to the job-generator, and housing costs must correspond to the income levels of the jobs generated by the project. The designation does not allow stand-alone residential development.

In summary, staff’s recommendation to maintain an urban land use designation in the area north of Eight Mile Road, within the Sphere of Influence (SOI), is intended to implement City Council direction. In response to public comment, staff has recommended a change to the Economic and Education Enterprise designation to clarify that a General Plan Amendment is required for development in this area.

#### Clear Boundaries

**Comment:** During the October 25, 2018, hearing and in a follow-up email to staff, Commissioner Warmsley asked about a strategy for working with the City of Lodi, San Joaquin County, and stakeholders on a greenbelt in the area north of Eight Mile Road.

**Response:** As presented in the staff report and presentation for the October 25, 2018, hearing, the Sierra Club raised the issue of an ag belt between Stockton and Lodi in a memorandum to Mayor Michael Tubbs dated September 20, 2018. In response to this and other public comments on an ag

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belt or greenbelt between Stockton and Lodi, staff worked with the County to consider potential revisions to Action LU-5.3B. As presented in the staff report for the 10/25/18 hearing (Attachment A to this staff report), staff recommends revising Action LU-5.3B as follows:

Coordinate with San Joaquin County to preserve agricultural land and open space areas in the unincorporated County that contribute to maintaining clear boundaries between cities.

This action, as revised, provides for a separation between Stockton and Lodi, and is consistent with San Joaquin County General Plan Policy LU-1.5, Clear Boundaries, which directs the County to strive to preserve agricultural and open space areas that contribute to maintaining clear boundaries among cities and unincorporated communities. The recommended policy revisions were developed in coordination with County staff. The creation of a greenbelt or ag belt program would be an extensive process that requires participation among the Cities, County, and property owners in the proposed greenbelt/ag belt area. As reported during the public comment period at the October 25, 2018 hearing, the previous attempt by the Cities of Stockton and Lodi and the County to create a greenbelt faltered due to lack of interest by property owners.

To address the challenges presented by the previous greenbelt process, the Planning Commission may consider recommending a change to the action to account for property owners as key stakeholders in agricultural land preservation through the following change (change is shown to the policy, as revised in the staff recommendation):

Coordinate with San Joaquin County and property owners in unincorporated areas to preserve agricultural land and open space areas in the unincorporated County that contribute to maintaining clear boundaries between cities.

### Fiscal Impacts of New Development

**Comment:** During the October 25, 2018 hearing, Commissioner Hull asked how much future development projects will cost the City.

**Response:** Fiscal impacts of new development to the City are project-specific, including as controlled by provisions of development agreements for a project. Action LU-6.5A requires the preparation of a fiscal impact analysis for large development projects and proposed annexations to ensure a full accounting of infrastructure and public service costs and to confirm whether revenue enhancement mechanisms are necessary to ensure net fiscal balance or better. The action also directs the City to require appropriate fiscal mitigations, when necessary, to ensure the City's ongoing fiscal health. Action LU-6.5A would ensure that new residential development provide any needed fiscal mitigations to support the City's fiscal health.

### Transit Funding

**Comment:** During the October 25, 2018 hearing, Commissioner Davie mentioned the comments from the Sierra Club/Campaign for Common Ground in its letter dated October 22, 2018, regarding transit funding, expressing interest in the idea of requiring that development provide funding to support transit, including for operations.

**Response:** As indicated in the staff report for the October 25, 2018, hearing (Attachment A to this staff report), as part of the City's commitments under the 2008 Settlement Agreement, the City has



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approved a transit gap study and program that involves the transmittal of 100 percent of the City's Local Transportation Fund (LTF) to the San Joaquin Regional Transit District (RTD) for transit purposes, as they are the acknowledged transit provider in Stockton. The LTF is funded through a countywide quarter-cent sales tax.

The October 22, 2018, Sierra Club/Campaign for Common Ground letter recommends policy changes that would specify that new development would contribute to transit funding. The Sierra Club/Campaign for Common Ground recommended changes are presented below. If the Planning Commission would like to require new development to contribute to transit funding, staff concurs with the recommended policy changes from the Sierra Club/Campaign for Common Ground, with the minor change to strike the proposed text "consistent with the Settlement Agreement" at the end of Action TR-2.2B. The reference to the Settlement Agreement is not necessary to convey the intent of the policy.

Action TR-2.2A: Require major new development to incorporate and fund design features to promote safe and comfortable access to transit, such as a circulation network that facilitates efficient and connected bus travel, clear pedestrian and bicycle routes connecting origins and destinations to transit stops, sheltered bus stops, park-and-ride facilities, and highly visible transit information and maps.

Action TR-2.2B: Support local and regional transit operators by ensuring major new development projects are designed to support transit and provide fair share funding of the cost of adequate transit service and access.

Action TR-2.2C: Request that public transit service providers expand routes and increase frequency and operational hours consistent with current short- and long-range transit planning, with the assistance of new development funding.

### Senate Bill 244 analysis

**Comment:** During the October 25, 2018 hearing, Commissioners Hull and Warmsley asked about changes to Appendix B of the General Plan, which presents an analysis of infrastructure and fire protection services for State-defined "disadvantaged unincorporated communities" within Stockton's SOI. Commissioners requested more information about the deficiencies and how the City will support efforts to address them. Commissioner Warmsley also sent a follow-up email to staff asking about the distribution of water and drainage infrastructure with regard to this analysis.

**Response:** Senate Bill (SB) 244 requires that cities identify and describe disadvantaged unincorporated communities that are within their SOIs; analyze water, wastewater, stormwater drainage, and structural fire protection needs or deficiencies; and analyze potential funding mechanisms that could make the extension of services and facilities to identified disadvantaged unincorporated communities financially feasible. The City of Stockton first conducted a SB 244 analysis of disadvantaged communities that are outside the city limit, but within the City's SOI, and their infrastructure and fire protection needs and deficiencies as part of the process to develop the 2015-2023 Housing Element, which was adopted in 2016. The 2016 SB 244 analysis was included in the Draft Envision Stockton General Plan as Appendix B.

As presented by the General Plan consultant during the October 25, 2018 hearing, after the Draft General Plan was published, staff has identified needed corrections to aspects of the information

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presented in the SB 244 analysis. Specifically, as part of our recent work on the Interim Sphere of Influence Plan/Sphere of Influence Review for LAFCO, staff has updated the information and findings, primarily related to wastewater and stormwater infrastructure, in the identified disadvantaged unincorporated communities. The changes that are required to update this appendix consistent with the updated analysis are shown in Attachments B and C to this staff report. Therefore, staff recommends that Appendix B be replaced with the updated version in Attachments B and C to this staff report (both a clean and tracked changes version are provided).

To address infrastructure deficiencies in the disadvantaged unincorporated communities, the Draft General Plan includes Action CH-2.3E, which directs the City to work with wastewater and water utilities to seek funding to complete sewer and water systems in areas within the SOI where parcels still rely on septic systems and wells.

Given that the updated SB 244 analysis also identifies stormwater infrastructure deficiencies, staff recommends revising Action CH-2.3E as follows:

**Action CH-2.3E:** Work with wastewater, water, and stormwater utilities to seek funding to complete sewer, water, and stormwater systems in areas within the SOI where parcels still rely on septic systems, wells, and roadside ditches.

The State does not require the City to budget for infrastructure improvements to address deficiencies, nor is that appropriate at the General Plan level. However, consistent with Action CH-2.3E, the City will work with utility providers to seek funding to complete needed infrastructure improvements in identified disadvantaged unincorporated communities.

### EIR Table 3-3

**Comment:** During the October 25, 2018 hearing, Commissioner Hull asked about Table 3-3 in the EIR, which presents the 2040 development by study area. In a follow-up phone conversation with staff, Commissioner Hull also asked about the row in Table 3-3 that is labeled “outside of study areas,” and questioned where that is geographically and how development numbers within it were derived.

**Response:** As discussed in the Final EIR and in the staff report for the October 25, 2018 hearing, Table 3-3 in the EIR reports the theoretical full buildout of the General Plan in order to explain the methodology that was used to develop the 2040 horizon-year development projections. Specifically, to estimate the 2040 development projection, a percentage of the full theoretical buildout potential was distributed among the geographic “study areas” defined through the community participation process for the General Plan update. The formatting of Table 3-3 was modified in the Final EIR in order to better demonstrate how the 2040 development numbers were estimated. The only changes made to Table 3-3 in the revised version were to italicize and use a gray font for the columns that provide the background calculations used to estimate the 2040 development, which is shown in black, non-italicized font. A note at the bottom of the table was also added for further clarification. No changes to the content of the table were made. The row labeled “outside of study areas” refers to the geographic areas that are not part of the identified study areas or the approved or pending development projects that are shown in Figure 3-5 of the Draft EIR. Therefore, all areas that are not shown in orange or with red or green hatching in Figure 3-5 of the Draft EIR are the areas to which this row of Table 3-3 refers. The EIR assumes that approximately 1,500 single family units would be developed throughout this area by 2040. The locations of development would be dependent on zoning capacity and market demands.

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### Approved Development

**Comment:** In an email following the October 25, 2018 hearing, Commissioner Warmsley asked about existing approved development projects and development capacity, including in south Stockton, and how they relate to new development that could occur under the Draft General Plan.

**Response:** As shown in Figure 3-5 and Table 3-4 of the Draft EIR, there are numerous approved development projects that have not been constructed. There are also projects that have only been partially constructed, such as Weston Ranch and in southeast Stockton. Such projects are already entitled, and the General Plan would not change those entitlements. Many projects have stalled due to infrastructure constraints and/or market conditions, but market conditions are improving. For example, the Weston Ranch project has infrastructure in place, and both housing and retail developers are in discussion with City staff about moving forward with their projects given the market conditions today. Similarly, in south Stockton, industrially-designated land in the existing and Draft General Plan has seen significant development interest and activity in the last three to four years, a trend that is expected to continue over the next three years.

While the Draft General Plan includes land use designations that allow for other development outside of these approved projects, it would not change their entitlements; project construction depends on decisions by developers based on infrastructure constraints and market conditions, among other factors.

### General Plan Implementation

**Comment:** Following the continued October 25, 2018 public hearing, Commissioner Warmsley asked staff about how to integrate the General Plan back to stakeholders and community members.

**Response:** The Draft General Plan includes significant changes to the 2035 General Plan both from a process perspective (i.e., a community- and stakeholder-driven process this time) and from significant changes to the land use map (i.e., pulling back urban boundaries). The General Plan also establishes a framework for implementation policies and programs that is more feasible than the 2035 General Plan. The City is already planning a number of post-adoption steps that will ensure the updated Plan is implemented by the City and stakeholders, including the following:

- Preparation of an implementation plan addressing each action in the adopted General Plan.
- Comprehensive rezoning of land use throughout the city to be consistent with the General Plan land use map.
- Detailed infrastructure analysis and revised development impacts fees to right-size infill and new growth fees.
- A comprehensive Development Code update to streamline infill development.

### Comment Letters

During the two weeks prior to the October 25, 2018 hearing, staff received three comment letters on the Draft General Plan. Staff recommendations and responses to those comment letters are provided below, as requested by the Planning Commission at the October 25, 2018, hearing.

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### League of Women Voters

This section provides staff recommendations and responses to the comments contained in the League of Women Voters letter dated 10/8/18 (Attachment D). The League of Women Voters also emailed staff some follow-up questions after the October 25, 2018 hearing; the email is provided in (Attachment E), and responses are also provided below.

**Comment:** The League of Women Voters letter states that a substantial amount of development is already approved and pending in north Stockton, and expresses opposition to designating the area north of Eight Mile Road as Economic and Education Enterprise. As part of this comment, the League provides information about campus land area needs, listing examples of university campuses ranging in size from approximately 100 to 400 acres, and suggesting that University Park is currently underutilized. The League expresses concern that the Economic and Education Enterprise designation will jeopardize growth and redevelopment of existing infill neighborhoods.

**Response:** Please see the staff response to the Planning Commission comment about the Economic and Education Enterprise designation above. As explained in that response, staff recommends maintaining the Economic and Education Enterprise designation as shown in the Draft General Plan land use map in order to implement Council direction, including Council's direction to apply the designation over an area larger than required for one catalyst project in order to allow flexibility for the locations of potential future projects based on the needs of individual projects.

In addition, the Draft General Plan includes numerous policies and actions to promote infill development; the most relevant policies and actions are listed below:

- **Action LU-6.1F:** Adjust the Public Facilities Fee structure to encourage development in areas where infrastructure is already present and ensure that non-infill pays its fair share of anticipated citywide capital facilities and operational costs.
- **Policy LU-6.2:** Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
- **Action LU-6.2A:** Implement an infill incentive program that encourages infill through expedited permitting, changes in fee structures, and other strategies.
- **Action LU-6.2B:** Do not approve future annexations or City utility connections unless they are consistent with the overall goals and policies of the General Plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.
- **Action LU-6.5A:** Require preparation of a fiscal impact analysis for large development projects and annexations to ensure a full accounting of infrastructure and public service costs, and require fiscal mitigations when necessary.

**Question:** Within Study Area 1 (as referenced in Table 3-3 of the EIR), do you have an estimate of

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the number of acres south of Eight Mile Road and the number of acres west of Interstate 5 and north of Eight Mile Road?

**Response:** The area within Study Area 1 that is south of Eight Mile Road totals approximately 1,060 acres. The area within Study Area 1 that is west of Interstate 5 and north of Eight Mile Road totals approximately 1,640 acres.

**Question:** Are all of the 1,200 multi-family homes and the 39,000 square feet of commercial space shown in EIR Table 3-3 as anticipated to occur before 2040 within Study Area 1 located in the portion of this study area that is south of Eight Mile Road?

**Response:** Yes.

#### Sierra Club/Campaign for Common Ground

This section provides staff recommendations and responses to the comments contained in the Sierra Club/Campaign for Common Ground letter dated October 22, 2018 (Attachment F).

**Comment:** Encourage housing along major corridors and discourage “power centers” at the edge of the city through the following policy/action edits:

**Policy LU-1.1:** Encourage retail businesses and housing development in mixed-use developments along regional transportation routes and in areas that serve local residents.

**Action LU-1.1C:** Prohibit the siting of any additional big-box “power centers” at the edges of the city to limit growth inducing impacts to adjacent farmlands. If big-box stores are allowed in the future, require applicants to fund an analysis of economic and blight-inducement impacts of the proposed development on retail businesses in the market area, employment, City revenues and services, and any other relevant economic considerations.

**New Action LU-1.1D:** Encourage the redevelopment of struggling under-utilized commercial strips into multi-family housing opportunities.

**Response:** Staff concurs with the recommended text edits provided above, with the exception of the edits to Action LU-1.1C. As described in the Final EIR, Action LU-1.1C, which is already being studied by the City, was included in the Draft General Plan based on consistent community support from neighborhoods in South Stockton that lack access to grocery stores and other large-scale retail. Residents cited the Big Box Ordinance as the cause for the abandonment of a potential big box store project in the area that would have provided needed retail options. Therefore, staff does not recommend striking the first portion of this action. However, if the Planning Commission would like to limit the siting of big-box power centers at the edges of the city, the suggested new text could still be added to the action without conflicting with previous input.

**Comment:** Ensure that development at the edge of the city does not compete with housing goals for the Downtown through the following new action:

**New Action LU-2.2D:** Discourage urban development at the edges of the city that would detract from or compete with the housing goals of the Greater Downtown.

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**Response:** Staff concurs with this recommended new action.

**Comment:** Strengthen the protection of historic resources policy through the following action edits:

**Action LU-3.1E:** Maintain and periodically update the City's historical resources inventory and adopt a priority list to protect the most important resources.

**Response:** Staff concurs with the recommended action edits.

**Comment:** Delete the 3,800-acre "Economic and Education Enterprise" land use designation from the land use map and retain the designation on lands north of Eight Mile Road in the Agricultural and Open Space designation.

**Response:** Please see the staff response to the Planning Commission comment about the Economic and Education Enterprise designation above. As explained in that response, staff recommends maintaining the Economic and Education Enterprise designation as shown in the Draft General Plan land use map in order to implement Council direction.

**Comment:** Revise the existing policy on large-scale development projects and incorporate new action items describing the intent and process if land is to be designated for Economic and Education Enterprise in the future, as shown in the following policy and action edits:

**Policy LU-4.1:** Encourage large-scale development proposals in appropriate locations that include significant numbers of higher-wage jobs and local revenue generation. Such development may utilize the Economic and Education Enterprise land use designation, if the proposal meets all of the criteria listed under the definition of the designation.

**New Action LU-4.1D:** The City will consider future amendments to the General Plan for extraordinary growth plans outside the Urban Services Boundary that include significant job generators or public institutions such as a college campus.

**New Action LU-4.1E:** The Economic and Education Enterprise land use designation may be applied to lands proposed for significant job generators through the amendment process, following completion of a full environmental analysis and a land availability study that concludes there is no other land available for the project within the existing City limits. Approval and construction of the first phase of the job generator must be completed prior to the consideration of any accompanying housing development.

**Response:** Because the staff-recommended approach would maintain the Economic and Education Enterprise designation on the General Plan land use map, the proposed new Action LU-4.1E would be redundant with the land use map. Therefore, staff does not recommend this new action.

However, the revisions to Policy LU-4.1 and the recommended new Action LU-4.1D would not conflict with staff's recommended approach to the Economic and Education Enterprise designation, and therefore staff concurs with those recommendations, with a minor wording change to the text of Action LU-4.1D, as follows (edits below are to the text as originally recommended in the letter):

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**Action LU-4.1D:** Consider future amendments to the General Plan for extraordinary growth plans outside the Urban Services Boundary that include significant job generators or public institutions such as a college campus.

**Comment:** Amend Policy LU-5.3 and Action LU-5.3B to finally establish an Ag Belt between Stockton and Lodi, as shown in the following policy and action edits:

**Policy LU-5.3:** Actively work to conserve prime agricultural lands outside the City boundaries and Define discrete and clear city edges that preserve agriculture, open space, and scenic views.

**Action LU-5.3B:** The City, in coordination with San Joaquin County, the City of Lodi, the California Farmland Trust, residents and affected landowners, shall prepare an Agricultural Belt Action Plan that addresses, among other items, how to target the agricultural mitigation fees that are collected by the two cities and the County toward purchasing easements within a defined buffer area between Stockton and Lodi. The location of the Agricultural Belt area shall be identified in a non-parcel specific, general fashion on the Plan Land Use Diagram map.

**Response:** Please see the staff response to the Planning Commission comment about clear boundaries above. As explained in that response, staff recommends different policy wording based on coordination with San Joaquin County.

**Comment:** Disallow expansion of the Urban Service Area and annexation unless there is a shortage of developable land and all standards are met, as shown in the following action edits:

**Action LU-6.2B:** Prohibit Urban Service Area expansion, future annexations or City utility connections unless there is less than a 10-year supply of developable land within the city limits and the expansion is consistent with the overall goals and policies of the General Plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

**Response:** Staff does not concur with this recommended change to the action because it would limit the flexibility required to promote economic development in the city. Establishing a threshold of a ten-year supply of development land could deter businesses from locating in Stockton if the available land supply does not meet the specific needs of the business.

**Comment:** Add an action item to ensure adequate water supply is phased to meet the demands of growth, as shown in the following new action:

**New Action LU-6.3D:** The City shall ensure that water supply capacity and infrastructure are in place, or planned and financed, prior to granting initial approvals for new development. The City shall pursue approval and construction of the second phase of the Delta Water Supply Project to serve new growth and reduce groundwater withdrawal. However, if Phase 2 is delayed or not approved by the State, the City shall phase or defer the approval of new growth until new surface water supplies are in place.

**Response:** Staff does not concur with this recommended new action. The first sentence is redundant with Action LU-6.1E, which directs the City to not approve new development unless there is

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infrastructure in place or planned and funded to support the growth. As explained in the Final EIR, if Phase 2 of the Delta Water Supply Project does not happen, there is still adequate water supply to serve projected development through 2040.

**Comment:** Strengthen the following land use policy to tie it with climate change goals and add a new action, as shown below:

**Policy LU-6.4:** Ensure that land use decisions balance travel origins and destinations in as close proximity as possible, and reduce vehicle miles traveled (VMT).

**New Action LU-6.4D:** Reduce Vehicle Miles Traveled (VMT) per household by planning new housing in closest proximity to employment centers, improving and funding public transportation and ridesharing, and facilitating more direct routes for pedestrians and bicyclists.

**Response:** Staff concurs with the recommended policy edits and new action.

**Comment:** Require major new development to incorporate and fund transit facilities and service, which is required by the Settlement Agreement.

**Response:** Please see the staff response to the Planning Commission comment about transit funding above. As explained in that response, staff concurs with the recommended action edits.

**Comment:** Strengthen the following transportation policy and add a new action, as shown below:

**Policy TR-3.2:** Require new development and transportation projects to reduce travel demand and greenhouse gases, support electric vehicle charging, and accommodate multi-passenger autonomous vehicle travel as much as feasible.

**New Action TR-3.2D:** Require projected traffic levels of new development to meet the recommended State threshold of 15 percent below baseline VMT per capita through smart growth design and other incentive programs.

**Response:** Staff concurs with the recommended edits to Policy TR-3.2, with minor text changes, as shown below (edits below are to the text as originally recommended in the letter):

**Policy TR-3.2:** Require new development and transportation projects to reduce travel demand and greenhouse gases gas emissions, support electric vehicle charging, and accommodate multi-passenger autonomous vehicle travel as much as feasible.

Staff does not concur with the recommended new Action TR-3.2D because it would be redundant with Policy TR-4.3 and Action TR-4.3A, which are listed below:

**Policy TR-4.3:** Use the threshold recommended by the California Office of Planning and Research for determining whether VMT impacts associated with land uses are considered significant under State environmental analysis requirements.

**Action TR-4.3A:** Amend the City's Transportation Impact Analysis Guidelines to:



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- Establish a threshold of 15 percent below baseline VMT per capita to determine a significant transportation impact under the California Environmental Quality Act.
- Identify screening criteria that will streamline certain types of development and/or development in certain areas by not requiring a VMT analysis.

**Comment:** Consider adoption (not just study) of an inclusionary housing program, as shown in the following action edits:

**Action CH-4.1B:** Consider adoption of inclusionary housing requirements, in-lieu fee levels, density bonus, modified fee structures, and/or tax incentives to promote the inclusion of a meaningful percentage of affordable units within market rate housing projects.

**Response:** Staff does not concur with the recommended action edits. The first step towards developing an inclusionary housing program is to conduct a feasibility study, which is directed in the original draft action. In addition, the original action is consistent with the direction provided in the adopted 2015-2023 Housing Element.

#### Healthy Neighborhoods Collaborative

This section provides staff recommendations and responses to the comments contained in the Healthy Neighborhoods Collaborative letter dated October 22, 2018 (Attachment G).

#### Land Use

**Comment:** Add the following new actions under Policy LU-5.2:

**New Action:** Enforce water conservation measures.

**New Action:** Coordinate with water agencies and non-profit organizations to promote public awareness on water quality and conservation issues and consistency in water quality impacts analyses.

**Response:** Staff concurs with the recommended new actions, with a modification to the first action, as shown below (edits below are to the text as originally recommended in the letter):

**New Action:** Comply with applicable water conservation measures.

Use of the word “enforce” implies that water conservation measures are not currently enforced, which may lead to a misunderstanding with agencies, stakeholders, and citizens.

**Comment:** Add the following new action under Policy LU-6.2:

**New Action:** Ensure prioritization of development and redevelopment of vacant, underutilized, and blighted infill areas be considered through strategies such as zoning changes and anti-gentrification methods.

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**Response:** Staff concurs with the recommended new actions, with a minor text change, as shown below (edits below are to the text as originally recommended in the letter):

**New Action:** Ensure prioritization of development and redevelopment of vacant, underutilized, and blighted infill areas be considered through strategies such as zoning changes and strategies to avoid gentrification.

**Comment:** Add the following new action under Policy LU-6.3:

**New Action:** Require a no-idling zone within a 1 to 2 block radius on both sides of streets and side streets of schools locations.

**Response:** The California Air Resources Board has adopted a statewide no-idling policy. Therefore, this action would be redundant with State law. Staff recommends the following language instead:

**New Action:** Comply with State requirements that limit the idling of motor vehicles.

**Comment:** Amend the following land use actions, as shown below:

**Action LU-6.4B:** Maintain a reasonable proximity and balance (i.e., magnitude) between job generating uses, housing opportunities, and resident services and amenities, including transit and active transportation.

**Action LU-6.6B:** Participate in the San Joaquin Council of Governments' (SJCOG) regional planning programs and coordinate City plans and programs with those of SJCOG, including the Regional Transportation Plan/Sustainable Communities Strategy, among others, and work with non-profit organizations also engaging in these planning programs.

**Action LU-6.7A:** Work with community-based organizations to develop and implement a comprehensive and accountable long-term strategy to engage the Stockton community in planning decisions.

**Response:** Staff concurs with the recommended edits.

### Community Health

**Comment:** Amend the following community health actions, as shown below:

**Action CH-1.1A:** Plant and maintain appropriate shade trees along all City streets to reduce heat exposure, prioritizing areas of the city with significantly less tree canopy, and provide a buffer between the travel way and bicycle and pedestrian facilities, and provide other amenities like well-marked crosswalks, bulb-outs, and pedestrian-scale street lighting.

**Action CH-1.1B:** Prepare a parks master plan through an open and engaging process inclusive of community residents that assesses the quality and distribution of existing parks, facilities, and community centers throughout the city relative to the population served (i.e., within a set walking distance) and their needs (i.e., considering age, income, and abilities), and, based on this information, identifies and prioritizes new, renovation, and expansion park

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and community center projects and describes funding means and timelines.

**Action CH-1.2D:** Prioritize pedestrian and active transportation improvement projects in low-income/disadvantaged communities that connect residential areas to retail locations that sell healthy food.

**Response:** Staff concurs with the recommended edits.

**Comment:** Add the following new actions under Policy CH-1.3:

**New Action:** Adopt and Implement an Urban Agriculture Incentive Zone (per AB 551) to allow privately-owned vacant property to be productively used for growing food.

**New Action:** Partner with nonprofits, local farmers and San Joaquin County Public Health Services to conduct public outreach and education to aid in the development of an urban agriculture ordinance

**New Action:** Identify new potential locations for farmers' markets in low-income and nutrient deficient neighborhoods, including opportunities to hold markets on publicly owned land.

**Response:** Staff concurs with the recommended new actions.

**Comment:** Amend the following community health policies and actions, as shown below:

**Policy CH-2.1:** Prioritize maintenance of streets and improvement of sidewalks, parks, and other infrastructure in areas of the city that historically have been comparatively underserved by public facilities, including implementation of complete streets where needed, especially in conjunction with infrastructure maintenance and improvement projects.

**Action CH-2.1A:** When considering parks and infrastructure maintenance and improvement projects, consider the following through an open and engaging process inclusive of community residents:

- Whether the affected community is underserved or disadvantaged.
- What the priority needs of the community are and whether the project would address those needs.
- Whether the project would negatively impact the community, such as through increased exposure to pollutants or displacement of residents or local businesses.

**Action CH-2.1B:** Provide incentives for rehabilitation or redevelopment of distressed properties that takes into consideration anti-gentrification strategies.

**Response:** Staff concurs with the recommended edits, with a minor text change, as shown below (edits below are to the text as originally recommended in the letter):

**Action CH-2.1B:** Provide incentives for rehabilitation or redevelopment of distressed properties that takes into consideration strategies to avoid gentrification.

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**Comment:** Amend the following community health actions, as shown below:

**Action CH-2.1C:** Develop incentives to promote reuse of distressed areas, such as through re-zoning, permit streamlining, density bonuses, and other appropriate tools.

**Action CH-2.1D:** Conduct marketing to potential developers to encourage the redevelopment and conversion of distressed commercial strips into housing and mixed-use areas that includes strategies to avoid gentrification.

**Action CH-2.1F:** Work with transit agencies, non-profit organizations, and communities to maintain and improve transit service in underserved and disadvantaged neighborhoods to connect residents with jobs, shopping, and services.

**Action CH-2.2A:** Aggressively facilitate the conservation and rehabilitation of older neighborhoods through the following approaches:

- Utilize all federal, State, and local programs for conservation and rehabilitation projects.
- Prioritize older disadvantaged neighborhoods for investment using funds such as the Community Development Block Grants.
- Encourage private investment in older neighborhoods.
- Cooperate in joint public-private partnerships to invest in older neighborhoods.

**Action CH-2.3A:** Build strong ties with disadvantaged communities to ensure that local residents can make significant contributions to planning decisions through the following:

- Use culturally appropriate approaches.
- Consider the convenience of the timing and locations of meetings to community members.
- Use social media and other communication techniques for those without time to attend public meetings.
- Provide translation services and translated materials when needed.
- Partner with non-profit organizations who are already active within the community.

**Action CH-2.3B:** Expand efforts to repair and rehabilitate substandard housing in disadvantaged communities, taking into consideration anti-gentrification strategies.

**Response:** Staff concurs with the recommended edits, with a minor text change, as shown below (edits below are to the text as originally recommended in the letter):

**Action CH-2.3B:** Expand efforts to repair and rehabilitate substandard housing in disadvantaged communities, taking into consideration ~~anti-gentrification~~ strategies to avoid gentrification.

**Comment:** Amend the following community health policies, as shown below:

**Policy CH-3.2:** Encourage neighborhood-serving commercial uses in areas where frequently needed goods and services are not widely available, especially for those

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areas with no availability within a 2-mile radius.

**Policy CH-5.1:** Accommodate a changing climate through adaptation, mitigation, and resiliency planning and projects.

**Response:** Staff concurs with the recommended edits.

**Comment:** Add the following new action under Policy CH-5.1:

**New Action:** Coordinate with relevant agencies and non-profit organizations to promote public awareness and readiness on natural disaster related emergency preparedness.

**Response:** Staff concurs with the recommended new action.

**Comment:** Amend the following community health action, as shown below:

**Action CH-5.2C:** Expand educational and outreach efforts to promote recycling by residents of multi-family housing, businesses, and schools.

**Response:** Staff concurs with the recommended edits, with a minor text change, as shown below (edits below are to the text as originally recommended in the letter):

**Action CH-5.2C:** Expand educational and outreach efforts to promote recycling by occupants of multi-family housing, businesses, and schools.

### Transportation

**Comment:** Amend the following transportation action, as shown below:

**Action TR-1.1A:** Direct truck traffic to designated truck routes that facilitate efficient goods movement and minimize risk to areas with concentrations of sensitive receptors, such as schools, for example by disallowing truck routes to pass directly on streets where schools are located, and vulnerable road users, like pedestrians and bicyclists.

**Response:** Staff concurs with the recommended edits, with a modification, as shown below (edits below are to the text as originally recommended in the letter):

**Action TR-1.1A:** Direct truck traffic to designated truck routes that facilitate efficient goods movement and minimize risk to areas with concentrations of sensitive receptors, such as schools, for example by disallowing any new truck routes to pass directly on streets where schools are located, and vulnerable road users, like pedestrians and bicyclists. The modification would apply the policy to new truck routes; existing truck routes have been established.

**Comment:** Amend the following transportation action, as shown below:

Action TR-1.1E: Work with local school districts to enhance pedestrian crossings near schools crossing enhancements like stop signs within a two-mile radius of schools, encourage activities like a walking school bus, and create educational programs that teach students

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bicycle safety.

**Response:** Staff concurs with the recommended edits, with a modification, as shown below (edits below are to the text as originally recommended in the letter):

**Action TR-1.1E:** Work with local school districts to enhance pedestrian crossing enhancements like stop signs within neighborhoods around schools, encourage activities like a walking school bus, and create educational programs that teach students bicycle safety.

A two-mile radius would cover an extensive area; enhancements targeted to the neighborhoods around schools would more effectively target school-related pedestrian activity.

**Comment:** Amend the following transportation action, as shown below:

**Action TR-2.1A:** Require safe and secure bicycle parking facilities to be provided at major activity centers such as public facilities, employment sites, schools, and shopping and office centers, along with showers and lockers for major employment sites.

**Response:** Staff does not concur with the recommended edits because the City lacks jurisdiction over schools. Schools are built under the jurisdiction of the State Architect.

**Comment:** Add the following new action under Policy TR-2.1:

**New Action:** Maintain and implement the City of Stockton Safe Route to School plan.

**Response:** Staff concurs with the recommended new action.

**Comment:** Amend the following transportation policies and actions, as shown below:

**Policy TR-2.2:** Connect housing and employment development in areas with good transit access through open and inclusive processes where appropriate.

**Action TR-2.2B:** Obtain input from community residents, relevant non-profit organizations, and local and regional transit operators on major new development projects to ensure projects are designed to support transit and provide adequate transit service and access.

**Response:** Staff concurs with the recommended edits.

**Comment:** Add the following new action under Policy TR-2.2:

**New Action:** Support efforts to electrify buses.

**Response:** Staff concurs with the recommended new action.

**Comment:** Amend the following transportation actions, as shown below:

**Action TR-3.1B:** Where feasible and appropriate, reduce the width of existing streets using bulb-outs, medians, pedestrian islands, shade tree landscaping, appropriate signage, and

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similar methods, while not jeopardizing emergency response.

**Action TR-3.1C:** Preserve right-of-way for transit and bicycle uses when designing new roadways and improving existing roadways, and ensuring adequate and clear signage.

**Response:** Staff concurs with the recommended edits.

#### Safety

**Comment:** Amend the following safety policy, as shown below:

**Policy SAF-4.3:** Coordinate with the San Joaquin Valley Air Pollution Control District and non-profit organizations to promote public awareness on air quality issues and consistency in air quality impacts analyses.

**Comment:** Amend Figure 6-1 to match the colors and scale of the CalEnviroScreen map when viewed online.

**Response:** Staff concurs with the recommended edit to the figure, recognizing that the data would not change - what would change is the way the data is shown (Attachment H).

#### Accountability

**Comment:** Add a table or reference to which agency or department is responsible for implementing each of the actions in the General Plan.

**Response:** Please see the staff response to the Planning Commission comment about the General Plan implementation above. As explained in that response, the City is already planning a number of post-adoption steps that will ensure the updated Plan is implemented by the City and stakeholders, including through preparation of an implementation plan addressing each action in the adopted General Plan; the implementation plan will specify the party responsible for implementation of each action.

#### Present Situation:

The Planning Commission will receive a staff presentation on the proposed draft Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements, and the Final Environmental Impact Report. This presentation will include proposed changes based on comments/input received from the community, stakeholders, the Commission, and City Council. After consideration of the public draft General Plan documents and proposed changes, staff recommends that the Planning Commission adopt a resolution recommending that the City Council approve:

- Certification of the Final Environmental Impact Report (FEIR); and
- Envision Stockton 2040 General Plan Update; and
- Utility Master Plan Supplements (UMPS).

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Attachment A - October 25, 2018, Planning Commission Staff Report with Attachments

Attachment B - Appendix B - SB 244 Analysis - Clean Version

Attachment C - Appendix B - SB244 Analysis - Track Changes Version

Attachment D - LWV October 8, 2018, Letter

Attachment E - LWV October 29, 2018, Email

Attachment F - CCG/Sierra Club October 22, 2018, Letter

Attachment G - Healthy Communities Collaborative, October 22, 2018, Letter

Attachment H - Revised Figure 6-1





# City of Stockton

## Legislation Text

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### **ENVISION STOCKTON 2040 GENERAL PLAN UPDATE, UTILITY MASTER PLAN SUPPLEMENTS, AND FINAL ENVIRONMENTAL IMPACT REPORT**

#### RECOMMENDATION

Staff recommends that the Planning Commission adopt a Resolution recommending that the City Council approve:

1. Certification of the Final Environmental Impact Report (FEIR);
2. Envision Stockton 2040 General Plan Update;
3. Utility Master Plan Supplements (UMPS).

#### Summary

In 2016, the City initiated Envision Stockton 2040 General Plan Update with a commitment to updating the General Plan in a sustainable manner. As a result of robust public engagement, staff received extensive input and guidance from the community, including citizens, stakeholders, the Planning Commission, and City Council. In April 2017, the City Council provided guidance to adopt infill standards using a city core intensification alternative. This infill alternative (referred to as Alternative "C") has the smallest urban footprint of the three alternatives considered. In July 2017, the City Council indicated the desire to continue with the Infill Focus Alternative, with some modifications. The modifications by the Council included allowing flexibility for an economic development catalyst project in the Sphere of Influence (SOI) area north of Eight Mile Road along Interstate 5.

On June 26, 2018, drafts of the General Plan Update, Environmental Impact Report (EIR), and related utility master plan documents were released for public review and comment. The 45-day comment period for the EIR ended on August 10, 2018. EIR comments and responses are contained in the Final EIR [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton) <<http://www.stocktongov.com/envisionstockton>>. The Planning Commission will receive a summary of community engagement efforts and a presentation on the proposed draft Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements, and the Final Environmental Impact Report, inclusive of proposed changes based on comments/input from the community, stakeholders, the Commission, and City Council. Staff recommends that after consideration of the public draft General Plan and any proposed changes that the Planning Commission adopt a Resolution recommending that the City Council approve:

- Certification of the Final Environmental Impact Report (FEIR);
- Envision Stockton 2040 General Plan Update; and,

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➤ **Utility Master Plan Supplements (UMPS).**

The Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements (UMPS), July/August 2018, workshop summaries, and the Final Environmental Impact Report (FEIR), and related findings, statement of overriding considerations (SOC), and mitigation monitoring and reporting program (MMRP) can be viewed at: [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton)  
<<http://www.stocktongov.com/envisionstockton>>

## DISCUSSION

### Background

State law requires each city and county to adopt and periodically update a General Plan that provides a comprehensive, long-range plan for its physical development. The General Plan is important because it contains goals, policies and implementation measures to guide development within the city limit and beyond in a Sphere of Influence where City services may someday be provided. The City's current 2035 General Plan was adopted in 2007. Since its adoption, significant economic and demographic changes occurred, prompting the City to update its growth and development assumptions.

In 2016, the City initiated Envision Stockton 2040 General Plan Update with a commitment to updating the General Plan in a sustainable manner. This General Plan Update provides guidance for reevaluation of the City's public infrastructure such as the City's roadways and water and sewer distribution systems and whether the cost (capital and maintenance) of that infrastructure is sustainable. This update provides an opportunity to revisit and reset the goals, policies, and implementation measures for development in the City limits and for future growth areas where City services may eventually be provided within a Sphere of Influence. Policy guidance is provided to reevaluate level of service goals regarding public infrastructure such as water, sewer and transportation improvements. The level of service goals associated with these particular types of improvements and its relationship to land use growth projections determines the cost of development impact fees associated with the cost of building a home or undertaking a development project.

### **Public Outreach and Feedback**

This update has been developed with extensive input and guidance from the community, including citizens, stakeholders, Planning Commission, and City Council. Thus far, there have been more than 30 opportunities (including workshops, open houses, and community events) for public input including a recent series of five public workshops held in locations throughout the City in July and August 2018.

In April 2017, Council provided guidance to adopt infill standards using a city core intensification alternative. This infill alternative (referred to as Alternative "C") has the smallest urban footprint of the three alternatives considered and contains the following attributes:

- Preservation of agricultural lands at City periphery
- Infill focused with a Downtown emphasis
  - Higher intensity mixed-use Downtown
  - High density in and near Downtown

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- Professional offices on South Airport Way
- Increased opportunities for a grocery store(s) along South Airport Way
- Opportunities for medical offices near Weston Ranch
- Flexibility for employment/economic generator north of Eight Mile Road

On July 25, 2017, the City Council considered and provided guidance to staff on the development of the General Plan goals and policies. The goals, policies, and actions in a General Plan guide service levels that directly influence the costs related to development projects and operation of city government. The following are highlights of some of the recommended policy changes included in the draft General Plan policy document:

- An increase of allowable densities and intensity of development in both downtown and the greater downtown areas; addition of new infill policies particularly as it relates to downtown and within the city's core and south Stockton.
- Weaving of environmental justice policies throughout the General Plan affecting land use, transportation, and community health policies.
- Incorporating public health policies throughout the General Plan as it relates to land use, transit, and safety policies.

On June 26, 2018, the following draft documents were released for public review and comment:

- Draft Envision Stockton 2040 General Plan policy document,
- Draft EIR, and
- Draft Utility Master Plan Supplements (water, wastewater, and stormwater).

On July 16, 2018, the City Council held a Study Session and staff presented an overview of the draft Envision Stockton 2040 General Plan, Draft EIR, and draft Utility Master Plan Supplements. The presentation covered housing and potential policy and program options for increasing affordable housing within the City of Stockton. Key housing policy/program options discussed included:

- Housing Trust funds
- Inclusionary housing
- Rent stabilization
- Rent Control Ordinances
- Just cause for eviction

## **Economic and Education Enterprise Designation**

Many comments received on the Draft General Plan have centered on the Economic and Education Enterprise designation. This section of the staff report provides a summary of the history of the development of this designation, as well as a staff-recommended change in response to public comments.

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## History of Designation

On April 4, 2017, City Council held a study session on the Envision Stockton 2040 General Plan preferred land use alternative. The City Council directed staff to proceed with Alternative C, the Infill Focus Alternative, with some modifications, to serve as the land use map in the Draft General Plan. Council's modifications included allowing flexibility for an economic development catalyst project in the Sphere of Influence (SOI) area north of Eight Mile Road along Interstate 5. Council directed staff to return with options to implement this modification.

On June 8, 2017, the Planning Commission considered four options presented by staff to implement the Council's direction for the area north of Eight Mile Road. The four options are provided in Table 1 below. The Planning Commission discussed the options, and continued the discussion to its June 22, 2017 meeting. At the June 22, 2017 meeting, the Planning Commission provided comments, but did not come to consensus on a preferred option. Comments from the Planning Commission at this meeting included the following:

- Focus on economic/job generators, not retail or residential
- Consider a policy requiring development to show that it couldn't be located elsewhere in Stockton
- Establish high-standard for projects, such as criteria related to:
  - Creation of jobs with wages above median income
  - Equity in hiring practices
  - Minimum number of jobs
  - Vehicle Miles Traveled (VMT)

**Table 1 Options for the Area North of Eight Mile Road**

<b>Land Use Map Options A or B</b>	<b>Map Option A:</b> Keep existing SOI boundary and maintain Village land use or change to other urban type designation.	<b>Map Option B:</b> Remove area 1 boundary and SOI boundary at designation.
<b>Policy Options 1 or 2</b>		

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<p><b>Policy Option 1:</b> Add language to consider development in the area, provided that the plans include significant job generators.</p>	<p><b>Map A + Policy 1:</b> This combination would allow the most streamlined approach to approving potential new development by keeping the area within the existing SOI inside the Urban Services boundary, simplifying boundary issues, with proposals subject to general policy criteria.</p>	<p><b>Map B + Policy 1:</b> This combination would allow an extensive approval process by request amendments to the SC boundary, with proposals subject to general policy criteria.</p>
<p><b>Policy Option 2:</b> Same as #1 with requirements that jobs have above-median wage levels, reduce vehicle miles traveled, fully mitigate environmental impacts, and additional housing is linked to the additional jobs created and housing cost is correlated with job wage levels.</p>	<p><b>Map A + Policy 2:</b> This combination would streamline the boundary portion of the approval process by keeping the area within the existing SOI inside the Urban Services boundary, but would require compliance with policy criteria that set high performance standards to allow potential new development in the area.</p>	<p><b>Map B + Policy 2:</b> This combination would allow an extensive approval process by request amendments to the SC boundary, and would require criteria that set high performance standards to allow potential new development in the area.</p>

Note: SOI = Sphere of Influence.

On July 25, 2017, in a City Council study session on the Envision Stockton 2040 General Plan, the Council considered the same four map and policy options and provided guidance to staff to proceed with the Map A + Policy 2 option. This option would maintain the existing SOI and provide an urban land use designation for the economic development catalyst area and establish policy language requiring above-median wage jobs, VMT reductions, environmental impact mitigation, and housing linked to jobs with housing costs correlated to job wage levels.

During the timeframe in which the Planning Commission and City Council discussed the options for the area North of Eight Mile Road, the Healthy Neighborhoods Collaborative submitted a letter, dated June 21, 2017, in which the Collaborative enumerated specific components that its members would like included in the General Plan regarding development in the area north of Eight Mile Road (Attachment A ). Representatives of the Healthy Neighborhoods Collaborative also provided similar verbal comments at the Planning Commission and City Council study sessions on this topic.

Following City Council's guidance on July 25, 2017, staff proceeded with the preparation of the Draft General Plan which includes a new designation called the Economic and Education Enterprise designation and is applied to the area north of Eight Mile Road within the SOI. In developing this designation, staff considered the letter from the Healthy Neighborhoods Collaborative which

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contained well-conceived recommendations and incorporated most of the components, as shown in Table 2. The primary difference is that the draft Economic and Education Enterprise designation does not specify that jobs must provide wages that are 120 percent of area median income (see the third row).

**Table 2 Healthy Neighborhoods Collaborative Recommendations**

<b>Healthy Neighborhoods Collaborative Recommendation</b>	<b>Related Text from the Draft Economic and Education Enterprise Designation</b> <i>(emphasis added as appropriate)</i>
A transparent process or policy that guarantees, with documentation, that the “anchor employer” cannot be reasonably accommodated within existing city limits.	Businesses envisioned for this designation include those within a Core Business Cluster industry, as specified in the City’s Economic Development Strategic Plan, that provide a significant number of jobs offering wages averaging above Area Median Income, <b>and that cannot be reasonably accommodated elsewhere within the city limit.</b>
The “anchor employer” must provide a significant number of new jobs in a Core Business Cluster industry as specified in the city’s Economic Development Strategic Plan.	Businesses envisioned for this designation include <b>those within a Core Business Cluster industry, as specified in the City’s Economic Development Strategic Plan, that provide a significant number of jobs</b> offering wages averaging above Area Median Income, and that cannot be reasonably accommodated elsewhere within the city limit.
New jobs created must be of high quality, defined as full-time equivalent and on average offering wages of 120% of Area Median Income.	Businesses envisioned for this designation include those within a Core Business Cluster industry, as specified in the City’s Economic Development Strategic Plan, that provide a significant number of <b>jobs offering wages averaging above Area Median Income,</b> and that cannot be reasonably accommodated elsewhere within the city limit.

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The new project must demonstrate development that will reduce Vehicle Miles Traveled (for example, through the provision of vanpool or car share services and/or the promotion of active transportation alternatives) and ensure proportionate amounts of diverse housing stock are available (single family, multifamily, mixed use).

In support of a major job-generator, this designation promotes linked transportation and housing options so that future employees can live close to their jobs and commute ***using transportation modes that support the City's vehicle miles traveled (VMT) reduction goals. Businesses that reduce VMT by providing vanpool programs, car share services, and active transportation alternatives are encouraged.*** The designation also allows ***proximate housing stock that supports the job-generator, including single-family, multi-family, and/or mixed-use dwellings at various levels of affordability, with housing costs that generally correspond to the income levels of the jobs generated by the project.***

Projects proposed north of Eight Mile Road or anywhere outside of existing city limits must be required to go through the city's existing development review process (environmental review, Planning Commission, City Council, and annexation) and include a community benefits analysis.

The City will negotiate with applicants to develop ***community benefit through development agreements that identify desired community amenities in the area of development***, and will ensure that development ***mitigates its environmental impacts as feasible, pursuant to the California Environmental Quality Act (CEQA)...*** Development proponents are ***encouraged to propose creative and innovative master plans*** to further the City's economic development goals consistent with the policies outlined above.

A Community Benefits Agreement must be negotiated with any "anchor employer" to ensure specific amenities or benefits are included to the neighborhoods impacted (for example, local hire initiatives, creation of a community fund, workforce training, etc.).

The City will negotiate with applicants to develop ***community benefit through development agreements that identify desired community amenities in the area of development***, and will ensure that development mitigates its environmental impacts as feasible, pursuant to the California Environmental Quality Act (CEQA).

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Note: See pages 2-14 and 2-17 of the Draft General Plan for the full text of the Economic and Education Enterprise designation.

The Draft General Plan was published on June 26, 2018, including the Economic and Education Enterprise designation. Since then, numerous comments on the Economic and Education Enterprise designation have been submitted.

### **Staff-Recommended Change To Economic and Education Enterprise Designation**

In response to the series of community comments on the Economic and Education Enterprise designation, staff recommends changing the text of the Economic and Education Enterprise designation to clarify the process that will be required to proceed with a development project within this designation, as shown below (underline denotes additions; ~~strikethrough~~ denotes deletions):

Development in this designation is intended to support the City's economic development goals by attracting new businesses, industries, and/or educational institutions that provide high-quality jobs to the local workforce. By bringing major job-generators to Stockton, this designation supports the City's Economic Development Strategic Plan and State Executive Orders regarding greenhouse gas (GHG) reduction, Senate Bill (SB) 32, and the San Joaquin Sustainable Communities Strategy.

Businesses envisioned for this designation include:

- Those within a Core Business Cluster industry, as specified in the City's Economic Development Strategic Plan;
- That provide a significant number of jobs offering wages averaging above Area Median Income, and that cannot be reasonably accommodated elsewhere within the city limit.

In support of a major job-generator, this designation promotes:

- ~~I~~Linked transportation and housing options so that future employees can live close to their jobs and commute using transportation modes that support the City's vehicle miles traveled (VMT) reduction goals;
- Businesses that reduce VMT by providing vanpool programs, car share services, and active transportation alternatives are encouraged; and
- ~~The designation also allows~~ pProximate housing stock that supports the job-generator, including single-family, multi-family, and/or mixed-use dwellings at various levels of affordability, with housing costs that generally correspond to the income levels of the jobs generated by the project.

Projects proposed in the Economic and Education Enterprise designation will be required to:

- Adhere to the City's existing development review process including consideration by the Planning Commission and City Council of a General Plan Amendment; (It should be noted that a general plan amendment process will require subsequent discretionary decisions before the planning commission and the city council and will also include a corresponding environmental analysis ).



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- The City will negotiate with applicants to develop community benefit through development agreements that identify desired community amenities in the area of development; and
- The City as Lead Agency, and will ensure that development mitigates its environmental impacts as feasible, pursuant to the California Environmental Quality Act (CEQA).

The maximum anticipated floor area ratio (FAR) for non-residential building is 0.6 and the maximum anticipated residential density is 24 dwelling units per gross acre; however, the designation allows variation from these standards with City approval to achieve the economic development goals and complete communities described above. Development proponents are encouraged to propose creative and innovative master plans to further the City's economic development goals consistent with the policies outlined above.

Staff does not recommend changing the language about job wages to specify that jobs must be 120 percent of area median income. Rather, staff recommends maintaining the current language of requiring wages that are above area median income to maintain some flexibility to facilitate future economic development.

### **September 13, 2018 Planning Commission Study Session Discussion**

At its September 13, 2018 study session on the Draft General Plan, the Planning Commission discussed specific policies and actions in the Draft Envision Stockton 2040 General Plan. During this discussion, the Commission requested that staff prepare potential policy language options to respond to comments made by the Commission at the meeting so that the Commission could consider potential revisions to the Draft General Plan at the recommendation hearing. The policy options prepared by staff are provided below and organized by General Plan chapter.

#### **Chapter 3: Land Use**

The Commission discussed Action LU-6.2A, which directs the City to develop and implement an infill incentive program. Commissioners requested that this action prioritize different categories of infill and include incentives to address blight. Based on these comments, the action could be revised as follows (underline denotes additions; ~~strikethrough~~ denotes deletions):

**Action LU-6.2A:** Develop and implement an infill incentive program that encourages infill development through expedited permitting, changes in fee structures, prioritizing infrastructure improvements in infill areas, property owner and/or landlord incentives to maintain property and reduce blight, and/or other strategies. As part of this program, define and prioritize categories of infill types based on land use, and residential density or non-residential intensity.

#### **Chapter 6: Community Health**

The Commission discussed Action CH-2.3D, which directs the City to focus enforcement of public health-related codes in disadvantaged communities. Commissioners requested that this action consider properties that are governed by homeowners associations, many of which are not being maintained. Based on Commissioner comments, the action could be revised as follows:

**Action CH-2.3D:** Focus enforcement of public health-related codes in disadvantaged communities,

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including on properties that are managed by homeowner's associations.

The Commission discussed the need to promote the growth of small and minority-owned businesses. Policy CH-3.1 directs the City to promote entrepreneurial development and small business expansion. Options to address the Commission's discussion include the following revisions to Action CH-3.1A and/or a new action CH-3.1B, as follows:

**Action CH-3.1A:** Coordinate with the Small Business Development Centers and other agencies to provide well-tailored services and resources for small and minority-owned businesses.

**New - Action CH-3.1B:** Provide training, promotion, and technical, financial, and business assistance to small and minority-owned businesses.

The Commission discussed Action CH-3.2B, which directs the City to develop an ordinance to restrict check-cashing establishments and tobacco stores in areas with high concentrations of similar establishments, and to continue to restrict over-concentration of liquor stores through the Alcohol Ordinance. Commissioners discussed the need for a map that illustrates the locations of these target uses, plus mini markets, gas stations, and fast food restaurants. Such map could be used to inform decision-making about whether to allow these uses and where to target efforts to attract a grocery store or other options that would provide access to healthy food. Options to address the Commission's discussion include the following revisions:

**Action CH-1.2B:** Prepare a healthy food ordinance that creates incentives and guidelines that support access to healthy food, such as standards requiring that a percent of sales area in neighborhood food and beverage stores be devoted to healthy foods and/or requiring acceptance of CalFresh and WIC. As part of this ordinance, collect geographic data about current health conditions, and discourage unhealthy food establishments (e.g., mini markets and fast food restaurants) in neighborhoods with high rates of obesity and/or diabetes.

**Action CH-1.2C:** Collaborate with non-profit partners and San Joaquin County Public Health Services to attract full-service grocery stores in areas that lack access to fresh food and/or are at a high risk of obesity and diabetes.

**Action CH-3.2B:** Consider options and develop an ordinance to restrict mini markets, gas stations, fast food restaurants, check-cashing establishments, and tobacco stores in areas with high existing concentrations of similar establishments and continue to restrict over-concentrations of liquor stores through the City's Alcohol Ordinance. To inform the development of this ordinance, create a map that identifies the locations of current establishments of these types, and regularly maintain it so that it continues to aid in decision-making about such uses.

**New - Action CH-3.2D:** Work with the California Department of Alcoholic Beverage Control to avoid over concentration of liquor stores.

### **Staff Recommended Changes to the Draft General Plan**

This section of the staff report lists specific staff-recommended changes to the Draft General Plan based on public comments received to date. The staff-recommended changes are provided below and organized by General Plan chapter. Staff also recommends deleting the references to the

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existing General Plan goals, policies, and implementation measures that are provided in parentheses following policies and actions. Such references were intended only for the public review draft. Proposed changes are as follows (underline denotes additions; ~~strikethrough~~ denotes deletions):

### Chapter 1: Introduction

- *Page 1-5.* The following paragraph was only intended for the public review draft; for the adopted General Plan, staff recommends deleting it: “~~For this Public Review Draft of the 2040 General Plan, goals, policies, and actions that are carried forward from the prior 2035 General Plan, either verbatim or with modifications, are identified by the 2035 General Plan goal, policy, or implementation measure number in parentheses following the goal, policy, or action text (e.g., “(ED-3)” after Goal LU-1 refers to Goal ED-3 in the Economic Development Element of the 2035 General Plan). This is intended to help reviewers understand the context, but will be removed in the final, adopted 2040 General Plan.~~”

### Chapter 2: Planning Framework

- *Page 2-15:* As a correction, revise Figure 2-8, General Plan Land Use Map, to show the Institutional designation on the portion of a parcel that is located along the western boundary of the Sphere of Influence (SOI) and General Plan Planning Area. In response to a comment from the University of the Pacific (UOP), revise Figure 2-8 to designate the entire UOP campus property as Institutional (Attachment D).

### Chapter 3: Land Use

- *Page 3-15.* In response to a comment from the City of Stockton Public Works Department, add the following new action:  
“Action LU-3.3F. Allow developers to develop pocket parks that function as social gathering places and/or children’s play areas, and which can count towards the park standard requirements for new development.”
- *Page 3-17.* In response to a comment from the Delta Stewardship council, revise second paragraph as follows: “To aid regional conservation efforts, California’s Delta Stewardship Council adopted the Delta Reform Plan in 2013, which includes rules and recommendations to improve water supply, protect the Delta ecosystem, and preserve, protect, and enhance agricultural, cultural, and recreational features. As shown on Figure 3-6, the western portion of the Planning Area is located within the “Legal Delta,” the area subject to State oversight through the Delta Plan, including actions such as ensuring that the Stockton General Plan is consistent with the Delta Plan.”

### Clear Boundaries

On September 24, 2018, staff received a memo from Eric Parfrey, representing the Sierra Club and Campaign for Common Ground (Attachment B) that had been originally sent to Mayor Tubbs regarding agricultural lands and open space between Stockton and Lodi. Prior to receipt of the memo, staff had been proactively considering a change to the action language contained in the public draft Envision Stockton 2040 policy document. Below is the existing policy language, as modified through consultation with San Joaquin County Community Development Department staff. For the Planning Commission’s information, the 2016 adopted County General Plan Clear Boundaries policy language is also provided.

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*Page 3-20. In response to a comment from the Eric Parfrey, representing the Sierra Club and Campaign for Common Ground, revise Action LU-5.3B as follows: “Coordinate with San Joaquin County to develop a plan for a greenbelt or community separator around the city preserve agricultural land and open space areas in the unincorporated County that contribute to maintaining clear boundaries between cities.”*

Adopted San Joaquin County General Plan Language reads as the following:

#### LU-1.5 Clear Boundaries

The County shall strive to preserve agricultural and open space areas that contribute to maintaining clear boundaries among cities and unincorporated communities.

## CHAPTER 4: TRANSPORTATION

- *Page 4-4.* In response to a comment from SJCOG, revise the last paragraph as follows: “Stockton is a regional transportation hub. Residents and commuters have access to a variety of transit options for both inter-city and regional travel. The San Joaquin Council of Governments (SJCOG) coordinates transportation planning and financing for the region and administers regional plans that promote sustainable growth, including the Regional Transportation Plan & Sustainable Communities Strategy that guides funding and policy decisions, the Regional Congestion Management Program that identifies regionally significant roadways, and the Smart Growth Transit-Oriented Development Plan that promotes transit-friendly land use planning and development. Together, these plans intend to enhance multi-modal opportunities in Stockton for both passengers and freight.”
- *Page 4-5.* In response to a comment from SJCOG, revise Action TR-1.3A as follows: “Protect the Airport and related aviation facilities from encroachment by ensuring that all future development within the Airport Influence Area (AIA) is consistent with the policies adopted by the San Joaquin County Airport Land Use Commission (ALUC), except in cases where the City Council concludes that project approval would provide for the orderly development of the Airport and the areas surrounding it while protecting the public health, safety, and welfare by minimizing the public’s exposure to excessive noise and safety hazards, consistent with the San Joaquin County Airport Land Use Compatibility Plan and the Stockton Metropolitan Airport Land Use Compatibility Plan.”
- *Page 4-7.* In response to a comment from SJCOG, revise Action TR-1.3B as follows: “Where substantial development already exists within the AIA and is incompatible with ALUC policies, only allow additional infill development of similar land uses if projects meet all of the following criteria to be an infill project:
  - The project site is bounded on at least three sides by uses similar to those proposed.
  - The proposed project would not extend the perimeter of the area developed with incompatible uses.
  - The proposed project does not otherwise increase the intensity and/or incompatibility of the use with respect to the criteria identified in the San Joaquin County Airport Land Use Compatibility Plan and in the Stockton Metropolitan Airport Land Use Compatibility

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Plan through use permits, density transfers, or other strategies.”

- *Page 4-11.* In response to a comment from SJCOG, add the following as a new Action: “Action TR-3.2D: Continue to coordinate with the San Joaquin Council of Governments to increase opportunities for additional park and ride facilities, consistent with the San Joaquin County Regional Park and Ride Lot Master Plan.”
- *Page 4-12.* In response to a comment from SJCOG, revise Action TR-4.1A as follows: “Strive for Level of Service (LOS) D or better for both daily roadway segment and peak hour intersection operations, except when doing so would conflict with other land use, environmental, or economic development priorities, and with the following additional exceptions:
  - In the Greater Downtown, strive for LOS E or better, but LOS F may be acceptable after consideration of physical or environmental constraints and other City goals and policies.
  - Strive for different LOS standards along the following corridors due to physical constraints that limit the improvements that can be constructed:
    - Benjamin Holt Drive, Plymouth Road to Gettysburg Place – LOS F
    - Eight Mile Road, Trinity Parkway to I-5 – LOS E
    - Eight Mile Road, Lower Sacramento Road to West Lane - LOS E
    - Eighth Street, I-5 to El Dorado Street - LOS E
    - Eighth Street, Airport Way to Mariposa Road - LOS E
    - French Camp Road, Manthey Road to I-5 LOS E
    - French Camp Road, I-5 to Val Dervin Parkway- LOS F
    - Hammer Lane, I-5 to Kelly Drive – LOS E
    - Hammer Lane, West Lane to Holman Road – LOS E
    - Interstate 5, Hammer Lane to Benjamin Holt Drive – LOS E
    - Interstate 5, Benjamin Holt Drive to Downing Avenue - LOS F
    - Interstate 5, Downing Avenue to French Camp Road – LOS E
    - Otto Drive, I-5 to Thornton Road - LOS F
  - Roadway segments determined to be operating at deficient LOS by the San Joaquin Council of Governments in the Regional Congestion Management Program.
  - Accept worse than adopted-standard LOS at intersections where widening the intersection would reduce bicycle and pedestrian safety and/or increase.”

## CHAPTER 6: COMMUNITY HEALTH

- In response to a comment from the Catholic Charities Diocese of Stockton, revise Figure 6-1, Disadvantaged Communities, to change the way the data is shown on the map (i.e., adjust the colors used for each category), as shown on Attachment C .

## APPENDIX B: SB244 ANALYSIS

- *Page B-14.* As a correction, revise the discussion of drainage as follows: “~~Storm drain services are provided by the City of Stockton through an underground storm main. There are no storm drain deficiencies in this area.~~ Roadside ditches are used to manage stormwater for the community by the County, along with some underground storm mains managed by the City.”

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There are locations within this area that are prone to flooding during sizeable storms.”

- *Page B-28.* As a correction, revise the conclusion as follows: “Although there are several communities in and around Stockton that meet the State definition of a disadvantaged unincorporated community, the City serves most of these communities with City services. The analysis showed that there are no deficiencies within most of the communities and that infrastructure services are sufficient. However, some communities rely on septic systems and lack wastewater collection infrastructure, ~~and~~ one community currently lacks water supply infrastructure, and one ten communities lack adequate storm drainage facilities; therefore, the City should work with the County and other utility providers to seek funding to complete sewer, ~~and water, and storm drainage~~ systems in these areas. As described above, there are funding opportunities available to address these deficiencies.”

## **Full Buildout of the General Plan**

A number of comments on the Draft Environmental Impact Report (EIR) for the General Plan express concern about theoretical full buildout beyond the timeframe of the General Plan, which are reported in Chapter 3 of the Draft EIR, including in Table 3-3 on page 3-26. Although detailed responses to these comments are provided in Chapter 5 of the Final EIR, the following is to provide clarity on the General Plan planning horizon:

The General Plan EIR evaluates the impacts associated with the amount of development that is anticipated to occur by 2040, the “horizon” or targeted final year of the General Plan. The General Plan caps development to that year 2040 amount, noting that further development would require additional environmental review separate from that done for the General Plan EIR (see Action LU-6.1A).

The reason that the theoretical full buildout of the General Plan (which could take hundreds of years to achieve) is reported in Chapter 3 of the Draft EIR is to explain the methodology that was used to develop the 2040 horizon-year development projections. Specifically, to estimate the 2040 development projection, a percentage of the full theoretical buildout potential was distributed amongst the geographic “study areas” defined through the community participation process for the General Plan update.

As shown in Chapter 3 of the Final EIR, staff has refined the formatting of Table 3-3 on page 3-26 of the Draft EIR to highlight how the full theoretical buildout numbers relate to the 2040 horizon-year projection that was evaluated in the EIR. The original and revised versions are shown below. In the revised version, the formatting has been changed to clarify how a specific percentage of the full theoretical buildout capacity was assumed to occur by 2040 within each study area. Those 2040 development projections reported in Table 3-3, combined with pending and approved projects, constitute the entirety of the development that was analyzed in the EIR, in conformance with CEQA Guidelines Section 15378(a), which requires that an EIR consider the reasonably foreseeable indirect physical changes in the environment resulting from a project.

It is also important to note that the General Plan EIR does not establish City policy. The *General Plan* provides policy guidance for how much development can occur and where, including the overall development cap established in Action LU-6.1A. The *General Plan EIR* discloses the potential

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impacts associated with implementation of the General Plan. Its assumptions about where and how much development will occur do not in any way “pre-approve” future development, nor do they prohibit development. They are assumptions that factor into the analysis presented in the EIR with the purpose of disclosing the potential environmental impacts resulting from adoption and implementation of the General Plan.

### Original Version of Table 3-3 in the Draft EIR

2040 GENERAL PLAN UPDATE AND UTILITY MASTER PLAN SUPPLEMENTS  
DRAFT ENVIRONMENTAL IMPACT REPORT  
CITY OF STOCKTON

#### PROJECT DESCRIPTION

TABLE 3-3 2040 DEVELOPMENT BY STUDY AREA

Study Area #/Name	Net New Single-Family Units (Full Buildout)	Percent Applied to 2040	Net New Single-Family Units (2040)	Net New Multi-Family Units (Full Buildout)	Percent Applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (Full Buildout)	Percent Applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (Full Buildout)	Percent Applied to 2040	Net New Industrial Square Feet (2040)
1. Eight Mile Rd	3,940	35%	1,380	25,350	5%	1,200	197,000	20%	39,000	74,095,000	0%	0
2. Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
3. West Ln and Alpine Rd	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
4. Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
5. El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
6. Miner/Weber Corridors <sup>a</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
7. Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
8. I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
9. Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
10. I-5 and Charter Way	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
11. Charter Wy/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
12. Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
13. Mariposa and Charter	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
14. East Weston Ranch <sup>b</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
15. South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
16. E French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>c</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>d</sup></b>	<b>20,480</b>		<b>3,060</b>	<b>70,400</b>		<b>9,040</b>	<b>45,773,000</b>		<b>8,739,000</b>	<b>208,796,000</b>		<b>2,033,000</b>

a. Excludes Open Window approved project.

b. Excludes Weston Ranch Town Center approved project.

c. Excludes approved/pending projects.

d. Numbers do not always add up due to rounding.

Source: PlaceWorks, 2017.

3-26

JUNE 2018

### Revised Table 3-3.

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TABLE 3-3 (AS REVISED IN THE FINAL EIR) 2040 DEVELOPMENT BY STUDY AREA

Study Area #/Name	Net New Single-Family Units (Full Buildout)	Percent Applied to 2040	Net New Single-Family Units (2040)	Net New Multi-Family Units (Full Buildout)	Percent Applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (Full Buildout)	Percent Applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (Full Buildout)	Percent Applied to 2040	Net New Industrial Square Feet (2040)
1. Eight Mile Rd	3,940	35%	1,380	25,350	5%	1,200	197,000	20%	39,000	74,095,000	0%	0
2. Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
3. West Ln and Alpine Rd	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
4. Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
5. El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
6. Miner/Weber Corridors <sup>a</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
7. Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
8. I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
9. Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
10. I-5 and Charter Way	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
11. Charter Wy/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
12. Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
13. Mariposa and Charter	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
14. East Weston Ranch <sup>b</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
15. South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
16. E French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>c</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>d</sup></b>			<b>3,060</b>			<b>9,040</b>			<b>8,739,000</b>			<b>2,033,000</b>

Note: To estimate the 2040 development, a percentage of the full theoretical buildout potential was assumed for each study area, as shown in the gray, italicized columns.

a. Excludes Open Window approved project.

b. Excludes Weston Ranch Town Center approved project.

c. Excludes approved/pending projects.

d. Numbers do not always add up due to rounding.

## Climate Action Plan Advisory Committee

On September 20, 2018, the Climate Action Plan Advisory Committee (CAPAC) met to consider making a recommendation to the Planning Commission and City Council on supportive policies for balanced infill/outskirt development consistent with the 2008 Settlement Agreement with the Sierra Club and the state Attorney General (Attachment E). With three members absent (Nelson, Pedroza, Trehune) the CAPAC voted 5-2 (Hatch, Leek dissenting) to recommend approval of staff recommended infill/outskirt policies with amendments to address minor text edits to Actions 6.1e, 6.1f and 2.2c. However, a minimum of six affirmative votes is needed to forward an approval recommendation.

## DRAFT GENERAL PLAN COMMENTS AND RESPONSES

This section of the staff report responds to written comments on the Draft General Plan that suggested specific text edits. This section is organized by comment letter, with a reference to the comment letter number from the Final EIR. Staff responses are provided below each comment. Note that responses to comments made on the Draft EIR are addressed separately in the Final EIR.

### 7/23/18 SIERRA CLUB LETTER (LETTER #A03 IN FINAL EIR)

The Sierra Club suggested the following changes to the Draft General Plan. As explained in the responses provided below, the recommended goals and policies are already addressed in the Draft General Plan and/or other programs, so staff does not recommend any changes.



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- Add a “Sustainability/Climate Change” (or similar title) section and put in relevant goals, as noted below.
  - *Response:* Background information about climate change is provided on page 6-12 of the Draft General Plan. Policies and actions that address climate change are denoted with a globe symbol and summarized in Appendix A. In addition, the City has adopted a standalone Climate Action Plan (CAP), which remains in effect.
- Add goals that address climate change, greenhouse gas reduction, and clean energy (there are a few related goals and policies in the draft plan, e.g., POLICY CH-5.1 “Accommodate a changing climate through adaptation and resiliency planning and projects,” but several more should be added from the Climate Action Plan (we appreciate that the city has committed to updating the CAP).
  - *Response:* As indicated in the comment, Policy CH-5.1 addresses climate change. Other policies and actions that address climate change, including greenhouse gas (GHG) reduction and clean energy, are denoted with a globe symbol and summarized in Appendix A. The CAP is a standalone document that remains in effect, and it would be redundant to repeat GHG reduction measures from the CAP in the General Plan.
- Add a goal that addresses need for City resiliency programs to combat climate changes due to rising sea levels and increased flood risk.
  - *Response:* Action CH-5.1A directs the City to conduct a comprehensive climate change vulnerability assessment to inform the development of adaptation and resilience policies and strategies, and incorporate them into the Safety Element. This assessment and the associated policies and strategies will consider rising sea levels and increased flood risk. In addition, Policies SAF-2.3 and SAF-2.4 and their associated actions address flood risk.
- Add a goal that addresses jobs/housing balance (POLICY LU-6.4 “Ensure that land use decisions balance travel origins and destinations in as close proximity as possible” is a start, but more specificity and consistency with the land use map is needed).
  - *Response:* Action LU-6.4A provides specificity and Action LU-6.4B addresses land use patterns related to a jobs/housing balance, as follows:
    - Action LU-6.4A: Maintain a reasonable balance between potential job generation and local workforce availability with a goal of one job for each employed resident.
    - Action LU-6.4B: Maintain a reasonable proximity and balance (i.e., magnitude) between job generating uses, housing opportunities, and resident services and amenities.
- Add goals and policies
- (from Housing Element?) that address affordable housing and inclusionary housing.
  - *Response:* Goal CH-4 - Ensure that all residents have a safe, high-quality, and stable place to call home - and its associated policies and actions address affordable housing. Action CH-4.1B directs the City to conduct a study to explore the feasibility of inclusionary housing requirements, and to implement the feasible approaches identified

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in the study.

- Add goals and policies that specifically support the redevelopment of struggling shopping centers into mixed use projects with a strong component of affordable housing.
  - *Response:* The following actions support redevelopment, including for struggling shopping centers:
    - Action LU-1.1B: Evaluate the City’s parking policies, and amend the Development Code to provide more flexibility as appropriate to facilitate mixed-use redevelopment.
    - Action CH-2.1B: Provide incentives for rehabilitation or redevelopment of distressed properties.
    - Action CH-2.1C: Develop incentives to promote reuse of distressed areas, such as through permit streamlining, density bonuses, and other appropriate tools.
    - Action CH-2.1D: Conduct marketing to potential developers to encourage the redevelopment and conversion of distressed commercial strips into housing and mixed-use areas.
    - Action CH-2.2A: Aggressively facilitate the conservation and rehabilitation of older neighborhoods through the following approaches:
      - Utilize all federal, State, and local programs for conservation and rehabilitation projects.
      - Prioritize older neighborhoods for investment using funds such as the Community Development Block Grants.
      - Encourage private investment in older neighborhoods.
      - Cooperate in joint public-private partnerships to invest in older neighborhoods
- Add goals and policies that specifically address City/developer funding for increased transit services (this is required by the Settlement Agreement).
  - *Response:* As part of the City’s commitments under the 2008 Settlement Agreement, the City has approved a transit gap study and program that involves the transmittal of 100 percent of the City’s Local Transportation Fund (LTF) to the San Joaquin Regional Transit District (RTD) for transit purposes, as they are the acknowledged transit provider in Stockton.
- Add more specific goals related to crime prevention as recommended by Commissioners and members of the public.
  - *Response:* Crime prevention is addressed through Goal SAF-1 - Create a safe and welcoming environment in all areas of the city at all times of day - and its associated policies and actions.

**7/25/18 CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC) (LETTER #A04 IN FINAL EIR)**

The CPUC suggested the following change to the Draft General Plan. As explained in the response provided below, the recommended change is already addressed in the Draft General Plan, so staff does not recommend any further changes.

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- Add language to the Stockton 2040 General Plan Update so that any future development adjacent to or near the rail right-of-way (ROW) is planned with the safety of the rail corridor in mind.
  - *Response:* Actions TR-1.1C and TR-1.2C address safety around rail corridors, as shown below. In addition, individual projects that are adjacent to or near the rail ROW will be subject to project-specific design review to consider safety around rail corridors, among other issues.
    - Action TR-1.1C: Require roadways in new development areas to be designed with multiple points of access and to address barriers, including waterways and railroads, in order to maximize connectivity for all modes of transportation.
    - Action TR-1.2C: Provide grade separations at railroad crossings on arterial streets where feasible to ensure public safety and minimize traffic delay.

**8/9/18 SIERRA CLUB, DELTA-SIERRA GROUP MOTHER LODGE CHAPTER (LETTER #A08 IN FINAL EIR)**

The Delta-Sierra Group Mother Lode Chapter of the Sierra Club suggested the following changes to the Draft General Plan. As explained in responses provided below, the recommended text changes are already addressed in the Draft General Plan, so staff does not recommend any further changes.

- Policy TR 2.3 states “wheel” more frequently. Wheel should be changed to bicycle.
  - *Response:* The term “wheel” conveys the meaning adequately, particularly including wheelchair access for disabled persons, and changing to “bicycle” is not necessary.
- Action SAF-2.4.C in the proposed General Plan directs the City to preserve waterways and floodplains for non-urban uses to maintain flood carrying capacity. Additionally, language should be included that commits the City of Stockton to enhance these environments where wildlife migration has been identified as feasible, such as the Calaveras River.
  - *Response:* The following actions in the Draft General Plan address habitat enhancement, including in and along waterways and floodplains:
    - Action LU-5.1B: Protect, preserve, and improve riparian corridors and incorporate them in the City’s parks, trails, and open space system.
    - Action LU-5.1C: Require landscape plans to incorporate native and drought-tolerant plants in order to preserve the visual integrity of the landscape, conserve water, provide habitat conditions suitable for native vegetation, and ensure that a maximum number and variety of well-adapted plants are maintained.
    - Action LU-5.2A: Continue to coordinate with the San Joaquin Council of Governments and comply with the terms of the Multi-Species Habitat Conservation and Open Space Plan to protect critical habitat areas that support endangered, threatened, and special-status species.
    - Action LU-5.2B: For projects on or within 100 feet of sites that have the potential to contain special-status species or critical or sensitive habitats, including wetlands, require preparation of a baseline assessment by a qualified biologist following appropriate protocols, such as wetland delineation protocol defined by the US Army Corps of Engineers. If such sensitive species or habitats are found to be present, development shall avoid impacting the resource, and if avoidance

is not feasible, impacts shall be minimized through project design or compensation identified in consultation with a qualified biologist.

- Action LU-5.2C: Require new development to implement best practices to protect biological resources, including incidental take minimization measures and other federal and State requirements and recommendations that are consistent with the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.
- Action SAF-2.3A: Coordinate with appropriate State, federal, and local flood control agencies to develop a flood protection plan for the levee systems protecting the city that:
  - Identifies the levees protecting the city and the entities responsible for the operation and maintenance of the levees;
  - Determines the flood levels in the waterways and the level of protection offered by the existing levees along the waterways;
  - Identifies a long-term plan to upgrade the system as necessary to provide at least a 100-year level of flood protection to the city, and 200-year level of flood protection, where feasible;
  - Encourages multi-purpose flood management projects that, where feasible, incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the city's streams, creeks, and lakes; and
  - Includes provisions for updates to reflect future State or federally mandated levels of flood protection.
- Policy SAF-3.2: Protect the availability of clean potable water from groundwater sources. Revise to include from groundwater contamination sources.
  - *Response:* The following actions in the Draft General Plan address water quality:
    - Action SAF-3.1A: Actively participate in appropriate forums designed to discuss and solve regional water supply and quality issues.
    - Action SAF-3.2B: Require new development to employ low impact development (LID) approaches, including:
      - Conserving natural areas and reducing imperviousness.
      - Runoff storage.
      - Hydro-modification (to mimic pre-development runoff volume and flow rate).
      - Reducing trash accumulation.
      - Public education and outreach.
    - Action SAF-3.4A: Require all new urban development to be served by an adequate wastewater collection system to avoid possible contamination of groundwater from onsite wastewater disposal systems.

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- Action CH-2.3E: Work with wastewater and water utilities to seek funding to complete sewer and water systems in areas within the SOI where parcels still rely on septic systems and wells.

**8/10/18 SJCOG (LETTER #A12 IN FINAL EIR)**

SJCOG suggested the following changes to the Draft General Plan. Staff does not recommend these changes, as explained in responses provided below.

- Include the Federal Aviation Administration (FAA) notification requirement, as found in page 3-40 of SMALUCP and page 3-28 of SJCALUCP, in Action TR-1.3B.
  - *Response:* The City will comply with all FAA notification requirements. Adding a reference to comply with such requirements would be redundant with federal and State law.
- SJCOG provided the following comments related to transportation demand management (TDM):
  - “Commercial, retail, office, industrial and multifamily residential development should be required to prepare a Transportation Demand Management Plan, to support the Active and Mobile Community Goals, that may include on-site amenities, bike parking, shower facilities, lockers, preferential parking, transportation information kiosks, EV charging stations and park and ride spaces as much as feasible.”
  - “Mitigate potential air quality impacts by requiring large employers and business parks based on employment size to submit a Transportation Demand Management Plan.”
  - “SJCOG recommends modifying the Policy SAF-4.2 language as follows: Require all new large employers to work with the San Joaquin Council of Governments dibs program to implement a transportation demand management plan to address elements such as California's Parking Cash-Out Program, vanpooling/carpooling, transit, Emergency Ride Home Program, Preferential Parking, telecommuting, bicycle parking and on-site amenities, and rideshare and transit incentives.”
  - “SJCOG recommends adding the following new policy: Support San Joaquin Valley Air Pollution Control District Rule 9410 by requiring employers of 100 or more employees to work with the San Joaquin Council of Government's dibs program to develop and implement a Trip Reduction Program (eTrip).”
  - *Response:* San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 9410 and Policy SAF-4.2 in the Draft General Plan, which are cited in the comments, already address TDM. SJVAPCD Rule 9410 requires TDM for employers with over 100 employees. According to Rule 9410, such employers must implement an Employer Trip Reduction Implementation Plan (ETRIP) that meets specific targets. Draft General Plan Policy SAF-4.2 supports this rule as follows: “Encourage major employers to participate in a transportation demand management program (TDM) that reduces vehicle trips through approaches such as carpooling, vanpooling, shuttles, car-sharing, bike-sharing, end-of-trip facilities like showers and bicycle parking, subscription bus service, transit

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subsidies, preferential parking, and telecommuting.” In addition, Draft General Plan Action SAF-4.2A further supports the rule as follows: “Provide information and conduct marketing and outreach to major existing and new employers about the transportation demand management (TDM) program facilitated by the San Joaquin Council of Governments.” No changes to the policy and action are required in order to support TDM.

- SJCOG encourages the addition of “high-quality” transit facilities, as defined by Senate Bill (SB) 375, to Action LU-2.2B, which directs the City to establish a Transit Oriented Development (TOD) Overlay Zone around the Robert J. Cabral ACE Train Station and the San Joaquin Street Amtrak Station.
  - *Response:* According to the 2018 Regional Transportation Plan/Sustainable Communities Strategy, “high-quality” transit facilities in Stockton include bus transit hubs and transfer stations and bus rapid transit (BRT) routes. Given the extent of these facilities, adding the TOD Overlay would cover too broad of an area and reduce the effectiveness of the overlay. Therefore, staff does not recommend any changes.
- Policy SAF-2.5 and/or its associated actions, which relate to noise exposure, should include a reference to the noise exposure contour maps that are included as Exhibit 3B in the Stockton Municipal Airport Land Use Compatibility Plan.
  - *Response:* Referring to the airport noise contour maps in the Stockton Municipal Airport Land Use Compatibility Plan would not change the effectiveness of the draft policy or actions; therefore, staff does not recommend this change.

#### 8/1/18 COLLEEN FOSTER (LETTER #B02 IN FINAL EIR)

Colleen Foster requested that the introduction starting on page 3-22 of the Draft General Plan related to fiscal health be revised, as indicated below. Staff does not recommend this change, as explained in the response provided below.

- Revise the introduction to the section about fiscal health on page 3-22 to state that new housing does not generate adequate revenue to support City services.
  - *Response:* Fiscal impacts of new development are project-specific, including to the specific development agreement for a project. Action LU-6.5A requires the preparation of a fiscal impact analysis for large development projects and proposed annexations to ensure a full accounting of infrastructure and public service costs and to confirm whether revenue enhancement mechanisms are necessary to ensure net fiscal balance or better. The action also directs the City to require appropriate fiscal mitigations, when necessary, to ensure the City’s ongoing fiscal health. Action LU-6.5A would ensure that new residential development provide any needed fiscal mitigations to support the City’s fiscal health.

#### Revisions to the Utility Master Plan Supplements

Each Utility Master Plan Supplement (UMPS) Technical Memorandum (TM) contains the General Plan land use map. Because of the changes to the General Plan Map, the UMPS TM have been revised to show the updated version of the land use map. Also, based on comments from the City Municipal Utilities Department, the text in Section 8.2 on page 19 of the UMPS for Potable Water has

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been revised (Attachment F).

On October 10, 2018, as this staff report was being written, a comment letter was received from the League of Women Voters indicating opposition to housing and industrial development north of Eight Mile Road. The noted letter is attached to this staff report for the Planning Commission's information (Attachment G).

Present Situation:

The Planning Commission will receive a staff presentation on the proposed draft Envision Stockton 2040 General Plan Update, Utility Master Plan Supplements, and the Final Environmental Impact Report. This presentation will include proposed changes based on comments/input received from the community, stakeholders, the Commission, and City Council. After consideration of the public draft General Plan and proposed changes, staff recommends that the Planning Commission adopt a Resolution recommending that the City Council approve: Certification of the Final Environmental Impact Report (FEIR); Envision Stockton 2040 General Plan Update; and Utility Master Plan Supplements (UMPS) (Attachment F).

Public Hearing Notice

A Public Notice of this hearing was published in The Record on October 10, 2018.

Attachment A - Healthy Neighborhoods Letter

Attachment B - Memorandum on Ag Belt

Attachment C - Revised Fig. 6-1 - Disadvantaged Communities

Attachment D - UOP Letter - General Plan Designation Request

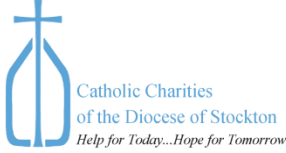
Attachment E - CAPAC Settlement Agreement Consistency Table

Attachment F - Revised Utility Technical Memorandums

Attachment G - League of Women Voters October 10, 2018, Comment Letter



TEN|SPACE



**PUBLIC HEALTH  
ADVOCATES**  
EVERYONE HAS THE RIGHT TO BE HEALTHY



Healthy Neighborhoods Collaborative  
1106 N. El Dorado Street  
Stockton, CA 95202

June 21, 2017

Mr. David Kwong  
Community Development Director  
City of Stockton  
345 N. El Dorado Street  
Stockton, CA 95202

Dear Mr. Kwong,

The Healthy Neighborhoods Collaborative would like to thank you for the opportunity to provide input on the Stockton General Plan.

The Healthy Neighborhoods Collaborative is made up of public health, environmental, environmental justice, housing, and transportation advocates as well as community and faith groups. Together we are working toward a more healthful, equitable, and sustainable city.



## ATTACHMENT D

As a Collaborative, we would like to provide comments on the proposed options for allowing growth north of Eight Mile Road. Our Collaborative recognizes the need for flexibility in the General Plan should the opportunity for a truly catalytic anchor institution present itself, and we believe the General Plan should include policies to prepare the city to attract such an entity. However, we believe that the city must also incorporate strong and definitive language to ensure that any project that requires a location outside of the existing city boundaries reflects the goals of the city at large.

During the city's public input process, there has been a clear preference for Land Use Alternative C, which prioritizes investment and growth in our existing neighborhoods rather than through expanding our city limits. If the city decides to allow development of an "anchor employer" in an area outside of the existing boundaries against the spirit of Alternative C, we believe that this development must be held to a very high standard. Specifically, our Collaborative would like to see the following components memorialized in any General Plan language permitting growth north of Eight Mile Road.

- A transparent process or policy that guarantees, with documentation, that the "anchor employer" cannot be reasonably accommodated within existing city limits
- The "anchor employer" must provide a significant number of new jobs in a Core Business Cluster industry as specified in the city's Economic Development Strategic Plan
- New jobs created must be of high quality, defined as full-time equivalent and on average offering wages of 120% of Area Median Income
- The new project must demonstrate development that will reduce Vehicle Miles Traveled (for example, through the provision of vanpool or car share services and/or the promotion of active transportation alternatives) and ensure proportionate amounts of diverse housing stock are available (single family, multifamily, mixed use)
- Projects proposed north of Eight Mile Road or anywhere outside of existing city limits must be required to go through the city's existing development review process (environmental review, Planning Commission, City Council, and annexation) and include a community benefits analysis
- A Community Benefits Agreement must be negotiated with any "anchor employer" to ensure specific amenities or benefits are included to the neighborhoods impacted (for example, local hire initiatives, creation of a community fund, workforce training, etc.)

Thank you for this opportunity to provide comment. We look forward to your response as well as continuing to provide public input as the General Plan process continues to move forward.

Sincerely,



Yolanda Park, Co-Chair  
Healthy Neighborhoods Collaborative

Eric Parfrey, Steering Committee Chair  
Campaign for Common Ground

Elvira Ramirez, Executive Director  
Catholic Charities Diocese of Stockton

## ATTACHMENT D

Richard Abood, Executive Committee  
Delta Sierra Group

Kristine Williams, Central Valley Program Officer  
Enterprise Community Partners

Pastor Curtis Smith, Chapter Director  
Faith in San Joaquin

Jeri Bigbee  
First Unitarian Universalist Social Justice Committee

LaCresia Hawkins, Program Manager  
Public Health Advocates

Jeremey Terhune, Co-Founder and Executive Director  
PUENTES

Hector Lara, Executive Director  
Reinvent South Stockton

Christina D. B. Frankel, Executive Director  
Save Downtown Stockton Foundation

Tammy Evans, RN, PHN, MSN, PhD, Director  
SJC Public Health Services

David Garcia, Chief Operating Officer  
TenSpace

Jasmine Leek, Director  
Third City Coalition

CC:

Mayor Michael Tubbs  
Vice Mayor Elbert Holman  
Councilmember Dan Wright  
Councilmember Susan Lofthus  
Councilmember Susan Lenz  
Councilmember Christina Fugazi  
Councilmember Jesus Andrade  
Planning Commissioner Don Aguillard  
Planning Commissioner Elizabeth Hull  
Planning Commissioner Sol Jobrack  
Planning Commissioner D'Adrea Davie  
Planning Commissioner Kimberly Warmsley  
Planning Commissioner Waqar Rizvi  
Planning Commissioner Anne Mallett  
David Stagnaro, Community Development Department

## M\_E\_M\_O\_R\_A\_N\_D\_U\_M

TO: Mayor Michael Tubbs  
 FR: Eric Parfrey  
 RE: Proposed "Ag Belt" and Ag Conservation Easements  
 DATE: September 20, 2018

Following up on our meeting on August 20, 2018, you asked to be given some background information on agricultural conservation easements and how a proposed "Ag Belt" between Stockton and Lodi would work. (The term "Ag Belt" is more appropriate than "greenbelt," which implies public parkland.)

First, Sierra Club and Campaign for Common Ground have advocated for the establishment of an Ag Belt north of Eight Mile Road and south of the Lodi Sphere of Influence for the over a decade. We made this strong request as part of the last 2007 General Plan and we were ignored by the staff and the City Council. Once again, we are asking that one or more strong policies and action measures be included in this updated 2040 plan in place of the existing weak and ineffective Policy LU-5.3 and Action LU-5.3B, as follows:

Policy LU-5.3 **Actively work to conserve prime agricultural lands outside the City boundaries and** Define discrete and clear city edges that preserve agriculture, open space, and scenic views.

Action LU-5.3B The City, in ~~Coordinate with~~ **coordination with San Joaquin County to develop a plan for a greenbelt or community separator around the city, the City of Lodi, the California Farmland Trust, residents and affected landowners, shall prepare an Agricultural Belt Action Plan that addresses, among other items, how to target the agricultural mitigation fees that are collected by the two cities and the County toward purchasing easements within a defined buffer area between Stockton and Lodi. The location of the Agricultural Belt area shall be identified in a non-parcel specific, general fashion on the Plan Land Use Diagram map.**

There is a long, failed history over the last decades of half-hearted attempts by the City of Stockton, the County, and Lodi to establish an Ag Belt. Now is the time to see that it actually gets done. It is incumbent upon the City of Stockton to take a strong leadership position on this project since it is the irresponsible sprawling land use practices of Stockton in the past that have kept these ag lands under so much threat of urbanization.

### How Do Agricultural Conservation Easements Work?

The creation of an Ag Belt can only be accomplished through strong political leadership and the reliance on existing and new funding sources. Agricultural separators between communities are created using a common tool called an agricultural conservation easement.

An agricultural conservation easement is a deed restriction landowners voluntarily place on their property to protect the farm from development. They are used by landowners (the “grantor”) to authorize a qualified conservation organization or public agency (“grantee”) to monitor and enforce the restrictions set forth in the agreement. Conservation easements are flexible documents tailored to each property and the needs of individual landowners. Agricultural conservation easements are designed to keep land available for farming.

In general, agricultural conservation easements limit subdivision, non-farm development and other uses that are inconsistent with commercial agriculture. Some easements allow lots to be reserved for family members. Agricultural conservation easements often permit commercial development related to the farm operation and the construction of farm buildings. Most do not restrict farming practices, although some grantees ask landowners to implement soil and water conservation plans. For example, landowners who receive federal funds for farm easements must implement an agricultural land easement conservation plan approved by the USDA Natural Resources Conservation Service (see the attached “Agricultural Conservation Easements” fact sheet prepared by the American Farmland Trust and USDA).

Landowners that enter into voluntary conservation easements are compensated for giving up or selling their “development rights.” The value of the compensation to the landowner for entering into the easement is determined by an appraisal. In the Central Valley the value of development rights to a typical large parcel of prime agricultural land may be about 60% to 80% of the fee simple value of the land without an easement. Thus, the landowner of a prime property that is valued at \$15,000 to \$20,000 per acre could be reimbursed for selling an easement at a rate of approximately \$9,000 to \$16,000 per acre.

### How Are Purchases of Conservation Easements Funded?

The purchase of easements for agricultural, habitat, and other types of conservation easements is typically coordinated through a local land trust. Land trusts California is home to more than 150 land trusts that have protected more than 2.5 million acres. Land trusts use a variety of funding sources to pay farmers for the purchase of easements, including grants from State and federal agencies and funds collected by local ag mitigation fee programs.

The City of Stockton, as well as San Joaquin County and the cities of Manteca, Lathrop, and Tracy, have an ongoing relationship with the most active land trust that is operating in the county, the California Central Valley Farmland Trust (formerly called the Central Valley Farmland Trust). Over the last two decades, the Trust has protected 50 family farms covering

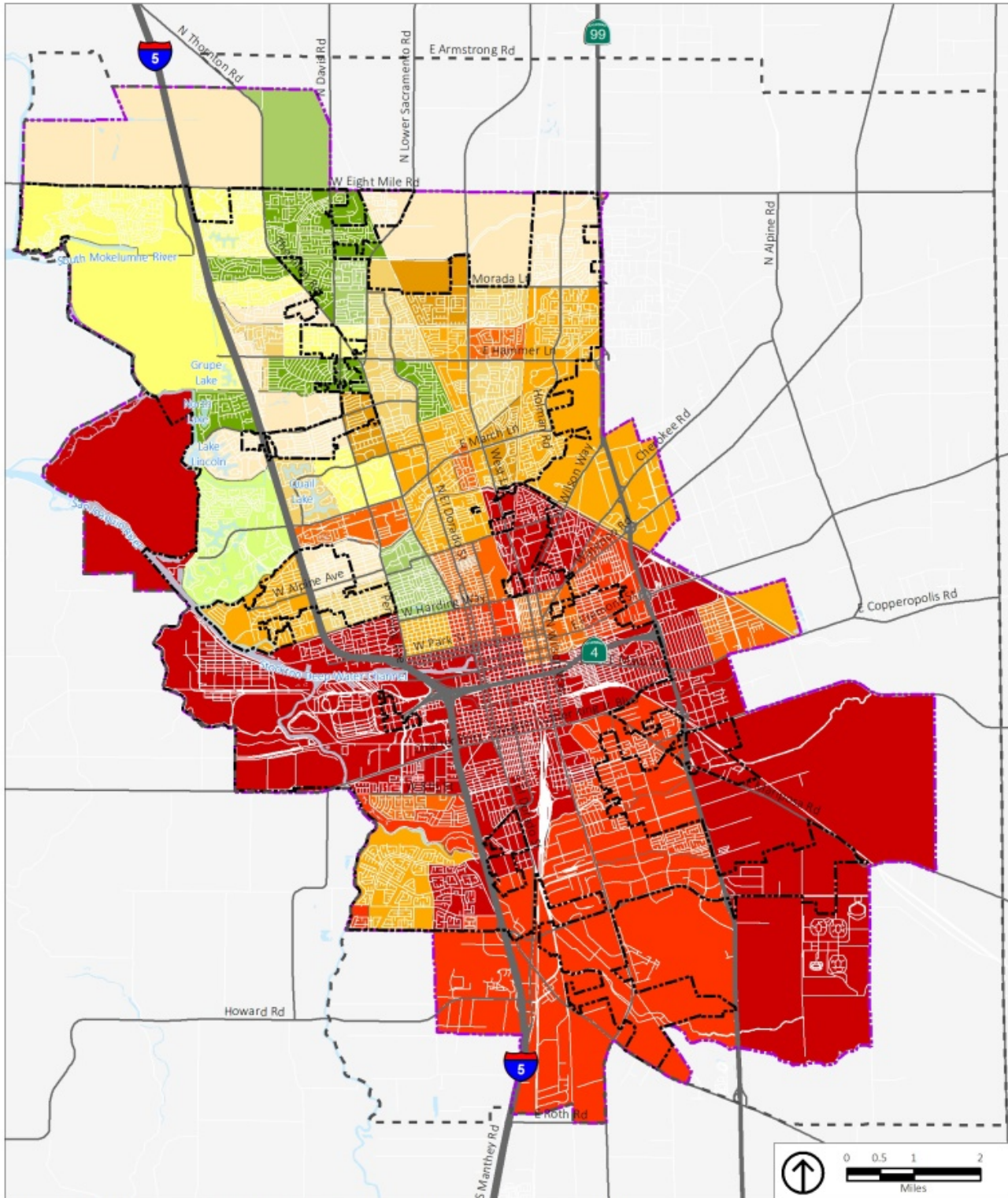
nearly 15,000 acres in San Joaquin, Sacramento, Stanislaus, and Merced counties (see <http://cafarmtrust.org/all-properties/>).

Another very successful example of a local land trust is located in Yolo County. Since its founding in 1988, Yolo Land Trust has permanently conserved nearly 11,000 farmland acres (see <http://theyololandtrust.org/>).

#### Next Steps

1. City Council adopts the new General Plan with a clear and unambiguous policy to prepare an Ag Belt Action Plan that will result in the establishment of an Ag Belt. The Council must appoint a task force or action team to oversee that effort. The task force or team should include representatives from the City of Stockton, the County, the City of Lodi, the California Farmland Trust, as well as residents and affected landowners.
2. Charge the action team with a detailed work plan that sets forth specific items to accomplish and strict deadlines to prepare the Ag Belt Action Plan. For example, the action team should be directed to review the existing agricultural fee mitigation programs adopted by the City of Stockton and the County and to make any recommended changes to the programs to ensure that funds are directed specifically to purchase easements on properties located with the proposed Ag Belt. Similarly, the action team should meet with representatives of the California Farmland Trust to review their strategic plan and to negotiate with them to amend the strategic plan to target properties within the Ag Belt. An updated Memorandum of Understanding should be negotiated between the City of Stockton, the County, and the Trust, and adding in the City of Lodi.
3. Following the preparation of a first draft Ag Belt Action Plan the documents should be subject to public review including workshops or hearings at the Planning Commission and City Council. The plan would presumably be subject to CEQA, so an environmental analysis would be required.

**Figure 6-1**  
**Disadvantaged Communities**



Source: California Office of Environmental Health Hazard Assessment, 2018; PlaceWorks, 2018.

**Percent of Disadvantaged Communities**

- |        |        |                          |                            |
|--------|--------|--------------------------|----------------------------|
| 1-50%  | 65-70% | 85-90%                   | General Plan Planning Area |
| 50-55% | 70-75% | 90-95%                   | City Limit                 |
| 55-60% | 75-80% | 95-100% (highest scores) | Sphere of Influence        |
| 60-65% | 80-85% |                          |                            |



*Sent Via E-Mail  
September 26, 2018*

David Stagnaro  
Planning Manager  
City of Stockton Community Development Department  
425 North El Dorado Street  
Stockton, California 95202  
David.Stagnaro@stocktonca.gov

RE: Envision Stockton EIR  
Amended Comments (follow-up to Letter dated 8.10.18)

#### FACILITIES

Real Estate Management  
Physical Planning  
Space Management

3601 Pacific Avenue  
Stockton, California 95211  
Tel 209.946.2319

Dear Mr. Stagnaro,

As a follow-up to our original comments sent to your attention via e-mail on August 10, 2018 and subsequent discussions with City staff and representatives, University of the Pacific is amending its request related to our parcels. At this time, University of the Pacific is requesting that all Pacific parcels (shown on the attached **Campus Base Map**) be assigned the General Plan land use designation of "Institutional". There is a second attachment entitled **Exhibit "B" LLA 16-03**, which was part of the lot line adjustment requested and made to Parcel APN 110-260-04 in 2016.

Pacific staff and administration will continue to work with City staff and representatives to further develop the land use zoning designation(s) of these parcels over the coming months. It is anticipated that the zoning district of "University/College" is likely to be requested for all parcels; however, that will be determined as the City and Pacific refine and clarify the anticipated development of our parcels, as well as the "University/College" zoning district.

As noted in our original comments, University of the Pacific is grateful for the opportunity to review and provide comments on this General Plan Update. We appreciate the collaborative work over the past months and look forward to continuing discussions with City staff, one of the University's critical local partners, as the Update is finalized.

Respectfully Submitted,

*Priscilla Meckley-Archuleta*

Priscilla Meckley-Archuleta  
Executive Director





**EXHIBIT "B"**  
**LLA 16-03**

BROOKSIDE ROAD

LOT 31

POB PAR. 2  
POC PAR. 1

S72°50'00"W 8.14'

S72°50'00"W 955.90'

S72°50'00"W 967.07'

LOT 36  
3MP/54  
PARCEL 1 AND 2  
BK 2456 PG 91  
APN: 110-260-04

PARCEL 2  
10.390AC +/-

20' ROAD EASEMENT  
EXISTING LOT LINE  
TO BE REMOVED  
PARCEL 1  
BK 2456 PG 95  
APN: 110-260-03

APN:  
110-260-01

S17°10'00"E 725.64'

-PERSHING AVENUE

LOT 35

EAST LINE  
LOT 35

N17°10'00"W 194.16'

N72°48'32"E 456.81'

S17°49'27"E 13.84'

N59°44'10"E 42.90'

S17°10'00"E

N26°46'31"W 469.70 (CLOSURE)  
469.82 (REC.)  
APN: 110-260-05

439.36'

478.551 @ 68.04%

APN:  
110-260-02

LOT 35

EAST LINE  
LOT 35

N17°10'00"W 194.16'

N72°48'32"E 456.81'

S17°49'27"E 13.84'

N59°44'10"E 42.90'

S17°10'00"E

N26°46'31"W 469.70 (CLOSURE)  
469.82 (REC.)  
APN: 110-260-05

439.36'

478.551 @ 68.04%

N49°02'00"E 58.63'

S49°02'00"W 534.63'

PARCEL 1  
4.136 AC +/-

NEW LOT LINE

S70°36'08"W 76.05'

N18°49'06"W 39.33'

S73°32'53"W 6.36'

N19°07'10"W 94.97'

S70°18'00"W 191.42'

TPOB PAR. 1

N70°18'00"E 491.83'

300.41'

GALAVERAS RIVER

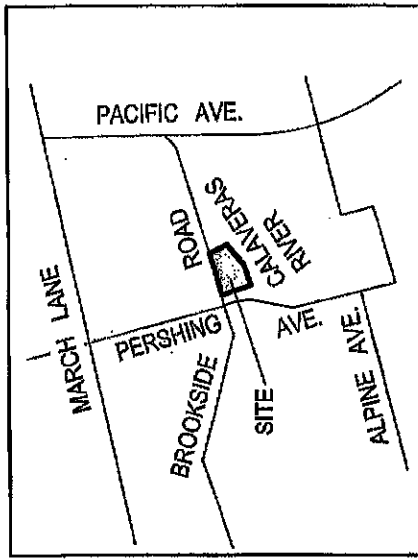
1116 BROOKSIDE ROAD  
STOCKTON, CA

SHEET TITLE

LOT LINE ADJUSTMENT 16-03  
SITE MAP

Proj Mgr: DK  
Drawn by: LZ  
Date: 4.06.16  
Scale: As Shown  
Job No.: 15009  
SHEET: 1

PROJECT  
UOP  
UPPER DIVISION EXPERIENCE



VICINITY MAP  
NTS



SCALE: 1"=160'

NOTE: AN ACCESS EASEMENT FOR PARCEL ONE WILL BE DEDICATED BY SEPERATE DOCUMENT.

**ATTACHMENT D**

**2008 SETTLEMENT AGREEMENT CONSISTENCY**

Attachment E

2008 SETTLEMENT AGREEMENT PROVISION	DRAFT ENVISION STOCKTON 2040 GENERAL PLAN POLICY/ACTION
6a: Require 4,400 units of new housing growth to be in Greater Downtown Stockton.	Policy LU-2.2: Facilitate the development of at least 4,400 units in the Greater Downtown by 2040.
	Action LU-2.2A: Provide more flexibility for residential development, including through a streamlined permit process, and to contribute to the “charm” of the Downtown.
	Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.
6b: Require an additional 14,000 units of new housing growth to be in 2008 city limit.	Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
	Action LU-6.2A: Implement an infill incentive program that encourages infill through expedited permitting, changes in fee structures, and other strategies.
	Action 6.2B: Do not approve future annexations or City utility connections unless they are consistent with the overall goals and policies of the General Plan and do not adversely impact the City’s fiscal viability, environmental resources, infrastructure and services, and quality of life.
6c: Provide incentives to promote infill development in the Greater Downtown.	Action LU-2.1A: Develop and utilize all available financing tools and incentives to stimulate Downtown investment.
	Action LU-2.1B: Provide flexibility for redevelopment of historic structures in the Downtown.
	Policy LU-2.2: Facilitate the development of at least 4,400 units in the Greater Downtown by 2040.
	Action LU-2.2A: Provide more flexibility for residential development, including through a streamlined permit process, and to contribute to the “charm” of the Downtown.
	Action LU-2.2B: Establish Transit Oriented Development (TOD) Overlay Zones around the ACE and Amtrak train stations to promote high-density residential and TOD.
	Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.
	Action LU-2.3A: Establish an entertainment district in the Downtown with strategies to promote entertainment uses, including reducing permit requirements and other incentives.
6d: Provide incentives for infill development within the existing city limit but outside the Greater Downtown.	Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
	Action LU-6.2A: Implement an infill incentive program that encourages infill through expedited permitting, changes in fee structures, and other strategies.
7a: Establish criteria for minimum levels of transportation efficiency, transit availability and level of service (LOS), City service capacity, water availability, and other urban services performance measures.	Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
	Action LU-6.2B: Do not approve future annexations or City utility connections unless they are consistent with the overall goals and policies of the General Plan and do not adversely impact the City’s fiscal viability, environmental resources, infrastructure and services, and quality of life.
	Action LU-6.3A: Require development to mitigate any impacts to existing sewer, water, stormwater, street, fire station, park, or library infrastructure that would reduce service levels.

# ATTACHMENT D

## 2008 SETTLEMENT AGREEMENT CONSISTENCY

	Policy TR-4.1: Utilize level of service (LOS) information to aid understanding of potential major increases to vehicle delay at key signalized intersections.
	Action TR-4.1A: Strive for traffic LOS D or better.
	Policy TR-4.2: Replace LOS with: (1) vehicle-miles traveled (VMT) per capita; and (2) impacts to non-automobile travel modes, as the metrics to analyze impacts related to land use proposals under the California Environmental Quality Act, in accordance with SB 743.
	Action TR-4.2A: Require projects to evaluate per capita vehicle miles traveled (VMT) and impacts to transit, bicycle, and pedestrian modes.
	Action TR-4.2B: Amend the Transportation Impact Analysis Guidelines to include alternative travel metrics and screening criteria.
	Action TR-4.3A: Amend the Transportation Impact Analysis Guidelines to establish a threshold of 15 percent below baseline VMT per capita to determine a significant impact under CEQA.
	Policy SAF-3.2: Protect the availability of clean potable water from groundwater sources.
	Action SAF-3.2A: Continue to cooperate with San Joaquin County, Stockton East Water District, and CalWater to monitor groundwater withdrawals and ensure that they fall within the target yield for the drinking water aquifer.
	Policy SAF-3.4: Ensure adequate collection, treatment, and safe disposal of wastewater.
	Action SAF-3.4A: Require all new development to be served by an adequate wastewater collection system to avoid possible contamination of groundwater from onsite disposal systems.
7b: Establish criteria for firm, effective milestones that will assure infill, jobs/housing, GHG, and VMT reduction goals are met before new entitlements can be granted.	Policy LU-6.1: Carefully plan for future development and proactively mitigate potential impacts.
	Action LU-6.1A: Require that environmental review for any development project that would exceed the development anticipated in the General Plan EIR address associated growth impacts.
	Action LU-6.1B: Monitor the rate of growth to ensure that it does not overburden the City's infrastructure and services.
	Action LU-6.1C: Require that vacant unincorporated properties be annexed prior to provision of City services.
	Action LU-6.1D: Require that all utility connections outside the city limit be for land uses that are consistent with the General Plan.
	Action LU-6.1E: Do not approve new development unless there is adequate infrastructure in place or planned and funded.
	Action LU-6.1F: Adjust the Public Facilities Fee structure to encourage development in areas where infrastructure is already present and ensure that non-infill pays its fair share of anticipated citywide capital facilities and operational costs.
7c: Establish impact fees on new development or alternative financing mechanisms that will ensure the milestones identified in 7a and 7b are met. Such fees shall be structured to ensure that development is revenue-neutral to the City, may be in addition to mitigation measures required by	Policy LU-2.2: Facilitate the development of at least 4,400 new housing units in the Greater Downtown by 2040.
	Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.
	Policy LU-3.3: Maintain or expand the currently available amount of public park and open space area in each neighborhood.
	Action LU-3.3-D: Periodically review the City's Development Impact Fee requirements to determine whether they should be adjusted to reflect the City's recreation priorities.

# ATTACHMENT D

## 2008 SETTLEMENT AGREEMENT CONSISTENCY

<p>CEQA, and shall be based on a fiscal impact analysis and a public facilities financing plan.</p>	<p>Policy LU-6.1: Carefully plan for future development and proactively mitigate potential impacts.</p>
	<p>Action LU-6.1F: Adjust the Public Facilities Fee structure to encourage development in areas where infrastructure is already present and ensure that non-infill pays its fair share of anticipated citywide capital facilities and operational costs.</p>
	<p>Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.</p>
	<p>Action LU-6.2A: Implement an infill incentive program that encourages infill through expedited permitting, changes in fee structures, and other strategies.</p>
	<p>Policy LU-6.5: Improve and maintain the City's fiscal health.</p>
	<p>Action LU-6.5A: Require preparation of a fiscal impact analysis for large development projects and annexations to ensure a full accounting of infrastructure and public service costs, and require fiscal mitigations when necessary.</p>
	<p>Action LU-6.5B: Utilize development agreements to implement public facilities financing plans and secure fiscal mitigations.</p>
	<p>Action LU-6.5C: Utilize developer fees, the City's public facilities fees, and other methods to finance public facilities.</p>
<p>7d: Explore the feasibility of enhancing the financial viability of infill development in the Greater Downtown, through the use of such mechanisms as an infill mitigation bank.</p>	<p>Policy LU-2.1: Promote the Downtown and waterfront as a hub for regional commerce and entertainment, with high-quality housing to complement commercial activity and to infuse the area with daytime, evening, and weekend activity.</p>
	<p>Action LU-2.1A: Develop and utilize all available financing tools and incentives to stimulate Downtown investment.</p>
	<p>Action LU-2.1B: Provide flexibility for redevelopment of historic structures in the Downtown.</p>
	<p>Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.</p>



## MEMORANDUM

DATE October 1, 2018

TO David Stagnaro  
City of Stockton Community Development Department

FROM Tanya Sundberg and Charlie Knox

SUBJECT Revisions to Utility Master Plan Supplements

Each Utility Master Plan Supplement (UMPS) Technical Memorandum (TM) shows the General Plan land use map as an attachment to the TM. Because staff has recommended changes to the land use map, the UMPS TM have been revised to show the updated version of the land use map in the attachments to those reports.

Also, based on comments from the City of Stockton Municipal Utilities Department, the text in Section 8.2 on page 19 of the UMPS for Potable Water (prepared by West Yost Associates) has been revised as follows:

### 8.2 COSMUD Northern and Southern Systems

The COSMUD water system includes a northern system and a southern system, essentially separated by the Cal Water system serving the center of the City. Since the completion of the Delta Water Treatment Project, COSMUD operates the two systems essentially as two separate, distinct systems. There is an eastern connection between the two systems, but the connection is kept closed. Evaluating the northern and southern COSMUD systems as if they were operated as a single system would allow the storage and pumping facilities to be evaluated collectively. However, additional studies of the potential benefits and impacts of connecting the north and south systems would need to be prepared.

To allow the northern and southern COSMUD systems to be operated as a single system, it is recommended that:

- ~~A western connection between the northern and southern COSMUD systems be constructed,~~
- ~~The water provided by Stockton East Water District (SEWD) to the southern COSMUD system be treated to the same standards as the water in the northern COSMUD system. This could be done by either SEWD or COSMUD, and~~



- ~~The eastern connection be opened.~~

The full versions of the revised UMPS are provided as Attachments 1, 2, and 3 to this memorandum.

**ATTACHMENT 1**  
**REVISED POTABLE WATER MASTER PLAN SUPPLEMENT**



## **TECHNICAL MEMORANDUM**

DATE: December 12, 2017 Project No.: 425-10-16-04.006  
SENT VIA: EMAIL  
 TO: City of Stockton, Municipal Utilities Department  
 FROM: Patrick Johnston, PE, RCE #59028  
 REVIEWED BY: Doug Moore, PE, RCE #58122  
 SUBJECT: Stockton General Plan Update—Potable Water Master Plans Supplement

This Technical Memorandum (TM) presents the Supplement for the Stockton General Plan Update (GPU) to the City of Stockton's Water Master Plan (2008) and California Water Service Company's (Cal Water) Water Master Plan (2009). Where appropriate, information related to the Service Area of the Cal Water is also included in this TM. This TM includes the following Sections:

- Summary
  - Demand Projection Summary by Development Area
  - Demand Projection Summary by Service Area
  - Required New Infrastructure Evaluations Summary
  - Cost Evaluations Summary
- Demand Projection Estimates by Development Area
  - GPU Land Uses by Development Area
  - Water Demand Factors
  - Average Day Demands by Development Area
  - Maximum Day Demands by Development Area
  - Peak Hour Demands by Development Area
  - Demand Projection Estimates by Service Area
- Infrastructure Evaluations
  - City of Stockton Municipal Utilities District (COSMUD) Infrastructure Evaluation
    - Water Storage Capacity
    - Pumping Facility Capacity
    - Distribution Pipeline Capacity



- Cal Water Infrastructure Evaluation
  - Water Storage Capacity
  - Pumping Facility Capacity
  - Distribution Pipeline Capacity
- Cost Evaluations by Service Area
  - COSMUD
  - Cal Water
- Recommended Future Actions
  - Water Distribution System
  - COSMUD Northern and Southern Systems
  - Future Development-Specific Potable Water Improvements

The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

## **SUMMARY**

A summary of this TM is presented below. The development of the summary data is presented in the following sections of this TM. The 2040 land uses are shown on Figure 1 as well as the COSMUD Service Areas and the Cal Water Service Area, and the General Plan Update buildout land use map is provided in Attachment A.

### **Demand Projection Summary by Development Area**

The estimated Average Day Demands, Maximum Day Demands and Peak Hour Demands are summarized in Table 1 and discussed below:

- The total Average Day Demands are estimated to increase from about 48.6 million gallons per day (mgd) for existing land uses to 66.3 mgd for the 2040 land uses.
- The total Maximum Day Demands are estimated to increase from about 85.0 mgd for existing land uses to 115.4 mgd for the 2040 land uses.
- The total Peak Hour Demands are estimated to increase from about 137.3 mgd for existing land uses to 196.1 mgd for the 2040 land uses.

### **Demand Projection Summary by Service Area**

Demands within the City are distributed between the service areas for COSMUD and Cal Water as described below:

- For the existing land uses, the COSMUD service area contains 52 percent of the demands, while the Cal Water service area contains 48 percent of the demands.
- The ratio is different with the 2040 land uses, with the COSMUD service area containing 61 percent of the demands and the Cal Water service area containing 39 percent of the demands.

<b>Table 1. Summary of Water Demand Estimates</b>			
<i>Land Use</i>	<i>Demand (mgd)</i>		
	<i>Existing</i>	<i>Net New</i>	<i>2040</i>
<b>Average Day Demand</b>			
Study Areas	2.09	2.42	4.51
Approved/Pending Development Projects Within City Limit	2.05	5.15	7.20
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.34	7.27	7.61
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects(e)	44.16	2.84	46.99
<b>Total</b>	<b>48.63</b>	<b>17.68</b>	<b>66.32</b>
<b>Maximum Day Demand</b>			
Study Areas	3.68	4.27	7.95
Approved/Pending Development Projects Within City Limit	3.49	8.78	12.27
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.57	12.36	12.94
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	77.27	4.96	82.23
<b>Total</b>	<b>85.01</b>	<b>30.37</b>	<b>115.38</b>
<b>Peak Hour Demand</b>			
Study Areas	5.95	6.99	12.94
Approved/Pending Development Projects Within City Limit	7.16	17.87	25.03
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	1.18	25.45	26.63
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	123.01	8.51	131.53
<b>Total</b>	<b>137.30</b>	<b>58.83</b>	<b>196.13</b>

## Required New Infrastructure Evaluations Summary

Preliminary infrastructure evaluations were performed for water storage facilities, booster pumping facilities, and the pipeline facilities for the COSMUD and Cal Water Service Areas. These infrastructure evaluations were developed by:

- Estimating the water demands for the GPU 2040 level of development within the COSMUD and Cal Water Service Areas. The 2040 level of development is significantly less than full buildout of the land uses in the GPU.
- Comparing the 2040 estimated water demands with the demands in the COSMUD and Cal Water WMPs. The COSMUD and Cal Water WMPs were based on full buildout the 2035 General Plan.
- The required infrastructure needed for the 2040 level of development was estimated by comparison with the infrastructure identified in the WMPs, but revised based on the changes in water demands.

For COSMUD:

- The 2035 buildout average day demands from the COSMUD WMP were 98.2 mgd. The 2040 average day demands from this study are 39.9 mgd, representing a decrease of approximately 60 percent.
- The required new storage is 24.9 mg for the 2040 GPU development. For comparison, the required new storage from the WMP for buildout of the 2035 General Plan is 142.9 mg.
- Potentially, no new booster pumping capacity is needed for the 2040 GPU development, depending on the existing booster pumps ability (depending on location) to serve the new development. For comparison, the required new pumping capacity from the WMP for buildout of the 2035 General Plan is 150,087 gpm.
- Water distribution piping will be needed for many of the new growth areas. However, in comparison to the buildout of the 2035 General Plan, significant reductions of the water distribution piping should occur for some study areas.

For Cal Water:

- The 2035 buildout average day demands from the Cal Water WMP were 35.1 mgd. The 2040 average day demands from this study are 26.4 mgd, representing a decrease of approximately 25 percent.
- The required new storage is 0.5 mg for the 2040 GPU development. For comparison, the required new storage from the WMP for buildout of the 2035 General Plan is 13.5 mg.
- The required new booster pumping capacity needed for the 2040 GPU development is 3,057 gpm. For comparison, the required new pumping capacity from the WMP for buildout of the 2035 General Plan is 13,925 gpm.
- The existing water distribution piping, along with recent and ongoing system improvements should be adequate for the GPU 2040 development.

## Cost Evaluations Summary

Preliminary infrastructure cost estimates for water storage facilities and booster pumping facilities were developed for the COSMUD and Cal Water Service Areas.

For COSMUD:

- The 2040 GPU required new water storage is 24.9 mg, which has an estimated cost of \$37.9 million. For comparison, from the WMP (for buildout of the 2035 General Plan), the required new storage was estimated to be 109.2 mg, which has an estimated cost of \$166.4 million.
- No new booster pumping capacity was needed for the 2040 GPU land uses (if the locations of the existing booster pumps will result in adequate service to the new development). For comparison, from the WMP (for buildout of the 2035 General Plan), the required new booster pumping was estimated to be 150,087 gpm, which has an estimated cost of \$65.5 million.

Cal Water:

- The 2040 GPU required new water storage is 0.5 mg, which has an estimated cost of \$0.8 million. For comparison, from the WMP (for buildout of the 2035 General Plan), the required new storage was estimated to be 13.5 mg, which has an estimated cost of \$21.5 million.
- The 2040 GPU required new booster pumping capacity of 3,057 gpm, which has an estimated cost of \$2.2 million. For comparison, from the WMP (for buildout of the 2035 General Plan), the required new booster pumping was estimated to be 13,925 gpm, which has an estimated cost of \$9.8 million.

## DEMAND PROJECTION ESTIMATES BY DEVELOPMENT AREA

### GPU Land Uses by Development Area

The land use data for this evaluation was provided by Placeworks, and is provided in Attachment A (including the buildout land use map, the dwelling unit data, acreage data, and 2040 percent development data). The land use data has been reorganized in Table 2 to be suitable for water demand estimating. The reorganized land use data includes existing land use data, net new land use data for 2040, and 2040 land use data. For single family and multi-family residential land uses, Table 2 includes both the dwelling unit data and the acreage data. For commercial and industrial land uses, Table 2 includes only acreage data. All the water demands were based on gross areas shown in Table 2.

ATTACHMENT D

Table 2. Land Use Data

Study Area or Development Name	Single Family (Dwelling Units)			Single Family (Gross Acres)			Multi Family (Dwelling Units)			Multi Family (Gross Acres)			Commercial (Gross Acres)			Industrial (Gross Acres)			Total Area (Gross Acres)		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																					
Study Area 1 - Eight Mile Rd Area	121	1,379	1,500	17.2	232.1	249.3	96	1,198	1,294	8.4	73.2	81.6	17.9	0.6	18.5	4.0	0.0	4.0	47.5	305.9	353.4
Study Area 2 - Pacific Ave Corridor	22	0	22	4.3	0.0	4.3	114	110	224	3.5	4.7	8.2	115.8	3.6	119.4	0.1	0.0	0.1	123.7	8.3	132.1
Study Area 3 - West Ln and Alpine Rd Area	208	77	285	38.7	51.6	90.2	94	680	774	5.8	29.9	35.7	68.4	6.2	74.6	54.5	0.0	54.5	167.4	87.7	255.1
Study Area 4 - Port/Waterfront	54	17	71	8.0	11.2	19.2	288	1,770	2,058	8.6	26.7	35.3	10.3	2.9	13.2	44.3	5.6	49.9	71.1	46.5	117.6
Study Area 5 - El Dorado/Center Corridors	45	0	45	5.5	0.0	5.5	359	1,196	1,555	8.3	17.2	25.5	8.1	1.8	9.9	9.9	0.0	9.9	31.8	19.0	50.8
Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	47	0	47	4.4	0.0	4.4	219	1,248	1,467	4.8	18.0	22.8	6.5	3.4	9.9	7.2	0.0	7.2	22.9	21.3	44.3
Study Area 7 - Wilson Way Corridor	12	0	12	1.6	0.0	1.6	6	234	240	0.2	6.8	7.1	2.1	5.1	7.2	14.9	0.0	14.9	18.9	12.0	30.9
Study Area 8 - I-5/Highway 4 Interchange	8	0	8	1.0	0.0	1.0	1	659	660	0.1	38.0	38.1	0.9	0.9	1.8	13.2	0.0	13.2	15.2	38.9	54.1
Study Area 9 - Railroad Corridor at California St	19	0	19	2.3	0.0	2.3	23	1,340	1,363	1.3	19.3	20.6	4.8	1.5	6.3	7.0	0.0	7.0	15.4	20.7	36.2
Study Area 10 - I-5 and Charter Way Area	228	86	314	42.8	57.9	100.7	29	98	127	4.1	4.2	8.3	26.3	2.6	28.9	4.6	2.7	7.3	77.8	67.4	145.2
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	5	0	5	0.3	0.0	0.3	0	396	396	0.0	7.7	7.7	2.9	0.4	3.3	0.0	0.0	0.0	3.2	8.2	11.3
Study Area 12 - Airport Way Corridor	53	0	53	7.2	0.0	7.2	4	108	112	0.4	4.7	5.1	6.8	10.2	17.0	89.5	13.1	102.6	103.9	28.0	131.9
Study Area 13 - Mariposa and Charter Area	12	0	12	3.9	0.0	3.9	77	0	77	5.9	0.0	5.9	5.6	1.5	7.2	0.0	0.0	0.0	15.5	1.5	17.0
Study Area 14 - East Weston Ranch <sup>(b)</sup>	1	0	1	1.1	0.0	1.1	0	0	0	0.0	0.0	0.0	4.9	14.8	19.8	0.0	0.0	0.0	6.1	14.8	20.9
Study Area 15 - South of French Camp Rd	89	0	89	75.7	0.0	75.7	9	0	9	6.1	0.0	6.1	0.0	0.0	0.0	0.1	0.0	0.1	81.8	0.0	81.8
Study Area 16 - E French Camp Rd Area	59	0	59	122.7	0.0	122.7	4	0	4	9.1	0.0	9.1	0.1	0.0	0.1	0.2	0.0	0.2	132.2	0.0	132.2
<b>Subtotal (Study Areas)</b>	<b>983</b>	<b>1,558</b>	<b>2,541</b>	<b>336.9</b>	<b>352.8</b>	<b>689.7</b>	<b>1,323</b>	<b>9,036</b>	<b>10,359</b>	<b>66.8</b>	<b>250.5</b>	<b>317.3</b>	<b>281.5</b>	<b>55.6</b>	<b>337.1</b>	<b>249.5</b>	<b>21.4</b>	<b>270.8</b>	<b>934.6</b>	<b>680.2</b>	<b>1,614.8</b>
<b>Approved/Pending Development Projects Within City Limit</b>																					
Westlake Villages	0	2,630	2,630	0.0	680.0	680.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	680.0	680.0
Delta Cove	0	1,164	1,164	0.0	132.7	132.7	0	381	381	0.0	47.6	47.6	0.0	2.6	2.6	0.0	0.0	0.0	0.0	182.9	182.9
North Stockton Projects III	235	2,220	2,455	38.0	355.0	393.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.0	355.0	393.0
Cannery Park	0	981	981	0.0	272.0	272.0	0	210	210	0.0	16.0	16.0	0.0	104.0	104.0	0.0	0.0	0.0	0.0	392.0	392.0
Nor Cal Logistics Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crystal Bay	0	951	951	0.0	19.4	19.4	0	392	392	0.0	78.7	78.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.1	98.1
Sanctuary	0	5,452	5,452	0.0	1,026.0	1,026.0	0	1,618	1,618	0.0	67.4	67.4	0.0	35.5	35.5	0.0	0.0	0.0	0.0	1,128.9	1,128.9
Tidewater Crossing	310	-310	0	869.6	-869.6	0.0	0	0	0	0.0	0.0	0.0	0.0	16.0	16.0	0.0	0.0	0.0	869.6	-853.6	16.0
Open Window <sup>(c)</sup>	0	0	0	0.0	0.0	0.0	9	1,391	1,400	0.0	11.9	11.9	12.9	-1.0	11.9	0.0	0.0	0.0	12.9	10.9	23.8
Weston Ranch Town Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	41.5	41.5	0.0	0.0	0.0	0.0	41.5	41.5
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>545</b>	<b>13,088</b>	<b>13,633</b>	<b>907.6</b>	<b>1,615.5</b>	<b>2,523.1</b>	<b>9</b>	<b>3,992</b>	<b>4,001</b>	<b>0.0</b>	<b>221.6</b>	<b>221.6</b>	<b>12.9</b>	<b>198.6</b>	<b>211.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>920.5</b>	<b>2,035.7</b>	<b>2,956.2</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																					
Mariposa Lakes	5	8,955	8,960	151.0	939.3	1,090.3	3	1,553	1,556	0.0	585.0	585.0	0.0	150.0	150.0	0.0	0.0	0.0	151.0	1,674.3	1,825.3
Airpark 599	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	128.0	128.0	0.0	0.0	0.0	0.0	128.0	128.0
Tra Vigne <sup>(d)</sup>	0	1,244	1,244	0.0	846.4	846.4	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	846.4	846.4
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>5</b>	<b>10,199</b>	<b>10,204</b>	<b>151.0</b>	<b>1,785.7</b>	<b>1,936.7</b>	<b>3</b>	<b>1,553</b>	<b>1,556</b>	<b>0.0</b>	<b>585.0</b>	<b>585.0</b>	<b>0.0</b>	<b>278.0</b>	<b>278.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>151.0</b>	<b>2,648.7</b>	<b>2,799.7</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects <sup>(e)</sup>	76,463	1,501	77,964	13,870.5	1,270.5	15,141.0	33,183	0	33,183	1,915.9	0.0	1,915.9	546.6	0.0	546.6	1,783.8	0.0	1,783.8	18,116.8	1,270.5	19,387.3
<b>Grand Total</b>	<b>77,996</b>	<b>26,346</b>	<b>104,342</b>	<b>15,266.0</b>	<b>5,024.6</b>	<b>20,290.5</b>	<b>34,518</b>	<b>14,581</b>	<b>49,099</b>	<b>1,982.7</b>	<b>1,057.1</b>	<b>3,039.8</b>	<b>841.0</b>	<b>532.1</b>	<b>1,373.1</b>	<b>2,033.2</b>	<b>21.4</b>	<b>2,054.6</b>	<b>20,122.9</b>	<b>6,635.1</b>	<b>26,758.0</b>

## Water Demand Factors

The 2008 COSMUD WMP and the 2009 Cal Water WMP provided water demand factors for both existing land uses (Figures 3-8 through 3-16 of the COSMUD WMP and Figures 3-10 through 3-22 of the Cal Water WMP) and for future land uses (Table 3-8 of the COSMUD WMP and Table 3-11 of the Cal Water WMP) for use in estimating demands in the water distribution system. Demand factors used for estimating water distribution system demands are intentionally conservative, meaning they are higher than the corresponding actual demands may be, to allow for a range of different demands within a land use category. For example, actual commercial demands would be very low for rental storage units to very high for restaurants. To allow for this range of actual possible demands, conservative (high) demand factors are used for estimating water demands, resulting in pipeline sizes that can accommodate either low or high actual demands.

The gross area demand factors used in this GPU water demand estimate are summarized in Table 3, which includes factors for single family residential, multi-family (including a higher factor for downtown multi-family) residential, commercial, and industrial land uses.

## Average Day Demands by Development Area

The Average Day Demand estimates are calculated in Table 4. Average Day demands are the estimate of the water used by the residents and businesses in the water system service area. The Average Day Demands are calculated by multiplying the appropriate land use data by the appropriate demand factor. The following Average Day Demands are calculated for existing, net new, and 2040 land use conditions:

- Average Day Demand from exiting land uses: 48.6 mgd
- Average Day Demand from net new land uses: 17.7 mgd
- Average Day Demand from 2040 land uses: 66.3 mgd

## Maximum Day Demands by Development Area

The Maximum Day demand estimates are calculated in Table 5. Maximum Day demands are the estimate of the water used by the residents and businesses in the water system service area on the day of the year when the demands are the highest. The Maximum Day demands are calculated by multiplying the Average Day Demands by the appropriate maximum day peaking factor (see Table 3). The Maximum Day peaking factor for the COSMUD service area is 1.7. The Maximum Day peaking factor for the Cal Water service area is 1.8. The following Maximum Day demands are calculated for existing, net new, and 2040 demands:

- Maximum Day demand from exiting land uses: 85.0 mgd
- Maximum Day demand from net new land uses: 30.4 mgd
- Maximum Day demand from 2040 land uses: 115.3 mgd

<b>Table 3. Water Demand Factors and Peaking Factors</b>		
<b>Land Use Category</b>	<b>Units</b>	<b>Factor</b>
<b>City of Stockton and Cal Water Demand Factors</b>		
Single Family Residential	gpd/ gross acre	2,232
Multi-Family Residential	gpd/ gross acre	4,642
Multi-Family Residential (Downtown)	gpd/ gross acre	13,927
Commercial	gpd/ gross acre	2,053
Industrial	gpd/ gross acre	1,785
<b>City of Stockton Peaking Factors</b>		
Maximum Day Peaking Factor (Maximum Day to Average Day)		1.7
Peak Hour Peaking Factor (Peak Hour to Average Day)		3.5
<b>Cal Water Peaking Factors</b>		
Maximum Day Peaking Factor (Maximum Day to Average Day)		1.8
Peak Hour Peaking Factor (Peak Hour to Average Day)		2.5

Table 4. Average Day Demand

Study Area Name	Water District	Percent Cal Water	Percent City	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
				Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																		
Study Area 1 - Eight Mile Rd Area	No District	0%	100%	38,425	517,995	556,420	39,109	339,673	378,782	36,693	1,238	37,931	7,200	0	7,200	121,427	858,907	980,333
Study Area 2 - Pacific Ave Corridor	California Water	95%	5%	9,689	0	9,689	16,141	21,943	38,084	237,866	7,382	245,248	135	0	135	263,831	29,325	293,157
Study Area 3 - West Ln and Alpine Rd Area	California Water	90%	10%	86,297	115,113	201,409	27,109	138,818	165,926	140,544	12,704	153,248	97,252	0	97,252	351,201	266,634	617,835
Study Area 4 - Port/Waterfront	California Water	100%	0%	17,756	25,082	42,838	39,899	310,294	350,193	21,051	6,040	27,091	79,152	9,920	89,073	157,858	351,336	509,195
Study Area 5 - El Dorado/Center Corridors	California Water	100%	0%	12,357	0	12,357	38,412	132,726	171,138	16,645	3,706	20,351	17,646	0	17,646	85,060	136,432	221,492
Study Area 6 - Miner/Weber Corridors	California Water	100%	0%	9,805	0	9,805	22,438	166,973	189,411	13,401	6,896	20,297	12,795	0	12,795	58,439	173,869	232,308
Study Area 7 - Wilson Way Corridor	California Water	100%	0%	3,679	0	3,679	1,151	31,767	32,918	4,318	10,522	14,840	26,666	0	26,666	35,814	42,289	78,103
Study Area 8 - I-5/Highway 4 Interchange	California Water	100%	0%	2,301	0	2,301	635	176,391	177,027	1,832	1,832	3,664	23,521	0	23,521	28,289	178,224	206,513
Study Area 9 - Railroad Corridor at California St	California Water	100%	0%	5,132	0	5,132	6,207	89,381	95,588	9,816	3,062	12,878	12,478	0	12,478	33,633	92,443	126,076
Study Area 10 - I-5 and Charter Way Area	California Water	100%	0%	95,618	129,215	224,834	18,890	19,551	38,441	54,035	5,258	59,293	8,216	4,859	13,075	176,759	158,883	335,642
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	California Water	100%	0%	630	0	630	0	35,911	35,911	5,930	894	6,824	0	0	0	6,560	36,805	43,365
Study Area 12 - Airport Way Corridor	California Water	80%	20%	16,017	0	16,017	1,634	21,837	23,471	13,974	20,902	34,875	159,884	23,376	183,261	191,510	66,115	257,625
Study Area 13 - Mariposa and Charter Area	California Water	100%	0%	8,800	0	8,800	27,566	0	27,566	11,521	3,180	14,701	0	0	0	47,887	3,180	51,067
Study Area 14 - East Weston Ranch	City of Stockton	0%	100%	2,534	0	2,534	0	0	0	10,151	30,452	40,602	0	0	0	12,685	30,452	43,137
Study Area 15 - South of French Camp Rd	No District	0%	100%	168,856	0	168,856	28,345	0	28,345	0	0	0	116	0	116	197,317	0	197,317
Study Area 16 - E French Camp Rd Area	No District	0%	100%	273,929	0	273,929	42,440	0	42,440	240	0	240	335	0	335	316,944	0	316,944
<b>Subtotal (Study Areas)</b>				<b>751,827</b>	<b>787,406</b>	<b>1,539,233</b>	<b>309,975</b>	<b>1,485,266</b>	<b>1,795,240</b>	<b>578,016</b>	<b>114,067</b>	<b>692,083</b>	<b>445,397</b>	<b>38,156</b>	<b>483,553</b>	<b>2,085,215</b>	<b>2,424,894</b>	<b>4,510,109</b>
<b>Approved/Pending Development Projects Within City Limit</b>																		
Westlake Villages	City of Stockton	0%	100%	0	1,517,661	1,517,661	0	0	0	0	0	0	0	0	0	0	1,517,661	1,517,661
Delta Cove	City of Stockton	0%	100%	0	296,234	296,234	0	220,925	220,925	0	5,298	5,298	0	0	0	0	522,457	522,457
North Stockton Projects III	City of Stockton	0%	100%	84,810	792,309	877,119	0	0	0	0	0	0	0	0	0	84,810	792,309	877,119
Cannery Park	City of Stockton	0%	100%	0	607,065	607,065	0	74,276	74,276	0	213,544	213,544	0	0	0	0	894,885	894,885
Nor Cal Logistics Center	City of Stockton	0%	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	City of Stockton	0%	100%	0	43,298	43,298	0	365,346	365,346	0	0	0	0	0	0	0	408,644	408,644
Sanctuary	City of Stockton	0%	100%	0	2,289,883	2,289,883	0	312,888	312,888	0	72,954	72,954	0	0	0	0	2,675,725	2,675,725
Tidewater Crossing	City of Stockton	0%	100%	1,940,866	-1,940,866	0	0	0	0	0	32,853	32,853	0	0	0	1,940,866	-1,908,013	32,853
Open Window	California Water	100%	0%	0	0	0	0	165,749	165,749	26,491	-2,053	24,437	0	0	0	26,491	163,696	190,186
Weston Ranch Town Center	City of Stockton	0%	100%	0	0	0	0	0	0	0	85,111	85,111	0	0	0	0	85,111	85,111
<b>Subtotal (Approved/Pending Development Projects Within City Limit)</b>				<b>2,025,676</b>	<b>3,605,584</b>	<b>5,631,260</b>	<b>0</b>	<b>1,139,184</b>	<b>1,139,184</b>	<b>26,491</b>	<b>407,706</b>	<b>434,197</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,052,167</b>	<b>5,152,474</b>	<b>7,204,641</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																		
Mariposa Lakes	No District	0%	100%	337,010	2,096,381	2,433,392	0	2,715,721	2,715,721	0	307,996	307,996	0	0	0	337,010	5,120,099	5,457,109
Airpark 599	No District	0%	100%	0	0	0	0	0	0	0	262,823	262,823	0	0	0	0	262,823	262,823
Tra Vigne	No District	0%	100%	0	1,889,150	1,889,150	0	0	0	0	0	0	0	0	0	0	1,889,150	1,889,150
<b>Subtotal (Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence)</b>				<b>337,010</b>	<b>3,985,531</b>	<b>4,322,541</b>	<b>0</b>	<b>2,715,721</b>	<b>2,715,721</b>	<b>0</b>	<b>570,819</b>	<b>570,819</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>337,010</b>	<b>7,272,071</b>	<b>7,609,082</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects		50%	50%	30,956,888	2,835,553	33,792,441	8,894,162	0	8,894,162	1,122,394	0	1,122,394	3,184,912	0	3,184,912	44,158,357	2,835,553	46,993,910
<b>Grand Total</b>				<b>34,071,402</b>	<b>11,214,074</b>	<b>45,285,476</b>	<b>9,204,137</b>	<b>5,340,171</b>	<b>14,544,308</b>	<b>1,726,900</b>	<b>1,092,592</b>	<b>2,819,492</b>	<b>3,630,310</b>	<b>38,156</b>	<b>3,668,466</b>	<b>48,632,749</b>	<b>17,684,993</b>	<b>66,317,741</b>
<b>Total Cal Water</b>				<b>15,663,904</b>	<b>1,669,236</b>	<b>17,333,140</b>	<b>4,623,119</b>	<b>1,291,995</b>	<b>5,915,114</b>	<b>1,087,328</b>	<b>74,504</b>	<b>1,161,832</b>	<b>1,981,260</b>	<b>33,481</b>	<b>2,014,741</b>	<b>23,355,611</b>	<b>3,069,215</b>	<b>26,424,826</b>
<b>Total City of Stockton</b>				<b>18,407,498</b>	<b>9,544,838</b>	<b>27,952,336</b>	<b>4,581,018</b>	<b>4,048,176</b>	<b>8,629,194</b>	<b>639,572</b>	<b>1,018,088</b>	<b>1,657,660</b>	<b>1,649,050</b>	<b>4,675</b>	<b>1,653,725</b>	<b>25,277,138</b>	<b>14,615,778</b>	<b>39,892,916</b>

Note: The water demands, analyses, and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.



**ATTACHMENT D**

**Table 5. Maximum Day Demand**

Study Area Name	Water District	Percent Cal Water	Percent City	Maximum Day Factor	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
					Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																			
Study Area 1 - Eight Mile Rd Area	No District	0%	100%	1.70	65,322	880,592	945,914	66,485	577,444	643,929	62,378	2,105	64,483	12,241	0	12,241	206,425	1,460,142	1,666,567
Study Area 2 - Pacific Ave Corridor	California Water	95%	5%	1.80	17,393	0	17,393	28,973	39,388	68,361	426,969	13,250	440,219	243	0	243	473,577	52,639	526,216
Study Area 3 - West Ln and Alpine Rd Area	California Water	90%	10%	1.79	154,471	206,051	360,522	48,524	248,484	297,008	251,574	22,739	274,314	174,081	0	174,081	628,650	477,274	1,105,925
Study Area 4 - Port/Waterfront	California Water	100%	0%	1.80	31,961	45,148	77,109	71,818	558,529	630,347	37,891	10,872	48,763	142,474	17,857	160,331	284,144	632,406	916,550
Study Area 5 - El Dorado/Center Corridors	California Water	100%	0%	1.80	22,243	0	22,243	69,141	238,907	308,048	29,961	6,670	36,631	31,762	0	31,762	153,108	245,577	398,685
Study Area 6 - Miner/Weber Corridors	California Water	100%	0%	1.80	17,648	0	17,648	40,389	300,551	340,940	24,121	12,413	36,535	23,032	0	23,032	105,190	312,965	418,155
Study Area 7 - Wilson Way Corridor	California Water	100%	0%	1.80	6,623	0	6,623	2,071	57,181	59,252	7,772	18,939	26,712	47,999	0	47,999	64,465	76,121	140,586
Study Area 8 - I-5/Highway 4 Interchange	California Water	100%	0%	1.80	4,142	0	4,142	1,143	317,505	318,648	3,298	3,298	6,596	42,338	0	42,338	50,921	320,802	371,723
Study Area 9 - Railroad Corridor at California St	California Water	100%	0%	1.80	9,238	0	9,238	11,173	160,885	172,058	17,668	5,512	23,180	22,461	0	22,461	60,540	166,397	226,937
Study Area 10 - I-5 and Charter Way Area	California Water	100%	0%	1.80	172,113	232,588	404,701	34,002	35,191	69,194	97,262	9,465	106,727	14,788	8,746	23,534	318,166	285,990	604,156
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	California Water	100%	0%	1.80	1,134	0	1,134	0	64,640	64,640	10,674	1,609	12,283	0	0	0	11,808	66,249	78,057
Study Area 12 - Airport Way Corridor	California Water	80%	20%	1.78	28,511	0	28,511	2,909	38,871	41,779	24,874	37,205	62,078	284,594	41,610	326,204	340,887	117,685	458,573
Study Area 13 - Mariposa and Charter Area	California Water	100%	0%	1.80	15,840	0	15,840	49,619	0	49,619	20,738	5,723	26,461	0	0	0	86,197	5,723	91,920
Study Area 14 - East Weston Ranch	City of Stockton	0%	100%	1.70	4,309	0	4,309	0	0	0	17,256	51,768	69,023	0	0	0	21,564	51,768	73,332
Study Area 15 - South of French Camp Rd	No District	0%	100%	1.70	287,055	0	287,055	48,186	0	48,186	0	0	0	197	0	197	335,438	0	335,438
Study Area 16 - E French Camp Rd Area	No District	0%	100%	1.70	465,680	0	465,680	72,148	0	72,148	409	0	409	569	0	569	538,805	0	538,805
<b>Subtotal (Study Areas)</b>					<b>1,303,683</b>	<b>1,364,379</b>	<b>2,668,062</b>	<b>546,580</b>	<b>2,637,576</b>	<b>3,184,157</b>	<b>1,032,846</b>	<b>201,569</b>	<b>1,234,415</b>	<b>796,779</b>	<b>68,213</b>	<b>864,992</b>	<b>3,679,889</b>	<b>4,271,738</b>	<b>7,951,626</b>
<b>Approved/Pending Development Projects Within City Limit</b>																			
Westlake Villages	City of Stockton	0%	100%	1.70	0	2,580,024	2,580,024	0	0	0	0	0	0	0	0	0	0	2,580,024	2,580,024
Delta Cove	City of Stockton	0%	100%	1.70	0	503,598	503,598	0	375,573	375,573	0	9,006	9,006	0	0	0	0	888,176	888,176
North Stockton Projects III	City of Stockton	0%	100%	1.70	144,178	1,346,924	1,491,102	0	0	0	0	0	0	0	0	0	144,178	1,346,924	1,491,102
Cannery Park	City of Stockton	0%	100%	1.70	0	1,032,010	1,032,010	0	126,269	126,269	0	363,025	363,025	0	0	0	0	1,521,304	1,521,304
Nor Cal Logistics Center	City of Stockton	0%	100%	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	City of Stockton	0%	100%	1.70	0	73,607	73,607	0	621,088	621,088	0	0	0	0	0	0	0	694,694	694,694
Sanctuary	City of Stockton	0%	100%	1.70	0	3,892,801	3,892,801	0	531,910	531,910	0	124,022	124,022	0	0	0	0	4,548,733	4,548,733
Tidewater Crossing	City of Stockton	0%	100%	1.70	3,299,472	-3,299,472	0	0	0	0	0	55,850	55,850	0	0	0	3,299,472	-3,243,622	55,850
Open Window	California Water	100%	0%	1.80	0	0	0	0	298,348	298,348	47,683	-3,696	43,987	0	0	0	47,683	294,652	342,335
Weston Ranch Town Center	City of Stockton	0%	100%	1.70	0	0	0	0	0	0	0	144,689	144,689	0	0	0	0	144,689	144,689
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>					<b>3,443,650</b>	<b>6,129,493</b>	<b>9,573,143</b>	<b>0</b>	<b>1,953,188</b>	<b>1,953,188</b>	<b>47,683</b>	<b>692,895</b>	<b>740,578</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,491,333</b>	<b>8,775,576</b>	<b>12,266,909</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																			
Mariposa Lakes	No District	0%	100%	1.70	572,917	3,563,848	4,136,766	0	4,616,726	4,616,726	0	523,593	523,593	0	0	0	572,917	8,704,168	9,277,085
Airpark 599	No District	0%	100%	1.70	0	0	0	0	0	0	0	446,800	446,800	0	0	0	0	446,800	446,800
Tra Vigne	No District	0%	100%	1.70	0	3,211,554	3,211,554	0	0	0	0	0	0	0	0	0	0	3,211,554	3,211,554
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>					<b>572,917</b>	<b>6,775,403</b>	<b>7,348,320</b>	<b>0</b>	<b>4,616,726</b>	<b>4,616,726</b>	<b>0</b>	<b>970,393</b>	<b>970,393</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>572,917</b>	<b>12,362,521</b>	<b>12,935,439</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects		50%	50%	1.75	54,167,524	4,961,574	59,129,098	15,562,764	0	15,562,764	1,963,934	0	1,963,934	5,572,874	0	5,572,874	77,267,095	4,961,574	82,228,669
<b>Grand Total</b>					<b>59,487,773</b>	<b>19,230,849</b>	<b>78,718,622</b>	<b>16,109,345</b>	<b>9,207,490</b>	<b>25,316,835</b>	<b>3,044,463</b>	<b>1,864,857</b>	<b>4,909,320</b>	<b>6,369,653</b>	<b>68,213</b>	<b>6,437,866</b>	<b>85,011,234</b>	<b>30,371,409</b>	<b>115,382,643</b>
<b>Total Cal Water</b>					27,420,042	2,932,701	30,352,743	8,098,917	2,323,888	10,422,805	1,926,513	133,623	2,060,136	3,483,213	59,891	3,543,104	40,928,685	5,450,103	46,378,788
<b>Total City of Stockton</b>					32,067,732	16,298,148	48,365,880	8,010,428	6,883,602	14,894,029	1,117,950	1,731,234	2,849,184	2,886,439	8,322	2,894,761	44,082,549	24,921,306	69,003,855

Note: The water demands, analyses, and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

### Peak Hour Demands by Development Area

The Peak Hour demand estimates are calculated in Table 6. Peak Hour demands are the estimate of the water used by the residents and businesses in the water system service area for the single hour during the year when the demands are the highest. The Peak Hour demands are calculated by multiplying the Average Day Demands by the appropriate peak hour peaking factor. The Peak Hour peaking factor for the COSMUD service area is 3.5. The Peak Hour peaking factor for the Cal Water service area is 2.5. The following Peak Hour demands are calculated for existing, net new, and 2040 demands:

- Peak Hour demand from exiting land uses: 137.3 mgd
- Peak Hour demand from net new land uses: 58.8 mgd
- Peak Hour demand from 2040 land uses: 196.1 mgd

### Demand Projection Estimates by Service Area

Demands within the City are distributed between the service areas for COSMUD and Cal Water. For the existing land uses, the COSMUD service area contains 52 percent of the demands, while the Cal Water service area contains 48 percent of the demands. The ratio is different with the 2040 land uses, with the COSMUD service area containing 61 percent of the demands and the Cal Water service area containing 39 percent of the demands.

The majority of the Study Areas are within the Cal Water Service Area. However, the Eight Mile Study area constitutes about 22 percent of the demands for all of the study areas, and is assigned to the COSMUD Service Area. The majority of the approved or pending development projects within the City limits or outside of the City limits are within the COSMUD Service Area, or are expected to be served by COSMUD. The result of this is that, while the existing demands are split almost evenly between the COSMUD and Cal Water Service Areas, the 2040 land use demands are more skewed to the COSMUD Service Area. Overall, 85 percent of the increases in demands from new development occur within areas that will be served by COSMUD.

As stated above, the demand analyses presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these demand analyses should be refined and updated through detailed evaluations of each specific development project.

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Table 6. Peak Hour Demand

Study Area Name	Water District	Percent Cal Water	Percent City	Peak Hour Factor	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
					Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																			
Study Area 1 - Eight Mile Rd Area	No District	0%	100%	3.50	134,487	1,812,984	1,947,471	136,880	1,188,856	1,325,736	128,425	4,334	132,759	25,201	0	25,201	424,993	3,006,174	3,431,167
Study Area 2 - Pacific Ave Corridor	California Water	95%	5%	2.55	24,708	0	24,708	41,160	55,956	97,115	606,558	18,824	625,381	345	0	345	672,770	74,779	747,549
Study Area 3 - West Ln and Alpine Rd Area	California Water	90%	10%	2.60	224,371	299,293	523,664	70,482	360,926	431,408	365,415	33,029	398,444	252,855	0	252,855	913,123	693,248	1,606,371
Study Area 4 - Port/Waterfront	California Water	100%	0%	2.50	44,390	62,706	107,095	99,747	775,735	875,482	52,627	15,100	67,727	197,881	24,801	222,682	394,645	878,341	1,272,986
Study Area 5 - El Dorado/Center Corridors	California Water	100%	0%	2.50	30,893	0	30,893	96,030	331,815	427,845	41,613	9,264	50,877	44,114	0	44,114	212,650	341,079	553,729
Study Area 6 - Miner/Weber Corridors	California Water	100%	0%	2.50	24,512	0	24,512	56,095	417,432	473,528	33,502	17,241	50,743	31,989	0	31,989	146,097	434,673	580,771
Study Area 7 - Wilson Way Corridor	California Water	100%	0%	2.50	9,198	0	9,198	2,877	79,418	82,295	10,795	26,305	37,100	66,666	0	66,666	89,535	105,723	195,258
Study Area 8 - I-5/Highway 4 Interchange	California Water	100%	0%	2.50	5,753	0	5,753	1,588	440,979	442,567	4,580	4,580	9,160	58,802	0	58,802	70,724	445,559	516,283
Study Area 9 - Railroad Corridor at California St	California Water	100%	0%	2.50	12,831	0	12,831	15,518	223,451	238,969	24,539	7,656	32,195	31,196	0	31,196	84,083	231,107	315,190
Study Area 10 - I-5 and Charter Way Area	California Water	100%	0%	2.50	239,046	323,038	562,084	47,226	48,877	96,102	135,087	13,146	148,233	20,539	12,148	32,687	441,897	397,209	839,106
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	California Water	100%	0%	2.50	1,575	0	1,575	0	89,777	89,777	14,825	2,235	17,060	0	0	0	16,401	92,012	108,413
Study Area 12 - Airport Way Corridor	California Water	80%	20%	2.70	43,247	0	43,247	4,412	58,961	63,373	37,730	56,434	94,164	431,688	63,116	494,804	517,076	178,512	695,588
Study Area 13 - Mariposa and Charter Area	California Water	100%	0%	2.50	22,000	0	22,000	68,915	0	68,915	28,803	7,949	36,751	0	0	0	119,718	7,949	127,667
Study Area 14 - East Weston Ranch	City of Stockton	0%	100%	3.50	8,871	0	8,871	0	0	0	35,527	106,580	142,107	0	0	0	44,397	106,580	150,978
Study Area 15 - South of French Camp Rd	No District	0%	100%	3.50	590,996	0	590,996	99,206	0	99,206	0	0	0	406	0	406	690,609	0	690,609
Study Area 16 - E French Camp Rd Area	No District	0%	100%	3.50	958,752	0	958,752	148,540	0	148,540	841	0	841	1,172	0	1,172	1,109,305	0	1,109,305
<b>Subtotal (Study Areas)</b>					<b>2,375,630</b>	<b>2,498,021</b>	<b>4,873,651</b>	<b>888,674</b>	<b>4,072,184</b>	<b>4,960,858</b>	<b>1,520,866</b>	<b>322,676</b>	<b>1,843,542</b>	<b>1,162,854</b>	<b>100,065</b>	<b>1,262,919</b>	<b>5,948,024</b>	<b>6,992,946</b>	<b>12,940,970</b>
<b>Approved/Pending Development Projects Within City Limit</b>																			
Westlake Villages	City of Stockton	0%	100%	3.50	0	5,311,815	5,311,815	0	0	0	0	0	0	0	0	0	0	5,311,815	5,311,815
Delta Cove	City of Stockton	0%	100%	3.50	0	1,036,819	1,036,819	0	773,238	773,238	0	18,541	18,541	0	0	0	0	1,828,599	1,828,599
North Stockton Projects III	City of Stockton	0%	100%	3.50	296,837	2,773,080	3,069,917	0	0	0	0	0	0	0	0	0	296,837	2,773,080	3,069,917
Cannery Park	City of Stockton	0%	100%	3.50	0	2,124,726	2,124,726	0	259,966	259,966	0	747,404	747,404	0	0	0	0	3,132,096	3,132,096
Nor Cal Logistics Center	City of Stockton	0%	100%	3.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	City of Stockton	0%	100%	3.50	0	151,543	151,543	0	1,278,710	1,278,710	0	0	0	0	0	0	0	1,430,253	1,430,253
Sanctuary	City of Stockton	0%	100%	3.50	0	8,014,591	8,014,591	0	1,095,109	1,095,109	0	255,339	255,339	0	0	0	0	9,365,039	9,365,039
Tidewater Crossing	City of Stockton	0%	100%	3.50	6,793,030	-6,793,030	0	0	0	0	114,985	114,985	0	0	0	0	6,793,030	-6,678,045	114,985
Open Window	California Water	100%	0%	2.50	0	0	0	0	414,372	414,372	66,227	-5,133	61,093	0	0	0	66,227	409,239	475,465
Weston Ranch Town Center	City of Stockton	0%	100%	3.50	0	0	0	0	0	0	0	297,889	297,889	0	0	0	0	297,889	297,889
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>					<b>7,089,867</b>	<b>12,619,544</b>	<b>19,709,411</b>	<b>0</b>	<b>3,821,395</b>	<b>3,821,395</b>	<b>66,227</b>	<b>1,429,025</b>	<b>1,495,252</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,156,093</b>	<b>17,869,964</b>	<b>25,026,058</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																			
Mariposa Lakes	No District	0%	100%	3.50	1,179,535	7,337,335	8,516,870	0	9,505,024	9,505,024	0	1,077,986	1,077,986	0	0	0	1,179,535	17,920,345	19,099,880
Airpark 599	No District	0%	100%	3.50	0	0	0	0	0	0	0	919,881	919,881	0	0	0	0	919,881	919,881
Tra Vigne	No District	0%	100%	3.50	0	6,612,024	6,612,024	0	0	0	0	0	0	0	0	0	0	6,612,024	6,612,024
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>					<b>1,179,535</b>	<b>13,949,358</b>	<b>15,128,894</b>	<b>0</b>	<b>9,505,024</b>	<b>9,505,024</b>	<b>0</b>	<b>1,997,867</b>	<b>1,997,867</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,179,535</b>	<b>25,452,250</b>	<b>26,631,785</b>
<b>Remaining City Outside of Study Areas and Outside of Approved/Pending Projects</b>																			
<b>Grand Total</b>					<b>103,586,003</b>	<b>37,580,022</b>	<b>141,166,025</b>	<b>27,591,361</b>	<b>17,398,603</b>	<b>44,989,964</b>	<b>4,956,822</b>	<b>3,749,569</b>	<b>8,706,391</b>	<b>10,724,824</b>	<b>100,065</b>	<b>10,824,889</b>	<b>137,297,039</b>	<b>58,828,259</b>	<b>196,125,298</b>
Total Cal Water					46,909,612	4,892,323	51,801,935	13,784,759	3,247,017	17,031,776	3,025,097	191,097	3,216,194	5,783,703	87,442	5,871,145	64,743,901	8,417,880	73,161,781
Total City of Stockton					56,676,391	32,687,699	89,364,090	13,806,602	14,151,586	27,958,187	1,931,726	3,558,471	5,490,197	4,941,121	12,623	4,953,744	72,553,138	50,410,379	122,963,518

Note: The water demands, analyses, and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

## INFRASTRUCTURE EVALUATIONS

The difference in demands that results from the changes in development areas causes changes in the required infrastructure in the Capital Improvement Programs from the WMPs. There are different changes for the COSMUD Service Area and the Cal Water Service Area.

The infrastructure evaluations and conclusions presented below are preliminary. These evaluations and conclusions should be verified through the preparation of updates to the COSMUD and Cal Water WMPs when the GPU process is completed and the final land uses have been adopted.

### COSMUD Infrastructure Evaluation

The decreases in projected demands from the COSMUD WMP, within the COSMUD Service Area, change the infrastructure needs for water storage capacity, pumping facility capacity and distribution pipeline capacity. The projected demands in the COSMUD WMP and for this study are:

- Average Day Demand – 2035 WMP: 98.2 mgd. This study for 2040: 39.9 mgd
- Maximum Day Demand – 2035 WMP: 166.9 mgd. This study for 2040: 69.0 mgd
- Peak Hour Demand – 2035 WMP: 343.7 mgd. This study for 2040: 123.0 mgd

The demands estimated for the 2040 land uses are approximately 60 percent lower than the demands from the COSMUD WMP.

#### Water Storage Capacity

Required storage volume decreases are based on decreased need for operational and emergency storage due to the lower projected demands. Required fire flow storage would not change with the decrease in demands. The operational storage requirement is 25 percent of maximum day demands. The emergency storage requirement is 100 percent of the average day demands.

Based on the COSMUD WMP (based on the 2035 General Plan buildout):

- The current total available storage is 33.7 mg, according to the COSMUD WMP.
- The required total storage at buildout of the 2035 General Plan is 142.9 mg.
- The required new storage is 109.2 mg.

Based on the current GPU 2040 land use demands:

- The current total available storage is 33.7 mg (according to the COSMUD WMP).
- The required total storage for the 2040 development is 58.6 mg.
- The required new storage is 24.9 mg.

Thus, the required new storage for 2040 development is 24.9 mg, which is a reduction of 84.3 mg from the storage needed for buildout of the 2035 General Plan.

### Pumping Facility Capacity

Sufficient water system pumping capacity should be provided to meet the greater of these two demand conditions:

1. A maximum day demand concurrent with a maximum fire flow event with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity.
2. A peak hour demand with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity,

Given that the peak hour demands are significantly larger than the maximum fire flow demands, the second set of conditions will control the decrease in required pumping facility capacity.

Based on the COSMUD WMP (based on the 2035 General Plan buildout):

- The current total available pumping capacity is 88,592 gpm (according to the COSMUD WMP).
- The required total pumping capacity at buildout of the 2035 General Plan is 238,679 gpm.
- The required new pumping capacity is 150,087 gpm.

Based on the GPU 2040 land use demands:

- The current total available pumping capacity is 88,592 gpm (according to the COSMUD WMP).
- The required total pumping capacity for the 2040 development is 85,416 gpm.
- As the current pumping capacity exceeds the required pumping capacity, no new pumping capacity may be needed. However, pumping capacity may be still needed if the existing booster pumps are not in the correct locations to effectively serve the 2040 development.

Thus, there is potentially no new required pumping capacity for 2040 development (unless additional pumping is needed based on the locations of the new development). This represents a reduction of 150,087 gpm from the pumping capacity needed for buildout of the 2035 General Plan.

### Distribution Pipeline Capacity

The COSMUD distribution system is split into the North and South areas. Each area was evaluated separately regarding the effect of the lower projected demands for the 2040 land uses. The COSMUD WMP does not provide specific projected demands for each study area or development project, which means that direct comparisons of the demands for specific areas are not possible. However, qualitative assessments have been made of the difference in required distribution and transmission pipelines within these areas by comparing the land uses. The areas where significant differences have been identified are discussed below.

- Within Study Area 1, the Eight Mile Road Area, the 2040 land uses show no new development north of Eight Mile Road. The COSMUD WMP was based on all of this area developing by 2035. It can be assumed that most of the distribution and transmission pipelines within Study Area 1 (north of Eight Mile Road) will not be needed. No specific amount of pipelines or dollar value was identified in the COSMUD WMP for this Study Area.
- Within Study Area 15, the South of French Camp Road Area, the 2040 land uses show this area as Open Space/Agriculture, whereas the 2035 land uses showed this area as Residential Estate. It can be assumed that all of the distribution and transmission pipelines within Study Area 15 shown in the COSMUD WMP will not be needed. No specific amount of pipelines or dollar value was identified in the COSMUD WMP for this Study Area.
- Within Study Area 16, the East of French Camp Road Area, the 2040 land uses show this area as Open Space/Agriculture, whereas the 2035 land uses showed this area as Residential Estate. It can be assumed that all of the distribution and transmission pipelines within Study Area 15 shown in the COSMUD WMP will not be needed. No specific amount of pipelines or dollar value was identified in the COSMUD WMP for this Study Area.
- For the Tra Vigne development project, the 2040 land uses show this area as Residential Estate, whereas the 2035 land uses showed this area with portions of higher density housing land uses. It can be assumed that the lower housing density for the 2040 land uses will result in lower demands. The developed area will not change, meaning that there would be no expected change in the extent of the distribution and transmission pipeline network planned for this area. However, the lower demands could result in smaller diameter pipelines being needed throughout this area.

Other changes in land uses within Study Areas or development areas are not expected to result in significant changes in the required COSMUD distribution or transmission pipelines planned for these areas.

### **Cal Water Infrastructure Evaluation**

The decrease in projected demands within the Cal Water Service Area change the infrastructure needs for water storage capacity, pumping facility capacity, and distribution pipeline capacity.

- Average Day Demand – 2035 WMP: 35.1 mgd. This study for 2040: 26.4 mgd
- Maximum Day Demand – 2035 WMP: 63.1 mgd. This study for 2040: 46.4 mgd
- Peak Hour Demand – 2035 WMP: 87.7 mgd. This study for 2040: 73.2 mgd

### Water Storage Capacity

Required storage volume decreases are based on decreased need for operational and emergency storage due to the lower projected demands. Required fire flow storage would not change with the decrease in demands. The operational storage requirement is 25 percent of maximum day demands. The emergency storage requirement is 100 percent of the average day demands.

Based on the Cal Water WMP (based on the 2035 General Plan buildout):

- The current total available storage is 38.4 mg (according to the Cal Water WMP).
- The required total storage at buildout of the 2035 General Plan is 51.9 mg.
- The required new storage is 13.5 mg.

Based on the current GPU 2040 land use demands:

- The current total available storage is 38.4 mg (according to the Cal Water WMP).
- The required total storage for the 2040 development is 38.9 mg.
- The required new storage is 0.5 mg.

Thus, the required new storage for 2040 development is 0.5 mg, which is a reduction of 13.0 mg from the storage needed for buildout of the 2035 General Plan.

#### Pumping Facility Capacity

Sufficient water system pumping capacity should be provided to meet the greater of these two demand conditions:

1. A maximum day demand concurrent with a maximum fire flow event with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity.
2. A peak hour demand with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity.

Given that the peak hour demands are significantly larger than the maximum fire flow demands, the second conditions will control the decrease in required pumping facility capacity.

Based on the Cal Water WMP (based on the 2035 General Plan buildout):

- The current total available pumping capacity is 47,012 gpm (according to the Cal Water WMP).
- The required total pumping capacity at buildout of the 2035 General Plan is 60,937 gpm.
- The required new pumping capacity is 13,925 gpm.

Based on the GPU 2040 land use demands:

- The current total available pumping capacity is 47,012 gpm (according to the Cal Water WMP)
- The required total pumping capacity for the 2040 development is 50,069 gpm
- The required new pumping capacity is 3,057 gpm.

Thus, the required new pumping capacity for 2040 development is 3,057 gpm, which is a reduction of 10,868 gpm from the pumping capacity needed for buildout of the 2035 General Plan.

### Distribution Pipeline Capacity

The Cal Water distribution system generally covers the downtown area of the City with a well-looped, grid system that provides adequate capacity in the inner downtown area where most of the changes in development are expected to occur. Cal Water has been and will continue to upgrade their distribution system. These upgrades will help Cal Water supply the future water demand. The projects that are included in the Cal Water WMP are expected to be adequately sized to support the 2040 land uses, as there is no change expected in the fire flow demands, and there is relatively little change in the peak hour demands. No changes to the pipeline CIP are expected.

The infrastructure analyses presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these analyses should be refined and updated through detailed evaluations of each specific development project.

## **COST EVALUATIONS BY SERVICE AREA**

Preliminary infrastructure cost estimates for water storage facilities and booster pumping facilities were developed for the COSMUD and Cal Water Service Areas. The cost analyses presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these analyses should be refined and updated through detailed evaluations of each specific development project.

### **COSMUD**

The COSMUD costs for water storage for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new storage is 109.2 mg, which has an estimated cost of \$166.4 million (based on \$1.52 per gallon of storage).
- The 2040 GPU required new storage is 24.9 mg, which has an estimated cost of \$37.9 million (based on \$1.52 per gallon of storage).
- The reduction in estimated storage costs from 2035 buildout to 2040 development land uses is \$128.5 million.

The COSMUD costs for pumping capacity for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new pumping capacity is 150,087 gpm, which has an estimated cost of \$65.5 million (based on \$303,000 per mgd of pumping capacity).
- The 2040 GPU required new pumping capacity is 0 gpm, which has no cost.
- The reduction in estimated pumping capacity costs from 2035 buildout to 2040 development land uses is \$65.5 million.



Costs were taken from the COSMUD WMP, which were developed with a July 2008 ENR index of 8293, and then adjusted to current dollars using a December 2016 ENR index of 10530.

The infrastructure evaluation also showed an expected reduction of required pipeline projects within certain study areas. As these pipeline projects are not listed in the COSMUD WMP by the study areas, it is not possible to estimate the amount of reduction in pipeline projects, or the associated costs from the available information.

### **Cal Water**

The Cal Water costs for water storage for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new storage is 13.5 mg, which has an estimated cost of \$21.5 million (based on \$1.60 per gallon of storage).
- The 2040 GPU required new storage is 0.5 mg, which has an estimated cost of \$0.8 million (based on \$1.60 per gallon of storage).
- The reduction is estimated storage costs from 2035 buildout to 2040 development land uses is \$20.7 million.

The Cal Water costs for pumping capacity for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new pumping capacity is 13,925 gpm, which has an estimated cost of \$9.8 million (based on \$490,000 per mgd of pumping capacity).
- The 2040 GPU required new pumping capacity is 3,057 gpm, which has an estimated cost of \$2.2 million (based on \$490,000 per mgd of pumping capacity).
- The reduction is estimated pumping capacity costs from 2035 buildout to 2040 development land uses is \$7.7 million.

Costs were taken from the Cal Water WMP, which were developed with an ENR CCI of 8549 (20 Cities Average), and then adjusted to current dollars using a December 2016 ENR index of 10530.

## **RECOMMENDED FUTURE ACTIONS**

The recommended actions to address potable water infrastructure needs are addressed in this section.

### **Water Distribution Systems**

The projected land uses for 2040 are different that the buildout land uses from the 2035 General Plan. Consequently, the water infrastructure identified in the previous master plans (City and Cal Water) may no longer be appropriate. This could result in some water infrastructure being undersized, which could lead to inadequate water deliveries or inadequate water pressures. Some water infrastructure could be oversized, which could lead to operational problems and unnecessary infrastructure capital and operation & maintenance expenditures.

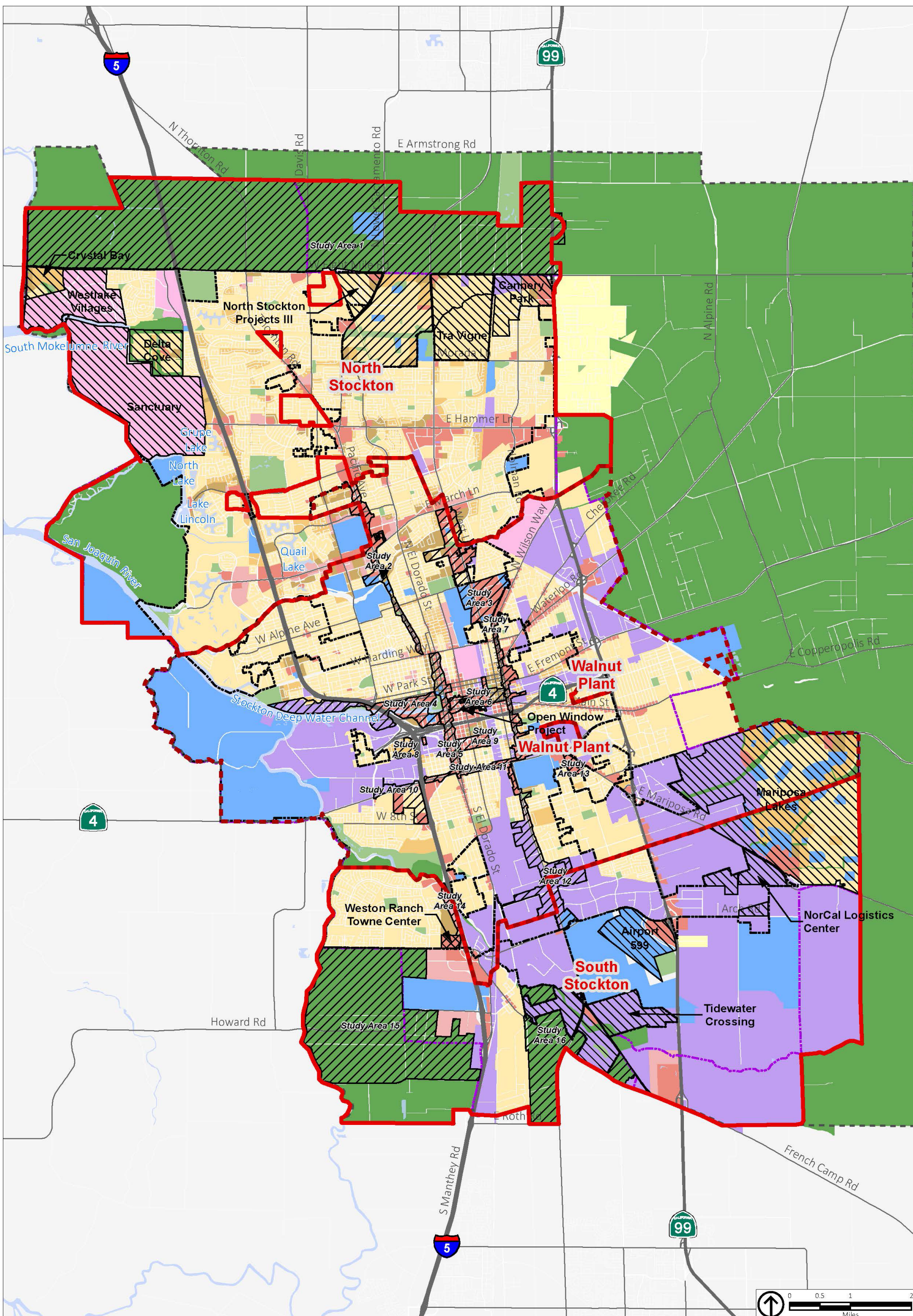
The previous water master plans (City and Cal Water) and associated water system models should be updated based on the 2040 land uses, and appropriately sized infrastructure should be developed and included in the City's and Cal Water's Capital Improvement Plans. The City's and Cal Water's Development Impact Fees should be revised based on the updated water master plans to ensure the City and Cal Water collect enough money to construct the required infrastructure.

### **COSMUD Northern and Southern Systems**

The COSMUD water system includes a northern system and a southern system, essentially separated by the Cal Water system serving the center of the City. Since the completion of the Delta Water Treatment Project, COSMUD operates the two systems essentially as two separate, distinct systems. There is an eastern connection between the two systems, but the connection is kept closed. Evaluating the northern and southern COSMUD systems as if they were operated as a single system would allow the storage and pumping facilities to be evaluated collectively. However, additional studies of the potential benefits and impacts of connecting the north and south systems would need to be prepared.

### **Future Development-Specific Potable Water Improvements**

This TM is a high-level assessment of required potable water facilities for the Study Areas and Approved/Pending Development Projects. These water demands and associated facility requirements are sized based on generalized land use data and preliminary engineering evaluations. These evaluations do not assess specific facilities needed for the Study Areas and Pending/Approved Development Projects. It is difficult to size potable water facilities without knowing the layout of the development and site-specific constraints. As specific developments occur, the specific potable water infrastructure serving the developments should be reviewed and verified using the updated water system models. The required infrastructure should be evaluated and identified as needed for the specific development projects.



Source: City of Stockton, June & August 2017.

- Major Development Areas
- Study Areas
- General Plan Planning Area
- City Limit
- Sphere of Influence
- Cal Water Service Area Boundary
- City of Stockton Water Service Area Boundary

- Residential Estate
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Mixed Use
- Commercial
- Administrative Professional
- Industrial
- Economic and Education Enterprise
- Institutional
- Parks and Recreation
- Open Space/Agriculture

Figure 1  
2017 Preferred 2040 Land Uses  
and Development Areas

**ATTACHMENT A**

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Land Use Data Received from Placeworks

**ATTACHMENT D**

Acreage Gross or Net	Study Area Name	Single Family Net New 2040	Single Family Net New 2040	Single Family Net New 2040 + Existing	Single Family Net New 2040 + Existing	Multi Family Net New 2040	Multi Family Net New 2040	Multi Family Net New 2040 + Existing	Multi Family Net New 2040 + Existing	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040 + Existing	Commercial Net New 2040 + Existing	Industrial Net New 2040	Industrial Net New 2040 + Existing
		Units	Acres	Units	Acres	Units	Acres	Units	Acres	Units	Acres	Total Square Feet	0.3 FAR Sq Ft	0.5 FAR Sq Ft	5.0 FAR Sq Ft	0.3 FAR Acres	0.5 FAR Acres	5.0 FAR Acres	Sq Ft	Acres
Gross	Study Area 1 - Eight Mile Rd Area	1,379	646	1,500	663	1,198	209	1,294	217	39,408	39,408	0	0	15	0	0	241,408	20	0	105,400
Net	Study Area 2 - Pacific Ave Corridor	0	0	22	4	110	19	224	22	93,961	93,961	0	0	17	0	0	1,560,846	103	0	1,980
Net	Study Area 3 - West Ln and Alpine Rd Area	77	13	285	52	680	120	774	125	323,399	323,399	0	0	102	0	0	975,325	163	0	1,423,576
Net	Study Area 4 - Port/Waterfront	17	3	71	11	1,770	33	2,058	42	2,040,010	6,100	0	2,033,911	2	0	31	2,865,512	62	580,859	1,739,495
Net	Study Area 5 - El Dorado/Center Corridors	0	0	45	6	1,196	22	1,555	30	1,310,216	0	0	1,310,216	0	0	21	2,158,663	53	0	258,300
Net	Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	0	0	47	4	1,248	22	1,467	27	1,463,025	0	0	1,463,025	0	0	14	2,152,972	33	0	187,300
Net	Study Area 7 - Wilson Way Corridor	0	0	12	2	234	27	240	28	606,716	103,753	0	502,963	19	0	5	1,321,076	65	0	390,342
Net	Study Area 8 - I-5/Highway 4 Interchange	0	0	8	1	659	47	660	48	388,671	0	0	388,671	0	0	4	388,671	4	0	344,300
Net	Study Area 9 - Railroad Corridor at California St	0	0	19	2	1,340	24	1,363	25	1,299,279	0	0	1,299,279	0	0	24	1,365,999	26	0	182,658
Net	Study Area 10 - I-5 and Charter Way Area	86	15	314	58	98	42	127	46	133,864	133,864	0	0	42	0	0	377,363	77	83,678	203,939
Net	Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0	0	5	0	396	15	396	15	323,733	9,597	0	314,135	6	0	7	703,670	38	0	0
Net	Study Area 12 - Airport Way Corridor	0	0	53	7	108	19	112	19	205,461	135,225	70,236	0	14	4	0	272,544	48	1,368,744	3,709,140
Net	Study Area 13 - Mariposa and Charter Area	0	0	12	4	0	0	77	6	80,944	80,944	0	0	25	0	0	93,560	28	0	0
Net	Study Area 14 - East Weston Ranch <sup>(b)</sup>	0	0	1	1	0	0	0	0	430,677	0	430,677	0	0	26	0	430,677	26	0	0
Net	Study Area 15 - South of French Camp Rd	0	0	89	76	0	0	9	6	0	0	0	0	0	0	0	0	0	0	1,700
Net	Study Area 16 - E French Camp Rd Area	0	0	59	123	0	0	4	9	0	0	0	0	0	0	0	5,100	17	0	4,900
Net	Outside of Study Areas <sup>(c)</sup>	1,501	246	77,964	14,117	0	0	33,183	1,916	0	0	0	0	0	0	0	23,811,089	1,607	0	46,620,901
	<b>Grand Total</b>	<b>3,059</b>	<b>923</b>	<b>80,505</b>	<b>15,131</b>	<b>9,036</b>	<b>600</b>	<b>43,542</b>	<b>2,583</b>	<b>8,739,364</b>	<b>926,252</b>	<b>500,913</b>	<b>7,312,200</b>	<b>242</b>	<b>31</b>	<b>105</b>	<b>38,724,475</b>	<b>2,371</b>	<b>2,033,281</b>	<b>55,173,931</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

<sup>(c)</sup> Excludes approved/pending projects.

Acreage Gross or Net	Approved/Pending Projects Details	Net New						Full Build (2040)					
		Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres	Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres
<b>Approved within city limit</b>													
Gross	Westlake Villages	2,630	680	0		0		2,630	680	0		0	
Gross	Delta Cove	1,164	133	381	48	31,000	3	1,164	133	381	48	31,000	2.6
Gross	North Stockton Projects III	2,220	355	0		0		2,455	393	0		0	
Gross	Cannery Park	981	272	210	16	1,078,762	104	981	272	210	16	1,078,762	104
Gross	Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0
Gross	Crystal Bay	951	19	392	79	0		951	19	392	79	0	0
Gross	Sanctuary	5,452	1,026	1,618	67	692,256	36	5,452	1,026	1,618	67	692,256	36
Gross	Tidewater Crossing	-310	-870	0		186,200	16	0	0	0	0	186,200	16
Net	Open Window <sup>(a)</sup>	0	0	1,391	12	-68,800	-1	0	0	1,400	12	290,000	12
Gross	Weston Ranch Town Center	0	0	0	0	481,000	41	0	0	0	0	481,000	41
<b>Approved/pending outside city limit, inside SOI</b>													
Gross	Mariposa Lakes	8,955	939	1,553	585	1,009,503	150	8,960	1,090	1,556	585	1,009,503	150
Gross	Airpark 599	0	0	0	0	1,678,500	128	0	0	0	0	1,678,500	128
Gross	Tra Vigne <sup>(b)</sup>	1,244	846	0	0	0	0	1,244	846	0	0	0	0

<sup>(a)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand the capacity to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.

<sup>(b)</sup> Pending; not approved.

2040 Development Study Area												
	Net New Single Family Units (full buildout)	Percent applied to 2040	Net New Single Family Units (2040)	Net New Multi-Family Units (full buildout)	Percent applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (full buildout)	Percent applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (full buildout)	Percent applied to 2040	Net New Industrial Square Feet (2040)
Study Area 1 – Eight Mile Rd Area	3,940	35%	1,380	3,420	35%	1,200	197,000	20%	39,000	0	0%	0
Study Area 2 – Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
Study Area 3 – West Ln and Alpine Rd Area	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
Study Area 4 – Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
Study Area 5 – El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
Study Area 6 – Miner/Weber Corridors <sup>(a)</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
Study Area 7 – Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
Study Area 8 – I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
Study Area 9 – Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
Study Area 10 – I-5 and Charter Way Area	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
Study Area 11 – Charter Way/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
Study Area 12 – Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
Study Area 13 – Mariposa and Charter Area	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
Study Area 14 – East Weston Ranch <sup>(b)</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
Study Area 15 – South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Study Area 16 – E French Camp Rd Area	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>(c)</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>(d)</sup></b>	<b>20,480</b>		<b>3,060</b>	<b>48,470</b>		<b>9,040</b>	<b>45,773,000</b>		<b>8,739,000</b>	<b>134,701,000</b>		<b>2,033,000</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

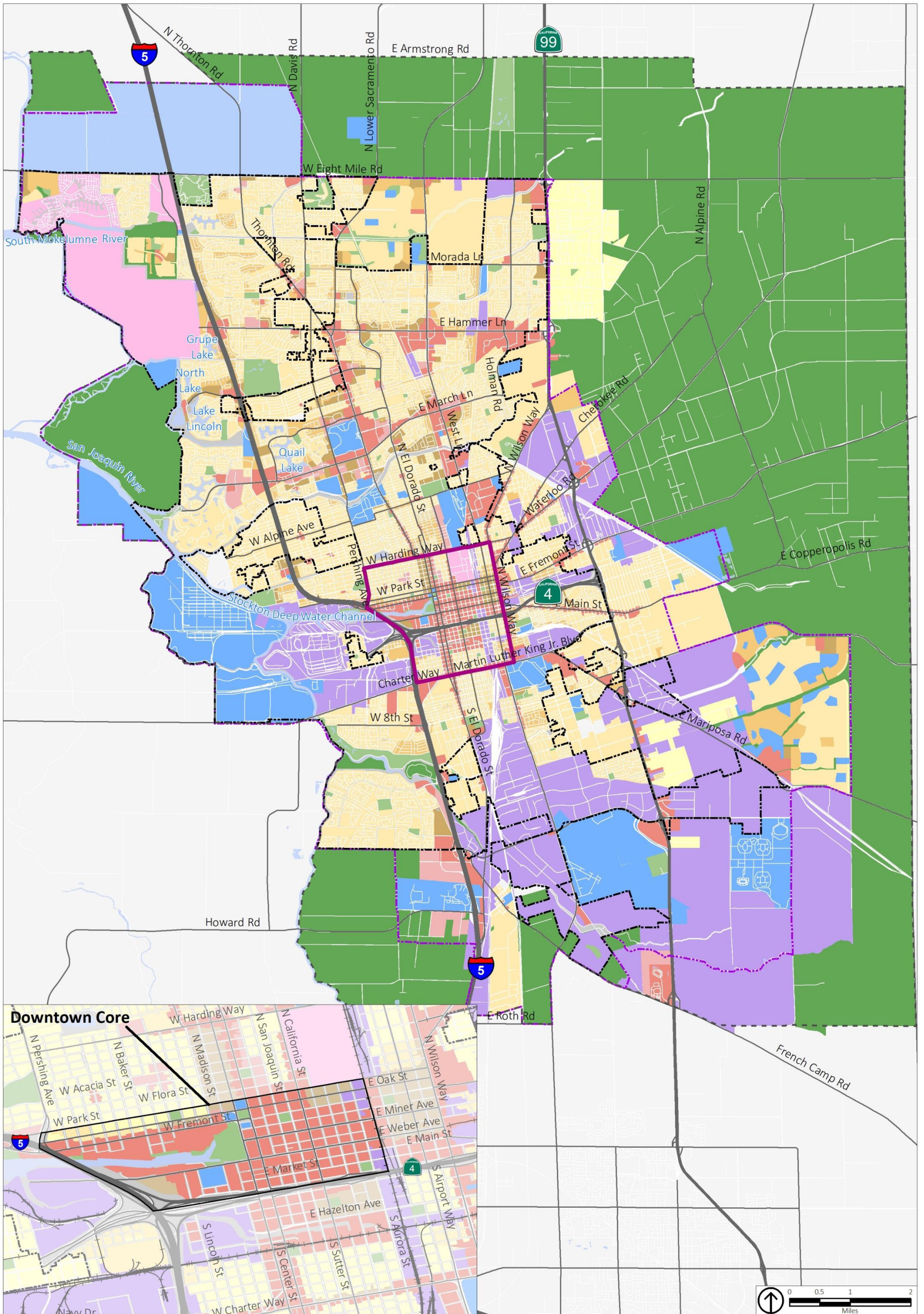
<sup>(c)</sup> Excludes approved/pending projects

<sup>(d)</sup> Numbers do not always add up due to rounding.

The "full buildout" of the proposed General Plan assumes the maximum development of every parcel, combined with approved and pending developments throughout the Planning Area. The 2040 land uses are based on realistic land use demand projections. The full buildout of the General Plan would result in almost three times more new housing units and over 24 times more new non-residential development than estimated for 2040. Therefore, it is extremely unlikely that the full buildout would occur by the year 2040. Full buildout may not occur until well beyond the useful lifespan of the proposed infrastructure (for example, the lifespan of concrete structures is typically 50 to 75 years). Consequently, this infrastructure planning was based on the estimated 2040 level of development. This table is included in this TM to document the relationship between the buildout land uses and the 2040 land uses.

Source: PlaceWorks, 2017.

**Figure 2-8**  
**General Plan Land Use Map**



Source: City of Stockton, 2017; PlaceWorks, 2017.

- |                            |                            |                          |                                   |                        |
|----------------------------|----------------------------|--------------------------|-----------------------------------|------------------------|
| City Limit                 | Residential Estate         | High Density Residential | Administrative Professional       | Institutional          |
| Sphere of Influence        | Low Density Residential    | Mixed Use                | Industrial                        | Parks and Recreation   |
| General Plan Planning Area | Medium Density Residential | Commercial               | Economic and Education Enterprise | Open Space/Agriculture |
| Greater Downtown Boundary  |                            |                          |                                   |                        |

**ATTACHMENT 2**  
**REVISED SEWER MASTER PLAN SUPPLEMENT**





## TECHNICAL MEMORANDUM

DATE: December 13, 2017 Project No.: 425-10-16-04.006  
 TO: City of Stockton, Municipal Utilities Department SENT VIA: EMAIL  
 FROM: Jeffrey D. Pelz, PE, RCE #46088  
 REVIEWED BY: Douglas T. Moore, PE, RCE #58122  
 SUBJECT: Stockton General Plan Update – Sewer Master Plan Supplement

This Technical Memorandum (TM) presents the Sewer Master Plan Supplement for the Stockton General Plan Update (GPU). This TM is based on the 2035 Wastewater Master Plan (2035 WWMP) prepared in 2008, with updated flows using GPU land uses. This TM includes the following Sections:

- Summary
  - Existing Sewer and Wastewater Treatment Facilities
  - Flow Projection Summary by Development Area
  - Flow Projection Summary by System
  - Required New Infrastructure Evaluations Summary
  - Approximate Regional Wastewater Control Facility Flows
  - Infrastructure Cost Evaluation Summary
- Existing Sewer and Wastewater Treatment Facilities
  - Sewer System
  - Regional Wastewater Control Facility
- Wastewater Flow Estimates by Development Area
  - GPU Land Uses by Development Area
  - Wastewater Flow Factors
  - Average Dry Weather Flows by Development Area
  - Peak Hour Wet Weather Flows by Development Area
- Comparison of GPU 2040 and 2035 WWMP Flows and Costs
- Regional Wastewater Control Facility Flows and Costs
- Recommended Future Actions
  - Sewer System
  - Regional Wastewater Control Facility

The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

## **SUMMARY**

Figure 1 shows the 2040 land uses based on the GPU. Figure 2 shows the City's wastewater sub-collection system boundaries, and Figure 3 show the existing pipelines and pump stations that comprise the wastewater collection systems. The basis of the summary data is presented in the sections following the summary, and the General Plan Update buildout land use map is provided in Attachment A.

### **Existing Sewer and Wastewater Treatment Facilities**

The City's sewer system is shown on Figure 3 and includes approximately 914 miles of gravity sewers and force mains (pressure pipelines) ranging from less than 6-inches to 72-inches in diameter and 28 sewer pump stations<sup>1</sup>. The sewer system generally flows from the north, east, and south to the Stockton Regional Wastewater Control Facility (RWCF), where it is treated and discharged to the San Joaquin River.

### **Flow Projection Summary by Development Area**

The estimated average dry weather flow (ADWF) and peak hour wet weather flow (PHWWF) for the collection system are summarized in Table 1. Based on land use information from the GPU and standard flow factors, the total estimated ADWF used for collection system planning is estimated to increase from about 37 million gallons per day (mgd) for existing land uses to 60 mgd for the 2040 land uses. The total PHWWF used for collection system planning is estimated to increase from about 80 mgd for existing land uses to 132 mgd for the 2040 land uses. The total of all flows used for planning collection system facilities is substantively higher than actual existing flows at the RWCF due to the need for conservative planning of collection system flows to minimize the potential for wastewater overflows.

### **Flow Projection Summary by System**

As described in the 2035 WWMP, the City's sewer system was divided into 10 existing sub-collection systems (Systems 1 through 10) and four future sub-collection systems (Systems 12 through 15). The Systems are shown on Figure 2. Improvements were identified for each of the Systems. In general, the 2040 ADWF for each System is lower than the ADWFs developed for the 2035 WWMP, which were based on buildout of the 2035 General Plan. There are three exceptions where the 2040 flows are higher than those projected in the 2035 WWMP (System 5 – serving the downtown area, System 10, and System 12). No flow from System 15 is anticipated by 2040, and about half the previously planned flow is anticipated in Systems 9, and 13.

<sup>1</sup> City of Stockton Sewer System Management Plan 2016-2020; January 2016, City of Stockton.

<b>Table 1. Summary of Wastewater Flow Estimates for Collection System Planning</b>			
Land Use	Flow, mgd		
	Existing	Net New	2040
<b>Average Dry Weather Flow</b>			
Study Areas	1.4	3.6	5.1
Approved/Pending Development Projects Within City Limit	0.1	7.1	7.2
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.0	8.3	8.3
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	35.6	3.6	39.1
<b>Total</b>	<b>37.1</b>	<b>22.5</b>	<b>59.7</b>
<b>Peak Hour Wet Weather Flow</b>			
Study Areas	8.3	10.1	18.4
Approved/Pending Development Projects Within City Limit	2.6	18.0	20.6
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.0	19.0	19.0
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	68.6	5.6	74.2
<b>Total</b>	<b>79.5</b>	<b>52.7</b>	<b>132.1</b>

## Required New Infrastructure Evaluations Summary

The infrastructure evaluations were developed by:

- Estimating the ADWFs for the GPU 2040 level of development by sewer sub-collection system.
- Comparing the 2040 estimated ADWFs with the ADWFs in the 2035 WWMP, which were based on full buildout the 2035 General Plan.
- Using changes in projected flows for each sub-collection system as an indicator of how costs associated with the required infrastructure needed for the 2040 level of development would compare to the infrastructure identified in the 2035 WWMP, adjusted based on the nature of growth and planned infrastructure for each area.

The improvements anticipated within existing Systems 1, 2, 4, and 7, and future System 12 are not expected to change as a result of the GPU. Improvements needed within the other systems are expected to change as follows:

- System 3: Slightly fewer trunk sewer improvements are likely to be needed as the projected flows are reduced. The Smith Canal Pump Station, which is shared with Systems 2 and 9, will still require capacity upgrades and force main improvements. While the ultimate design flow may be slightly lower, this is unlikely to significantly reduce the cost of the needed improvements.
- System 5: The projected flows are about 30 percent higher, which may affect the size of some future improvements. The future Lincoln Street Pump Station and force main will also need to have a slightly higher capacity than previously planned.
- System 6: Lower projected flows will result in some reduction in future costs for planned upsizing and sewer extensions. The planned pump station needed for the eastern portion of System 6 would be slightly larger.
- System 8: Fewer trunk sewer upsizing projects and extensions into new service area will be needed by 2040 than previously identify for 2035 buildout.
- System 9: Some of the planned trunk sewer extensions into new service area may not be needed, and it is likely that none of the previously identified upsizing projects will be needed by 2040. The future Newton Road Pump Station would be somewhat smaller.
- System 10: Many of the previously identify trunk sewer extension have been constructed, so the projected costs will be lower. System 10 shares the 14-Mile Slough Pump Station with Systems 1, 2 and 15. Due to changes in growth planned for Systems 10 and 15, the 2040 capacity required at 14-Mile Slough Pump Station would be about 65 percent of the previously identified build-out flow. (No flow is anticipated from System 15 by 2040.)

- System 13: New pipelines and pump stations are required to serve this new service area. 2040 flows are about one half of the previously projected buildout flows, so the size of pump stations and some pipelines improvements will be less. The quantity (and cost) of infrastructure will be related to the size of new service area being added, and to the relative timing of development in the western portion versus the eastern portion. Development to the east in advance of development in the western portion will have disproportionately higher sewer infrastructure improvements due to the need to extend the collection system into the new service area.
- System 14: Most previously anticipated growth will not occur by 2040, and the infrastructure already constructed will not require improvements. The relevant facilities include the Weston Ranch Pump Station and force mains, which are shared with a portion of System 8.
- System 15: System 15 is not expected to require any sewer service by 2040, so no improvements will be needed.

### Approximate Regional Wastewater Control Facility Flows

The three-month average influent flow entering the RWCF is reported to be 27.0 mgd for May through July 2017<sup>2</sup>. The ADWF and Annual Average flow in 2016 were both 29 mgd, and the maximum month and maximum week flow were 37.7 mgd and 42.1 mgd, respectively<sup>3</sup>. These flow records compare to an ADWF of 37 mgd estimated using land uses and flow factors (above). The flow rate of 37 mgd is intended to be relatively high to reduce potential wastewater overflows in the collection system. Also, the lower reported ADWF from 2016 and 2017 reflect significant reductions from water conservation as well as areas counted as “developed” that are not currently occupied. In the absence of City-wide flow monitoring and additional analysis, adjustments to collection system flow projections are not recommended. For treatment plant planning, the City has adopted a predicted ADWF of 40.2 mgd for 2035 and 46.3 mgd for 2045<sup>4</sup>. The actual ADWF at 2040 will vary depending on the pace of development and changes in water conservation activities.

### Infrastructure Cost Evaluation Summary

Costs presented in the 2008 WWMP were adjusted based on the estimated reduction or increase in flow for each sub-collection system. Collection system total project costs associated with growth are predicted to be about \$727 million in 2007 dollars, with an additional \$67 million in 2007 dollars to address existing deficiencies. Costs for improvements at the RWCF through 2040 were not adjusted from the estimate prepared in 2011 for the Capital Improvement and Energy Management Plan, which totaled \$221 million in 2011 dollars. All costs estimates are planning level estimates based on broad assumptions and limited information, and do not necessarily reflect the economic conditions at the time a project is constructed.

<sup>2</sup> Source: State of California CIWQS Data (self-monitoring reports); <http://ciwqs.waterboards.ca.gov>

<sup>3</sup> Source: Stockton RWCF Design Build Project; “Advanced Package 3a & 3b” of the Basis of Design Report; AECOM, October 2017.

<sup>4</sup> Ibid.

## EXISTING SEWER AND WASTEWATER TREATMENT FACILITIES

These descriptions of the existing sewer system and RWCF are based on the 2035 Wastewater Master Plan (2035 WWMP), which was prepared to identify how to collect and treat the wastewater flows from buildout of the 2035 General Plan. Additionally, these descriptions are updated based on discussions with City staff.

### Sewer System

As described in the 2035 WWMP, the City's sewer system is divided into 10 existing sub-collection systems (Systems 1 through 10) and four future sub-collection systems (Systems 12 through 15). There is no System 11. A System comprises a relatively large area that is generally tributary to a single major trunk sewer or flow route to the RWCF. System 15 will remain undeveloped at 2040, based on the GPU. The boundaries of the Systems referenced throughout this TM are shown on Figure 2.

The area labeled as System 90 is not served by the City's sewer system. Collection system planning does not incorporate flows from the area as there is no plan to connect it to the City's sewer in the future.

The City's wastewater collection infrastructure is shown on Figure 3. The sewer system generally flows from the north, east, and south toward the RWCF located on Navy Drive adjacent to the San Joaquin River. The City's sewer system, based on GIS mapping includes approximately 30 miles of force mains (pressure sewers) and 884 miles of gravity sewers<sup>5</sup>. The gravity sewers receive flow from approximately 554 miles of services laterals currently in use. The gravity sewers and force mains range in size from less than 6 inches to 72 inches in diameter. There are 28 pump stations (also shown on Figure 3) that range in capacity from 0.46 to 21.6 mgd. The capacity of each pump station is normally expressed in terms of firm capacity, which is the capacity with the largest pump on standby as a backup pump.

The wastewater infrastructure is of various ages and conditions. The City conducts regular inspection, maintenance and repairs to address deterioration and keep the system operational. Maintenance practices for the collection system are documented in the Sewer System Management Plan 2016-2020, prepared by the City in compliance with the requirements of the State Water Resources Control Board (SWRCB) Order No. 2006-003-DWQ, Statewide General Waste Discharge Requirement (WDR), dated May 2, 2006.

### Regional Wastewater Control Facility

Figure 3 depicts the location of the RWCF in relation to the collection systems. The RWCF is located on the San Joaquin River and consists of the main treatment plant, which has a design ADWF of 48 mgd, and the tertiary treatment plant, which has a designed ADWF and permitted capacity of 55 mgd. The tertiary treatment plant includes approximately 630 acres of facultative oxidation ponds surrounded by distribution canals and groundwater interceptor ditches; an engineered wetland; disinfection facilities; and a river outfall discharge system<sup>6</sup>. Solids are treated by anaerobic digestion,

<sup>5</sup> City of Stockton Sewer System Management Plan 2016-2020; January 2016, City of Stockton.

<sup>6</sup> Ibid.

dewatered, and disposed of off-site. Effluent is discharged into the San Joaquin River adjacent to the RWCF.

Past and current flows to the RWCF are summarized below:

- 1997 ADWF: 28.4 mgd
- 2000 ADWF: 31.6 mgd
- 2005 ADWF: 35.0 mgd
- 2016 ADWF: 29.0 mgd
- 2017 ADWF (based on May, June, July): 27.0 mgd (a recent decrease in wastewater flows has occurred in many cities in California and is generally attributed to the recent drought, associated mandated water conservation, and the economic recession).

The RWCF discharges treated water to the Sacramento/San Joaquin River Delta in accordance with National Pollutant Discharge Elimination System (NPDES) permit No. CA0079138, State Water Resources Control Board Order R5-2014-0070-03. A major upgrade to the RWCF is currently in design that will improve the headworks and secondary treatment system as part of a long-term plan to address rehabilitation and replacement needs while improving treatment reliability and upgrading to provide the currently permitted capacity of 55 mgd.

## **WASTEWATER FLOW ESTIMATES BY DEVELOPMENT AREA**

Wastewater flow projections were calculated using two different methodologies. The first was based on summary data tables developed by Placeworks listing the land uses in each GPU Study Area and planned development projects (Development Areas). Projections were also developed for each wastewater collection System, as described later in this TM, to facilitate an update to the 2035 WWMP infrastructure cost analysis.

### **GPU Land Uses by Development Area**

The land use data provided by Placeworks is presented in Attachment A (including the buildout land use map, dwelling unit data, acreage data, and 2040 percent development data). The land use data was reorganized to facilitate application of wastewater flow factors. The reorganized data is provided in Table 2, which includes existing land use, net new land use for 2040, and 2040 land use. For single family and multi-family residential land uses, Table 2 includes both dwelling unit data and acreage data. For commercial and industrial land uses, Table 2 includes only acreage data.

### **Wastewater Flow Factors**

The 2035 WWMP provided flow factors for both existing land uses (Table 2-10 of the WWMP) and for future land uses (Table 2-11 of the WWMP) for use in estimating flow in the sewer system. Flow factors used for estimating sewer system flows are intentionally conservative, meaning they are intended to result in predicted flows that are higher than the corresponding actual flows, to allow for a range of different flow rates within a land use category. For example, actual commercial flows will generally range from very low for rental storage units to very high for restaurants. To allow for this range of actual flows, conservative (high) flow factors are used for estimating collection system flows in order to reduce the risk of undersized sewers and associated wastewater outflows.

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Table 2. Land Use Data

Study Area or Development Name	Single Family (Dwelling Units)			Single Family (Gross Acres)			Multi Family (Dwelling Units)			Multi Family (Gross Acres)			Commercial (Gross Acres)			Industrial (Gross Acres)			Total Area (Gross Acres)		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																					
Study Area 1 - Eight Mile Rd Area	121	1,379	1,500	17.2	232.1	249.3	96	1,198	1,294	8.4	73.2	81.6	17.9	0.6	18.5	4.0	0.0	4.0	48	306	353
Study Area 2 - Pacific Ave Corridor	22	0	22	5.8	0.0	5.8	114	110	224	4.3	5.9	10.3	114.9	4.5	119.4	0.1	0.0	0.1	125	10	136
Study Area 3 - West Ln and Alpine Rd Area	208	77	285	51.6	68.8	120.3	94	680	774	7.3	37.4	44.7	66.9	7.7	74.6	68.1	0.0	68.1	194	114	308
Study Area 4 - Port/Waterfront	54	17	71	10.6	15.0	25.6	288	1,770	2,058	10.7	33.4	44.2	9.5	3.7	13.2	55.4	6.9	62.4	86	59	145
Study Area 5 - El Dorado/Center Corridors	45	0	45	7.4	0.0	7.4	359	1,196	1,555	10.3	21.5	31.9	7.7	2.3	9.9	12.4	0.0	12.4	38	24	62
Study Area 6 - Miner/Weber Corridors	47	0	47	5.9	0.0	5.9	219	1,248	1,467	6.0	22.5	28.5	5.7	4.2	9.9	9.0	0.0	9.0	27	27	53
Study Area 7 - Wilson Way Corridor	12	0	12	2.2	0.0	2.2	6	234	240	0.3	8.6	8.9	0.8	6.4	7.2	18.7	0.0	18.7	22	15	37
Study Area 8 - I-5/Highway 4 Interchange	8	0	8	1.4	0.0	1.4	1	659	660	0.2	47.5	47.7	0.7	1.1	1.8	16.5	0.0	16.5	19	49	67
Study Area 9 - Railroad Corridor at California St	19	0	19	3.1	0.0	3.1	23	1,340	1,363	1.7	24.1	25.7	4.4	1.9	6.3	8.7	0.0	8.7	18	26	44
Study Area 10 - I-5 and Charter Way Area	228	86	314	57.1	77.2	134.3	29	98	127	5.1	5.3	10.4	25.7	3.2	28.9	5.8	3.4	9.2	94	89	183
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	5	0	5	0.4	0.0	0.4	0	396	396	0.0	9.7	9.7	2.8	0.5	3.3	0.0	0.0	0.0	3	10	13
Study Area 12 - Airport Way Corridor	53	0	53	9.6	0.0	9.6	4	108	112	0.4	5.9	6.3	4.3	12.7	17.0	111.9	16.4	128.3	126	35	161
Study Area 13 - Mariposa and Charter Area	12	0	12	5.3	0.0	5.3	77	0	77	7.4	0.0	7.4	5.2	1.9	7.2	0.0	0.0	0.0	18	2	20
Study Area 14 - East Weston Ranch	1	0	1	1.5	0.0	1.5	0	0	0	0.0	0.0	0.0	1.2	18.5	19.8	0.0	0.0	0.0	3	19	21
Study Area 15 - South of French Camp Rd	89	0	89	100.9	0.0	100.9	9	0	9	7.6	0.0	7.6	0.0	0.0	0.0	0.1	0.0	0.1	109	0	109
Study Area 16 - E French Camp Rd Area	59	0	59	163.6	0.0	163.6	4	0	4	11.4	0.0	11.4	0.1	0.0	0.1	0.2	0.0	0.2	175	0	175
<b>Subtotal (Study Areas)</b>	<b>983</b>	<b>1,558</b>	<b>2,541</b>	<b>443.4</b>	<b>393.0</b>	<b>836.5</b>	<b>1,323</b>	<b>9,036</b>	<b>10,359</b>	<b>81.4</b>	<b>294.8</b>	<b>376.2</b>	<b>267.8</b>	<b>69.3</b>	<b>337.1</b>	<b>310.8</b>	<b>26.7</b>	<b>337.5</b>	<b>1,103</b>	<b>784</b>	<b>1,887</b>
<b>Approved/Pending Development Projects Within City Limit</b>																					
Westlake Villages	0	2,630	2,630	0.0	680.0	680.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	680	680
Delta Cove	0	1,164	1,164	0.0	132.7	132.7	0	381	381	0.0	47.6	47.6	0.0	2.6	2.6	0.0	0.0	0.0	0	183	183
North Stockton Projects III	235	2,220	2,455	38.0	355.0	393.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38	355	393
Cannery Park	0	981	981	0.0	272.0	272.0	0	210	210	0.0	16.0	16.0	0.0	104.0	104.0	0.0	0.0	0.0	0	392	392
Nor Cal Logistics Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0
Crystal Bay	0	951	951	0.0	19.4	19.4	0	392	392	0.0	78.7	78.7	0.0	0.0	0.0	0.0	0.0	0.0	0	98	98
Sanctuary	0	5,452	5,452	0.0	1,026.0	1,026.0	0	1,618	1,618	0.0	67.4	67.4	0.0	35.5	35.5	0.0	0.0	0.0	0	1,129	1,129
Tidewater Crossing	310	-310	0	869.6	-869.6	0.0	0	0	0	0.0	0.0	0.0	0.0	16.0	16.0	0.0	0.0	0.0	870	-854	16
Open Window	0	0	0	0.0	0.0	0.0	11	1,739	1,750	0.0	14.9	14.9	16.1	-1.3	14.9	0.0	0.0	0.0	16	14	30
Weston Ranch Town Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	41.5	41.5	0.0	0.0	0.0	0	41	41
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>545</b>	<b>13,088</b>	<b>13,633</b>	<b>907.6</b>	<b>1,615.5</b>	<b>2,523.1</b>	<b>11</b>	<b>4,340</b>	<b>4,351</b>	<b>0.0</b>	<b>224.6</b>	<b>224.6</b>	<b>16.1</b>	<b>198.3</b>	<b>214.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>924</b>	<b>2,038</b>	<b>2,962</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																					
Mariposa Lakes	5	8,955	8,960	151.0	939.3	1,090.3	3	1,553	1,556	0.0	585.0	585.0	0.0	150.0	150.0	0.0	0.0	0.0	151	1,674	1,825
Airpark 599	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	128.0	128.0	0.0	0.0	0.0	0	128	128
Tra Vigne	0	1,244	1,244	0.0	846.4	846.4	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	846	846
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>5</b>	<b>10,199</b>	<b>10,204</b>	<b>151.0</b>	<b>1,785.7</b>	<b>1,936.7</b>	<b>3</b>	<b>1,553</b>	<b>1,556</b>	<b>0.0</b>	<b>585.0</b>	<b>585.0</b>	<b>0.0</b>	<b>278.0</b>	<b>278.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>151</b>	<b>2,649</b>	<b>2,800</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	76,463	1,501	77,964	18,494	1,694	20,188	33,183	0	33,183	2,395	0	2,395	683	0	683	2,230	0	2,230	23,802	1,694	25,496
<b>Grand Total</b>	<b>77,996</b>	<b>26,346</b>	<b>104,342</b>	<b>19,996</b>	<b>5,488</b>	<b>25,484</b>	<b>34,520</b>	<b>14,929</b>	<b>49,449</b>	<b>2,476</b>	<b>1,104</b>	<b>3,581</b>	<b>967</b>	<b>546</b>	<b>1,513</b>	<b>2,541</b>	<b>27</b>	<b>2,567</b>	<b>25,980</b>	<b>7,165</b>	<b>33,145</b>



The flow factors used in this GPU wastewater estimate are summarized in Table 3, and include factors for single family residential, multi-family residential, commercial, and industrial for both existing land uses and for future land uses. Flow projected for 2040 is based on both sets of factors, those listed under “Flow Factors for Existing Development Areas” are applied to currently developed areas, and those listed under “Flow Factors for Areas Planned for Future Development” are applied to currently undeveloped areas where growth is planned. A limited number of industries that produce flows well in excess of the flow that would be predicted using the standard flow factors are considered on a case-by-case basis in the 2035 WWMP.

### **Average Dry Weather Flows by Development Area**

The ADWF estimates for the Development Areas are calculated in Table 4. The ADWFs are calculated by multiplying the land use (in terms of acres or residential dwelling units) by the appropriate flow factor. The following ADWFs are calculated for existing, net new, and 2040 flows using the land use data and flow factors adopted for collection system planning:

- ADWF from exiting land uses: 37.1 mgd
- ADWF from net growth between 2017 and 2040: 22.5 mgd
- ADWF from 2040 land uses: 59.7 mgd

The average of the actual May, June, and July 2017 daily flows entering the RWCF was 27.0 mgd<sup>7</sup>. The ADWF estimated using land use data and flow factors of 37.1 mgd is 37 percent higher than the actual flow into the RWCF. As discussed above, the flow factors used in estimating the ADWFs for sewer system planning and sizing are intentionally conservative (high). It is likely that flows observed in the summer of 2017 reflect substantive residual water conservation efforts that were initiated during the recent drought and continue to result in lower than historical wastewater flows. To the extent such conservation efforts are not permanent, flows from existing users can be expected to rebound to higher values in the future, even in the absence of growth. In addition, it is likely that a portion of the areas identified as “developed” are not fully occupied. Therefore, the ratio of the total of estimated flows used in collection system planning compared to actual current dry weather flow at the treatment plant is appropriate and expected.

<sup>7</sup> California Integrated Water Quality System Project (CIWQS); State of California ([https://www.waterboards.ca.gov/water\\_issues/programs/ciwqs/publicreports.shtml](https://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.shtml)).

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<b>Table 3. Sewer Flow Factors for Existing and Future Development<sup>(a)</sup></b>		
<b>Land Use Category</b>	<b>Flow Factor</b>	<b>Units</b>
Flow Factors for Existing Development Areas from Table 2-10 from City of Stockton 2035 Wastewater Master Plan (West Yost, October 2008)		
Single Family Residential	240	gpd/DU
Multi-Family Residential	5,568	gpd/acre
Commercial	1,100	gpd/acre
Industrial	1,400	gpd/acre
Flow Factors for Areas Planned for Future Development Table 2-11 from City of Stockton 2035 Wastewater Master Plan (West Yost, October 2008)		
<b>Land Use Category</b>	<b>Flow Factor</b>	<b>Units</b>
Single Family Residential	2,100	gpd/acre
Multi-Family Residential	6,800	gpd/acre
Multi-Family Residential (Downtown)	20,400	gpd/acre
Commercial	2,000	gpd/acre
Industrial	3,000	gpd/acre
<sup>(a)</sup> Flow projected for 2040 is based on both sets of factors, those listed under "Flow Factors for Existing Development Areas" are applied to currently developed areas, and those listed under "Flow Factors for Areas Planned for Future Development" are applied to currently undeveloped areas where growth is planned.		

Table 4. Average Dry Weather Flows

Study Area Name	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>															
Study Area 1 - Eight Mile Rd Area	29,040	487,393	516,433	46,908	497,555	544,462	19,657	1,206	20,863	5,646	0	5,646	101,250	986,154	1,087,404
Study Area 2 - Pacific Ave Corridor	5,280	0	5,280	24,200	40,178	64,378	126,441	8,988	135,429	133	0	133	156,053	49,166	205,220
Study Area 3 - West Ln and Alpine Rd Area	49,920	144,416	194,336	40,643	254,176	294,819	73,591	15,467	89,058	95,319	0	95,319	259,473	414,059	673,532
Study Area 4 - Port/Waterfront	12,960	31,467	44,427	59,819	568,150	627,969	10,468	7,354	17,822	77,579	20,835	98,415	160,827	627,806	788,633
Study Area 5 - El Dorado/Center Corridors	10,800	0	10,800	57,590	243,022	300,612	8,421	4,512	12,933	17,295	0	17,295	94,106	247,534	341,640
Study Area 6 - Miner/Weber Corridors	11,280	0	11,280	33,641	305,728	339,369	6,255	8,397	14,652	12,541	0	12,541	63,717	314,125	377,842
Study Area 7 - Wilson Way Corridor	2,880	0	2,880	1,725	58,166	59,891	904	12,811	13,715	26,136	0	26,136	31,645	70,977	102,622
Study Area 8 - I-5/Highway 4 Interchange	1,920	0	1,920	952	322,974	323,926	736	2,231	2,967	23,053	0	23,053	26,662	325,204	351,866
Study Area 9 - Railroad Corridor at California St	4,560	0	4,560	9,306	163,656	172,962	4,848	3,728	8,577	12,230	0	12,230	30,945	167,385	198,329
Study Area 10 - I-5 and Charter Way Area	54,720	162,109	216,829	28,322	35,797	64,119	28,243	6,402	34,646	8,052	10,205	18,258	119,337	214,514	333,851
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	1,200	0	1,200	0	65,753	65,753	3,057	1,088	4,146	0	0	0	4,257	66,842	71,099
Study Area 12 - Airport Way Corridor	12,720	0	12,720	2,450	39,984	42,434	4,687	25,449	30,135	156,707	49,097	205,804	176,564	114,530	291,094
Study Area 13 - Mariposa and Charter Area	2,880	0	2,880	41,329	0	41,329	5,746	3,871	9,617	0	0	0	49,955	3,871	53,826
Study Area 14 - East Weston Ranch	240	0	240	0	0	0	1,359	37,076	38,436	0	0	0	1,599	37,076	38,676
Study Area 15 - South of French Camp Rd	21,360	0	21,360	42,496	0	42,496	0	0	0	114	0	114	63,970	0	63,970
Study Area 16 - E French Camp Rd Area	14,160	0	14,160	63,629	0	63,629	161	0	161	328	0	328	78,278	0	78,278
<b>Subtotal (Study Areas)</b>	<b>235,920</b>	<b>825,385</b>	<b>1,061,305</b>	<b>453,009</b>	<b>2,595,141</b>	<b>3,048,150</b>	<b>294,576</b>	<b>138,580</b>	<b>433,157</b>	<b>435,134</b>	<b>80,138</b>	<b>515,272</b>	<b>1,418,640</b>	<b>3,639,243</b>	<b>5,057,883</b>
<b>Approved/Pending Development Projects Within City Limit</b>															
Westlake Villages	0	1,428,000	1,428,000	0	0	0	0	0	0	0	0	0	0	1,428,000	1,428,000
Delta Cove	0	278,733	278,733	0	323,612	323,612	0	5,160	5,160	0	0	0	0	607,505	607,505
North Stockton Projects III	56,400	745,500	801,900	0	0	0	0	0	0	0	0	0	56,400	745,500	801,900
Cannery Park	0	571,200	571,200	0	108,800	108,800	0	208,000	208,000	0	0	0	0	888,000	888,000
Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	0	40,740	40,740	0	535,160	535,160	0	0	0	0	0	0	0	575,900	575,900
Sanctuary	0	2,154,600	2,154,600	0	458,320	458,320	0	71,060	71,060	0	0	0	0	2,683,980	2,683,980
Tidewater Crossing	74,400	-74,400	0	0	0	0	0	32,000	32,000	0	0	0	74,400	-42,400	32,000
Open Window	0	0	0	0	101,162	101,162	17,739	-1,375	16,364	0	0	0	17,739	99,787	117,527
Weston Ranch Town Center	0	0	0	0	0	0	0	82,902	82,902	0	0	0	0	82,902	82,902
<b>Subtotal (Approved/Pending Development Projects Within City Limit)</b>	<b>130,800</b>	<b>5,144,373</b>	<b>5,275,173</b>	<b>0</b>	<b>1,527,054</b>	<b>1,527,054</b>	<b>17,739</b>	<b>397,747</b>	<b>415,486</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>148,539</b>	<b>7,069,174</b>	<b>7,217,713</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>															
Mariposa Lakes <sup>(a)</sup>	0	1,972,530	1,972,530	0	3,978,000	3,978,000	0	300,000	300,000	0	0	0	0	6,250,530	6,250,530
Airpark 599	0	0	0	0	0	0	0	256,000	256,000	0	0	0	0	256,000	256,000
Tra Vigne	0	1,777,541	1,777,541	0	0	0	0	0	0	0	0	0	0	1,777,541	1,777,541
<b>Subtotal (Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence)</b>	<b>0</b>	<b>3,750,071</b>	<b>3,750,071</b>	<b>0</b>	<b>3,978,000</b>	<b>3,978,000</b>	<b>0</b>	<b>556,000</b>	<b>556,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,284,071</b>	<b>8,284,071</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	18,351,120	3,557,377	21,908,497	13,334,753	0	13,334,753	751,613	0	751,613	3,121,617	0	3,121,617	35,559,103	3,557,377	39,116,479
<b>Grand Total</b>	<b>18,717,840</b>	<b>13,277,205</b>	<b>31,995,045</b>	<b>13,787,762</b>	<b>8,100,195</b>	<b>21,887,957</b>	<b>1,063,929</b>	<b>1,092,327</b>	<b>2,156,255</b>	<b>3,556,751</b>	<b>80,138</b>	<b>3,636,889</b>	<b>37,126,282</b>	<b>22,549,865</b>	<b>59,676,147</b>

<sup>(a)</sup> Small amount of existing development accounts for zero flow since the collection system is not yet constructed.

## Peak Hour Wet Weather Flows by Development Area

The Peak Hour Wet Weather Flows estimates (PHWWFs) for sewer design purposes are the sum of the ADWF and the Infiltration and Inflow (I&I) multiplied by a peaking factor<sup>8</sup>.

- Derivation of ADWF was discussed above.
- I&I accounts for rainfall and groundwater that enters the sewer systems during storm events. The I&I is estimated by multiplying the land use area by the I&I factor (400 gallons per day per acre). The estimated I&I flows are presented in Table 5.
- The peaking factor is multiplied by the sum of the ADWF and I&I flows. The peaking factor accounts for variations in the flow during the daily cycle of activity. For example, on weekdays, the residential ADWFs are typically highest in the morning as people wake up and getting ready to go to work. Commercial and industrial ADWFs are often highest in the day time when many people are at work. The peaking factor accounts for the variation in flows during the daily cycle and the aggregate effect of differences in flow patterns from different land uses. The peaking factor is dependent on the total ADWF, and as the ADWF increases, the peaking factor decreases. Peaking factors are calculated in Table 6 using the equations from the City's design standards and reported on page 2-19 of the 2035 WWMP. The maximum allowed peaking factor is 5.0. Where a study area comprises multiple independent sewer sub-sheds, the listed aggregate peaking factor is lower than the peaking factor that would be applied to individual sub-sheds.
- The PHWWF presented in Table 7 is calculated by multiplying the peaking factor by the sum of the ADWF and I&I flows for the existing land uses and for the 2040 land uses. The net new PHWWFs are the difference between the 2040 values and the existing values. These PHWWFs are used to size sewer system pipelines and pump stations.

A more thorough flow study and calibrated model would be needed for a more reliable estimate of PHWWFs based on historical flow patterns and I&I measurements throughout the collection system. The City has projected that the PHWWF at the RWCF will be 104.5 mgd in 2035 and 120.5 mgd in 2045<sup>9</sup>. Assuming linear growth from 2035 to 2045, the corresponding PHWWF for 2040 would be 112.5 mgd.

As stated above, the flow estimates presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these flow estimates should be refined and updated through detailed evaluations of each specific development project.

<sup>8</sup> Standard Drawing No. S-1, City of Stockton, 2016.  
([http://www.stocktongov.com/files/Standard\\_Drawings\\_2016.pdf](http://www.stocktongov.com/files/Standard_Drawings_2016.pdf))

<sup>9</sup> Source: Stockton RWCF Design Build Project; "Advanced Package 3a & 3b" of the Basis of Design Report; AECOM, October 2017.

Table 5. Infiltration and Inflow

Study Area Name	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>															
Study Area 1 - Eight Mile Rd Area	6,887	92,837	99,723	3,370	29,268	32,638	7,148	241	7,389	1,613	0	1,613	19,018	122,346	141,363
Study Area 2 - Pacific Ave Corridor	2,315	0	2,315	1,738	2,363	4,102	45,979	1,798	47,776	38	0	38	50,070	4,161	54,231
Study Area 3 - West Ln and Alpine Rd Area	20,622	27,508	48,130	2,920	14,952	17,871	26,760	3,093	29,854	27,234	0	27,234	77,536	45,553	123,089
Study Area 4 - Port/Waterfront	4,243	5,994	10,237	4,297	13,368	17,666	3,807	1,471	5,277	22,166	2,778	24,944	34,513	23,611	58,123
Study Area 5 - El Dorado/Center Corridors	2,953	0	2,953	4,137	8,612	12,749	3,062	902	3,964	4,941	0	4,941	15,094	9,514	24,608
Study Area 6 - Miner/Weber Corridors	2,343	0	2,343	2,417	8,992	11,409	2,275	1,679	3,954	3,583	0	3,583	10,618	10,671	21,289
Study Area 7 - Wilson Way Corridor	879	0	879	124	3,422	3,545	329	2,562	2,891	7,468	0	7,468	8,799	5,984	14,783
Study Area 8 - I-5/Highway 4 Interchange	550	0	550	68	18,998	19,067	268	446	714	6,587	0	6,587	7,473	19,445	26,917
Study Area 9 - Railroad Corridor at California St	1,226	0	1,226	669	9,627	10,295	1,763	746	2,509	3,494	0	3,494	7,152	10,373	17,525
Study Area 10 - I-5 and Charter Way Area	22,849	30,878	53,727	2,035	2,106	4,140	10,270	1,280	11,551	2,301	1,361	3,661	37,455	35,625	73,080
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	151	0	151	0	3,868	3,868	1,112	218	1,329	0	0	0	1,262	4,086	5,348
Study Area 12 - Airport Way Corridor	3,828	0	3,828	176	2,352	2,528	1,704	5,090	6,794	44,773	6,546	51,320	50,481	13,988	64,469
Study Area 13 - Mariposa and Charter Area	2,103	0	2,103	2,969	0	2,969	2,090	774	2,864	0	0	0	7,161	774	7,936
Study Area 14 - East Weston Ranch	606	0	606	0	0	0	494	7,415	7,910	0	0	0	1,100	7,415	8,515
Study Area 15 - South of French Camp Rd	40,351	0	40,351	3,053	0	3,053	0	0	0	33	0	33	43,436	0	43,436
Study Area 16 - E French Camp Rd Area	65,459	0	65,459	4,571	0	4,571	59	0	59	94	0	94	70,183	0	70,183
<b>Subtotal (Study Areas)</b>	<b>177,364</b>	<b>157,216</b>	<b>334,580</b>	<b>32,544</b>	<b>117,927</b>	<b>150,471</b>	<b>107,119</b>	<b>27,716</b>	<b>134,835</b>	<b>124,324</b>	<b>10,685</b>	<b>135,009</b>	<b>441,351</b>	<b>313,544</b>	<b>754,895</b>
<b>Approved/Pending Development Projects Within City Limit</b>															
Westlake Villages	0	272,000	272,000	0	0	0	0	0	0	0	0	0	0	272,000	272,000
Delta Cove	0	53,092	53,092	0	19,036	19,036	0	1,032	1,032	0	0	0	0	73,160	73,160
North Stockton Projects III	15,200	142,000	157,200	0	0	0	0	0	0	0	0	0	15,200	142,000	157,200
Cannery Park	0	108,800	108,800	0	6,400	6,400	0	41,600	41,600	0	0	0	0	156,800	156,800
Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	0	7,760	7,760	0	31,480	31,480	0	0	0	0	0	0	0	39,240	39,240
Sanctuary	0	410,400	410,400	0	26,960	26,960	0	14,212	14,212	0	0	0	0	451,572	451,572
Tidewater Crossing	347,848	-347,848	0	0	0	0	0	6,400	6,400	0	0	0	347,848	-341,448	6,400
Open Window	0	0	0	0	5,951	5,951	6,451	-500	5,951	0	0	0	6,451	5,451	11,901
Weston Ranch Town Center	0	0	0	0	0	0	0	16,580	16,580	0	0	0	0	16,580	16,580
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>363,048</b>	<b>646,204</b>	<b>1,009,252</b>	<b>0</b>	<b>89,827</b>	<b>89,827</b>	<b>6,451</b>	<b>79,324</b>	<b>85,775</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>369,499</b>	<b>815,355</b>	<b>1,184,854</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>															
Mariposa Lakes	60,400	375,720	436,120	0	234,000	234,000	0	60,000	60,000	0	0	0	60,400	669,720	730,120
Airpark 599	0	0	0	0	0	0	0	51,200	51,200	0	0	0	0	51,200	51,200
Tra Vigne	0	338,579	338,579	0	0	0	0	0	0	0	0	0	0	338,579	338,579
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>60,400</b>	<b>714,299</b>	<b>774,699</b>	<b>0</b>	<b>234,000</b>	<b>234,000</b>	<b>0</b>	<b>111,200</b>	<b>111,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60,400</b>	<b>1,059,499</b>	<b>1,119,899</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	7,397,586	677,596	8,075,182	957,956	0	957,956	273,314	0	273,314	891,891	0	891,891	9,520,747	677,596	10,198,343
<b>Grand Total</b>	<b>7,998,399</b>	<b>2,195,315</b>	<b>10,193,714</b>	<b>990,500</b>	<b>441,754</b>	<b>1,432,254</b>	<b>386,883</b>	<b>218,240</b>	<b>605,123</b>	<b>1,016,215</b>	<b>10,685</b>	<b>1,026,900</b>	<b>10,391,997</b>	<b>2,865,994</b>	<b>13,257,991</b>

<b>Table 6. Peaking Factors</b>		
Study Area Name	Peaking Factor	
	<i>Existing</i>	<i>2040</i>
<b>Study Areas</b>		
Study Area 1 - Eight Mile Rd Area	5.0	2.5
Study Area 2 - Pacific Ave Corridor	4.3	3.9
Study Area 3 - West Ln and Alpine Rd Area	3.6	2.7
Study Area 4 - Port/Waterfront	4.2	2.6
Study Area 5 - El Dorado/Center Corridors	5.0	3.3
Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	5.0	3.2
Study Area 7 - Wilson Way Corridor	5.0	4.9
Study Area 8 - I-5/Highway 4 Interchange	5.0	3.3
Study Area 9 - Railroad Corridor at California St	5.0	4.0
Study Area 10 - I-5 and Charter Way Area	4.7	3.3
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	5.0	5.0
Study Area 12 - Airport Way Corridor	4.1	3.5
Study Area 13 - Mariposa and Charter Area	5.0	5.0
Study Area 14 - East Weston Ranch <sup>(b)</sup>	5.0	5.0
Study Area 15 - South of French Camp Rd	5.0	5.0
Study Area 16 - E French Camp Rd Area	5.0	5.0
<b>Approved/Pending Development Projects Within City Limit</b>		
Westlake Villages	0.0	2.3
Delta Cove	0.0	2.8
North Stockton Projects III	5.0	2.6
Cannery Park	0.0	2.6
Nor Cal Logistics Center	0.0	0.0
Crystal Bay	0.0	2.8
Sanctuary	0.0	2.1
Tidewater Crossing	5.0	5.0
Open Window <sup>(a)</sup>	5.0	4.7
Weston Ranch Town Center	0.0	5.0
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>		
Mariposa Lakes	0.0	1.9
Airpark 599	0.0	3.6
Tra Vigne <sup>(b)</sup>	0.0	2.2
<b>Remaining City Outside of Study Areas and Outside of Approved/Pending Project</b>	1.5	1.5
<b>RWCF</b>	1.5	1.4
Note: A peaking factor of 0.0 is used for development areas with no existing wastewater flow.		
<sup>(a)</sup> Peaking factors based on City of Stockton 2016 Standard Drawing No. S-1.		
<sup>(b)</sup> As flows combine with flows from onther areas, the applicable peaking factor will be lower than listed.		

## COMPARISON OF GPU 2040 AND 2035 WWMP FLOWS AND COSTS

Wastewater collection infrastructure improvements were grouped by the numbered collection Systems identified in the 2035 WWMP. In order to assess potential changes to the planned facilities resulting from the GPU, it is useful to evaluate the change in projected flows for each System.

A summary of the ADWFs for the current GPU evaluations (2040 ADWF estimates, representing partial build-out) and the 2035 WWMP evaluation (2035 General Plan buildout) is provided in Table 8. As shown, there are significant differences between the 2040 projection and the 2035 WWMP buildout ADWFs. Some of the changes can be attributed to updated land use data and differing flow calculation methodologies, but they provide a reliable indication of the magnitude of differences associated with the new planning horizon and General Plan land use diagram. These differences potentially result in changes to the previously planned sewer system improvements. The changes are discussed in the following paragraphs by System. Costs are planning level estimates of construction cost without contingencies based on Table 8-2 of the 2035 WWMP. The adjusted costs applying the following changes are provided in Table 9:

- System 1: In this System, the change in ADWF is a decrease of 0.1 mgd out of a 2035 WWMP estimated flow of 3.0 mgd (a decrease of 3.0 percent). This small change results in no significant change in the planned sewer system infrastructure for this shed. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 2: In this System, the change in ADWF is a decrease of 1.1 mgd out of a 2035 WWMP estimated flow of 13.6 mgd (a decrease of 7.8 percent). This small change results in no significant change in the planned sewer system infrastructure for this shed. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 3: In this System, the change in ADWF is a decrease of 3.0 mgd out of a 2035 WWMP estimated flow of 10.3 mgd (a decrease of 29 percent). A significant portion of the apparent decrease in projected flow appears to be associated with a revision to the existing conditions land use data. Nevertheless, this change will likely result in a reduction of the planned sewer system improvements, including:
  - Trunk Sewers: All pipeline improvements comprised upsizing of existing pipelines. Approximately 20 percent of the previously estimated cost was associated with existing deficiencies. Based on the reduced estimate of existing flows, a relatively small reduction (10 percent) in the projected trunk sewer costs for this System is warranted.
  - Pump Stations: System 3 shares a major pumping facility with Systems 2 and 9, the Smith Canal Pump Station, which will require major upgrades in the future. One additional small pump station, Kirk and Del Rio (County) Pump Station, is also expected to require upgrades and eventual replacement to accommodate growth. Any change in cost to planned improvements at these pumping facilities attributable to changes in System 3 is expected to be minor and a change in the planning level estimate of costs is not warranted.

The costs associated with System 3 exclude the cost of improvements to Smith Canal Pump Station, which are accounted for separately as a shared facility, below.

Table 7. Peak Hour Wet Weather Flow

Study Area Name	Single Family, gpd		Multi Family, gpd		Commercial, gpd		Industrial, gpd		Total, gpd		
	Existing	2040	Existing	2040	Existing	2040	Existing	2040	Existing	Net New	2040
<b>Study Areas</b>											
Study Area 1 - Eight Mile Rd Area	178,413	1,512,761	249,680	1,416,872	133,116	69,365	36,048	17,822	597,257	2,419,562	3,016,820
Study Area 2 - Pacific Ave Corridor	32,588	29,707	111,288	267,837	739,769	716,544	731	667	884,377	130,377	1,014,754
Study Area 3 - West Ln and Alpine Rd Area	254,870	660,183	157,394	851,391	362,574	323,773	442,788	333,687	1,217,626	951,408	2,169,034
Study Area 4 - Port/Waterfront	73,062	143,852	272,306	1,699,033	60,627	60,789	423,620	324,626	829,615	1,398,686	2,228,300
Study Area 5 - El Dorado/Center Corridors	68,765	45,278	308,635	1,031,654	57,415	55,629	111,183	73,208	545,997	659,771	1,205,769
Study Area 6 - Miner/Weber Corridors	68,115	43,349	180,287	1,116,186	42,651	59,205	80,622	51,308	371,675	898,374	1,270,048
Study Area 7 - Wilson Way Corridor	18,796	18,584	9,245	313,600	6,164	82,092	168,019	166,121	202,224	378,172	580,396
Study Area 8 - I-5/Highway 4 Interchange	12,350	8,051	5,103	1,118,008	5,019	11,997	148,201	96,614	170,673	1,063,998	1,234,670
Study Area 9 - Railroad Corridor at California St	28,932	22,894	49,873	725,072	33,057	43,861	78,623	62,216	190,485	663,557	854,042
Study Area 10 - I-5 and Charter Way Area	364,398	897,701	142,604	226,484	180,925	153,279	48,636	72,727	736,562	613,628	1,350,190
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	6,753	6,753	0	348,105	20,844	27,374	0	0	27,597	354,635	382,232
Study Area 12 - Airport Way Corridor	68,095	57,508	10,806	156,257	26,300	128,341	829,117	893,582	934,318	301,370	1,235,688
Study Area 13 - Mariposa and Charter Area	24,915	24,915	221,488	221,488	39,179	62,406	0	0	285,582	23,228	308,809
Study Area 14 - East Weston Ranch	4,228	4,228	0	0	9,269	231,726	0	0	13,497	222,457	235,954
Study Area 15 - South of French Camp Rd	308,553	308,553	227,745	227,745	0	0	732	732	537,030	0	537,030
Study Area 16 - E French Camp Rd Area	398,096	398,096	341,000	341,000	1,098	1,098	2,109	2,109	742,303	0	742,303
Subtotal (Study Areas)	1,910,929	4,182,412	2,287,455	10,060,733	1,718,006	2,027,478	2,370,429	2,095,417	8,286,818	10,079,222	18,366,041
<b>Approved/Pending Development Projects Within City Limit</b>											
Westlake Villages	0	3,935,207	0	0	0	0			0	3,935,207	3,935,207
Delta Cove	0	923,852	0	953,985	0	17,239			0	1,895,076	1,895,076
North Stockton Projects III	358,000	2,514,861	0	0	0	0			358,000	2,156,861	2,514,861
Cannery Park	0	1,744,182	0	295,485	0	640,217			0	2,679,884	2,679,884
Nor Cal Logistics Center	0	0	0	0	0	0			0	0	0
Crystal Bay	0	136,599	0	1,595,924	0	0			0	1,732,523	1,732,523
Sanctuary	0	5,378,573	0	1,017,588	0	178,808			0	6,574,969	6,574,969
Tidewater Crossing	2,111,240	0	0	0	0	192,000			2,111,240	-1,919,240	192,000
Open Window	0	0	0	505,792	120,951	105,373			120,951	490,214	611,165
Weston Ranch Town Center	0	0	0	0	0	497,410			0	497,410	497,410
Subtotal (Approved/Pending Projects Within City Limit)	2,469,240	14,633,274	0	4,368,774	120,951	1,631,047	0	0	2,590,191	18,042,904	20,633,095
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>											
Mariposa Lakes	0	4,548,083	0	7,953,220	0	679,762			0	13,181,066	13,181,066
Airpark 599	0	0	0	0	0	1,114,992			0	1,114,992	1,114,992
Tra Vigne	0	4,672,178	0	0	0	0			0	4,672,178	4,672,178
Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)	0	9,220,260	0	7,953,220	0	1,794,754	0	0	0	18,968,235	18,968,235
<b>Remaining City Outside of Study Areas and Outside of Approved/Pending Projects</b>	39,190,957	45,100,427	21,754,295	21,498,606	1,559,995	1,541,659	6,108,780	6,036,981	68,614,027	5,563,646	74,177,673
<b>Estimated Total at RWCF</b>									<b>71,939,687</b>	<b>32,167,306</b>	<b>104,106,993</b>



**Table 8. Summary of Flows by Sewer Shed**

Collection System	Current General Plan Update Evaluation	2035 WWMP Evaluation	Change in Estimated ADF for 2040 versus 2035 Buildout	Change as a percent of the Estimated 2035 Buildout Flow <sup>(a)</sup>
	Estimated 2040 ADF	Estimated 2035 Buildout ADF		
1	2.9	3.0	(0.1)	-3.0%
2	12.6	13.6	(1.1)	-7.8%
3	7.3	10.3	(3.0)	-29.1%
4	2.4	2.5	(0.12)	-4.9%
5	3.7	2.8	0.91	32.6%
6	5.6	8.0	(2.5)	-30.6%
7	6.2	8.8	(2.6)	-29.2%
8	14.6	22.7	(8.0)	-35.5%
9	3.2	7.0	(3.7)	-53.4%
10	16.9	16.2	0.79	4.9%
12	10.4	9.7	0.69	7.1%
13	7.7	15.3	(7.6)	-49.8%
14	0.9	10.5	(9.6)	-91.4%
15 <sup>(b)</sup>	-	24.1	(24.1)	-100.0%

<sup>(a)</sup> Reductions or increases in predicted future flows do not change the analysis of existing flows and capacities. The analysis of existing pipes identified in the 2008 Master Plan with potential existing limitations has not changed as a result of changes in future development assumptions.

<sup>(b)</sup> System 15 will remain unserved at 2040.

Table 9. GPU Planning-Level Estimate of Collection System Cost for 2040

Improvements	Existing Deficiencies <sup>(a)</sup>		Growth Related	Buildout	
	Comments	Budget Costs, dollars	Budget Costs, dollars	Comments	Budget Costs, dollars
<b>COLLECTION SYSTEM 1 FACILITIES</b>					
Improvements to Existing Gravity Sewers		\$ 138,000	\$ -		\$ 138,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Pump Stations					
<i>Plymouth &amp; 5 Mile Cr. P.S.</i>	Construct new pump station with required additional capacity	\$ 573,000	\$ 66,000	Construct new pump station with required additional capacity	\$ 639,000
<i>Cumberland &amp; 5 Mile Cr. P.S.</i>	No Upgrade	\$ -	\$ -	No Upgrade	\$ -
Subtotals		\$ 711,000	\$ 66,000		\$ 777,000
<b>COLLECTION SYSTEM 2 FACILITIES</b>					
Existing Gravity Sewers		\$ 9,962,000	\$ 3,886,000		\$ 13,848,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Force Mains					
<i>Thornton &amp; Davis P.S. FM</i>		\$ 14,000	\$ -		\$ 14,000
Pump Stations					
<i>Kelly &amp; Mosher P.S.</i>	Replace pumps and controls	\$ 645,000	\$ -	Replace pumps and controls	\$ 645,000
<i>Thornton &amp; Davis P.S. (Stonewood)</i>	Construct new pump station with required additional capacity	\$ 847,000	\$ 154,000	Construct new pump station with required additional capacity	\$ 1,001,000
<i>Don Ave. &amp; Santiago L.S.</i>	Construct new pump station with required additional capacity	\$ 1,003,000	\$ 116,000	Construct new pump station with required additional capacity	\$ 1,119,000
<i>Swenson &amp; 5 Mile Cr. P.S. (North P.S.)</i>	Replace pumps and controls	\$ 5,155,000	\$ 839,000	Replace pumps and controls	\$ 5,994,000
<i>Blossom Ranch P.S.</i>	Replace pumps and controls	\$ 183,000	\$ 91,000	Replace pumps and controls	\$ 274,000
<i>Camanche P.S.</i>	Replace pumps and controls	\$ 467,000	\$ 321,000	Construct new pump station with required additional capacity	\$ 788,000
<i>Alexandria &amp; 14 Mile Sl. P.S. (Quail Lake)</i>	Replace pumps and controls	\$ 386,000	\$ 36,000	Replace pumps and controls	\$ 422,000
<i>March-Brookside &amp; I-5 P.S.</i>	No Upgrade. Monitor actual run-times and/or flows	\$ 25,000	\$ 199,000	Replace pumps and controls	\$ 224,000
Subtotals		\$ 18,687,000	\$ 5,642,000		\$ 24,329,000
<b>COLLECTION SYSTEM 3 FACILITIES</b>					
Existing Gravity Sewers		\$ 9,221,000	\$ 39,929,000		\$ 49,150,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Pump Stations					
<i>Kirk &amp; Del Rio (County P.S.)</i>	Replace pumps and controls	\$ 291,000	\$ 700,000	Construct new pump station with required additional capacity	\$ 991,000
Subtotals		\$ 9,512,000	\$ 40,629,000		\$ 50,141,000
<b>COLLECTION SYSTEM 4 FACILITIES</b>					
Existing Gravity Sewers		\$ 2,829,000	\$ 13,521,000		\$ 16,350,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Pump Stations					
<i>Waterloo &amp; Roosevelt/North P.</i>	No Upgrade	\$ -	\$ 366,000	Replace pumps and controls	\$ 366,000
<i>Drake &amp; Hwy. 99/South P.S.</i>	No Upgrade	\$ -	\$ -	No Upgrade	\$ -
Subtotals		\$ 2,829,000	\$ 13,887,000		\$ 16,716,000
<b>COLLECTION SYSTEM 5 FACILITIES</b>					
Existing Gravity Sewers		\$ 3,762,000	\$ 5,009,000		\$ 8,771,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 61,000		\$ 61,000
Force Mains					
<i>Lincoln Street PS FM</i>		\$ -	\$ 1,274,000	Construct new force main to accommodate growth	\$ 1,274,000
Pump Stations					
<i>Lincoln Street PS</i>		\$ -	\$ 2,587,000	Construct new pump station to accommodate growth	\$ 2,587,000
Subtotals		\$ 3,762,000	\$ 8,931,000		\$ 12,693,000
<b>COLLECTION SYSTEM 6 FACILITIES</b>					
Existing Gravity Sewers		\$ 254,000	\$ 19,742,000		\$ 19,996,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 7,800,000		\$ 7,800,000
Force Mains					
<i>System 6 North PS FM</i>		\$ -	\$ 937,000		\$ 937,000
<i>Backpressure Sustaining Facilities</i>		\$ -	\$ -		\$ -
Pump Stations					
<i>System 6 North PS</i>		\$ -	\$ 1,172,000	Future Pump Station	\$ 1,172,000
Crossings					
		\$ -	\$ 3,230,000		\$ 3,230,000
Subtotals		\$ 254,000	\$ 32,881,000		\$ 33,135,000
<b>COLLECTION SYSTEM 7 FACILITIES</b>					
Existing Gravity Sewers		\$ 12,000	\$ 5,591,000		\$ 5,603,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 6,084,000		\$ 6,084,000
Pump Stations					
<i>Duck Creek PS</i>		\$ -	\$ 1,348,000	Future Pump Station	\$ 1,348,000
Crossings					
		\$ -	\$ 800,000		\$ 800,000
Subtotals		\$ 12,000	\$ 13,823,000		\$ 13,835,000
<b>COLLECTION SYSTEM 8 FACILITIES</b>					
Existing Gravity Sewers		\$ 125,000	\$ 25,173,000		\$ 25,298,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 24,147,000		\$ 24,147,000
Force Mains					
<i>Arch Road PS FM</i>		\$ -	\$ -	Completed	\$ -
<i>Backpressure Sustaining Facilities</i>		\$ -	\$ -		\$ -
Pump Stations					
<i>Arch Road Industrial Park P.S.</i>		\$ -	\$ -	Completed	\$ -
<i>County P.S. (Hospital)</i>	Monitor actual run-times and/or flows	\$ -	\$ -	Assume removed from service at buildout. Must confirm grades are adequate for gravity flow.	\$ -
Crossings					
		\$ -	\$ 3,440,000		\$ 3,440,000
Subtotals		\$ 125,000	\$ 52,760,000		\$ 52,885,000

Table 9. GPU Planning-Level Estimate of Collection System Cost for 2040

Improvements	Existing Deficiencies <sup>(a)</sup>		Growth Related Budget Costs, dollars	Buildout	
	Comments	Budget Costs, dollars		Comments	Budget Costs, dollars
<b>COLLECTION SYSTEM 9 FACILITIES</b>					
Existing Gravity Sewers		\$ -	\$ -		\$ -
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 5,100,000		\$ 5,100,000
Force Mains					
Newton Road FM		\$ -	\$ 287,000		\$ 287,000
Backpressure Sustaining Facilities		\$ -	\$ -		\$ -
Pump Stations					
Origone PS	No Upgrade	\$ -	\$ -	Replace pumps and controls	\$ -
Sanguinetti PS	No Upgrade	\$ -	\$ -	Replace pumps and controls	\$ -
Newton Rd PS		\$ -	\$ 2,131,000	Future Pump Station	\$ 2,131,000
Crossings		\$ -	\$ 4,000,000		\$ 4,000,000
Subtotals		\$ -	\$ 11,518,000		\$ 11,518,000
<b>COLLECTION SYSTEM 10 FACILITIES</b>					
Existing Gravity Sewers		\$ 55,000	\$ 16,380,000		\$ 16,435,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 21,368,000		\$ 21,368,000
Pump Stations					
Brookside Pumping Station	No Upgrade	\$ -	\$ -	No Upgrade	\$ -
Westlake P.S.	No Upgrade	\$ -	\$ -	No Upgrade	\$ -
Sanctuary PS		\$ -	\$ 2,094,000	Future Pump Station	\$ 2,094,000
Crossings		\$ -	\$ 8,585,000		\$ 8,585,000
Subtotals		\$ 55,000	\$ 48,427,000		\$ 48,482,000
<b>COLLECTION SYSTEM 12 FACILITIES</b>					
Existing Gravity Sewers		\$ -	\$ -		\$ -
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 26,768,000		\$ 26,768,000
Force Mains					
Central Stockton FM		\$ -	\$ 23,232,000		\$ 23,232,000
Backpressure Sustaining Facilities		\$ -	\$ 500,000		\$ 500,000
Pump Stations					
Mariposa PS	Future Pump Station	\$ -	\$ 7,268,000	Future Pump Station	\$ 7,268,000
Crossings		\$ -	\$ 6,600,000		\$ 6,600,000
Subtotals		\$ -	\$ 64,368,000		\$ 64,368,000
<b>COLLECTION SYSTEM 13 FACILITIES</b>					
Existing Gravity Sewers		\$ -	\$ -		\$ -
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 34,178,000		\$ 34,178,000
Force Mains					
System 13 East PS FM		\$ -	\$ 282,000		\$ 282,000
Tidewater PS FM		\$ -	\$ 7,765,000		\$ 7,765,000
Backpressure Sustaining Facilities		\$ -	\$ 800,000		\$ 800,000
Pump Stations					
System 13 East PS		\$ -	\$ 4,622,000	Future Pump Station	\$ 4,622,000
Tidewater PS		\$ -	\$ 7,168,000	Future Pump Station	\$ 7,168,000
Crossings		\$ -	\$ 9,760,000		\$ 9,760,000
Subtotals		\$ -	\$ 64,575,000		\$ 64,575,000
<b>COLLECTION SYSTEM 14 FACILITIES</b>					
Existing Gravity Sewers		\$ -	\$ -		\$ -
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -	Area not developed by 2040	\$ -
Force Mains					
System 14 PS FM		\$ -	\$ -	Area not developed by 2040	\$ -
Backpressure Sustaining Facilities		\$ -	\$ -	Area not developed by 2040	\$ -
Pump Stations					
System 14 PS		\$ -	\$ -	Area not developed by 2040	\$ -
Crossings		\$ -	\$ -	Area not developed by 2040	\$ -
Subtotals		\$ -	\$ -		\$ -
<b>COLLECTION SYSTEM 15 FACILITIES</b>					
Existing Gravity Sewers		\$ -	\$ -		\$ -
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -	Area not developed by 2040	\$ -
Force Mains					
Thompson PS FM		\$ -	\$ -	Area not developed by 2040	\$ -
System 15 East PS FM		\$ -	\$ -	Area not developed by 2040	\$ -
Gateway PS FM		\$ -	\$ -	Area not developed by 2040	\$ -
System 15 FM		\$ -	\$ -	Area not developed by 2040	\$ -
Backpressure Sustaining Facilities		\$ -	\$ -	Area not developed by 2040	\$ -
Pump Stations					
Thompson PS		\$ -	\$ -	Area not developed by 2040	\$ -
Gateway PS		\$ -	\$ -	Area not developed by 2040	\$ -
System 15 East PS		\$ -	\$ -	Area not developed by 2040	\$ -
Crossings		\$ -	\$ -	Area not developed by 2040	\$ -
Subtotals		\$ -	\$ -		\$ -
<b>SHARED FACILITIES</b>					
Force Mains					
Westside Parallel FM		\$ -	\$ -	Would have served System 15	\$ -
Smith Canal FM West		\$ 551,000	\$ 3,689,000	Primarily serve Systems 3 & 9	\$ 4,240,000
Smith Canal FM East		\$ 328,000	\$ 6,154,000	Primarily serve Systems 3 & 9	\$ 6,482,000
Weston Ranch P.S. FM	Exceeds capacity; however other FM facilities exist to address this issue	\$ -	\$ -	Serves Systems 8 and 14	\$ -
Backpressure Sustaining Facilities		\$ -	\$ -	Would have served System 15	\$ -

**Table 9. GPU Planning-Level Estimate of Collection System Cost for 2040**

Improvements	Existing Deficiencies <sup>(a)</sup>		Growth Related	Buildout	
	Comments	Budget Costs, dollars	Budget Costs, dollars	Comments	Budget Costs, dollars
<b>Pump Stations</b>					
<i>Smith Canal Pump Station</i>	Monitor flow split. Adjust as appropriate	\$ -	\$ 9,885,000	Replace pumps and controls; primarily serve Systems 3 and 9	\$ 9,885,000
<i>Weston Ranch P.S.</i>	No Upgrade	\$ -	\$ -	Construct new pump station with required additional capacity; Serves Systems 8 and 14	\$ -
<i>14 Mile Slough PS</i>	No Upgrade	\$ -	\$ 11,362,000	Construct new pump station with required additional capacity; Serves Systems 10, 1, and 15	\$ 11,362,000
Crossings		\$ -	\$ 3,600,000		\$ 3,600,000
Subtotals		\$ 879,000	\$ 34,690,000		\$ 35,569,000
<b>SUMMARY</b>					
Existing Gravity Sewers		\$ 26,400,000	\$ 129,200,000		\$ 155,600,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 125,500,000		\$ 125,500,000
Force Mains		\$ 900,000	\$ 44,900,000		\$ 45,800,000
Pump Stations		\$ 9,600,000	\$ 52,500,000		\$ 62,100,000
Crossings		\$ -	\$ 40,000,000		\$ 40,000,000
TOTAL (Construction Costs) <sup>(d)</sup>		\$ 36,900,000	\$ 392,100,000		\$ 429,023,000
Estimating Contingency (Level of Planning and Construction Contingency), 35%		\$ 12,900,000	\$ 137,200,000		\$ 150,100,000
TOTAL CONSTRUCTION BUDGET (2007 dollars)		\$ 49,800,000	\$ 529,300,000		\$ 579,123,000
Engineering, Administration and Other Project Costs, 35%		\$ 17,400,000	\$ 185,300,000		\$ 202,700,000
TOTAL PROJECT COSTS w/o Land (2007 dollars)		\$ 67,200,000	\$ 714,600,000		\$ 781,823,000
Property Acquisition Allowance (7% of bare growth pipeline construction)		\$ -	\$ 11,900,000		\$ 11,900,000
TOTAL PROJECT COSTS (2007 dollars)		\$ 67,200,000	\$ 726,500,000		\$ 793,723,000

(a) Only fractional quantities of each gravity sewer total are used for projecting CIP costs (2035 WWMP). Findings from the City's ongoing condition assessment activities and additional flow  
 (b) Costs provided for gravity sewers 18 inches and larger only and for all force mains (irrespective of diameter).

- System 4: In this System, the change in ADWF is a decrease of 0.12 mgd out of a 2035 WWMP estimated flow of 2.54 mgd (a decrease of 4.9 percent). This small change would result in no significant change in the planned sewer system infrastructure for this shed. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 5: In this System, the change in ADWF is an increase of 0.91 mgd out of a 2035 WWMP estimated flow of 2.8 mgd (an increase of 33 percent). A portion of this increase may be attributed to an updated and improved identification of existing land uses; nevertheless, this change will likely result in some additional improvements being needed to accommodate the planned growth, including:
  - Trunk Sewers: Approximately 30 percent of the previously estimated cost was associated with existing deficiencies and the remainder is associated with growth. Several significant pipeline upsizing projects were predicted. It is assumed that the higher projected flows will result in a slight increase in a portion of the previously predicted upsizing projects resulting in an assumed 10 percent increase in the previously estimated cost. In addition, it is possible that some additional sewers will need to be upsized, so it is assumed that the previously estimated cost will increase an additional 10 percent, for a total increase of 20 percent.
  - Pump Stations: One new pump station, the Lincoln Street Pump Station, and an associated force main were planned to serve the downtown area only. Due to the apparent increase in buildout flows, it is assumed the cost of this pump station and force main project will increase approximately 10 percent.
- System 6: In this System, the change in ADWF is a decrease of 2.5 mgd out of a 2035 WWMP estimated flow of 8.0 mgd (a decrease of about 31 percent). This change will likely result in a reduction of the planned sewer system improvements, including:
  - Trunk Sewers: Pipeline improvements include upsizing of existing pipelines as well as extension of new sewers into the eastern portions of System 6 that are currently undeveloped. It is assumed about half of the future sewer extensions will be approximately 15 percent lower cost than previously estimated and that the cost of the remaining half will not be affected. For the upsizing of existing sewers, it is assumed the cost will be approximately 20 percent lower than previously estimated, based on the lower predicted flows.
  - Pump Stations: The eastern portions of System 6 will require a new pump station and force main. Any change in the cost of these new facilities attributable to the lower flow projections is expected to be small, so a five percent reduction in the planning level estimate of costs is assumed.
- System 7: In this System, the change in ADWF is a decrease of 2.6 mgd out of a 2035 WWMP estimated flow of 8.8 mgd (a decrease of about 29 percent). One major new trunk relief sewer was attributed to System 7, a 5,600 ft. long 54” diameter pipeline primarily located along Tillie Lewis Drive. In addition, some gravity sewer extensions into growth areas and one associated pump station at the eastern end of the System were identified, as well as improvements to existing sewers to correct apparent grade issues or localized capacity concerns. However, the apparent decrease in flows from the System are not expected to substantively affect the costs previously

- identified improvements for System 7. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 8: In this System, the change in ADWF is a decrease of 8.0 mgd out of a 2035 WWMP estimated flow of 22.7 mgd (a decrease of about 36 percent). Major costs associated with upsizing of existing sewers as well as major extensions east of State Highway 99 were identified. This reduction in planned flow is likely attributed to a decrease in the rate of development, and depending on the location of the development that occurs by 2040, it is likely that substantial portions of the future extensions will not be needed by 2040. The change will likely result in a reduction of the planned sewer system improvements, including:
    - Trunk Sewers: The need for both new sewer extensions and upsizing in existing sewers will likely be reduced, unless development begins at the eastern end of the System 8, requiring long extensions into those areas. Therefore, it is assumed that the cost of trunk sewer improvements will be reduced by approximately 20 percent.
    - Pump Stations: The Arch Road Industrial Park Pump Station identified in the 2035 WWMP has been constructed.
  - System 9: In this System, the change in ADWF is a decrease of 3.7 mgd out of a 2035 WWMP estimated flow of 7.0 mgd (a decrease of about 53 percent). Costs associated with upsizing of existing sewers as well as major extensions into areas not currently served by the sewer system were identified. The reduction in planned flow is likely attributed to a decrease in the rate of development, and depending on the location of the development that occurs by 2040, it is likely that some of the future extensions will not be needed by 2040. The change will likely result in a reduction of the planned sewer system improvements, including:
    - Trunk Sewers: It is assumed the need for upsizing existing trunk sewers will be eliminated by the decrease in projected flow. The need for new sewer extensions might be reduced slightly; however, the new sewer extensions are primarily smaller diameter trunks necessary in each portion of the Shed that begins to develop. Therefore, costs reductions will only be realized where portions of the Shed do not develop. It is assumed that most or all areas of the Shed will begin to develop by 2035, and therefore no substantive reduction in the cost of new trunk sewer extensions is appropriate.
    - Pump Stations: It is assumed the need for upsizing existing pumps stations will be eliminated by the decrease in projected flow. A new pump station, the Newton Road Pump Station is needed to connect a significant portion of the Shed. The Pump Station would likely require smaller pumping equipment sized for lower flows early in its useful life, so a 10 percent reduction in the planning level estimate of costs is assumed.
  - System 10: In this System, the change in ADWF is an increase of 0.79 mgd over a 2035 WWMP estimated flow of 16.2 mgd (an increase of about 5 percent). This change is not likely to result in a substantive reduction in the cost of the planned sewer system improvements. The following changes will likely affect the projected cost of improvements:

- Trunk sewers: Approximately 15 to 20 percent of trunk extensions planned in the 2035 WWMP have been completed since 2008, so the estimated cost of the future extensions should be reduced by about 15 percent. Improvements to existing trunk sewers are dominated by a large upsizing project along Whistler Way and extending east from Lower Sacramento Road along Bear Creek. The cost of this improvement or other upsizing projects is not likely to be affected.
- Pump Stations: System 10 shares the 14-Mile Slough Pump Station, which is discussed separately.
- System 12: In this System, the change in ADWF is an increase of 0.69 mgd out of a 2035 WWMP estimated flow of 9.7 mgd (an increase of about 7 percent). This small change is not likely to result in a substantive increase in the cost of planned sewer system infrastructure. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 13: In this System, the change in ADWF is a decrease of 7.6 mgd out of a 2035 WWMP estimated flow of 15.3 mgd (a decrease of about 50 percent). New sewers and pump stations are required to serve the System 13 area. The reduction in projected flow may result in somewhat smaller sewer diameters and pump capacities; however, costs will primarily be related to the extent of new service area being added within the 2040 planning horizon. For example, if the eastern portion of the service area develops first, a disproportionate cost would be triggered to extend the collection system to the new service area. Therefore, for the purposes of this analysis, it is assumed that the cost of new trunk sewers and pump stations will be reduced by 20 percent, reflecting fewer facilities constructed than those identified for build out in the 2035 WWMP.
- System 14: In this System, the change in ADWF is a decrease of 9.6 mgd out of a 2035 WWMP estimated flow of 10.5 mgd (a decrease of about 91 percent). Most of this growth area has been eliminated from the 2040 sewer service area, and the planned trunk sewers for developing areas have already been constructed. Therefore, all planned costs for System 14 are eliminated.
- System 15: Nearly all of System 15 will remain undeveloped at 2040. A small area adjacent to the existing 14-Mile Slough Pump Station is planned for institutional land use; however, only a small diameter sewer would be needed to serve the area by connecting it to the pump station if the small area ever develops. It is assumed that the Delta Water Supply Project treatment facility will remain disconnected from the collection system, and that no other existing or future development will be served by 2040. Therefore, all costs associated with System 15 identified in the 2035 WWMP are eliminated.
- Shared Facilities: Each shared facility is critical component in more than one System. The largest shared facility is the RWCF. The GPU is expected to have the following impacts on shared facilities:

- 14-Mile Slough Pump Station: This pump station serves Systems 1, 2 and 10, and was designed for expansion to serve System 15. The modeled ratio of peak to average flow was about 2.4 in the 2035 WWMP. The revised 2040 average flow for Systems 1 and 10 is 19.2 mgd, and the peak flow can be estimated using the same 2.4 peaking factor to be 46 mgd, or about 65 percent of the buildout peak flow projected in the 2035 WWMP. The current peak flow capacity of the pump station is 14.5 mgd, so even though the future peak flow is substantially lower, a major upgrade will be necessary. For the purposes of this analysis, it is assumed that the cost of increased capacity will be 80 percent of the previously estimated cost for future expansion.
- Westside Parallel Force Main: The existing West Side Force Main receives flow from the 14-Mile Slough Pump Station as well as the Brookside Pump Station, and serves Systems 1, 2 and 10. A parallel force main was planned to serve System 15, but will not be needed for capacity reasons.
- Smith Canal Pump Station and Force Mains: Two force mains receive flow from the Smith Canal Pump Station, primarily serving Systems 3 and 9. Replacement and upsizing of the force mains, pumps and controls will be needed to serve planned growth. The required upsizing may be slightly reduced and is potentially deferred as a result of reduced growth planned for 2040; however, it is likely that most or all of the anticipated improvements will be needed by 2040 and for the purposes of this analysis no reduction in the planned cost is recommended.
- Weston Ranch Pump Station and Force Main: Pump station and force main improvements were identified in the 2035 WWMP primary triggered by planned development in System 14, which is no longer planned for 2040. It is assumed that no significant upgrade will be needed for serving growth within the existing pump station service area.

The adjusted costs are presented in Table 9 which is adapted from Table 8-2 of the 2035 WWMP. All costs estimates are planning level estimates based on broad assumptions and limited information, and do not necessarily reflect the economic conditions at the time a project is constructed.

The planning level estimate of construction costs (without contingencies, engineering, administration, land acquisition for pipeline extensions or other project costs) can be compared to the 2035 WWMP buildout estimates as follows in terms of 2007 dollars:

- Construction costs for existing deficiencies decreased slightly from \$38 million to \$36.9 million.
- Construction costs for growth-related improvements decreased from \$599 million to \$392 million.
- The corresponding updated planning level estimates of total project costs (total capital costs) are \$67.2 million to address existing deficiencies and \$727 million for growth-related improvements, as shown in Table 9.



## REGIONAL WASTEWATER CONTROL FACILITY FLOWS AND COSTS

As presented previously, actual flow to the RWCF in the summer of 2017 averaged about 27 mgd, and the ADWF for 2016 was 29 mgd. It is assumed these flows reflect significant water conservation originating from the recent drought conditions, which would be consistent with most other communities in California. Furthermore, it is assumed that flow would rebound upward over time, even in the absence of growth. Nevertheless, it is likely that standard flow factors used to predict flows for prudent collection system planning will over predict the aggregate combined flow at the RWCF. Indeed, the 2017 land uses with standard flow factors applied would generate an average flow of about 37 mgd.

The 2035 WWMP included a predicted buildout influent flow of 70 mgd, based on population of 580,717, a per capita flow of 112 gallons per day, and an analysis of industrial flows in excess of the per capita flow factor. (For treatment plant design purposes, plant recycle flows must also be considered.) The total estimated project cost to accommodate the buildout flow, based on very preliminary planning analysis was about \$417 million in 2007 dollars.

The City prepared a Capital Improvement and Energy Management Plan (CIEMP) for the RWCF in 2011 which predicted flows would reach 49.3 mgd by 2035, which did not represent a general plan buildout value<sup>10</sup>. The CIEMP is being implemented through a series of projects, and the projection of future flows was recently updated as part of the CIEMP implementation work. The adopted flow projection is based on a population of 401,961 (from the San Joaquin Council of Governments) and a per capita flow rate of 100 gallons per day for 2035<sup>11</sup>. As noted above, the revised projected ADWF is 40.2 mgd for 2035 and 46.3 mgd for 2045. Assuming linear growth from 2035 to 2045, the corresponding ADWF for 2040 would be 43.3 mgd.

Existing treatment facilities have a rated secondary ADWF treatment capacity of 48 mgd, and a rated tertiary treatment capacity of 55 mgd. Preparation of the CIEMP involved an extensive analysis of existing treatment facilities, both capacity and condition. The CIEMP recommended a series of short-term and long-term improvements to address rehabilitation and replacement needs while improving treatment reliability. The total project cost for the short and long-term projects, excluding energy-related projects, was about \$221 million, based on 2011 dollars<sup>12</sup>.

For the purposes of this analysis, the CIEMP estimate of costs to achieve a reliability at the permitted capacity should be used as the cost to accommodate flows at the 2040 planning horizon.

All costs estimates are planning level estimates based on broad assumptions and limited information, and do not necessarily reflect the economic conditions at the time a project is constructed.

<sup>10</sup> City of Stockton RWCF Capital Improvement and Energy Management Plan; Carollo Engineers, August 2011.

<sup>11</sup> Information provided by City staff, and resulting 40.2 mgd ADWF for 2035 is reported in the Stockton RWCF Design Build Project; "Advanced Package 3a & 3b" of the Basis of Design Report; AECOM, October 2017.

<sup>12</sup> Ibid. (Table 19.2)

The infrastructure analyses and cost evaluations presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these analyses should be refined and updated through detailed evaluations of each specific development project.

## **RECOMMENDED FUTURE ACTIONS**

The recommended actions to address wastewater infrastructure needs are addressed in this section.

### **Sewer System**

The projected land uses for 2040 are different that the buildout land uses from the 2035 General Plan. Consequently, the collection system improvements identified in the 2035 WWMP may no longer be appropriate. This could result in some sewer system infrastructure being undersized, which could lead to sanitary sewer overflows. Some sewer system infrastructure could be oversized, resulting in unnecessary capital expenditures and increased operations and maintenance efforts and costs. Therefore, it is recommended that an updated citywide collection system model and capital improvement plan be developed and periodically updated. The model and plan should,

- a) Incorporate industry standard calibration procedures, which will require additional flow monitoring throughout the collection system and peak wet weather flow analysis;
- b) Be based on field-verified sewer invert elevation data where existing data indicates anomalies such as pipes with adverse or unexpected slopes; and
- c) Use software capable of dynamic hydraulic computations so that surcharging conditions can be more accurately represented.

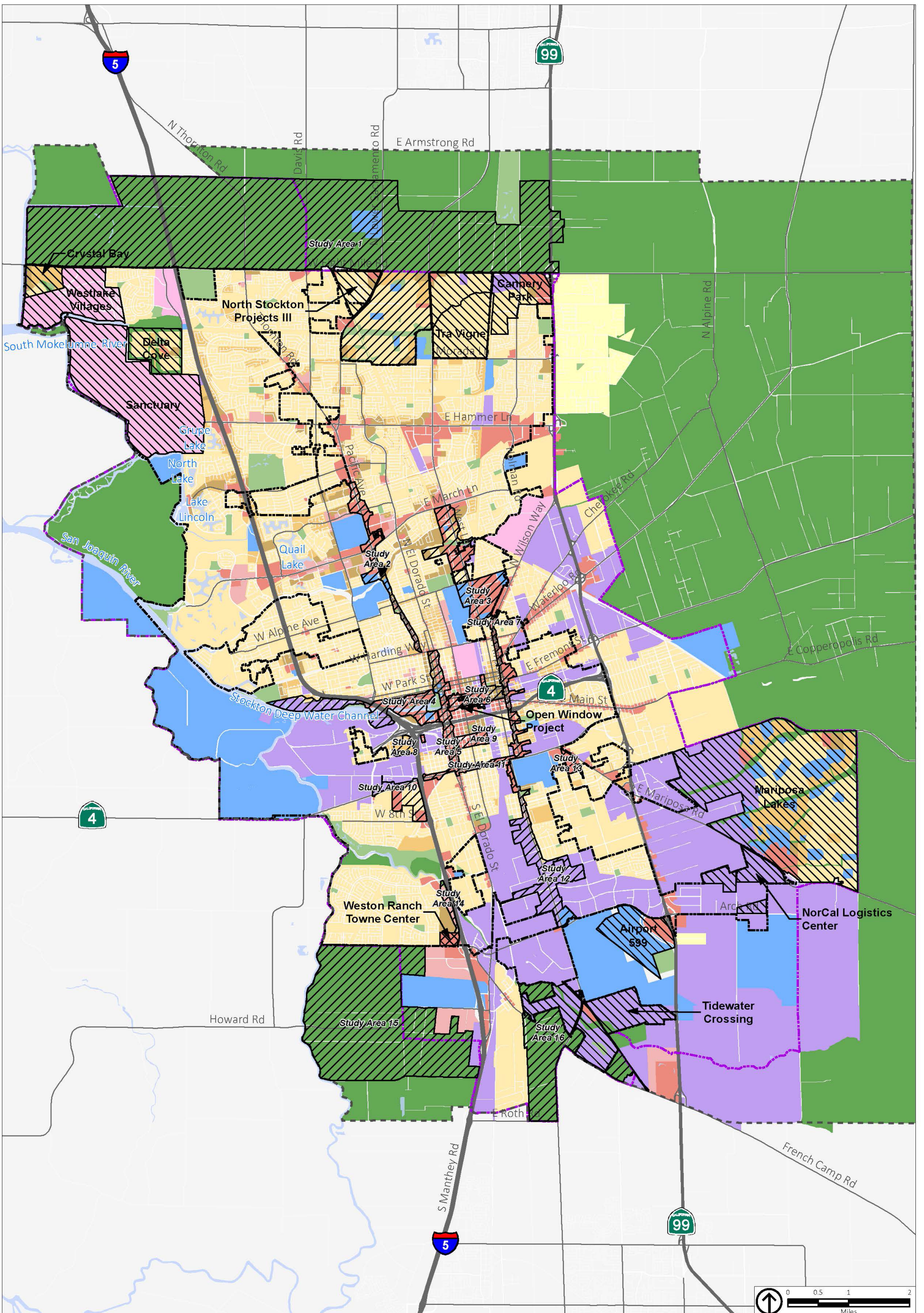
Routine inspection and maintenance should be conducted in order to maintain capacity and reliability in existing facilities. Such activities should include completion (and future updates) of ongoing efforts to assess the condition of gravity sewers, and a thorough condition assessment of pumping facilities. The condition assessment data should be used to quantify and prioritize rehabilitation needs, including an analysis of annual funding required to restore and maintain system reliability.

Beyond the need for collection system model calibration, a long-term program of wet and dry weather flow monitoring is recommended as a tool for detecting excessive infiltration and inflow problems that develop over time as pipelines deteriorate.

### **Regional Wastewater Control Facility**

Major improvements to the RWCF have been identified as necessary to address rehabilitation needs and provided sufficient capacity for the planned growth. Current RWCF planning is based on providing capacity for flows and loads predicted for partial buildout, which is appropriate. However, it is also recommended that as the layout and orientation of new or replacement facilities are designed, consideration is given to how the plant can be efficiently increased in the future. A plant layout reflecting flows at General Plan buildout should be configured to avoid unnecessarily increasing the cost of future improvements.

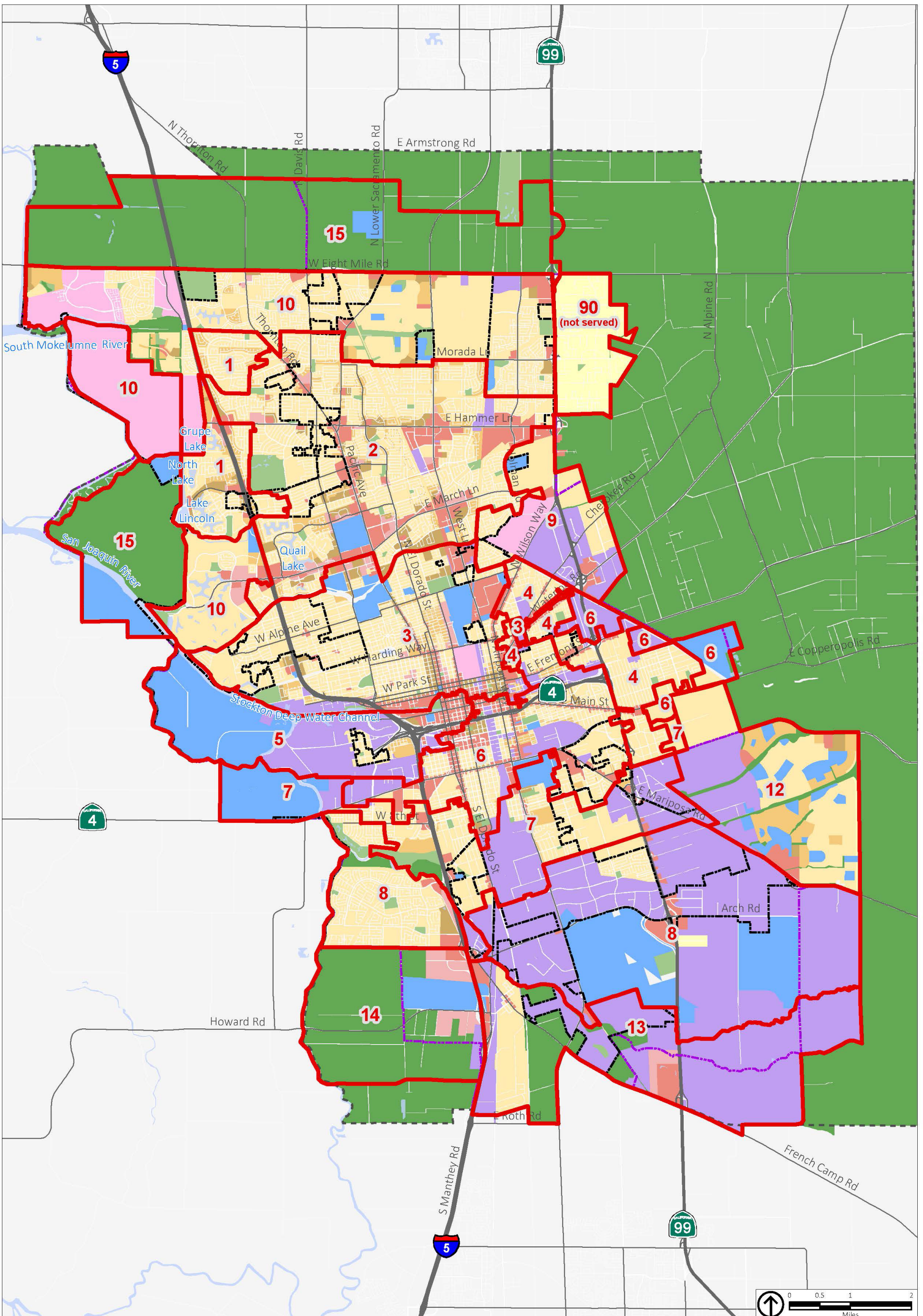
The CIEMP, which is serving as a long-term facilities plan for the RWCF, should be periodically updated to reflect actual flows and loads measured for existing conditions, operational experience with recently constructed facilities, and improvements in treatment and energy management technologies.



Source: City of Stockton, June & August 2017.



Figure 1  
2017 Preferred 2040 Land Uses  
and Development Areas



Source: City of Stockton, June & August 2017.

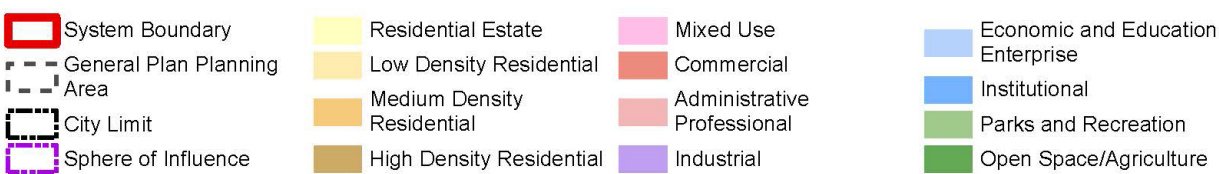
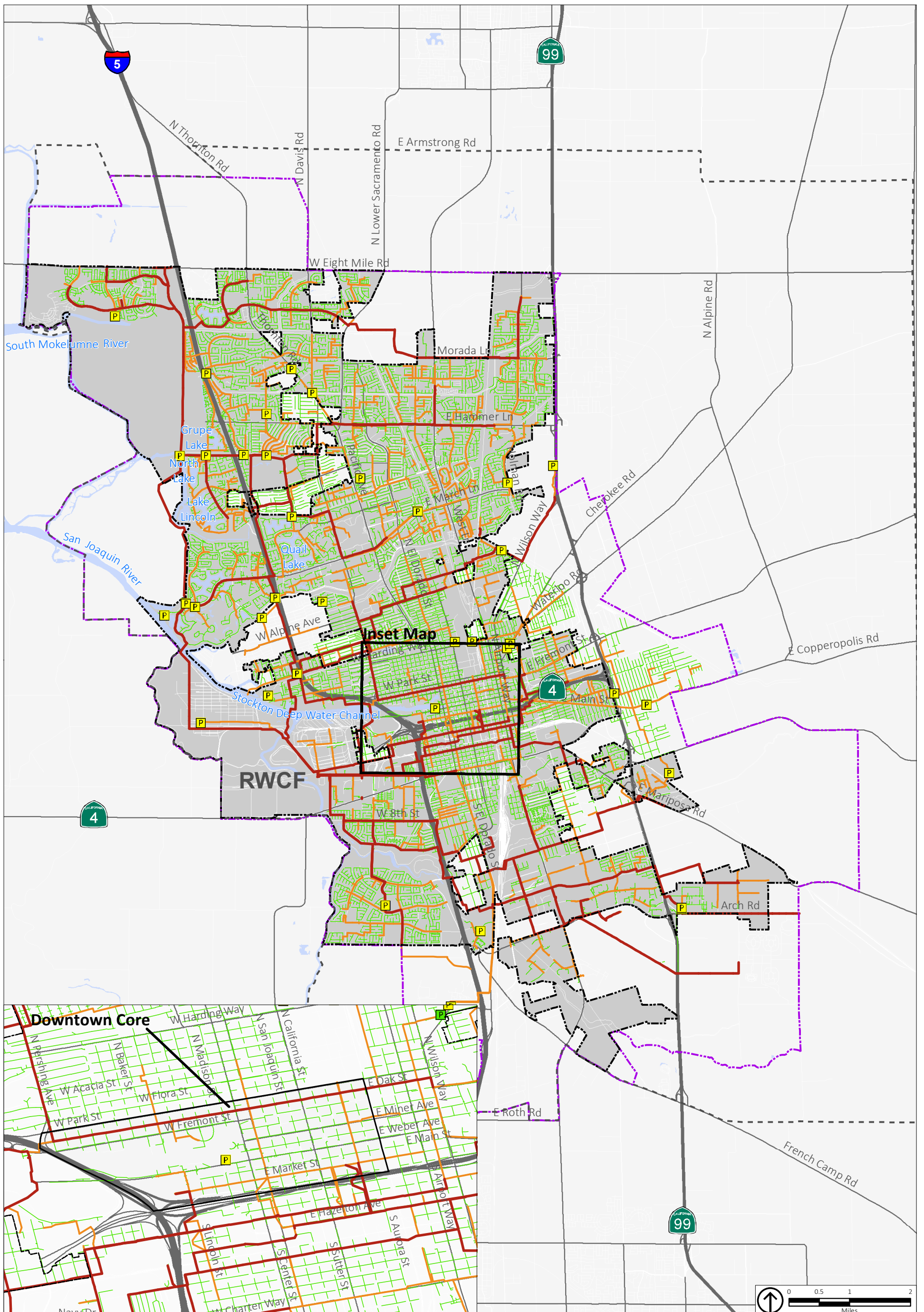


Figure 2  
2017 Preferred 2040 Land Uses and Sewer  
Sub - Collection System Boundaries



Source: City of Stockton, April 2016.

- P Sanitary Pump Station
- General Plan Planning Area
- Existing Sewer Line (Diameter)**
- < 8 Inches
- 10 - 18 Inches
- > 18 Inches
- City Limit
- Sphere of Influence

Figure 3  
Sewer System Facilities

ATTACHMENT A

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Land Use Data Received from Placeworks and Buildout Land Use Map

**ATTACHMENT D**

Acreage Gross or Net	Study Area Name	Single Family Net New 2040	Single Family Net New 2040	Single Family Net New 2040 + Existing	Single Family Net New 2040 + Existing	Multi Family Net New 2040	Multi Family Net New 2040	Multi Family Net New 2040 + Existing	Multi Family Net New 2040 + Existing	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040 + Existing	Commercial Net New 2040 + Existing	Industrial Net New 2040	Industrial Net New 2040 + Existing
		Units	Acres	Units	Acres	Units	Acres	Units	Acres	Units	Acres	Total Square Feet	0.3 FAR Sq Ft	0.5 FAR Sq Ft	5.0 FAR Sq Ft	0.3 FAR Acres	0.5 FAR Acres	5.0 FAR Acres	Sq Ft	Acres
Gross	Study Area 1 - Eight Mile Rd Area	1,379	646	1,500	663	1,198	209	1,294	217	39,408	39,408	0	0	15	0	0	241,408	20	0	105,400
Net	Study Area 2 - Pacific Ave Corridor	0	0	22	4	110	19	224	22	93,961	93,961	0	0	17	0	0	1,560,846	103	0	1,980
Net	Study Area 3 - West Ln and Alpine Rd Area	77	13	285	52	680	120	774	125	323,399	323,399	0	0	102	0	0	975,325	163	0	1,423,576
Net	Study Area 4 - Port/Waterfront	17	3	71	11	1,770	33	2,058	42	2,040,010	6,100	0	2,033,911	2	0	31	2,865,512	62	580,859	1,739,495
Net	Study Area 5 - El Dorado/Center Corridors	0	0	45	6	1,196	22	1,555	30	1,310,216	0	0	1,310,216	0	0	21	2,158,663	53	0	258,300
Net	Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	0	0	47	4	1,248	22	1,467	27	1,463,025	0	0	1,463,025	0	0	14	2,152,972	33	0	187,300
Net	Study Area 7 - Wilson Way Corridor	0	0	12	2	234	27	240	28	606,716	103,753	0	502,963	19	0	5	1,321,076	65	0	390,342
Net	Study Area 8 - I-5/Highway 4 Interchange	0	0	8	1	659	47	660	48	388,671	0	0	388,671	0	0	4	388,671	4	0	344,300
Net	Study Area 9 - Railroad Corridor at California St	0	0	19	2	1,340	24	1,363	25	1,299,279	0	0	1,299,279	0	0	24	1,365,999	26	0	182,658
Net	Study Area 10 - I-5 and Charter Way Area	86	15	314	58	98	42	127	46	133,864	133,864	0	0	42	0	0	377,363	77	83,678	203,939
Net	Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0	0	5	0	396	15	396	15	323,733	9,597	0	314,135	6	0	7	703,670	38	0	0
Net	Study Area 12 - Airport Way Corridor	0	0	53	7	108	19	112	19	205,461	135,225	70,236	0	14	4	0	272,544	48	1,368,744	3,709,140
Net	Study Area 13 - Mariposa and Charter Area	0	0	12	4	0	0	77	6	80,944	80,944	0	0	25	0	0	93,560	28	0	0
Net	Study Area 14 - East Weston Ranch <sup>(b)</sup>	0	0	1	1	0	0	0	0	430,677	0	430,677	0	0	26	0	430,677	26	0	0
Net	Study Area 15 - South of French Camp Rd	0	0	89	76	0	0	9	6	0	0	0	0	0	0	0	0	0	0	1,700
Net	Study Area 16 - E French Camp Rd Area	0	0	59	123	0	0	4	9	0	0	0	0	0	0	0	5,100	17	0	4,900
Net	Outside of Study Areas <sup>(c)</sup>	1,501	246	77,964	14,117	0	0	33,183	1,916	0	0	0	0	0	0	0	23,811,089	1,607	0	46,620,901
	<b>Grand Total</b>	<b>3,059</b>	<b>923</b>	<b>80,505</b>	<b>15,131</b>	<b>9,036</b>	<b>600</b>	<b>43,542</b>	<b>2,583</b>	<b>8,739,364</b>	<b>926,252</b>	<b>500,913</b>	<b>7,312,200</b>	<b>242</b>	<b>31</b>	<b>105</b>	<b>38,724,475</b>	<b>2,371</b>	<b>2,033,281</b>	<b>55,173,931</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

<sup>(c)</sup> Excludes approved/pending projects.

Acreage Gross or Net	Approved/Pending Projects Details	Net New						Full Build (2040)					
		Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres	Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres
<b>Approved within city limit</b>													
Gross	Westlake Villages	2,630	680	0		0		2,630	680	0		0	
Gross	Delta Cove	1,164	133	381	48	31,000	3	1,164	133	381	48	31,000	2.6
Gross	North Stockton Projects III	2,220	355	0		0		2,455	393	0		0	
Gross	Cannery Park	981	272	210	16	1,078,762	104	981	272	210	16	1,078,762	104
Gross	Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0
Gross	Crystal Bay	951	19	392	79	0		951	19	392	79	0	0
Gross	Sanctuary	5,452	1,026	1,618	67	692,256	36	5,452	1,026	1,618	67	692,256	36
Gross	Tidewater Crossing	-310	-870	0		186,200	16	0	0	0	0	186,200	16
Net	Open Window <sup>(a)</sup>	0	0	1,391	12	-68,800	-1	0	0	1,400	12	290,000	12
Gross	Weston Ranch Town Center	0	0	0	0	481,000	41	0	0	0	0	481,000	41
<b>Approved/pending outside city limit, inside SOI</b>													
Gross	Mariposa Lakes	8,955	939	1,553	585	1,009,503	150	8,960	1,090	1,556	585	1,009,503	150
Gross	Airpark 599	0	0	0	0	1,678,500	128	0	0	0	0	1,678,500	128
Gross	Tra Vigne <sup>(b)</sup>	1,244	846	0	0	0	0	1,244	846	0	0	0	0

<sup>(a)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand the capacity to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.

<sup>(b)</sup> Pending; not approved.

2040 Development Study Area												
	Net New Single Family Units (full buildout)	Percent applied to 2040	Net New Single Family Units (2040)	Net New Multi-Family Units (full buildout)	Percent applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (full buildout)	Percent applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (full buildout)	Percent applied to 2040	Net New Industrial Square Feet (2040)
Study Area 1 – Eight Mile Rd Area	3,940	35%	1,380	3,420	35%	1,200	197,000	20%	39,000	0	0%	0
Study Area 2 – Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
Study Area 3 – West Ln and Alpine Rd Area	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
Study Area 4 – Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
Study Area 5 – El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
Study Area 6 – Miner/Weber Corridors <sup>(a)</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
Study Area 7 – Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
Study Area 8 – I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
Study Area 9 – Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
Study Area 10 – I-5 and Charter Way Area	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
Study Area 11 – Charter Way/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
Study Area 12 – Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
Study Area 13 – Mariposa and Charter Area	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
Study Area 14 – East Weston Ranch <sup>(b)</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
Study Area 15 – South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Study Area 16 – E French Camp Rd Area	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>(c)</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>(d)</sup></b>	<b>20,480</b>		<b>3,060</b>	<b>48,470</b>		<b>9,040</b>	<b>45,773,000</b>		<b>8,739,000</b>	<b>134,701,000</b>		<b>2,033,000</b>

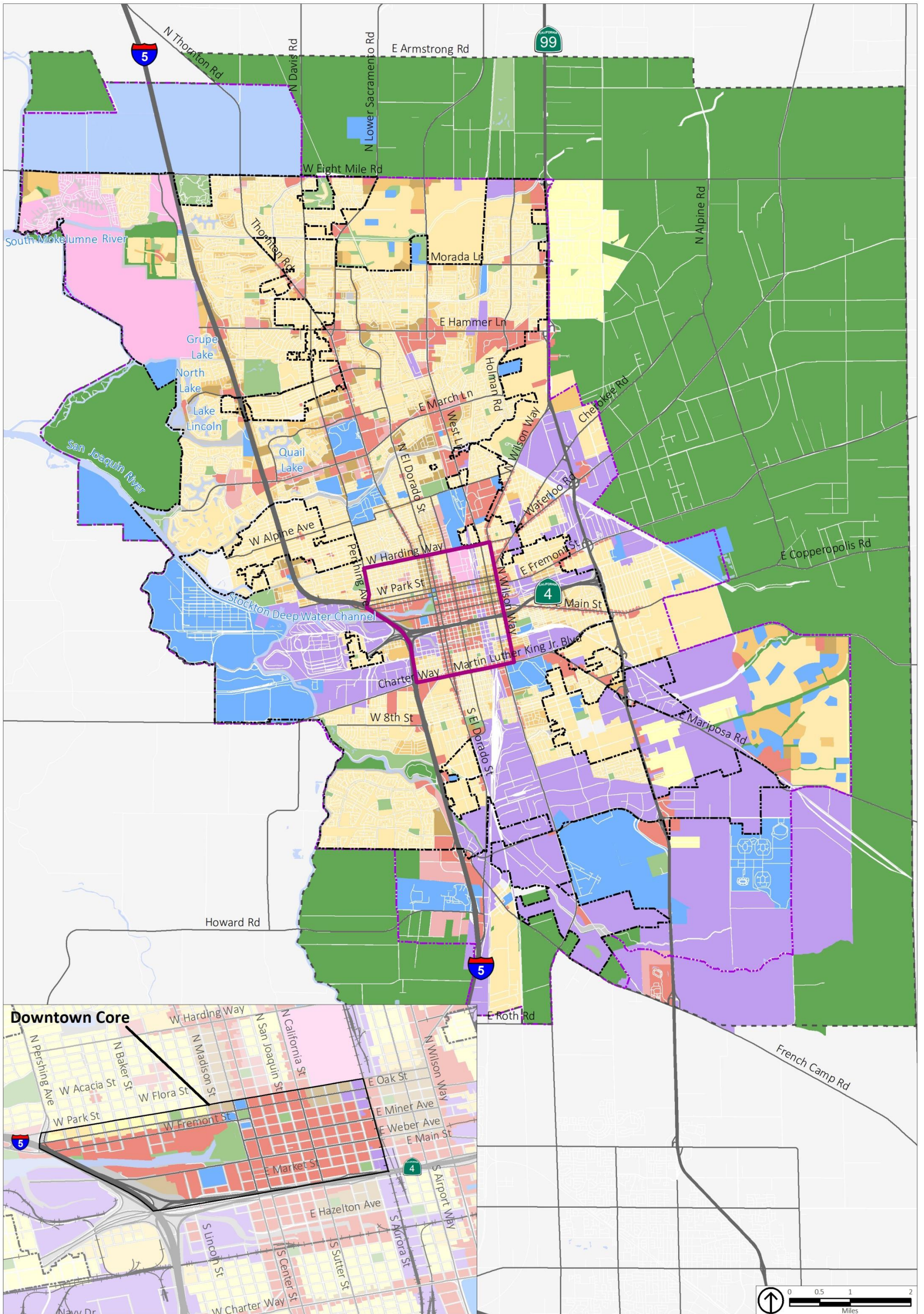
<sup>(a)</sup> Excludes Open Window approved project.  
<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.  
<sup>(c)</sup> Excludes approved/pending projects  
<sup>(d)</sup> Numbers do not always add up due to rounding.

The "full buildout" of the proposed General Plan assumes the maximum development of every parcel, combined with approved and pending developments throughout the Planning Area. The 2040 land uses are based on realistic land use demand projections. The full buildout of the General Plan would result in almost three times more new housing units and over 24 times more new non-residential development than estimated for 2040. Therefore, it is extremely unlikely that the full buildout would occur by the year 2040. Full buildout may not occur until well beyond the useful lifespan of the proposed infrastructure (for example, the lifespan of concrete structures is typically 50 to 75 years). Consequently, this infrastructure planning was based on the estimated 2040 level of development. This table is included in this TM to document the relationship between the buildout land uses and the 2040 land uses.

Source: PlaceWorks, 2017.



**Figure 2-8**  
**General Plan Land Use Map**



Source: City of Stockton, 2017; PlaceWorks, 2017.

- |                            |                            |                          |                                   |                        |
|----------------------------|----------------------------|--------------------------|-----------------------------------|------------------------|
| City Limit                 | Residential Estate         | High Density Residential | Administrative Professional       | Institutional          |
| Sphere of Influence        | Low Density Residential    | Mixed Use                | Industrial                        | Parks and Recreation   |
| General Plan Planning Area | Medium Density Residential | Commercial               | Economic and Education Enterprise | Open Space/Agriculture |
| Greater Downtown Boundary  |                            |                          |                                   |                        |

**ATTACHMENT 3**  
**REVISED STORMWATER MASTER PLAN SUPPLEMENT**



## **TECHNICAL MEMORANDUM**

DATE: December 6, 2017 Project No.: 425-10-16-04.006  
 TO: City of Stockton, Municipal Utilities Department SENT VIA: EMAIL  
 FROM: Douglas T. Moore, PE, RCE #58122  
 REVIEWED BY: Mark Kubik, PE, RCE #50963  
 SUBJECT: Stockton General Plan Update – Stormwater Master Plan Supplement

This Technical Memorandum (TM) presents the Stormwater Master Plan Supplement for the Stockton General Plan Update (GPU). This TM includes the following sections:

- Summary
  - Existing Conditions Summary
  - Detention Storage and Pumping Requirements for the Study Areas Summary
  - Cost Evaluations Summary
  - Potential Environmental Impacts and Mitigation Measures Summary
- Existing Conditions
- Detention Storage and Pumping Requirements for the Study Areas
  - GPU Land Uses by Development Area
  - Assumptions and Methodology
  - Storage Requirements
  - Pump Station Requirements
- Detention Storage and Pumping Cost Evaluations
  - Detention Storage Construction Costs
  - Pumping Construction Costs
  - Total Capital Costs
- Recommended Future Actions
- Conclusions

The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

## SUMMARY

A summary of this TM is presented below. The development of the summary data is presented in the following sections of this TM. The 2040 land uses are shown on Figure 1, and the General Plan Update buildout land use map is provided in Attachment A.

### Existing Conditions Summary

The City's storm drain system is shown on Figure 2. The storm drain system includes 620 miles of 4-inch to 96-inch storm drains and over 22,500 drain inlets. A total of 58 pump stations and 19 lift stations are used to pump drainage into receiving waters, as shown on Figure 2.

The City of Stockton (City) is characterized by flat topography with a complex network of streams and rivers running through it. The northern portion of the City is protected by levees, and drainage is typically pumped into receiving waters. The southern portion of the City does not have many levees and is characterized by various floodplain designations by FEMA (Peterson Brustad Inc., 2008). A few of the waterways in the central and northern parts of the City, namely Bear Creek, Pixley Slough, Mosher Slough, and the Calaveras River, have sufficient capacity to handle buildout flows based on the 1990 General Plan, but do not have capacity to handle additional development beyond that. The creeks in the southeast portion of the planning area, (North Littlejohns Creek, Weber Slough, South Littlejohns Creek, and Lone Tree Creek) do not have capacity to contain the existing 100-year flows, resulting in overbank flooding predicted in much of those watersheds (West Yost Associates [West Yost], 2004).

### Detention Storage and Pumping Requirements for the Study Areas Summary

Several development Study Areas were identified by Placeworks, as shown on Figure 2. Little infrastructure planning has been done for the Study Areas; consequently, detention storage and pumping requirements have been estimated for the Study Areas. Stormwater plans have been or will be prepared by others for the Approved/Pending Development Projects. To avoid conflicting infrastructure plans, no storage and pumping requirements have been estimated for the Approved/Pending Development Projects.

The detention storage volumes required per the City of Stockton's standards range from 0.5 to 50.4 acre-feet (ac-ft). The total new development tributary area that needs detention storage facilities is 547.8 acres of various land uses.

The San Joaquin County Improvement Standards requires that detention basins shall have outlet facilities providing terminal drainage capable of emptying a full basin in 24 hours in urban areas. Firm pumping capacity is the combined capacity of the individual pumps in the pump station, except the largest pump (assuming the largest pump is out of service). The firm pumping capacities for the Study Areas range from 0.3 to 25.4 cubic feet per second (cfs), and the combined firm capacity is 50.3 cfs. Total pumping capacity is the combined capacity of all the individual pumps in the pump station, including the largest pump (assuming the largest pump is in service). Total pumping capacity is included in this evaluation for estimating pump station costs. The total pumping capacities range from 0.5 to 38.1 cfs, and the combined total capacity is 88.0 cfs. The total tributary area is 547.8 acres of various land uses. On average, this results in about 0.09 cfs/acre of firm pumping capacity needed per acre of development.

## Cost Evaluations Summary

Capital costs range from approximately \$95,000 to \$5.8 million, with a total of \$12.2 million. Land costs make up approximately \$2.8 million of the \$12.2 million. The cost per acre of development is approximately \$22,400.

## Potential Environmental Impacts and Mitigation Measures Summary

This study is a high-level assessment to analyze detention basin and pumping capacity requirements based on increases in the volume of stormwater runoff resulting from development in the Study Areas. No hydraulic or hydrologic modeling was performed for this study, storm drainage pipe facilities were not sized, and water quality control measures were not considered. To address the potential impacts of development, a comprehensive City-wide storm drainage master plan should be completed. In addition, each development project should complete a drainage plan to appropriately size storm drainage facilities based on site specific constraints. Each drainage study should also consider stormwater quality control measures and trash control measures as applicable.

## EXISTING CONDITIONS

The City's storm drain system is shown on Figure 2. The storm drain system includes 620-miles of 4-inch to 96-inch storm drains. Multiple pump stations and lift stations are used to pump drainage into receiving waters. Figure 2 shows the locations of the 58 pump stations and the 19 lift stations, and various sizes of storm drain pipes.

Major receiving waters include Pixley Slough, Bear Creek, Mosher Slough, Five Mile Slough, Calaveras River, Fourteen Mile Slough, Smith Canal, Stockton Deep Water Ship Channel, San Joaquin River, Walker/French Camp Slough, Duck Creek, and North Littlejohns Creek.

The information for the existing condition storm drains is compiled from a 2008 Conceptual Storm Drain Master Plan by Peterson Brustad Inc. and a 2004 Conceptual Storm Drain Master Plan by West Yost. The City of Stockton is situated on the eastern boundary of the Sacramento/San Joaquin River Delta. The City is characterized by flat topography with a complex network of streams and rivers running through it. The northern portion of the City is protected by levees, and drainage is typically pumped into receiving waters. The southern portion of the City does not have many levees and is characterized by various floodplain designations by FEMA (Peterson Brustad Inc., 2008). A few of the waterways in the central and northern parts of the city, namely Bear Creek, Pixley Slough, Mosher Slough, and the Calaveras River, have sufficient capacity to handle buildout flows based on the 1990 General Plan, but do not have capacity to handle additional development beyond that. The creeks in the southeast portion of the planning area (North Littlejohns Creek, Weber Slough, South Littlejohns Creek, and Lone Tree Creek) do not have capacity to contain the existing 100-year flows, resulting in overbank flooding in much of those watersheds (West Yost, 2004).

## DETENTION STORAGE AND PUMPING REQUIREMENTS FOR THE STUDY AREAS

The development of the detention storage and pumping requirements are discussed below:

### GPU Land Uses by Development Area

The land use data for this evaluation was provided by Placeworks and is provided in Attachment A (including the buildout land use map, the dwelling unit data, acreage data, and 2040 percent development data). The land use data has been reorganized in Table 1 to be suitable for estimating the stormwater detention storage and pumping requirements. The reorganized land use data includes existing land use data, net new land use data for 2040, and 2040 land use data in terms of gross acreages. The 2040 land use data is shown on Figure 1, and the Study Areas and the Approved/Pending Development Projects are shown on Figure 2.

### Assumptions and Methodology

The following assumptions were made for this stormwater evaluation:

- Little infrastructure planning has been done for the Study Areas, consequently, detention storage and pumping requirements have been estimated for the Study Area.
- Stormwater plans have been or will be prepared by others for the Approved/Pending Development Projects. To avoid conflicting infrastructure plans, no storage and pumping requirements have been estimated for the Approved/Pending Development Projects.
- Without existing drainage models, it is not possible to accurately evaluate the need for detention storage and new pumping. Also, re-development projects will use the existing stormwater infrastructure, resulting in minimal new infrastructure requirements. Consequently, if the re-development project results in increased impervious coverage, detailed evaluations will need to be prepared in the future, including preparation of hydrologic and hydraulic models which can be used to accurately determine best drainage approach and size the required infrastructure.
  - Study areas that consisted primarily of new development or infill projects were assumed to need detention facilities if they did not already have detention basins.
  - Study areas that consisted primarily of re-development projects were assumed to not need detention facilities.
  - Study areas that had both re-development and infill projects were assumed to need detention facilities unless they already drained to a detention basin or if the receiving system appears to have adequate capacity for buildout conditions.
- Net new development areas were used to size stormwater facilities. Net new development areas do not include areas that are already developed and will not change as a result of new development.

The following methodology was used for evaluating the required stormwater detention storage and pumping requirements for the Study Areas.

**Table 1. Land Use Data**

Study Area or Development Name	Single Family, Gross Acres			Multi Family, Gross Acres			Commercial, Gross Acres			Industrial, Gross Acres		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>												
Study Area 1 - Eight Mile Rd Area	17.2	232.1	249.3	8.4	73.2	81.6	17.9	0.6	18.5	4.0	0.0	4.0
Study Area 2 - Pacific Ave Corridor	4.3	0.0	4.3	3.5	4.7	8.2	115.8	3.6	119.4	0.1	0.0	0.1
Study Area 3 - West Ln and Alpine Rd Area	38.7	51.6	90.2	5.8	29.9	35.7	68.4	6.2	74.6	54.5	0.0	54.5
Study Area 4 - Port/Waterfront	8.0	11.2	19.2	8.6	26.7	35.3	10.3	2.9	13.2	44.3	5.6	49.9
Study Area 5 - El Dorado/Center Corridors	5.5	0.0	5.5	8.3	17.2	25.5	8.1	1.8	9.9	9.9	0.0	9.9
Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	4.4	0.0	4.4	4.8	18.0	22.8	6.5	3.4	9.9	7.2	0.0	7.2
Study Area 7 - Wilson Way Corridor	1.6	0.0	1.6	0.2	6.8	7.1	2.1	5.1	7.2	14.9	0.0	14.9
Study Area 8 - I-5/Highway 4 Interchange	1.0	0.0	1.0	0.1	38.0	38.1	0.9	0.9	1.8	13.2	0.0	13.2
Study Area 9 - Railroad Corridor at California St	2.3	0.0	2.3	1.3	19.3	20.6	4.8	1.5	6.3	7.0	0.0	7.0
Study Area 10 - I-5 and Charter Way Area	42.8	57.9	100.7	4.1	4.2	8.3	26.3	2.6	28.9	4.6	2.7	7.3
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0.3	0.0	0.3	0.0	7.7	7.7	2.9	0.4	3.3	0.0	0.0	0.0
Study Area 12 - Airport Way Corridor	7.2	0.0	7.2	0.4	4.7	5.1	6.8	10.2	17.0	89.5	13.1	102.6
Study Area 13 - Mariposa and Charter Area	3.9	0.0	3.9	5.9	0.0	5.9	5.6	1.5	7.2	0.0	0.0	0.0
Study Area 14 - East Weston Ranch <sup>(b)</sup>	1.1	0.0	1.1	0.0	0.0	0.0	4.9	14.8	19.8	0.0	0.0	0.0
Study Area 15 - South of French Camp Rd	75.7	0.0	75.7	6.1	0.0	6.1	0.0	0.0	0.0	0.1	0.0	0.1
Study Area 16 - E French Camp Rd Area	122.7	0.0	122.7	9.1	0.0	9.1	0.1	0.0	0.1	0.2	0.0	0.2
<b>Subtotal (Study Areas)</b>	<b>336.9</b>	<b>352.8</b>	<b>689.7</b>	<b>66.8</b>	<b>250.5</b>	<b>317.3</b>	<b>281.5</b>	<b>55.6</b>	<b>337.1</b>	<b>249.5</b>	<b>21.4</b>	<b>270.8</b>
<b>Approved/Pending Development Projects Within City Limit</b>												
Westlake Villages	0.0	680.0	680.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delta Cove	0.0	132.7	132.7	0.0	47.6	47.6	0.0	2.6	2.6	0.0	0.0	0.0
North Stockton Projects III	38.0	355.0	393.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cannery Park	0.0	272.0	272.0	0.0	16.0	16.0	0.0	104.0	104.0	0.0	0.0	0.0
Nor Cal Logistics Center	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crystal Bay	0.0	19.4	19.4	0.0	78.7	78.7	0.0	0.0	0.0	0.0	0.0	0.0
Sanctuary	0.0	1,026.0	1,026.0	0.0	67.4	67.4	0.0	35.5	35.5	0.0	0.0	0.0
Tidewater Crossing	869.6	-869.6	0.0	0.0	0.0	0.0	0.0	16.0	16.0	0.0	0.0	0.0
Open Window <sup>(c)</sup>	0.0	0.0	0.0	0.0	11.9	11.9	12.9	-1.0	11.9	0.0	0.0	0.0
Weston Ranch Town Center	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.5	41.5	0.0	0.0	0.0
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>907.6</b>	<b>1,615.5</b>	<b>2,523.1</b>	<b>0.0</b>	<b>221.6</b>	<b>221.6</b>	<b>12.9</b>	<b>198.6</b>	<b>211.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>												
Mariposa Lakes	151.0	939.3	1,090.3	0.0	585.0	585.0	0.0	150.0	150.0	0.0	0.0	0.0
Airpark 599	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.0	128.0	0.0	0.0	0.0
Tra Vigne <sup>(d)</sup>	0.0	846.4	846.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>151.0</b>	<b>1,785.7</b>	<b>1,936.7</b>	<b>0.0</b>	<b>585.0</b>	<b>585.0</b>	<b>0.0</b>	<b>278.0</b>	<b>278.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects <sup>(e)</sup>	13,870.5	1,270.5	15,141.0	1,915.9	0.0	1,915.9	546.6	0.0	546.6	1,783.8	0.0	1,783.8
<b>Grand Total</b>	<b>15,266.0</b>	<b>5,024.6</b>	<b>20,290.5</b>	<b>1,982.7</b>	<b>1,057.1</b>	<b>3,039.8</b>	<b>841.0</b>	<b>532.1</b>	<b>1,373.1</b>	<b>2,033.2</b>	<b>21.4</b>	<b>2,054.6</b>

<sup>(a)</sup> Excludes Open Window approved project.  
<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.  
<sup>(c)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.  
<sup>(d)</sup> Pending; not approved.  
<sup>(e)</sup> Excludes approved/pending projects.

City of Stockton Standard Specifications, Section 77 requires:

- Detention basins be sized using the equation  $\text{Volume (acre-feet)} = C \cdot A \cdot R / 12$ , where
  - C = runoff coefficient,
  - A = area of the site (acres), and
  - R = rainfall depth (inches). Rainfall depths are shown in Table 2 and differ between areas that have discharge limitations or not.
- Discharge limitations were explained in the 2008 Conceptual Storm Drain Master Plan as receiving waters that had discharge constraints based on the existing capacity of the channel. Many Study Areas do not have a known receiving water, and therefore, it was assumed they were discharge limited unless otherwise noted in the PBI report (2008).
- Runoff coefficients were obtained from City Standard Drawing Number 76, as shown in Table 3.

<b>Table 2. Rainfall Depth for Use in the Detention Basin Sizing Equation (above).</b>	
Receiving Water Status	Rainfall <sup>(a)</sup> , inches
No discharge limitations	3.12
Discharge limitations	Use safety factor of 1.5 applied to size calculated for No Discharge Limitations
<sup>(a)</sup> From City of Stockton Standard Specifications, Section 77m	

<b>Table 3. Runoff Coefficients<sup>(a)</sup></b>	
Land Use Category	C-Value
Single Family Residential	0.35
Multi-Family Residential	0.65
Commercial	0.90
Industrial	0.90
<sup>(a)</sup> From City of Stockton Standard Drawing Number 76.	

Neither the City’s Specifications Section 74 nor 77 provided guidance on how to size pump stations to empty detention basins; therefore, guidance from San Joaquin County Improvement Standards were used. Section 3-4.05.C of the San Joaquin County Improvement Standards requires that detention basins shall have outlet facilities providing terminal drainage capable of emptying a full basin in 24 hours in urban areas. Although the San Joaquin County Improvement Standards encourage the use of gravity drained detention basins, it is difficult to know if a system will drain by gravity without additional modeling or design. Therefore, all detention basins were assumed to require pumping facilities.



### **Storage Requirements**

Using the methodology described above, the required detention storage volumes are summarized in Table 4 for the Study Areas. As shown, the required detention storage volumes range from 0.5 to 50.4 ac-ft. The total combined detention storage volume for all of the Study Areas is 99.8 ac-ft. Storage volume was also included in Table 4 for extended detention basins located with the flood control basin assuming there were no volume reduction measures implemented. The total new development tributary area that needs facilities is 547.8 acres of various land uses.

### **Pumping Requirements**

Using the methodology described above, the pumping requirements are summarized in Table 4. As shown, the firm pumping capacities range from 0.3 to 25.4 cfs, and the combined firm capacity is 50.3 cfs. The total pumping capacities range from 0.5 to 38.1 cfs, and the combined total capacity is 88.0 cfs. The total tributary area is 547.8 acres of various land uses. As stated above, the analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

Additionally, the pump stations that discharge into open channels, creek, or rivers may require acquisition of several permits such as Clean Water Act Section 401 and 404 permits/certification, California Department of Fish and Wildlife Stream Bed Alteration Agreement, Central Valley Flood Protection Board encroachment permit, and the San Joaquin County Flood Control and Water Conservation District permits.

**Table 4. Detention Basin Volumes and Pump Station Capacities<sup>(f)</sup>**

Study Area Name	Location of Discharge	Limited or Unlimited Discharge	New Development, Re-development, or Infill	Facilities Needed? <sup>(d)</sup> (Yes or No)	Single	Multi Family,	Industrial,	Total Areas of Study Areas that Need Facilities, acres	Area Weighted C-Value	Extended Detention Basin Volume, ac-ft	Volume <sup>(c)</sup> (discharge limitations), ac-ft	Firm Pumping Capacity <sup>(b)</sup> for basins with discharge limitations, cfs	Total Pumping Capacity <sup>(b, e)</sup> for basins with discharge limitations, cfs
					Family, acres	acres	acres						
<b>Study Areas</b>													
Study Area 1 - Eight Mile Rd Area	Pixley Slough	Limited	100% new development	Yes	232.1	73.2	0.0	305.9	0.42	5.6	50.4	25.4	38.1
Study Area 2 - Pacific Ave Corridor	Unknown from PBI	Limited	100% re-development	No	0.0	4.7	0.0	0.0	--	--	--	--	--
Study Area 3 - West Ln and Alpine Rd Area	Unknown from PBI	Limited	50% re-development, 50% infill	Yes	51.6	29.9	0.0	87.7	0.49	1.9	16.8	8.5	16.9
Study Area 4 - Port/Waterfront	Unknown from PBI	Limited	60% re-development, 40% infill	Yes	11.2	26.7	5.6	46.5	0.62	1.3	11.3	5.7	11.4
Study Area 5 - El Dorado/Center Corridors	Unknown from PBI	Limited	80% re-development, 20% infill	No	0.0	17.2	0.0	0.0	--	--	--	--	--
Study Area 6 - Miner/Weber Corridors	Unknown from PBI	Limited	90% re-development, 10% infill	No	0.0	18.0	0.0	0.0	--	--	--	--	--
Study Area 7 - Wilson Way Corridor	Unknown from PBI	Limited	90% re-development, 10% infill	No	0.0	6.8	0.0	0.0	--	--	--	--	--
Study Area 8 - I-5/Highway 4 Interchange	Unknown from PBI	Limited	10% re-development, 90% infill	Yes	0.0	38.0	0.0	38.9	0.66	1.1	9.9	5.0	10.0
Study Area 9 - Railroad Corridor at California St	Unknown from PBI	Limited	60% re-development, 40% infill	No	0.0	19.3	0.0	0.0	--	--	--	--	--
Study Area 10 - I-5 and Charter Way Area	Unknown from PBI	Limited	60% re-development, 40% infill	Yes	57.9	4.2	2.7	67.4	0.41	1.2	10.8	5.5	10.9
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	Unknown from PBI	Limited	100% re-development	No	0.0	7.7	0.0	0.0	--	--	--	--	--
Study Area 12 - Airport Way Corridor	Unknown from PBI	Limited	50% re-development, 50% infill	No	0.0	4.7	13.1	0.0	--	--	--	--	--
Study Area 13 - Mariposa and Charter Area	Potentially Calaveras River	Limited	30% redevelopment, 70% infill	Yes	0.0	0.0	0.0	1.5	0.90	0.1	0.5	0.3	0.5
Study Area 14 - East Weston Ranch	Unknown from PBI	Limited	100% infill	No	0.0	0.0	0.0	0.0	--	--	--	--	--
Study Area 15 - South of French Camp Rd	San Joaquin River	Limited	95% new development, 5% re-development	Yes	0.0	0.0	0.0	0.0	--	--	--	--	--
Study Area 16 - E French Camp Rd Area	Potentially French Camp Slough <sup>(a)</sup>	Limited	90% new development, 10% re-development	Yes	0.0	0.0	0.0	0.0	--	--	--	--	--
Total					352.8	250.5	21.4	547.8		11.1	99.8	50.3	88.0

<sup>(a)</sup> PBI concluded that no proper hydraulic modeling existed for this conveyance system and comprehensive flood management was recommended for this area, and thus discharge constraints could not be developed. A limited discharge was assumed for this Study Area.

<sup>(b)</sup> Detention basins should have outlet facilities capable of draining a basin in 24 hours in urban areas (per San Joaquin County Improvement Standards, 2014)

<sup>(c)</sup> Volume (in acre-feet) is calculated using  $V = C \cdot A \cdot R / 12$ , where C = area weighted runoff coefficient, A = total area (acres), and R = rainfall depth (in)

<sup>(d)</sup> Facilities are needed for areas where there is new development or infill with no existing facilities or capacity for buildout. Facilities are not needed if there is primarily re-development or the system already has the capacity for buildout conditions.

<sup>(e)</sup> Total pumping capacity is included in this evaluation for estimating pump station costs.

<sup>(f)</sup> The analyses and conclusions presented in this TM are based on limited land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

## DETENTION STORAGE AND PUMPING COST EVALUATIONS

Approximate stormwater infrastructure unit costs are presented in Table 5 and discussed below. These unit costs were taken/developed from previous West Yost planning engineering studies, design, bid, construction projects, and general West Yost cost estimating experience from projects located in the California Central Valley for construction associated with medium to large development projects.

- The detention basin unit cost of \$28,000 per ac-ft is from actual construction costs for a detention basin project in the City of Dixon, but inflated from Spring 2005 to December 2016 (using the Engineering News Record 20 Cities Average). This unit cost includes detention basin excavation, an all-weather access road around the basin, inlet and outlet headwalls, and other facilities for a complete, urban detention basin. The basins are assumed to be 12 feet deep, with a water depth of 10 feet, a freeboard of 2 feet, and side slopes of 4H:1V.
- The pump station unit cost of \$37,000 per cfs is from actual construction costs for the Natomas Area of Sacramento, but inflated from October 1998 to December 2016.
- The land cost for detention basins was assumed to be \$200,000 per acre.
- The Engineering, Environmental, Administration, Construction Management, etc. multiplier of 40 percent is from West Yost Associates' experience with similar, typical projects.

Facility Type	Unit	Cost per Unit, dollars
Detention Basin (Storage Capacity)	Acre-feet	28,000
Pump Station (Total Pumping Capacity)	cfs	37,000
Land Acquisition	Acres	200,000
Engineering, Environmental, Administration, Construction Management, etc.	--	40 percent of construction cost

The estimated construction costs for the Study Areas are summarized in Table 6. The quantities for the cost calculations are also provided in Table 6. The construction costs are developed by multiplying the infrastructure quantities from Table 6 by the approximate unit costs from Table 5. The total capital costs additionally include the cost of Engineering, Environmental, Administration, Construction Management, etc., and the land acquisition for the detention basins.

**Table 6. Estimated Stormwater Infrastructure Construction and Total Capital Costs**

Study Area	Volume of required water storage	Excavation Volume <sup>(a)</sup>	Area of Basin	Total Pumping Capacity	Detention Basin Cost	Pump Station Cost	Construction Cost	Land Cost	Engineering, Administration, CM	Total Capital Cost
<i>Units, Unit Costs, and Multipliers</i>	<i>ac-ft</i>	<i>ac-ft</i>	<i>ac</i>	<i>cfs</i>	<i>\$28,000/ac-ft</i>	<i>\$37,000/cfs</i>	<i>dollars</i>	<i>\$200,000/ac</i>	<i>40%</i>	<i>dollars</i>
Study Area 1 - Eight Mile Rd Area	56.0	66.1	5.9	38.1	\$1,851,737	\$1,411,396	\$3,263,000	\$1,185,678	\$1,305,000.00	\$5,754,000
Study Area 2 - Pacific Ave Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 3 - West Ln and Alpine Rd Area	18.7	22.0	2.2	16.9	\$616,464	\$626,492	\$1,243,000	\$439,722	\$497,000.00	\$2,180,000
Study Area 4 - Port/Waterfront	12.5	14.8	1.6	11.4	\$414,630	\$421,375	\$836,000	\$311,814	\$334,000.00	\$1,482,000
Study Area 5 - El Dorado/Center Corridors	--	--	--	--	--	--	--	--	--	--
Study Area 6 - Miner/Weber Corridors	--	--	--	--	--	--	--	--	--	--
Study Area 7 - Wilson Way Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 8 - I-5/Highway 4 Interchange	11.1	13.0	1.4	10.0	\$365,106	\$371,046	\$736,000	\$279,785	\$294,000.00	\$1,310,000
Study Area 9 - Railroad Corridor at California St	--	--	--	--	--	--	--	--	--	--
Study Area 10 - I-5 and Charter Way Area	12.0	14.2	1.5	10.9	\$397,379	\$403,844	\$801,000	\$300,694	\$320,000.00	\$1,422,000
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 12 - Airport Way Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 13 - Mariposa and Charter Area	0.6	0.8	0.2	0.5	\$22,997	\$20,278	\$43,000	\$35,424	\$17,000.00	\$95,000
Study Area 14 - East Weston Ranch	--	--	--	--	--	--	--	--	--	--
Study Area 15 - South of French Camp Rd	--	--	--	--	--	--	--	--	--	--
Study Area 16 - E French Camp Rd Area	--	--	--	--	--	--	--	--	--	--
<b>Total</b>	<b>110.9</b>	<b>131.0</b>	<b>12.8</b>	<b>88.0</b>	<b>\$3,668,312</b>	<b>\$3,254,432</b>	<b>\$6,922,000</b>	<b>\$2,553,116</b>	<b>\$2,767,000</b>	<b>\$12,243,000</b>

<sup>(a)</sup> Excavation values based on:  
 1) San Joaquin County Improvement Standards requires the depth of basin to be 2 feet above groundwater, detention basin side slopes be at least 4H:1V, and that the water surface be a minimum of 2-feet below all ground surface elevations upstream from the basin.  
 2) City of Stockton and County of San Joaquin Final Stormwater Quality Control Criteria Plan, March 2009.  
 3) Sizing assumptions include: A depth to groundwater of 12 feet, a square detention basin shape, and a maximum water depth of 10 feet.

### **Detention Storage Construction Costs**

Detention basin construction costs range from approximately \$23,000 to \$1.8 million, with a total of \$3.7 million.

### **Pump Station Construction Costs**

Pump station construction costs range from approximately \$20,000 to \$1.4 million, with a total of \$3.3 million.

### **Total Capital Costs**

Capital costs range from approximately \$95,000 to \$5.8 million, with a total of \$12.2 million. Land costs make up approximately \$2.8 million of the \$12.2 million. The cost per acre of development is approximately \$22,400.

## **RECOMMENDED FUTURE ACTIONS**

The recommended actions to address stormwater infrastructure needs are addressed in this section.

### **City-Wide Stormwater Master Plan for the Existing City**

The City does not have a City-wide storm drainage master plan with hydrologic and hydraulic models. The previous storm drain master plans did not incorporate modeling and therefore lacked information critical to infrastructure planning for the existing City. Consequently, the storm drain system improvements for the existing City areas identified in previous storm drain master plans may no longer be appropriate. This could result in some storm drain infrastructure being undersized, which could lead to flooding, or oversized which could lead to unnecessary infrastructure capital expenditures and increased operations and maintenance efforts and costs.

The City should complete a City-wide storm drainage master plan, including hydrologic and hydraulic models for existing land use conditions. The master plan should identify the future stormwater infrastructure needs to solve existing stormwater system deficiencies. The City's current stormwater fee program is insufficient to fund the required operations and maintenance needs of the City's aging stormwater and flood control infrastructure and insufficient to fund the required future repairs and replacements for the existing facilities. The City stormwater fee program should be revised based on the updated storm drainage master plan, operations and maintenance requirements, and future repairs and replacements to ensure the City collects enough money to adequately operate and maintain the existing system and construct the required future repairs and replacements.

### **City-Wide Stormwater Master Plan for the Future Development**

The City does not have a City-wide storm drainage master plan with hydrologic and hydraulic models. The previous storm drain master plans did not incorporate modeling and therefore lacked information critical to infrastructure planning for future development. In addition, the projected land uses for 2040 are different than the buildout land uses from the 2035 General Plan. Consequently, the storm drain system improvements identified in previous storm drain master plans may no longer be appropriate. This could result in some storm drain infrastructure being

undersized, which could lead to flooding, or oversized which could lead to unnecessary infrastructure capital expenditures and increased operations and maintenance efforts and costs.

The City should complete a City-wide stormwater master plan, including hydrologic and hydraulic models for the 2040 land uses. The master plan should identify the future stormwater infrastructure needs and develop a capital improvement plan that is adequate to fund improvements needed for the City to serve the future development, including both infrastructure capital costs and future system operation and maintenance costs.

### **Future Development-Specific Stormwater Drainage and Flood Control Plans**

This stormwater study is a high-level assessment of required detention volume and pumping capacity for the Study Areas, and does not assess storm drainage piping facilities. These facilities are sized based on generalized land use data and preliminary engineering evaluations, and it is difficult to size stormwater facilities without knowing the layout of the development and site-specific constraints.

The City should require each new development to prepare a stormwater drainage and flood control plan covering drainage (storm drains, detention basins, pump stations, and associated hydrologic and hydraulic models *etc.*) and flood control. As development projects progress, the specific infrastructure serving the development should be reviewed and verified using the updated storm drain master plan models. The models should be used to identify both on-site and off-site development related infrastructure requirements. The development projects should be required to construct the identified on-site and to fund or construct the off-site infrastructure.

### **Future Development-Specific Stormwater Quality and Permitting Plans**

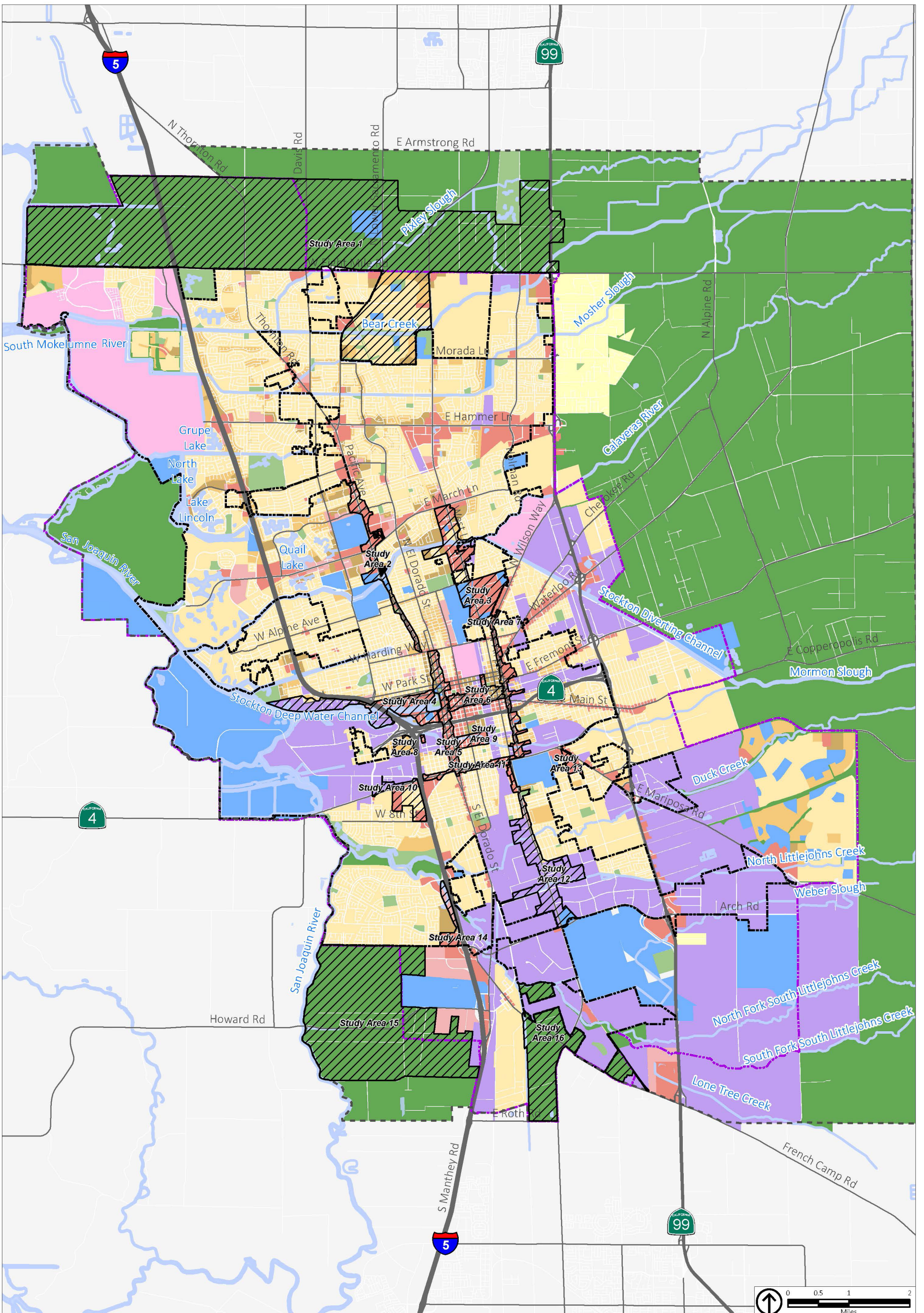
This study does not fully consider the sizing of detention basins or other facilities to address stormwater quality and stormwater pollution control measures. Stockton has a Phase 1 Municipal Separate Storm Sewer System permit that requires stormwater quality be considered. In addition, the State of California recently mandated that trash should be captured from stormwater runoff in high generating trash land use areas, including commercial, industrial, and high density residential areas. It is difficult to size these trash capture and stormwater quality systems without knowing the layout plan of the developing area.

Each Study Area should develop a Stormwater Quality and Permitting Plan that is consistent with Stockton's Stormwater Quality Control Criteria Plan (March 2009) and is consistent with the City's trash control requirements. The Stormwater Quality and Permitting Plans could be combined with the Stormwater Drainage and Flood Control Plans into a single document.

## CONCLUSIONS

Stormwater infrastructure conclusions are provided below:

- Detention basins and pump stations were sized to account for the net increase in the Study Areas.
- Areas that are already developed and/or already have capacity for buildout conditions were assumed to not need additional detention facilities.
- The estimated total capital costs of storm drain detention basins and pump stations is \$11.8 million.
- The estimated cost of detention basins and pumping facilities for developing areas was estimated to be approximately \$21,600 /acre of development.
- The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.



Source: City of Stockton, August 2017.

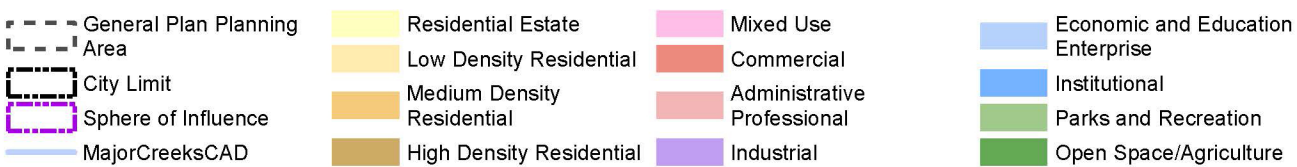
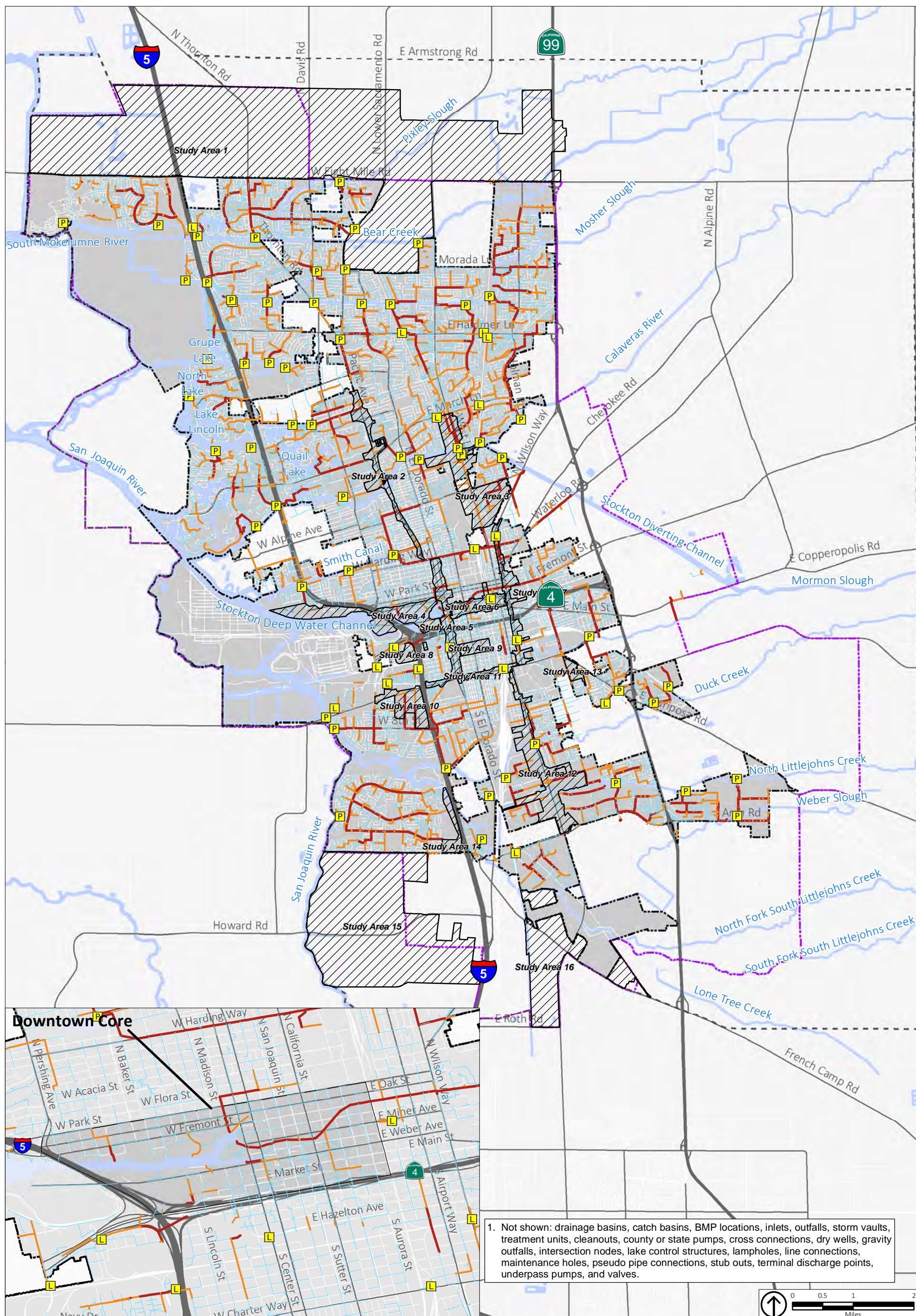


Figure 1

2017 Preferred 2040 Land Uses





1. Not shown: drainage basins, catch basins, BMP locations, inlets, outfalls, storm vaults, treatment units, cleanouts, county or state pumps, cross connections, dry wells, gravity outfalls, intersection nodes, lake control structures, lampholes, line connections, maintenance holes, pseudo pipe connections, stub outs, terminal discharge points, underpass pumps, and valves.

**Existing Storm Facility Existing Storm Drain (Diameter)**

Lift Station	< 22 Inches
Pump Station	24 - 36 Inches
Study Areas	>39 Inches
	Major Creeks/CAD

Figure 2  
Storm System Facilities

**ATTACHMENT A**

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Land Use Data Received from Placeworks and Buildout Land Use Map

**ATTACHMENT D**

Acreage Gross or Net	Study Area Name	Single Family Net New 2040	Single Family Net New 2040	Single Family Net New 2040 + Existing	Single Family Net New 2040 + Existing	Multi Family Net New 2040	Multi Family Net New 2040	Multi Family Net New 2040 + Existing	Multi Family Net New 2040 + Existing	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040 + Existing	Commercial Net New 2040 + Existing	Industrial Net New 2040	Industrial Net New 2040 + Existing
		Units	Acres	Units	Acres	Units	Acres	Units	Acres	Total Square Feet	0.3 FAR Sq Ft	0.5 FAR Sq Ft	5.0 FAR Sq Ft	0.3 FAR Acres	0.5 FAR Acres	5.0 FAR Acres	Sq Ft	Acres	Sq Ft	Sq Ft
Gross	Study Area 1 - Eight Mile Rd Area	1,379	646	1,500	663	1,198	209	1,294	217	39,408	39,408	0	0	15	0	0	241,408	20	0	105,400
Net	Study Area 2 - Pacific Ave Corridor	0	0	22	4	110	19	224	22	93,961	93,961	0	0	17	0	0	1,560,846	103	0	1,980
Net	Study Area 3 - West Ln and Alpine Rd Area	77	13	285	52	680	120	774	125	323,399	323,399	0	0	102	0	0	975,325	163	0	1,423,576
Net	Study Area 4 - Port/Waterfront	17	3	71	11	1,770	33	2,058	42	2,040,010	6,100	0	2,033,911	2	0	31	2,865,512	62	580,859	1,739,495
Net	Study Area 5 - El Dorado/Center Corridors	0	0	45	6	1,196	22	1,555	30	1,310,216	0	0	1,310,216	0	0	21	2,158,663	53	0	258,300
Net	Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	0	0	47	4	1,248	22	1,467	27	1,463,025	0	0	1,463,025	0	0	14	2,152,972	33	0	187,300
Net	Study Area 7 - Wilson Way Corridor	0	0	12	2	234	27	240	28	606,716	103,753	0	502,963	19	0	5	1,321,076	65	0	390,342
Net	Study Area 8 - I-5/Highway 4 Interchange	0	0	8	1	659	47	660	48	388,671	0	0	388,671	0	0	4	388,671	4	0	344,300
Net	Study Area 9 - Railroad Corridor at California St	0	0	19	2	1,340	24	1,363	25	1,299,279	0	0	1,299,279	0	0	24	1,365,999	26	0	182,658
Net	Study Area 10 - I-5 and Charter Way Area	86	15	314	58	98	42	127	46	133,864	133,864	0	0	42	0	0	377,363	77	83,678	203,939
Net	Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0	0	5	0	396	15	396	15	323,733	9,597	0	314,135	6	0	7	703,670	38	0	0
Net	Study Area 12 - Airport Way Corridor	0	0	53	7	108	19	112	19	205,461	135,225	70,236	0	14	4	0	272,544	48	1,368,744	3,709,140
Net	Study Area 13 - Mariposa and Charter Area	0	0	12	4	0	0	77	6	80,944	80,944	0	0	25	0	0	93,560	28	0	0
Net	Study Area 14 - East Weston Ranch <sup>(b)</sup>	0	0	1	1	0	0	0	0	430,677	0	430,677	0	0	26	0	430,677	26	0	0
Net	Study Area 15 - South of French Camp Rd	0	0	89	76	0	0	9	6	0	0	0	0	0	0	0	0	0	0	1,700
Net	Study Area 16 - E French Camp Rd Area	0	0	59	123	0	0	4	9	0	0	0	0	0	0	0	5,100	17	0	4,900
Net	Outside of Study Areas <sup>(c)</sup>	1,501	246	77,964	14,117	0	0	33,183	1,916	0	0	0	0	0	0	0	23,811,089	1,607	0	46,620,901
	<b>Grand Total</b>	<b>3,059</b>	<b>923</b>	<b>80,505</b>	<b>15,131</b>	<b>9,036</b>	<b>600</b>	<b>43,542</b>	<b>2,583</b>	<b>8,739,364</b>	<b>926,252</b>	<b>500,913</b>	<b>7,312,200</b>	<b>242</b>	<b>31</b>	<b>105</b>	<b>38,724,475</b>	<b>2,371</b>	<b>2,033,281</b>	<b>55,173,931</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

<sup>(c)</sup> Excludes approved/pending projects.

Acreage Gross or Net	Approved/Pending Projects Details	Net New						Full Build (2040)					
		Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres	Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres
<b>Approved within city limit</b>													
Gross	Westlake Villages	2,630	680	0		0		2,630	680	0		0	
Gross	Delta Cove	1,164	133	381	48	31,000	3	1,164	133	381	48	31,000	2.6
Gross	North Stockton Projects III	2,220	355	0		0		2,455	393	0		0	
Gross	Cannery Park	981	272	210	16	1,078,762	104	981	272	210	16	1,078,762	104
Gross	Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0
Gross	Crystal Bay	951	19	392	79	0		951	19	392	79	0	0
Gross	Sanctuary	5,452	1,026	1,618	67	692,256	36	5,452	1,026	1,618	67	692,256	36
Gross	Tidewater Crossing	-310	-870	0		186,200	16	0	0	0	0	186,200	16
Net	Open Window <sup>(a)</sup>	0	0	1,391	12	-68,800	-1	0	0	1,400	12	290,000	12
Gross	Weston Ranch Town Center	0	0	0	0	481,000	41	0	0	0	0	481,000	41
<b>Approved/pending outside city limit, inside SOI</b>													
Gross	Mariposa Lakes	8,955	939	1,553	585	1,009,503	150	8,960	1,090	1,556	585	1,009,503	150
Gross	Airpark 599	0	0	0	0	1,678,500	128	0	0	0	0	1,678,500	128
Gross	Tra Vigne <sup>(b)</sup>	1,244	846	0	0	0	0	1,244	846	0	0	0	0

<sup>(a)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand the capacity to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.

<sup>(b)</sup> Pending; not approved.

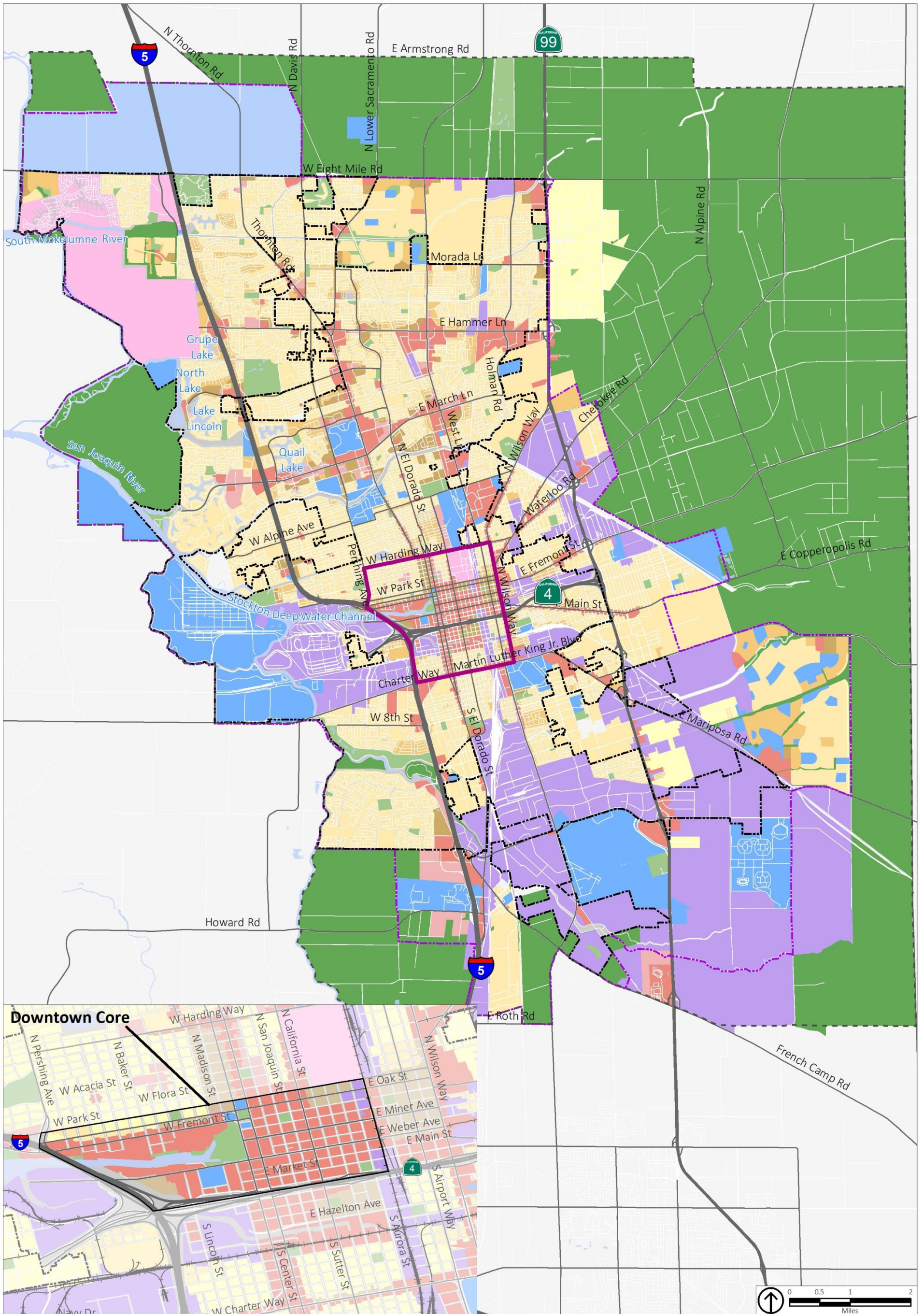
2040 Development Study Area												
	Net New Single Family Units (full buildout)	Percent applied to 2040	Net New Single Family Units (2040)	Net New Multi-Family Units (full buildout)	Percent applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (full buildout)	Percent applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (full buildout)	Percent applied to 2040	Net New Industrial Square Feet (2040)
Study Area 1 – Eight Mile Rd Area	3,940	35%	1,380	3,420	35%	1,200	197,000	20%	39,000	0	0%	0
Study Area 2 – Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
Study Area 3 – West Ln and Alpine Rd Area	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
Study Area 4 – Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
Study Area 5 – El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
Study Area 6 – Miner/Weber Corridors <sup>(a)</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
Study Area 7 – Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
Study Area 8 – I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
Study Area 9 – Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
Study Area 10 – I-5 and Charter Way Area	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
Study Area 11 – Charter Way/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
Study Area 12 – Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
Study Area 13 – Mariposa and Charter Area	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
Study Area 14 – East Weston Ranch <sup>(b)</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
Study Area 15 – South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Study Area 16 – E French Camp Rd Area	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>(c)</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>(d)</sup></b>	<b>20,480</b>		<b>3,060</b>	<b>48,470</b>		<b>9,040</b>	<b>45,773,000</b>		<b>8,739,000</b>	<b>134,701,000</b>		<b>2,033,000</b>

<sup>(a)</sup> Excludes Open Window approved project.  
<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.  
<sup>(c)</sup> Excludes approved/pending projects  
<sup>(d)</sup> Numbers do not always add up due to rounding.

The "full buildout" of the proposed General Plan assumes the maximum development of every parcel, combined with approved and pending developments throughout the Planning Area. The 2040 land uses are based on realistic land use demand projections. The full buildout of the General Plan would result in almost three times more new housing units and over 24 times more new non-residential development than estimated for 2040. Therefore, it is extremely unlikely that the full buildout would occur by the year 2040. Full buildout may not occur until well beyond the useful lifespan of the proposed infrastructure (for example, the lifespan of concrete structures is typically 50 to 75 years). Consequently, this infrastructure planning was based on the estimated 2040 level of development. This table is included in this TM to document the relationship between the buildout land uses and the 2040 land uses.

Source: PlaceWorks, 2017.

**Figure 2-8**  
**General Plan Land Use Map**



Source: City of Stockton, 2017; PlaceWorks, 2017.

- |                            |                            |                          |                                   |                        |
|----------------------------|----------------------------|--------------------------|-----------------------------------|------------------------|
| City Limit                 | Residential Estate         | High Density Residential | Administrative Professional       | Institutional          |
| Sphere of Influence        | Low Density Residential    | Mixed Use                | Industrial                        | Parks and Recreation   |
| General Plan Planning Area | Medium Density Residential | Commercial               | Economic and Education Enterprise | Open Space/Agriculture |
| Greater Downtown Boundary  |                            |                          |                                   |                        |



## League of Women Voters of San Joaquin County

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Post Office Box 4548 ■ Stockton, California 95204 ■ lwvsjc@gmail.com

October 8, 2018

Stockton Planning Commission  
Draft Envision Stockton 2040 General Plan.

Re: Adoption of Updated General Plan

Chairman Don Aguillard and Members of the Commission:

The League of Women Voters of San Joaquin County is opposed to housing and industrial development on the 3800 acres north of Eight Mile Road included in the proposed Envision Stockton 2040 General Plan Update.

A substantial amount of development is already approved and pending in North Stockton. According to General Plan Table 3-4, of the 29,300 housing units, 17,300 (59%) are in North Stockton- 12,700 in Northwest Stockton (Hammer to south of 8 Mile Road) and 4,600 in North Central and North East Stockton (Davis to Highway 99, south of 8 Mile Road). Additionally, there are 1,802,000 square feet of commercial space and 1,442,000 square feet of industrial space.

The area north of 8 Mile Road was added later in the planning process after discussion about locating a Stockton state university there. However the websites of several universities demonstrate that a university would consume very little of the 3800 acres:

- Chico, 119 acres
- Stanislaus, Turlock, 228 acres
- Stanislaus, Stockton, 102 acres
- Sacramento, 300 acres
- Fresno, 388 acres

Furthermore, the state's policy regarding enrollment growth is to maximize the capacity at existing campuses before adding new ones. (Legislative Analyst report, "Assessing UC and CSU Enrollment and Capacity", Jan 2017). The 102 acres in University Park is underutilized and, if the state's policy does not change, would be a candidate for future build out. It is interesting to note that the newest CSU-- Channel Islands-- was established on the grounds of the old Camarillo State Hospital. It replaced an off-campus center connected to CSU Northridge.

The League is of the opinion that the proposed 3800 acre addition will jeopardize growth and redevelopment in existing "infill" neighborhoods in other parts of Stockton. We support

ATTACHMENT D

reclassifying this to open space/agriculture with the idea of establishing a permanent buffer between Stockton and Lodi.

We appreciate the opportunity to submit our concerns for the updated Stockton General Plan and DEIR.

Sincerely yours



Kathy Casenave, President  
League of Women Voters of San Joaquin County

Cc: Stockton City Council  
Stockton Planning Department  
San Joaquin County Board of Supervisors

Resolution No.

## **STOCKTON PLANNING COMMISSION**

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### **RESOLUTION FORWARDING A RECOMMENDATION TO THE CITY COUNCIL TO APPROVE THE ENVISION STOCKTON 2040 GENERAL PLAN UPDATE, UTILITY MASTER PLAN SUPPLEMENTS, AND RELATED FINAL ENVIRONMENTAL IMPACT REPORT**

The City of Stockton has formulated a comprehensive, long-term General Plan Update, and related Utility Master Plan Supplements (UMPS) for the physical development of the City, which the General Plan contains each of the elements required by law to be a part of it; and

An update to the City's 2035 General Plan has been initiated to maintain compliance with State law; and

The Planning Commission held a duly noticed public hearing to consider the Envision Stockton 2040 General Plan Update, UMPS, and related Final Environmental Impact Report (FEIR) on October 25, 2018; now, therefore,

BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF STOCKTON, AS FOLLOWS:

1. The Planning Commission hereby forwards a recommendation to the City Council to adopt the Envision Stockton 2040 General Plan Update, and UMPS, as set forth in Exhibit 1, attached hereto and incorporated by this reference, and related FEIR, based on the following findings. All findings below are supported by the corresponding evidence in the administrative record:

- a. The proposed Envision Stockton 2040 General Plan Update establishes appropriate goals, objectives, policies, and actions to address such issues as land use, housing, economic development, community health, community design, transportation and circulation, public facilities and services, recreation, safety, youth, education, and natural and cultural resources;
- b. The General Plan has been updated in conformity with the provisions of State law requirements of California Code Section 65300 et seq.
- c. The proposed amendment will not endanger, jeopardize, or otherwise constitute a hazard to the public convenience, health, interest, safety, or general welfare of persons residing or working in the City;
- d. The Planning Commission has reviewed and considered the FEIR for the Envision Stockton 2040 General Plan Update, and UMPS



and has recommended certification of the FEIR as being adequate under the California Environmental Quality Act (CEQA);

- e. The mitigation measures, the monitoring program to be implemented for each mitigation measure, the findings, and statement of overriding considerations as set forth in the Findings, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program documents on file at [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton) are hereby recommended for adoption in relation to the proposed Envision Stockton 2040 General Plan Update and UMPS.

The statements, findings, and mitigation monitoring provisions are based on the above-referenced FEIR for the Envision Stockton 2040 General Plan Update and UMPS and other information available to the City Council are recommended for adoption in compliance with Sections 15091 and 15093 of the State CEQA Guidelines.

2. The Planning Commission hereby adopts a resolution recommending that the City Council approve:

- a. Certification of the Final Environmental Impact Report (FEIR);
- b. Envision Stockton 2040 General Plan Update;
- c. Utility Master Plan Supplements (UMPS).

PASSED, APPROVED, and ADOPTED: October 25, 2018.

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DON M. AGUILLARD, CHAIR  
CITY OF STOCKTON PLANNING COMMISSION

ATTEST:

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DAVID KWONG, SECRETARY  
CITY OF STOCKTON PLANNING COMMISSION

Exhibit 1

[www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton)

## APPENDIX B

# SB 244 ANALYSIS

There are hundreds of disadvantaged unincorporated communities (DUCs) throughout California, including more than 200 in the San Joaquin Valley alone. Many of these communities are geographically isolated islands. The living conditions in many of these communities suggest a distinct lack of public and private investment that threatens the health and safety of the residents and fosters economic, social, and educational inequality. Many of these communities lack basic infrastructure, including streets, sidewalks, storm drainage, clean drinking water, and adequate sewer service. In response to these conditions, the State Legislature passed Senate Bill 244 (SB 244) in 2011 with the intent of addressing the legal, financial, and political barriers that contribute to inequality and infrastructure deficits in DUCs. Accounting for these communities in the long-range planning process, as required by SB 244, is one way to ensure a more efficient system for delivery of services and infrastructure, including water, wastewater, storm drainage, and structural fire protection. Furthermore, investment in these services and infrastructure will result in the enhancement and protection of public health and safety for residents of these communities.

### **SB 244 Requirements: City, County, LAFCo**

The requirements of SB 244 apply differently to cities, counties, and local agency formation commissions (LAFCOs). These differences reflect the distinct physical and social settings of cities and counties and the different institutional authorities and responsibilities of cities, counties, and LAFCOs.

#### **Cities and Counties**

The requirements for cities and counties focus on their compliance with State Planning and Zoning Law, and particularly on general plans. SB 244 added the following requirements to Government Code Section 65588 concerning general plan land use elements:

- In the case of a city, an identification of each unincorporated island or fringe community within the city's sphere of influence. In the case of a county, an identification of each legacy community within the boundaries of the county, but not including any area within the sphere of influence of any city. This identification shall include a description of the community and a map designating its location.
- For each identified community, an analysis of water, wastewater, stormwater drainage, and structural fire protection needs or deficiencies.
- An analysis, based on then existing available data, of benefit assessment districts or other financing alternatives that could make the extension of services to identified communities financially feasible.

SB 244 also added Section 65302.10 to the Government Code to define the terms used in the legislation as they relate to cities and counties. According to the legislation, the key terms are defined as follows:

- “Community” means an inhabited area within a city or county that is comprised of no less than 10 dwellings adjacent or in close proximity to one another.
- “Disadvantaged unincorporated community” means a fringe, island, or legacy community in which the median household income is 80 percent or less than the statewide median household income.
- “Unincorporated fringe community” means any inhabited and unincorporated territory that is within a city’s sphere of influence.
- “Unincorporated island community” means any inhabited and unincorporated territory that is surrounded or substantially surrounded by one or more cities or by one or more cities and a county boundary or the Pacific Ocean.
- “Unincorporated legacy community” means a geographically isolated community that is inhabited and has existed for at least 50 years.

### **Local Agency Formation Commissions**

For LAFCO purposes, the definition of a DUC differs from those for cities and counties. SB 244 identifies a DUC for LAFCO purposes as an inhabited territory, as defined by Section 56046 of the Government Code (i.e., 12 or more registered voters), that constitutes all or a portion of a “disadvantaged community” as defined by Section 79505.5 of the Water Code (i.e., a community with an annual median household income that is less than 80 percent of the statewide annual median household income). SB 244 requires that, in conjunction with sphere of influence reviews or updates occurring after July 1, 2012, LAFCOs include determinations concerning the present and planned capacity of public facilities and adequacy of public services for DUCs within or adjacent to the sphere of influence of any city or special district. This includes evaluation of sewer, water, and structural fire protection needs or deficiencies; it does not explicitly include drainage. SB 244 defines DUCs slightly differently for LAFCOs than it does for cities and counties. SB 244 also includes procedural requirements related to approval of proposed annexations contiguous with DUCs.

In December 2012, San Joaquin LAFCo updated its Policies and Procedures to comply with the requirements of SB 244. The update consisted of identifying a series of DUCs within the Stockton Metropolitan Area and adopting policy language addressing these communities. According to the policy, San Joaquin LAFCo shall not approve an annexation of 10 acres or more that is adjacent to a disadvantaged unincorporated community unless a concurrent application of all or part of the DUC has also been filed. The policy excepts areas for which an application has been made in the past five years and areas where a majority of the registered voters within the DUC are opposed to annexation.

In developing its modified Sphere of Influence policies, San Joaquin LAFCO identified five DUCs within or adjacent to the City of Stockton’s SOI: August CDP; Garden Acres CDP; Kennedy CDP; French Camp CDP; and Taft Mosswood.

### **DUC Identification**

SB 244 outlines the general characteristics of DUCs, but does not provide guidance on how to identify them. To assist local governments in addressing the requirements of SB 244, the Governor's Office of Planning and Research (OPR) published a technical advisory memo in February 2013. The memo recommends data sources for identifying the income status of communities and mapping sources for identifying "communities" as defined by SB 244. It also referenced methodological guidance prepared by PolicyLink in collaboration with California Rural Legal Assistance. Based on the guidance provided by OPR and Policy, the City of Stockton identified DUCs in the Stockton area by focusing on a combination of income status and parcel density. Following are brief descriptions of the steps the City followed to identify these communities.

#### **Income Status**

To identify communities that meet the income status defined by SB 244, the City relied on the 2000 Census for income data because it disaggregated data to the Census block group level. The City also reviewed the 2010 Census and more recent American Community Survey (ACS) data, but the 2010 Census did not include income data and the ACS sample sizes were too small to produce reliable data for unincorporated areas. In 2000, the median household income of California was \$47,493, so the City included in its analysis any census block group with a median income of less than \$37,994 (i.e., 80 percent of the statewide median). In doing so, the City isolated census blocks in unincorporated areas within the City's sphere of influence.

#### **Parcel Density**

After isolating the census blocks that met the income threshold, the City proceeded with a parcel density analysis to identify "communities" as defined by SB 244. This analysis focused on identifying closely-settled places, rather than spread-out rural or semi-rural communities. The City identified areas with a density of at least 250 parcels per square mile, which is comparable to the density of Census Designated Places (unincorporated communities tracked by the Census Bureau). Within these areas, the City then screened to areas with at least 10 dwellings "adjacent or in close proximity to one another" as described by SB 244. In doing so, the City eliminated non-residential areas; areas less than three-quarters of an acre with only one or two houses; and any obvious narrow "slivers" that were a result of GIS layer overlap (e.g., along city limits and census tract overlaps).

#### **Communities Identified**

The City identified 3 types of DUCs in its analysis: Census Designated Places (CDPs), Island, and Fringe Communities.

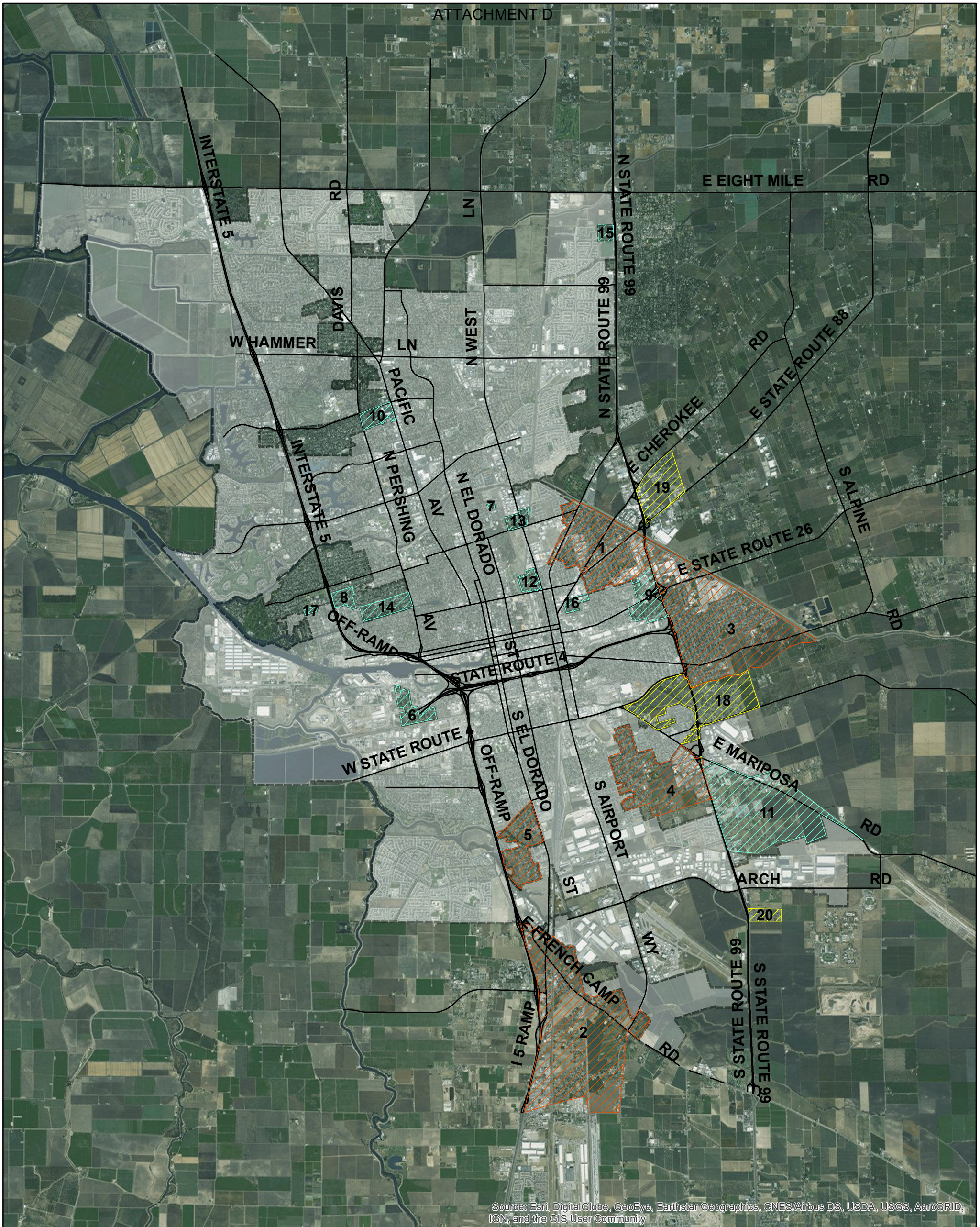
- The CDPs that the City identified are derived from San Joaquin County LAFCo's DUC analysis.
- The Island Communities are located within the city boundaries and Sphere of Influence.
- The Fringe Communities are located outside of city boundaries, but within the Sphere of Influence.

Table B-1 lists the DUCs in the Stockton area by type, size (in acres), and the number of parcels in each community.

**Table B-1. City of Stockton DUCs**

Name	Type	Size (acres)	Parcels
1. August CDP	CDP	805	2,137
2. French Camp CDP	CDP	2,006	606
3. Garden Acres CDP	CDP	1,652	2,901
4. Kennedy CDP	CDP	774	888
5. Taft Mosswood CDP	CDP	310	493
6. Boggs Tract	Island	100	325
7. East Alpine Community	Island	4	10
8. East Interstate Community	Island	51	212
9. Fremont St Community	Island	194	221
10. Holt Ave/Pershing Ave Community	Island	79	252
11. Mariposa Road Community	Island	35	223
12. North Oaks Community	Island	52	232
13. West Lane Community	Island	45	195
14. Pershing Ave Community	Island	110	473
15. Waller-Childress Community	Island	35	34
16. Rose Terrace	Island	33	106
17. West Interstate 5 Community	Island	85	22
18. Charter Way Community	Fringe	654	775
19. State Route 88 Community	Fringe	281	143
20. Sunny Road Community	Fringe	59	47

Source: Mintier Harnish, September 2017.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure B-1:  
Disadvantaged Unincorporated Communities

Map date: October 21, 2016  
Source: City of Stockton; San Joaquin County;  
United States Census, 2000.

DUCs (CDP)

- 1. August
- 2. French Camp
- 3. Garden Acres
- 4. Kennedy
- 5. Taft Mosswood

DUCs (Island)

- 6. Boggs Tract
- 7. Sperry Tract
- 8. East Interstate 5 Community
- 9. Fremont St. Community
- 10. Holt Ave/Pershing Ave Community
- 11. Mariposa Road Community

DUCs (Fringe)

- 12. North Oaks Community
- 13. West Lane Community
- 14. Pershing Ave Community
- 15. Waller-Childress Community
- 16. Rose Terrace
- 17. West Interstate 5 Community
- 18. Charter Way Community
- 19. State Route 88 Community
- 20. Sunny Road Community
- City Limits

0 0.75 1.5 3 Miles



# ATTACHMENT D

ENVISION STOCKTON 2040 GENERAL PLAN  
APPENDIX B: SB 244 ANALYSIS

*Please see next page.*



## **Infrastructure Analysis**

Once DUCs have been identified, SB 244 requires an analysis of infrastructure services for each DUC. This section first provides an overview of service providers in the Stockton Metropolitan Area and then describes public services within each of the DUCs in the Stockton area consistent with the requirements of SB244.

### **Overview of Service Providers in Stockton Area**

#### ***Water***

Water service providers in the Stockton Metropolitan Area include the City of Stockton Municipal Utilities Department (COSMUD), California Water Service Company (Cal Water), and San Joaquin County Maintenance Districts (SJMCDs) covering Lincoln Village and Colonial Heights. These providers deliver a combination of treated surface water supplied by the Stockton East Water District (SEWD), Delta Water Supply Project (DWSP) water from the San Joaquin River, and pumped groundwater.

#### ***Sewer***

Wastewater collection and treatment facilities in the Stockton Metropolitan Area consist of the Stockton Regional Wastewater Control Facility (RWCF) and the City of Stockton Wastewater Collection System Facilities. The RWCF provides primary, secondary, and tertiary treatment of municipal wastewater from throughout the city. The RWCF has a designed flow capacity of 55 mgd and average daily flow rate of 31.7 mgd. Treated effluent from the RWCF is dechlorinated and discharged to the San Joaquin River.

The City's wastewater collection system is divided into 15 designated sub-areas or "systems." Pump stations are located throughout the city and are integral to the wastewater collection system. Most of the pump stations discharge to pressure sewers that convey flow under pressure either directly to the RWCF or to a downstream gravity sewer.

#### ***Storm Drainage***

Storm drainage services for the Stockton Area are provided by the City of Stockton and San Joaquin County. Data for this part of this analysis came from consultation with County of San Joaquin staff.

#### ***Fire Protection***

Fire protection services for the Stockton Area are provided by City of Stockton Fire Department, French Camp-McKinley Fire District, Eastside Rural County Fire Protection District, Montezuma Fire Protection District, and Waterloo-Morada Fire Protection District. Data for this part of this analysis came from consultation with fire department staff.

## CDP Communities

### 1. August CDP

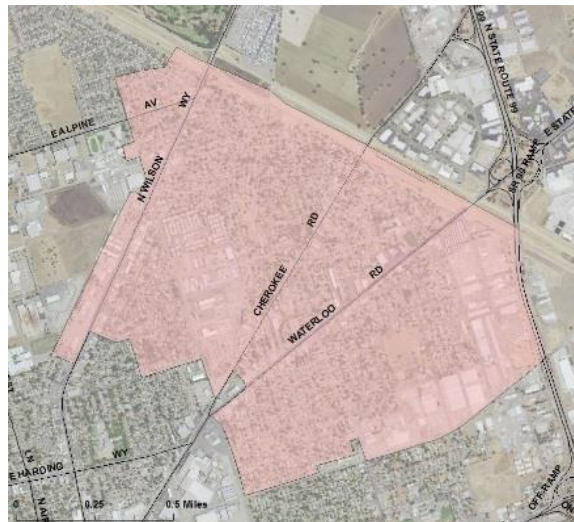
The August Community is made up of 2,137 parcels totaling approximately 805 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** –This area is covered by the East Stockton Sanitary Sewer Project and is served by the City of Stockton Collection System 4, as defined in the City’s Wastewater Master Plan. Service is provided to unincorporated area properties according to out-of-agency agreements. Additional sewer lines and connections consistent with the Wastewater Master Plan would have to be constructed to accommodate growth upon annexation.

**Drainage** – Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there are drainage deficiencies in this area.

**Fire** - Fire services for this area are provided by Eastside Rural County Fire Protection District which contracts with the City of Stockton Fire Department. The area has access to fire hydrants. There are no fire service deficiencies in this area.



## 2. French Camp CDP

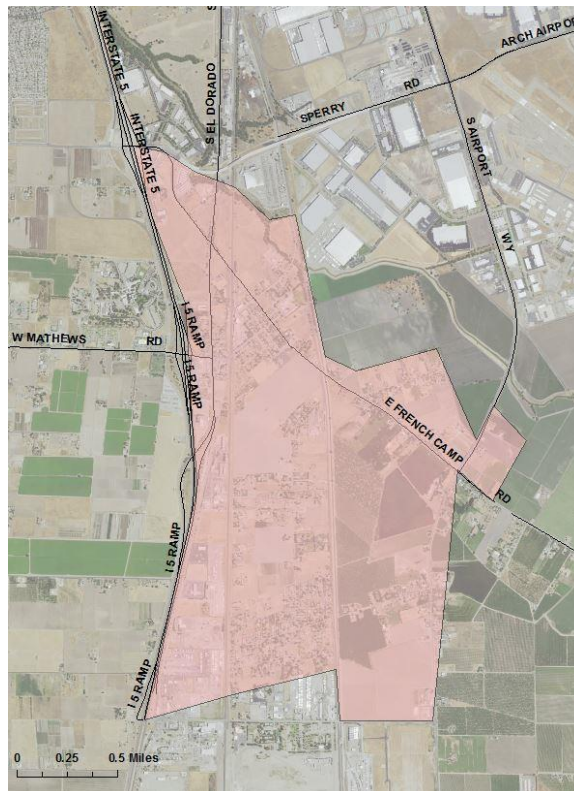
The French Camp Community is made up of 606 parcels totaling approximately 2,006 acres.

**Water** – Although this area is covered by the City of Stockton Water Master Plan, it is not currently served by a public water system. Instead, existing development relies on individual wells, many of which have experienced contamination problems over the years (e.g., coliform bacteria, high salt concentration). Through its Water Master Plan CIP, the City of Stockton has identified the need for water tanks and a network of 12-inch water lines to serve the area.

**Sewer** – Sewer system services in the French Camp area within the Stockton SOI are currently provided by individual septic systems. While there are no reported problems associated with sufficiency of these systems to serve existing development, new wastewater infrastructure will be required to serve additional development. The City’s 2035 Wastewater Master Plan outlines a variety of improvements (e.g., gravity sewers, force mains, pump stations) for future services in the area. These are part of the proposed Collection System 13 facilities, which will serve French Camp and other annexation areas south of the city within Stockton’s SOI.

**Drainage** – Roadside ditches and on-site private drainage ponds are used to manage stormwater for the community. Because there is no formal storm drain system, there are drainage deficiencies in this area.

**Fire** – Fire services for this area are provided by the French Camp-McKinley Fire District which contracts with the City of Stockton Fire Department. French Camp Proper has access to fire hydrants and water on the fire trucks and the French Camp Rural has access to fire tenders and water on the fire trucks. There are no fire service deficiencies in this area.



### 3. Garden Acres CDP

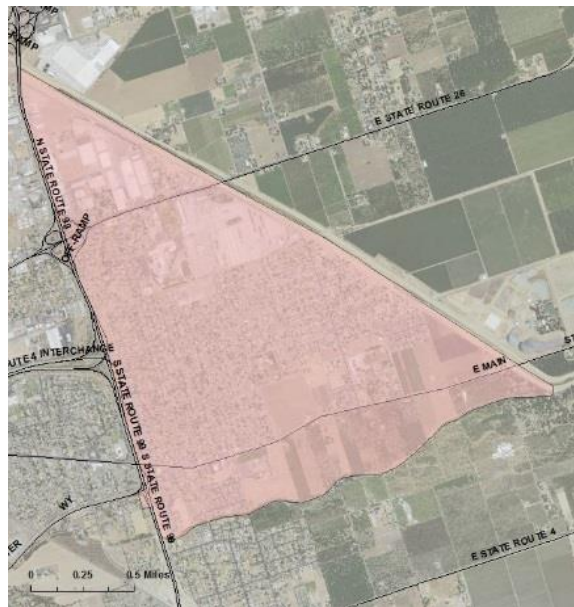
The Garden Acres Community is made up of 2,901 parcels totaling approximately 1,652 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – Sewer facilities in part of this area are provided by the East Stockton Sanitary Sewer Project, while the rest of the area relies on septic systems. The City of Stockton Wastewater Management Plan addresses improvement needs in this area (in existing Collection Systems 4 and 6 and a small part of the proposed new Collection System 12). There are no deficiencies in sewer services in this area..

**Drainage** – Storm drain services are provided by San Joaquin County through a combination of an underground storm main and roadside ditches. There are no storm drain deficiencies in this area.

**Fire** – Fire services for this area are provided by Eastside Rural County Fire Protection District which contracts with the City of Stockton Fire Department. The area has access to fire hydrants. There are no fire service deficiencies in this area.



#### 4. Kennedy CDP

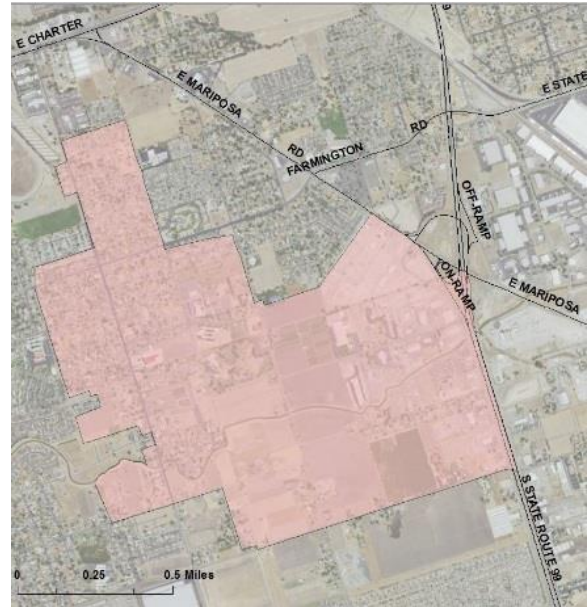
The Kennedy Community is made up of 888 parcels totaling approximately 774 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – Sewer system services to this area are provided by the City of Stockton through Morrison Gardens Sanitary District facilities. The City’s 2035 Wastewater Master Plan outlines a variety of improvements (e.g., gravity sewers, force mains, pump stations) for potential future services in the area. These are part of the proposed Collection System 6 and 7 facilities. Because connections to the public treatment system are limited, there are deficiencies in sewer services in this area. New service lines would need to be constructed to accommodate new development.

**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – Fire services for this area are provided by the Montezuma Fire Protection District. The area includes Montezuma Fire Station #1 and has access to fire hydrants. There are no fire service deficiencies in this area.



## 5. Taft Mosswood CDP

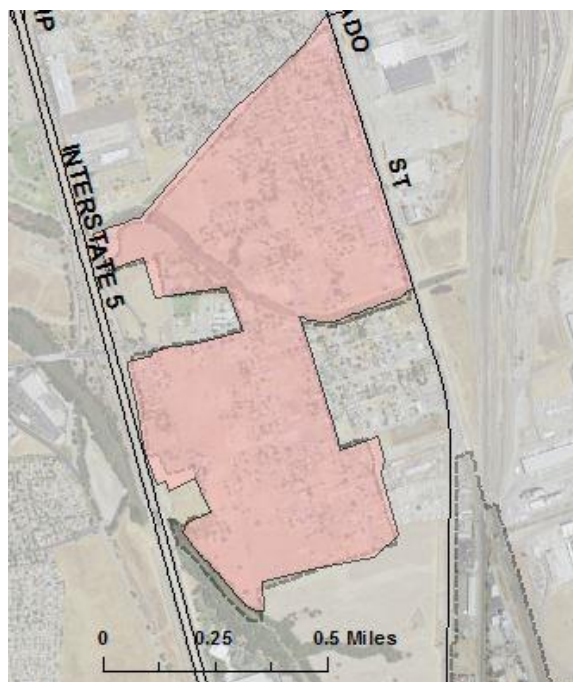
The Taft Mosswood Community is made up of 493 parcels totaling approximately 310 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – Sewer services are provided to this area by San Joaquin County Public Works through Taft Improvement District No. 52 (south of Walker Slough) and Mosswood Sewer Project facilities (north of Walker Slough), but connections are limited. Thus, there are deficiencies in sewer services in this area.

**Drainage** – Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there are drainage deficiencies in this area.

**Fire** – Fire services for this area are provided by the French Camp-McKinley Fire District which contracts with the City of Stockton Fire Department. The area has access to fire hydrants and all the fire trucks carry water on board. There are no fire service deficiencies in this area.



## Island Communities

### 6. Boggs Tract

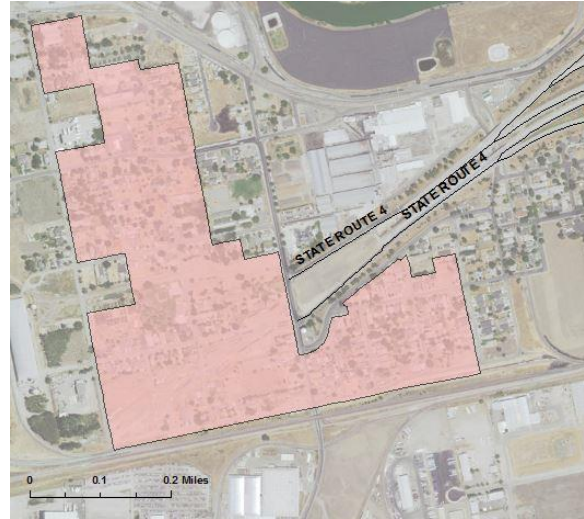
Boggs Tract is made up of 325 parcels totaling approximately 100 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – The sewers serving Boggs Tract in the southern and eastern parts of the area are deficient and in need of improvement.

**Drainage** – Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there are storm drain deficiencies in this area.

**Fire** – Boggs Tract Fire Protection District contracts with the City of Stockton Fire Department to provide fire protection with the operation of Station #2, located in Stockton. There are no fire service deficiencies in this area.



## 7. East Alpine Community

The East Alpine Community is made up of 10 parcels fronting Wright Avenue totaling approximately 4 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – Sewer system services are provided to this area by the City of Stockton’s Sewer Collection System 2.. There are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by the City of Stockton through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – Eastside Rural County Fire Protection District contracts with the City of Stockton Fire Department to provide fire protection with the operation of Station #9, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.



## 8. East 5 Interstate Community

The East Interstate Community is made up of 212 parcels totaling approximately 51 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – Sewer system services are provided to this area by Pacific Gardens Sanitary District which contracts for treatment by the City of Stockton. There are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – The Tuxedo-County Club Rural County Fire Protection District contracts with the City of Stockton Fire Department to provide fire protection with the operation of Station #6, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.



## 9. Fremont Street Community

The Fremont Street Community is made up of 221 parcels totaling approximately 194 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plans prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – This area is covered by the East Stockton Sanitary Sewer Project and is served by the City of Stockton Collection System 4, as defined in the City’s Wastewater Master Plan. Service is provided to unincorporated area properties according to out-of-agency agreements. Additional sewer lines and connections consistent with the Wastewater Master Plan would have to be constructed to accommodate growth upon annexation.

**Drainage** – Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there are drainage deficiencies in this area.

**Fire** – Eastside Rural County Fire Protection District contracts with the City of Stockton Fire Department to provide fire protection with the operation of Station #12, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.



## 10. Holt Avenue/Pershing Avenue Community

The Holt Ave/Pershing Ave Community is made up of 252 parcels totaling approximately 79 acres.

**Water** –Water is provided to this area by the City of Stockton from groundwater wells and surface water. As documented in the 2015 Urban Water Management Plan prepared for the City of Stockton, the facilities serving the DUCs have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – Lincoln Village Maintenance District sewer system services are provided to this area by the City of Stockton Sewer System 2. According to the 2035 Stockton General Plan Infrastructure Evaluation, there is a sewer line that is in need of improvement in the southern portion of the community. Otherwise, there are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

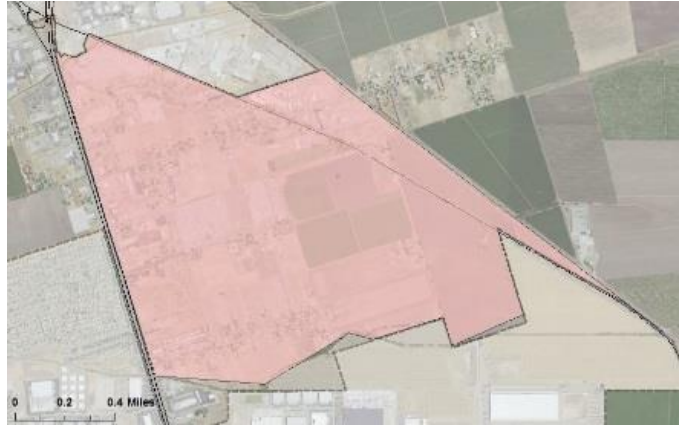
**Fire** – Lincoln Rural County Fire Protection District contracts with the City of Stockton Fire Department to provide fire protection with the operation of Station #4, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.



## 11. Mariposa Road Community

The Mariposa Road Community is made up of 223 parcels totaling approximately 35 acres.

**Water** – Water is provided to this area by California Water Service and the City of Stockton. As documented in the 2015 Urban Water Management Plans prepared for the City of Stockton and Cal Water, the facilities serving the DUCs have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – Sewer system services are provided to this area by the City of Stockton through Morrison Gardens Sanitary District facilities. The City’s 2035 Wastewater Master Plan outlines a variety of improvements (e.g., gravity sewers, force mains, pump stations) for potential future services in the area. These are part of the proposed Collection System 7 and 8 facilities. Because connections to the public treatment system are limited, there are deficiencies in sewer services in this area.

**Drainage** – Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there are drainage deficiencies in this area.

**Fire** – The Montezuma Fire Protection District provides fire protection services to this area, which has access to fire hydrants. There are no fire service deficiencies in this area.

## 12. North Oaks Community

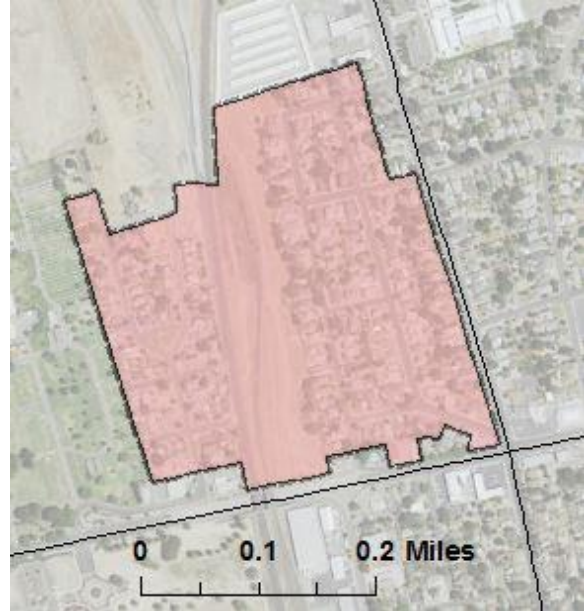
The North Oaks Community is made up of 232 parcels totaling approximately 52 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – Sewer system services are provided to this area through a City of Stockton Assessment District via Collection System 3. There are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by the City of Stockton through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – The City of Stockton Fire Department provides fire protection with the operation of Station #11, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.



### 13. West Lane Community

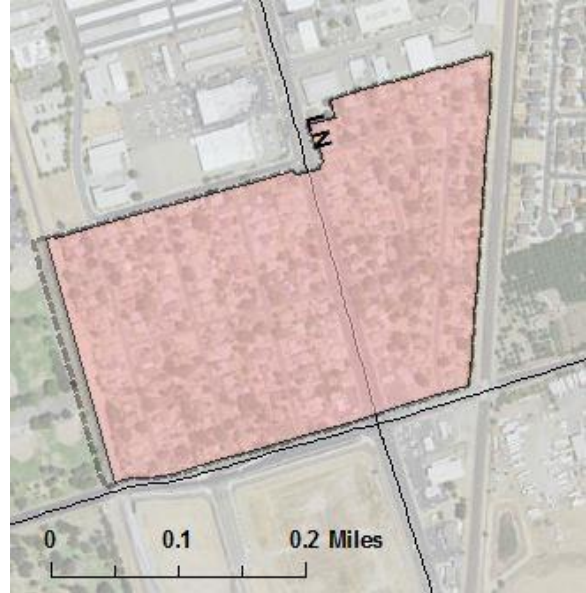
The West Lane Community is made up of 195 parcels totaling approximately 45 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – Sewer system services are provided to this area through a City of Stockton Assessment District via Collection System 3. There are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by the County. There are no storm drain deficiencies in this area.

**Fire** – The Eastside and Lincoln Fire Protection Districts contract with the City of Stockton Fire Department to provide fire protection with the operation of Station #9, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.



#### 14. Pershing Avenue Community

The Pershing Avenue Community consists of 473 parcels totaling approximately 110 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plans prepared for Cal Water, the facilities serving the DUCs have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – Sewer system services are provided to this area by Pacific Gardens Sanitary District which contracts for treatment by the City of Stockton. There are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – The Tuxedo-County Club Rural County Fire Protection District contracts with the City of Stockton Fire Department to provide fire protection with the operation of Station #6, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.



## 15. Waller-Childress Community

The Waller-Childress Community is made up of 34 parcels totaling approximately 35 acres. It is surrounded on the north, south, and west by incorporated areas of Stockton and on the east by Highway 99.

**Water** – Water is provided to this area by groundwater wells, and the City’s Water Master Plan does not show any plans for extension of public water service to the area. While there are no known deficiencies in water services in this area, annexation or further subdivision of the area would likely require new facilities.

Water is provided to this area by groundwater wells, and the City’s Water Master Plan does not show any plans for extension of public water service to the area. While there are no deficiencies in water services in this area, annexation or further subdivision of the area would likely require new facilities.

**Sewer** – Sewer system services in the Waller-Childress area are currently provided by individual septic systems. While there are no known deficiencies with these systems, annexation or further subdivision of the area would likely require extension and connection with the public sewer system in the adjacent area.

**Drainage** – Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there are drainage deficiencies in this area.

**Fire** - Fire services for this area are provided by the Waterloo Morada Fire District. The area does not have access to fire hydrants, but has access to fire tenders and water on the fire trucks. There are no fire service deficiencies in this area.





## 16. Rose Terrace Community

The Rose Terrace Community is made up of 106 parcels totaling approximately 33 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – Sewer facilities in this area are provided by the East Stockton Sanitary Sewer Project. There are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – The Eastside Fire Protection District contracts with the City of Stockton Fire Department to provide fire protection with the operation of Station #9, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.

## 17. West Interstate 5 Community

The West Interstate 5 Community is made up of 22 parcels totaling approximately 10 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – Sewer system services are provided to this area by Pacific Gardens Sanitary District which contracts for treatment with the City of Stockton. There are no deficiencies in sewer services in this area.

**Drainage** – Given the absence of storm drainage infrastructure, there are storm drain deficiencies in this area.

**Fire** – The Tuxedo-County Club Rural County Fire Protection District contracts with the City of Stockton Fire Department to provide fire protection with the operation of Station #6, located in Stockton. The area has access to fire hydrants. There are no deficiencies in this area. There are no fire service deficiencies in this area.

## Fringe Communities

### 18. Charter Way Community

The Charter Way Community is made up of 775 parcels totaling approximately 650 acres. It is bisected by Highway 99 and the AT&SF railroad tracks.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – Sewer facilities in the area east of Highway 99 are provided by the East Stockton Sanitary Sewer Project. The City of Stockton Wastewater Master Plan anticipates the provision of force main and gravity trunk improvements planned between State Route 4 and Charter Way to accommodate growth in the area. Since much of this area is not connected to a public sewer system, there are deficiencies in sewer services in this area.

**Drainage** – In the area east of Highway 99, storm drain services are provided by San Joaquin County through an underground storm main. The area west of Highway 99 relies on roadside ditches, so there are storm drain deficiencies in this area.

**Fire** – The Eastside Fire Protection District contracts with the City of Stockton Fire Department to provide fire protection with the operation of Station #12, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.

## 19. State Route 88 Fringe Community

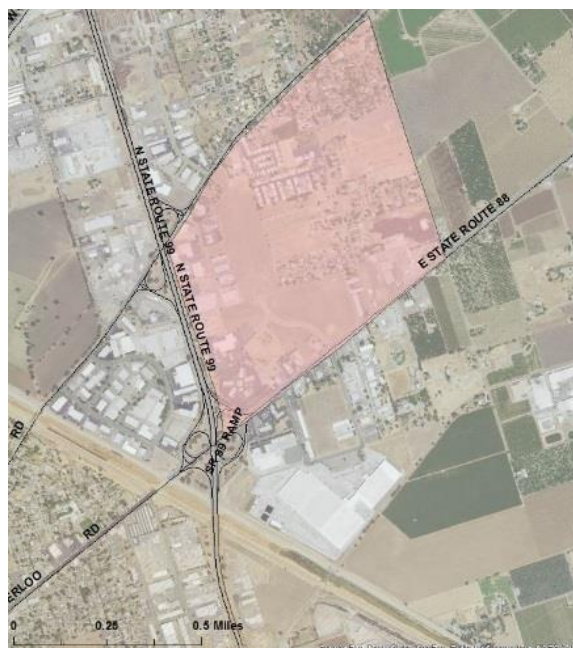
The State Route 88 Fringe Community is made up of 143 parcels totaling approximately 281 acres.

**Water** –Water is provided to this area by the California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the 2015 Urban Water Management Plan prepared for Cal Water, the facilities serving this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – County Service Area 15 (Waterloo-99) provides sewer system services to this area. According to the City of Stockton Wastewater Master Plan, there are planned node and gravity trunk improvements throughout most of the area. While there are currently no deficiencies in sewer services in this area, new sewer lines would need to be constructed to accommodate growth in demand.

**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

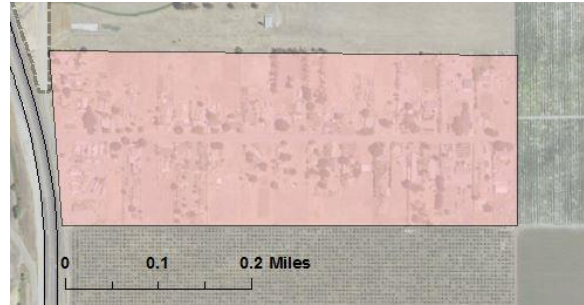
**Fire** – Fire services for this area are provided by the Waterloo Morada Fire District. The area has access to fire hydrants. There are no fire service deficiencies in this area.



## 20. Sunny Road Community

The Arch Road Fringe Community is made up of 47 parcels totaling approximately 59 acres.

**Water** –Water is provided to this area by groundwater wells, and the City’s Water Master Plan does not show any plans for extension of public water service to the area. While there are no known deficiencies in water services in this area, annexation or further subdivision of the area would likely require new facilities.



**Sewer** –Sewer system services are provided to this area by the City of Stockton’s Sewer System 8, although the homes along Sunny Road rely on septic systems. The City’s 2035 Wastewater Master Plan identifies Sunny Road as a candidate for a new gravity sewer line.

**Drainage** – Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there are drainage deficiencies in this area.

**Fire** – Fire services for this area are provided by the Montezuma Fire Protection District which contracts with the City of Stockton Fire Department. The area does not have access to fire hydrants, but has access to fire tenders and water on fire trucks. There are no fire service deficiencies in this area.

### **Potential Funding Sources**

As summarized above, there are several communities that have stormwater deficiencies and all areas outside of Colonial Heights Maintenance District, Lincoln Village Maintenance District, Pacific Gardens Sanitary District, Country Club Sanitary District, and the City of Stockton Assessment District in the vicinity of Alpine would need new sewer lines to accommodate growth in demand. There are several ways that services to these areas could be improved, including annexation to the City of Stockton and connection to the City’s existing and planned infrastructure. For most of these areas, the City has provided a backbone sanitary sewer system, so connection to public treatment systems is a viable option. Generally, funding sources for other needed system improvements include CFDs, taxes, bonds, grants, and exactions. Some financing mechanisms may, however, be difficult to use because they require voter approval. For this reason, grants are often used for infrastructure improvements to reduce the cost burden for taxpayers, although grant programs can be very competitive and, thus, not a reliable source of funding. Given the City Council’s July 2018, the establishment of CFDs may be the most promising way to ensure necessary improvements can be funded and maintained.

In addition to local infrastructure funding mechanisms, there are also funding sources offered by the federal and state government that address existing deficiencies and/or expansion of infrastructure for new development. A summary of each program is provided below:

- **Community Development Block Grants (CDBG)** – The Community Development Block Grant program is an annual funding mechanism offered by the United States Housing and Urban

Development Department. These versatile grants often fund the construction of projects such as water and sewer facilities, recreation facilities, street maintenance, as well as other public work projects.

- **Integrated Regional Water Management (grants)** – This funding program is offered by the California Department of Water Resources. DWR's IRWM Grant Programs are managed within the Division of IRWM, Financial Assistance Branch, with assistance from DWR's regional offices. The IRWM Grant Programs include IRWM funding for planning, disadvantaged community involvement, implementation, and companion grant programs that support sustainable groundwater planning and water-energy programs and projects.
- **Proposition 84** - The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act provides funding from the State Water Resources Control Board. Proposition 84 allows the funding to be utilized for capital costs on projects that pertain to protecting river, lakes, and streams from excessive stormwater runoff. Such projects that can be funded could be related to the collection of stormwater, and treatment of water to reduce the likelihood of ground contamination.

### **Conclusion**

The DUCs in the Stockton Metropolitan Area are generally well-served by current fire protection and water services providers, but public wastewater collection and storm drain systems are unavailable in many areas. This includes where storm drainage is provided via roadside ditches, with no connections to storm drain systems, as well as several areas where sewer lines would need to be constructed to accommodate growth in demand. In areas where services are deficient, new development, with or without annexation, would require improvements to bring them up to contemporary standards and to accommodate new development. This would include connection to public sewer systems and extension of storm drainage systems, as anticipated by the City's Wastewater Master Plan and Stormwater Management Plan in several areas. Also, in some DUCs, as with other areas within the City's SOI, fire protection services are provided by independent fire protection districts.

## APPENDIX B

# SB 244 ANALYSIS

There are hundreds of disadvantaged unincorporated communities (DUCs) throughout California, including more than 200 in the San Joaquin Valley alone. Many of these communities are geographically isolated islands. The living conditions in many of these communities suggest a distinct lack of public and private investment that threatens the health and safety of the residents and fosters economic, social, and educational inequality. Many of these communities lack basic infrastructure, including streets, sidewalks, storm drainage, clean drinking water, and adequate sewer service. In response to these conditions, the State Legislature passed Senate Bill 244 (SB 244) in 2011 with the intent of addressing the legal, financial, and political barriers that contribute to inequality and infrastructure deficits in DUCs. Accounting for these communities in the long-range planning process, as required by SB 244, is one way to ensure a more efficient system for delivery of services and infrastructure, including water, wastewater, storm drainage, and structural fire protection. Furthermore, investment in these services and infrastructure will result in the enhancement and protection of public health and safety for residents of these communities.

### **SB 244 Requirements: City, County, LAFCo**

The requirements of SB 244 apply differently to cities, counties, and local agency formation commissions (LAFCos). These differences reflect the distinct physical and social settings of cities and counties and the different institutional authorities and responsibilities of cities, counties, and LAFCos.

#### **Cities and Counties**

The requirements for cities and counties focus on their compliance with State Planning and Zoning Law, and particularly on general plans. SB 244 added the following requirements to Government Code Section 65588 concerning general plan land use elements:

- In the case of a city, an identification of each unincorporated island or fringe community within the city's sphere of influence. In the case of a county, an identification of each legacy community within the boundaries of the county, but not including any area within the sphere of influence of any city. This identification shall include a description of the community and a map designating its location.
- For each identified community, an analysis of water, wastewater, stormwater drainage, and structural fire protection needs or deficiencies.
- An analysis, based on then existing available data, of benefit assessment districts or other financing alternatives that could make the extension of services to identified communities financially feasible.

SB 244 also added Section 65302.10 to the Government Code to define the terms used in the legislation as they relate to cities and counties. According to the legislation, the key terms are defined as follows:

- “Community” means an inhabited area within a city or county that is comprised of no less than 10 dwellings adjacent or in close proximity to one another.
- “Disadvantaged unincorporated community” means a fringe, island, or legacy community in which the median household income is 80 percent or less than the statewide median household income.
- “Unincorporated fringe community” means any inhabited and unincorporated territory that is within a city’s sphere of influence.
- “Unincorporated island community” means any inhabited and unincorporated territory that is surrounded or substantially surrounded by one or more cities or by one or more cities and a county boundary or the Pacific Ocean.
- “Unincorporated legacy community” means a geographically isolated community that is inhabited and has existed for at least 50 years.

### **Local Agency Formation Commissions**

For LAFCO purposes, the definition of a DUC differs from those for cities and counties. SB 244 identifies a DUC for LAFCO purposes as an inhabited territory, as defined by Section 56046 of the Government Code (i.e., 12 or more registered voters), that constitutes all or a portion of a “disadvantaged community” as defined by Section 79505.5 of the Water Code (i.e., a community with an annual median household income that is less than 80 percent of the statewide annual median household income). SB 244 requires that, in conjunction with sphere of influence reviews or updates occurring after July 1, 2012, LAFCOs include determinations concerning the present and planned capacity of public facilities and adequacy of public services for DUCs within or adjacent to the sphere of influence of any city or special district. This includes evaluation of sewer, water, and structural fire protection needs or deficiencies; it does not explicitly include drainage. SB 244 defines DUCs slightly differently for LAFCOs than it does for cities and counties. SB 244 also includes procedural requirements related to approval of proposed annexations contiguous with DUCs.

In December 2012, San Joaquin LAFCo updated its Policies and Procedures to comply with the requirements of SB 244. The update consisted of identifying a series of DUCs within the Stockton Metropolitan Area and adopting policy language addressing these communities. According to the policy, San Joaquin LAFCo shall not approve an annexation of 10 acres or more that is adjacent to a disadvantaged unincorporated community unless a concurrent application of all or part of the DUC has also been filed. The policy excepts areas for which an application has been made in the past five years and areas where a majority of the registered voters within the DUC are opposed to annexation.

In developing its modified Sphere of Influence policies, San Joaquin LAFCO identified five DUCs within or adjacent to the City of Stockton’s SOI: August CDP; Garden Acres CDP; Kennedy CDP; French Camp CDP; and Taft Mosswood.



### **DUC Identification**

SB 244 outlines the general characteristics of DUCs, but does not provide guidance on how to identify them. To assist local governments in addressing the requirements of SB 244, the Governor's Office of Planning and Research (OPR) published a technical advisory memo in February 2013. The memo recommends data sources for identifying the income status of communities and mapping sources for identifying "communities" as defined by SB 244. It also referenced methodological guidance prepared by PolicyLink in collaboration with California Rural Legal Assistance. Based on the guidance provided by OPR and Policy, the City of Stockton identified DUCs in the Stockton area by focusing on a combination of income status and parcel density. Following are brief descriptions of the steps the City followed to identify these communities.

#### **Income Status**

To identify communities that meet the income status defined by SB 244, the City relied on the 2000 Census for income data because it disaggregated data to the Census block group level. The City also reviewed the 2010 Census and more recent American Community Survey (ACS) data, but the 2010 Census did not include income data and the ACS sample sizes were too small to produce reliable data for unincorporated areas. In 2000, the median household income of California was \$47,493, so the City included in its analysis any census block group with a median income of less than \$37,994 (i.e., 80 percent of the statewide median). In doing so, the City isolated census blocks in unincorporated areas within the City's sphere of influence.

#### **Parcel Density**

After isolating the census blocks that met the income threshold, the City proceeded with a parcel density analysis to identify "communities" as defined by SB 244. This analysis focused on identifying closely-settled places, rather than spread-out rural or semi-rural communities. The City identified areas with a density of at least 250 parcels per square mile, which is comparable to the density of Census Designated Places (unincorporated communities tracked by the Census Bureau). Within these areas, the City then screened to areas with at least 10 dwellings "adjacent or in close proximity to one another" as described by SB 244. In doing so, the City eliminated non-residential areas; areas less than three-quarters of an acre with only one or two houses; and any obvious narrow "slivers" that were a result of GIS layer overlap (e.g., along city limits and census tract overlaps).

#### **Communities Identified**

The City identified 3 types of DUCs in its analysis: Census Designated Places (CDPs), Island, and Fringe Communities.

- The CDPs that the City identified are derived from San Joaquin County LAFCo's DUC analysis.
- The Island Communities are located within the city boundaries and Sphere of Influence.
- The Fringe Communities are located outside of city boundaries, but within the Sphere of Influence.

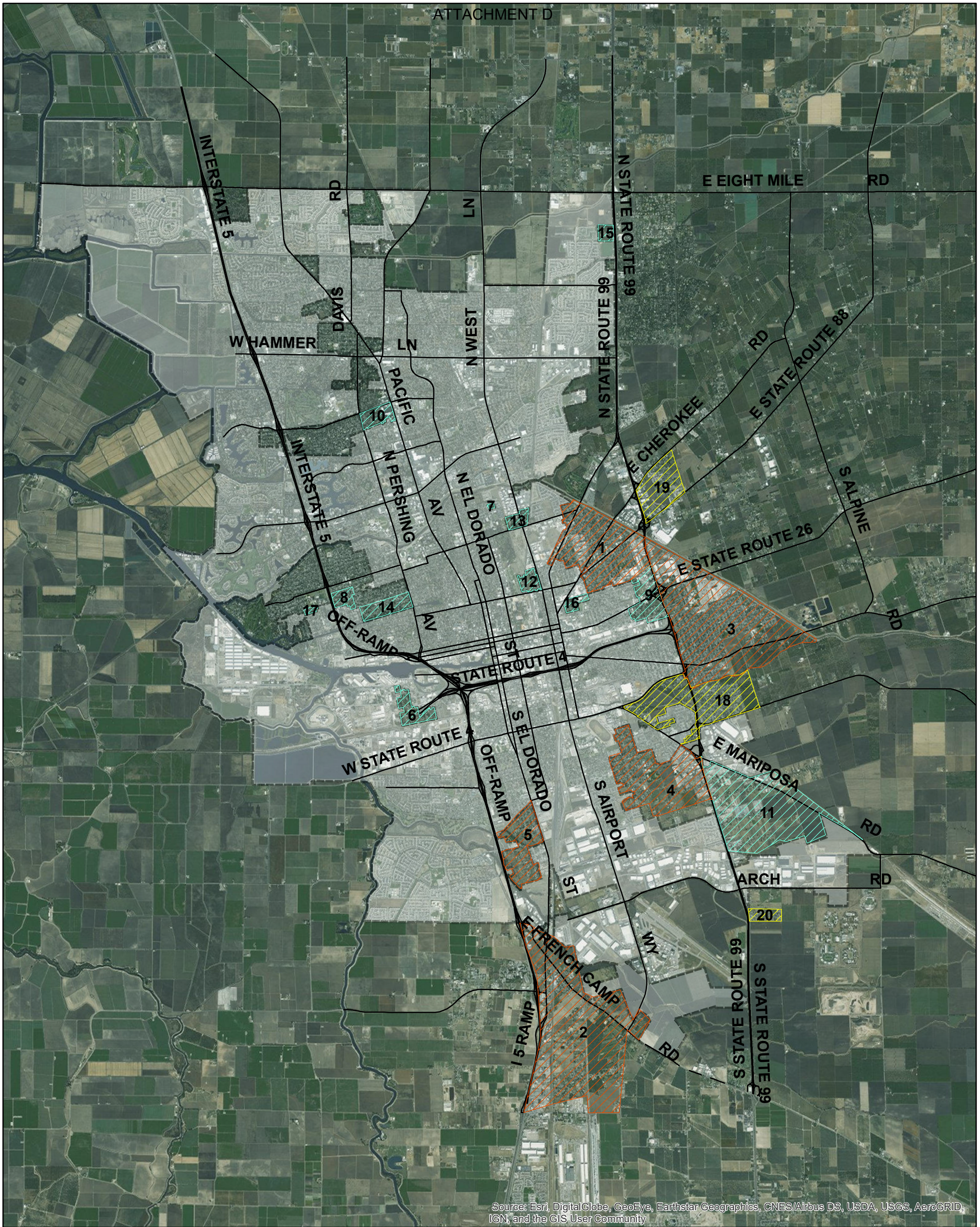
# ATTACHMENT D

Table 3-9B-1 lists the DUCs in the Stockton area by type, size (in acres), and the number of parcels in each community.

Table 3-9B-1. City of Stockton DUCs

Name	Type	Size (acres)	Parcels
1. August CDP	CDP	805	2,137
2. French Camp CDP	CDP	2,006	606
3. Garden Acres CDP	CDP	1,652	2,901
4. Kennedy CDP	CDP	774	888
5. Taft Mosswood CDP	CDP	310	493
6. Boggs Tract	Island	100	325
7. East Alpine Community	Island	4	10
8. East Interstate Community	Island	51	212
9. Fremont St Community	Island	194	221
10. Holt Ave/Pershing Ave Community	Island	79	252
11. Mariposa Road Community	Island	35	223
12. <del>N. West Ln/Harding Way</del> North Oaks Community	Island	52	232
13. <del>N. West Ln/Alpine Ave</del> West Lane Community	Island	45	195
14. Pershing Ave Community	Island	110	473
15. Waller-Childress Community	Island	35	34
16. <del>Waterloo Road Community</del> Rose Terrace	Island	33	106
17. West Interstate 5 Community	Island	85	22
18. Charter Way Community	Fringe	654	775
19. State Route 88 Community	Fringe	281	143
20. Sunny Road Community	Fringe	59	47

Source: Mintier Harnish, September 2017.



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Figure B-1:  
Disadvantaged Unincorporated Communities

Map date: October 21, 2016  
Source: City of Stockton; San Joaquin County;  
United States Census, 2000.

DUCs (CDP)

- 1. August
- 2. French Camp
- 3. Garden Acres
- 4. Kennedy
- 5. Taft Mosswood

DUCs (Island)

- 6. Boggs Tract
- 7. Sperry Tract
- 8. East Interstate 5 Community
- 9. Fremont St. Community
- 10. Holt Ave/Pershing Ave Community
- 11. Mariposa Road Community

DUCs (Fringe)

- 12. North Oaks Community
- 13. West Lane Community
- 14. Pershing Ave Community
- 15. Waller-Childress Community
- 16. Rose Terrace
- 17. West Interstate 5 Community
- 18. Charter Way Community
- 19. State Route 88 Community
- 20. Sunny Road Community
- City Limits

0 0.75 1.5 3 Miles



# ATTACHMENT D

ENVISION STOCKTON 2040 GENERAL PLAN  
APPENDIX B: SB 244 ANALYSIS

*Please see next page.*

## **Infrastructure Analysis**

Once DUCs have been identified, SB 244 requires an analysis of infrastructure services for each DUC. This section first provides an overview of service providers in the Stockton Metropolitan Area and then describes public services within each of the DUCs in the Stockton area consistent with the requirements of SB244.

### **Overview of Service Providers in Stockton Area**

#### ***Water***

Water service providers in the Stockton Metropolitan Area include the City of Stockton Municipal Utilities Department (COSMUD), California Water Service Company (Cal Water), and San Joaquin County Maintenance Districts (SJMCDs) covering Lincoln Village and Colonial Heights. These providers deliver a combination of treated surface water supplied by the Stockton East Water District (SEWD), Delta Water Supply Project (DWSP) water from the San Joaquin River, and pumped groundwater.

#### ***Sewer***

Wastewater collection and treatment facilities in the Stockton Metropolitan Area consist of the Stockton Regional Wastewater Control Facility (RWCF) and the City of Stockton Wastewater Collection System Facilities. The RWCF provides primary, secondary, and tertiary treatment of municipal wastewater from throughout the city. The RWCF has a designed flow capacity of 55 mgd and average daily flow rate of 31.7 mgd. Treated effluent from the RWCF is dechlorinated and discharged to the San Joaquin River.

The City's wastewater collection system is divided into 15 designated sub-areas or "systems." Pump stations are located throughout the city and are integral to the wastewater collection system. Most of the pump stations discharge to pressure sewers that convey flow under pressure either directly to the RWCF or to a downstream gravity sewer.

#### ***Storm Drainage***

Storm drainage services for the Stockton Area are provided by the City of Stockton and San Joaquin County. Data for this part of this analysis came from consultation with County of San Joaquin staff.

#### ***Fire Protection***

Fire protection services for the Stockton Area are provided by City of Stockton Fire Department, French Camp-McKinley Fire District, Eastside Rural County Fire Protection District, Montezuma Fire Protection District, and Waterloo-Morada Fire Protection District. Data for this part of this analysis came from consultation with fire department staff.

## CDP Communities

### 1. August CDP

The August Community is made up of 2,137 parcels totaling approximately 805 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in [the Draft 2015 Urban Water Management Plans](#) prepared for ~~the City of Stockton and~~ Cal Water, the facilities serving ~~the DUCs this area~~ have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – ~~This area is covered by the East Stockton Sanitary Sewer Project and is served by the City of Stockton Collection System 4, as defined in the City’s Wastewater Master Plan. Service is provided to unincorporated area properties according to out-of-agency agreements. Additional sewer lines and connections consistent with the Wastewater Master Plan would have to be constructed to accommodate growth upon annexation. Sewer system services are provided to portions of this area by the City of Stockton’s Sewer System 4 and 9. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOT in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit. Some parcels currently rely on individual septic systems.~~

**Drainage** – Roadside ditches are used to manage stormwater for the community. ~~Because there is no formal storm drain system, there~~ ~~There~~ are no drainage deficiencies in this area.

**Fire** - Fire services for this area are provided by Eastside Rural County Fire Protection District which contracts with the City of Stockton Fire Department. The area has access to fire hydrants. There are no fire service deficiencies in this area.

## 2. French Camp CDP

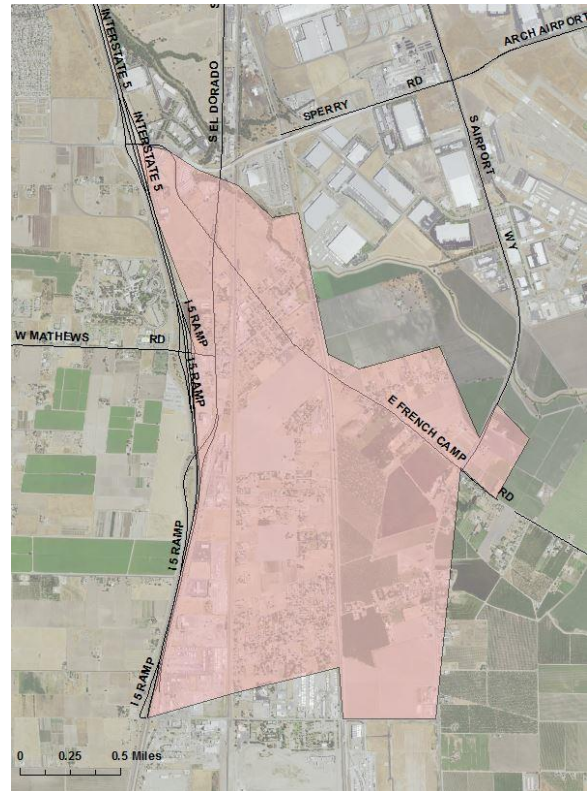
The French Camp Community is made up of 606 parcels totaling approximately 2,006 acres.

**Water** – ~~Although this area is covered by the City of Stockton Water Master Plan, it is not currently served by a public water system. Instead, existing development relies on individual wells, many of which have experienced contamination problems over the years (e.g., coliform bacteria, high salt concentration). Through its Water Master Plan CIP, the City of Stockton has identified the need for water tanks and a network of 12-inch water lines to serve the area. Water is provided to portions of this area by the City of Stockton and Cal Water from groundwater wells and surface water. As documented in Draft 2015 Urban Water Management Plans prepared for the City of Stockton, the facilities serving the DUCs have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.~~

**Sewer** – ~~There is no sewer system servicing this area; all parcels rely on individual septic systems. Sewer system services in the French Camp area within the Stockton SOI are currently provided by individual septic systems. While there are no reported problems associated with sufficiency of these systems to serve existing development, new wastewater infrastructure will be required to serve additional development. The City's 2035 Wastewater Master Plan outlines a variety of improvements (e.g., gravity sewers, force mains, pump stations) for future services in the area. These are part of the proposed Collection System 13 facilities, which will serve French Camp and other annexation areas south of the city within Stockton's SOI.~~

**Drainage** – Roadside ditches and on-site private drainage ponds are used to manage stormwater for the community. ~~There are no drainage deficiencies in this area.~~ Because there is no formal storm drain system, there are drainage deficiencies in this area.

**Fire** – Fire services for this area are provided by the French Camp-McKinley Fire District which contracts with the City of Stockton Fire Department. French Camp Proper has access to fire hydrants and water on the fire trucks and the French Camp Rural has access to fire tenders and water on the fire trucks. There are no fire service deficiencies in this area.



### 3. Garden Acres CDP

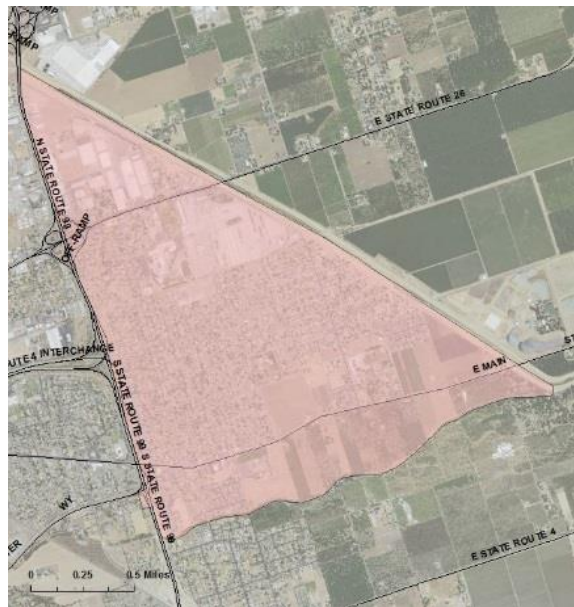
The Garden Acres Community is made up of 2,901 parcels totaling approximately 1,652 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in [the Draft 2015 Urban Water Management Plans](#) prepared for [the City of Stockton and Cal Water](#), the facilities serving [the DUCs in this area](#) have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – [Sewer facilities in part of this area are provided by the East Stockton Sanitary Sewer Project, while the rest of the area relies on septic systems. The City of Stockton Wastewater Management Plan addresses improvement needs in this area \(in existing Collection Systems 4 and 6 and a small part of the proposed new Collection System 12\). There are no deficiencies in sewer services in this area. Sewer system services are provided to portions of this area by the City of Stockton Sewer Systems 4 and 6. The City of Stockton Regional Wastewater Control Facility \(RWCF\) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOT in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit. Some parcels currently rely on individual septic systems.](#)

**Drainage** – Storm drain services are provided by San Joaquin County through [a combination of](#) an underground storm main and roadside ditches. There are no storm drain deficiencies in this area.

**Fire** – Fire services for this area are provided by Eastside Rural County Fire Protection District which contracts with the City of Stockton Fire Department. The area has access to fire hydrants. There are no fire service deficiencies in this area.





#### 4. Kennedy CDP

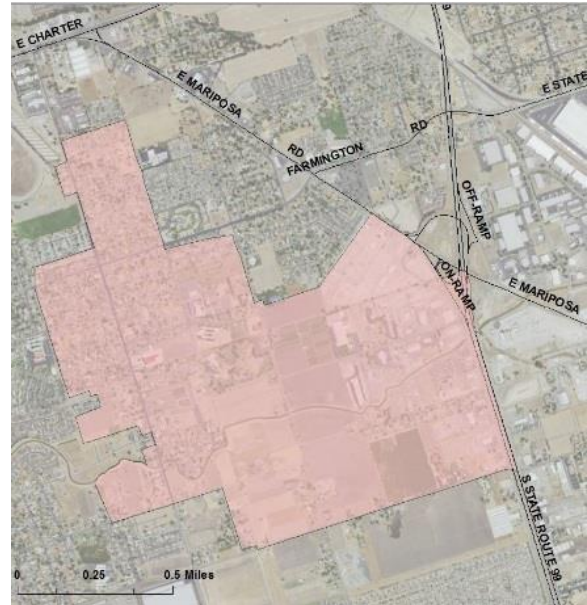
The Kennedy Community is made up of 888 parcels totaling approximately 774 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in [the Draft 2015 Urban Water Management Plans](#) prepared for [the City of Stockton and Cal Water](#), the facilities serving [the DUCs this area](#) have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – [Sewer system services to this area are provided by the City of Stockton through Morrison Gardens Sanitary District facilities. The City's 2035 Wastewater Master Plan outlines a variety of improvements \(e.g., gravity sewers, force mains, pump stations\) for potential future services in the area. These are part of the proposed Collection System 6 and 7 facilities. Because connections to the public treatment system are limited, there are deficiencies in sewer services in this area. New service lines would need to be constructed to accommodate new development.](#) Sewer system services are provided to portions of this area by the City of Stockton's Sewer Systems 6, 7, and 8. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOL in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit. Some parcels currently rely on individual septic systems.

**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – Fire services for this area are provided by the Montezuma Fire Protection District [which contracts with the City of Stockton Fire Department](#). The area [includes Montezuma Fire Station #1](#) and has access to fire hydrants. There are no fire service deficiencies in this area.



## 5. Taft Mosswood CDP

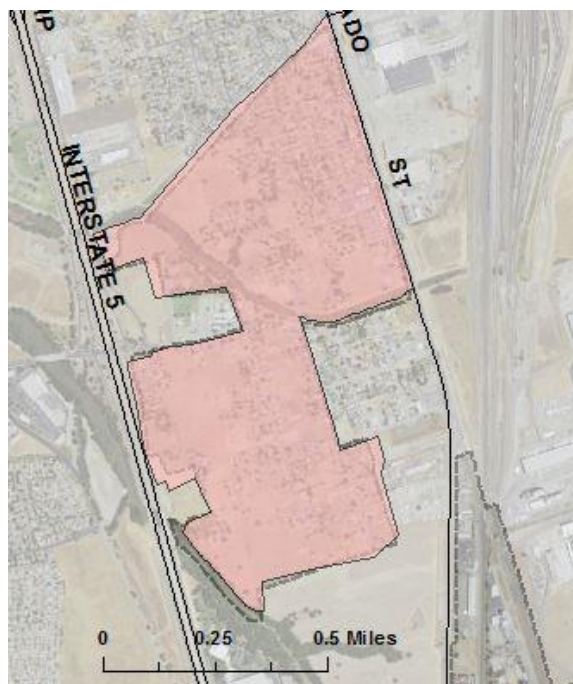
The Taft Mosswood Community is made up of 493 parcels totaling approximately 310 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in [the Draft 2015 Urban Water Management Plans](#) prepared for [the City of Stockton and Cal Water](#), the facilities serving [the DUCs this area](#) have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – ~~Sewer system services are provided to portions of this area by the City of Stockton’s Sewer System 7. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOI in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit. Some parcels currently rely on individual septic systems.~~ Sewer services are provided to this area by San Joaquin County Public Works through Taft Improvement District No. 52 (south of Walker Slough) and Mosswood Sewer Project facilities (north of Walker Slough), but connections are limited. Thus, there are deficiencies in sewer services in this area.

**Drainage** – Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there ~~There~~ are no drainage deficiencies in this area.

**Fire** – Fire services for this area are provided by the French Camp-McKinley Fire District which contracts with the City of Stockton Fire Department. The area has access to fire hydrants and all the fire trucks carry water on board. There are no fire service deficiencies in this area.



## Island Communities

### 6. Boggs Tract

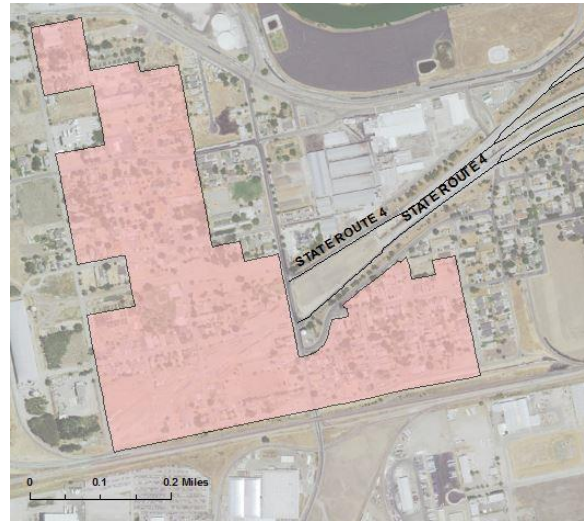
The Boggs Tract Community is made up of 325 parcels totaling approximately 100 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in [the Draft 2015 Urban Water Management Plans](#) prepared for [the City of Stockton and Cal Water](#), the facilities serving [the DUCs this area](#) have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – [The sewers serving Boggs Tract in the southern and eastern parts of the area are deficient and in need of improvement](#) Sewer system services are provided to this area by the City of Stockton's Sewer System 5. According to the 2035 Stockton General Plan, the sewers on the southern and eastern ends of the property are in need of improvements. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOL in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit. There are no deficiencies in sewer services in this area.

**Drainage** – [Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there](#) Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – [Boggs Tract Fire Protection District contracts with the](#) The City of Stockton Fire Department to provides fire protection with the operation of Station #2, located in Stockton. There are no fire service deficiencies in this area.



## 7. East Alpine Community

The East Alpine ~~Island~~ Community is made up of 10 parcels fronting Wright Avenue totaling approximately 4 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in ~~Draft the 2015 Urban Water Management Plans prepared for the City of Stockton and Cal Water~~, the facilities serving ~~the DUCs this area~~ have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – ~~Sewer system services are provided to this area by the City of Stockton's Sewer Collection System 2. Sewer system services are provided to this area by the City of Stockton's Sewer System 2. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOI in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit.~~ There are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by the City of Stockton through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – ~~Eastside Rural County Fire Protection District contracts with the~~ ~~The~~ City of Stockton Fire Department ~~to~~ provides fire protection with the operation of Station #9, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.

## 8. East 5 Interstate Community

The East Interstate Community is made up of 212 parcels totaling approximately 51 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in [Draft 2015 Urban Water Management Plans](#) prepared for ~~the City of Stockton and~~ Cal Water, the facilities serving ~~the DUCs this area~~ have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – Sewer system services are provided to this area by [Pacific Gardens Sanitary District](#) which contracts for treatment by the City of Stockton ~~the County Sewer System 3. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOI in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit.~~ There are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – The [Tuxedo-County Club Rural County Fire Protection District](#) ~~contracts with the~~ City of Stockton Fire Department ~~to~~ provides fire protection with the operation of Station #6, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.



## 9. Fremont Street Community

The Fremont Street ~~Fringe~~ Community is made up of 221 parcels totaling approximately 194 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in the Draft 2015 Urban Water Management Plans prepared for the City of Stockton and Cal Water, the facilities serving the DUCs this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – ~~Sewer system services are provided to portions of this area by the City of Stockton Sewer System 4 and 6. According to the 2035 Stockton General Plan Infrastructure Evaluation, there is a force main installation planned on and south of Fremont Street. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOI in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit. Some parcels currently rely on individual septic systems. This area is covered by the East Stockton Sanitary Sewer Project and is served by the City of Stockton Collection System 4, as defined in the City's Wastewater Master Plan. Service is provided to unincorporated area properties according to out-of-agency agreements. Additional sewer lines and connections consistent with the Wastewater Master Plan would have to be constructed to accommodate growth upon annexation.~~

**Drainage** – Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there ~~There~~ are ~~no~~ drainage deficiencies in this area.

**Fire** – Eastside Rural County Fire Protection District contracts with the ~~The~~ City of Stockton Fire Department to ~~provides~~ fire protection with the operation of Station #12, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.



## 10. Holt Avenue/Pershing Avenue Island Community

The Holt Ave/Pershing Ave Island Community is made up of 252 parcels totaling approximately 79 acres.

**Water** – ~~Water is provided to this area by the City of Stockton from groundwater wells and surface water. As documented in the 2015 Urban Water Management Plans prepared for the City of Stockton, the facilities serving the DUCs have sufficient capacity and access to high-quality water supplies to address current and projected demands~~ Water is provided to this area by the County from groundwater wells and surface water. There are no deficiencies in water services in this area.



**Sewer** – ~~Lincoln Village Maintenance District sewer system services are provided to this area by the City of Stockton~~ Sewer system services are provided to this area by the County Sewer System 2. According to the 2035 Stockton General Plan Infrastructure Evaluation, there is a sewer line that is in need of improvement in the southern portion of the community. ~~Otherwise, there~~ The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOI in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit. There are no deficiencies in sewer services in this area.

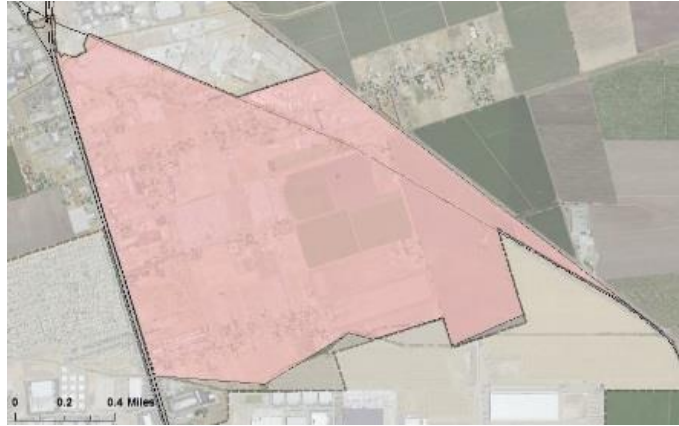
**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – ~~Lincoln Rural County Fire Protection District contracts with the~~ The City of Stockton Fire Department ~~to~~ provides fire protection with the operation of Station #4, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.

## 11. Mariposa Road ~~Island~~ Community

The Mariposa Road Community is made up of 223 parcels totaling approximately 35 acres.

**Water** – Water is provided to this area by California Water Service and the City of Stockton. As documented in ~~Draft the~~ 2015 Urban Water Management Plans prepared for the City of Stockton and Cal Water, the facilities serving the DUCs have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – Sewer system services are provided to this area by the City of Stockton’s ~~Sewer Systems 7 and 8~~. ~~According to the 2035 Stockton General Plan, the sewers on the southern and eastern ends of the property are in need of improvements. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOL in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit through Morrison Gardens Sanitary District facilities. The City’s 2035 Wastewater Master Plan outlines a variety of improvements (e.g., gravity sewers, force mains, pump stations) for potential future services in the area. These are part of the proposed Collection System 7 and 8 facilities. Because connections to the public treatment system are limited, there are deficiencies in sewer services in this area.~~

**Drainage** – Roadside ditches are used to manage stormwater for the community. ~~Because there is no formal storm drain system, there~~ ~~There~~ are no drainage deficiencies in this area.

**Fire** – The ~~Montezuma Fire Protection District~~ ~~City of Stockton Fire Department~~ provides fire protection services to this area, which ~~with the operation of Station #13, located in Stockton. The area~~ has access to fire hydrants. There are no fire service deficiencies in this area.



## 12. ~~N. West Lane/Harding Way Island~~ North Oaks Community

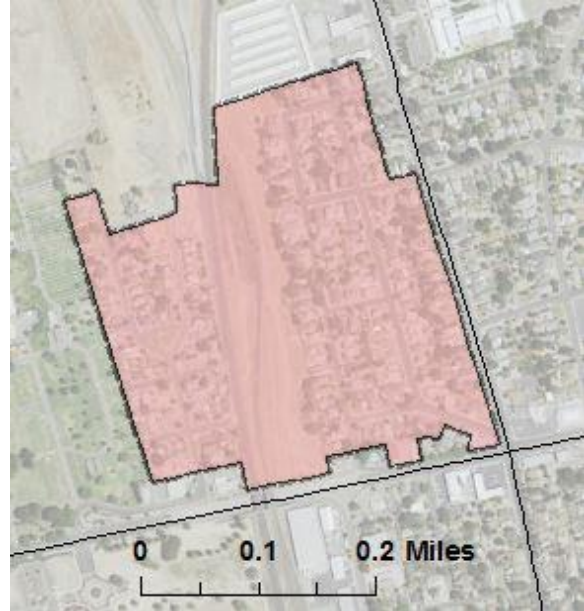
The ~~N. West Lane/Harding Way Island~~ North Oaks Community is made up of 232 parcels totaling approximately 52 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in ~~Draft the 2015 Urban Water Management Plans prepared for the City of Stockton and Cal Water, the facilities serving the DUCs this area~~ have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – Sewer system services are provided to this area ~~through a City of Stockton Assessment District via Collection System 3 by the City of Stockton's Sewer System 3. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOL in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit.~~ There are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by the City of Stockton through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – The City of Stockton Fire Department provides fire protection with the operation of Station #11, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.



**13. N. West Lane/Alpine Ave Island Community**

The ~~N. West Lane /Alpine Ave Island~~ Community is made up of 195 parcels totaling approximately 45 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in ~~Draft the 2015 Urban Water Management Plans prepared for the City of Stockton and Cal Water~~, the facilities serving ~~the DUCs this area~~ have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – Sewer system services are provided to this area ~~through a City of Stockton Assessment District via Collection System 3 by the City of Stockton's Sewer System 3. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOI in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit.~~ There are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by the County. There are no storm drain deficiencies in this area.

**Fire** – The ~~Eastside and Lincoln Fire Protection Districts contract with the~~ City of Stockton Fire Department ~~to provides~~ fire protection with the operation of Station #9, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.



#### 14. Pershing Avenue Island Community

The Pershing Avenue Island Community is made up ~~consists~~ of 473 parcels totaling approximately 110 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in ~~Draft the~~ 2015 Urban Water Management Plans prepared for ~~the City of Stockton and~~ Cal Water, the facilities serving the DUCs have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – Sewer system services are provided to this area by ~~Pacific Gardens Sanitary District which contracts for treatment by the City of Stockton the County Sewer System 3. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOI in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit.~~ There are no deficiencies in sewer services in this area.

**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – The ~~Tuxedo-County Club Rural County Fire Protection District contracts with the~~ City of Stockton Fire Department ~~to provides~~ fire protection with the operation of Station #26, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.

## 15. Waller-Childress Community

The ~~State Route 99 Island~~ Waller-Childress Community is made up of 34 parcels totaling approximately 35 acres. It surrounded on the north, south, and west by incorporated areas of Stockton and on the east by Highway 99.

**Water** – Water is provided to this area by groundwater wells, and the City's Water Master Plan does not show any plans for extension of public water service to the area. ~~There~~ While there are no known deficiencies in water services in this area, annexation or further subdivision of the area would likely require new facilities.



Water is provided to this area by ~~the City of Stockton from~~ groundwater wells, and the City's Water Master Plan does not show any plans for extension of public water service to the area ~~and surface water.~~ As documented in ~~Draft 2015 Urban Water Management Plans prepared for the City of Stockton,~~ the facilities serving the DUCs have sufficient capacity and access to high-quality water supplies to address current and projected demands. ~~There~~ While there are no deficiencies in water services in this area, annexation or further subdivision of the area would likely require new facilities.

**Sewer** – Sewer system services in the Waller-Childress area are currently provided by individual septic systems. While there are no known deficiencies with these systems, annexation or further subdivision of the area would likely require extension and connection with the public sewer system in the adjacent area ~~There is no sewer system servicing this area; all parcels rely on individual septic systems.~~

**Drainage** – Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there ~~There~~ are ~~no~~ drainage deficiencies in this area.

**Fire** - Fire services for this area are provided by the Waterloo Morada Fire District. The area does not have access to fire hydrants, but has access to fire tenders and water on the fire trucks. There are no fire service deficiencies in this area.

## 16. Waterloo Road IslandRose Terrace Community

The Waterloo Road IslandRose Terrace Community is made up of 106 parcels totaling approximately 33 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in Draft the 2015 Urban Water Management Plans prepared for the City of Stockton and Cal Water, the facilities serving the DUCs this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – Sewer facilities in this area are provided by the East Stockton Sanitary Sewer Project ~~Sewer system services are provided to this area by the City of Stockton's Sewer Systems 4 and 6. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOL in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit.~~ There are no deficiencies in sewer services in this area.

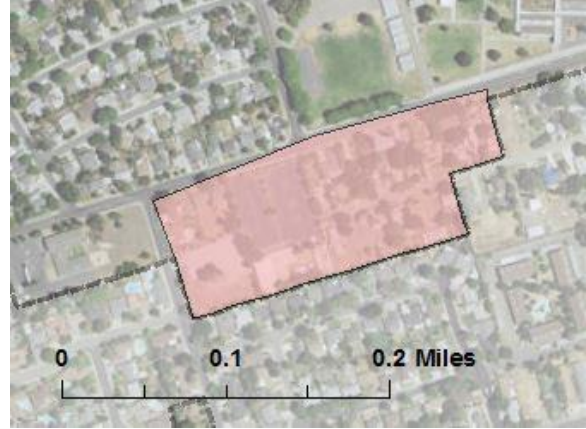
**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – The Eastside Fire Protection District contracts with the City of Stockton Fire Department to provides fire protection with the operation of Station #9, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.

## 17. West Interstate 5 ~~Island~~ Community

The West Interstate 5 ~~Island~~ Community is made up of 22 parcels totaling approximately 10 acres.

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in ~~Draft the~~ 2015 Urban Water Management Plans prepared for ~~the City of Stockton and~~ Cal Water, the facilities serving ~~the DUCs this area~~ have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – ~~Sewer system services are provided to this area by Pacific Gardens Sanitary District which contracts for treatment with the City of Stockton. There are no deficiencies in sewer services in this area. There is no sewer system servicing this area; all parcels rely on individual septic systems.~~

**Drainage** – ~~Storm drain services are provided by San Joaquin County through an underground storm main. Given the absence of storm drainage infrastructure, There there are no storm drain deficiencies in this area.~~

**Fire** – ~~The Tuxedo-County Club Rural County Fire Protection District contracts with the City of Stockton Fire Department to provide fire protection with the operation of Station #6, located in Stockton. City of Stockton Fire Department provides fire protection with the operation of Station #13, located in Stockton.~~ The area has access to fire hydrants. There are no deficiencies in this area. There are no fire service deficiencies in this area.

## Fringe Communities

### 18. Charter Way Community

The Charter Way ~~Island~~ Community is made up of 775 parcels totaling approximately ~~650~~ ~~654~~ acres. ~~It is bisected by Highway 99 and the AT&SF railroad tracks.~~

**Water** – Water is provided to this area by California Water Service as part of the Central Stockton Storage and Distribution system. As documented in ~~the Draft 2015 Urban Water Management Plans prepared for the City of Stockton and Cal Water~~, the facilities serving ~~the DUCs this area~~ have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.



**Sewer** – ~~Sewer facilities in the area east of Highway 99 are provided by the East Stockton Sanitary Sewer Project. The City of Stockton Wastewater Master Plan anticipates the provision of force main and gravity trunk improvements planned between State Route 4 and Charter Way to accommodate growth in the area. Since much of this area is not connected to a public sewer system, there are deficiencies in sewer services in this area. Sewer system services are provided to portions of this area by the City of Stockton's Sewer Systems 4, 6, and 7. According to the 2035 Stockton General Plan Infrastructure Evaluation, there are force main and gravity trunk installations planned between State Route 4 and Charter Way. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOI in compliance with the Central Valley Regional Water Quality Control Board and NPDES permit. Some parcels currently rely on individual septic systems.~~

**Drainage** – ~~In the area east of Highway 99, storm drain services are provided by San Joaquin County through an underground storm main. The area west of Highway 99 relies on roadside ditches, so there are no storm drain deficiencies in this area.~~

**Fire** – ~~The Eastside Fire Protection District contracts with the City of Stockton Fire Department to provide fire protection with the operation of Station #12, located in Stockton. The area has access to fire hydrants. There are no fire service deficiencies in this area.~~

## 19. State Route 88 Fringe Community

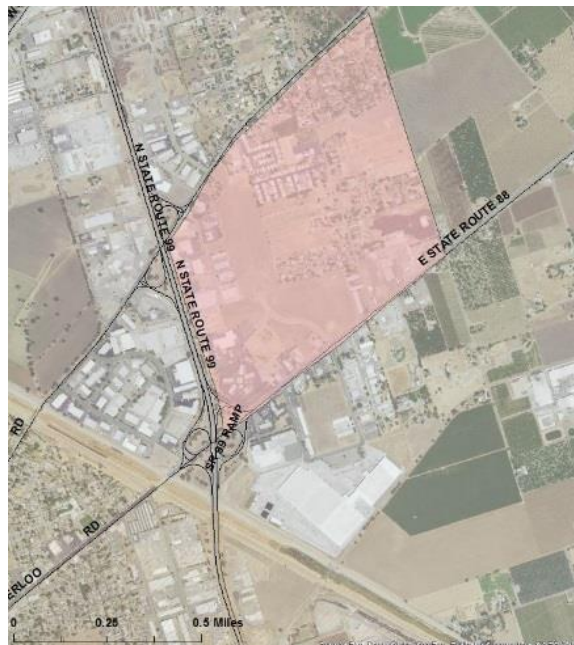
The State Route 88 Fringe Community is made up of 143 parcels totaling approximately 281 acres.

**Water** – Water is provided to this area by the ~~County and~~ California Water Service as part of the Central Stockton Storage and Distribution system. As documented in ~~Draft the~~ 2015 Urban Water Management Plans prepared for ~~the City of Stockton and~~ Cal Water, the facilities serving ~~the DUCs~~ this area have sufficient capacity and access to high-quality water supplies to address current and projected demands. There are no deficiencies in water services in this area.

**Sewer** – County Service Area 15 (Waterloo-99) provides sewer system services to this area. According to the City of Stockton Wastewater Master Plan, there are planned node and gravity trunk improvements throughout most of the area. While there are currently no deficiencies in sewer services in this area, new sewer lines would need to be constructed to accommodate growth in demand~~There is no sewer system servicing this area; all parcels rely on individual septic systems.~~

**Drainage** – Storm drain services are provided by San Joaquin County through an underground storm main. There are no storm drain deficiencies in this area.

**Fire** – Fire services for this area are provided by the Waterloo Morada Fire District~~The City of Stockton Fire Department provides fire protection with the operation of Station #4, located in Stockton.~~ The area has access to fire hydrants. There are no fire service deficiencies in this area.

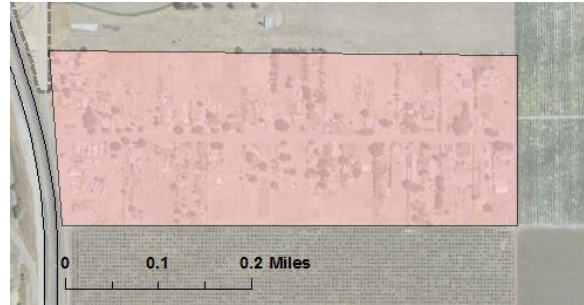




## 20. Sunny Road Community

The Arch Road Fringe Community is made up of 47 parcels totaling approximately 59 acres.

**Water** –Water is provided to this area by groundwater wells, and the City’s Water Master Plan does not show any plans for extension of public water service to the area. While there are no known deficiencies in water services in this area, annexation or further subdivision of the area would likely require new facilities. There are no water lines currently servicing this area.



**Sewer** –Sewer system services are provided to this area by the City of Stockton’s Sewer System 8, although the homes along Sunny Road rely on septic systems. According to theThe City’s 2035 Stockton General Plan, the sewers on the southern and eastern ends of the property are in need of improvements. The City of Stockton Regional Wastewater Control Facility (RWCF) has met and expects to continue to meet annual wastewater collection and treatment demands within the SOI in compliance with the Central Valley Regional Water Quality Control Board and NPDES permitWastewater Master Plan identifies Sunny Road as a candidate for a new gravity sewer line.

**Drainage** – Roadside ditches are used to manage stormwater for the community. Because there is no formal storm drain system, there There are no drainage deficiencies in this area.

**Fire** – Fire services for this area are provided by the Montezuma Fire Protection District which contracts with the City of Stockton Fire Department. The area does not have access to fire hydrants, but has access to fire tenders and water on fire trucks. There are no fire service deficiencies in this area.

### **Potential Funding Sources**

As summarized above, there are several communities that have stormwater deficiencies and all areas outside of Colonial Heights Maintenance District, Lincoln Village Maintenance District, Pacific Gardens Sanitary District, Country Club Sanitary District, and the City of Stockton Assessment District in the vicinity of Alpine would need new sewer lines to accommodate growth in demand. There are several ways that services to these areas could be improved, including annexation to the City of Stockton and connection to the City’s existing and planned infrastructure. For most of these areas, the City has provided a backbone sanitary sewer system, so connection to public treatment systems is a viable option. Generally, funding sources for other needed system improvements include CFDs, taxes, bonds, grants, and exactions. Some financing mechanisms may, however, be difficult to use because they require voter approval. For this reason, grants are often used for infrastructure improvements to reduce the cost burden for taxpayers, although grant programs can be very competitive and, thus, not a reliable source of funding. Given the City Council’s July 2018, the establishment of CFDs may be the most promising way to ensure necessary improvements can be funded and maintainedmost communities have adequate infrastructure. For those communities with deficient infrastructure, there are funding sources available. Primary funding sources for local government infrastructure improvements include taxes, bonds, grants, and exactions. However, these

~~financing mechanisms may be difficult to use because they require voter approval. For this reason, grants are often used for infrastructure improvements to reduce the cost burden for tax payers.~~

In addition to local infrastructure funding mechanisms, there are also funding sources offered by the federal and state government that address existing deficiencies and/or expansion of infrastructure for new development. A summary of each program is provided below:

- **Community Development Block Grants (CDBG)** – The Community Development Block Grant program is an annual funding mechanism offered by the United States Housing and Urban Development Department. These versatile grants often fund the construction of projects such as water and sewer facilities, recreation facilities, street maintenance, as well as other public work projects.
- ~~**Community Facilities Direct Loan and Grant Program** – This program offered by the United States Department of Agriculture Rural Development provides affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of the community in a primarily rural area, and does not include private, commercial, or business undertakings. USDA provides grants to assist in the development of essential community facilities in rural areas and towns with populations up to 20,000.~~
- **Integrated Regional Water Management (grants)** – This funding program is offered by the California Department of Water Resources. DWR's IRWM Grant Programs are managed within the Division of IRWM, Financial Assistance Branch, with assistance from DWR's regional offices. The IRWM Grant Programs include IRWM funding for planning, disadvantaged community involvement, implementation, and companion grant programs that support sustainable groundwater planning and water-energy projects and programs.
- **Proposition 84** - The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act provides funding from the State Water Resources Control Board. Proposition 84 allows the funding to be utilized for capital costs on projects that pertain to protecting river, lakes, and streams from excessive stormwater runoff. Such projects that can be funded could be related to the collection of stormwater, and treatment of water to reduce the likelihood of ground contamination.

### **Conclusion**

~~Although there are several communities in and around Stockton that meet the State definition of a disadvantaged unincorporated community, the City serves most of these communities with City services. The analysis showed that there are no deficiencies within most of the communities and that infrastructure services are sufficient. However, some communities rely on septic systems and lack wastewater collection infrastructure, and one community currently lacks water supply infrastructure; therefore, the City should work with the County and other utility providers to seek funding to complete sewer and water systems in these areas. As described above, there are funding opportunities available to address these deficiencies.~~

The DUCs in the Stockton Metropolitan Area are generally well-served by current fire protection and water services providers, but public wastewater collection and storm drain systems are unavailable in many areas. This includes where storm drainage is provided via roadside ditches, with no connections to storm drain systems, as well as several areas where sewer lines would need to be constructed to accommodate growth in demand. In areas where services are deficient, new development, with or without annexation, would require improvements to bring them up to contemporary standards and to accommodate new development. This would include connection to public sewer systems and extension of storm drainage systems, as anticipated by the City's Wastewater Master Plan and Stormwater Management Plan in several areas. Also, in some DUCs, as with other areas within the City's SOI, fire protection services are provided by independent fire protection districts.



## League of Women Voters of San Joaquin County

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Post Office Box 4548 ■ Stockton, California 95204 ■ lwvsjc@gmail.com

October 8, 2018

Stockton Planning Commission  
Draft Envision Stockton 2040 General Plan.

Re: Adoption of Updated General Plan

Chairman Don Aguillard and Members of the Commission:

The League of Women Voters of San Joaquin County is opposed to housing and industrial development on the 3800 acres north of Eight Mile Road included in the proposed Envision Stockton 2040 General Plan Update.

A substantial amount of development is already approved and pending in North Stockton. According to General Plan Table 3-4, of the 29,300 housing units, 17,300 (59%) are in North Stockton- 12,700 in Northwest Stockton (Hammer to south of 8 Mile Road) and 4,600 in North Central and North East Stockton (Davis to Highway 99, south of 8 Mile Road). Additionally, there are 1,802,000 square feet of commercial space and 1,442,000 square feet of industrial space.

The area north of 8 Mile Road was added later in the planning process after discussion about locating a Stockton state university there. However the websites of several universities demonstrate that a university would consume very little of the 3800 acres:

- Chico, 119 acres
- Stanislaus, Turlock, 228 acres
- Stanislaus, Stockton, 102 acres
- Sacramento, 300 acres
- Fresno, 388 acres

Furthermore, the state's policy regarding enrollment growth is to maximize the capacity at existing campuses before adding new ones. (Legislative Analyst report, "Assessing UC and CSU Enrollment and Capacity", Jan 2017). The 102 acres in University Park is underutilized and, if the state's policy does not change, would be a candidate for future build out. It is interesting to note that the newest CSU-- Channel Islands-- was established on the grounds of the old Camarillo State Hospital. It replaced an off-campus center connected to CSU Northridge.

The League is of the opinion that the proposed 3800 acre addition will jeopardize growth and redevelopment in existing "infill" neighborhoods in other parts of Stockton. We support

reclassifying this to open space/agriculture with the idea of establishing a permanent buffer between Stockton and Lodi.

We appreciate the opportunity to submit our concerns for the updated Stockton General Plan and DEIR.

Sincerely yours



Kathy Casenave, President  
League of Women Voters of San Joaquin County

Cc: Stockton City Council  
Stockton Planning Department  
San Joaquin County Board of Supervisors

**David Stagnaro**

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**From:** Kathy Casenave <kjcaz@att.net>  
**Sent:** Monday, October 29, 2018 11:43 AM  
**To:** David Stagnaro  
**Subject:** Re: More questions from League of Women Voters

Hello David-

I attended the last Commission meeting and have a couple more questions regarding Study Area 1.

- Do you have an estimate of the number of acres south of 8 Mile Rd and also the number of acres west of I5 & north of 8 Mile Rd?
- In September (see below) you wrote back that all of the single family homes were in the section south of 8 Mile Rd. Is that also true for the 1,200 multi-family homes and the 39,000 sq ft of commercial space anticipated to occur before 2040? If not, where?

I appreciate your prompt response to my questions. However, I will be on vacation until November 7 so I do not need an answer until that date.

Regards,

Kathy Casenave  
President  
League of Women Voters of San Joaquin County



Stockton Planning Commission  
Via e-mail only

October 22, 2018

Re: Proposed Amendments to Policies for the Updated Stockton General Plan

Chair Aguillard and Members of the Commission:

This letter includes our proposed amendments to policies and action items for the Updated Stockton General Plan. The amendments are listed in the same order as policies in the draft General Plan.

**1. Encourage housing along major corridors and discourage “power centers” at the edge of the city.**

POLICY LU-1.1

Encourage retail businesses and housing development in mixed-use developments along regional transportation routes and in areas that serve local residents.

Action LU-1.1C

~~Continue to study and consider repealing the “Big Box Ordinance” that was adopted in 2007, and~~ Prohibit the siting of any additional big-box “power centers” at the edges of the city to limit growth inducing impacts to adjacent farmlands. ~~If big-box stores are allowed~~ in the future, require applicants to fund an analysis of economic and blight-inducement impacts of the proposed development on retail businesses in the market area, employment, City revenues and services, and any other relevant economic considerations.

Action LU-1.1D

Encourage the redevelopment of struggling under-utilized commercial strips into multi-family housing opportunities.

**2. Ensure that development at the edge of the city does not compete with housing goals for the downtown.**

POLICY LU-2.2

Facilitate the development of at least 4,400 new housing units in the Greater Downtown by 2040. (DV-2.3)

Action LU-2.2D

Discourage urban development at the edges of the city that would detract from or compete with the housing goals of the Greater Downtown.

**3. Strengthen the protection of historic resources policy.**

Action LU-3.1E

Maintain and periodically update the City's historical resources inventory and adopt a priority list to protect the most important resources.

**4. Delete the 3,800-acre "Economic and Education Enterprise" land use designation from the land use map and retain the designation on lands north of Eight Mile Road in the Agricultural and Open Space designation. Revise the existing policy on large-scale development projects and incorporate new action items describing the intent and process if land is to be designated for Economic and Education Enterprise in the future.**

POLICY LU-4.1

Encourage large-scale development proposals in appropriate locations that include significant numbers of higher-wage jobs and local revenue generation. Such development may utilize the Economic and Education Enterprise land use designation, if the proposal meets all of the criteria listed under the definition of the designation.

Action LU-4.1D The City will consider future amendments to the General Plan for extraordinary growth plans outside the Urban Services Boundary that include significant job generators or public institutions such as a college campus.

Action LU-4.1E The Economic and Education Enterprise land use designation may be applied to lands proposed for significant job generators through the amendment process.



following completion of a full environmental analysis and a land availability study that concludes there is no other land available for the project within the existing City limits. Approval and construction of the first phase of the job generator must be completed prior to the consideration of any accompanying housing development.

**5. Amend Policy LU-5.3 and Action LU-5.3B to finally establish an Ag Belt between Stockton and Lodi (see memo):**

Policy LU-5.3 Actively work to conserve prime agricultural lands outside the City boundaries and ~~Define~~ discrete and clear city edges that preserve agriculture, open space, and scenic views.

Action LU-5.3B ~~The City, in Coordinate with~~ coordination with San Joaquin County to develop a plan for a greenbelt or community separator around the city-, the City of Lodi, the California Farmland Trust, residents and affected landowners, shall prepare an Agricultural Belt Action Plan that addresses, among other items, how to target the agricultural mitigation fees that are collected by the two cities and the County toward purchasing easements within a defined buffer area between Stockton and Lodi. The location of the Agricultural Belt area shall be identified in a non-parcel specific, general fashion on the Plan Land Use Diagram map.

**6. Disallow expansion of the Urban Service Area and annexation unless there is a shortage of developable land and all standards are met:**

POLICY LU-6.2 Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.

Action LU-6.2B ~~Do not approve~~ Prohibit Urban Service Area expansion, future annexations, or City utility connections unless there is less than a 10-year supply of developable land within the city limits and the expansion ~~they are~~ is consistent with the overall goals and policies of the General Plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

**7. Add an action item to ensure adequate water supply is phased to meet the demands of growth.**

POLICY LU-6.3

Ensure that all neighborhoods have access to well-maintained public facilities and utilities that meet community service needs.

Action LU-6.3D

The City shall ensure that water supply capacity and infrastructure are in place, or planned and financed, prior to granting initial approvals for new development. The City shall pursue approval and construction of the second phase of the Delta Water Supply Project to serve new growth and reduce groundwater withdrawal. However, if Phase 2 is delayed or not approved by the State, the City shall phase or defer the approval of new growth until new surface water supplies are in place.

**8. Strengthen the following land use policy to tie it with climate change goals and add a new action:**

POLICY LU-6.4

Ensure that land use decisions balance travel origins and destinations in as close proximity as possible, and reduce vehicle miles traveled (VMT). (LU-1.12, HS-4.13)

Action LU-6.4D

Reduce Vehicle Miles Traveled (VMT) per household by planning new housing in closest proximity to employment centers, improving and funding public transportation and ridesharing, and facilitating more direct routes for pedestrians and bicyclists.

**9. Require major new development to incorporate and fund transit facilities and service, which is required by the Settlement Agreement:**

POLICY TR-2.2 Connect housing and employment development in areas with good transit access.

Action TR-2.2A Require major new development to incorporate and fund design features to promote safe and comfortable access to transit, such as a circulation network that facilitates efficient and connected bus travel, clear pedestrian routes connecting origins and destinations to transit stops, sheltered bus stops, park-and-ride facilities, and highly visible transit information and maps.

Action TR-2.2B ~~Obtain input from~~ Support local and regional transit operators ~~on~~ by ensuring major new development projects ~~to ensure projects~~ are designed to support transit and provide fair share funding of the cost of adequate transit service and access, consistent with the Settlement Agreement.

Action TR-2.2C Request that public transit service providers expand routes and increase frequency and operational hours consistent with current short- and long-range transit planning, ~~as financially feasible~~ with the assistance of new development funding.

**10. Strengthen the following transportation policy and add a new action:**

POLICY TR-3.2 Require new development and transportation projects to reduce travel demand and greenhouse gases, support electric vehicle charging, and accommodate multi-passenger autonomous vehicle travel as much as feasible.

Action TR-3.2D Require projected traffic levels of new development to meet the recommended State threshold of 15 percent below baseline VMT per capita through smart growth design and other incentive programs.

**11. Consider adoption (not just study) an inclusionary housing program.**

Action CH-4.1B

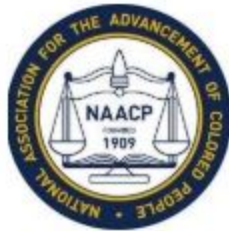
~~Conduct a study to explore the feasibility~~ Consider adoption of inclusionary housing requirements, in-lieu fee levels, density bonus, modified fee structures, and/or tax incentives to promote the inclusion of a meaningful percentage of affordable units within market rate housing projects, ~~and implement the feasible approaches identified in the study.~~

Thank you for your consideration of these important matters. We look forward to much more discussion and debate about these issues.

Very truly yours,

ss/Eric Parfrey  
Chair, CCG and  
Chair, Sierra Club California Executive Committee

cc: Stockton City Council  
SJ County Board of Supervisors  
State Attorney General  
Shute, Mihaly, Weinberger



Healthy Neighborhoods Collaborative  
1106 N. El Dorado Street  
Stockton, CA 95202

October 22, 2018

Mr. David Kwong  
Community Development Director  
City of Stockton  
345 N. El Dorado Street  
Stockton, CA 95202

Dear Mr. Kwong,

The Healthy Neighborhoods Collaborative would like to thank you for the opportunity to provide input on the draft Stockton General Plan. We are pleased at how far this General Plan update has come since the previous one, and would like to commend city staff for their extensive outreach efforts in which significant attendance at public workshops has been well noted by planners and city officials alike. We appreciate and are thankful for city staff's inclusion of many of our policy suggestions as presented in our previous letter back in March 2017.

The Healthy Neighborhoods Collaborative is made up of public health, environmental, environmental justice, housing, and transportation advocates as well as community and faith groups. Together we are working toward a more healthful, equitable, and sustainable city.

As a Collaborative, we have identified areas that the draft General Plan can be tightened to ensure our existing neighborhoods become more healthful, equitable, and sustainable. Stockton needs to invest first in its existing neighborhoods and residents. We would be very happy to meet with you and the consultant team to discuss these further in detail.

Please note: original is in italics, and added suggestions are non-italicized and underlined. Subtractions are strikethrough. As many of the policies and actions are reiterated in multiple areas, suggestions are only made once but apply to all instances where that policy or action is mentioned throughout the draft or, if added entirely, to all applicable categories.

## Land Use

### **Additional Actions for Policy LU-5.2**

Action: Enforce water conservation measures

Action: Coordinate with water agencies and non-profit organizations to promote public awareness on water quality and conservation issues and consistency in water quality impacts analyses.

### **Additional Action for Policy LU-6.2**

Action: Ensure prioritization of development and redevelopment of vacant, underutilized, and blighted infill areas be considered through strategies such as zoning changes and anti-gentrification methods.

### **Additional Action for Policy LU-6.3**

Action: Require a no-idling zone within a 1 to 2 block radius on both sides of streets and side streets of schools locations.

### ***POLICY LU-6.4***

*Action LU-6.4B Maintain a reasonable proximity and balance (i.e., magnitude) between job generating uses, housing opportunities, and resident services and amenities, including transit and active transportation.*

### ***POLICY LU-6.6***

*Action LU-6.6B Participate in the San Joaquin Council of Governments' (SJCOG) regional planning programs and coordinate City plans and programs with those of SJCOG, including the Regional Transportation Plan/Sustainable Communities Strategy, among others, and work with non-profit organizations also engaging in these planning programs. (LU-1.10)*

### ***POLICY LU-6.7***

*Action LU-6.7A Work with community-based organizations to develop and implement a comprehensive and accountable long-term strategy to engage the Stockton community in planning decisions. (LU-8.2)*

## **Community Health**

### **POLICY CH-1.1**

*Action CH-1.1A Plant and maintain appropriate shade trees along all City streets to reduce heat exposure, prioritizing areas of the city with significantly less tree canopy, and provide a buffer between the travel way and bicycle and pedestrian facilities, and provide other amenities like well-marked crosswalks, bulb-outs, and pedestrian scale street lighting. (NCR-8.2)*

*Action CH-1.1B Prepare a parks master plan through an open and engaging process inclusive of community residents that assesses the quality and distribution of existing parks, facilities, and community centers throughout the city relative to the population served (i.e., within a set walking distance) and their needs (i.e., considering age, income, and abilities), and, based on this information, identifies and prioritizes new, renovation, and expansion park and community center projects and describes funding means and timelines. (RW-1.1, IM RW-1, IM RW-2, IM RW-7)*

### **POLICY CH-1.2**

*Action CH-1.2D Prioritize pedestrian and active transportation improvement projects, in low-income/disadvantaged communities, that connect residential areas to retail locations that sell healthy food.*

### **Additional Actions for Policy CH-1.3**

*Action: Adopt and Implement and Urban Agriculture Incentive Zone (per AB551) to allow privately-owned vacant property to be productively used for growing food.*

*Action: Partner with nonprofits, local farmers and San Joaquin County Public Health Services to conduct public outreach and education to aid in the development of an urban agriculture ordinance.*

*Action: Identify new potential locations for farmers' markets in low-income and nutrient deficient neighborhoods, including opportunities to hold markets on publicly owned land.*

### **POLICY CH-2.1**

*Prioritize maintenance of streets and improvement of sidewalks, parks, and other infrastructure in areas of the city that historically have been comparatively underserved by public facilities, including implementation of complete streets where needed, especially in conjunction with infrastructure maintenance and improvement projects.*

(RW-2.10)

*Action CH-2.1A When considering parks and infrastructure maintenance and improvement projects, consider the following through an open and engaging process inclusive of community residents: ■ Whether the affected community is underserved or disadvantaged. ■ What the priority needs of the community are and whether the project would address those needs. ■ Whether the project would negatively impact the community, such as through increased exposure to pollutants or displacement of residents or local businesses.*

*Action CH-2.1B Provide incentives for rehabilitation or redevelopment of distressed properties that takes into consideration anti-gentrification strategies.*

*Action CH-2.1C Develop incentives to promote reuse of distressed areas, such as through, re-zoning, permit streamlining, density bonuses, and other appropriate tools. (IM LU-5)*

*Action CH-2.1D Conduct marketing to potential developers to encourage the redevelopment and conversion of distressed commercial strips into housing and mixed-use areas that includes strategies to avoid gentrification. (LU-4.9)*

*Action CH-2.1F Work with transit agencies, non-profit organizations, and communities, to maintain and improve transit service in underserved and disadvantaged neighborhoods to connect residents with jobs, shopping, and services.*

### **POLICY CH-2.2**

*Action CH-2.2A Aggressively facilitate the conservation and rehabilitation of older neighborhoods through the following approaches: ■ Utilize all federal, State, and local programs for conservation and rehabilitation projects. ■ Prioritize older disadvantaged neighborhoods for investment using funds such as the Community Development Block Grants. ■ Encourage private investment in older neighborhoods. ■ Cooperate in joint public-private partnerships to invest in older neighborhoods. (DV-3.5)*

### **POLICY CH-2.3**

*Action CH-2.3A Build strong ties with disadvantaged communities to ensure that local residents can make significant contributions to planning decisions through the following: ■ Use culturally appropriate approaches. ■ Consider the convenience of the timing and locations of meetings to community members. ■ Use social media and other communication techniques for those without time to attend public meetings. ■ Provide translation services and translated materials when needed. ■ Partner with non-profit organizations who are already active within the community*

*Action CH-2.3B Expand efforts to repair and rehabilitate substandard housing in*

*disadvantaged communities taking into consideration anti-gentrification strategies.*

**POLICY CH-3.2**

*Encourage neighborhood-serving commercial uses in areas where frequently needed goods and services are not widely available, especially for these areas with no availability within a 2-mile radius. (LU-4.8)*

**POLICY CH-5.1**

*Accommodate a changing climate through adaptation, mitigation, and resiliency planning and projects.*

**Additional Action for Policy CH-5.1**

*Action: Coordinate with relevant agencies and non-profit organizations to promote public awareness and readiness on natural disaster related emergency preparedness.*

**POLICY CH-5.2**

*Action CH-5.2C Expand educational and outreach efforts to promote recycling by residents of multi-family housing, businesses, and schools.*

**Transportation**

**POLICY TR-1.1**

*Action TR-1.1A Direct truck traffic to designated truck routes that facilitate efficient goods movement and minimize risk to areas with concentrations of sensitive receptors, such as schools, for example by disallowing truck routes to pass directly on streets where schools are located, and vulnerable road users, like pedestrians and bicyclists. (TC-2.19, HS-2.6)*

*Action TR-1.1E: Work with local school districts to provide pedestrian crossing enhancements like stop signs, within a two-mile radius of schools, and encourage activities like a walking school bus, and create education programs that teach students bicycle safety.*

**POLICY TR-2.1**

*Action TR-2.1A Require safe and secure bicycle parking facilities to be provided at major activity centers such as public facilities, employment sites, schools, and shopping and office centers, along with showers and lockers for major employment sites. (TC-5.7, TC-5.10)*

**Additional Action for Policy TR-2.1**



Add action TR-2.1C to Maintain and implement the City of Stockton Safe Route to School plan.

**POLICY TR-2.2**

*Connect housing and employment development in areas with good transit access, through open and inclusive processes where appropriate. (TC-4.3, HS-4.12)*

*Action TR-2.2B Obtain input from community residents, relevant non-profit organizations, local and regional transit operators on major new development projects to ensure projects are designed to support transit and provide adequate transit service and access. (TC-4.4, IM TC-13)*

**Additional Action for Policy TR-2.2**

Action: Support efforts to electrify buses

**POLICY TR-3.1**

*Action TR-3.1 B Where feasible and appropriate, reduce the width of existing streets using bulbouts, medians, pedestrian islands, shade tree landscaping, appropriate signage, and similar methods, while not jeopardizing emergency response.*

*Action TR-3.1C Preserve right-of-way for transit and bicycle uses when designing new roadways and improving existing roadways, and ensuring adequate and clear signage. (TC-4.7)*

**Safety**

**POLICY SAF-4.3** *Coordinate with the San Joaquin Valley Air Pollution Control District and non-profit organizations to promote public awareness on air quality issues and consistency in air quality impacts analyses.*

**CalEnviroScreen Map**

The 2040 Envision Stockton General Plan Update presents a unique opportunity to improve and revitalize many of the city's existing neighborhoods. To remain consistent with this goal we encourage the city of Stockton staff and consultants to revisit the Disadvantaged Communities map in Figure 6-1 on page 6-5. The map depicts disadvantaged communities using the California Communities Environmental Health Screening Tool, CalEnviroScreen. The colors on the map shown range from shades of red and orange representing severely disadvantaged communities to shades of green for those with lower rankings. Although this map is illustrated using a 5% percent scale and CalEnviroScreen uses a 10% scale we want to ensure that communities outside of central and south Stockton whose census tracts do not appear to be disadvantaged according to this map do not miss out on the benefits of policies and actions

designed to improve such communities. To ensure that all neighborhoods throughout the city can benefit from the equity measures set forth in the general plan it is necessary to update the disadvantaged communities map to one that more closely depicts the current CalEnviroScreen 3.0, and to provide a clear and inclusive definition of a disadvantaged community as it pertains policies and actions in the general plan.

### **Accountability**

Lastly, to ensure continued public participation and measures for accountability, the general plan should include a table or reference to which agency or department is responsible for implementing each of the specified action. As we see in Richmond's 2030 General Plan, such additions would ensure community partners and residents are able to stay engaged through the implementation of the 2040 Envision Stockton General Plan.

The Healthy Neighborhoods Collaborative calls on the City of Stockton to continue on this path of health, sustainability and equity through the General Plan, and promote existing neighborhoods as priority. We look forward to discussing these recommendations with you in more detail, and to continue engagement in the General Plan process.

Sincerely,

Yolanda Park, Environmental Justice Program Manager  
Catholic Charities, Diocese of Stockton

Barb Alberson, MPH, Sr. Deputy Director, Policy & Planning  
San Joaquin County Public Health Services

Erin Reynolds, Community Outreach Specialist  
Public Health Advocates

Eric Parfrey, Chair/Steering Committee  
Campaign for Common Ground

Esperanza Vielma, Executive Director  
CafeCoop

Richard Abood, Representing Member  
EcoInterFaith

Curtis Smith, County Director  
Faith in the Valley, San Joaquin

Eric Parfrey, Chair, California Executive Committee  
Sierra Club

Marty Martinez, MPP, Northern California Policy Manager  
Safe Routes to School National Partnership

Robert Bivens, President  
NAACP-Stockton Branch

**And the residents of Stockton:**

Jeri Bigbee  
Beatriz and Miguel Flores  
Brandi Moore  
Charlene West  
Ernest Williams  
Roslyn Burse  
Shani Richards  
Cynthia Grayson  
Jennifer Flores  
Christina Peoples  
Shapresha Galloway  
LaTina Griffin  
Candis Bishop  
Alice Moore  
Willie Moore  
Tiana Moore

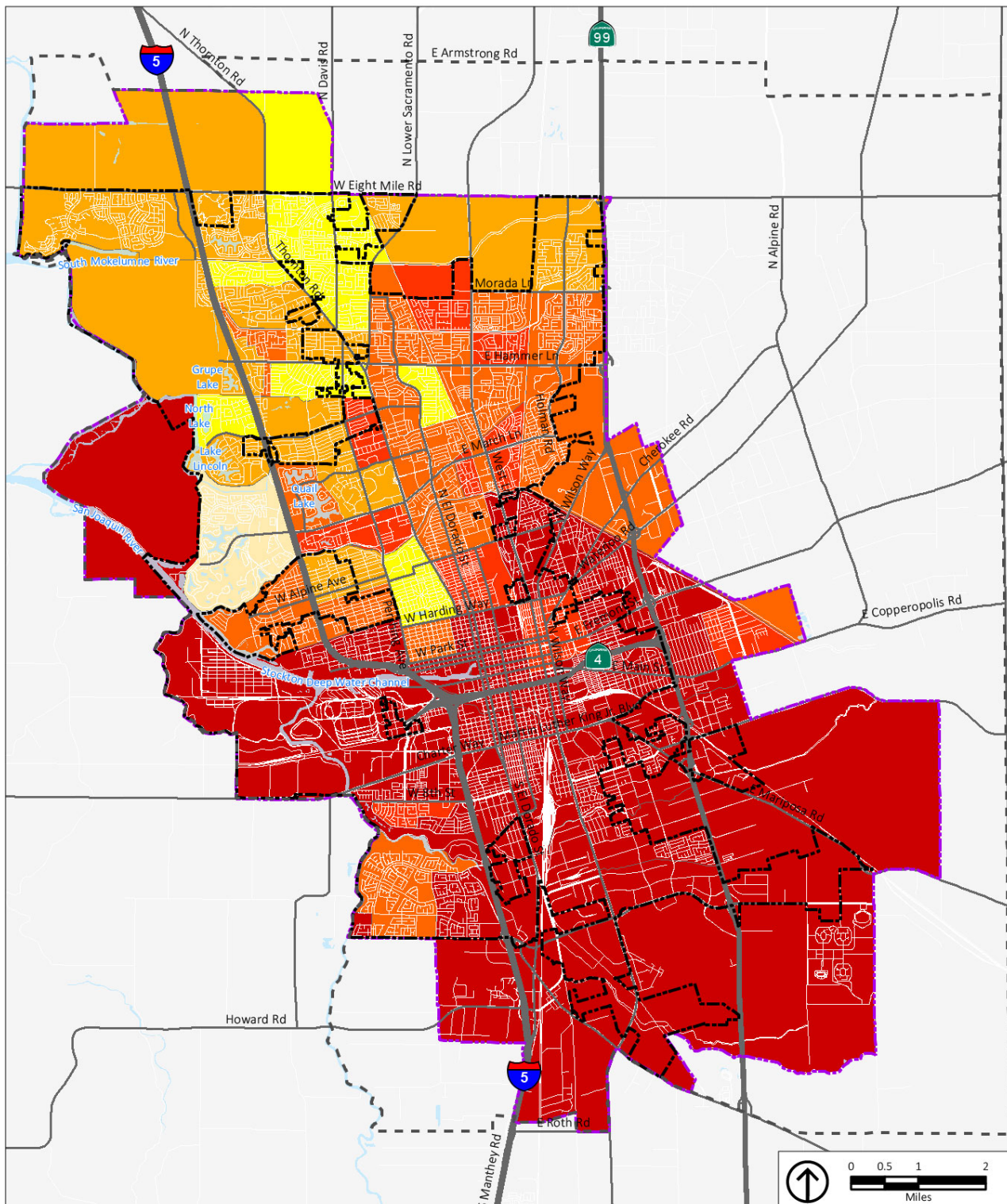
CC:

Mayor Michael Tubbs  
Vice Mayor Elbert Holman  
Councilmember Dan Wright  
Councilmember Susan Lofthus  
Councilmember Susan Lenz  
Councilmember Christina Fugazi  
Councilmember Jesus Andrade  
Planning Commissioner Don Aguillard  
Planning Commissioner Elizabeth Hull  
Planning Commissioner Sol Jobrack  
Planning Commissioner D'Adrea Davie  
Planning Commissioner Kimberly Warmsley

# ATTACHMENT D

Planning Commissioner Waqar Rizvi  
Planning Commissioner Anne Mallett  
David Stagnaro, Community Development Department

**Figure 6-1**  
**Disadvantaged Communities**



Source: California Office of Environmental Health Hazard Assessment, 2018; PlaceWorks, 2018.

Percent of Disadvantaged Communities

- |                            |                         |          |                              |
|----------------------------|-------------------------|----------|------------------------------|
| ■ 91-100% (highest scores) | ■ 61-70%                | ■ 31-40% | ⬡ General Plan Planning Area |
| ■ 81-90%                   | ■ 51-60%                | ■ 21-30% | ⬡ City Limit                 |
| ■ 71-80%                   | ■ 41-50%                | ■ 11-20% | ⬡ Sphere of Influence        |
|                            | ■ 0-10% (lowest scores) |          |                              |

Resolution No.

## **STOCKTON PLANNING COMMISSION**

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### **RESOLUTION FORWARDING A RECOMMENDATION TO THE CITY COUNCIL TO APPROVE THE ENVISION STOCKTON 2040 GENERAL PLAN UPDATE, UTILITY MASTER PLAN SUPPLEMENTS, AND RELATED FINAL ENVIRONMENTAL IMPACT REPORT**

The City of Stockton has formulated a comprehensive, long-term General Plan Update, and related Utility Master Plan Supplements (UMPS) for the physical development of the City, which the General Plan contains each of the elements required by law to be a part of it; and

An update to the City's 2035 General Plan has been initiated to maintain compliance with State law; and

The Planning Commission held a duly noticed public hearing to consider the Envision Stockton 2040 General Plan Update, UMPS, and related Final Environmental Impact Report (FEIR) on October 25, 2018 and was continued to the regularly scheduled meeting on November 15, 2018; now, therefore,

BE IT RESOLVED BY THE PLANNING COMMISSION OF THE CITY OF STOCKTON, AS FOLLOWS:

1. The Planning Commission hereby forwards a recommendation to the City Council to adopt the Envision Stockton 2040 General Plan Update, and UMPS, as set forth in Exhibit 1, attached hereto and incorporated by this reference, and related FEIR, based on the following findings. All findings below are supported by the corresponding evidence in the administrative record:

- a. The proposed Envision Stockton 2040 General Plan Update establishes appropriate goals, objectives, policies, and actions to address such issues as land use, housing, economic development, community health, community design, transportation and circulation, public facilities and services, recreation, safety, youth, education, and natural and cultural resources;
- b. The General Plan has been updated in conformity with the provisions of State law requirements of California Code section 65300 et seq.;
- c. The proposed amendment will not endanger, jeopardize, or otherwise constitute a hazard to the public convenience, health, interest, safety, or general welfare of persons residing or working in the City;
- d. The Planning Commission has reviewed and considered the FEIR for the Envision Stockton 2040 General Plan Update, and UMPS and

- has recommended certification of the FEIR as being adequate under the California Environmental Quality Act (CEQA); and
- e. The mitigation measures, the monitoring program to be implemented for each mitigation measure, the findings, and statement of overriding considerations as set forth in the Findings, Statement of Overriding Considerations, and Mitigation Monitoring and Reporting Program documents on file at [www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton) are hereby recommended for adoption in relation to the proposed Envision Stockton 2040 General Plan Update and UMPS.

The statements, findings, and mitigation monitoring provisions are based on the above-referenced FEIR for the Envision Stockton 2040 General Plan Update and UMPS and other information available to the City Council are recommended for adoption in compliance with sections 15091 and 15093 of the State CEQA Guidelines.

2. The Planning Commission hereby adopts a resolution recommending that the City Council approve:

- a. Certification of the Final Environmental Impact Report (FEIR);
- b. Envision Stockton 2040 General Plan Update;
- c. Utility Master Plan Supplements (UMPS).

PASSED, APPROVED, and ADOPTED: November 15, 2018.

\_\_\_\_\_  
DON M. AGUILLARD, CHAIR  
CITY OF STOCKTON PLANNING COMMISSION

ATTEST:

\_\_\_\_\_  
DAVID W. KWONG, SECRETARY  
CITY OF STOCKTON PLANNING COMMISSION

Exhibit 1

[www.stocktongov.com/envisionstockton](http://www.stocktongov.com/envisionstockton)



## M\_E\_M\_O\_R\_A\_N\_D\_U\_M

TO: Mayor Michael Tubbs  
 FR: Eric Parfrey  
 RE: Proposed “Ag Belt” and Ag Conservation Easements  
 DATE: September 20, 2018

Following up on our meeting on August 20, 2018, you asked to be given some background information on agricultural conservation easements and how a proposed “Ag Belt” between Stockton and Lodi would work. (The term “Ag Belt” is more appropriate than “greenbelt,” which implies public parkland.)

First, Sierra Club and Campaign for Common Ground have advocated for the establishment of an Ag Belt north of Eight Mile Road and south of the Lodi Sphere of Influence for the over a decade. We made this strong request as part of the last 2007 General Plan and we were ignored by the staff and the City Council. Once again, we are asking that one or more strong policies and action measures be included in this updated 2040 plan in place of the existing weak and ineffective Policy LU-5.3 and Action LU-5.3B, as follows:

Policy LU-5.3 **Actively work to conserve prime agricultural lands outside the City boundaries and** Define discrete and clear city edges that preserve agriculture, open space, and scenic views.

Action LU-5.3B The City, in ~~Coordinate with~~ **coordination with San Joaquin County to develop a plan for a greenbelt or community separator around the city, the City of Lodi, the California Farmland Trust, residents and affected landowners, shall prepare an Agricultural Belt Action Plan that addresses, among other items, how to target the agricultural mitigation fees that are collected by the two cities and the County toward purchasing easements within a defined buffer area between Stockton and Lodi. The location of the Agricultural Belt area shall be identified in a non-parcel specific, general fashion on the Plan Land Use Diagram map.**

There is a long, failed history over the last decades of half-hearted attempts by the City of Stockton, the County, and Lodi to establish an Ag Belt. Now is the time to see that it actually gets done. It is incumbent upon the City of Stockton to take a strong leadership position on this project since it is the irresponsible sprawling land use practices of Stockton in the past that have kept these ag lands under so much threat of urbanization.

### How Do Agricultural Conservation Easements Work?

The creation of an Ag Belt can only be accomplished through strong political leadership and the reliance on existing and new funding sources. Agricultural separators between communities are created using a common tool called an agricultural conservation easement.

An agricultural conservation easement is a deed restriction landowners voluntarily place on their property to protect the farm from development. They are used by landowners (the “grantor”) to authorize a qualified conservation organization or public agency (“grantee”) to monitor and enforce the restrictions set forth in the agreement. Conservation easements are flexible documents tailored to each property and the needs of individual landowners. Agricultural conservation easements are designed to keep land available for farming.

In general, agricultural conservation easements limit subdivision, non-farm development and other uses that are inconsistent with commercial agriculture. Some easements allow lots to be reserved for family members. Agricultural conservation easements often permit commercial development related to the farm operation and the construction of farm buildings. Most do not restrict farming practices, although some grantees ask landowners to implement soil and water conservation plans. For example, landowners who receive federal funds for farm easements must implement an agricultural land easement conservation plan approved by the USDA Natural Resources Conservation Service (see the attached “Agricultural Conservation Easements” fact sheet prepared by the American Farmland Trust and USDA).

Landowners that enter into voluntary conservation easements are compensated for giving up or selling their “development rights.” The value of the compensation to the landowner for entering into the easement is determined by an appraisal. In the Central Valley the value of development rights to a typical large parcel of prime agricultural land may be about 60% to 80% of the fee simple value of the land without an easement. Thus, the landowner of a prime property that is valued at \$15,000 to \$20,000 per acre could be reimbursed for selling an easement at a rate of approximately \$9,000 to \$16,000 per acre.

### How Are Purchases of Conservation Easements Funded?

The purchase of easements for agricultural, habitat, and other types of conservation easements is typically coordinated through a local land trust. Land trusts California is home to more than 150 land trusts that have protected more than 2.5 million acres. Land trusts use a variety of funding sources to pay farmers for the purchase of easements, including grants from State and federal agencies and funds collected by local ag mitigation fee programs.

The City of Stockton, as well as San Joaquin County and the cities of Manteca, Lathrop, and Tracy, have an ongoing relationship with the most active land trust that is operating in the county, the California Central Valley Farmland Trust (formerly called the Central Valley Farmland Trust). Over the last two decades, the Trust has protected 50 family farms covering

nearly 15,000 acres in San Joaquin, Sacramento, Stanislaus, and Merced counties (see <http://cafarmtrust.org/all-properties/>).

Another very successful example of a local land trust is located in Yolo County. Since its founding in 1988, Yolo Land Trust has permanently conserved nearly 11,000 farmland acres (see <http://theyololandtrust.org/>).

#### Next Steps

1. City Council adopts the new General Plan with a clear and unambiguous policy to prepare an Ag Belt Action Plan that will result in the establishment of an Ag Belt. The Council must appoint a task force or action team to oversee that effort. The task force or team should include representatives from the City of Stockton, the County, the City of Lodi, the California Farmland Trust, as well as residents and affected landowners.
2. Charge the action team with a detailed work plan that sets forth specific items to accomplish and strict deadlines to prepare the Ag Belt Action Plan. For example, the action team should be directed to review the existing agricultural fee mitigation programs adopted by the City of Stockton and the County and to make any recommended changes to the programs to ensure that funds are directed specifically to purchase easements on properties located with the proposed Ag Belt. Similarly, the action team should meet with representatives of the California Farmland Trust to review their strategic plan and to negotiate with them to amend the strategic plan to target properties within the Ag Belt. An updated Memorandum of Understanding should be negotiated between the City of Stockton, the County, and the Trust, and adding in the City of Lodi.
3. Following the preparation of a first draft Ag Belt Action Plan the documents should be subject to public review including workshops or hearings at the Planning Commission and City Council. The plan would presumably be subject to CEQA, so an environmental analysis would be required.



## MEMORANDUM

DATE October 1, 2018  
TO David Stagnaro  
City of Stockton Community Development Department  
FROM Tanya Sundberg and Charlie Knox  
SUBJECT Revisions to Utility Master Plan Supplements

Each Utility Master Plan Supplement (UMPS) Technical Memorandum (TM) shows the General Plan land use map as an attachment to the TM. Because staff has recommended changes to the land use map, the UMPS TM have been revised to show the updated version of the land use map in the attachments to those reports.

Also, based on comments from the City of Stockton Municipal Utilities Department, the text in Section 8.2 on page 19 of the UMPS for Potable Water (prepared by West Yost Associates) has been revised as follows:

### 8.2 COSMUD Northern and Southern Systems

The COSMUD water system includes a northern system and a southern system, essentially separated by the Cal Water system serving the center of the City. Since the completion of the Delta Water Treatment Project, COSMUD operates the two systems essentially as two separate, distinct systems. There is an eastern connection between the two systems, but the connection is kept closed. Evaluating the northern and southern COSMUD systems as if they were operated as a single system would allow the storage and pumping facilities to be evaluated collectively. However, additional studies of the potential benefits and impacts of connecting the north and south systems would need to be prepared.

To allow the northern and southern COSMUD systems to be operated as a single system, it is recommended that:

- ~~• A western connection between the northern and southern COSMUD systems be constructed,~~
- ~~• The water provided by Stockton East Water District (SEWD) to the southern COSMUD system be treated to the same standards as the water in the northern COSMUD system. This could be done by either SEWD or COSMUD, and~~

## ATTACHMENT F



- ~~The eastern connection be opened.~~

The full versions of the revised UMPS are provided as Attachments 1, 2, and 3 to this memorandum.

ATTACHMENT F

**ATTACHMENT 1**  
**REVISED POTABLE WATER MASTER PLAN SUPPLEMENT**

## ATTACHMENT F



### TECHNICAL MEMORANDUM

DATE: December 12, 2017 Project No.: 425-10-16-04.006  
TO: City of Stockton, Municipal Utilities Department SENT VIA: EMAIL  
FROM: Patrick Johnston, PE, RCE #59028  
REVIEWED BY: Doug Moore, PE, RCE #58122  
SUBJECT: Stockton General Plan Update—Potable Water Master Plans Supplement

This Technical Memorandum (TM) presents the Supplement for the Stockton General Plan Update (GPU) to the City of Stockton's Water Master Plan (2008) and California Water Service Company's (Cal Water) Water Master Plan (2009). Where appropriate, information related to the Service Area of the Cal Water is also included in this TM. This TM includes the following Sections:

- Summary
  - Demand Projection Summary by Development Area
  - Demand Projection Summary by Service Area
  - Required New Infrastructure Evaluations Summary
  - Cost Evaluations Summary
- Demand Projection Estimates by Development Area
  - GPU Land Uses by Development Area
  - Water Demand Factors
  - Average Day Demands by Development Area
  - Maximum Day Demands by Development Area
  - Peak Hour Demands by Development Area
  - Demand Projection Estimates by Service Area
- Infrastructure Evaluations
  - City of Stockton Municipal Utilities District (COSMUD) Infrastructure Evaluation
    - Water Storage Capacity
    - Pumping Facility Capacity
    - Distribution Pipeline Capacity

## ATTACHMENT F

- Cal Water Infrastructure Evaluation
  - Water Storage Capacity
  - Pumping Facility Capacity
  - Distribution Pipeline Capacity
- Cost Evaluations by Service Area
  - COSMUD
  - Cal Water
- Recommended Future Actions
  - Water Distribution System
  - COSMUD Northern and Southern Systems
  - Future Development-Specific Potable Water Improvements

The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

### **SUMMARY**

A summary of this TM is presented below. The development of the summary data is presented in the following sections of this TM. The 2040 land uses are shown on Figure 1 as well as the COSMUD Service Areas and the Cal Water Service Area, and the General Plan Update buildout land use map is provided in Attachment A.

### **Demand Projection Summary by Development Area**

The estimated Average Day Demands, Maximum Day Demands and Peak Hour Demands are summarized in Table 1 and discussed below:

- The total Average Day Demands are estimated to increase from about 48.6 million gallons per day (mgd) for existing land uses to 66.3 mgd for the 2040 land uses.
- The total Maximum Day Demands are estimated to increase from about 85.0 mgd for existing land uses to 115.4 mgd for the 2040 land uses.
- The total Peak Hour Demands are estimated to increase from about 137.3 mgd for existing land uses to 196.1 mgd for the 2040 land uses.

### **Demand Projection Summary by Service Area**

Demands within the City are distributed between the service areas for COSMUD and Cal Water as described below:

- For the existing land uses, the COSMUD service area contains 52 percent of the demands, while the Cal Water service area contains 48 percent of the demands.
- The ratio is different with the 2040 land uses, with the COSMUD service area containing 61 percent of the demands and the Cal Water service area containing 39 percent of the demands.



ATTACHMENT F

<b>Table 1. Summary of Water Demand Estimates</b>			
<i>Land Use</i>	<i>Demand (mgd)</i>		
	<i>Existing</i>	<i>Net New</i>	<i>2040</i>
<b>Average Day Demand</b>			
Study Areas	2.09	2.42	4.51
Approved/Pending Development Projects Within City Limit	2.05	5.15	7.20
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.34	7.27	7.61
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects(e)	44.16	2.84	46.99
<b>Total</b>	<b>48.63</b>	<b>17.68</b>	<b>66.32</b>
<b>Maximum Day Demand</b>			
Study Areas	3.68	4.27	7.95
Approved/Pending Development Projects Within City Limit	3.49	8.78	12.27
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.57	12.36	12.94
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	77.27	4.96	82.23
<b>Total</b>	<b>85.01</b>	<b>30.37</b>	<b>115.38</b>
<b>Peak Hour Demand</b>			
Study Areas	5.95	6.99	12.94
Approved/Pending Development Projects Within City Limit	7.16	17.87	25.03
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	1.18	25.45	26.63
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	123.01	8.51	131.53
<b>Total</b>	<b>137.30</b>	<b>58.83</b>	<b>196.13</b>

## ATTACHMENT F

### Required New Infrastructure Evaluations Summary

Preliminary infrastructure evaluations were performed for water storage facilities, booster pumping facilities, and the pipeline facilities for the COSMUD and Cal Water Service Areas. These infrastructure evaluations were developed by:

- Estimating the water demands for the GPU 2040 level of development within the COSMUD and Cal Water Service Areas. The 2040 level of development is significantly less than full buildout of the land uses in the GPU.
- Comparing the 2040 estimated water demands with the demands in the COSMUD and Cal Water WMPs. The COSMUD and Cal Water WMPs were based on full buildout the 2035 General Plan.
- The required infrastructure needed for the 2040 level of development was estimated by comparison with the infrastructure identified in the WMPs, but revised based on the changes in water demands.

For COSMUD:

- The 2035 buildout average day demands from the COSMUD WMP were 98.2 mgd. The 2040 average day demands from this study are 39.9 mgd, representing a decrease of approximately 60 percent.
- The required new storage is 24.9 mg for the 2040 GPU development. For comparison, the required new storage from the WMP for buildout of the 2035 General Plan is 142.9 mg.
- Potentially, no new booster pumping capacity is needed for the 2040 GPU development, depending on the existing booster pumps ability (depending on location) to serve the new development. For comparison, the required new pumping capacity from the WMP for buildout of the 2035 General Plan is 150,087 gpm.
- Water distribution piping will be needed for many of the new growth areas. However, in comparison to the buildout of the 2035 General Plan, significant reductions of the water distribution piping should occur for some study areas.

For Cal Water:

- The 2035 buildout average day demands from the Cal Water WMP were 35.1 mgd. The 2040 average day demands from this study are 26.4 mgd, representing a decrease of approximately 25 percent.
- The required new storage is 0.5 mg for the 2040 GPU development. For comparison, the required new storage from the WMP for buildout of the 2035 General Plan is 13.5 mg.
- The required new booster pumping capacity needed for the 2040 GPU development is 3,057 gpm. For comparison, the required new pumping capacity from the WMP for buildout of the 2035 General Plan is 13,925 gpm.
- The existing water distribution piping, along with recent and ongoing system improvements should be adequate for the GPU 2040 development.

## ATTACHMENT F

### Cost Evaluations Summary

Preliminary infrastructure cost estimates for water storage facilities and booster pumping facilities were developed for the COSMUD and Cal Water Service Areas.

For COSMUD:

- The 2040 GPU required new water storage is 24.9 mg, which has an estimated cost of \$37.9 million. For comparison, from the WMP (for buildout of the 2035 General Plan), the required new storage was estimated to be 109.2 mg, which has an estimated cost of \$166.4 million.
- No new booster pumping capacity was needed for the 2040 GPU land uses (if the locations of the existing booster pumps will result in adequate service to the new development). For comparison, from the WMP (for buildout of the 2035 General Plan), the required new booster pumping was estimated to be 150,087 gpm, which has an estimated cost of \$65.5 million.

Cal Water:

- The 2040 GPU required new water storage is 0.5 mg, which has an estimated cost of \$0.8 million. For comparison, from the WMP (for buildout of the 2035 General Plan), the required new storage was estimated to be 13.5 mg, which has an estimated cost of \$21.5 million.
- The 2040 GPU required new booster pumping capacity of 3,057 gpm, which has an estimated cost of \$2.2 million. For comparison, from the WMP (for buildout of the 2035 General Plan), the required new booster pumping was estimated to be 13,925 gpm, which has an estimated cost of \$9.8 million.

### DEMAND PROJECTION ESTIMATES BY DEVELOPMENT AREA

#### GPU Land Uses by Development Area

The land use data for this evaluation was provided by Placeworks, and is provided in Attachment A (including the buildout land use map, the dwelling unit data, acreage data, and 2040 percent development data). The land use data has been reorganized in Table 2 to be suitable for water demand estimating. The reorganized land use data includes existing land use data, net new land use data for 2040, and 2040 land use data. For single family and multi-family residential land uses, Table 2 includes both the dwelling unit data and the acreage data. For commercial and industrial land uses, Table 2 includes only acreage data. All the water demands were based on gross areas shown in Table 2.

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Table 2. Land Use Data

Study Area or Development Name	Single Family (Dwelling Units)			Single Family (Gross Acres)			Multi Family (Dwelling Units)			Multi Family (Gross Acres)			Commercial (Gross Acres)			Industrial (Gross Acres)			Total Area (Gross Acres)		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																					
Study Area 1 - Eight Mile Rd Area	121	1,379	1,500	17.2	232.1	249.3	96	1,198	1,294	8.4	73.2	81.6	17.9	0.6	18.5	4.0	0.0	4.0	47.5	305.9	353.4
Study Area 2 - Pacific Ave Corridor	22	0	22	4.3	0.0	4.3	114	110	224	3.5	4.7	8.2	115.8	3.6	119.4	0.1	0.0	0.1	123.7	8.3	132.1
Study Area 3 - West Ln and Alpine Rd Area	208	77	285	38.7	51.6	90.2	94	680	774	5.8	29.9	35.7	68.4	6.2	74.6	54.5	0.0	54.5	167.4	87.7	255.1
Study Area 4 - Port/Waterfront	54	17	71	8.0	11.2	19.2	288	1,770	2,058	8.6	26.7	35.3	10.3	2.9	13.2	44.3	5.6	49.9	71.1	46.5	117.6
Study Area 5 - El Dorado/Center Corridors	45	0	45	5.5	0.0	5.5	359	1,196	1,555	8.3	17.2	25.5	8.1	1.8	9.9	9.9	0.0	9.9	31.8	19.0	50.8
Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	47	0	47	4.4	0.0	4.4	219	1,248	1,467	4.8	18.0	22.8	6.5	3.4	9.9	7.2	0.0	7.2	22.9	21.3	44.3
Study Area 7 - Wilson Way Corridor	12	0	12	1.6	0.0	1.6	6	234	240	0.2	6.8	7.1	2.1	5.1	7.2	14.9	0.0	14.9	18.9	12.0	30.9
Study Area 8 - I-5/Highway 4 Interchange	8	0	8	1.0	0.0	1.0	1	659	660	0.1	38.0	38.1	0.9	0.9	1.8	13.2	0.0	13.2	15.2	38.9	54.1
Study Area 9 - Railroad Corridor at California St	19	0	19	2.3	0.0	2.3	23	1,340	1,363	1.3	19.3	20.6	4.8	1.5	6.3	7.0	0.0	7.0	15.4	20.7	36.2
Study Area 10 - I-5 and Charter Way Area	228	86	314	42.8	57.9	100.7	29	98	127	4.1	4.2	8.3	26.3	2.6	28.9	4.6	2.7	7.3	77.8	67.4	145.2
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	5	0	5	0.3	0.0	0.3	0	396	396	0.0	7.7	7.7	2.9	0.4	3.3	0.0	0.0	0.0	3.2	8.2	11.3
Study Area 12 - Airport Way Corridor	53	0	53	7.2	0.0	7.2	4	108	112	0.4	4.7	5.1	6.8	10.2	17.0	89.5	13.1	102.6	103.9	28.0	131.9
Study Area 13 - Mariposa and Charter Area	12	0	12	3.9	0.0	3.9	77	0	77	5.9	0.0	5.9	5.6	1.5	7.2	0.0	0.0	0.0	15.5	1.5	17.0
Study Area 14 - East Weston Ranch <sup>(b)</sup>	1	0	1	1.1	0.0	1.1	0	0	0	0.0	0.0	0.0	4.9	14.8	19.8	0.0	0.0	0.0	6.1	14.8	20.9
Study Area 15 - South of French Camp Rd	89	0	89	75.7	0.0	75.7	9	0	9	6.1	0.0	6.1	0.0	0.0	0.0	0.1	0.0	0.1	81.8	0.0	81.8
Study Area 16 - E French Camp Rd Area	59	0	59	122.7	0.0	122.7	4	0	4	9.1	0.0	9.1	0.1	0.0	0.1	0.2	0.0	0.2	132.2	0.0	132.2
<b>Subtotal (Study Areas)</b>	<b>983</b>	<b>1,558</b>	<b>2,541</b>	<b>336.9</b>	<b>352.8</b>	<b>689.7</b>	<b>1,323</b>	<b>9,036</b>	<b>10,359</b>	<b>66.8</b>	<b>250.5</b>	<b>317.3</b>	<b>281.5</b>	<b>55.6</b>	<b>337.1</b>	<b>249.5</b>	<b>21.4</b>	<b>270.8</b>	<b>934.6</b>	<b>680.2</b>	<b>1,614.8</b>
<b>Approved/Pending Development Projects Within City Limit</b>																					
Westlake Villages	0	2,630	2,630	0.0	680.0	680.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	680.0	680.0
Delta Cove	0	1,164	1,164	0.0	132.7	132.7	0	381	381	0.0	47.6	47.6	0.0	2.6	2.6	0.0	0.0	0.0	0.0	182.9	182.9
North Stockton Projects III	235	2,220	2,455	38.0	355.0	393.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.0	355.0	393.0
Cannery Park	0	981	981	0.0	272.0	272.0	0	210	210	0.0	16.0	16.0	0.0	104.0	104.0	0.0	0.0	0.0	0.0	392.0	392.0
Nor Cal Logistics Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crystal Bay	0	951	951	0.0	19.4	19.4	0	392	392	0.0	78.7	78.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.1	98.1
Sanctuary	0	5,452	5,452	0.0	1,026.0	1,026.0	0	1,618	1,618	0.0	67.4	67.4	0.0	35.5	35.5	0.0	0.0	0.0	0.0	1,128.9	1,128.9
Tidewater Crossing	310	-310	0	869.6	-869.6	0.0	0	0	0	0.0	0.0	0.0	0.0	16.0	16.0	0.0	0.0	0.0	869.6	-853.6	16.0
Open Window <sup>(c)</sup>	0	0	0	0.0	0.0	0.0	9	1,391	1,400	0.0	11.9	11.9	12.9	-1.0	11.9	0.0	0.0	0.0	12.9	10.9	23.8
Weston Ranch Town Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	41.5	41.5	0.0	0.0	0.0	0.0	41.5	41.5
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>545</b>	<b>13,088</b>	<b>13,633</b>	<b>907.6</b>	<b>1,615.5</b>	<b>2,523.1</b>	<b>9</b>	<b>3,992</b>	<b>4,001</b>	<b>0.0</b>	<b>221.6</b>	<b>221.6</b>	<b>12.9</b>	<b>198.6</b>	<b>211.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>920.5</b>	<b>2,035.7</b>	<b>2,956.2</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																					
Mariposa Lakes	5	8,955	8,960	151.0	939.3	1,090.3	3	1,553	1,556	0.0	585.0	585.0	0.0	150.0	150.0	0.0	0.0	0.0	151.0	1,674.3	1,825.3
Airpark 599	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	128.0	128.0	0.0	0.0	0.0	0.0	128.0	128.0
Tra Vigne <sup>(d)</sup>	0	1,244	1,244	0.0	846.4	846.4	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	846.4	846.4
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>5</b>	<b>10,199</b>	<b>10,204</b>	<b>151.0</b>	<b>1,785.7</b>	<b>1,936.7</b>	<b>3</b>	<b>1,553</b>	<b>1,556</b>	<b>0.0</b>	<b>585.0</b>	<b>585.0</b>	<b>0.0</b>	<b>278.0</b>	<b>278.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>151.0</b>	<b>2,648.7</b>	<b>2,799.7</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects <sup>(e)</sup>	76,463	1,501	77,964	13,870.5	1,270.5	15,141.0	33,183	0	33,183	1,915.9	0.0	1,915.9	546.6	0.0	546.6	1,783.8	0.0	1,783.8	18,116.8	1,270.5	19,387.3
<b>Grand Total</b>	<b>77,996</b>	<b>26,346</b>	<b>104,342</b>	<b>15,266.0</b>	<b>5,024.6</b>	<b>20,290.5</b>	<b>34,518</b>	<b>14,581</b>	<b>49,099</b>	<b>1,982.7</b>	<b>1,057.1</b>	<b>3,039.8</b>	<b>841.0</b>	<b>532.1</b>	<b>1,373.1</b>	<b>2,033.2</b>	<b>21.4</b>	<b>2,054.6</b>	<b>20,122.9</b>	<b>6,635.1</b>	<b>26,758.0</b>

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### Water Demand Factors

The 2008 COSMUD WMP and the 2009 Cal Water WMP provided water demand factors for both existing land uses (Figures 3-8 through 3-16 of the COSMUD WMP and Figures 3-10 through 3-22 of the Cal Water WMP) and for future land uses (Table 3-8 of the COSMUD WMP and Table 3-11 of the Cal Water WMP) for use in estimating demands in the water distribution system. Demand factors used for estimating water distribution system demands are intentionally conservative, meaning they are higher than the corresponding actual demands may be, to allow for a range of different demands within a land use category. For example, actual commercial demands would be very low for rental storage units to very high for restaurants. To allow for this range of actual possible demands, conservative (high) demand factors are used for estimating water demands, resulting in pipeline sizes that can accommodate either low or high actual demands.

The gross area demand factors used in this GPU water demand estimate are summarized in Table 3, which includes factors for single family residential, multi-family (including a higher factor for downtown multi-family) residential, commercial, and industrial land uses.

### Average Day Demands by Development Area

The Average Day Demand estimates are calculated in Table 4. Average Day demands are the estimate of the water used by the residents and businesses in the water system service area. The Average Day Demands are calculated by multiplying the appropriate land use data by the appropriate demand factor. The following Average Day Demands are calculated for existing, net new, and 2040 land use conditions:

- Average Day Demand from exiting land uses: 48.6 mgd
- Average Day Demand from net new land uses: 17.7 mgd
- Average Day Demand from 2040 land uses: 66.3 mgd

### Maximum Day Demands by Development Area

The Maximum Day demand estimates are calculated in Table 5. Maximum Day demands are the estimate of the water used by the residents and businesses in the water system service area on the day of the year when the demands are the highest. The Maximum Day demands are calculated by multiplying the Average Day Demands by the appropriate maximum day peaking factor (see Table 3). The Maximum Day peaking factor for the COSMUD service area is 1.7. The Maximum Day peaking factor for the Cal Water service area is 1.8. The following Maximum Day demands are calculated for existing, net new, and 2040 demands:

- Maximum Day demand from exiting land uses: 85.0 mgd
- Maximum Day demand from net new land uses: 30.4 mgd
- Maximum Day demand from 2040 land uses: 115.3 mgd

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<b>Table 3. Water Demand Factors and Peaking Factors</b>		
Land Use Category	Units	Factor
<b>City of Stockton and Cal Water Demand Factors</b>		
Single Family Residential	gpd/ gross acre	2,232
Multi-Family Residential	gpd/ gross acre	4,642
Multi-Family Residential (Downtown)	gpd/ gross acre	13,927
Commercial	gpd/ gross acre	2,053
Industrial	gpd/ gross acre	1,785
<b>City of Stockton Peaking Factors</b>		
Maximum Day Peaking Factor (Maximum Day to Average Day)		1.7
Peak Hour Peaking Factor (Peak Hour to Average Day)		3.5
<b>Cal Water Peaking Factors</b>		
Maximum Day Peaking Factor (Maximum Day to Average Day)		1.8
Peak Hour Peaking Factor (Peak Hour to Average Day)		2.5

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**Table 4. Average Day Demand**

Study Area Name	Water District	Percent Cal Water	Percent City	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
				Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																		
Study Area 1 - Eight Mile Rd Area	No District	0%	100%	38,425	517,995	556,420	39,109	339,673	378,782	36,693	1,238	37,931	7,200	0	7,200	121,427	858,907	980,333
Study Area 2 - Pacific Ave Corridor	California Water	95%	5%	9,689	0	9,689	16,141	21,943	38,084	237,866	7,382	245,248	135	0	135	263,831	29,325	293,157
Study Area 3 - West Ln and Alpine Rd Area	California Water	90%	10%	86,297	115,113	201,409	27,109	138,818	165,926	140,544	12,704	153,248	97,252	0	97,252	351,201	266,634	617,835
Study Area 4 - Port/Waterfront	California Water	100%	0%	17,756	25,082	42,838	39,899	310,294	350,193	21,051	6,040	27,091	79,152	9,920	89,073	157,858	351,336	509,195
Study Area 5 - El Dorado/Center Corridors	California Water	100%	0%	12,357	0	12,357	38,412	132,726	171,138	16,645	3,706	20,351	17,646	0	17,646	85,060	136,432	221,492
Study Area 6 - Miner/Weber Corridors	California Water	100%	0%	9,805	0	9,805	22,438	166,973	189,411	13,401	6,896	20,297	12,795	0	12,795	58,439	173,869	232,308
Study Area 7 - Wilson Way Corridor	California Water	100%	0%	3,679	0	3,679	1,151	31,767	32,918	4,318	10,522	14,840	26,666	0	26,666	35,814	42,289	78,103
Study Area 8 - I-5/Highway 4 Interchange	California Water	100%	0%	2,301	0	2,301	635	176,391	177,027	1,832	1,832	3,664	23,521	0	23,521	28,289	178,224	206,513
Study Area 9 - Railroad Corridor at California St	California Water	100%	0%	5,132	0	5,132	6,207	89,381	95,588	9,816	3,062	12,878	12,478	0	12,478	33,633	92,443	126,076
Study Area 10 - I-5 and Charter Way Area	California Water	100%	0%	95,618	129,215	224,834	18,890	19,551	38,441	54,035	5,258	59,293	8,216	4,859	13,075	176,759	158,883	335,642
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	California Water	100%	0%	630	0	630	0	35,911	35,911	5,930	894	6,824	0	0	0	6,560	36,805	43,365
Study Area 12 - Airport Way Corridor	California Water	80%	20%	16,017	0	16,017	1,634	21,837	23,471	13,974	20,902	34,875	159,884	23,376	183,261	191,510	66,115	257,625
Study Area 13 - Mariposa and Charter Area	California Water	100%	0%	8,800	0	8,800	27,566	0	27,566	11,521	3,180	14,701	0	0	0	47,887	3,180	51,067
Study Area 14 - East Weston Ranch	City of Stockton	0%	100%	2,534	0	2,534	0	0	0	10,151	30,452	40,602	0	0	0	12,685	30,452	43,137
Study Area 15 - South of French Camp Rd	No District	0%	100%	168,856	0	168,856	28,345	0	28,345	0	0	0	116	0	116	197,317	0	197,317
Study Area 16 - E French Camp Rd Area	No District	0%	100%	273,929	0	273,929	42,440	0	42,440	240	0	240	335	0	335	316,944	0	316,944
<b>Subtotal (Study Areas)</b>				<b>751,827</b>	<b>787,406</b>	<b>1,539,233</b>	<b>309,975</b>	<b>1,485,266</b>	<b>1,795,240</b>	<b>578,016</b>	<b>114,067</b>	<b>692,083</b>	<b>445,397</b>	<b>38,156</b>	<b>483,553</b>	<b>2,085,215</b>	<b>2,424,894</b>	<b>4,510,109</b>
<b>Approved/Pending Development Projects Within City Limit</b>																		
Westlake Villages	City of Stockton	0%	100%	0	1,517,661	1,517,661	0	0	0	0	0	0	0	0	0	0	1,517,661	1,517,661
Delta Cove	City of Stockton	0%	100%	0	296,234	296,234	0	220,925	220,925	0	5,298	5,298	0	0	0	0	522,457	522,457
North Stockton Projects III	City of Stockton	0%	100%	84,810	792,309	877,119	0	0	0	0	0	0	0	0	0	84,810	792,309	877,119
Cannery Park	City of Stockton	0%	100%	0	607,065	607,065	0	74,276	74,276	0	213,544	213,544	0	0	0	0	894,885	894,885
Nor Cal Logistics Center	City of Stockton	0%	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	City of Stockton	0%	100%	0	43,298	43,298	0	365,346	365,346	0	0	0	0	0	0	0	408,644	408,644
Sanctuary	City of Stockton	0%	100%	0	2,289,883	2,289,883	0	312,888	312,888	0	72,954	72,954	0	0	0	0	2,675,725	2,675,725
Tidewater Crossing	City of Stockton	0%	100%	1,940,866	-1,940,866	0	0	0	0	0	32,853	32,853	0	0	0	1,940,866	-1,908,013	32,853
Open Window	California Water	100%	0%	0	0	0	0	165,749	165,749	26,491	-2,053	24,437	0	0	0	26,491	163,696	190,186
Weston Ranch Town Center	City of Stockton	0%	100%	0	0	0	0	0	0	0	85,111	85,111	0	0	0	85,111	85,111	85,111
<b>Subtotal (Approved/Pending Development Projects Within City Limit)</b>				<b>2,025,676</b>	<b>3,605,584</b>	<b>5,631,260</b>	<b>0</b>	<b>1,139,184</b>	<b>1,139,184</b>	<b>26,491</b>	<b>407,706</b>	<b>434,197</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,052,167</b>	<b>5,152,474</b>	<b>7,204,641</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																		
Mariposa Lakes	No District	0%	100%	337,010	2,096,381	2,433,392	0	2,715,721	2,715,721	0	307,996	307,996	0	0	0	337,010	5,120,099	5,457,109
Airpark 599	No District	0%	100%	0	0	0	0	0	0	0	262,823	262,823	0	0	0	0	262,823	262,823
Tra Vigne	No District	0%	100%	0	1,889,150	1,889,150	0	0	0	0	0	0	0	0	0	0	1,889,150	1,889,150
<b>Subtotal (Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence)</b>				<b>337,010</b>	<b>3,985,531</b>	<b>4,322,541</b>	<b>0</b>	<b>2,715,721</b>	<b>2,715,721</b>	<b>0</b>	<b>570,819</b>	<b>570,819</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>337,010</b>	<b>7,272,071</b>	<b>7,609,082</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects		50%	50%	30,956,888	2,835,553	33,792,441	8,894,162	0	8,894,162	1,122,394	0	1,122,394	3,184,912	0	3,184,912	44,158,357	2,835,553	46,993,910
<b>Grand Total</b>				<b>34,071,402</b>	<b>11,214,074</b>	<b>45,285,476</b>	<b>9,204,137</b>	<b>5,340,171</b>	<b>14,544,308</b>	<b>1,726,900</b>	<b>1,092,592</b>	<b>2,819,492</b>	<b>3,630,310</b>	<b>38,156</b>	<b>3,668,466</b>	<b>48,632,749</b>	<b>17,684,993</b>	<b>66,317,741</b>
<b>Total Cal Water</b>				<b>15,663,904</b>	<b>1,669,236</b>	<b>17,333,140</b>	<b>4,623,119</b>	<b>1,291,995</b>	<b>5,915,114</b>	<b>1,087,328</b>	<b>74,504</b>	<b>1,161,832</b>	<b>1,981,260</b>	<b>33,481</b>	<b>2,014,741</b>	<b>23,355,611</b>	<b>3,069,215</b>	<b>26,424,826</b>
<b>Total City of Stockton</b>				<b>18,407,498</b>	<b>9,544,838</b>	<b>27,952,336</b>	<b>4,581,018</b>	<b>4,048,176</b>	<b>8,629,194</b>	<b>639,572</b>	<b>1,018,088</b>	<b>1,657,660</b>	<b>1,649,050</b>	<b>4,675</b>	<b>1,653,725</b>	<b>25,277,138</b>	<b>14,615,778</b>	<b>39,892,916</b>

Note: The water demands, analyses, and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

**ATTACHMENT F**

**Table 5. Maximum Day Demand**

Study Area Name	Water District	Percent Cal Water	Percent City	Maximum Day Factor	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
					Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																			
Study Area 1 - Eight Mile Rd Area	No District	0%	100%	1.70	65,322	880,592	945,914	66,485	577,444	643,929	62,378	2,105	64,483	12,241	0	12,241	206,425	1,460,142	1,666,567
Study Area 2 - Pacific Ave Corridor	California Water	95%	5%	1.80	17,393	0	17,393	28,973	39,388	68,361	426,969	13,250	440,219	243	0	243	473,577	52,639	526,216
Study Area 3 - West Ln and Alpine Rd Area	California Water	90%	10%	1.79	154,471	206,051	360,522	48,524	248,484	297,008	251,574	22,739	274,314	174,081	0	174,081	628,650	477,274	1,105,925
Study Area 4 - Port/Waterfront	California Water	100%	0%	1.80	31,961	45,148	77,109	71,818	558,529	630,347	37,891	10,872	48,763	142,474	17,857	160,331	284,144	632,406	916,550
Study Area 5 - El Dorado/Center Corridors	California Water	100%	0%	1.80	22,243	0	22,243	69,141	238,907	308,048	29,961	6,670	36,631	31,762	0	31,762	153,108	245,577	398,685
Study Area 6 - Miner/Weber Corridors	California Water	100%	0%	1.80	17,648	0	17,648	40,389	300,551	340,940	24,121	12,413	36,535	23,032	0	23,032	105,190	312,965	418,155
Study Area 7 - Wilson Way Corridor	California Water	100%	0%	1.80	6,623	0	6,623	2,071	57,181	59,252	7,772	18,939	26,712	47,999	0	47,999	64,465	76,121	140,586
Study Area 8 - I-5/Highway 4 Interchange	California Water	100%	0%	1.80	4,142	0	4,142	1,143	317,505	318,648	3,298	3,298	6,596	42,338	0	42,338	50,921	320,802	371,723
Study Area 9 - Railroad Corridor at California St	California Water	100%	0%	1.80	9,238	0	9,238	11,173	160,885	172,058	17,668	5,512	23,180	22,461	0	22,461	60,540	166,397	226,937
Study Area 10 - I-5 and Charter Way Area	California Water	100%	0%	1.80	172,113	232,588	404,701	34,002	35,191	69,194	97,262	9,465	106,727	14,788	8,746	23,534	318,166	285,990	604,156
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	California Water	100%	0%	1.80	1,134	0	1,134	0	64,640	64,640	10,674	1,609	12,283	0	0	0	11,808	66,249	78,057
Study Area 12 - Airport Way Corridor	California Water	80%	20%	1.78	28,511	0	28,511	2,909	38,871	41,779	24,874	37,205	62,078	284,594	41,610	326,204	340,887	117,685	458,573
Study Area 13 - Mariposa and Charter Area	California Water	100%	0%	1.80	15,840	0	15,840	49,619	0	49,619	20,738	5,723	26,461	0	0	0	86,197	5,723	91,920
Study Area 14 - East Weston Ranch	City of Stockton	0%	100%	1.70	4,309	0	4,309	0	0	0	17,256	51,768	69,023	0	0	0	21,564	51,768	73,332
Study Area 15 - South of French Camp Rd	No District	0%	100%	1.70	287,055	0	287,055	48,186	0	48,186	0	0	0	197	0	197	335,438	0	335,438
Study Area 16 - E French Camp Rd Area	No District	0%	100%	1.70	465,680	0	465,680	72,148	0	72,148	409	0	409	569	0	569	538,805	0	538,805
<b>Subtotal (Study Areas)</b>					<b>1,303,683</b>	<b>1,364,379</b>	<b>2,668,062</b>	<b>546,580</b>	<b>2,637,576</b>	<b>3,184,157</b>	<b>1,032,846</b>	<b>201,569</b>	<b>1,234,415</b>	<b>796,779</b>	<b>68,213</b>	<b>864,992</b>	<b>3,679,889</b>	<b>4,271,738</b>	<b>7,951,626</b>
<b>Approved/Pending Development Projects Within City Limit</b>																			
Westlake Villages	City of Stockton	0%	100%	1.70	0	2,580,024	2,580,024	0	0	0	0	0	0	0	0	0	0	2,580,024	2,580,024
Delta Cove	City of Stockton	0%	100%	1.70	0	503,598	503,598	0	375,573	375,573	0	9,006	9,006	0	0	0	0	888,176	888,176
North Stockton Projects III	City of Stockton	0%	100%	1.70	144,178	1,346,924	1,491,102	0	0	0	0	0	0	0	0	0	144,178	1,346,924	1,491,102
Cannery Park	City of Stockton	0%	100%	1.70	0	1,032,010	1,032,010	0	126,269	126,269	0	363,025	363,025	0	0	0	0	1,521,304	1,521,304
Nor Cal Logistics Center	City of Stockton	0%	100%	1.70	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	City of Stockton	0%	100%	1.70	0	73,607	73,607	0	621,088	621,088	0	0	0	0	0	0	0	694,694	694,694
Sanctuary	City of Stockton	0%	100%	1.70	0	3,892,801	3,892,801	0	531,910	531,910	0	124,022	124,022	0	0	0	0	4,548,733	4,548,733
Tidewater Crossing	City of Stockton	0%	100%	1.70	3,299,472	-3,299,472	0	0	0	0	0	55,850	55,850	0	0	0	3,299,472	-3,243,622	55,850
Open Window	California Water	100%	0%	1.80	0	0	0	0	298,348	298,348	47,683	-3,696	43,987	0	0	0	47,683	294,652	342,335
Weston Ranch Town Center	City of Stockton	0%	100%	1.70	0	0	0	0	0	0	0	144,689	144,689	0	0	0	0	144,689	144,689
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>					<b>3,443,650</b>	<b>6,129,493</b>	<b>9,573,143</b>	<b>0</b>	<b>1,953,188</b>	<b>1,953,188</b>	<b>47,683</b>	<b>692,895</b>	<b>740,578</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,491,333</b>	<b>8,775,576</b>	<b>12,266,909</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																			
Mariposa Lakes	No District	0%	100%	1.70	572,917	3,563,848	4,136,766	0	4,616,726	4,616,726	0	523,593	523,593	0	0	0	572,917	8,704,168	9,277,085
Airpark 599	No District	0%	100%	1.70	0	0	0	0	0	0	0	446,800	446,800	0	0	0	0	446,800	446,800
Tra Vigne	No District	0%	100%	1.70	0	3,211,554	3,211,554	0	0	0	0	0	0	0	0	0	0	3,211,554	3,211,554
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>					<b>572,917</b>	<b>6,775,403</b>	<b>7,348,320</b>	<b>0</b>	<b>4,616,726</b>	<b>4,616,726</b>	<b>0</b>	<b>970,393</b>	<b>970,393</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>572,917</b>	<b>12,362,521</b>	<b>12,935,439</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects		50%	50%	1.75	54,167,524	4,961,574	59,129,098	15,562,764	0	15,562,764	1,963,934	0	1,963,934	5,572,874	0	5,572,874	77,267,095	4,961,574	82,228,669
<b>Grand Total</b>					<b>59,487,773</b>	<b>19,230,849</b>	<b>78,718,622</b>	<b>16,109,345</b>	<b>9,207,490</b>	<b>25,316,835</b>	<b>3,044,463</b>	<b>1,864,857</b>	<b>4,909,320</b>	<b>6,369,653</b>	<b>68,213</b>	<b>6,437,866</b>	<b>85,011,234</b>	<b>30,371,409</b>	<b>115,382,643</b>
<b>Total Cal Water</b>					<b>27,420,042</b>	<b>2,932,701</b>	<b>30,352,743</b>	<b>8,098,917</b>	<b>2,323,888</b>	<b>10,422,805</b>	<b>1,926,513</b>	<b>133,623</b>	<b>2,060,136</b>	<b>3,483,213</b>	<b>59,891</b>	<b>3,543,104</b>	<b>40,928,685</b>	<b>5,450,103</b>	<b>46,378,788</b>
<b>Total City of Stockton</b>					<b>32,067,732</b>	<b>16,298,148</b>	<b>48,365,880</b>	<b>8,010,428</b>	<b>6,883,602</b>	<b>14,894,029</b>	<b>1,117,950</b>	<b>1,731,234</b>	<b>2,849,184</b>	<b>2,886,439</b>	<b>8,322</b>	<b>2,894,761</b>	<b>44,082,549</b>	<b>24,921,306</b>	<b>69,003,855</b>

Note: The water demands, analyses, and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.



## ATTACHMENT F

### Peak Hour Demands by Development Area

The Peak Hour demand estimates are calculated in Table 6. Peak Hour demands are the estimate of the water used by the residents and businesses in the water system service area for the single hour during the year when the demands are the highest. The Peak Hour demands are calculated by multiplying the Average Day Demands by the appropriate peak hour peaking factor. The Peak Hour peaking factor for the COSMUD service area is 3.5. The Peak Hour peaking factor for the Cal Water service area is 2.5. The following Peak Hour demands are calculated for existing, net new, and 2040 demands:

- Peak Hour demand from exiting land uses: 137.3 mgd
- Peak Hour demand from net new land uses: 58.8 mgd
- Peak Hour demand from 2040 land uses: 196.1 mgd

### Demand Projection Estimates by Service Area

Demands within the City are distributed between the service areas for COSMUD and Cal Water. For the existing land uses, the COSMUD service area contains 52 percent of the demands, while the Cal Water service area contains 48 percent of the demands. The ratio is different with the 2040 land uses, with the COSMUD service area containing 61 percent of the demands and the Cal Water service area containing 39 percent of the demands.

The majority of the Study Areas are within the Cal Water Service Area. However, the Eight Mile Study area constitutes about 22 percent of the demands for all of the study areas, and is assigned to the COSMUD Service Area. The majority of the approved or pending development projects within the City limits or outside of the City limits are within the COSMUD Service Area, or are expected to be served by COSMUD. The result of this is that, while the existing demands are split almost evenly between the COSMUD and Cal Water Service Areas, the 2040 land use demands are more skewed to the COSMUD Service Area. Overall, 85 percent of the increases in demands from new development occur within areas that will be served by COSMUD.

As stated above, the demand analyses presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these demand analyses should be refined and updated through detailed evaluations of each specific development project.

**ATTACHMENT F**

**Table 6. Peak Hour Demand**

Study Area Name	Water District	Percent Cal Water	Percent City	Peak Hour Factor	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
					Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																			
Study Area 1 - Eight Mile Rd Area	No District	0%	100%	3.50	134,487	1,812,984	1,947,471	136,880	1,188,856	1,325,736	128,425	4,334	132,759	25,201	0	25,201	424,993	3,006,174	3,431,167
Study Area 2 - Pacific Ave Corridor	California Water	95%	5%	2.55	24,708	0	24,708	41,160	55,956	97,115	606,558	18,824	625,381	345	0	345	672,770	74,779	747,549
Study Area 3 - West Ln and Alpine Rd Area	California Water	90%	10%	2.60	224,371	299,293	523,664	70,482	360,926	431,408	365,415	33,029	398,444	252,855	0	252,855	913,123	693,248	1,606,371
Study Area 4 - Port/Waterfront	California Water	100%	0%	2.50	44,390	62,706	107,095	99,747	775,735	875,482	52,627	15,100	67,727	197,881	24,801	222,682	394,645	878,341	1,272,986
Study Area 5 - El Dorado/Center Corridors	California Water	100%	0%	2.50	30,893	0	30,893	96,030	331,815	427,845	41,613	9,264	50,877	44,114	0	44,114	212,650	341,079	553,729
Study Area 6 - Miner/Weber Corridors	California Water	100%	0%	2.50	24,512	0	24,512	56,095	417,432	473,528	33,502	17,241	50,743	31,989	0	31,989	146,097	434,673	580,771
Study Area 7 - Wilson Way Corridor	California Water	100%	0%	2.50	9,198	0	9,198	2,877	79,418	82,295	10,795	26,305	37,100	66,666	0	66,666	89,535	105,723	195,258
Study Area 8 - I-5/Highway 4 Interchange	California Water	100%	0%	2.50	5,753	0	5,753	1,588	440,979	442,567	4,580	4,580	9,160	58,802	0	58,802	70,724	445,559	516,283
Study Area 9 - Railroad Corridor at California St	California Water	100%	0%	2.50	12,831	0	12,831	15,518	223,451	238,969	24,539	7,656	32,195	31,196	0	31,196	84,083	231,107	315,190
Study Area 10 - I-5 and Charter Way Area	California Water	100%	0%	2.50	239,046	323,038	562,084	47,226	48,877	96,102	135,087	13,146	148,233	20,539	12,148	32,687	441,897	397,209	839,106
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	California Water	100%	0%	2.50	1,575	0	1,575	0	89,777	89,777	14,825	2,235	17,060	0	0	0	16,401	92,012	108,413
Study Area 12 - Airport Way Corridor	California Water	80%	20%	2.70	43,247	0	43,247	4,412	58,961	63,373	37,730	56,434	94,164	431,688	63,116	494,804	517,076	178,512	695,588
Study Area 13 - Mariposa and Charter Area	California Water	100%	0%	2.50	22,000	0	22,000	68,915	0	68,915	28,803	7,949	36,751	0	0	0	119,718	7,949	127,667
Study Area 14 - East Weston Ranch	City of Stockton	0%	100%	3.50	8,871	0	8,871	0	0	0	35,527	106,580	142,107	0	0	0	44,397	106,580	150,978
Study Area 15 - South of French Camp Rd	No District	0%	100%	3.50	590,996	0	590,996	99,206	0	99,206	0	0	0	406	0	406	690,609	0	690,609
Study Area 16 - E French Camp Rd Area	No District	0%	100%	3.50	958,752	0	958,752	148,540	0	148,540	841	0	841	1,172	0	1,172	1,109,305	0	1,109,305
<b>Subtotal (Study Areas)</b>					<b>2,375,630</b>	<b>2,498,021</b>	<b>4,873,651</b>	<b>888,674</b>	<b>4,072,184</b>	<b>4,960,858</b>	<b>1,520,866</b>	<b>322,676</b>	<b>1,843,542</b>	<b>1,162,854</b>	<b>100,065</b>	<b>1,262,919</b>	<b>5,948,024</b>	<b>6,992,946</b>	<b>12,940,970</b>
<b>Approved/Pending Development Projects Within City Limit</b>																			
Westlake Villages	City of Stockton	0%	100%	3.50	0	5,311,815	5,311,815	0	0	0	0	0	0	0	0	0	0	5,311,815	5,311,815
Delta Cove	City of Stockton	0%	100%	3.50	0	1,036,819	1,036,819	0	773,238	773,238	0	18,541	18,541	0	0	0	0	1,828,599	1,828,599
North Stockton Projects III	City of Stockton	0%	100%	3.50	296,837	2,773,080	3,069,917	0	0	0	0	0	0	0	0	0	296,837	2,773,080	3,069,917
Cannery Park	City of Stockton	0%	100%	3.50	0	2,124,726	2,124,726	0	259,966	259,966	0	747,404	747,404	0	0	0	0	3,132,096	3,132,096
Nor Cal Logistics Center	City of Stockton	0%	100%	3.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	City of Stockton	0%	100%	3.50	0	151,543	151,543	0	1,278,710	1,278,710	0	0	0	0	0	0	0	1,430,253	1,430,253
Sanctuary	City of Stockton	0%	100%	3.50	0	8,014,591	8,014,591	0	1,095,109	1,095,109	0	255,339	255,339	0	0	0	0	9,365,039	9,365,039
Tidewater Crossing	City of Stockton	0%	100%	3.50	6,793,030	-6,793,030	0	0	0	0	0	114,985	114,985	0	0	0	6,793,030	-6,678,045	114,985
Open Window	California Water	100%	0%	2.50	0	0	0	0	414,372	414,372	66,227	-5,133	61,093	0	0	0	66,227	409,239	475,465
Weston Ranch Town Center	City of Stockton	0%	100%	3.50	0	0	0	0	0	0	0	297,889	297,889	0	0	0	0	297,889	297,889
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>					<b>7,089,867</b>	<b>12,619,544</b>	<b>19,709,411</b>	<b>0</b>	<b>3,821,395</b>	<b>3,821,395</b>	<b>66,227</b>	<b>1,429,025</b>	<b>1,495,252</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>7,156,093</b>	<b>17,869,964</b>	<b>25,026,058</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																			
Mariposa Lakes	No District	0%	100%	3.50	1,179,535	7,337,335	8,516,870	0	9,505,024	9,505,024	0	1,077,986	1,077,986	0	0	0	1,179,535	17,920,345	19,099,880
Airpark 599	No District	0%	100%	3.50	0	0	0	0	0	0	0	919,881	919,881	0	0	0	0	919,881	919,881
Tra Vigne	No District	0%	100%	3.50	0	6,612,024	6,612,024	0	0	0	0	0	0	0	0	0	0	6,612,024	6,612,024
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>					<b>1,179,535</b>	<b>13,949,358</b>	<b>15,128,894</b>	<b>0</b>	<b>9,505,024</b>	<b>9,505,024</b>	<b>0</b>	<b>1,997,867</b>	<b>1,997,867</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,179,535</b>	<b>25,452,250</b>	<b>26,631,785</b>
<b>Remaining City Outside of Study Areas and Outside of Approved/Pending Projects</b>																			
<b>Grand Total</b>					<b>103,586,003</b>	<b>37,580,022</b>	<b>141,166,025</b>	<b>27,591,361</b>	<b>17,398,603</b>	<b>44,989,964</b>	<b>4,956,822</b>	<b>3,749,569</b>	<b>8,706,391</b>	<b>10,724,824</b>	<b>100,065</b>	<b>10,824,889</b>	<b>137,297,039</b>	<b>58,828,259</b>	<b>196,125,298</b>
Total Cal Water					46,909,612	4,892,323	51,801,935	13,784,759	3,247,017	17,031,776	3,025,097	191,097	3,216,194	5,783,703	87,442	5,871,145	64,743,901	8,417,880	73,161,781
Total City of Stockton					56,676,391	32,687,699	89,364,090	13,806,602	14,151,586	27,958,187	1,931,726	3,558,471	5,490,197	4,941,121	12,623	4,953,744	72,553,138	50,410,379	122,963,518

Note: The water demands, analyses, and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

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### INFRASTRUCTURE EVALUATIONS

The difference in demands that results from the changes in development areas causes changes in the required infrastructure in the Capital Improvement Programs from the WMPs. There are different changes for the COSMUD Service Area and the Cal Water Service Area.

The infrastructure evaluations and conclusions presented below are preliminary. These evaluations and conclusions should be verified through the preparation of updates to the COSMUD and Cal Water WMPs when the GPU process is completed and the final land uses have been adopted.

### COSMUD Infrastructure Evaluation

The decreases in projected demands from the COSMUD WMP, within the COSMUD Service Area, change the infrastructure needs for water storage capacity, pumping facility capacity and distribution pipeline capacity. The projected demands in the COSMUD WMP and for this study are:

- Average Day Demand – 2035 WMP: 98.2 mgd. This study for 2040: 39.9 mgd
- Maximum Day Demand – 2035 WMP: 166.9 mgd. This study for 2040: 69.0 mgd
- Peak Hour Demand – 2035 WMP: 343.7 mgd. This study for 2040: 123.0 mgd

The demands estimated for the 2040 land uses are approximately 60 percent lower than the demands from the COSMUD WMP.

#### Water Storage Capacity

Required storage volume decreases are based on decreased need for operational and emergency storage due to the lower projected demands. Required fire flow storage would not change with the decrease in demands. The operational storage requirement is 25 percent of maximum day demands. The emergency storage requirement is 100 percent of the average day demands.

Based on the COSMUD WMP (based on the 2035 General Plan buildout):

- The current total available storage is 33.7 mg, according to the COSMUD WMP.
- The required total storage at buildout of the 2035 General Plan is 142.9 mg.
- The required new storage is 109.2 mg.

Based on the current GPU 2040 land use demands:

- The current total available storage is 33.7 mg (according to the COSMUD WMP).
- The required total storage for the 2040 development is 58.6 mg.
- The required new storage is 24.9 mg.

Thus, the required new storage for 2040 development is 24.9 mg, which is a reduction of 84.3 mg from the storage needed for buildout of the 2035 General Plan.

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### Pumping Facility Capacity

Sufficient water system pumping capacity should be provided to meet the greater of these two demand conditions:

1. A maximum day demand concurrent with a maximum fire flow event with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity.
2. A peak hour demand with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity,

Given that the peak hour demands are significantly larger than the maximum fire flow demands, the second set of conditions will control the decrease in required pumping facility capacity.

Based on the COSMUD WMP (based on the 2035 General Plan buildout):

- The current total available pumping capacity is 88,592 gpm (according to the COSMUD WMP).
- The required total pumping capacity at buildout of the 2035 General Plan is 238,679 gpm.
- The required new pumping capacity is 150,087 gpm.

Based on the GPU 2040 land use demands:

- The current total available pumping capacity is 88,592 gpm (according to the COSMUD WMP).
- The required total pumping capacity for the 2040 development is 85,416 gpm.
- As the current pumping capacity exceeds the required pumping capacity, no new pumping capacity may be needed. However, pumping capacity may be still needed if the existing booster pumps are not in the correct locations to effectively serve the 2040 development.

Thus, there is potentially no new required pumping capacity for 2040 development (unless additional pumping is needed based on the locations of the new development). This represents a reduction of 150,087 gpm from the pumping capacity needed for buildout of the 2035 General Plan.

### Distribution Pipeline Capacity

The COSMUD distribution system is split into the North and South areas. Each area was evaluated separately regarding the effect of the lower projected demands for the 2040 land uses. The COSMUD WMP does not provide specific projected demands for each study area or development project, which means that direct comparisons of the demands for specific areas are not possible. However, qualitative assessments have been made of the difference in required distribution and transmission pipelines within these areas by comparing the land uses. The areas where significant differences have been identified are discussed below.

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- Within Study Area 1, the Eight Mile Road Area, the 2040 land uses show no new development north of Eight Mile Road. The COSMUD WMP was based on all of this area developing by 2035. It can be assumed that most of the distribution and transmission pipelines within Study Area 1 (north of Eight Mile Road) will not be needed. No specific amount of pipelines or dollar value was identified in the COSMUD WMP for this Study Area.
- Within Study Area 15, the South of French Camp Road Area, the 2040 land uses show this area as Open Space/Agriculture, whereas the 2035 land uses showed this area as Residential Estate. It can be assumed that all of the distribution and transmission pipelines within Study Area 15 shown in the COSMUD WMP will not be needed. No specific amount of pipelines or dollar value was identified in the COSMUD WMP for this Study Area.
- Within Study Area 16, the East of French Camp Road Area, the 2040 land uses show this area as Open Space/Agriculture, whereas the 2035 land uses showed this area as Residential Estate. It can be assumed that all of the distribution and transmission pipelines within Study Area 15 shown in the COSMUD WMP will not be needed. No specific amount of pipelines or dollar value was identified in the COSMUD WMP for this Study Area.
- For the Tra Vigne development project, the 2040 land uses show this area as Residential Estate, whereas the 2035 land uses showed this area with portions of higher density housing land uses. It can be assumed that the lower housing density for the 2040 land uses will result in lower demands. The developed area will not change, meaning that there would be no expected change in the extent of the distribution and transmission pipeline network planned for this area. However, the lower demands could result in smaller diameter pipelines being needed throughout this area.

Other changes in land uses within Study Areas or development areas are not expected to result in significant changes in the required COSMUD distribution or transmission pipelines planned for these areas.

### Cal Water Infrastructure Evaluation

The decrease in projected demands within the Cal Water Service Area change the infrastructure needs for water storage capacity, pumping facility capacity, and distribution pipeline capacity.

- Average Day Demand – 2035 WMP: 35.1 mgd. This study for 2040: 26.4 mgd
- Maximum Day Demand – 2035 WMP: 63.1 mgd. This study for 2040: 46.4 mgd
- Peak Hour Demand – 2035 WMP: 87.7 mgd. This study for 2040: 73.2 mgd

### Water Storage Capacity

Required storage volume decreases are based on decreased need for operational and emergency storage due to the lower projected demands. Required fire flow storage would not change with the decrease in demands. The operational storage requirement is 25 percent of maximum day demands. The emergency storage requirement is 100 percent of the average day demands.

## ATTACHMENT F

Based on the Cal Water WMP (based on the 2035 General Plan buildout):

- The current total available storage is 38.4 mg (according to the Cal Water WMP).
- The required total storage at buildout of the 2035 General Plan is 51.9 mg.
- The required new storage is 13.5 mg.

Based on the current GPU 2040 land use demands:

- The current total available storage is 38.4 mg (according to the Cal Water WMP).
- The required total storage for the 2040 development is 38.9 mg.
- The required new storage is 0.5 mg.

Thus, the required new storage for 2040 development is 0.5 mg, which is a reduction of 13.0 mg from the storage needed for buildout of the 2035 General Plan.

### Pumping Facility Capacity

Sufficient water system pumping capacity should be provided to meet the greater of these two demand conditions:

1. A maximum day demand concurrent with a maximum fire flow event with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity.
2. A peak hour demand with the largest pump at each booster pump station in standby mode with well pumps assumed to operate at firm groundwater pumping capacity.

Given that the peak hour demands are significantly larger than the maximum fire flow demands, the second conditions will control the decrease in required pumping facility capacity.

Based on the Cal Water WMP (based on the 2035 General Plan buildout):

- The current total available pumping capacity is 47,012 gpm (according to the Cal Water WMP).
- The required total pumping capacity at buildout of the 2035 General Plan is 60,937 gpm.
- The required new pumping capacity is 13,925 gpm.

Based on the GPU 2040 land use demands:

- The current total available pumping capacity is 47,012 gpm (according to the Cal Water WMP)
- The required total pumping capacity for the 2040 development is 50,069 gpm
- The required new pumping capacity is 3,057 gpm.

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Thus, the required new pumping capacity for 2040 development is 3,057 gpm, which is a reduction of 10,868 gpm from the pumping capacity needed for buildout of the 2035 General Plan.

### Distribution Pipeline Capacity

The Cal Water distribution system generally covers the downtown area of the City with a well-looped, grid system that provides adequate capacity in the inner downtown area where most of the changes in development are expected to occur. Cal Water has been and will continue to upgrade their distribution system. These upgrades will help Cal Water supply the future water demand. The projects that are included in the Cal Water WMP are expected to be adequately sized to support the 2040 land uses, as there is no change expected in the fire flow demands, and there is relatively little change in the peak hour demands. No changes to the pipeline CIP are expected.

The infrastructure analyses presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these analyses should be refined and updated through detailed evaluations of each specific development project.

### **COST EVALUATIONS BY SERVICE AREA**

Preliminary infrastructure cost estimates for water storage facilities and booster pumping facilities were developed for the COSMUD and Cal Water Service Areas. The cost analyses presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these analyses should be refined and updated through detailed evaluations of each specific development project.

#### **COSMUD**

The COSMUD costs for water storage for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new storage is 109.2 mg, which has an estimated cost of \$166.4 million (based on \$1.52 per gallon of storage).
- The 2040 GPU required new storage is 24.9 mg, which has an estimated cost of \$37.9 million (based on \$1.52 per gallon of storage).
- The reduction in estimated storage costs from 2035 buildout to 2040 development land uses is \$128.5 million.

The COSMUD costs for pumping capacity for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new pumping capacity is 150,087 gpm, which has an estimated cost of \$65.5 million (based on \$303,000 per mgd of pumping capacity).
- The 2040 GPU required new pumping capacity is 0 gpm, which has no cost.
- The reduction in estimated pumping capacity costs from 2035 buildout to 2040 development land uses is \$65.5 million.

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Costs were taken from the COSMUD WMP, which were developed with a July 2008 ENR index of 8293, and then adjusted to current dollars using a December 2016 ENR index of 10530.

The infrastructure evaluation also showed an expected reduction of required pipeline projects within certain study areas. As these pipeline projects are not listed in the COSMUD WMP by the study areas, it is not possible to estimate the amount of reduction in pipeline projects, or the associated costs from the available information.

### Cal Water

The Cal Water costs for water storage for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new storage is 13.5 mg, which has an estimated cost of \$21.5 million (based on \$1.60 per gallon of storage).
- The 2040 GPU required new storage is 0.5 mg, which has an estimated cost of \$0.8 million (based on \$1.60 per gallon of storage).
- The reduction is estimated storage costs from 2035 buildout to 2040 development land uses is \$20.7 million.

The Cal Water costs for pumping capacity for the 2040 land uses are estimated to decrease from the costs for buildout of the 2035 General Plan, as summarized below:

- The 2035 General Plan buildout new pumping capacity is 13,925 gpm, which has an estimated cost of \$9.8 million (based on \$490,000 per mgd of pumping capacity).
- The 2040 GPU required new pumping capacity is 3,057 gpm, which has an estimated cost of \$2.2 million (based on \$490,000 per mgd of pumping capacity).
- The reduction is estimated pumping capacity costs from 2035 buildout to 2040 development land uses is \$7.7 million.

Costs were taken from the Cal Water WMP, which were developed with an ENR CCI of 8549 (20 Cities Average), and then adjusted to current dollars using a December 2016 ENR index of 10530.

### RECOMMENDED FUTURE ACTIONS

The recommended actions to address potable water infrastructure needs are addressed in this section.

#### Water Distribution Systems

The projected land uses for 2040 are different that the buildout land uses from the 2035 General Plan. Consequently, the water infrastructure identified in the previous master plans (City and Cal Water) may no longer be appropriate. This could result in some water infrastructure being undersized, which could lead to inadequate water deliveries or inadequate water pressures. Some water infrastructure could be oversized, which could lead to operational problems and unnecessary infrastructure capital and operation & maintenance expenditures.



## ATTACHMENT F

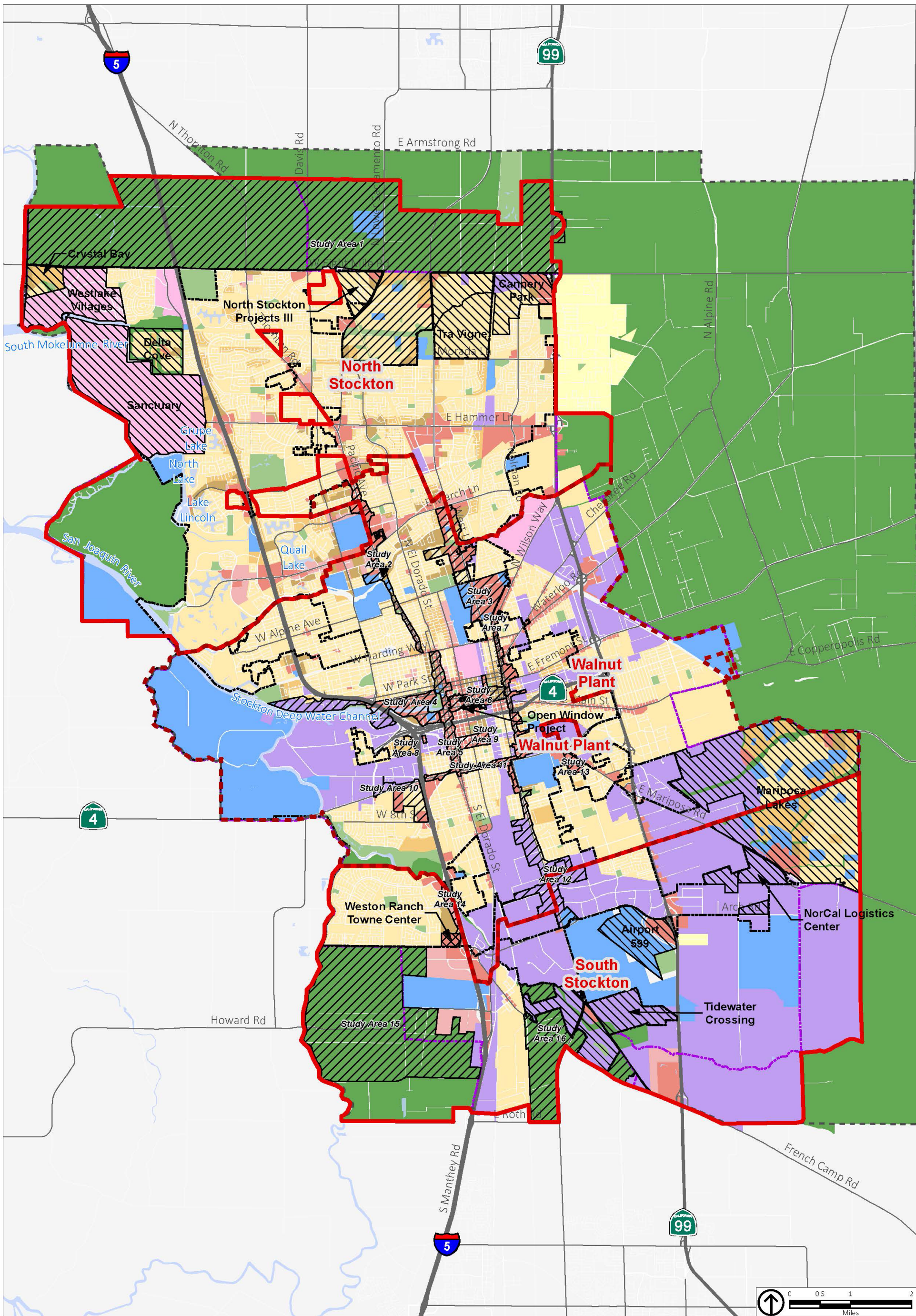
The previous water master plans (City and Cal Water) and associated water system models should be updated based on the 2040 land uses, and appropriately sized infrastructure should be developed and included in the City's and Cal Water's Capital Improvement Plans. The City's and Cal Water's Development Impact Fees should be revised based on the updated water master plans to ensure the City and Cal Water collect enough money to construct the required infrastructure.

### **COSMUD Northern and Southern Systems**

The COSMUD water system includes a northern system and a southern system, essentially separated by the Cal Water system serving the center of the City. Since the completion of the Delta Water Treatment Project, COSMUD operates the two systems essentially as two separate, distinct systems. There is an eastern connection between the two systems, but the connection is kept closed. Evaluating the northern and southern COSMUD systems as if they were operated as a single system would allow the storage and pumping facilities to be evaluated collectively. However, additional studies of the potential benefits and impacts of connecting the north and south systems would need to be prepared.

### **Future Development-Specific Potable Water Improvements**

This TM is a high-level assessment of required potable water facilities for the Study Areas and Approved/Pending Development Projects. These water demands and associated facility requirements are sized based on generalized land use data and preliminary engineering evaluations. These evaluations do not assess specific facilities needed for the Study Areas and Pending/Approved Development Projects. It is difficult to size potable water facilities without knowing the layout of the development and site-specific constraints. As specific developments occur, the specific potable water infrastructure serving the developments should be reviewed and verified using the updated water system models. The required infrastructure should be evaluated and identified as needed for the specific development projects.



Source: City of Stockton, June & August 2017.

- Major Development Areas
- Study Areas
- General Plan Planning Area
- City Limit
- Sphere of Influence
- Cal Water Service Area Boundary
- City of Stockton Water Service Area Boundary

- Residential Estate
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Mixed Use
- Commercial
- Administrative Professional
- Industrial
- Economic and Education Enterprise
- Institutional
- Parks and Recreation
- Open Space/Agriculture

Figure 1  
2017 Preferred 2040 Land Uses  
and Development Areas

ATTACHMENT F

**ATTACHMENT A**

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Land Use Data Received from Placeworks

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Acreage Gross or Net	Study Area Name	Single Family Net New 2040	Single Family Net New 2040	Single Family Net New 2040 + Existing	Single Family Net New 2040 + Existing	Multi Family Net New 2040	Multi Family Net New 2040	Multi Family Net New 2040 + Existing	Multi Family Net New 2040 + Existing	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040 + Existing	Commercial Net New 2040 + Existing	Industrial Net New 2040	Industrial Net New 2040 + Existing
		Units	Acres	Units	Acres	Units	Acres	Units	Acres	Units	Acres	Total Square Feet	0.3 FAR Sq Ft	0.5 FAR Sq Ft	5.0 FAR Sq Ft	0.3 FAR Acres	0.5 FAR Acres	5.0 FAR Acres	Sq Ft	Acres
Gross	Study Area 1 - Eight Mile Rd Area	1,379	646	1,500	663	1,198	209	1,294	217	39,408	39,408	0	0	15	0	0	241,408	20	0	105,400
Net	Study Area 2 - Pacific Ave Corridor	0	0	22	4	110	19	224	22	93,961	93,961	0	0	17	0	0	1,560,846	103	0	1,980
Net	Study Area 3 - West Ln and Alpine Rd Area	77	13	285	52	680	120	774	125	323,399	323,399	0	0	102	0	0	975,325	163	0	1,423,576
Net	Study Area 4 - Port/Waterfront	17	3	71	11	1,770	33	2,058	42	2,040,010	6,100	0	2,033,911	2	0	31	2,865,512	62	580,859	1,739,495
Net	Study Area 5 - El Dorado/Center Corridors	0	0	45	6	1,196	22	1,555	30	1,310,216	0	0	1,310,216	0	0	21	2,158,663	53	0	258,300
Net	Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	0	0	47	4	1,248	22	1,467	27	1,463,025	0	0	1,463,025	0	0	14	2,152,972	33	0	187,300
Net	Study Area 7 - Wilson Way Corridor	0	0	12	2	234	27	240	28	606,716	103,753	0	502,963	19	0	5	1,321,076	65	0	390,342
Net	Study Area 8 - I-5/Highway 4 Interchange	0	0	8	1	659	47	660	48	388,671	0	0	388,671	0	0	4	388,671	4	0	344,300
Net	Study Area 9 - Railroad Corridor at California St	0	0	19	2	1,340	24	1,363	25	1,299,279	0	0	1,299,279	0	0	24	1,365,999	26	0	182,658
Net	Study Area 10 - I-5 and Charter Way Area	86	15	314	58	98	42	127	46	133,864	133,864	0	0	42	0	0	377,363	77	83,678	203,939
Net	Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0	0	5	0	396	15	396	15	323,733	9,597	0	314,135	6	0	7	703,670	38	0	0
Net	Study Area 12 - Airport Way Corridor	0	0	53	7	108	19	112	19	205,461	135,225	70,236	0	14	4	0	272,544	48	1,368,744	3,709,140
Net	Study Area 13 - Mariposa and Charter Area	0	0	12	4	0	0	77	6	80,944	80,944	0	0	25	0	0	93,560	28	0	0
Net	Study Area 14 - East Weston Ranch <sup>(b)</sup>	0	0	1	1	0	0	0	0	430,677	0	430,677	0	0	26	0	430,677	26	0	0
Net	Study Area 15 - South of French Camp Rd	0	0	89	76	0	0	9	6	0	0	0	0	0	0	0	0	0	0	1,700
Net	Study Area 16 - E French Camp Rd Area	0	0	59	123	0	0	4	9	0	0	0	0	0	0	0	5,100	17	0	4,900
Net	Outside of Study Areas <sup>(c)</sup>	1,501	246	77,964	14,117	0	0	33,183	1,916	0	0	0	0	0	0	0	23,811,089	1,607	0	46,620,901
	<b>Grand Total</b>	<b>3,059</b>	<b>923</b>	<b>80,505</b>	<b>15,131</b>	<b>9,036</b>	<b>600</b>	<b>43,542</b>	<b>2,583</b>	<b>8,739,364</b>	<b>926,252</b>	<b>500,913</b>	<b>7,312,200</b>	<b>242</b>	<b>31</b>	<b>105</b>	<b>38,724,475</b>	<b>2,371</b>	<b>2,033,281</b>	<b>55,173,931</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

<sup>(c)</sup> Excludes approved/pending projects.

Acreage Gross or Net	Approved/Pending Projects Details	Net New						Full Build (2040)					
		Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres	Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres
Approved within city limit													
Gross	Westlake Villages	2,630	680	0		0		2,630	680	0		0	
Gross	Delta Cove	1,164	133	381	48	31,000	3	1,164	133	381	48	31,000	2.6
Gross	North Stockton Projects III	2,220	355	0		0		2,455	393	0		0	
Gross	Cannery Park	981	272	210	16	1,078,762	104	981	272	210	16	1,078,762	104
Gross	Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0
Gross	Crystal Bay	951	19	392	79	0		951	19	392	79	0	0
Gross	Sanctuary	5,452	1,026	1,618	67	692,256	36	5,452	1,026	1,618	67	692,256	36
Gross	Tidewater Crossing	-310	-870	0		186,200	16	0	0	0	0	186,200	16
Net	Open Window <sup>(a)</sup>	0	0	1,391	12	-68,800	-1	0	0	1,400	12	290,000	12
Gross	Weston Ranch Town Center	0	0	0	0	481,000	41	0	0	0	0	481,000	41
Approved/pending outside city limit, inside SOI													
Gross	Mariposa Lakes	8,955	939	1,553	585	1,009,503	150	8,960	1,090	1,556	585	1,009,503	150
Gross	Airpark 599	0	0	0	0	1,678,500	128	0	0	0	0	1,678,500	128
Gross	Tra Vigne <sup>(b)</sup>	1,244	846	0	0	0	0	1,244	846	0	0	0	0

<sup>(a)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand the capacity to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.

<sup>(b)</sup> Pending; not approved.

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2040 Development Study Area												
	Net New Single Family Units (full buildout)	Percent applied to 2040	Net New Single Family Units (2040)	Net New Multi-Family Units (full buildout)	Percent applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (full buildout)	Percent applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (full buildout)	Percent applied to 2040	Net New Industrial Square Feet (2040)
Study Area 1 – Eight Mile Rd Area	3,940	35%	1,380	3,420	35%	1,200	197,000	20%	39,000	0	0%	0
Study Area 2 – Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
Study Area 3 – West Ln and Alpine Rd Area	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
Study Area 4 – Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
Study Area 5 – El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
Study Area 6 – Miner/Weber Corridors <sup>(a)</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
Study Area 7 – Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
Study Area 8 – I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
Study Area 9 – Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
Study Area 10 – I-5 and Charter Way Area	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
Study Area 11 – Charter Way/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
Study Area 12 – Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
Study Area 13 – Mariposa and Charter Area	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
Study Area 14 – East Weston Ranch <sup>(b)</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
Study Area 15 – South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Study Area 16 – E French Camp Rd Area	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>(c)</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>(d)</sup></b>	<b>20,480</b>		<b>3,060</b>	<b>48,470</b>		<b>9,040</b>	<b>45,773,000</b>		<b>8,739,000</b>	<b>134,701,000</b>		<b>2,033,000</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

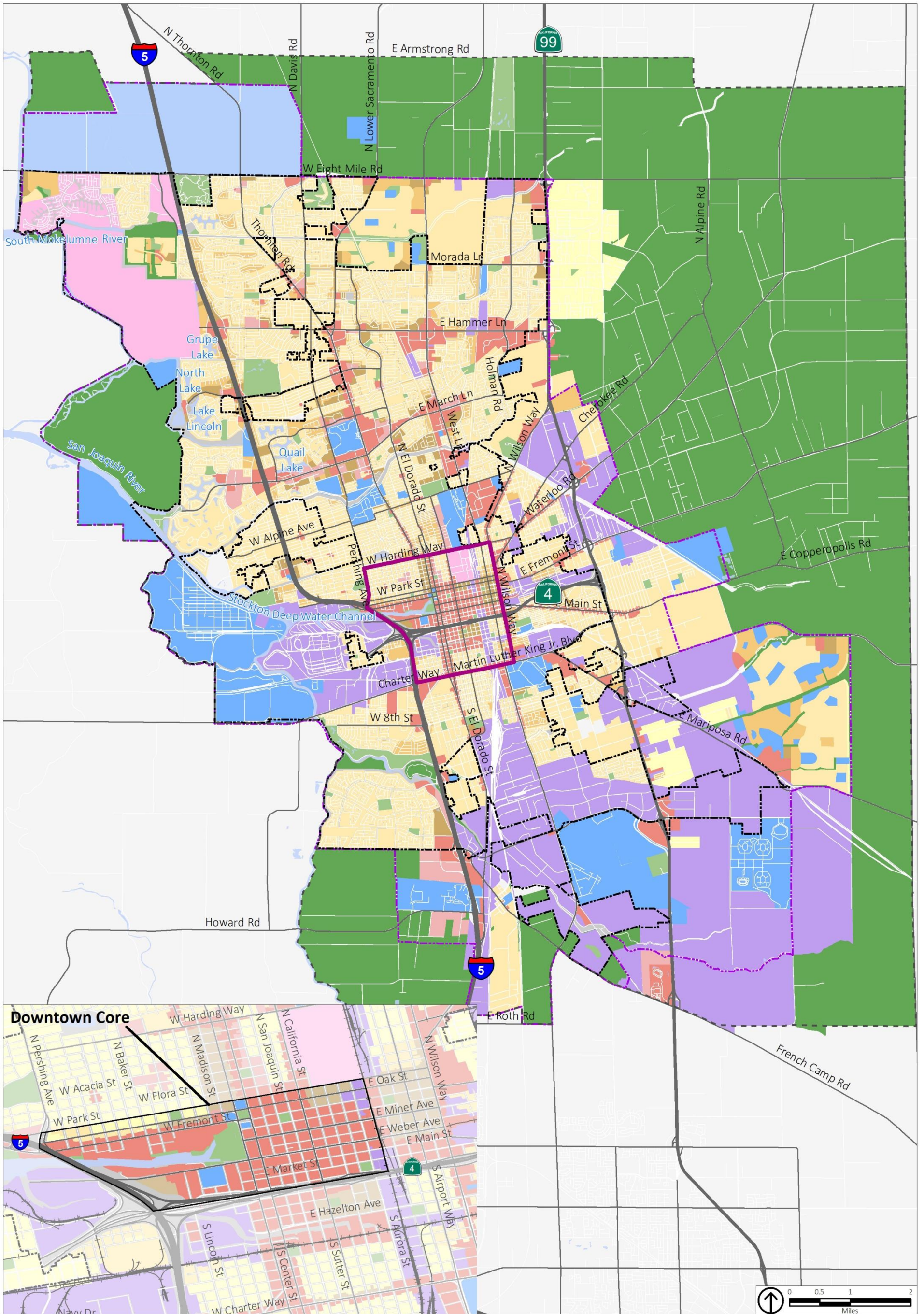
<sup>(c)</sup> Excludes approved/pending projects

<sup>(d)</sup> Numbers do not always add up due to rounding.

The "full buildout" of the proposed General Plan assumes the maximum development of every parcel, combined with approved and pending developments throughout the Planning Area. The 2040 land uses are based on realistic land use demand projections. The full buildout of the General Plan would result in almost three times more new housing units and over 24 times more new non-residential development than estimated for 2040. Therefore, it is extremely unlikely that the full buildout would occur by the year 2040. Full buildout may not occur until well beyond the useful lifespan of the proposed infrastructure (for example, the lifespan of concrete structures is typically 50 to 75 years). Consequently, this infrastructure planning was based on the estimated 2040 level of development. This table is included in this TM to document the relationship between the buildout land uses and the 2040 land uses.

Source: PlaceWorks, 2017.

**Figure 2-8**  
**General Plan Land Use Map**



Source: City of Stockton, 2017; PlaceWorks, 2017.

- |                            |                            |                          |                                   |                        |
|----------------------------|----------------------------|--------------------------|-----------------------------------|------------------------|
| City Limit                 | Residential Estate         | High Density Residential | Administrative Professional       | Institutional          |
| Sphere of Influence        | Low Density Residential    | Mixed Use                | Industrial                        | Parks and Recreation   |
| General Plan Planning Area | Medium Density Residential | Commercial               | Economic and Education Enterprise | Open Space/Agriculture |
| Greater Downtown Boundary  |                            |                          |                                   |                        |

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**ATTACHMENT 2**  
**REVISED SEWER MASTER PLAN SUPPLEMENT**



**TECHNICAL MEMORANDUM**

DATE: December 13, 2017 Project No.: 425-10-16-04.006  
SENT VIA: EMAIL  
TO: City of Stockton, Municipal Utilities Department  
FROM: Jeffrey D. Pelz, PE, RCE #46088  
REVIEWED BY: Douglas T. Moore, PE, RCE #58122  
SUBJECT: Stockton General Plan Update – Sewer Master Plan Supplement

This Technical Memorandum (TM) presents the Sewer Master Plan Supplement for the Stockton General Plan Update (GPU). This TM is based on the 2035 Wastewater Master Plan (2035 WWMP) prepared in 2008, with updated flows using GPU land uses. This TM includes the following Sections:

- Summary
  - Existing Sewer and Wastewater Treatment Facilities
  - Flow Projection Summary by Development Area
  - Flow Projection Summary by System
  - Required New Infrastructure Evaluations Summary
  - Approximate Regional Wastewater Control Facility Flows
  - Infrastructure Cost Evaluation Summary
- Existing Sewer and Wastewater Treatment Facilities
  - Sewer System
  - Regional Wastewater Control Facility
- Wastewater Flow Estimates by Development Area
  - GPU Land Uses by Development Area
  - Wastewater Flow Factors
  - Average Dry Weather Flows by Development Area
  - Peak Hour Wet Weather Flows by Development Area
- Comparison of GPU 2040 and 2035 WWMP Flows and Costs
- Regional Wastewater Control Facility Flows and Costs
- Recommended Future Actions
  - Sewer System
  - Regional Wastewater Control Facility



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The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

### **SUMMARY**

Figure 1 shows the 2040 land uses based on the GPU. Figure 2 shows the City's wastewater sub-collection system boundaries, and Figure 3 show the existing pipelines and pump stations that comprise the wastewater collection systems. The basis of the summary data is presented in the sections following the summary, and the General Plan Update buildout land use map is provided in Attachment A.

### **Existing Sewer and Wastewater Treatment Facilities**

The City's sewer system is shown on Figure 3 and includes approximately 914 miles of gravity sewers and force mains (pressure pipelines) ranging from less than 6-inches to 72-inches in diameter and 28 sewer pump stations<sup>1</sup>. The sewer system generally flows from the north, east, and south to the Stockton Regional Wastewater Control Facility (RWCF), where it is treated and discharged to the San Joaquin River.

### **Flow Projection Summary by Development Area**

The estimated average dry weather flow (ADWF) and peak hour wet weather flow (PHWWF) for the collection system are summarized in Table 1. Based on land use information from the GPU and standard flow factors, the total estimated ADWF used for collection system planning is estimated to increase from about 37 million gallons per day (mgd) for existing land uses to 60 mgd for the 2040 land uses. The total PHWWF used for collection system planning is estimated to increase from about 80 mgd for existing land uses to 132 mgd for the 2040 land uses. The total of all flows used for planning collection system facilities is substantively higher than actual existing flows at the RWCF due to the need for conservative planning of collection system flows to minimize the potential for wastewater overflows.

### **Flow Projection Summary by System**

As described in the 2035 WWMP, the City's sewer system was divided into 10 existing sub-collection systems (Systems 1 through 10) and four future sub-collection systems (Systems 12 through 15). The Systems are shown on Figure 2. Improvements were identified for each of the Systems. In general, the 2040 ADWF for each System is lower than the ADWFs developed for the 2035 WWMP, which were based on buildout of the 2035 General Plan. There are three exceptions where the 2040 flows are higher than those projected in the 2035 WWMP (System 5 – serving the downtown area, System 10, and System 12). No flow from System 15 is anticipated by 2040, and about half the previously planned flow is anticipated in Systems 9, and 13.

<sup>1</sup> City of Stockton Sewer System Management Plan 2016-2020; January 2016, City of Stockton.

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<b>Table 1. Summary of Wastewater Flow Estimates for Collection System Planning</b>			
Land Use	Flow, mgd		
	Existing	Net New	2040
<b>Average Dry Weather Flow</b>			
Study Areas	1.4	3.6	5.1
Approved/Pending Development Projects Within City Limit	0.1	7.1	7.2
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.0	8.3	8.3
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	35.6	3.6	39.1
<b>Total</b>	<b>37.1</b>	<b>22.5</b>	<b>59.7</b>
<b>Peak Hour Wet Weather Flow</b>			
Study Areas	8.3	10.1	18.4
Approved/Pending Development Projects Within City Limit	2.6	18.0	20.6
Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence	0.0	19.0	19.0
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	68.6	5.6	74.2
<b>Total</b>	<b>79.5</b>	<b>52.7</b>	<b>132.1</b>

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### Required New Infrastructure Evaluations Summary

The infrastructure evaluations were developed by:

- Estimating the ADWFs for the GPU 2040 level of development by sewer sub-collection system.
- Comparing the 2040 estimated ADWFs with the ADWFs in the 2035 WWMP, which were based on full buildout the 2035 General Plan.
- Using changes in projected flows for each sub-collection system as an indicator of how costs associated with the required infrastructure needed for the 2040 level of development would compare to the infrastructure identified in the 2035 WWMP, adjusted based on the nature of growth and planned infrastructure for each area.

The improvements anticipated within existing Systems 1, 2, 4, and 7, and future System 12 are not expected to change as a result of the GPU. Improvements needed within the other systems are expected to change as follows:

- System 3: Slightly fewer trunk sewer improvements are likely to be needed as the projected flows are reduced. The Smith Canal Pump Station, which is shared with Systems 2 and 9, will still require capacity upgrades and force main improvements. While the ultimate design flow may be slightly lower, this is unlikely to significantly reduce the cost of the needed improvements.
- System 5: The projected flows are about 30 percent higher, which may affect the size of some future improvements. The future Lincoln Street Pump Station and force main will also need to have a slightly higher capacity than previously planned.
- System 6: Lower projected flows will result in some reduction in future costs for planned upsizing and sewer extensions. The planned pump station needed for the eastern portion of System 6 would be slightly larger.
- System 8: Fewer trunk sewer upsizing projects and extensions into new service area will be needed by 2040 than previously identify for 2035 buildout.
- System 9: Some of the planned trunk sewer extensions into new service area may not be needed, and it is likely that none of the previously identified upsizing projects will be needed by 2040. The future Newton Road Pump Station would be somewhat smaller.
- System 10: Many of the previously identify trunk sewer extension have been constructed, so the projected costs will be lower. System 10 shares the 14-Mile Slough Pump Station with Systems 1, 2 and 15. Due to changes in growth planned for Systems 10 and 15, the 2040 capacity required at 14-Mile Slough Pump Station would be about 65 percent of the previously identified build-out flow. (No flow is anticipated from System 15 by 2040.)

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- System 13: New pipelines and pump stations are required to serve this new service area. 2040 flows are about one half of the previously projected buildout flows, so the size of pump stations and some pipelines improvements will be less. The quantity (and cost) of infrastructure will be related to the size of new service area being added, and to the relative timing of development in the western portion versus the eastern portion. Development to the east in advance of development in the western portion will have disproportionately higher sewer infrastructure improvements due to the need to extend the collection system into the new service area.
- System 14: Most previously anticipated growth will not occur by 2040, and the infrastructure already constructed will not require improvements. The relevant facilities include the Weston Ranch Pump Station and force mains, which are shared with a portion of System 8.
- System 15: System 15 is not expected to require any sewer service by 2040, so no improvements will be needed.

### Approximate Regional Wastewater Control Facility Flows

The three-month average influent flow entering the RWCF is reported to be 27.0 mgd for May through July 2017<sup>2</sup>. The ADWF and Annual Average flow in 2016 were both 29 mgd, and the maximum month and maximum week flow were 37.7 mgd and 42.1 mgd, respectively<sup>3</sup>. These flow records compare to an ADWF of 37 mgd estimated using land uses and flow factors (above). The flow rate of 37 mgd is intended to be relatively high to reduce potential wastewater overflows in the collection system. Also, the lower reported ADWF from 2016 and 2017 reflect significant reductions from water conservation as well as areas counted as “developed” that are not currently occupied. In the absence of City-wide flow monitoring and additional analysis, adjustments to collection system flow projections are not recommended. For treatment plant planning, the City has adopted a predicted ADWF of 40.2 mgd for 2035 and 46.3 mgd for 2045<sup>4</sup>. The actual ADWF at 2040 will vary depending on the pace of development and changes in water conservation activities.

### Infrastructure Cost Evaluation Summary

Costs presented in the 2008 WWMP were adjusted based on the estimated reduction or increase in flow for each sub-collection system. Collection system total project costs associated with growth are predicted to be about \$727 million in 2007 dollars, with an additional \$67 million in 2007 dollars to address existing deficiencies. Costs for improvements at the RWCF through 2040 were not adjusted from the estimate prepared in 2011 for the Capital Improvement and Energy Management Plan, which totaled \$221 million in 2011 dollars. All costs estimates are planning level estimates based on broad assumptions and limited information, and do not necessarily reflect the economic conditions at the time a project is constructed.

<sup>2</sup> Source: State of California CIWQS Data (self-monitoring reports); <http://ciwqs.waterboards.ca.gov>

<sup>3</sup> Source: Stockton RWCF Design Build Project; “Advanced Package 3a & 3b” of the Basis of Design Report; AECOM, October 2017.

<sup>4</sup> Ibid.

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### EXISTING SEWER AND WASTEWATER TREATMENT FACILITIES

These descriptions of the existing sewer system and RWCF are based on the 2035 Wastewater Master Plan (2035 WWMP), which was prepared to identify how to collect and treat the wastewater flows from buildout of the 2035 General Plan. Additionally, these descriptions are updated based on discussions with City staff.

#### Sewer System

As described in the 2035 WWMP, the City's sewer system is divided into 10 existing sub-collection systems (Systems 1 through 10) and four future sub-collection systems (Systems 12 through 15). There is no System 11. A System comprises a relatively large area that is generally tributary to a single major trunk sewer or flow route to the RWCF. System 15 will remain undeveloped at 2040, based on the GPU. The boundaries of the Systems referenced throughout this TM are shown on Figure 2.

The area labeled as System 90 is not served by the City's sewer system. Collection system planning does not incorporate flows from the area as there is no plan to connect it to the City's sewer in the future.

The City's wastewater collection infrastructure is shown on Figure 3. The sewer system generally flows from the north, east, and south toward the RWCF located on Navy Drive adjacent to the San Joaquin River. The City's sewer system, based on GIS mapping includes approximately 30 miles of force mains (pressure sewers) and 884 miles of gravity sewers<sup>5</sup>. The gravity sewers receive flow from approximately 554 miles of services laterals currently in use. The gravity sewers and force mains range in size from less than 6 inches to 72 inches in diameter. There are 28 pump stations (also shown on Figure 3) that range in capacity from 0.46 to 21.6 mgd. The capacity of each pump station is normally expressed in terms of firm capacity, which is the capacity with the largest pump on standby as a backup pump.

The wastewater infrastructure is of various ages and conditions. The City conducts regular inspection, maintenance and repairs to address deterioration and keep the system operational. Maintenance practices for the collection system are documented in the Sewer System Management Plan 2016-2020, prepared by the City in compliance with the requirements of the State Water Resources Control Board (SWRCB) Order No. 2006-003-DWQ, Statewide General Waste Discharge Requirement (WDR), dated May 2, 2006.

#### Regional Wastewater Control Facility

Figure 3 depicts the location of the RWCF in relation to the collection systems. The RWCF is located on the San Joaquin River and consists of the main treatment plant, which has a design ADWF of 48 mgd, and the tertiary treatment plant, which has a designed ADWF and permitted capacity of 55 mgd. The tertiary treatment plant includes approximately 630 acres of facultative oxidation ponds surrounded by distribution canals and groundwater interceptor ditches; an engineered wetland; disinfection facilities; and a river outfall discharge system<sup>6</sup>. Solids are treated by anaerobic digestion,

<sup>5</sup> City of Stockton Sewer System Management Plan 2016-2020; January 2016, City of Stockton.

<sup>6</sup> Ibid.

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dewatered, and disposed of off-site. Effluent is discharged into the San Joaquin River adjacent to the RWCF.

Past and current flows to the RWCF are summarized below:

- 1997 ADWF: 28.4 mgd
- 2000 ADWF: 31.6 mgd
- 2005 ADWF: 35.0 mgd
- 2016 ADWF: 29.0 mgd
- 2017 ADWF (based on May, June, July): 27.0 mgd (a recent decrease in wastewater flows has occurred in many cities in California and is generally attributed to the recent drought, associated mandated water conservation, and the economic recession).

The RWCF discharges treated water to the Sacramento/San Joaquin River Delta in accordance with National Pollutant Discharge Elimination System (NPDES) permit No. CA0079138, State Water Resources Control Board Order R5-2014-0070-03. A major upgrade to the RWCF is currently in design that will improve the headworks and secondary treatment system as part of a long-term plan to address rehabilitation and replacement needs while improving treatment reliability and upgrading to provide the currently permitted capacity of 55 mgd.

### WASTEWATER FLOW ESTIMATES BY DEVELOPMENT AREA

Wastewater flow projections were calculated using two different methodologies. The first was based on summary data tables developed by Placeworks listing the land uses in each GPU Study Area and planned development projects (Development Areas). Projections were also developed for each wastewater collection System, as described later in this TM, to facilitate an update to the 2035 WWMP infrastructure cost analysis.

#### GPU Land Uses by Development Area

The land use data provided by Placeworks is presented in Attachment A (including the buildout land use map, dwelling unit data, acreage data, and 2040 percent development data). The land use data was reorganized to facilitate application of wastewater flow factors. The reorganized data is provided in Table 2, which includes existing land use, net new land use for 2040, and 2040 land use. For single family and multi-family residential land uses, Table 2 includes both dwelling unit data and acreage data. For commercial and industrial land uses, Table 2 includes only acreage data.

#### Wastewater Flow Factors

The 2035 WWMP provided flow factors for both existing land uses (Table 2-10 of the WWMP) and for future land uses (Table 2-11 of the WWMP) for use in estimating flow in the sewer system. Flow factors used for estimating sewer system flows are intentionally conservative, meaning they are intended to result in predicted flows that are higher than the corresponding actual flows, to allow for a range of different flow rates within a land use category. For example, actual commercial flows will generally range from very low for rental storage units to very high for restaurants. To allow for this range of actual flows, conservative (high) flow factors are used for estimating collection system flows in order to reduce the risk of undersized sewers and associated wastewater outflows.

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Table 2. Land Use Data

Study Area or Development Name	Single Family (Dwelling Units)			Single Family (Gross Acres)			Multi Family (Dwelling Units)			Multi Family (Gross Acres)			Commercial (Gross Acres)			Industrial (Gross Acres)			Total Area (Gross Acres)		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>																					
Study Area 1 - Eight Mile Rd Area	121	1,379	1,500	17.2	232.1	249.3	96	1,198	1,294	8.4	73.2	81.6	17.9	0.6	18.5	4.0	0.0	4.0	48	306	353
Study Area 2 - Pacific Ave Corridor	22	0	22	5.8	0.0	5.8	114	110	224	4.3	5.9	10.3	114.9	4.5	119.4	0.1	0.0	0.1	125	10	136
Study Area 3 - West Ln and Alpine Rd Area	208	77	285	51.6	68.8	120.3	94	680	774	7.3	37.4	44.7	66.9	7.7	74.6	68.1	0.0	68.1	194	114	308
Study Area 4 - Port/Waterfront	54	17	71	10.6	15.0	25.6	288	1,770	2,058	10.7	33.4	44.2	9.5	3.7	13.2	55.4	6.9	62.4	86	59	145
Study Area 5 - El Dorado/Center Corridors	45	0	45	7.4	0.0	7.4	359	1,196	1,555	10.3	21.5	31.9	7.7	2.3	9.9	12.4	0.0	12.4	38	24	62
Study Area 6 - Miner/Weber Corridors	47	0	47	5.9	0.0	5.9	219	1,248	1,467	6.0	22.5	28.5	5.7	4.2	9.9	9.0	0.0	9.0	27	27	53
Study Area 7 - Wilson Way Corridor	12	0	12	2.2	0.0	2.2	6	234	240	0.3	8.6	8.9	0.8	6.4	7.2	18.7	0.0	18.7	22	15	37
Study Area 8 - I-5/Highway 4 Interchange	8	0	8	1.4	0.0	1.4	1	659	660	0.2	47.5	47.7	0.7	1.1	1.8	16.5	0.0	16.5	19	49	67
Study Area 9 - Railroad Corridor at California St	19	0	19	3.1	0.0	3.1	23	1,340	1,363	1.7	24.1	25.7	4.4	1.9	6.3	8.7	0.0	8.7	18	26	44
Study Area 10 - I-5 and Charter Way Area	228	86	314	57.1	77.2	134.3	29	98	127	5.1	5.3	10.4	25.7	3.2	28.9	5.8	3.4	9.2	94	89	183
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	5	0	5	0.4	0.0	0.4	0	396	396	0.0	9.7	9.7	2.8	0.5	3.3	0.0	0.0	0.0	3	10	13
Study Area 12 - Airport Way Corridor	53	0	53	9.6	0.0	9.6	4	108	112	0.4	5.9	6.3	4.3	12.7	17.0	111.9	16.4	128.3	126	35	161
Study Area 13 - Mariposa and Charter Area	12	0	12	5.3	0.0	5.3	77	0	77	7.4	0.0	7.4	5.2	1.9	7.2	0.0	0.0	0.0	18	2	20
Study Area 14 - East Weston Ranch	1	0	1	1.5	0.0	1.5	0	0	0	0.0	0.0	0.0	1.2	18.5	19.8	0.0	0.0	0.0	3	19	21
Study Area 15 - South of French Camp Rd	89	0	89	100.9	0.0	100.9	9	0	9	7.6	0.0	7.6	0.0	0.0	0.0	0.1	0.0	0.1	109	0	109
Study Area 16 - E French Camp Rd Area	59	0	59	163.6	0.0	163.6	4	0	4	11.4	0.0	11.4	0.1	0.0	0.1	0.2	0.0	0.2	175	0	175
<b>Subtotal (Study Areas)</b>	<b>983</b>	<b>1,558</b>	<b>2,541</b>	<b>443.4</b>	<b>393.0</b>	<b>836.5</b>	<b>1,323</b>	<b>9,036</b>	<b>10,359</b>	<b>81.4</b>	<b>294.8</b>	<b>376.2</b>	<b>267.8</b>	<b>69.3</b>	<b>337.1</b>	<b>310.8</b>	<b>26.7</b>	<b>337.5</b>	<b>1,103</b>	<b>784</b>	<b>1,887</b>
<b>Approved/Pending Development Projects Within City Limit</b>																					
Westlake Villages	0	2,630	2,630	0.0	680.0	680.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	680	680
Delta Cove	0	1,164	1,164	0.0	132.7	132.7	0	381	381	0.0	47.6	47.6	0.0	2.6	2.6	0.0	0.0	0.0	0	183	183
North Stockton Projects III	235	2,220	2,455	38.0	355.0	393.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38	355	393
Cannery Park	0	981	981	0.0	272.0	272.0	0	210	210	0.0	16.0	16.0	0.0	104.0	104.0	0.0	0.0	0.0	0	392	392
Nor Cal Logistics Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0
Crystal Bay	0	951	951	0.0	19.4	19.4	0	392	392	0.0	78.7	78.7	0.0	0.0	0.0	0.0	0.0	0.0	0	98	98
Sanctuary	0	5,452	5,452	0.0	1,026.0	1,026.0	0	1,618	1,618	0.0	67.4	67.4	0.0	35.5	35.5	0.0	0.0	0.0	0	1,129	1,129
Tidewater Crossing	310	-310	0	869.6	-869.6	0.0	0	0	0	0.0	0.0	0.0	0.0	16.0	16.0	0.0	0.0	0.0	870	-854	16
Open Window	0	0	0	0.0	0.0	0.0	11	1,739	1,750	0.0	14.9	14.9	16.1	-1.3	14.9	0.0	0.0	0.0	16	14	30
Weston Ranch Town Center	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	41.5	41.5	0.0	0.0	0.0	0	41	41
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>545</b>	<b>13,088</b>	<b>13,633</b>	<b>907.6</b>	<b>1,615.5</b>	<b>2,523.1</b>	<b>11</b>	<b>4,340</b>	<b>4,351</b>	<b>0.0</b>	<b>224.6</b>	<b>224.6</b>	<b>16.1</b>	<b>198.3</b>	<b>214.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>924</b>	<b>2,038</b>	<b>2,962</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>																					
Mariposa Lakes	5	8,955	8,960	151.0	939.3	1,090.3	3	1,553	1,556	0.0	585.0	585.0	0.0	150.0	150.0	0.0	0.0	0.0	151	1,674	1,825
Airpark 599	0	0	0	0.0	0.0	0.0	0	0	0	0.0	0.0	0.0	0.0	128.0	128.0	0.0	0.0	0.0	0	128	128
Tra Vigne	0	1,244	1,244	0.0	846.4	846.4	0	0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	846	846
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>5</b>	<b>10,199</b>	<b>10,204</b>	<b>151.0</b>	<b>1,785.7</b>	<b>1,936.7</b>	<b>3</b>	<b>1,553</b>	<b>1,556</b>	<b>0.0</b>	<b>585.0</b>	<b>585.0</b>	<b>0.0</b>	<b>278.0</b>	<b>278.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>151</b>	<b>2,649</b>	<b>2,800</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	76,463	1,501	77,964	18,494	1,694	20,188	33,183	0	33,183	2,395	0	2,395	683	0	683	2,230	0	2,230	23,802	1,694	25,496
<b>Grand Total</b>	<b>77,996</b>	<b>26,346</b>	<b>104,342</b>	<b>19,996</b>	<b>5,488</b>	<b>25,484</b>	<b>34,520</b>	<b>14,929</b>	<b>49,449</b>	<b>2,476</b>	<b>1,104</b>	<b>3,581</b>	<b>967</b>	<b>546</b>	<b>1,513</b>	<b>2,541</b>	<b>27</b>	<b>2,567</b>	<b>25,980</b>	<b>7,165</b>	<b>33,145</b>

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The flow factors used in this GPU wastewater estimate are summarized in Table 3, and include factors for single family residential, multi-family residential, commercial, and industrial for both existing land uses and for future land uses. Flow projected for 2040 is based on both sets of factors, those listed under “Flow Factors for Existing Development Areas” are applied to currently developed areas, and those listed under “Flow Factors for Areas Planned for Future Development” are applied to currently undeveloped areas where growth is planned. A limited number of industries that produce flows well in excess of the flow that would be predicted using the standard flow factors are considered on a case-by-case basis in the 2035 WWMP.

### Average Dry Weather Flows by Development Area

The ADWF estimates for the Development Areas are calculated in Table 4. The ADWFs are calculated by multiplying the land use (in terms of acres or residential dwelling units) by the appropriate flow factor. The following ADWFs are calculated for existing, net new, and 2040 flows using the land use data and flow factors adopted for collection system planning:

- ADWF from exiting land uses: 37.1 mgd
- ADWF from net growth between 2017 and 2040: 22.5 mgd
- ADWF from 2040 land uses: 59.7 mgd

The average of the actual May, June, and July 2017 daily flows entering the RWCF was 27.0 mgd<sup>7</sup>. The ADWF estimated using land use data and flow factors of 37.1 mgd is 37 percent higher than the actual flow into the RWCF. As discussed above, the flow factors used in estimating the ADWFs for sewer system planning and sizing are intentionally conservative (high). It is likely that flows observed in the summer of 2017 reflect substantive residual water conservation efforts that were initiated during the recent drought and continue to result in lower than historical wastewater flows. To the extent such conservation efforts are not permanent, flows from existing users can be expected to rebound to higher values in the future, even in the absence of growth. In addition, it is likely that a portion of the areas identified as “developed” are not fully occupied. Therefore, the ratio of the total of estimated flows used in collection system planning compared to actual current dry weather flow at the treatment plant is appropriate and expected.

<sup>7</sup> California Integrated Water Quality System Project (CIWQS); State of California ([https://www.waterboards.ca.gov/water\\_issues/programs/ciwqs/publicreports.shtml](https://www.waterboards.ca.gov/water_issues/programs/ciwqs/publicreports.shtml)).



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<b>Table 3. Sewer Flow Factors for Existing and Future Development<sup>(a)</sup></b>		
Land Use Category	Flow Factor	Units
Flow Factors for Existing Development Areas from Table 2-10 from City of Stockton 2035 Wastewater Master Plan (West Yost, October 2008)		
Single Family Residential	240	gpd/DU
Multi-Family Residential	5,568	gpd/acre
Commercial	1,100	gpd/acre
Industrial	1,400	gpd/acre
Flow Factors for Areas Planned for Future Development Table 2-11 from City of Stockton 2035 Wastewater Master Plan (West Yost, October 2008)		
Land Use Category	Flow Factor	Units
Single Family Residential	2,100	gpd/acre
Multi-Family Residential	6,800	gpd/acre
Multi-Family Residential (Downtown)	20,400	gpd/acre
Commercial	2,000	gpd/acre
Industrial	3,000	gpd/acre
<sup>(a)</sup> Flow projected for 2040 is based on both sets of factors, those listed under "Flow Factors for Existing Development Areas" are applied to currently developed areas, and those listed under "Flow Factors for Areas Planned for Future Development" are applied to currently undeveloped areas where growth is planned.		

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**Table 4. Average Dry Weather Flows**

Study Area Name	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>															
Study Area 1 - Eight Mile Rd Area	29,040	487,393	516,433	46,908	497,555	544,462	19,657	1,206	20,863	5,646	0	5,646	101,250	986,154	1,087,404
Study Area 2 - Pacific Ave Corridor	5,280	0	5,280	24,200	40,178	64,378	126,441	8,988	135,429	133	0	133	156,053	49,166	205,220
Study Area 3 - West Ln and Alpine Rd Area	49,920	144,416	194,336	40,643	254,176	294,819	73,591	15,467	89,058	95,319	0	95,319	259,473	414,059	673,532
Study Area 4 - Port/Waterfront	12,960	31,467	44,427	59,819	568,150	627,969	10,468	7,354	17,822	77,579	20,835	98,415	160,827	627,806	788,633
Study Area 5 - El Dorado/Center Corridors	10,800	0	10,800	57,590	243,022	300,612	8,421	4,512	12,933	17,295	0	17,295	94,106	247,534	341,640
Study Area 6 - Miner/Weber Corridors	11,280	0	11,280	33,641	305,728	339,369	6,255	8,397	14,652	12,541	0	12,541	63,717	314,125	377,842
Study Area 7 - Wilson Way Corridor	2,880	0	2,880	1,725	58,166	59,891	904	12,811	13,715	26,136	0	26,136	31,645	70,977	102,622
Study Area 8 - I-5/Highway 4 Interchange	1,920	0	1,920	952	322,974	323,926	736	2,231	2,967	23,053	0	23,053	26,662	325,204	351,866
Study Area 9 - Railroad Corridor at California St	4,560	0	4,560	9,306	163,656	172,962	4,848	3,728	8,577	12,230	0	12,230	30,945	167,385	198,329
Study Area 10 - I-5 and Charter Way Area	54,720	162,109	216,829	28,322	35,797	64,119	28,243	6,402	34,646	8,052	10,205	18,258	119,337	214,514	333,851
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	1,200	0	1,200	0	65,753	65,753	3,057	1,088	4,146	0	0	0	4,257	66,842	71,099
Study Area 12 - Airport Way Corridor	12,720	0	12,720	2,450	39,984	42,434	4,687	25,449	30,135	156,707	49,097	205,804	176,564	114,530	291,094
Study Area 13 - Mariposa and Charter Area	2,880	0	2,880	41,329	0	41,329	5,746	3,871	9,617	0	0	0	49,955	3,871	53,826
Study Area 14 - East Weston Ranch	240	0	240	0	0	0	1,359	37,076	38,436	0	0	0	1,599	37,076	38,676
Study Area 15 - South of French Camp Rd	21,360	0	21,360	42,496	0	42,496	0	0	0	114	0	114	63,970	0	63,970
Study Area 16 - E French Camp Rd Area	14,160	0	14,160	63,629	0	63,629	161	0	161	328	0	328	78,278	0	78,278
<b>Subtotal (Study Areas)</b>	<b>235,920</b>	<b>825,385</b>	<b>1,061,305</b>	<b>453,009</b>	<b>2,595,141</b>	<b>3,048,150</b>	<b>294,576</b>	<b>138,580</b>	<b>433,157</b>	<b>435,134</b>	<b>80,138</b>	<b>515,272</b>	<b>1,418,640</b>	<b>3,639,243</b>	<b>5,057,883</b>
<b>Approved/Pending Development Projects Within City Limit</b>															
Westlake Villages	0	1,428,000	1,428,000	0	0	0	0	0	0	0	0	0	0	1,428,000	1,428,000
Delta Cove	0	278,733	278,733	0	323,612	323,612	0	5,160	5,160	0	0	0	0	607,505	607,505
North Stockton Projects III	56,400	745,500	801,900	0	0	0	0	0	0	0	0	0	56,400	745,500	801,900
Cannery Park	0	571,200	571,200	0	108,800	108,800	0	208,000	208,000	0	0	0	0	888,000	888,000
Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	0	40,740	40,740	0	535,160	535,160	0	0	0	0	0	0	0	575,900	575,900
Sanctuary	0	2,154,600	2,154,600	0	458,320	458,320	0	71,060	71,060	0	0	0	0	2,683,980	2,683,980
Tidewater Crossing	74,400	-74,400	0	0	0	0	0	32,000	32,000	0	0	0	74,400	-42,400	32,000
Open Window	0	0	0	0	101,162	101,162	17,739	-1,375	16,364	0	0	0	17,739	99,787	117,527
Weston Ranch Town Center	0	0	0	0	0	0	0	82,902	82,902	0	0	0	0	82,902	82,902
<b>Subtotal (Approved/Pending Development Projects Within City Limit)</b>	<b>130,800</b>	<b>5,144,373</b>	<b>5,275,173</b>	<b>0</b>	<b>1,527,054</b>	<b>1,527,054</b>	<b>17,739</b>	<b>397,747</b>	<b>415,486</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>148,539</b>	<b>7,069,174</b>	<b>7,217,713</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>															
Mariposa Lakes <sup>(a)</sup>	0	1,972,530	1,972,530	0	3,978,000	3,978,000	0	300,000	300,000	0	0	0	0	6,250,530	6,250,530
Airpark 599	0	0	0	0	0	0	0	256,000	256,000	0	0	0	0	256,000	256,000
Tra Vigne	0	1,777,541	1,777,541	0	0	0	0	0	0	0	0	0	0	1,777,541	1,777,541
<b>Subtotal (Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence)</b>	<b>0</b>	<b>3,750,071</b>	<b>3,750,071</b>	<b>0</b>	<b>3,978,000</b>	<b>3,978,000</b>	<b>0</b>	<b>556,000</b>	<b>556,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8,284,071</b>	<b>8,284,071</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	18,351,120	3,557,377	21,908,497	13,334,753	0	13,334,753	751,613	0	751,613	3,121,617	0	3,121,617	35,559,103	3,557,377	39,116,479
<b>Grand Total</b>	<b>18,717,840</b>	<b>13,277,205</b>	<b>31,995,045</b>	<b>13,787,762</b>	<b>8,100,195</b>	<b>21,887,957</b>	<b>1,063,929</b>	<b>1,092,327</b>	<b>2,156,255</b>	<b>3,556,751</b>	<b>80,138</b>	<b>3,636,889</b>	<b>37,126,282</b>	<b>22,549,865</b>	<b>59,676,147</b>

<sup>(a)</sup> Small amount of existing development accounts for zero flow since the collection system is not yet constructed.

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### Peak Hour Wet Weather Flows by Development Area

The Peak Hour Wet Weather Flows estimates (PHWWFs) for sewer design purposes are the sum of the ADWF and the Infiltration and Inflow (I&I) multiplied by a peaking factor<sup>8</sup>.

- Derivation of ADWF was discussed above.
- I&I accounts for rainfall and groundwater that enters the sewer systems during storm events. The I&I is estimated by multiplying the land use area by the I&I factor (400 gallons per day per acre). The estimated I&I flows are presented in Table 5.
- The peaking factor is multiplied by the sum of the ADWF and I&I flows. The peaking factor accounts for variations in the flow during the daily cycle of activity. For example, on weekdays, the residential ADWFs are typically highest in the morning as people wake up and getting ready to go to work. Commercial and industrial ADWFs are often highest in the day time when many people are at work. The peaking factor accounts for the variation in flows during the daily cycle and the aggregate effect of differences in flow patterns from different land uses. The peaking factor is dependent on the total ADWF, and as the ADWF increases, the peaking factor decreases. Peaking factors are calculated in Table 6 using the equations from the City's design standards and reported on page 2-19 of the 2035 WWMP. The maximum allowed peaking factor is 5.0. Where a study area comprises multiple independent sewer sub-sheds, the listed aggregate peaking factor is lower than the peaking factor that would be applied to individual sub-sheds.
- The PHWWF presented in Table 7 is calculated by multiplying the peaking factor by the sum of the ADWF and I&I flows for the existing land uses and for the 2040 land uses. The net new PHWWFs are the difference between the 2040 values and the existing values. These PHWWFs are used to size sewer system pipelines and pump stations.

A more thorough flow study and calibrated model would be needed for a more reliable estimate of PHWWFs based on historical flow patterns and I&I measurements throughout the collection system. The City has projected that the PHWWF at the RWCF will be 104.5 mgd in 2035 and 120.5 mgd in 2045<sup>9</sup>. Assuming linear growth from 2035 to 2045, the corresponding PHWWF for 2040 would be 112.5 mgd.

As stated above, the flow estimates presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these flow estimates should be refined and updated through detailed evaluations of each specific development project.

<sup>8</sup> Standard Drawing No. S-1, City of Stockton, 2016.  
([http://www.stocktongov.com/files/Standard\\_Drawings\\_2016.pdf](http://www.stocktongov.com/files/Standard_Drawings_2016.pdf))

<sup>9</sup> Source: Stockton RWCF Design Build Project; "Advanced Package 3a & 3b" of the Basis of Design Report; AECOM, October 2017.

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Table 5. Infiltration and Inflow

Study Area Name	Single Family, gpd			Multi Family, gpd			Commercial, gpd			Industrial, gpd			Total, gpd		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>															
Study Area 1 - Eight Mile Rd Area	6,887	92,837	99,723	3,370	29,268	32,638	7,148	241	7,389	1,613	0	1,613	19,018	122,346	141,363
Study Area 2 - Pacific Ave Corridor	2,315	0	2,315	1,738	2,363	4,102	45,979	1,798	47,776	38	0	38	50,070	4,161	54,231
Study Area 3 - West Ln and Alpine Rd Area	20,622	27,508	48,130	2,920	14,952	17,871	26,760	3,093	29,854	27,234	0	27,234	77,536	45,553	123,089
Study Area 4 - Port/Waterfront	4,243	5,994	10,237	4,297	13,368	17,666	3,807	1,471	5,277	22,166	2,778	24,944	34,513	23,611	58,123
Study Area 5 - El Dorado/Center Corridors	2,953	0	2,953	4,137	8,612	12,749	3,062	902	3,964	4,941	0	4,941	15,094	9,514	24,608
Study Area 6 - Miner/Weber Corridors	2,343	0	2,343	2,417	8,992	11,409	2,275	1,679	3,954	3,583	0	3,583	10,618	10,671	21,289
Study Area 7 - Wilson Way Corridor	879	0	879	124	3,422	3,545	329	2,562	2,891	7,468	0	7,468	8,799	5,984	14,783
Study Area 8 - I-5/Highway 4 Interchange	550	0	550	68	18,998	19,067	268	446	714	6,587	0	6,587	7,473	19,445	26,917
Study Area 9 - Railroad Corridor at California St	1,226	0	1,226	669	9,627	10,295	1,763	746	2,509	3,494	0	3,494	7,152	10,373	17,525
Study Area 10 - I-5 and Charter Way Area	22,849	30,878	53,727	2,035	2,106	4,140	10,270	1,280	11,551	2,301	1,361	3,661	37,455	35,625	73,080
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	151	0	151	0	3,868	3,868	1,112	218	1,329	0	0	0	1,262	4,086	5,348
Study Area 12 - Airport Way Corridor	3,828	0	3,828	176	2,352	2,528	1,704	5,090	6,794	44,773	6,546	51,320	50,481	13,988	64,469
Study Area 13 - Mariposa and Charter Area	2,103	0	2,103	2,969	0	2,969	2,090	774	2,864	0	0	0	7,161	774	7,936
Study Area 14 - East Weston Ranch	606	0	606	0	0	0	494	7,415	7,910	0	0	0	1,100	7,415	8,515
Study Area 15 - South of French Camp Rd	40,351	0	40,351	3,053	0	3,053	0	0	0	33	0	33	43,436	0	43,436
Study Area 16 - E French Camp Rd Area	65,459	0	65,459	4,571	0	4,571	59	0	59	94	0	94	70,183	0	70,183
<b>Subtotal (Study Areas)</b>	<b>177,364</b>	<b>157,216</b>	<b>334,580</b>	<b>32,544</b>	<b>117,927</b>	<b>150,471</b>	<b>107,119</b>	<b>27,716</b>	<b>134,835</b>	<b>124,324</b>	<b>10,685</b>	<b>135,009</b>	<b>441,351</b>	<b>313,544</b>	<b>754,895</b>
<b>Approved/Pending Development Projects Within City Limit</b>															
Westlake Villages	0	272,000	272,000	0	0	0	0	0	0	0	0	0	0	272,000	272,000
Delta Cove	0	53,092	53,092	0	19,036	19,036	0	1,032	1,032	0	0	0	0	73,160	73,160
North Stockton Projects III	15,200	142,000	157,200	0	0	0	0	0	0	0	0	0	15,200	142,000	157,200
Cannery Park	0	108,800	108,800	0	6,400	6,400	0	41,600	41,600	0	0	0	0	156,800	156,800
Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crystal Bay	0	7,760	7,760	0	31,480	31,480	0	0	0	0	0	0	0	39,240	39,240
Sanctuary	0	410,400	410,400	0	26,960	26,960	0	14,212	14,212	0	0	0	0	451,572	451,572
Tidewater Crossing	347,848	-347,848	0	0	0	0	0	6,400	6,400	0	0	0	347,848	-341,448	6,400
Open Window	0	0	0	0	5,951	5,951	6,451	-500	5,951	0	0	0	6,451	5,451	11,901
Weston Ranch Town Center	0	0	0	0	0	0	0	16,580	16,580	0	0	0	0	16,580	16,580
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>363,048</b>	<b>646,204</b>	<b>1,009,252</b>	<b>0</b>	<b>89,827</b>	<b>89,827</b>	<b>6,451</b>	<b>79,324</b>	<b>85,775</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>369,499</b>	<b>815,355</b>	<b>1,184,854</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>															
Mariposa Lakes	60,400	375,720	436,120	0	234,000	234,000	0	60,000	60,000	0	0	0	60,400	669,720	730,120
Airpark 599	0	0	0	0	0	0	0	51,200	51,200	0	0	0	0	51,200	51,200
Tra Vigne	0	338,579	338,579	0	0	0	0	0	0	0	0	0	0	338,579	338,579
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>60,400</b>	<b>714,299</b>	<b>774,699</b>	<b>0</b>	<b>234,000</b>	<b>234,000</b>	<b>0</b>	<b>111,200</b>	<b>111,200</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60,400</b>	<b>1,059,499</b>	<b>1,119,899</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects	7,397,586	677,596	8,075,182	957,956	0	957,956	273,314	0	273,314	891,891	0	891,891	9,520,747	677,596	10,198,343
<b>Grand Total</b>	<b>7,998,399</b>	<b>2,195,315</b>	<b>10,193,714</b>	<b>990,500</b>	<b>441,754</b>	<b>1,432,254</b>	<b>386,883</b>	<b>218,240</b>	<b>605,123</b>	<b>1,016,215</b>	<b>10,685</b>	<b>1,026,900</b>	<b>10,391,997</b>	<b>2,865,994</b>	<b>13,257,991</b>

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<b>Table 6. Peaking Factors</b>		
Study Area Name	Peaking Factor	
	<i>Existing</i>	<i>2040</i>
<b>Study Areas</b>		
Study Area 1 - Eight Mile Rd Area	5.0	2.5
Study Area 2 - Pacific Ave Corridor	4.3	3.9
Study Area 3 - West Ln and Alpine Rd Area	3.6	2.7
Study Area 4 - Port/Waterfront	4.2	2.6
Study Area 5 - El Dorado/Center Corridors	5.0	3.3
Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	5.0	3.2
Study Area 7 - Wilson Way Corridor	5.0	4.9
Study Area 8 - I-5/Highway 4 Interchange	5.0	3.3
Study Area 9 - Railroad Corridor at California St	5.0	4.0
Study Area 10 - I-5 and Charter Way Area	4.7	3.3
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	5.0	5.0
Study Area 12 - Airport Way Corridor	4.1	3.5
Study Area 13 - Mariposa and Charter Area	5.0	5.0
Study Area 14 - East Weston Ranch <sup>(b)</sup>	5.0	5.0
Study Area 15 - South of French Camp Rd	5.0	5.0
Study Area 16 - E French Camp Rd Area	5.0	5.0
<b>Approved/Pending Development Projects Within City Limit</b>		
Westlake Villages	0.0	2.3
Delta Cove	0.0	2.8
North Stockton Projects III	5.0	2.6
Cannery Park	0.0	2.6
Nor Cal Logistics Center	0.0	0.0
Crystal Bay	0.0	2.8
Sanctuary	0.0	2.1
Tidewater Crossing	5.0	5.0
Open Window <sup>(a)</sup>	5.0	4.7
Weston Ranch Town Center	0.0	5.0
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>		
Mariposa Lakes	0.0	1.9
Airpark 599	0.0	3.6
Tra Vigne <sup>(b)</sup>	0.0	2.2
<b>Remaining City Outside of Study Areas and Outside of Approved/Pending Project</b>	1.5	1.5
<b>RWCF</b>	1.5	1.4
Note: A peaking factor of 0.0 is used for development areas with no existing wastewater flow. <sup>(a)</sup> Peaking factors based on City of Stockton 2016 Standard Drawing No. S-1. <sup>(b)</sup> As flows combine with flows from onther areas, the applicable peaking factor will be lower than listed.		

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### COMPARISON OF GPU 2040 AND 2035 WWMP FLOWS AND COSTS

Wastewater collection infrastructure improvements were grouped by the numbered collection Systems identified in the 2035 WWMP. In order to assess potential changes to the planned facilities resulting from the GPU, it is useful to evaluate the change in projected flows for each System.

A summary of the ADWFs for the current GPU evaluations (2040 ADWF estimates, representing partial build-out) and the 2035 WWMP evaluation (2035 General Plan buildout) is provided in Table 8. As shown, there are significant differences between the 2040 projection and the 2035 WWMP buildout ADWFs. Some of the changes can be attributed to updated land use data and differing flow calculation methodologies, but they provide a reliable indication of the magnitude of differences associated with the new planning horizon and General Plan land use diagram. These differences potentially result in changes to the previously planned sewer system improvements. The changes are discussed in the following paragraphs by System. Costs are planning level estimates of construction cost without contingencies based on Table 8-2 of the 2035 WWMP. The adjusted costs applying the following changes are provided in Table 9:

- System 1: In this System, the change in ADWF is a decrease of 0.1 mgd out of a 2035 WWMP estimated flow of 3.0 mgd (a decrease of 3.0 percent). This small change results in no significant change in the planned sewer system infrastructure for this shed. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 2: In this System, the change in ADWF is a decrease of 1.1 mgd out of a 2035 WWMP estimated flow of 13.6 mgd (a decrease of 7.8 percent). This small change results in no significant change in the planned sewer system infrastructure for this shed. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 3: In this System, the change in ADWF is a decrease of 3.0 mgd out of a 2035 WWMP estimated flow of 10.3 mgd (a decrease of 29 percent). A significant portion of the apparent decrease in projected flow appears to be associated with a revision to the existing conditions land use data. Nevertheless, this change will likely result in a reduction of the planned sewer system improvements, including:
  - Trunk Sewers: All pipeline improvements comprised upsizing of existing pipelines. Approximately 20 percent of the previously estimated cost was associated with existing deficiencies. Based on the reduced estimate of existing flows, a relatively small reduction (10 percent) in the projected trunk sewer costs for this System is warranted.
  - Pump Stations: System 3 shares a major pumping facility with Systems 2 and 9, the Smith Canal Pump Station, which will require major upgrades in the future. One additional small pump station, Kirk and Del Rio (County) Pump Station, is also expected to require upgrades and eventual replacement to accommodate growth. Any change in cost to planned improvements at these pumping facilities attributable to changes in System 3 is expected to be minor and a change in the planning level estimate of costs is not warranted.

The costs associated with System 3 exclude the cost of improvements to Smith Canal Pump Station, which are accounted for separately as a shared facility, below.

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Table 7. Peak Hour Wet Weather Flow

Study Area Name	Single Family, gpd		Multi Family, gpd		Commercial, gpd		Industrial, gpd		Total, gpd		
	Existing	2040	Existing	2040	Existing	2040	Existing	2040	Existing	Net New	2040
<b>Study Areas</b>											
Study Area 1 - Eight Mile Rd Area	178,413	1,512,761	249,680	1,416,872	133,116	69,365	36,048	17,822	597,257	2,419,562	3,016,820
Study Area 2 - Pacific Ave Corridor	32,588	29,707	111,288	267,837	739,769	716,544	731	667	884,377	130,377	1,014,754
Study Area 3 - West Ln and Alpine Rd Area	254,870	660,183	157,394	851,391	362,574	323,773	442,788	333,687	1,217,626	951,408	2,169,034
Study Area 4 - Port/Waterfront	73,062	143,852	272,306	1,699,033	60,627	60,789	423,620	324,626	829,615	1,398,686	2,228,300
Study Area 5 - El Dorado/Center Corridors	68,765	45,278	308,635	1,031,654	57,415	55,629	111,183	73,208	545,997	659,771	1,205,769
Study Area 6 - Miner/Weber Corridors	68,115	43,349	180,287	1,116,186	42,651	59,205	80,622	51,308	371,675	898,374	1,270,048
Study Area 7 - Wilson Way Corridor	18,796	18,584	9,245	313,600	6,164	82,092	168,019	166,121	202,224	378,172	580,396
Study Area 8 - I-5/Highway 4 Interchange	12,350	8,051	5,103	1,118,008	5,019	11,997	148,201	96,614	170,673	1,063,998	1,234,670
Study Area 9 - Railroad Corridor at California St	28,932	22,894	49,873	725,072	33,057	43,861	78,623	62,216	190,485	663,557	854,042
Study Area 10 - I-5 and Charter Way Area	364,398	897,701	142,604	226,484	180,925	153,279	48,636	72,727	736,562	613,628	1,350,190
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	6,753	6,753	0	348,105	20,844	27,374	0	0	27,597	354,635	382,232
Study Area 12 - Airport Way Corridor	68,095	57,508	10,806	156,257	26,300	128,341	829,117	893,582	934,318	301,370	1,235,688
Study Area 13 - Mariposa and Charter Area	24,915	24,915	221,488	221,488	39,179	62,406	0	0	285,582	23,228	308,809
Study Area 14 - East Weston Ranch	4,228	4,228	0	0	9,269	231,726	0	0	13,497	222,457	235,954
Study Area 15 - South of French Camp Rd	308,553	308,553	227,745	227,745	0	0	732	732	537,030	0	537,030
Study Area 16 - E French Camp Rd Area	398,096	398,096	341,000	341,000	1,098	1,098	2,109	2,109	742,303	0	742,303
Subtotal (Study Areas)	1,910,929	4,182,412	2,287,455	10,060,733	1,718,006	2,027,478	2,370,429	2,095,417	8,286,818	10,079,222	18,366,041
<b>Approved/Pending Development Projects Within City Limit</b>											
Westlake Villages	0	3,935,207	0	0	0	0			0	3,935,207	3,935,207
Delta Cove	0	923,852	0	953,985	0	17,239			0	1,895,076	1,895,076
North Stockton Projects III	358,000	2,514,861	0	0	0	0			358,000	2,156,861	2,514,861
Cannery Park	0	1,744,182	0	295,485	0	640,217			0	2,679,884	2,679,884
Nor Cal Logistics Center	0	0	0	0	0	0			0	0	0
Crystal Bay	0	136,599	0	1,595,924	0	0			0	1,732,523	1,732,523
Sanctuary	0	5,378,573	0	1,017,588	0	178,808			0	6,574,969	6,574,969
Tidewater Crossing	2,111,240	0	0	0	0	192,000			2,111,240	-1,919,240	192,000
Open Window	0	0	0	505,792	120,951	105,373			120,951	490,214	611,165
Weston Ranch Town Center	0	0	0	0	0	497,410			0	497,410	497,410
Subtotal (Approved/Pending Projects Within City Limit)	2,469,240	14,633,274	0	4,368,774	120,951	1,631,047	0	0	2,590,191	18,042,904	20,633,095
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>											
Mariposa Lakes	0	4,548,083	0	7,953,220	0	679,762			0	13,181,066	13,181,066
Airpark 599	0	0	0	0	0	1,114,992			0	1,114,992	1,114,992
Tra Vigne	0	4,672,178	0	0	0	0			0	4,672,178	4,672,178
Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)	0	9,220,260	0	7,953,220	0	1,794,754	0	0	0	18,968,235	18,968,235
<b>Remaining City Outside of Study Areas and Outside of Approved/Pending Projects</b>	39,190,957	45,100,427	21,754,295	21,498,606	1,559,995	1,541,659	6,108,780	6,036,981	68,614,027	5,563,646	74,177,673
<b>Estimated Total at RWCF</b>									<b>71,939,687</b>	<b>32,167,306</b>	<b>104,106,993</b>

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**Table 8. Summary of Flows by Sewer Shed**

Collection System	Current General Plan Update Evaluation	2035 WWMP Evaluation	Change in Estimated ADFW for 2040 versus 2035 Buildout	Change as a percent of the Estimated 2035 Buildout Flow <sup>(a)</sup>
	Estimated 2040 ADFW	Estimated 2035 Buildout ADFW		
1	2.9	3.0	(0.1)	-3.0%
2	12.6	13.6	(1.1)	-7.8%
3	7.3	10.3	(3.0)	-29.1%
4	2.4	2.5	(0.12)	-4.9%
5	3.7	2.8	0.91	32.6%
6	5.6	8.0	(2.5)	-30.6%
7	6.2	8.8	(2.6)	-29.2%
8	14.6	22.7	(8.0)	-35.5%
9	3.2	7.0	(3.7)	-53.4%
10	16.9	16.2	0.79	4.9%
12	10.4	9.7	0.69	7.1%
13	7.7	15.3	(7.6)	-49.8%
14	0.9	10.5	(9.6)	-91.4%
15 <sup>(b)</sup>	-	24.1	(24.1)	-100.0%

<sup>(a)</sup> Reductions or increases in predicted future flows do not change the analysis of existing flows and capacities. The analysis of existing pipes identified in the 2008 Master Plan with potential existing limitations has not changed as a result of changes in future development assumptions.

<sup>(b)</sup> System 15 will remain unserved at 2040.



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Table 9. GPU Planning-Level Estimate of Collection System Cost for 2040					
Improvements	Existing Deficiencies <sup>(a)</sup>		Growth Related Budget Costs, dollars	Buildout	
	Comments	Budget Costs, dollars		Comments	Budget Costs, dollars
<b>COLLECTION SYSTEM 1 FACILITIES</b>					
Improvements to Existing Gravity Sewers		\$ 138,000	\$ -		\$ 138,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Pump Stations					
<i>Plymouth &amp; 5 Mile Cr. P.S.</i>	Construct new pump station with required additional capacity	\$ 573,000	\$ 66,000	Construct new pump station with required additional capacity	\$ 639,000
<i>Cumberland &amp; 5 Mile Cr. P.S.</i>	No Upgrade	\$ -	\$ -	No Upgrade	\$ -
Subtotals		\$ 711,000	\$ 66,000		\$ 777,000
<b>COLLECTION SYSTEM 2 FACILITIES</b>					
Existing Gravity Sewers		\$ 9,962,000	\$ 3,886,000		\$ 13,848,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Force Mains					
<i>Thornton &amp; Davis P.S. FM</i>		\$ 14,000	\$ -		\$ 14,000
Pump Stations					
<i>Kelly &amp; Mosher P.S.</i>	Replace pumps and controls	\$ 645,000	\$ -	Replace pumps and controls	\$ 645,000
<i>Thornton &amp; Davis P.S. (Stonewood)</i>	Construct new pump station with required additional capacity	\$ 847,000	\$ 154,000	Construct new pump station with required additional capacity	\$ 1,001,000
<i>Don Ave. &amp; Santiago L.S.</i>	Construct new pump station with required additional capacity	\$ 1,003,000	\$ 116,000	Construct new pump station with required additional capacity	\$ 1,119,000
<i>Swenson &amp; 5 Mile Cr. P.S. (North P.S.)</i>	Replace pumps and controls	\$ 5,155,000	\$ 839,000	Replace pumps and controls	\$ 5,994,000
<i>Blossom Ranch P.S.</i>	Replace pumps and controls	\$ 183,000	\$ 91,000	Replace pumps and controls	\$ 274,000
<i>Camanche P.S.</i>	Replace pumps and controls	\$ 467,000	\$ 321,000	Construct new pump station with required additional capacity	\$ 788,000
<i>Alexandria &amp; 14 Mile Sl. P.S. (Quail Lake)</i>	Replace pumps and controls	\$ 386,000	\$ 36,000	Replace pumps and controls	\$ 422,000
<i>March-Brookside &amp; I-5 P.S.</i>	No Upgrade. Monitor actual run-times and/or flows	\$ 25,000	\$ 199,000	Replace pumps and controls	\$ 224,000
Subtotals		\$ 18,687,000	\$ 5,642,000		\$ 24,329,000
<b>COLLECTION SYSTEM 3 FACILITIES</b>					
Existing Gravity Sewers		\$ 9,221,000	\$ 39,929,000		\$ 49,150,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Pump Stations					
<i>Kirk &amp; Del Rio (County P.S.)</i>	Replace pumps and controls	\$ 291,000	\$ 700,000	Construct new pump station with required additional capacity	\$ 991,000
Subtotals		\$ 9,512,000	\$ 40,629,000		\$ 50,141,000
<b>COLLECTION SYSTEM 4 FACILITIES</b>					
Existing Gravity Sewers		\$ 2,829,000	\$ 13,521,000		\$ 16,350,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -		\$ -
Pump Stations					
<i>Waterloo &amp; Roosevelt/North P.</i>	No Upgrade	\$ -	\$ 366,000	Replace pumps and controls	\$ 366,000
<i>Drake &amp; Hwy. 99/South P.S.</i>	No Upgrade	\$ -	\$ -	No Upgrade	\$ -
Subtotals		\$ 2,829,000	\$ 13,887,000		\$ 16,716,000
<b>COLLECTION SYSTEM 5 FACILITIES</b>					
Existing Gravity Sewers		\$ 3,762,000	\$ 5,009,000		\$ 8,771,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 61,000		\$ 61,000
Force Mains					
<i>Lincoln Street PS FM</i>		\$ -	\$ 1,274,000	Construct new force main to accommodate growth	\$ 1,274,000
Pump Stations					
<i>Lincoln Street PS</i>		\$ -	\$ 2,587,000	Construct new pump station to accommodate growth	\$ 2,587,000
Subtotals		\$ 3,762,000	\$ 8,931,000		\$ 12,693,000
<b>COLLECTION SYSTEM 6 FACILITIES</b>					
Existing Gravity Sewers		\$ 254,000	\$ 19,742,000		\$ 19,996,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 7,800,000		\$ 7,800,000
Force Mains					
<i>System 6 North PS FM</i>		\$ -	\$ 937,000		\$ 937,000
<i>Backpressure Sustaining Facilities</i>		\$ -	\$ -		\$ -
Pump Stations					
<i>System 6 North PS</i>		\$ -	\$ 1,172,000	Future Pump Station	\$ 1,172,000
Crossings		\$ -	\$ 3,230,000		\$ 3,230,000
Subtotals		\$ 254,000	\$ 32,881,000		\$ 33,135,000
<b>COLLECTION SYSTEM 7 FACILITIES</b>					
Existing Gravity Sewers		\$ 12,000	\$ 5,591,000		\$ 5,603,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 6,084,000		\$ 6,084,000
Pump Stations					
<i>Duck Creek PS</i>		\$ -	\$ 1,348,000	Future Pump Station	\$ 1,348,000
Crossings		\$ -	\$ 800,000		\$ 800,000
Subtotals		\$ 12,000	\$ 13,823,000		\$ 13,835,000
<b>COLLECTION SYSTEM 8 FACILITIES</b>					
Existing Gravity Sewers		\$ 125,000	\$ 25,173,000		\$ 25,298,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 24,147,000		\$ 24,147,000
Force Mains					
<i>Arch Road PS FM</i>		\$ -	\$ -	Completed	\$ -
<i>Backpressure Sustaining Facilities</i>		\$ -	\$ -		\$ -
Pump Stations					
<i>Arch Road Industrial Park P.S.</i>		\$ -	\$ -	Completed	\$ -
<i>County P.S. (Hospital)</i>	Monitor actual run-times and/or flows	\$ -	\$ -	Assume removed from service at buildout. Must confirm grades are adequate for gravity flow.	\$ -
Crossings		\$ -	\$ 3,440,000		\$ 3,440,000
Subtotals		\$ 125,000	\$ 52,760,000		\$ 52,885,000

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Table 9. GPU Planning-Level Estimate of Collection System Cost for 2040

Improvements	Existing Deficiencies <sup>(a)</sup>		Growth Related Budget Costs, dollars	Buildout	
	Comments	Budget Costs, dollars		Comments	Budget Costs, dollars
<b>COLLECTION SYSTEM 9 FACILITIES</b>					
Existing Gravity Sewers		\$ -	\$ -		\$ -
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 5,100,000		\$ 5,100,000
Force Mains					
Newton Road FM		\$ -	\$ 287,000		\$ 287,000
Backpressure Sustaining Facilities		\$ -	\$ -		\$ -
Pump Stations					
Origone PS	No Upgrade	\$ -	\$ -	Replace pumps and controls	\$ -
Sanguinetti PS	No Upgrade	\$ -	\$ -	Replace pumps and controls	\$ -
Newton Rd PS		\$ -	\$ 2,131,000	Future Pump Station	\$ 2,131,000
Crossings		\$ -	\$ 4,000,000		\$ 4,000,000
Subtotals		\$ -	\$ 11,518,000		\$ 11,518,000
<b>COLLECTION SYSTEM 10 FACILITIES</b>					
Existing Gravity Sewers		\$ 55,000	\$ 16,380,000		\$ 16,435,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 21,368,000		\$ 21,368,000
Pump Stations					
Brookside Pumping Station	No Upgrade	\$ -	\$ -	No Upgrade	\$ -
Westlake P.S.	No Upgrade	\$ -	\$ -	No Upgrade	\$ -
Sanctuary PS		\$ -	\$ 2,094,000	Future Pump Station	\$ 2,094,000
Crossings		\$ -	\$ 8,585,000		\$ 8,585,000
Subtotals		\$ 55,000	\$ 48,427,000		\$ 48,482,000
<b>COLLECTION SYSTEM 12 FACILITIES</b>					
Existing Gravity Sewers		\$ -	\$ -		\$ -
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 26,768,000		\$ 26,768,000
Force Mains					
Central Stockton FM		\$ -	\$ 23,232,000		\$ 23,232,000
Backpressure Sustaining Facilities		\$ -	\$ 500,000		\$ 500,000
Pump Stations					
Mariposa PS	Future Pump Station	\$ -	\$ 7,268,000	Future Pump Station	\$ 7,268,000
Crossings		\$ -	\$ 6,600,000		\$ 6,600,000
Subtotals		\$ -	\$ 64,368,000		\$ 64,368,000
<b>COLLECTION SYSTEM 13 FACILITIES</b>					
Existing Gravity Sewers		\$ -	\$ -		\$ -
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 34,178,000		\$ 34,178,000
Force Mains					
System 13 East PS FM		\$ -	\$ 282,000		\$ 282,000
Tidewater PS FM		\$ -	\$ 7,765,000		\$ 7,765,000
Backpressure Sustaining Facilities		\$ -	\$ 800,000		\$ 800,000
Pump Stations					
System 13 East PS		\$ -	\$ 4,622,000	Future Pump Station	\$ 4,622,000
Tidewater PS		\$ -	\$ 7,168,000	Future Pump Station	\$ 7,168,000
Crossings		\$ -	\$ 9,760,000		\$ 9,760,000
Subtotals		\$ -	\$ 64,575,000		\$ 64,575,000
<b>COLLECTION SYSTEM 14 FACILITIES</b>					
Existing Gravity Sewers		\$ -	\$ -		\$ -
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -	Area not developed by 2040	\$ -
Force Mains					
System 14 PS FM		\$ -	\$ -	Area not developed by 2040	\$ -
Backpressure Sustaining Facilities		\$ -	\$ -	Area not developed by 2040	\$ -
Pump Stations					
System 14 PS		\$ -	\$ -	Area not developed by 2040	\$ -
Crossings		\$ -	\$ -	Area not developed by 2040	\$ -
Subtotals		\$ -	\$ -		\$ -
<b>COLLECTION SYSTEM 15 FACILITIES</b>					
Existing Gravity Sewers		\$ -	\$ -		\$ -
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ -	Area not developed by 2040	\$ -
Force Mains					
Thompson PS FM		\$ -	\$ -	Area not developed by 2040	\$ -
System 15 East PS FM		\$ -	\$ -	Area not developed by 2040	\$ -
Gateway PS FM		\$ -	\$ -	Area not developed by 2040	\$ -
System 15 FM		\$ -	\$ -	Area not developed by 2040	\$ -
Backpressure Sustaining Facilities		\$ -	\$ -	Area not developed by 2040	\$ -
Pump Stations					
Thompson PS		\$ -	\$ -	Area not developed by 2040	\$ -
Gateway PS		\$ -	\$ -	Area not developed by 2040	\$ -
System 15 East PS		\$ -	\$ -	Area not developed by 2040	\$ -
Crossings		\$ -	\$ -	Area not developed by 2040	\$ -
Subtotals		\$ -	\$ -		\$ -
<b>SHARED FACILITIES</b>					
Force Mains					
Westside Parallel FM		\$ -	\$ -	Would have served System 15	\$ -
Smith Canal FM West		\$ 551,000	\$ 3,689,000	Primarily serve Systems 3 & 9	\$ 4,240,000
Smith Canal FM East		\$ 328,000	\$ 6,154,000	Primarily serve Systems 3 & 9	\$ 6,482,000
Weston Ranch P.S. FM	Exceeds capacity; however other FM facilities exist to address this issue	\$ -	\$ -	Serves Systems 8 and 14	\$ -
Backpressure Sustaining Facilities		\$ -	\$ -	Would have served System 15	\$ -

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Table 9. GPU Planning-Level Estimate of Collection System Cost for 2040					
Improvements	Existing Deficiencies <sup>(a)</sup>		Growth Related	Buildout	
	Comments	Budget Costs, dollars	Budget Costs, dollars	Comments	Budget Costs, dollars
<b>Pump Stations</b>					
<i>Smith Canal Pump Station</i>	Monitor flow split. Adjust as appropriate	\$ -	\$ 9,885,000	Replace pumps and controls; primarily serve Systems 3 and 9	\$ 9,885,000
<i>Weston Ranch P.S.</i>	No Upgrade	\$ -	\$ -	Construct new pump station with required additional capacity; Serves Systems 8 and 14	\$ -
<i>14 Mile Slough PS</i>	No Upgrade	\$ -	\$ 11,362,000	Construct new pump station with required additional capacity; Serves Systems 10, 1, and 15	\$ 11,362,000
Crossings		\$ -	\$ 3,600,000		\$ 3,600,000
Subtotals		\$ 879,000	\$ 34,690,000		\$ 35,569,000
<b>SUMMARY</b>					
Existing Gravity Sewers		\$ 26,400,000	\$ 129,200,000		\$ 155,600,000
Future Gravity Sewers <sup>(b)</sup>		\$ -	\$ 125,500,000		\$ 125,500,000
Force Mains		\$ 900,000	\$ 44,900,000		\$ 45,800,000
Pump Stations		\$ 9,600,000	\$ 52,500,000		\$ 62,100,000
Crossings		\$ -	\$ 40,000,000		\$ 40,000,000
TOTAL (Construction Costs) <sup>(d)</sup>		\$ 36,900,000	\$ 392,100,000		\$ 429,023,000
Estimating Contingency (Level of Planning and Construction Contingency), 35%		\$ 12,900,000	\$ 137,200,000		\$ 150,100,000
TOTAL CONSTRUCTION BUDGET (2007 dollars)		\$ 49,800,000	\$ 529,300,000		\$ 579,123,000
Engineering, Administration and Other Project Costs, 35%		\$ 17,400,000	\$ 185,300,000		\$ 202,700,000
TOTAL PROJECT COSTS w/o Land (2007 dollars)		\$ 67,200,000	\$ 714,600,000		\$ 781,823,000
Property Acquisition Allowance (7% of bare growth pipeline construction)		\$ -	\$ 11,900,000		\$ 11,900,000
TOTAL PROJECT COSTS (2007 dollars)		\$ 67,200,000	\$ 726,500,000		\$ 793,723,000
(a) Only fractional quantities of each gravity sewer total are used for projecting CIP costs (2035 WWMP). Findings from the City's ongoing condition assessment activities and additional flow					
(b) Costs provided for gravity sewers 18 inches and larger only and for all force mains (irrespective of diameter).					

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- System 4: In this System, the change in ADWF is a decrease of 0.12 mgd out of a 2035 WWMP estimated flow of 2.54 mgd (a decrease of 4.9 percent). This small change would result in no significant change in the planned sewer system infrastructure for this shed. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 5: In this System, the change in ADWF is an increase of 0.91 mgd out of a 2035 WWMP estimated flow of 2.8 mgd (an increase of 33 percent). A portion of this increase may be attributed to an updated and improved identification of existing land uses; nevertheless, this change will likely result in some additional improvements being needed to accommodate the planned growth, including:
  - Trunk Sewers: Approximately 30 percent of the previously estimated cost was associated with existing deficiencies and the remainder is associated with growth. Several significant pipeline upsizing projects were predicted. It is assumed that the higher projected flows will result in a slight increase in a portion of the previously predicted upsizing projects resulting in an assumed 10 percent increase in the previously estimated cost. In addition, it is possible that some additional sewers will need to be upsized, so it is assumed that the previously estimated cost will increase an additional 10 percent, for a total increase of 20 percent.
  - Pump Stations: One new pump station, the Lincoln Street Pump Station, and an associated force main were planned to serve the downtown area only. Due to the apparent increase in buildout flows, it is assumed the cost of this pump station and force main project will increase approximately 10 percent.
- System 6: In this System, the change in ADWF is a decrease of 2.5 mgd out of a 2035 WWMP estimated flow of 8.0 mgd (a decrease of about 31 percent). This change will likely result in a reduction of the planned sewer system improvements, including:
  - Trunk Sewers: Pipeline improvements include upsizing of existing pipelines as well as extension of new sewers into the eastern portions of System 6 that are currently undeveloped. It is assumed about half of the future sewer extensions will be approximately 15 percent lower cost than previously estimated and that the cost of the remaining half will not be affected. For the upsizing of existing sewers, it is assumed the cost will be approximately 20 percent lower than previously estimated, based on the lower predicted flows.
  - Pump Stations: The eastern portions of System 6 will require a new pump station and force main. Any change in the cost of these new facilities attributable to the lower flow projections is expected to be small, so a five percent reduction in the planning level estimate of costs is assumed.
- System 7: In this System, the change in ADWF is a decrease of 2.6 mgd out of a 2035 WWMP estimated flow of 8.8 mgd (a decrease of about 29 percent). One major new trunk relief sewer was attributed to System 7, a 5,600 ft. long 54" diameter pipeline primarily located along Tillie Lewis Drive. In addition, some gravity sewer extensions into growth areas and one associated pump station at the eastern end of the System were identified, as well as improvements to existing sewers to correct apparent grade issues or localized capacity concerns. However, the apparent decrease in flows from the System are not expected to substantively affect the costs previously

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identified improvements for System 7. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.

- System 8: In this System, the change in ADWF is a decrease of 8.0 mgd out of a 2035 WWMP estimated flow of 22.7 mgd (a decrease of about 36 percent). Major costs associated with upsizing of existing sewers as well as major extensions east of State Highway 99 were identified. This reduction in planned flow is likely attributed to a decrease in the rate of development, and depending on the location of the development that occurs by 2040, it is likely that substantial portions of the future extensions will not be needed by 2040. The change will likely result in a reduction of the planned sewer system improvements, including:
  - Trunk Sewers: The need for both new sewer extensions and upsizing in existing sewers will likely be reduced, unless development begins at the eastern end of the System 8, requiring long extensions into those areas. Therefore, it is assumed that the cost of trunk sewer improvements will be reduced by approximately 20 percent.
  - Pump Stations: The Arch Road Industrial Park Pump Station identified in the 2035 WWMP has been constructed.
- System 9: In this System, the change in ADWF is a decrease of 3.7 mgd out of a 2035 WWMP estimated flow of 7.0 mgd (a decrease of about 53 percent). Costs associated with upsizing of existing sewers as well as major extensions into areas not currently served by the sewer system were identified. The reduction in planned flow is likely attributed to a decrease in the rate of development, and depending on the location of the development that occurs by 2040, it is likely that some of the future extensions will not be needed by 2040. The change will likely result in a reduction of the planned sewer system improvements, including:
  - Trunk Sewers: It is assumed the need for upsizing existing trunk sewers will be eliminated by the decrease in projected flow. The need for new sewer extensions might be reduced slightly; however, the new sewer extensions are primarily smaller diameter trunks necessary in each portion of the Shed that begins to develop. Therefore, costs reductions will only be realized where portions of the Shed do not develop. It is assumed that most or all areas of the Shed will begin to develop by 2035, and therefore no substantive reduction in the cost of new trunk sewer extensions is appropriate.
  - Pump Stations: It is assumed the need for upsizing existing pumps stations will be eliminated by the decrease in projected flow. A new pump station, the Newton Road Pump Station is needed to connect a significant portion of the Shed. The Pump Station would likely require smaller pumping equipment sized for lower flows early in its useful life, so a 10 percent reduction in the planning level estimate of costs is assumed.
- System 10: In this System, the change in ADWF is an increase of 0.79 mgd over a 2035 WWMP estimated flow of 16.2 mgd (an increase of about 5 percent). This change is not likely to result in a substantive reduction in the cost of the planned sewer system improvements. The following changes will likely affect the projected cost of improvements:

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- Trunk sewers: Approximately 15 to 20 percent of trunk extensions planned in the 2035 WWMP have been completed since 2008, so the estimated cost of the future extensions should be reduced by about 15 percent. Improvements to existing trunk sewers are dominated by a large upsizing project along Whistler Way and extending east from Lower Sacramento Road along Bear Creek. The cost of this improvement or other upsizing projects is not likely to be affected.
- Pump Stations: System 10 shares the 14-Mile Slough Pump Station, which is discussed separately.
- System 12: In this System, the change in ADWF is an increase of 0.69 mgd out of a 2035 WWMP estimated flow of 9.7 mgd (an increase of about 7 percent). This small change is not likely to result in a substantive increase in the cost of planned sewer system infrastructure. Consequently, the estimated costs from the 2035 WWMP for this System are still appropriate.
- System 13: In this System, the change in ADWF is a decrease of 7.6 mgd out of a 2035 WWMP estimated flow of 15.3 mgd (a decrease of about 50 percent). New sewers and pump stations are required to serve the System 13 area. The reduction in projected flow may result in somewhat smaller sewer diameters and pump capacities; however, costs will primarily be related to the extent of new service area being added within the 2040 planning horizon. For example, if the eastern portion of the service area develops first, a disproportionate cost would be triggered to extend the collection system to the new service area. Therefore, for the purposes of this analysis, it is assumed that the cost of new trunk sewers and pump stations will be reduced by 20 percent, reflecting fewer facilities constructed than those identified for build out in the 2035 WWMP.
- System 14: In this System, the change in ADWF is a decrease of 9.6 mgd out of a 2035 WWMP estimated flow of 10.5 mgd (a decrease of about 91 percent). Most of this growth area has been eliminated from the 2040 sewer service area, and the planned trunk sewers for developing areas have already been constructed. Therefore, all planned costs for System 14 are eliminated.
- System 15: Nearly all of System 15 will remain undeveloped at 2040. A small area adjacent to the existing 14-Mile Slough Pump Station is planned for institutional land use; however, only a small diameter sewer would be needed to serve the area by connecting it to the pump station if the small area ever develops. It is assumed that the Delta Water Supply Project treatment facility will remain disconnected from the collection system, and that no other existing or future development will be served by 2040. Therefore, all costs associated with System 15 identified in the 2035 WWMP are eliminated.
- Shared Facilities: Each shared facility is critical component in more than one System. The largest shared facility is the RWCF. The GPU is expected to have the following impacts on shared facilities:

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- 14-Mile Slough Pump Station: This pump station serves Systems 1, 2 and 10, and was designed for expansion to serve System 15. The modeled ratio of peak to average flow was about 2.4 in the 2035 WWMP. The revised 2040 average flow for Systems 1 and 10 is 19.2 mgd, and the peak flow can be estimated using the same 2.4 peaking factor to be 46 mgd, or about 65 percent of the buildout peak flow projected in the 2035 WWMP. The current peak flow capacity of the pump station is 14.5 mgd, so even though the future peak flow is substantially lower, a major upgrade will be necessary. For the purposes of this analysis, it is assumed that the cost of increased capacity will be 80 percent of the previously estimated cost for future expansion.
- Westside Parallel Force Main: The existing West Side Force Main receives flow from the 14-Mile Slough Pump Station as well as the Brookside Pump Station, and serves Systems 1, 2 and 10. A parallel force main was planned to serve System 15, but will not be needed for capacity reasons.
- Smith Canal Pump Station and Force Mains: Two force mains receive flow from the Smith Canal Pump Station, primarily serving Systems 3 and 9. Replacement and upsizing of the force mains, pumps and controls will be needed to serve planned growth. The required upsizing may be slightly reduced and is potentially deferred as a result of reduced growth planned for 2040; however, it is likely that most or all of the anticipated improvements will be needed by 2040 and for the purposes of this analysis no reduction in the planned cost is recommended.
- Weston Ranch Pump Station and Force Main: Pump station and force main improvements were identified in the 2035 WWMP primary triggered by planned development in System 14, which is no longer planned for 2040. It is assumed that no significant upgrade will be needed for serving growth within the existing pump station service area.

The adjusted costs are presented in Table 9 which is adapted from Table 8-2 of the 2035 WWMP. All costs estimates are planning level estimates based on broad assumptions and limited information, and do not necessarily reflect the economic conditions at the time a project is constructed.

The planning level estimate of construction costs (without contingencies, engineering, administration, land acquisition for pipeline extensions or other project costs) can be compared to the 2035 WWMP buildout estimates as follows in terms of 2007 dollars:

- Construction costs for existing deficiencies decreased slightly from \$38 million to \$36.9 million.
- Construction costs for growth-related improvements decreased from \$599 million to \$392 million.
- The corresponding updated planning level estimates of total project costs (total capital costs) are \$67.2 million to address existing deficiencies and \$727 million for growth-related improvements, as shown in Table 9.

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### REGIONAL WASTEWATER CONTROL FACILITY FLOWS AND COSTS

As presented previously, actual flow to the RWCF in the summer of 2017 averaged about 27 mgd, and the ADWF for 2016 was 29 mgd. It is assumed these flows reflect significant water conservation originating from the recent drought conditions, which would be consistent with most other communities in California. Furthermore, it is assumed that flow would rebound upward over time, even in the absence of growth. Nevertheless, it is likely that standard flow factors used to predict flows for prudent collection system planning will over predict the aggregate combined flow at the RWCF. Indeed, the 2017 land uses with standard flow factors applied would generate an average flow of about 37 mgd.

The 2035 WWMP included a predicted buildout influent flow of 70 mgd, based on population of 580,717, a per capita flow of 112 gallons per day, and an analysis of industrial flows in excess of the per capita flow factor. (For treatment plant design purposes, plant recycle flows must also be considered.) The total estimated project cost to accommodate the buildout flow, based on very preliminary planning analysis was about \$417 million in 2007 dollars.

The City prepared a Capital Improvement and Energy Management Plan (CIEMP) for the RWCF in 2011 which predicted flows would reach 49.3 mgd by 2035, which did not represent a general plan buildout value<sup>10</sup>. The CIEMP is being implemented through a series of projects, and the projection of future flows was recently updated as part of the CIEMP implementation work. The adopted flow projection is based on a population of 401,961 (from the San Joaquin Council of Governments) and a per capita flow rate of 100 gallons per day for 2035<sup>11</sup>. As noted above, the revised projected ADWF is 40.2 mgd for 2035 and 46.3 mgd for 2045. Assuming linear growth from 2035 to 2045, the corresponding ADWF for 2040 would be 43.3 mgd.

Existing treatment facilities have a rated secondary ADWF treatment capacity of 48 mgd, and a rated tertiary treatment capacity of 55 mgd. Preparation of the CIEMP involved an extensive analysis of existing treatment facilities, both capacity and condition. The CIEMP recommended a series of short-term and long-term improvements to address rehabilitation and replacement needs while improving treatment reliability. The total project cost for the short and long-term projects, excluding energy-related projects, was about \$221 million, based on 2011 dollars<sup>12</sup>.

For the purposes of this analysis, the CIEMP estimate of costs to achieve a reliability at the permitted capacity should be used as the cost to accommodate flows at the 2040 planning horizon.

All costs estimates are planning level estimates based on broad assumptions and limited information, and do not necessarily reflect the economic conditions at the time a project is constructed.

<sup>10</sup> City of Stockton RWCF Capital Improvement and Energy Management Plan; Carollo Engineers, August 2011.

<sup>11</sup> Information provided by City staff, and resulting 40.2 mgd ADWF for 2035 is reported in the Stockton RWCF Design Build Project; "Advanced Package 3a & 3b" of the Basis of Design Report; AECOM, October 2017.

<sup>12</sup> Ibid. (Table 19.2)



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The infrastructure analyses and cost evaluations presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these analyses should be refined and updated through detailed evaluations of each specific development project.

### RECOMMENDED FUTURE ACTIONS

The recommended actions to address wastewater infrastructure needs are addressed in this section.

#### Sewer System

The projected land uses for 2040 are different than the buildout land uses from the 2035 General Plan. Consequently, the collection system improvements identified in the 2035 WWMP may no longer be appropriate. This could result in some sewer system infrastructure being undersized, which could lead to sanitary sewer overflows. Some sewer system infrastructure could be oversized, resulting in unnecessary capital expenditures and increased operations and maintenance efforts and costs. Therefore, it is recommended that an updated citywide collection system model and capital improvement plan be developed and periodically updated. The model and plan should,

- a) Incorporate industry standard calibration procedures, which will require additional flow monitoring throughout the collection system and peak wet weather flow analysis;
- b) Be based on field-verified sewer invert elevation data where existing data indicates anomalies such as pipes with adverse or unexpected slopes; and
- c) Use software capable of dynamic hydraulic computations so that surcharging conditions can be more accurately represented.

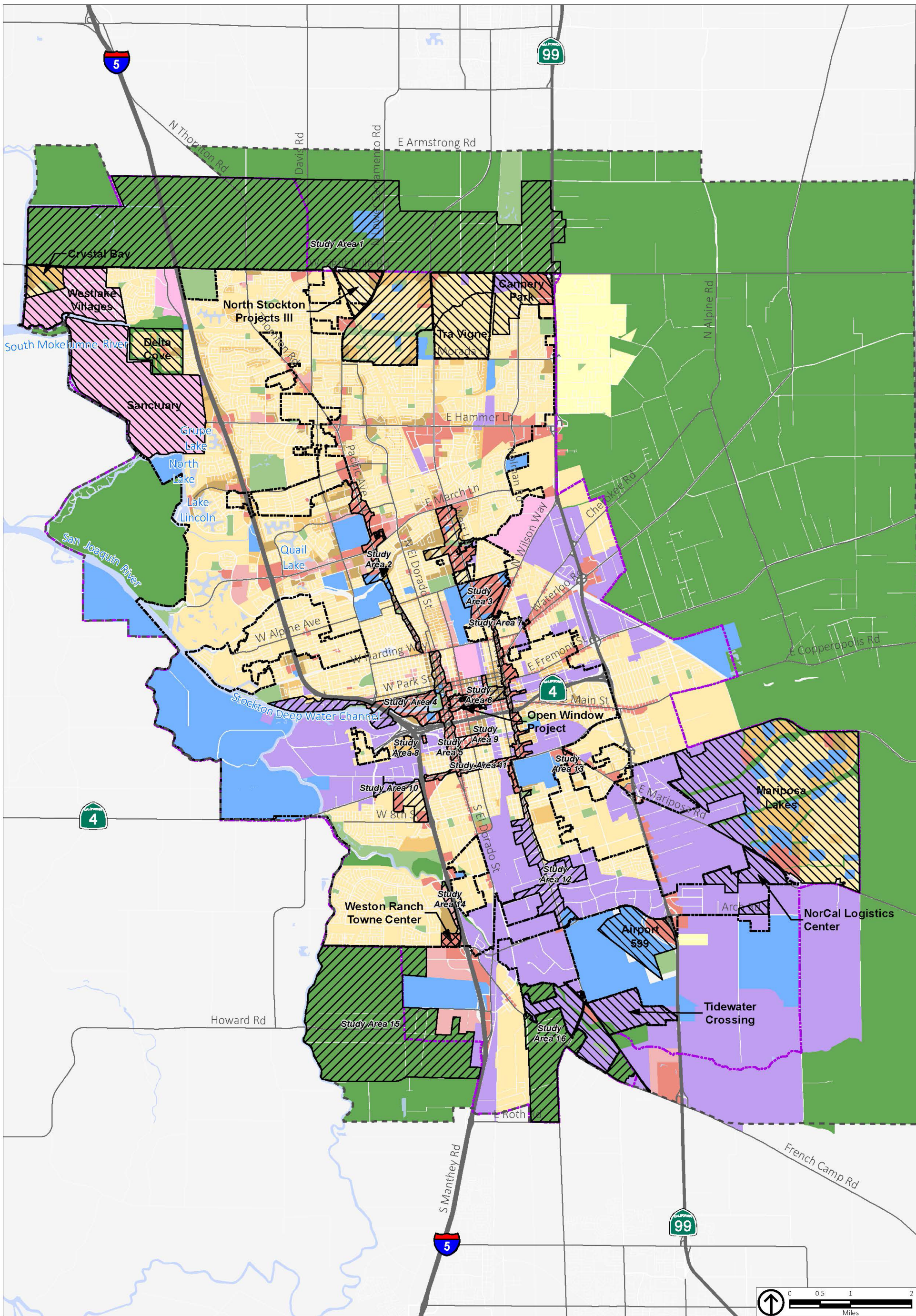
Routine inspection and maintenance should be conducted in order to maintain capacity and reliability in existing facilities. Such activities should include completion (and future updates) of ongoing efforts to assess the condition of gravity sewers, and a thorough condition assessment of pumping facilities. The condition assessment data should be used to quantify and prioritize rehabilitation needs, including an analysis of annual funding required to restore and maintain system reliability.

Beyond the need for collection system model calibration, a long-term program of wet and dry weather flow monitoring is recommended as a tool for detecting excessive infiltration and inflow problems that develop over time as pipelines deteriorate.

#### Regional Wastewater Control Facility

Major improvements to the RWCF have been identified as necessary to address rehabilitation needs and provide sufficient capacity for the planned growth. Current RWCF planning is based on providing capacity for flows and loads predicted for partial buildout, which is appropriate. However, it is also recommended that as the layout and orientation of new or replacement facilities are designed, consideration is given to how the plant can be efficiently increased in the future. A plant layout reflecting flows at General Plan buildout should be configured to avoid unnecessarily increasing the cost of future improvements.

The CIEMP, which is serving as a long-term facilities plan for the RWCF, should be periodically updated to reflect actual flows and loads measured for existing conditions, operational experience with recently constructed facilities, and improvements in treatment and energy management technologies.



Source: City of Stockton, June & August 2017.

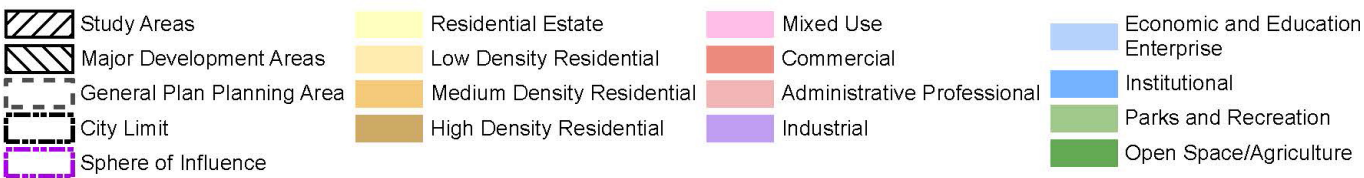
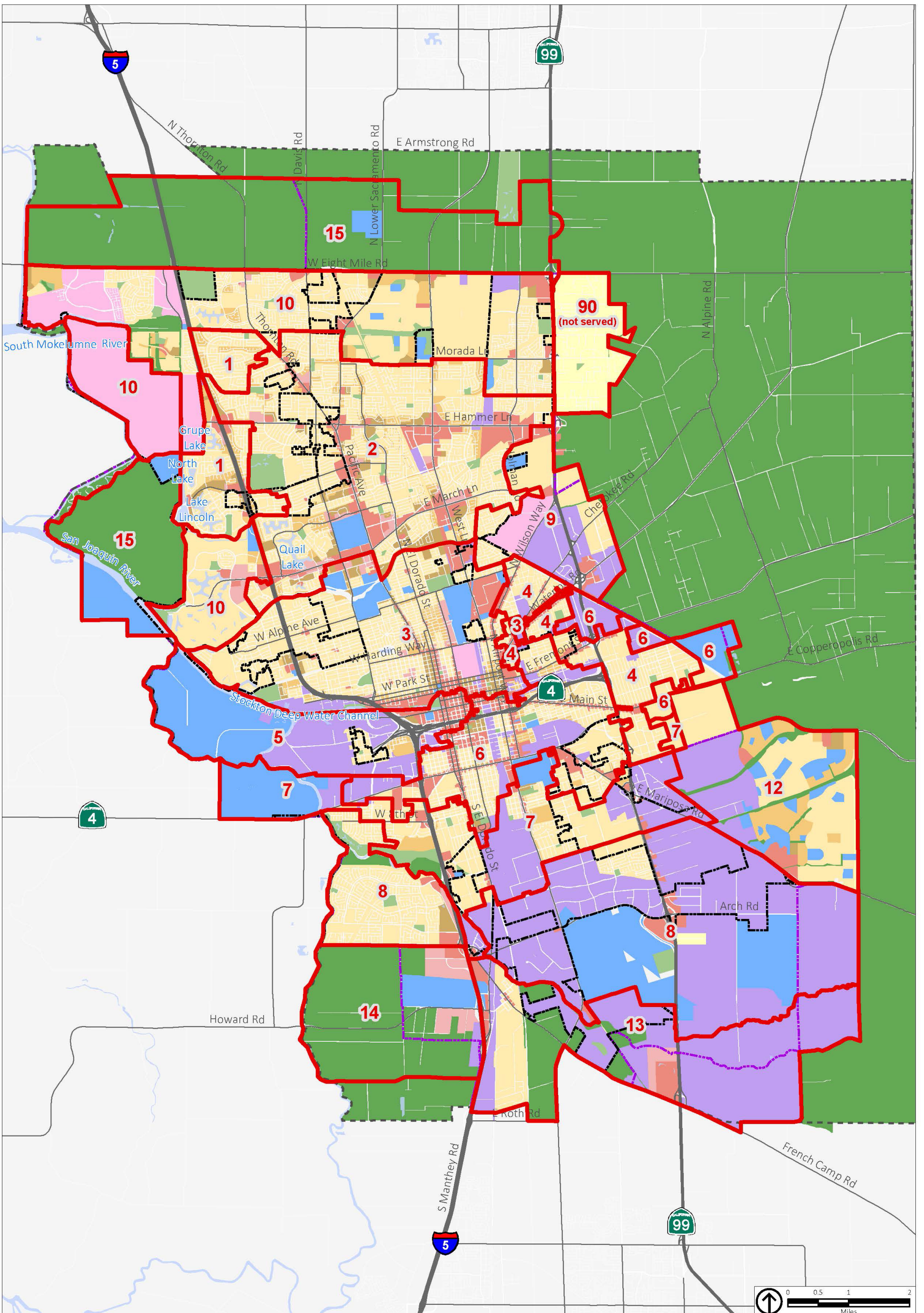


Figure 1  
2017 Preferred 2040 Land Uses  
and Development Areas



Source: City of Stockton, June & August 2017.

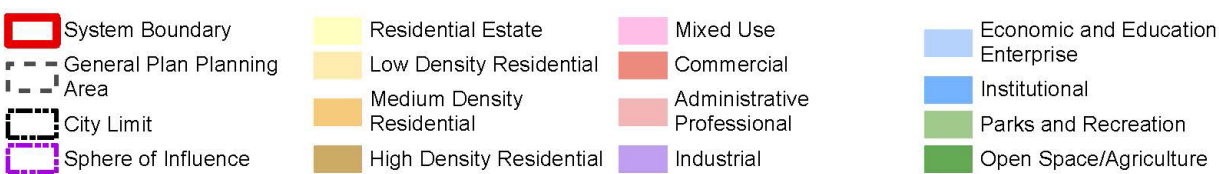
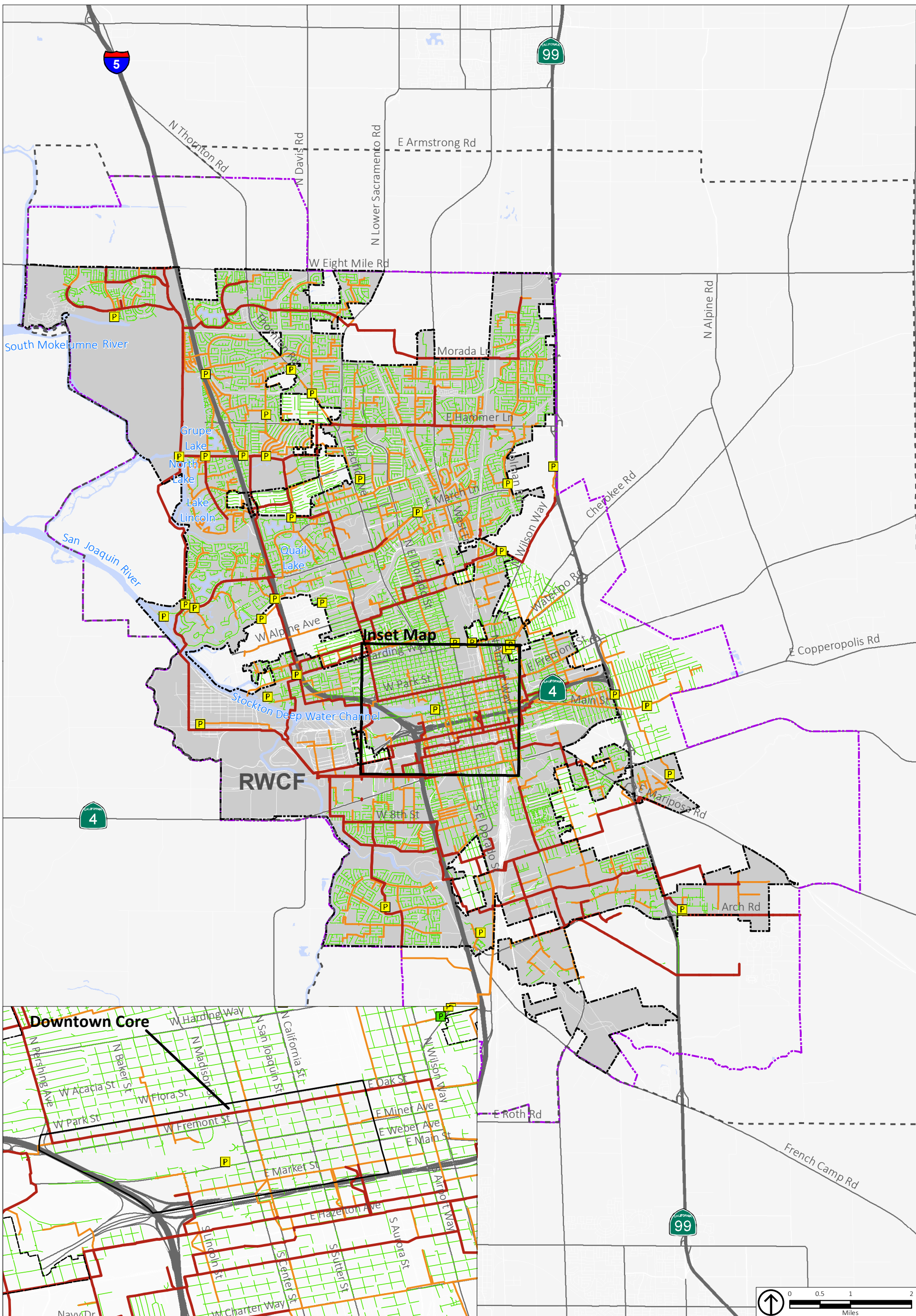


Figure 2  
2017 Preferred 2040 Land Uses and Sewer  
Sub - Collection System Boundaries



Source: City of Stockton, April 2016.

- Sanitary Pump Station
- General Plan Planning Area
- Existing Sewer Line (Diameter)**
- < 8 Inches
- City Limit
- 10 - 18 Inches
- Sphere of Influence
- > 18 Inches

Figure 3  
Sewer System Facilities

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ATTACHMENT A

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Land Use Data Received from Placeworks and Buildout Land Use Map

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Acreage Gross or Net	Study Area Name	Single Family Net New 2040	Single Family Net New 2040	Single Family Net New 2040 + Existing	Single Family Net New 2040 + Existing	Multi Family Net New 2040	Multi Family Net New 2040	Multi Family Net New 2040 + Existing	Multi Family Net New 2040 + Existing	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040 + Existing	Commercial Net New 2040 + Existing	Industrial Net New 2040	Industrial Net New 2040 + Existing
		Units	Acres	Units	Acres	Units	Acres	Units	Acres	Units	Acres	Total Square Feet	0.3 FAR Sq Ft	0.5 FAR Sq Ft	5.0 FAR Sq Ft	0.3 FAR Acres	0.5 FAR Acres	5.0 FAR Acres	Sq Ft	Acres
Gross	Study Area 1 - Eight Mile Rd Area	1,379	646	1,500	663	1,198	209	1,294	217	39,408	39,408	0	0	15	0	0	241,408	20	0	105,400
Net	Study Area 2 - Pacific Ave Corridor	0	0	22	4	110	19	224	22	93,961	93,961	0	0	17	0	0	1,560,846	103	0	1,980
Net	Study Area 3 - West Ln and Alpine Rd Area	77	13	285	52	680	120	774	125	323,399	323,399	0	0	102	0	0	975,325	163	0	1,423,576
Net	Study Area 4 - Port/Waterfront	17	3	71	11	1,770	33	2,058	42	2,040,010	6,100	0	2,033,911	2	0	31	2,865,512	62	580,859	1,739,495
Net	Study Area 5 - El Dorado/Center Corridors	0	0	45	6	1,196	22	1,555	30	1,310,216	0	0	1,310,216	0	0	21	2,158,663	53	0	258,300
Net	Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	0	0	47	4	1,248	22	1,467	27	1,463,025	0	0	1,463,025	0	0	14	2,152,972	33	0	187,300
Net	Study Area 7 - Wilson Way Corridor	0	0	12	2	234	27	240	28	606,716	103,753	0	502,963	19	0	5	1,321,076	65	0	390,342
Net	Study Area 8 - I-5/Highway 4 Interchange	0	0	8	1	659	47	660	48	388,671	0	0	388,671	0	0	4	388,671	4	0	344,300
Net	Study Area 9 - Railroad Corridor at California St	0	0	19	2	1,340	24	1,363	25	1,299,279	0	0	1,299,279	0	0	24	1,365,999	26	0	182,658
Net	Study Area 10 - I-5 and Charter Way Area	86	15	314	58	98	42	127	46	133,864	133,864	0	0	42	0	0	377,363	77	83,678	203,939
Net	Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0	0	5	0	396	15	396	15	323,733	9,597	0	314,135	6	0	7	703,670	38	0	0
Net	Study Area 12 - Airport Way Corridor	0	0	53	7	108	19	112	19	205,461	135,225	70,236	0	14	4	0	272,544	48	1,368,744	3,709,140
Net	Study Area 13 - Mariposa and Charter Area	0	0	12	4	0	0	77	6	80,944	80,944	0	0	25	0	0	93,560	28	0	0
Net	Study Area 14 - East Weston Ranch <sup>(b)</sup>	0	0	1	1	0	0	0	0	430,677	0	430,677	0	0	26	0	430,677	26	0	0
Net	Study Area 15 - South of French Camp Rd	0	0	89	76	0	0	9	6	0	0	0	0	0	0	0	0	0	0	1,700
Net	Study Area 16 - E French Camp Rd Area	0	0	59	123	0	0	4	9	0	0	0	0	0	0	0	5,100	17	0	4,900
Net	Outside of Study Areas <sup>(c)</sup>	1,501	246	77,964	14,117	0	0	33,183	1,916	0	0	0	0	0	0	0	23,811,089	1,607	0	46,620,901
	<b>Grand Total</b>	<b>3,059</b>	<b>923</b>	<b>80,505</b>	<b>15,131</b>	<b>9,036</b>	<b>600</b>	<b>43,542</b>	<b>2,583</b>	<b>8,739,364</b>	<b>926,252</b>	<b>500,913</b>	<b>7,312,200</b>	<b>242</b>	<b>31</b>	<b>105</b>	<b>38,724,475</b>	<b>2,371</b>	<b>2,033,281</b>	<b>55,173,931</b>

<sup>(a)</sup> Excludes Open Window approved project.  
<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.  
<sup>(c)</sup> Excludes approved/pending projects.

Acreage Gross or Net	Approved/Pending Projects Details	Net New						Full Build (2040)					
		Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres	Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres
<b>Approved within city limit</b>													
Gross	Westlake Villages	2,630	680	0		0		2,630	680	0		0	
Gross	Delta Cove	1,164	133	381	48	31,000	3	1,164	133	381	48	31,000	2.6
Gross	North Stockton Projects III	2,220	355	0		0		2,455	393	0		0	
Gross	Cannery Park	981	272	210	16	1,078,762	104	981	272	210	16	1,078,762	104
Gross	Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0
Gross	Crystal Bay	951	19	392	79	0		951	19	392	79	0	0
Gross	Sanctuary	5,452	1,026	1,618	67	692,256	36	5,452	1,026	1,618	67	692,256	36
Gross	Tidewater Crossing	-310	-870	0		186,200	16	0	0	0		186,200	16
Net	Open Window <sup>(a)</sup>	0	0	1,391	12	-68,800	-1	0	0	1,400	12	290,000	12
Gross	Weston Ranch Town Center	0	0	0	0	481,000	41	0	0	0	0	481,000	41
<b>Approved/pending outside city limit, inside SOI</b>													
Gross	Mariposa Lakes	8,955	939	1,553	585	1,009,503	150	8,960	1,090	1,556	585	1,009,503	150
Gross	Airpark 599	0	0	0	0	1,678,500	128	0	0	0	0	1,678,500	128
Gross	Tra Vigne <sup>(b)</sup>	1,244	846	0	0	0	0	1,244	846	0	0	0	0

<sup>(a)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand the capacity to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.  
<sup>(b)</sup> Pending; not approved.

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2040 Development Study Area												
	Net New Single Family Units (full buildout)	Percent applied to 2040	Net New Single Family Units (2040)	Net New Multi-Family Units (full buildout)	Percent applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (full buildout)	Percent applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (full buildout)	Percent applied to 2040	Net New Industrial Square Feet (2040)
Study Area 1 – Eight Mile Rd Area	3,940	35%	1,380	3,420	35%	1,200	197,000	20%	39,000	0	0%	0
Study Area 2 – Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
Study Area 3 – West Ln and Alpine Rd Area	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
Study Area 4 – Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
Study Area 5 – El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
Study Area 6 – Miner/Weber Corridors <sup>(a)</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
Study Area 7 – Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
Study Area 8 – I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
Study Area 9 – Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
Study Area 10 – I-5 and Charter Way Area	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
Study Area 11 – Charter Way/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
Study Area 12 – Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
Study Area 13 – Mariposa and Charter Area	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
Study Area 14 – East Weston Ranch <sup>(b)</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
Study Area 15 – South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Study Area 16 – E French Camp Rd Area	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>(c)</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>(d)</sup></b>	<b>20,480</b>		<b>3,060</b>	<b>48,470</b>		<b>9,040</b>	<b>45,773,000</b>		<b>8,739,000</b>	<b>134,701,000</b>		<b>2,033,000</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

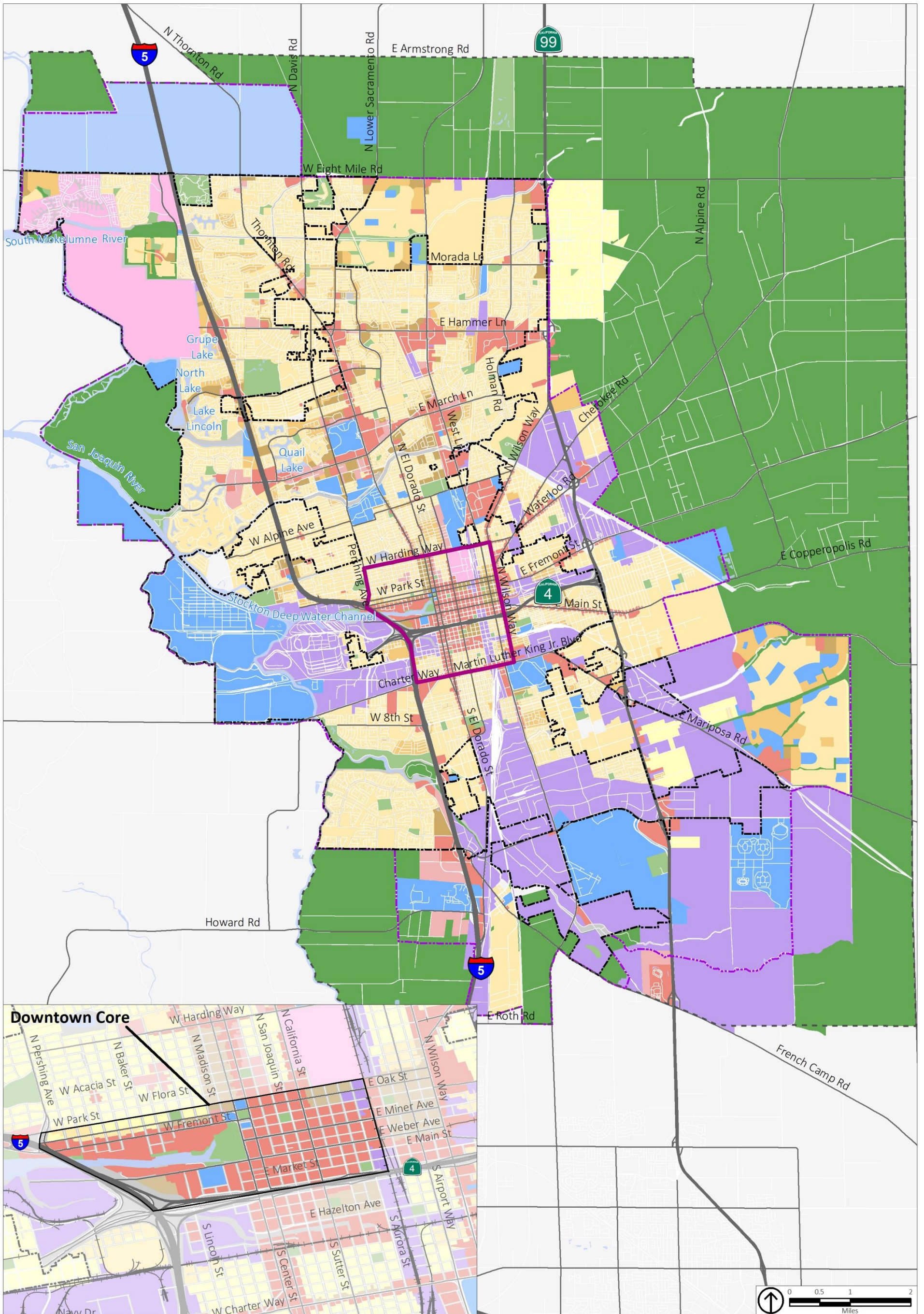
<sup>(c)</sup> Excludes approved/pending projects

<sup>(d)</sup> Numbers do not always add up due to rounding.

The "full buildout" of the proposed General Plan assumes the maximum development of every parcel, combined with approved and pending developments throughout the Planning Area. The 2040 land uses are based on realistic land use demand projections. The full buildout of the General Plan would result in almost three times more new housing units and over 24 times more new non-residential development than estimated for 2040. Therefore, it is extremely unlikely that the full buildout would occur by the year 2040. Full buildout may not occur until well beyond the useful lifespan of the proposed infrastructure (for example, the lifespan of concrete structures is typically 50 to 75 years). Consequently, this infrastructure planning was based on the estimated 2040 level of development. This table is included in this TM to document the relationship between the buildout land uses and the 2040 land uses.

Source: PlaceWorks, 2017.

**Figure 2-8**  
**General Plan Land Use Map**



Source: City of Stockton, 2017; PlaceWorks, 2017.

- |                            |                            |                          |                                   |                        |
|----------------------------|----------------------------|--------------------------|-----------------------------------|------------------------|
| City Limit                 | Residential Estate         | High Density Residential | Administrative Professional       | Institutional          |
| Sphere of Influence        | Low Density Residential    | Mixed Use                | Industrial                        | Parks and Recreation   |
| General Plan Planning Area | Medium Density Residential | Commercial               | Economic and Education Enterprise | Open Space/Agriculture |
| Greater Downtown Boundary  |                            |                          |                                   |                        |



ATTACHMENT F

**ATTACHMENT 3**  
**REVISED STORMWATER MASTER PLAN SUPPLEMENT**



**TECHNICAL MEMORANDUM**

DATE: December 6, 2017 Project No.: 425-10-16-04.006  
SENT VIA: EMAIL  
TO: City of Stockton, Municipal Utilities Department  
FROM: Douglas T. Moore, PE, RCE #58122  
REVIEWED BY: Mark Kubik, PE, RCE #50963  
SUBJECT: Stockton General Plan Update – Stormwater Master Plan Supplement

This Technical Memorandum (TM) presents the Stormwater Master Plan Supplement for the Stockton General Plan Update (GPU). This TM includes the following sections:

- Summary
  - Existing Conditions Summary
  - Detention Storage and Pumping Requirements for the Study Areas Summary
  - Cost Evaluations Summary
  - Potential Environmental Impacts and Mitigation Measures Summary
- Existing Conditions
- Detention Storage and Pumping Requirements for the Study Areas
  - GPU Land Uses by Development Area
  - Assumptions and Methodology
  - Storage Requirements
  - Pump Station Requirements
- Detention Storage and Pumping Cost Evaluations
  - Detention Storage Construction Costs
  - Pumping Construction Costs
  - Total Capital Costs
- Recommended Future Actions
- Conclusions

The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

## ATTACHMENT F

### SUMMARY

A summary of this TM is presented below. The development of the summary data is presented in the following sections of this TM. The 2040 land uses are shown on Figure 1, and the General Plan Update buildout land use map is provided in Attachment A.

#### Existing Conditions Summary

The City's storm drain system is shown on Figure 2. The storm drain system includes 620 miles of 4-inch to 96-inch storm drains and over 22,500 drain inlets. A total of 58 pump stations and 19 lift stations are used to pump drainage into receiving waters, as shown on Figure 2.

The City of Stockton (City) is characterized by flat topography with a complex network of streams and rivers running through it. The northern portion of the City is protected by levees, and drainage is typically pumped into receiving waters. The southern portion of the City does not have many levees and is characterized by various floodplain designations by FEMA (Peterson Brustad Inc., 2008). A few of the waterways in the central and northern parts of the City, namely Bear Creek, Pixley Slough, Mosher Slough, and the Calaveras River, have sufficient capacity to handle buildout flows based on the 1990 General Plan, but do not have capacity to handle additional development beyond that. The creeks in the southeast portion of the planning area, (North Littlejohns Creek, Weber Slough, South Littlejohns Creek, and Lone Tree Creek) do not have capacity to contain the existing 100-year flows, resulting in overbank flooding predicted in much of those watersheds (West Yost Associates [West Yost], 2004).

#### Detention Storage and Pumping Requirements for the Study Areas Summary

Several development Study Areas were identified by Placeworks, as shown on Figure 2. Little infrastructure planning has been done for the Study Areas; consequently, detention storage and pumping requirements have been estimated for the Study Areas. Stormwater plans have been or will be prepared by others for the Approved/Pending Development Projects. To avoid conflicting infrastructure plans, no storage and pumping requirements have been estimated for the Approved/Pending Development Projects.

The detention storage volumes required per the City of Stockton's standards range from 0.5 to 50.4 acre-feet (ac-ft). The total new development tributary area that needs detention storage facilities is 547.8 acres of various land uses.

The San Joaquin County Improvement Standards requires that detention basins shall have outlet facilities providing terminal drainage capable of emptying a full basin in 24 hours in urban areas. Firm pumping capacity is the combined capacity of the individual pumps in the pump station, except the largest pump (assuming the largest pump is out of service). The firm pumping capacities for the Study Areas range from 0.3 to 25.4 cubic feet per second (cfs), and the combined firm capacity is 50.3 cfs. Total pumping capacity is the combined capacity of all the individual pumps in the pump station, including the largest pump (assuming the largest pump is in service). Total pumping capacity is included in this evaluation for estimating pump station costs. The total pumping capacities range from 0.5 to 38.1 cfs, and the combined total capacity is 88.0 cfs. The total tributary area is 547.8 acres of various land uses. On average, this results in about 0.09 cfs/acre of firm pumping capacity needed per acre of development.

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### Cost Evaluations Summary

Capital costs range from approximately \$95,000 to \$5.8 million, with a total of \$12.2 million. Land costs make up approximately \$2.8 million of the \$12.2 million. The cost per acre of development is approximately \$22,400.

### Potential Environmental Impacts and Mitigation Measures Summary

This study is a high-level assessment to analyze detention basin and pumping capacity requirements based on increases in the volume of stormwater runoff resulting from development in the Study Areas. No hydraulic or hydrologic modeling was performed for this study, storm drainage pipe facilities were not sized, and water quality control measures were not considered. To address the potential impacts of development, a comprehensive City-wide storm drainage master plan should be completed. In addition, each development project should complete a drainage plan to appropriately size storm drainage facilities based on site specific constraints. Each drainage study should also consider stormwater quality control measures and trash control measures as applicable.

### EXISTING CONDITIONS

The City's storm drain system is shown on Figure 2. The storm drain system includes 620-miles of 4-inch to 96-inch storm drains. Multiple pump stations and lift stations are used to pump drainage into receiving waters. Figure 2 shows the locations of the 58 pump stations and the 19 lift stations, and various sizes of storm drain pipes.

Major receiving waters include Pixley Slough, Bear Creek, Mosher Slough, Five Mile Slough, Calaveras River, Fourteen Mile Slough, Smith Canal, Stockton Deep Water Ship Channel, San Joaquin River, Walker/French Camp Slough, Duck Creek, and North Littlejohns Creek.

The information for the existing condition storm drains is compiled from a 2008 Conceptual Storm Drain Master Plan by Peterson Brustad Inc. and a 2004 Conceptual Storm Drain Master Plan by West Yost. The City of Stockton is situated on the eastern boundary of the Sacramento/San Joaquin River Delta. The City is characterized by flat topography with a complex network of streams and rivers running through it. The northern portion of the City is protected by levees, and drainage is typically pumped into receiving waters. The southern portion of the City does not have many levees and is characterized by various floodplain designations by FEMA (Peterson Brustad Inc., 2008). A few of the waterways in the central and northern parts of the city, namely Bear Creek, Pixley Slough, Mosher Slough, and the Calaveras River, have sufficient capacity to handle buildout flows based on the 1990 General Plan, but do not have capacity to handle additional development beyond that. The creeks in the southeast portion of the planning area (North Littlejohns Creek, Weber Slough, South Littlejohns Creek, and Lone Tree Creek) do not have capacity to contain the existing 100-year flows, resulting in overbank flooding in much of those watersheds (West Yost, 2004).

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### DETENTION STORAGE AND PUMPING REQUIREMENTS FOR THE STUDY AREAS

The development of the detention storage and pumping requirements are discussed below:

#### GPU Land Uses by Development Area

The land use data for this evaluation was provided by Placeworks and is provided in Attachment A (including the buildout land use map, the dwelling unit data, acreage data, and 2040 percent development data). The land use data has been reorganized in Table 1 to be suitable for estimating the stormwater detention storage and pumping requirements. The reorganized land use data includes existing land use data, net new land use data for 2040, and 2040 land use data in terms of gross acreages. The 2040 land use data is shown on Figure 1, and the Study Areas and the Approved/Pending Development Projects are shown on Figure 2.

#### Assumptions and Methodology

The following assumptions were made for this stormwater evaluation:

- Little infrastructure planning has been done for the Study Areas, consequently, detention storage and pumping requirements have been estimated for the Study Area.
- Stormwater plans have been or will be prepared by others for the Approved/Pending Development Projects. To avoid conflicting infrastructure plans, no storage and pumping requirements have been estimated for the Approved/Pending Development Projects.
- Without existing drainage models, it is not possible to accurately evaluate the need for detention storage and new pumping. Also, re-development projects will use the existing stormwater infrastructure, resulting in minimal new infrastructure requirements. Consequently, if the re-development project results in increased impervious coverage, detailed evaluations will need to be prepared in the future, including preparation of hydrologic and hydraulic models which can be used to accurately determine best drainage approach and size the required infrastructure.
  - Study areas that consisted primarily of new development or infill projects were assumed to need detention facilities if they did not already have detention basins.
  - Study areas that consisted primarily of re-development projects were assumed to not need detention facilities.
  - Study areas that had both re-development and infill projects were assumed to need detention facilities unless they already drained to a detention basin or if the receiving system appears to have adequate capacity for buildout conditions.
- Net new development areas were used to size stormwater facilities. Net new development areas do not include areas that are already developed and will not change as a result of new development.

The following methodology was used for evaluating the required stormwater detention storage and pumping requirements for the Study Areas.

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Table 1. Land Use Data

Study Area or Development Name	Single Family, Gross Acres			Multi Family, Gross Acres			Commercial, Gross Acres			Industrial, Gross Acres		
	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040	Existing	Net New	2040
<b>Study Areas</b>												
Study Area 1 - Eight Mile Rd Area	17.2	232.1	249.3	8.4	73.2	81.6	17.9	0.6	18.5	4.0	0.0	4.0
Study Area 2 - Pacific Ave Corridor	4.3	0.0	4.3	3.5	4.7	8.2	115.8	3.6	119.4	0.1	0.0	0.1
Study Area 3 - West Ln and Alpine Rd Area	38.7	51.6	90.2	5.8	29.9	35.7	68.4	6.2	74.6	54.5	0.0	54.5
Study Area 4 - Port/Waterfront	8.0	11.2	19.2	8.6	26.7	35.3	10.3	2.9	13.2	44.3	5.6	49.9
Study Area 5 - El Dorado/Center Corridors	5.5	0.0	5.5	8.3	17.2	25.5	8.1	1.8	9.9	9.9	0.0	9.9
Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	4.4	0.0	4.4	4.8	18.0	22.8	6.5	3.4	9.9	7.2	0.0	7.2
Study Area 7 - Wilson Way Corridor	1.6	0.0	1.6	0.2	6.8	7.1	2.1	5.1	7.2	14.9	0.0	14.9
Study Area 8 - I-5/Highway 4 Interchange	1.0	0.0	1.0	0.1	38.0	38.1	0.9	0.9	1.8	13.2	0.0	13.2
Study Area 9 - Railroad Corridor at California St	2.3	0.0	2.3	1.3	19.3	20.6	4.8	1.5	6.3	7.0	0.0	7.0
Study Area 10 - I-5 and Charter Way Area	42.8	57.9	100.7	4.1	4.2	8.3	26.3	2.6	28.9	4.6	2.7	7.3
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0.3	0.0	0.3	0.0	7.7	7.7	2.9	0.4	3.3	0.0	0.0	0.0
Study Area 12 - Airport Way Corridor	7.2	0.0	7.2	0.4	4.7	5.1	6.8	10.2	17.0	89.5	13.1	102.6
Study Area 13 - Mariposa and Charter Area	3.9	0.0	3.9	5.9	0.0	5.9	5.6	1.5	7.2	0.0	0.0	0.0
Study Area 14 - East Weston Ranch <sup>(b)</sup>	1.1	0.0	1.1	0.0	0.0	0.0	4.9	14.8	19.8	0.0	0.0	0.0
Study Area 15 - South of French Camp Rd	75.7	0.0	75.7	6.1	0.0	6.1	0.0	0.0	0.0	0.1	0.0	0.1
Study Area 16 - E French Camp Rd Area	122.7	0.0	122.7	9.1	0.0	9.1	0.1	0.0	0.1	0.2	0.0	0.2
<b>Subtotal (Study Areas)</b>	<b>336.9</b>	<b>352.8</b>	<b>689.7</b>	<b>66.8</b>	<b>250.5</b>	<b>317.3</b>	<b>281.5</b>	<b>55.6</b>	<b>337.1</b>	<b>249.5</b>	<b>21.4</b>	<b>270.8</b>
<b>Approved/Pending Development Projects Within City Limit</b>												
Westlake Villages	0.0	680.0	680.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delta Cove	0.0	132.7	132.7	0.0	47.6	47.6	0.0	2.6	2.6	0.0	0.0	0.0
North Stockton Projects III	38.0	355.0	393.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cannery Park	0.0	272.0	272.0	0.0	16.0	16.0	0.0	104.0	104.0	0.0	0.0	0.0
Nor Cal Logistics Center	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Crystal Bay	0.0	19.4	19.4	0.0	78.7	78.7	0.0	0.0	0.0	0.0	0.0	0.0
Sanctuary	0.0	1,026.0	1,026.0	0.0	67.4	67.4	0.0	35.5	35.5	0.0	0.0	0.0
Tidewater Crossing	869.6	-869.6	0.0	0.0	0.0	0.0	0.0	16.0	16.0	0.0	0.0	0.0
Open Window <sup>(c)</sup>	0.0	0.0	0.0	0.0	11.9	11.9	12.9	-1.0	11.9	0.0	0.0	0.0
Weston Ranch Town Center	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.5	41.5	0.0	0.0	0.0
<b>Subtotal (Approved/Pending Projects Within City Limit)</b>	<b>907.6</b>	<b>1,615.5</b>	<b>2,523.1</b>	<b>0.0</b>	<b>221.6</b>	<b>221.6</b>	<b>12.9</b>	<b>198.6</b>	<b>211.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Approved/Pending Development Projects Outside City Limit but Within Sphere of Influence</b>												
Mariposa Lakes	151.0	939.3	1,090.3	0.0	585.0	585.0	0.0	150.0	150.0	0.0	0.0	0.0
Airpark 599	0.0	0.0	0.0	0.0	0.0	0.0	0.0	128.0	128.0	0.0	0.0	0.0
Tra Vigne <sup>(d)</sup>	0.0	846.4	846.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Subtotal (Approved/Pending Projects Outside City Limit but Within Sphere of Influence)</b>	<b>151.0</b>	<b>1,785.7</b>	<b>1,936.7</b>	<b>0.0</b>	<b>585.0</b>	<b>585.0</b>	<b>0.0</b>	<b>278.0</b>	<b>278.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Remaining City Outside of Study Areas and Outside of Approved/Pending Projects <sup>(e)</sup>	13,870.5	1,270.5	15,141.0	1,915.9	0.0	1,915.9	546.6	0.0	546.6	1,783.8	0.0	1,783.8
<b>Grand Total</b>	<b>15,266.0</b>	<b>5,024.6</b>	<b>20,290.5</b>	<b>1,982.7</b>	<b>1,057.1</b>	<b>3,039.8</b>	<b>841.0</b>	<b>532.1</b>	<b>1,373.1</b>	<b>2,033.2</b>	<b>21.4</b>	<b>2,054.6</b>

<sup>(a)</sup> Excludes Open Window approved project.

<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.

<sup>(c)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.

<sup>(d)</sup> Pending; not approved.

<sup>(e)</sup> Excludes approved/pending projects.

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City of Stockton Standard Specifications, Section 77 requires:

- Detention basins be sized using the equation  $\text{Volume (acre-feet)} = C \cdot A \cdot R / 12$ , where
  - C = runoff coefficient,
  - A = area of the site (acres), and
  - R = rainfall depth (inches). Rainfall depths are shown in Table 2 and differ between areas that have discharge limitations or not.
- Discharge limitations were explained in the 2008 Conceptual Storm Drain Master Plan as receiving waters that had discharge constraints based on the existing capacity of the channel. Many Study Areas do not have a known receiving water, and therefore, it was assumed they were discharge limited unless otherwise noted in the PBI report (2008).
- Runoff coefficients were obtained from City Standard Drawing Number 76, as shown in Table 3.

<b>Table 2. Rainfall Depth for Use in the Detention Basin Sizing Equation (above).</b>	
Receiving Water Status	Rainfall <sup>(a)</sup> , inches
No discharge limitations	3.12
Discharge limitations	Use safety factor of 1.5 applied to size calculated for No Discharge Limitations
<sup>(a)</sup> From City of Stockton Standard Specifications, Section 77m	

<b>Table 3. Runoff Coefficients<sup>(a)</sup></b>	
Land Use Category	C-Value
Single Family Residential	0.35
Multi-Family Residential	0.65
Commercial	0.90
Industrial	0.90
<sup>(a)</sup> From City of Stockton Standard Drawing Number 76.	

Neither the City's Specifications Section 74 nor 77 provided guidance on how to size pump stations to empty detention basins; therefore, guidance from San Joaquin County Improvement Standards were used. Section 3-4.05.C of the San Joaquin County Improvement Standards requires that detention basins shall have outlet facilities providing terminal drainage capable of emptying a full basin in 24 hours in urban areas. Although the San Joaquin County Improvement Standards encourage the use of gravity drained detention basins, it is difficult to know if a system will drain by gravity without additional modeling or design. Therefore, all detention basins were assumed to require pumping facilities.

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### **Storage Requirements**

Using the methodology described above, the required detention storage volumes are summarized in Table 4 for the Study Areas. As shown, the required detention storage volumes range from 0.5 to 50.4 ac-ft. The total combined detention storage volume for all of the Study Areas is 99.8 ac-ft. Storage volume was also included in Table 4 for extended detention basins located with the flood control basin assuming there were no volume reduction measures implemented. The total new development tributary area that needs facilities is 547.8 acres of various land uses.

### **Pumping Requirements**

Using the methodology described above, the pumping requirements are summarized in Table 4. As shown, the firm pumping capacities range from 0.3 to 25.4 cfs, and the combined firm capacity is 50.3 cfs. The total pumping capacities range from 0.5 to 38.1 cfs, and the combined total capacity is 88.0 cfs. The total tributary area is 547.8 acres of various land uses. As stated above, the analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

Additionally, the pump stations that discharge into open channels, creek, or rivers may require acquisition of several permits such as Clean Water Act Section 401 and 404 permits/certification, California Department of Fish and Wildlife Stream Bed Alteration Agreement, Central Valley Flood Protection Board encroachment permit, and the San Joaquin County Flood Control and Water Conservation District permits.



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Table 4. Detention Basin Volumes and Pump Station Capacities<sup>(f)</sup>

Study Area Name	Location of Discharge	Limited or Unlimited Discharge	New Development, Re-development, or Infill	Facilities Needed? <sup>(d)</sup> (Yes or No)	Single Family, acres <i>Net New</i>	Multi Family, acres <i>Net New</i>	Industrial, acres <i>Net New</i>	Total Areas of Study Areas that Need Facilities, acres <i>Net New</i>	Area Weighted C-Value <i>Net New</i>	Extended Detention Basin Volume, ac-ft <i>Net New</i>	Volume <sup>(c)</sup> (discharge limitations), ac-ft <i>Net New</i>	Firm Pumping Capacity <sup>(b)</sup> for basins with discharge limitations, cfs <i>Net New</i>	Total Pumping Capacity <sup>(b, e)</sup> for basins with discharge limitations, cfs <i>Net New</i>
<b>Study Areas</b>													
Study Area 1 - Eight Mile Rd Area	Pixley Slough	Limited	100% new development	Yes	232.1	73.2	0.0	305.9	0.42	5.6	50.4	25.4	38.1
Study Area 2 - Pacific Ave Corridor	Unknown from PBI	Limited	100% re-development	No	0.0	4.7	0.0	0.0	--	--	--	--	--
Study Area 3 - West Ln and Alpine Rd Area	Unknown from PBI	Limited	50% re-development, 50% infill	Yes	51.6	29.9	0.0	87.7	0.49	1.9	16.8	8.5	16.9
Study Area 4 - Port/Waterfront	Unknown from PBI	Limited	60% re-development, 40% infill	Yes	11.2	26.7	5.6	46.5	0.62	1.3	11.3	5.7	11.4
Study Area 5 - El Dorado/Center Corridors	Unknown from PBI	Limited	80% re-development, 20% infill	No	0.0	17.2	0.0	0.0	--	--	--	--	--
Study Area 6 - Miner/Weber Corridors	Unknown from PBI	Limited	90% re-development, 10% infill	No	0.0	18.0	0.0	0.0	--	--	--	--	--
Study Area 7 - Wilson Way Corridor	Unknown from PBI	Limited	90% re-development, 10% infill	No	0.0	6.8	0.0	0.0	--	--	--	--	--
Study Area 8 - I-5/Highway 4 Interchange	Unknown from PBI	Limited	10% re-development, 90% infill	Yes	0.0	38.0	0.0	38.9	0.66	1.1	9.9	5.0	10.0
Study Area 9 - Railroad Corridor at California St	Unknown from PBI	Limited	60% re-development, 40% infill	No	0.0	19.3	0.0	0.0	--	--	--	--	--
Study Area 10 - I-5 and Charter Way Area	Unknown from PBI	Limited	60% re-development, 40% infill	Yes	57.9	4.2	2.7	67.4	0.41	1.2	10.8	5.5	10.9
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	Unknown from PBI	Limited	100% re-development	No	0.0	7.7	0.0	0.0	--	--	--	--	--
Study Area 12 - Airport Way Corridor	Unknown from PBI	Limited	50% re-development, 50% infill	No	0.0	4.7	13.1	0.0	--	--	--	--	--
Study Area 13 - Mariposa and Charter Area	Potentially Calaveras River	Limited	30% redevelopment, 70% infill	Yes	0.0	0.0	0.0	1.5	0.90	0.1	0.5	0.3	0.5
Study Area 14 - East Weston Ranch	Unknown from PBI	Limited	100% infill	No	0.0	0.0	0.0	0.0	--	--	--	--	--
Study Area 15 - South of French Camp Rd	San Joaquin River	Limited	95% new development, 5% re-development	Yes	0.0	0.0	0.0	0.0	--	--	--	--	--
Study Area 16 - E French Camp Rd Area	Potentially French Camp Slough <sup>(a)</sup>	Limited	90% new development, 10% re-development	Yes	0.0	0.0	0.0	0.0	--	--	--	--	--
Total					352.8	250.5	21.4	547.8		11.1	99.8	50.3	88.0

<sup>(a)</sup> PBI concluded that no proper hydraulic modeling existed for this conveyance system and comprehensive flood management was recommended for this area, and thus discharge constraints could not be developed. A limited discharge was assumed for this Study Area.

<sup>(b)</sup> Detention basins should have outlet facilities capable of draining a basin in 24 hours in urban areas (per San Joaquin County Improvement Standards, 2014)

<sup>(c)</sup> Volume (in acre-feet) is calculated using  $V = C \cdot A \cdot R / 12$ , where C = area weighted runoff coefficient, A = total area (acres), and R = rainfall depth (in)

<sup>(d)</sup> Facilities are needed for areas where there is new development or infill with no existing facilities or capacity for buildout. Facilities are not needed if there is primarily re-development or the system already has the capacity for buildout conditions.

<sup>(e)</sup> Total pumping capacity is included in this evaluation for estimating pump station costs.

<sup>(f)</sup> The analyses and conclusions presented in this TM are based on limited land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.

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### DETENTION STORAGE AND PUMPING COST EVALUATIONS

Approximate stormwater infrastructure unit costs are presented in Table 5 and discussed below. These unit costs were taken/developed from previous West Yost planning engineering studies, design, bid, construction projects, and general West Yost cost estimating experience from projects located in the California Central Valley for construction associated with medium to large development projects.

- The detention basin unit cost of \$28,000 per ac-ft is from actual construction costs for a detention basin project in the City of Dixon, but inflated from Spring 2005 to December 2016 (using the Engineering News Record 20 Cities Average). This unit cost includes detention basin excavation, an all-weather access road around the basin, inlet and outlet headwalls, and other facilities for a complete, urban detention basin. The basins are assumed to be 12 feet deep, with a water depth of 10 feet, a freeboard of 2 feet, and side slopes of 4H:1V.
- The pump station unit cost of \$37,000 per cfs is from actual construction costs for the Natomas Area of Sacramento, but inflated from October 1998 to December 2016.
- The land cost for detention basins was assumed to be \$200,000 per acre.
- The Engineering, Environmental, Administration, Construction Management, etc. multiplier of 40 percent is from West Yost Associates' experience with similar, typical projects.

Facility Type	Unit	Cost per Unit, dollars
Detention Basin (Storage Capacity)	Acre-feet	28,000
Pump Station (Total Pumping Capacity)	cfs	37,000
Land Acquisition	Acres	200,000
Engineering, Environmental, Administration, Construction Management, etc.	--	40 percent of construction cost

The estimated construction costs for the Study Areas are summarized in Table 6. The quantities for the cost calculations are also provided in Table 6. The construction costs are developed by multiplying the infrastructure quantities from Table 6 by the approximate unit costs from Table 5. The total capital costs additionally include the cost of Engineering, Environmental, Administration, Construction Management, etc., and the land acquisition for the detention basins.

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**Table 6. Estimated Stormwater Infrastructure Construction and Total Capital Costs**

Study Area	Volume of required water storage	Excavation Volume <sup>(a)</sup>	Area of Basin	Total Pumping Capacity	Detention Basin Cost	Pump Station Cost	Construction Cost	Land Cost	Engineering, Administration, CM	Total Capital Cost
<i>Units, Unit Costs, and Multipliers</i>	<i>ac-ft</i>	<i>ac-ft</i>	<i>ac</i>	<i>cfs</i>	<i>\$28,000/ac-ft</i>	<i>\$37,000/cfs</i>	<i>dollars</i>	<i>\$200,000/ac</i>	<i>40%</i>	<i>dollars</i>
Study Area 1 - Eight Mile Rd Area	56.0	66.1	5.9	38.1	\$1,851,737	\$1,411,396	\$3,263,000	\$1,185,678	\$1,305,000.00	\$5,754,000
Study Area 2 - Pacific Ave Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 3 - West Ln and Alpine Rd Area	18.7	22.0	2.2	16.9	\$616,464	\$626,492	\$1,243,000	\$439,722	\$497,000.00	\$2,180,000
Study Area 4 - Port/Waterfront	12.5	14.8	1.6	11.4	\$414,630	\$421,375	\$836,000	\$311,814	\$334,000.00	\$1,482,000
Study Area 5 - El Dorado/Center Corridors	--	--	--	--	--	--	--	--	--	--
Study Area 6 - Miner/Weber Corridors	--	--	--	--	--	--	--	--	--	--
Study Area 7 - Wilson Way Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 8 - I-5/Highway 4 Interchange	11.1	13.0	1.4	10.0	\$365,106	\$371,046	\$736,000	\$279,785	\$294,000.00	\$1,310,000
Study Area 9 - Railroad Corridor at California St	--	--	--	--	--	--	--	--	--	--
Study Area 10 - I-5 and Charter Way Area	12.0	14.2	1.5	10.9	\$397,379	\$403,844	\$801,000	\$300,694	\$320,000.00	\$1,422,000
Study Area 11 - Charter Way/MLK Jr Blvd Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 12 - Airport Way Corridor	--	--	--	--	--	--	--	--	--	--
Study Area 13 - Mariposa and Charter Area	0.6	0.8	0.2	0.5	\$22,997	\$20,278	\$43,000	\$35,424	\$17,000.00	\$95,000
Study Area 14 - East Weston Ranch	--	--	--	--	--	--	--	--	--	--
Study Area 15 - South of French Camp Rd	--	--	--	--	--	--	--	--	--	--
Study Area 16 - E French Camp Rd Area	--	--	--	--	--	--	--	--	--	--
<b>Total</b>	<b>110.9</b>	<b>131.0</b>	<b>12.8</b>	<b>88.0</b>	<b>\$3,668,312</b>	<b>\$3,254,432</b>	<b>\$6,922,000</b>	<b>\$2,553,116</b>	<b>\$2,767,000</b>	<b>\$12,243,000</b>

<sup>(a)</sup> Excavation values based on:  
 1) San Joaquin County Improvement Standards requires the depth of basin to be 2 feet above groundwater, detention basin side slopes be at least 4H:1V, and that the water surface be a minimum of 2-feet below all ground surface elevations upstream from the basin.  
 2) City of Stockton and County of San Joaquin Final Stormwater Quality Control Criteria Plan, March 2009.  
 3) Sizing assumptions include: A depth to groundwater of 12 feet, a square detention basin shape, and a maximum water depth of 10 feet.

## ATTACHMENT F

### **Detention Storage Construction Costs**

Detention basin construction costs range from approximately \$23,000 to \$1.8 million, with a total of \$3.7 million.

### **Pump Station Construction Costs**

Pump station construction costs range from approximately \$20,000 to \$1.4 million, with a total of \$3.3 million.

### **Total Capital Costs**

Capital costs range from approximately \$95,000 to \$5.8 million, with a total of \$12.2 million. Land costs make up approximately \$2.8 million of the \$12.2 million. The cost per acre of development is approximately \$22,400.

## **RECOMMENDED FUTURE ACTIONS**

The recommended actions to address stormwater infrastructure needs are addressed in this section.

### **City-Wide Stormwater Master Plan for the Existing City**

The City does not have a City-wide storm drainage master plan with hydrologic and hydraulic models. The previous storm drain master plans did not incorporate modeling and therefore lacked information critical to infrastructure planning for the existing City. Consequently, the storm drain system improvements for the existing City areas identified in previous storm drain master plans may no longer be appropriate. This could result in some storm drain infrastructure being undersized, which could lead to flooding, or oversized which could lead to unnecessary infrastructure capital expenditures and increased operations and maintenance efforts and costs.

The City should complete a City-wide storm drainage master plan, including hydrologic and hydraulic models for existing land use conditions. The master plan should identify the future stormwater infrastructure needs to solve existing stormwater system deficiencies. The City's current stormwater fee program is insufficient to fund the required operations and maintenance needs of the City's aging stormwater and flood control infrastructure and insufficient to fund the required future repairs and replacements for the existing facilities. The City stormwater fee program should be revised based on the updated storm drainage master plan, operations and maintenance requirements, and future repairs and replacements to ensure the City collects enough money to adequately operate and maintain the existing system and construct the required future repairs and replacements.

### **City-Wide Stormwater Master Plan for the Future Development**

The City does not have a City-wide storm drainage master plan with hydrologic and hydraulic models. The previous storm drain master plans did not incorporate modeling and therefore lacked information critical to infrastructure planning for future development. In addition, the projected land uses for 2040 are different than the buildout land uses from the 2035 General Plan. Consequently, the storm drain system improvements identified in previous storm drain master plans may no longer be appropriate. This could result in some storm drain infrastructure being

## ATTACHMENT F

undersized, which could lead to flooding, or oversized which could lead to unnecessary infrastructure capital expenditures and increased operations and maintenance efforts and costs.

The City should complete a City-wide stormwater master plan, including hydrologic and hydraulic models for the 2040 land uses. The master plan should identify the future stormwater infrastructure needs and develop a capital improvement plan that is adequate to fund improvements needed for the City to serve the future development, including both infrastructure capital costs and future system operation and maintenance costs.

### **Future Development-Specific Stormwater Drainage and Flood Control Plans**

This stormwater study is a high-level assessment of required detention volume and pumping capacity for the Study Areas, and does not assess storm drainage piping facilities. These facilities are sized based on generalized land use data and preliminary engineering evaluations, and it is difficult to size stormwater facilities without knowing the layout of the development and site-specific constraints.

The City should require each new development to prepare a stormwater drainage and flood control plan covering drainage (storm drains, detention basins, pump stations, and associated hydrologic and hydraulic models *etc.*) and flood control. As development projects progress, the specific infrastructure serving the development should be reviewed and verified using the updated storm drain master plan models. The models should be used to identify both on-site and off-site development related infrastructure requirements. The development projects should be required to construct the identified on-site and to fund or construct the off-site infrastructure.

### **Future Development-Specific Stormwater Quality and Permitting Plans**

This study does not fully consider the sizing of detention basins or other facilities to address stormwater quality and stormwater pollution control measures. Stockton has a Phase 1 Municipal Separate Storm Sewer System permit that requires stormwater quality be considered. In addition, the State of California recently mandated that trash should be captured from stormwater runoff in high generating trash land use areas, including commercial, industrial, and high density residential areas. It is difficult to size these trash capture and stormwater quality systems without knowing the layout plan of the developing area.

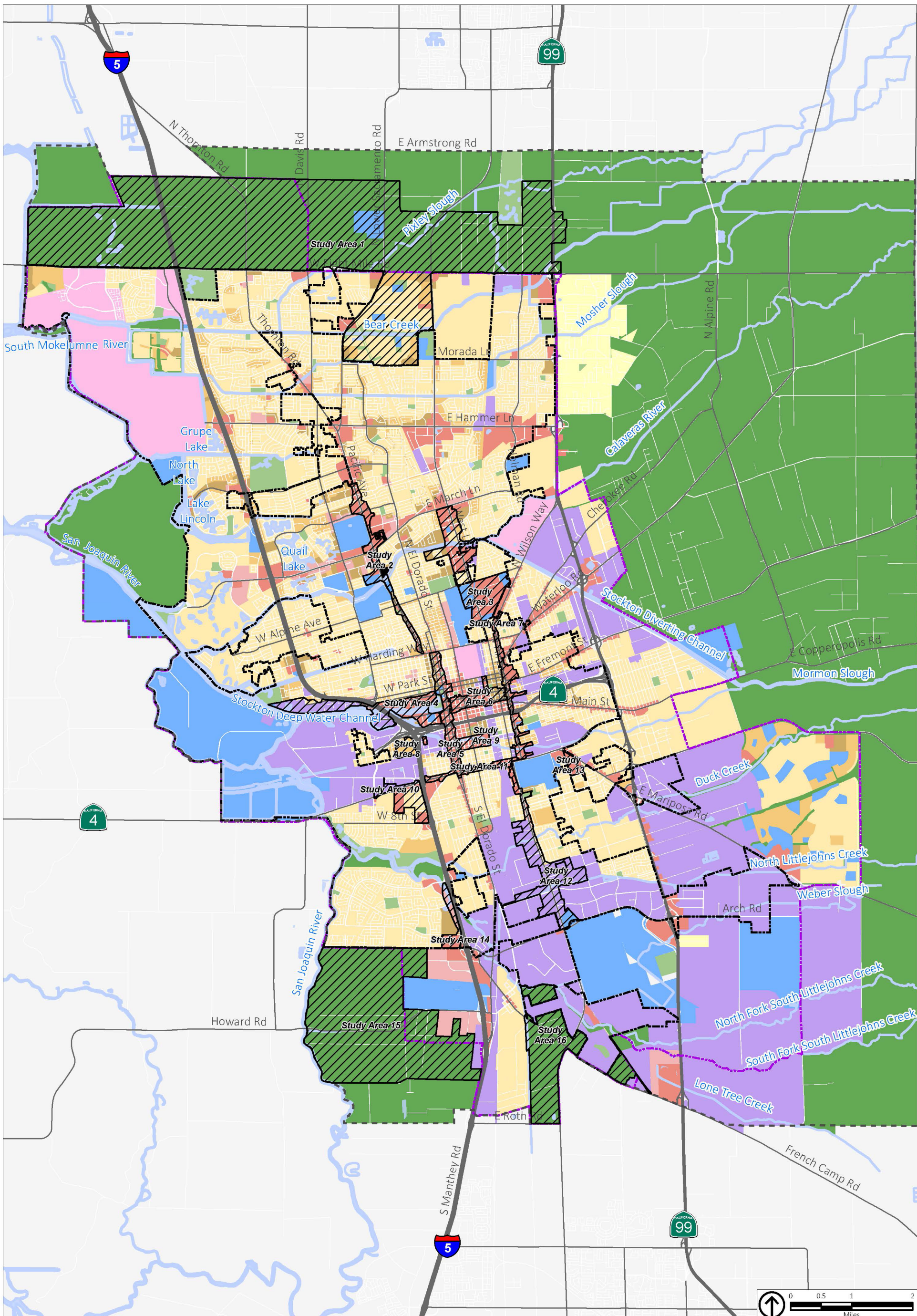
Each Study Area should develop a Stormwater Quality and Permitting Plan that is consistent with Stockton's Stormwater Quality Control Criteria Plan (March 2009) and is consistent with the City's trash control requirements. The Stormwater Quality and Permitting Plans could be combined with the Stormwater Drainage and Flood Control Plans into a single document.

## ATTACHMENT F

### CONCLUSIONS

Stormwater infrastructure conclusions are provided below:

- Detention basins and pump stations were sized to account for the net increase in the Study Areas.
- Areas that are already developed and/or already have capacity for buildout conditions were assumed to not need additional detention facilities.
- The estimated total capital costs of storm drain detention basins and pump stations is \$11.8 million.
- The estimated cost of detention basins and pumping facilities for developing areas was estimated to be approximately \$21,600 /acre of development.
- The analyses and conclusions presented in this TM are based on generalized land use data and preliminary engineering evaluations. All these evaluations should be refined and updated through detailed evaluations of each specific development project.



Source: City of Stockton, August 2017.

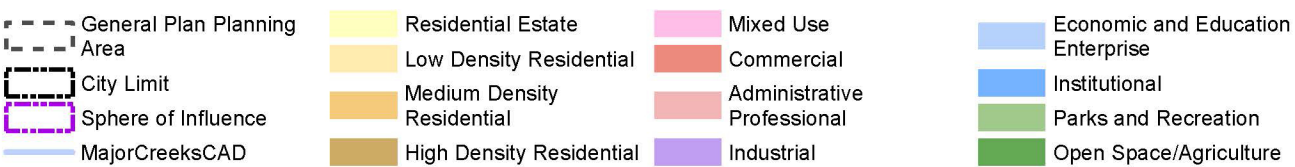
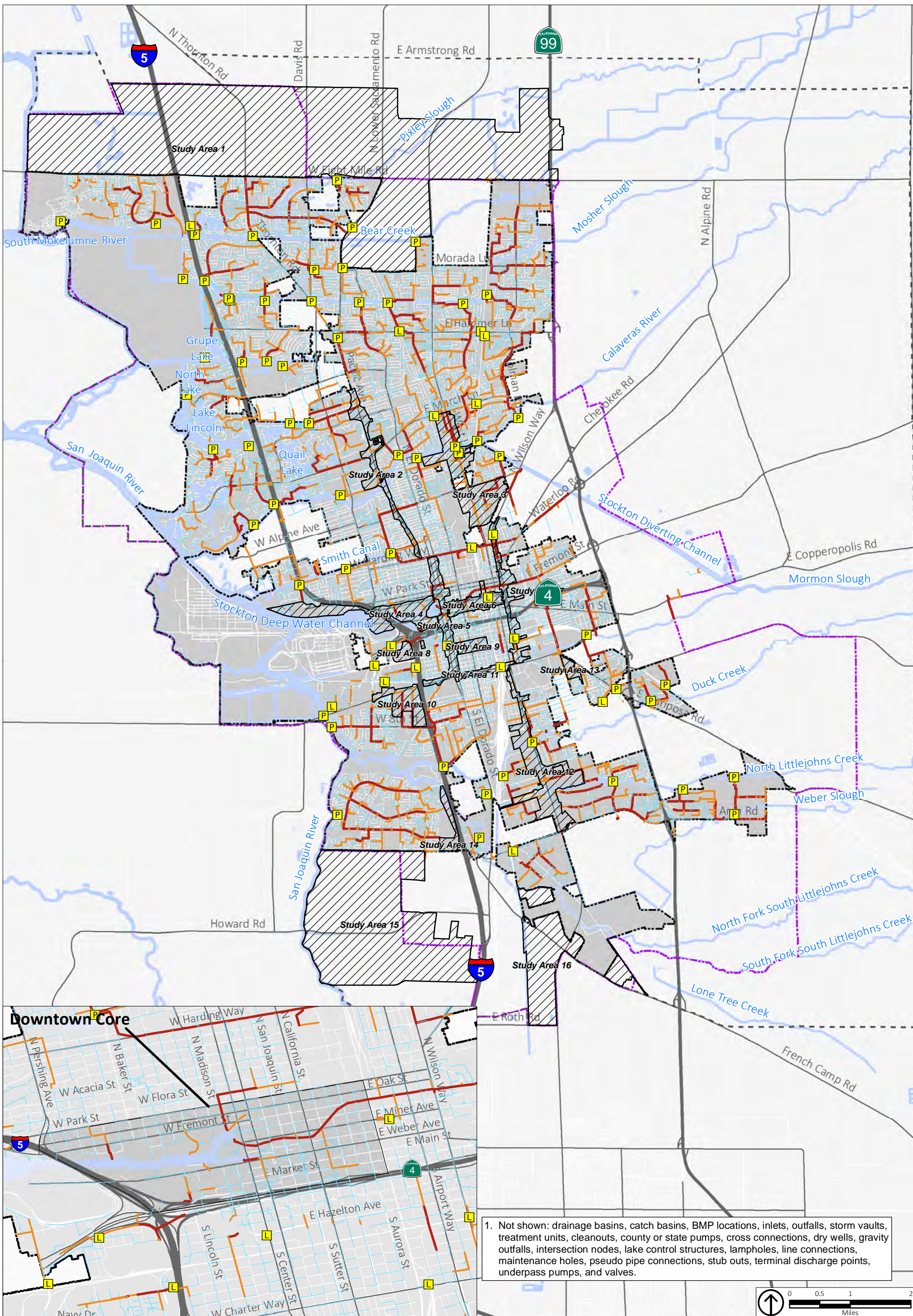


Figure 1

2017 Preferred 2040 Land Uses



**Existing Storm Facility Existing Storm Drain (Diameter)**

- L Lift Station
- P Pump Station
- Study Areas
- < 22 Inches
- 24 - 36 Inches
- >39 Inches
- Major Creeks/CAD

Figure 2  
Storm System Facilities



**ATTACHMENT A**

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Land Use Data Received from Placeworks and Buildout Land Use Map

ATTACHMENT F

Acreage Gross or Net	Study Area Name	Single Family Net New 2040	Single Family Net New 2040	Single Family Net New 2040 + Existing	Single Family Net New 2040 + Existing	Multi Family Net New 2040	Multi Family Net New 2040	Multi Family Net New 2040 + Existing	Multi Family Net New 2040 + Existing	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040	Commercial Net New 2040 + Existing	Commercial Net New 2040 + Existing	Industrial Net New 2040	Industrial Net New 2040 + Existing
		Units	Acres	Units	Acres	Units	Acres	Units	Acres	Units	Acres	Total Square Feet	0.3 FAR Sq Ft	0.5 FAR Sq Ft	5.0 FAR Sq Ft	0.3 FAR Acres	0.5 FAR Acres	5.0 FAR Acres	Sq Ft	Acres
Gross	Study Area 1 - Eight Mile Rd Area	1,379	646	1,500	663	1,198	209	1,294	217	39,408	39,408	0	0	15	0	0	241,408	20	0	105,400
Net	Study Area 2 - Pacific Ave Corridor	0	0	22	4	110	19	224	22	93,961	93,961	0	0	17	0	0	1,560,846	103	0	1,980
Net	Study Area 3 - West Ln and Alpine Rd Area	77	13	285	52	680	120	774	125	323,399	323,399	0	0	102	0	0	975,325	163	0	1,423,576
Net	Study Area 4 - Port/Waterfront	17	3	71	11	1,770	33	2,058	42	2,040,010	6,100	0	2,033,911	2	0	31	2,865,512	62	580,859	1,739,495
Net	Study Area 5 - El Dorado/Center Corridors	0	0	45	6	1,196	22	1,555	30	1,310,216	0	0	1,310,216	0	0	21	2,158,663	53	0	258,300
Net	Study Area 6 - Miner/Weber Corridors <sup>(a)</sup>	0	0	47	4	1,248	22	1,467	27	1,463,025	0	0	1,463,025	0	0	14	2,152,972	33	0	187,300
Net	Study Area 7 - Wilson Way Corridor	0	0	12	2	234	27	240	28	606,716	103,753	0	502,963	19	0	5	1,321,076	65	0	390,342
Net	Study Area 8 - I-5/Highway 4 Interchange	0	0	8	1	659	47	660	48	388,671	0	0	388,671	0	0	4	388,671	4	0	344,300
Net	Study Area 9 - Railroad Corridor at California St	0	0	19	2	1,340	24	1,363	25	1,299,279	0	0	1,299,279	0	0	24	1,365,999	26	0	182,658
Net	Study Area 10 - I-5 and Charter Way Area	86	15	314	58	98	42	127	46	133,864	133,864	0	0	42	0	0	377,363	77	83,678	203,939
Net	Study Area 11 - Charter Way/MLK Jr Blvd Corridor	0	0	5	0	396	15	396	15	323,733	9,597	0	314,135	6	0	7	703,670	38	0	0
Net	Study Area 12 - Airport Way Corridor	0	0	53	7	108	19	112	19	205,461	135,225	70,236	0	14	4	0	272,544	48	1,368,744	3,709,140
Net	Study Area 13 - Mariposa and Charter Area	0	0	12	4	0	0	77	6	80,944	80,944	0	0	25	0	0	93,560	28	0	0
Net	Study Area 14 - East Weston Ranch <sup>(b)</sup>	0	0	1	1	0	0	0	0	430,677	0	430,677	0	0	26	0	430,677	26	0	0
Net	Study Area 15 - South of French Camp Rd	0	0	89	76	0	0	9	6	0	0	0	0	0	0	0	0	0	0	1,700
Net	Study Area 16 - E French Camp Rd Area	0	0	59	123	0	0	4	9	0	0	0	0	0	0	0	5,100	17	0	4,900
Net	Outside of Study Areas <sup>(c)</sup>	1,501	246	77,964	14,117	0	0	33,183	1,916	0	0	0	0	0	0	0	23,811,089	1,607	0	46,620,901
	<b>Grand Total</b>	<b>3,059</b>	<b>923</b>	<b>80,505</b>	<b>15,131</b>	<b>9,036</b>	<b>600</b>	<b>43,542</b>	<b>2,583</b>	<b>8,739,364</b>	<b>926,252</b>	<b>500,913</b>	<b>7,312,200</b>	<b>242</b>	<b>31</b>	<b>105</b>	<b>38,724,475</b>	<b>2,371</b>	<b>2,033,281</b>	<b>55,173,931</b>

<sup>(a)</sup> Excludes Open Window approved project.  
<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.  
<sup>(c)</sup> Excludes approved/pending projects.

Acreage Gross or Net	Approved/Pending Projects Details	Net New						Full Build (2040)					
		Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres	Single Family Units	Single Family Acres	Multi-Family Units	Multi-Family Acres	Commercial Square Feet	Commercial Acres
Approved within city limit													
Gross	Westlake Villages	2,630	680	0		0		2,630	680	0		0	
Gross	Delta Cove	1,164	133	381	48	31,000	3	1,164	133	381	48	31,000	2.6
Gross	North Stockton Projects III	2,220	355	0		0		2,455	393	0		0	
Gross	Cannery Park	981	272	210	16	1,078,762	104	981	272	210	16	1,078,762	104
Gross	Nor Cal Logistics Center	0	0	0	0	0	0	0	0	0	0	0	0
Gross	Crystal Bay	951	19	392	79	0		951	19	392	79	0	0
Gross	Sanctuary	5,452	1,026	1,618	67	692,256	36	5,452	1,026	1,618	67	692,256	36
Gross	Tidewater Crossing	-310	-870	0		186,200	16	0	0	0	0	186,200	16
Net	Open Window <sup>(a)</sup>	0	0	1,391	12	-68,800	-1	0	0	1,400	12	290,000	12
Gross	Weston Ranch Town Center	0	0	0	0	481,000	41	0	0	0	0	481,000	41
Approved/pending outside city limit, inside SOI													
Gross	Mariposa Lakes	8,955	939	1,553	585	1,009,503	150	8,960	1,090	1,556	585	1,009,503	150
Gross	Airpark 599	0	0	0	0	1,678,500	128	0	0	0	0	1,678,500	128
Gross	Tra Vigne <sup>(b)</sup>	1,244	846	0	0	0	0	1,244	846	0	0	0	0

<sup>(a)</sup> The Master Development Plan for Open Window is approved for 1,034 units, with an option to expand the capacity to 1,400 units if the General Plan Update increases the maximum densities in the Downtown, which is being considered as part of this General Plan Update.  
<sup>(b)</sup> Pending; not approved.

ATTACHMENT F

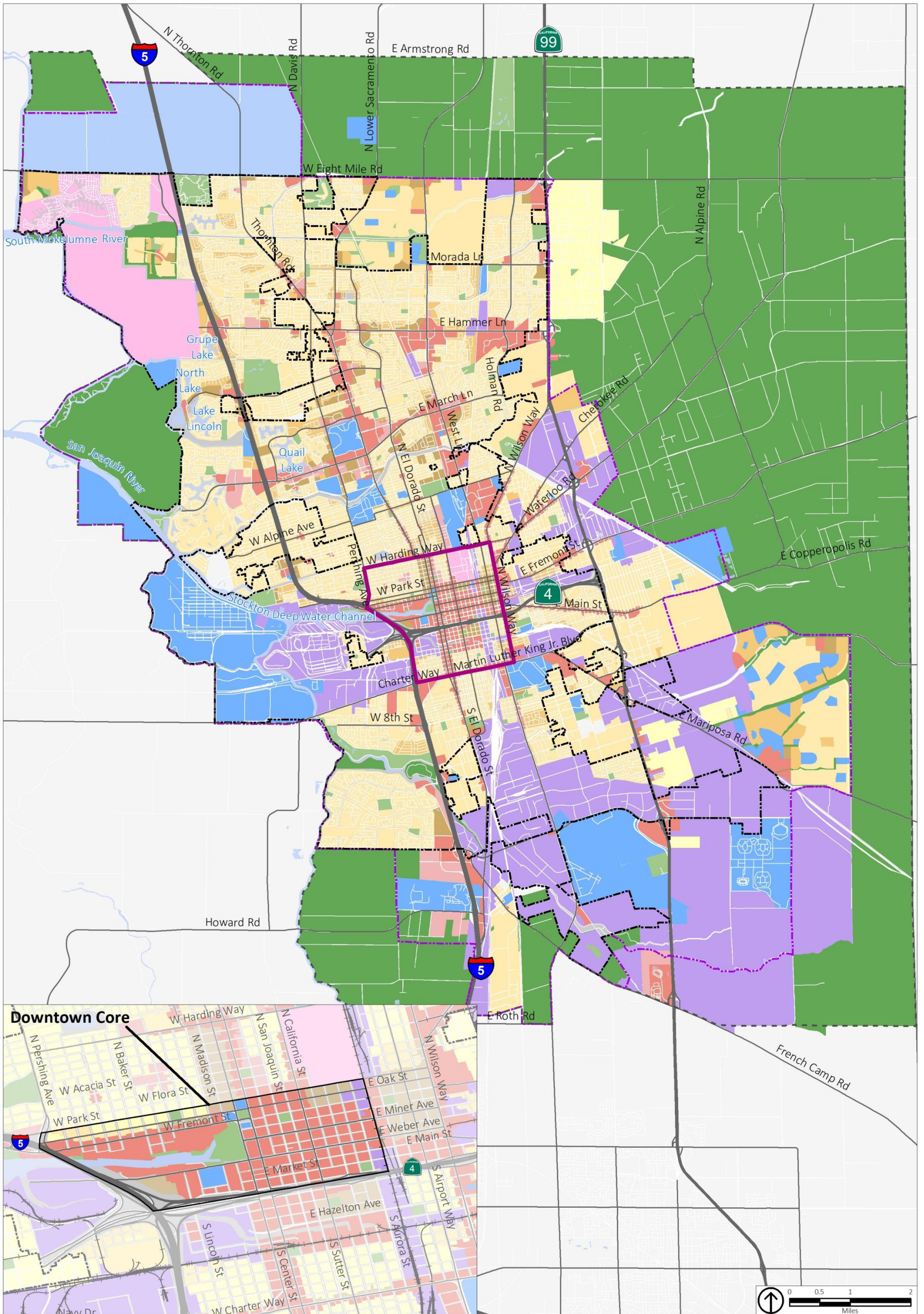
2040 Development Study Area												
	Net New Single Family Units (full buildout)	Percent applied to 2040	Net New Single Family Units (2040)	Net New Multi-Family Units (full buildout)	Percent applied to 2040	Net New Multi-Family Units (2040)	Net New Commercial Square Feet (full buildout)	Percent applied to 2040	Net New Commercial Square Feet (2040)	Net New Industrial Square Feet (full buildout)	Percent applied to 2040	Net New Industrial Square Feet (2040)
Study Area 1 – Eight Mile Rd Area	3,940	35%	1,380	3,420	35%	1,200	197,000	20%	39,000	0	0%	0
Study Area 2 – Pacific Ave Corridor	0	0%	0	440	25%	110	188,000	50%	94,000	0	0%	0
Study Area 3 – West Ln and Alpine Rd Area	80	100%	80	2,720	25%	680	1,294,000	25%	323,000	0	0%	0
Study Area 4 – Port/Waterfront	20	100%	20	2,210	80%	1,770	6,800,000	30%	2,040,000	2,323,000	25%	581,000
Study Area 5 – El Dorado/Center Corridors	0	0%	0	1,500	80%	1,200	4,367,000	30%	1,310,000	0	0%	0
Study Area 6 – Miner/Weber Corridors <sup>(a)</sup>	0	0%	0	1,560	80%	1,250	2,926,000	50%	1,463,000	0	0%	0
Study Area 7 – Wilson Way Corridor	0	0%	0	940	25%	230	1,213,000	50%	607,000	0	0%	0
Study Area 8 – I-5/Highway 4 Interchange	0	0%	0	820	80%	660	777,000	50%	389,000	0	0%	0
Study Area 9 – Railroad Corridor at California St	0	0%	0	1,680	80%	1,340	5,197,000	25%	1,299,000	0	0%	0
Study Area 10 – I-5 and Charter Way Area	90	100%	90	980	10%	100	535,000	25%	134,000	98,000	85%	84,000
Study Area 11 – Charter Way/MLK Jr Blvd Corridor	0	0%	0	790	50%	400	1,619,000	20%	324,000	0	0%	0
Study Area 12 – Airport Way Corridor	0	0%	0	430	25%	110	274,000	75%	205,000	5,475,000	25%	1,369,000
Study Area 13 – Mariposa and Charter Area	0	0%	0	570	0%	0	324,000	25%	81,000	0	0%	0
Study Area 14 – East Weston Ranch <sup>(b)</sup>	0	0%	0	610	0%	0	574,000	75%	431,000	0	0%	0
Study Area 15 – South of French Camp Rd	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Study Area 16 – E French Camp Rd Area	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Outside of Study Areas <sup>(c)</sup>	16,360	9%	1,500	29,810	0%	0	19,487,000	0%	0	126,805,000	0%	0
<b>Grand Total<sup>(d)</sup></b>	<b>20,480</b>		<b>3,060</b>	<b>48,470</b>		<b>9,040</b>	<b>45,773,000</b>		<b>8,739,000</b>	<b>134,701,000</b>		<b>2,033,000</b>

<sup>(a)</sup> Excludes Open Window approved project.  
<sup>(b)</sup> Excludes Weston Ranch Town Center approved project.  
<sup>(c)</sup> Excludes approved/pending projects  
<sup>(d)</sup> Numbers do not always add up due to rounding.

The "full buildout" of the proposed General Plan assumes the maximum development of every parcel, combined with approved and pending developments throughout the Planning Area. The 2040 land uses are based on realistic land use demand projections. The full buildout of the General Plan would result in almost three times more new housing units and over 24 times more new non-residential development than estimated for 2040. Therefore, it is extremely unlikely that the full buildout would occur by the year 2040. Full buildout may not occur until well beyond the useful lifespan of the proposed infrastructure (for example, the lifespan of concrete structures is typically 50 to 75 years). Consequently, this infrastructure planning was based on the estimated 2040 level of development. This table is included in this TM to document the relationship between the buildout land uses and the 2040 land uses.

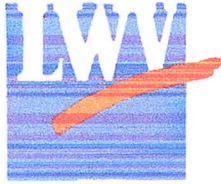
Source: PlaceWorks, 2017.

**Figure 2-8**  
**General Plan Land Use Map**



Source: City of Stockton, 2017; PlaceWorks, 2017.

- |                            |                            |                          |                                   |                        |
|----------------------------|----------------------------|--------------------------|-----------------------------------|------------------------|
| City Limit                 | Residential Estate         | High Density Residential | Administrative Professional       | Institutional          |
| Sphere of Influence        | Low Density Residential    | Mixed Use                | Industrial                        | Parks and Recreation   |
| General Plan Planning Area | Medium Density Residential | Commercial               | Economic and Education Enterprise | Open Space/Agriculture |
| Greater Downtown Boundary  |                            |                          |                                   |                        |



## League of Women Voters of San Joaquin County

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Post Office Box 4548 ■ Stockton, California 95204 ■ lwvsjc@gmail.com

October 8, 2018

Stockton Planning Commission  
Draft Envision Stockton 2040 General Plan.

Re: Adoption of Updated General Plan

Chairman Don Aguillard and Members of the Commission:

The League of Women Voters of San Joaquin County is opposed to housing and industrial development on the 3800 acres north of Eight Mile Road included in the proposed Envision Stockton 2040 General Plan Update.

A substantial amount of development is already approved and pending in North Stockton. According to General Plan Table 3-4, of the 29,300 housing units, 17,300 (59%) are in North Stockton- 12,700 in Northwest Stockton (Hammer to south of 8 Mile Road) and 4,600 in North Central and North East Stockton (Davis to Highway 99, south of 8 Mile Road). Additionally, there are 1,802,000 square feet of commercial space and 1,442,000 square feet of industrial space.

The area north of 8 Mile Road was added later in the planning process after discussion about locating a Stockton state university there. However the websites of several universities demonstrate that a university would consume very little of the 3800 acres:

- Chico, 119 acres
- Stanislaus, Turlock, 228 acres
- Stanislaus, Stockton, 102 acres
- Sacramento, 300 acres
- Fresno, 388 acres

Furthermore, the state's policy regarding enrollment growth is to maximize the capacity at existing campuses before adding new ones. (Legislative Analyst report, "Assessing UC and CSU Enrollment and Capacity", Jan 2017). The 102 acres in University Park is underutilized and, if the state's policy does not change, would be a candidate for future build out. It is interesting to note that the newest CSU-- Channel Islands-- was established on the grounds of the old Camarillo State Hospital. It replaced an off-campus center connected to CSU Northridge.

The League is of the opinion that the proposed 3800 acre addition will jeopardize growth and redevelopment in existing "infill" neighborhoods in other parts of Stockton. We support

reclassifying this to open space/agriculture with the idea of establishing a permanent buffer between Stockton and Lodi.

We appreciate the opportunity to submit our concerns for the updated Stockton General Plan and DEIR.

Sincerely yours



Kathy Casenave, President  
League of Women Voters of San Joaquin County

Cc: Stockton City Council  
Stockton Planning Department  
San Joaquin County Board of Supervisors



Stockton Planning Commission  
Via e-mail only

October 22, 2018

Re: Proposed Amendments to Policies for the Updated Stockton General Plan

Chair Aguillard and Members of the Commission:

This letter includes our proposed amendments to policies and action items for the Updated Stockton General Plan. The amendments are listed in the same order as policies in the draft General Plan.

**1. Encourage housing along major corridors and discourage “power centers” at the edge of the city.**

POLICY LU-1.1

Encourage retail businesses and housing development in mixed-use developments along regional transportation routes and in areas that serve local residents.

Action LU-1.1C

~~Continue to study and consider repealing the “Big Box Ordinance” that was adopted in 2007, and~~ Prohibit the siting of any additional big-box “power centers” at the edges of the city to limit growth inducing impacts to adjacent farmlands. ~~If big-box stores are allowed~~ in the future, require applicants to fund an analysis of economic and blight-inducement impacts of the proposed development on retail businesses in the market area, employment, City revenues and services, and any other relevant economic considerations.

Action LU-1.1D

Encourage the redevelopment of struggling under-utilized commercial strips into multi-family housing opportunities.

**2. Ensure that development at the edge of the city does not compete with housing goals for the downtown.**

POLICY LU-2.2

Facilitate the development of at least 4,400 new housing units in the Greater Downtown by 2040. (DV-2.3)

Action LU-2.2D

Discourage urban development at the edges of the city that would detract from or compete with the housing goals of the Greater Downtown.

**3. Strengthen the protection of historic resources policy.**

Action LU-3.1E

Maintain and periodically update the City's historical resources inventory and adopt a priority list to protect the most important resources.

**4. Delete the 3,800-acre "Economic and Education Enterprise" land use designation from the land use map and retain the designation on lands north of Eight Mile Road in the Agricultural and Open Space designation. Revise the existing policy on large-scale development projects and incorporate new action items describing the intent and process if land is to be designated for Economic and Education Enterprise in the future.**

POLICY LU-4.1

Encourage large-scale development proposals in appropriate locations that include significant numbers of higher-wage jobs and local revenue generation. Such development may utilize the Economic and Education Enterprise land use designation, if the proposal meets all of the criteria listed under the definition of the designation.

Action LU-4.1D The City will consider future amendments to the General Plan for extraordinary growth plans outside the Urban Services Boundary that include significant job generators or public institutions such as a college campus.

Action LU-4.1E The Economic and Education Enterprise land use designation may be applied to lands proposed for significant job generators through the amendment process.



following completion of a full environmental analysis and a land availability study that concludes there is no other land available for the project within the existing City limits. Approval and construction of the first phase of the job generator must be completed prior to the consideration of any accompanying housing development.

**5. Amend Policy LU-5.3 and Action LU-5.3B to finally establish an Ag Belt between Stockton and Lodi (see memo):**

Policy LU-5.3 Actively work to conserve prime agricultural lands outside the City boundaries and ~~Define~~ discrete and clear city edges that preserve agriculture, open space, and scenic views.

Action LU-5.3B ~~The City, in Coordinate with~~ coordination with San Joaquin County to develop a plan for a greenbelt or community separator around the city-, the City of Lodi, the California Farmland Trust, residents and affected landowners, shall prepare an Agricultural Belt Action Plan that addresses, among other items, how to target the agricultural mitigation fees that are collected by the two cities and the County toward purchasing easements within a defined buffer area between Stockton and Lodi. The location of the Agricultural Belt area shall be identified in a non-parcel specific, general fashion on the Plan Land Use Diagram map.

**6. Disallow expansion of the Urban Service Area and annexation unless there is a shortage of developable land and all standards are met:**

POLICY LU-6.2 Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.

Action LU-6.2B ~~Do not approve~~ Prohibit Urban Service Area expansion, future annexations, or City utility connections unless there is less than a 10-year supply of developable land within the city limits and the expansion ~~they are~~ is consistent with the overall goals and policies of the General Plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life.

**7. Add an action item to ensure adequate water supply is phased to meet the demands of growth.**

POLICY LU-6.3

Ensure that all neighborhoods have access to well-maintained public facilities and utilities that meet community service needs.

Action LU-6.3D

The City shall ensure that water supply capacity and infrastructure are in place, or planned and financed, prior to granting initial approvals for new development. The City shall pursue approval and construction of the second phase of the Delta Water Supply Project to serve new growth and reduce groundwater withdrawal. However, if Phase 2 is delayed or not approved by the State, the City shall phase or defer the approval of new growth until new surface water supplies are in place.

**8. Strengthen the following land use policy to tie it with climate change goals and add a new action:**

## POLICY LU-6.4

Ensure that land use decisions balance travel origins and destinations in as close proximity as possible, and reduce vehicle miles traveled (VMT). (LU-1.12, HS-4.13)

Action LU-6.4D

Reduce Vehicle Miles Traveled (VMT) per household by planning new housing in closest proximity to employment centers, improving and funding public transportation and ridesharing, and facilitating more direct routes for pedestrians and bicyclists.

**9. Require major new development to incorporate and fund transit facilities and service, which is required by the Settlement Agreement:**

POLICY TR-2.2 Connect housing and employment development in areas with good transit access.

Action TR-2.2A Require major new development to incorporate and fund design features to promote safe and comfortable access to transit, such as a circulation network that facilitates efficient and connected bus travel, clear pedestrian routes connecting origins and destinations to transit stops, sheltered bus stops, park-and-ride facilities, and highly visible transit information and maps.

Action TR-2.2B ~~Obtain input from~~ Support local and regional transit operators ~~on~~ by ensuring major new development projects ~~to ensure projects are~~ designed to support transit and provide fair share funding of the cost of adequate transit service and access, consistent with the Settlement Agreement.

Action TR-2.2C Request that public transit service providers expand routes and increase frequency and operational hours consistent with current short- and long-range transit planning, ~~as financially feasible~~ with the assistance of new development funding.

**10. Strengthen the following transportation policy and add a new action:**

POLICY TR-3.2 Require new development and transportation projects to reduce travel demand and greenhouse gases, support electric vehicle charging, and accommodate multi-passenger autonomous vehicle travel as much as feasible.

Action TR-3.2D Require projected traffic levels of new development to meet the recommended State threshold of 15 percent below baseline VMT per capita through smart growth design and other incentive programs.

**11. Consider adoption (not just study) an inclusionary housing program.**

Action CH-4.1B

~~Conduct a study to explore the feasibility~~ Consider adoption of inclusionary housing requirements, in-lieu fee levels, density bonus, modified fee structures, and/or tax incentives to promote the inclusion of a meaningful percentage of affordable units within market rate housing projects, ~~and implement the feasible approaches identified in the study.~~

Thank you for your consideration of these important matters. We look forward to much more discussion and debate about these issues.

Very truly yours,

ss/Eric Parfrey  
Chair, CCG and  
Chair, Sierra Club California Executive Committee

cc: Stockton City Council  
SJ County Board of Supervisors  
State Attorney General  
Shute, Mihaly, Weinberger

## 2008 SETTLEMENT AGREEMENT CONSISTENCY

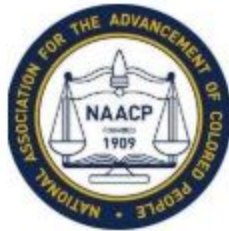
2008 SETTLEMENT AGREEMENT PROVISION	DRAFT ENVISION STOCKTON 2040 GENERAL PLAN POLICY/ACTION
6a: Require 4,400 units of new housing growth to be in Greater Downtown Stockton.	Policy LU-2.2: Facilitate the development of at least 4,400 units in the Greater Downtown by 2040.
	Action LU-2.2A: Provide more flexibility for residential development, including through a streamlined permit process, and to contribute to the “charm” of the Downtown.
	Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.
6b: Require an additional 14,000 units of new housing growth to be in 2008 city limit.	Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
	Action LU-6.2A: Implement an infill incentive program that encourages infill through expedited permitting, changes in fee structures, and other strategies.
	Action 6.2B: Do not approve future annexations or City utility connections unless they are consistent with the overall goals and policies of the General Plan and do not adversely impact the City’s fiscal viability, environmental resources, infrastructure and services, and quality of life.
6c: Provide incentives to promote infill development in the Greater Downtown.	Action LU-2.1A: Develop and utilize all available financing tools and incentives to stimulate Downtown investment.
	Action LU-2.1B: Provide flexibility for redevelopment of historic structures in the Downtown.
	Policy LU-2.2: Facilitate the development of at least 4,400 units in the Greater Downtown by 2040.
	Action LU-2.2A: Provide more flexibility for residential development, including through a streamlined permit process, and to contribute to the “charm” of the Downtown.
	Action LU-2.2B: Establish Transit Oriented Development (TOD) Overlay Zones around the ACE and Amtrak train stations to promote high-density residential and TOD.
	Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.
	Action LU-2.3A: Establish an entertainment district in the Downtown with strategies to promote entertainment uses, including reducing permit requirements and other incentives.
6d: Provide incentives for infill development within the existing city limit but outside the Greater Downtown.	Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
	Action LU-6.2A: Implement an infill incentive program that encourages infill through expedited permitting, changes in fee structures, and other strategies.
7a: Establish criteria for minimum levels of transportation efficiency, transit availability and level of service (LOS), City service capacity, water availability, and other urban services performance measures.	Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
	Action LU-6.2B: Do not approve future annexations or City utility connections unless they are consistent with the overall goals and policies of the General Plan and do not adversely impact the City’s fiscal viability, environmental resources, infrastructure and services, and quality of life.
	Action LU-6.3A: Require development to mitigate any impacts to existing sewer, water, stormwater, street, fire station, park, or library infrastructure that would reduce service levels.

## 2008 SETTLEMENT AGREEMENT CONSISTENCY

	Policy TR-4.1: Utilize level of service (LOS) information to aid understanding of potential major increases to vehicle delay at key signalized intersections.
	Action TR-4.1A: Strive for traffic LOS D or better.
	Policy TR-4.2: Replace LOS with: (1) vehicle-miles traveled (VMT) per capita; and (2) impacts to non-automobile travel modes, as the metrics to analyze impacts related to land use proposals under the California Environmental Quality Act, in accordance with SB 743.
	Action TR-4.2A: Require projects to evaluate per capita vehicle miles traveled (VMT) and impacts to transit, bicycle, and pedestrian modes.
	Action TR-4.2B: Amend the Transportation Impact Analysis Guidelines to include alternative travel metrics and screening criteria.
	Action TR-4.3A: Amend the Transportation Impact Analysis Guidelines to establish a threshold of 15 percent below baseline VMT per capita to determine a significant impact under CEQA.
	Policy SAF-3.2: Protect the availability of clean potable water from groundwater sources.
	Action SAF-3.2A: Continue to cooperate with San Joaquin County, Stockton East Water District, and CalWater to monitor groundwater withdrawals and ensure that they fall within the target yield for the drinking water aquifer.
	Policy SAF-3.4: Ensure adequate collection, treatment, and safe disposal of wastewater.
	Action SAF-3.4A: Require all new development to be served by an adequate wastewater collection system to avoid possible contamination of groundwater from onsite disposal systems.
7b: Establish criteria for firm, effective milestones that will assure infill, jobs/housing, GHG, and VMT reduction goals are met before new entitlements can be granted.	Policy LU-6.1: Carefully plan for future development and proactively mitigate potential impacts.
	Action LU-6.1A: Require that environmental review for any development project that would exceed the development anticipated in the General Plan EIR address associated growth impacts.
	Action LU-6.1B: Monitor the rate of growth to ensure that it does not overburden the City's infrastructure and services.
	Action LU-6.1C: Require that vacant unincorporated properties be annexed prior to provision of City services.
	Action LU-6.1D: Require that all utility connections outside the city limit be for land uses that are consistent with the General Plan.
	Action LU-6.1E: Do not approve new development unless there is adequate infrastructure in place or planned and funded.
	Action LU-6.1F: Adjust the Public Facilities Fee structure to encourage development in areas where infrastructure is already present and ensure that non-infill pays its fair share of anticipated citywide capital facilities and operational costs.
7c: Establish impact fees on new development or alternative financing mechanisms that will ensure the milestones identified in 7a and 7b are met. Such fees shall be structured to ensure that development is revenue-neutral to the City, may be in addition to mitigation measures required by	Policy LU-2.2: Facilitate the development of at least 4,400 new housing units in the Greater Downtown by 2040.
	Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.
	Policy LU-3.3: Maintain or expand the currently available amount of public park and open space area in each neighborhood.
	Action LU-3.3-D: Periodically review the City's Development Impact Fee requirements to determine whether they should be adjusted to reflect the City's recreation priorities.

## 2008 SETTLEMENT AGREEMENT CONSISTENCY

CEQA, and shall be based on a fiscal impact analysis and a public facilities financing plan.	Policy LU-6.1: Carefully plan for future development and proactively mitigate potential impacts.
	Action LU-6.1F: Adjust the Public Facilities Fee structure to encourage development in areas where infrastructure is already present and ensure that non-infill pays its fair share of anticipated citywide capital facilities and operational costs.
	Policy LU-6.2: Prioritize development and redevelopment of vacant, underutilized, and blighted infill areas.
	Action LU-6.2A: Implement an infill incentive program that encourages infill through expedited permitting, changes in fee structures, and other strategies.
	Policy LU-6.5: Improve and maintain the City's fiscal health.
	Action LU-6.5A: Require preparation of a fiscal impact analysis for large development projects and annexations to ensure a full accounting of infrastructure and public service costs, and require fiscal mitigations when necessary.
	Action LU-6.5B: Utilize development agreements to implement public facilities financing plans and secure fiscal mitigations.
	Action LU-6.5C: Utilize developer fees, the City's public facilities fees, and other methods to finance public facilities.
7d: Explore the feasibility of enhancing the financial viability of infill development in the Greater Downtown, through the use of such mechanisms as an infill mitigation bank.	Policy LU-2.1: Promote the Downtown and waterfront as a hub for regional commerce and entertainment, with high-quality housing to complement commercial activity and to infuse the area with daytime, evening, and weekend activity.
	Action LU-2.1A: Develop and utilize all available financing tools and incentives to stimulate Downtown investment.
	Action LU-2.1B: Provide flexibility for redevelopment of historic structures in the Downtown.
	Action LU-2.2C: Adjust the Public Facilities Fee structure to promote development in the Downtown.



Healthy Neighborhoods Collaborative  
1106 N. El Dorado Street  
Stockton, CA 95202

October 22, 2018

Mr. David Kwong  
Community Development Director  
City of Stockton  
345 N. El Dorado Street  
Stockton, CA 95202

Dear Mr. Kwong,

The Healthy Neighborhoods Collaborative would like to thank you for the opportunity to provide input on the draft Stockton General Plan. We are pleased at how far this General Plan update has come since the previous one, and would like to commend city staff for their extensive outreach efforts in which significant attendance at public workshops has been well noted by planners and city officials alike. We appreciate and are thankful for city staff's inclusion of many of our policy suggestions as presented in our previous letter back in March 2017.

The Healthy Neighborhoods Collaborative is made up of public health, environmental, environmental justice, housing, and transportation advocates as well as community and faith groups. Together we are working toward a more healthful, equitable, and sustainable city.

As a Collaborative, we have identified areas that the draft General Plan can be tightened to ensure our existing neighborhoods become more healthful, equitable, and sustainable. Stockton needs to invest first in its existing neighborhoods and residents. We would be very happy to meet with you and the consultant team to discuss these further in detail.

Please note: original is in italics, and added suggestions are non-italicized and underlined. Subtractions are strikethrough. As many of the policies and actions are reiterated in multiple areas, suggestions are only made once but apply to all instances where that policy or action is mentioned throughout the draft or, if added entirely, to all applicable categories.

## Land Use

### **Additional Actions for Policy LU-5.2**

Action: Enforce water conservation measures

Action: Coordinate with water agencies and non-profit organizations to promote public awareness on water quality and conservation issues and consistency in water quality impacts analyses.

### **Additional Action for Policy LU-6.2**

Action: Ensure prioritization of development and redevelopment of vacant, underutilized, and blighted infill areas be considered through strategies such as zoning changes and anti-gentrification methods.

### **Additional Action for Policy LU-6.3**

Action: Require a no-idling zone within a 1 to 2 block radius on both sides of streets and side streets of schools locations.

### ***POLICY LU-6.4***

*Action LU-6.4B Maintain a reasonable proximity and balance (i.e., magnitude) between job generating uses, housing opportunities, and resident services and amenities, including transit and active transportation.*

### ***POLICY LU-6.6***

*Action LU-6.6B Participate in the San Joaquin Council of Governments' (SJCOG) regional planning programs and coordinate City plans and programs with those of SJCOG, including the Regional Transportation Plan/Sustainable Communities Strategy, among others, and work with non-profit organizations also engaging in these planning programs. (LU-1.10)*

### ***POLICY LU-6.7***



*Action LU-6.7A Work with community-based organizations to develop and implement a comprehensive and accountable long-term strategy to engage the Stockton community in planning decisions. (LU-8.2)*

## **Community Health**

### **POLICY CH-1.1**

*Action CH-1.1A Plant and maintain appropriate shade trees along all City streets to reduce heat exposure, prioritizing areas of the city with significantly less tree canopy, and provide a buffer between the travel way and bicycle and pedestrian facilities, and provide other amenities like well-marked crosswalks, bulb-outs, and pedestrian scale street lighting. (NCR-8.2)*

*Action CH-1.1B Prepare a parks master plan through an open and engaging process inclusive of community residents that assesses the quality and distribution of existing parks, facilities, and community centers throughout the city relative to the population served (i.e., within a set walking distance) and their needs (i.e., considering age, income, and abilities), and, based on this information, identifies and prioritizes new, renovation, and expansion park and community center projects and describes funding means and timelines. (RW-1.1, IM RW-1, IM RW-2, IM RW-7)*

### **POLICY CH-1.2**

*Action CH-1.2D Prioritize pedestrian and active transportation improvement projects, in low-income/disadvantaged communities, that connect residential areas to retail locations that sell healthy food.*

### **Additional Actions for Policy CH-1.3**

*Action: Adopt and Implement and Urban Agriculture Incentive Zone (per AB551) to allow privately-owned vacant property to be productively used for growing food.*

*Action: Partner with nonprofits, local farmers and San Joaquin County Public Health Services to conduct public outreach and education to aid in the development of an urban agriculture ordinance.*

*Action: Identify new potential locations for farmers' markets in low-income and nutrient deficient neighborhoods, including opportunities to hold markets on publicly owned land.*

### **POLICY CH-2.1**

*Prioritize maintenance of streets and improvement of sidewalks, parks, and other infrastructure in areas of the city that historically have been comparatively underserved by public facilities, including implementation of complete streets where needed, especially in conjunction with infrastructure maintenance and improvement projects.*

(RW-2.10)

*Action CH-2.1A When considering parks and infrastructure maintenance and improvement projects, consider the following through an open and engaging process inclusive of community residents: ■ Whether the affected community is underserved or disadvantaged. ■ What the priority needs of the community are and whether the project would address those needs. ■ Whether the project would negatively impact the community, such as through increased exposure to pollutants or displacement of residents or local businesses.*

*Action CH-2.1B Provide incentives for rehabilitation or redevelopment of distressed properties that takes into consideration anti-gentrification strategies.*

*Action CH-2.1C Develop incentives to promote reuse of distressed areas, such as through, re-zoning, permit streamlining, density bonuses, and other appropriate tools. (IM LU-5)*

*Action CH-2.1D Conduct marketing to potential developers to encourage the redevelopment and conversion of distressed commercial strips into housing and mixed-use areas that includes strategies to avoid gentrification. (LU-4.9)*

*Action CH-2.1F Work with transit agencies, non-profit organizations, and communities, to maintain and improve transit service in underserved and disadvantaged neighborhoods to connect residents with jobs, shopping, and services.*

### **POLICY CH-2.2**

*Action CH-2.2A Aggressively facilitate the conservation and rehabilitation of older neighborhoods through the following approaches: ■ Utilize all federal, State, and local programs for conservation and rehabilitation projects. ■ Prioritize older disadvantaged neighborhoods for investment using funds such as the Community Development Block Grants. ■ Encourage private investment in older neighborhoods. ■ Cooperate in joint public-private partnerships to invest in older neighborhoods. (DV-3.5)*

### **POLICY CH-2.3**

*Action CH-2.3A Build strong ties with disadvantaged communities to ensure that local residents can make significant contributions to planning decisions through the following: ■ Use culturally appropriate approaches. ■ Consider the convenience of the timing and locations of meetings to community members. ■ Use social media and other communication techniques for those without time to attend public meetings. ■ Provide translation services and translated materials when needed. ■ Partner with non-profit organizations who are already active within the community*

*Action CH-2.3B Expand efforts to repair and rehabilitate substandard housing in*

*disadvantaged communities taking into consideration anti-gentrification strategies.*

**POLICY CH-3.2**

*Encourage neighborhood-serving commercial uses in areas where frequently needed goods and services are not widely available, especially for these areas with no availability within a 2-mile radius. (LU-4.8)*

**POLICY CH-5.1**

*Accommodate a changing climate through adaptation, mitigation, and resiliency planning and projects.*

**Additional Action for Policy CH-5.1**

*Action: Coordinate with relevant agencies and non-profit organizations to promote public awareness and readiness on natural disaster related emergency preparedness.*

**POLICY CH-5.2**

*Action CH-5.2C Expand educational and outreach efforts to promote recycling by residents of multi-family housing, businesses, and schools.*

## **Transportation**

**POLICY TR-1.1**

*Action TR-1.1A Direct truck traffic to designated truck routes that facilitate efficient goods movement and minimize risk to areas with concentrations of sensitive receptors, such as schools, for example by disallowing truck routes to pass directly on streets where schools are located, and vulnerable road users, like pedestrians and bicyclists. (TC-2.19, HS-2.6)*

*Action TR-1.1E: Work with local school districts to provide pedestrian crossing enhancements like stop signs, within a two-mile radius of schools, and encourage activities like a walking school bus, and create education programs that teach students bicycle safety.*

**POLICY TR-2.1**

*Action TR-2.1A Require safe and secure bicycle parking facilities to be provided at major activity centers such as public facilities, employment sites, schools, and shopping and office centers, along with showers and lockers for major employment sites. (TC-5.7, TC-5.10)*

**Additional Action for Policy TR-2.1**

Add action TR-2.1C to Maintain and implement the City of Stockton Safe Route to School plan.

**POLICY TR-2.2**

*Connect housing and employment development in areas with good transit access, through open and inclusive processes where appropriate. (TC-4.3, HS-4.12)*

*Action TR-2.2B Obtain input from community residents, relevant non-profit organizations, local and regional transit operators on major new development projects to ensure projects are designed to support transit and provide adequate transit service and access. (TC-4.4, IM TC-13)*

**Additional Action for Policy TR-2.2**

Action: Support efforts to electrify buses

**POLICY TR-3.1**

*Action TR-3.1 B Where feasible and appropriate, reduce the width of existing streets using bulbouts, medians, pedestrian islands, shade tree landscaping, appropriate signage, and similar methods, while not jeopardizing emergency response.*

*Action TR-3.1C Preserve right-of-way for transit and bicycle uses when designing new roadways and improving existing roadways, and ensuring adequate and clear signage. (TC-4.7)*

**Safety**

**POLICY SAF-4.3** *Coordinate with the San Joaquin Valley Air Pollution Control District and non-profit organizations to promote public awareness on air quality issues and consistency in air quality impacts analyses.*

**CalEnviroScreen Map**

The 2040 Envision Stockton General Plan Update presents a unique opportunity to improve and revitalize many of the city's existing neighborhoods. To remain consistent with this goal we encourage the city of Stockton staff and consultants to revisit the Disadvantaged Communities map in Figure 6-1 on page 6-5. The map depicts disadvantaged communities using the California Communities Environmental Health Screening Tool, CalEnviroScreen. The colors on the map shown range from shades of red and orange representing severely disadvantaged communities to shades of green for those with lower rankings. Although this map is illustrated using a 5% percent scale and CalEnviroScreen uses a 10% scale we want to ensure that communities outside of central and south Stockton whose census tracts do not appear to be disadvantaged according to this map do not miss out on the benefits of policies and actions

designed to improve such communities. To ensure that all neighborhoods throughout the city can benefit from the equity measures set forth in the general plan it is necessary to update the disadvantaged communities map to one that more closely depicts the current CalEnviroScreen 3.0, and to provide a clear and inclusive definition of a disadvantaged community as it pertains policies and actions in the general plan.

### **Accountability**

Lastly, to ensure continued public participation and measures for accountability, the general plan should include a table or reference to which agency or department is responsible for implementing each of the specified action. As we see in Richmond's 2030 General Plan, such additions would ensure community partners and residents are able to stay engaged through the implementation of the 2040 Envision Stockton General Plan.

The Healthy Neighborhoods Collaborative calls on the City of Stockton to continue on this path of health, sustainability and equity through the General Plan, and promote existing neighborhoods as priority. We look forward to discussing these recommendations with you in more detail, and to continue engagement in the General Plan process.

Sincerely,

Yolanda Park, Environmental Justice Program Manager  
Catholic Charities, Diocese of Stockton

Barb Alberson, MPH, Sr. Deputy Director, Policy & Planning  
San Joaquin County Public Health Services

Erin Reynolds, Community Outreach Specialist  
Public Health Advocates

Eric Parfrey, Chair/Steering Committee  
Campaign for Common Ground

Esperanza Vielma, Executive Director  
CafeCoop

Richard Abood, Representing Member  
EcoInterFaith

Curtis Smith, County Director  
Faith in the Valley, San Joaquin

Eric Parfrey, Chair, California Executive Committee  
Sierra Club

Marty Martinez, MPP, Northern California Policy Manager  
Safe Routes to School National Partnership

Robert Bivens, President  
NAACP-Stockton Branch

**And the residents of Stockton:**

Jeri Bigbee  
Beatriz and Miguel Flores  
Brandi Moore  
Charlene West  
Ernest Williams  
Roslyn Burse  
Shani Richards  
Cynthia Grayson  
Jennifer Flores  
Christina Peoples  
Shapresha Galloway  
LaTina Griffin  
Candis Bishop  
Alice Moore  
Willie Moore  
Tiana Moore

CC:

Mayor Michael Tubbs  
Vice Mayor Elbert Holman  
Councilmember Dan Wright  
Councilmember Susan Lofthus  
Councilmember Susan Lenz  
Councilmember Christina Fugazi  
Councilmember Jesus Andrade  
Planning Commissioner Don Aguillard  
Planning Commissioner Elizabeth Hull  
Planning Commissioner Sol Jobrack  
Planning Commissioner D'Adrea Davie  
Planning Commissioner Kimberly Warmsley

Planning Commissioner Waqar Rizvi  
Planning Commissioner Anne Mallett  
David Stagnaro, Community Development Department



ATTACHMENT K

Received

NOV 13 2018

Community Development  
Permit Center/Building Division

November 8, 2018

City of Stockton Planning Commission  
City of Stockton  
425 North El Dorado Street, City Hall  
Stockton, CA 95202

Re: Envision Stockton 2040 General Plan Update

Dear Honorable Members of the Stockton Planning Commission:

Thank you for the opportunity to participate in the Envision Stockton 2040 General Plan Update. This has been an informative and important process and I applaud the City for pursuing a plan and policies that champion job and educational growth for its residents. As the Update now winds its way to a conclusion, I felt it important to correct the record as it relates to our Eight Mile Road property.

One, it has been reported that "Spanos" owns "3,800 acres of prime ag land" north of Eight Mile Road. Factually, this is wrong. Spanos - more correctly Trinity Capital LLC and Spanos Corporation - owns approximately 900 acres north of Eight Mile Road. Notably, this land has been earmarked for development since 2004.

Two, it has also been reported that as many as 26,710 housing units are planned for the "Spanos land". Again, factually this is wrong. After carefully listening to feedback from the community, our local legislator, and city staff, we recalibrated its development plans and crafted a plan for our Eight Mile Road properties that focuses on job creation rather than housing. For instance, we have set aside land for a 4-year university, a separate innovation campus, a jobs training and employment center, and a community hospital and health care center. In addition, after meeting with potential tenants we learned that nearby housing positively influences locational decisions. Thus, we acknowledge that new housing must complement job centers. We also recognize the type of housing to be built will be guided primarily by city policies and secondarily by market conditions. This approach is consistent with the City Council's goals for the property north of Eight Mile Road.

Three, the land north of Eight Mile Road has been earmarked for development since the late 1990s and was specifically included in the Sphere of Influence ("SOI") in 2004. (A sphere of influence represents a decision that land is planned to be annexed and developed within the City of Stockton.) Significantly, after the Sierra Club challenged this designation, they entered into a negotiated settlement and agreed



to dismiss their lawsuits "with prejudice". Therefore, as a party to the negotiated settlement, the Sierra Club is prevented from challenging the validity of the Sphere of Influence.

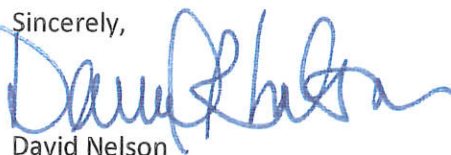
Four, the development projections and assumptions used to evaluate the impacts of developing north of Eight Mile Road are significantly flawed. The draft Environmental Impact Report ("DEIR"), table 3-3, 2040 Development by Study Area, proposes that development north of Eight Mile Road will be largely residential. This is wholly inconsistent with the land-use designation of an Employment and Education Enterprise Zone and fails to be responsive to the Council's expressed vision for this study area. As a side note, we were not consulted on our proposed development plans for our Eight Mile Road property and this omission may have contributed to the inaccuracies presented in the table and analysis.

Our vision for the Eight Mile Road properties is transformative in terms of economic development and employment opportunities. We envision a project that would marry together economic, environmental, and social sustainability. It is a project that strikes a balance between jobs, education and housing, transforming the city from a car-centric commuter community to a hub of economic and educational opportunities.

The General Plan Update is an important next step in Stockton's economic recovery. We believe a General Plan that defines policies encouraging job growth, job diversity and prosperity, and expanded educational opportunities will send a clear signal that Stockton is the right location and has the right vision for the State's next 4-year university and a city which is strongly supportive of growing companies that create family wage jobs and widespread economic opportunities.

Thank you for your consideration of our comments.

Sincerely,



David Nelson

AG Spanos Companies

Cc: Kurt Wilson  
David Kwong  
John Leubberke

Resolution No. **2018-12-04-1503-01**

## **STOCKTON CITY COUNCIL**

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### **RESOLUTION CERTIFYING THE ENVIRONMENTAL IMPACT REPORT FOR THE ENVISION STOCKTON 2040 GENERAL PLAN UPDATE (GENERAL PLAN) AND UTILITY MASTER PLAN SUPPLEMENTS (UMPS), ADOPTING THE FINDINGS OF FACT, ADOPTING A MITIGATION MONITORING AND REPORTING PROGRAM, REJECTING LAND USE ALTERNATIVES, AND ADOPTING A STATEMENT OF OVERRIDING CONSIDERATIONS**

On January 26, 2016, the City Council of the City of Stockton (City Council) authorized the preparation of the Envision Stockton 2040 General Plan Update (General Plan), Utility Master Plan Supplements (UMPS), and General Plan and UMPS Environmental Impact Report (EIR); and

On May 24, 2017, a Notice of Preparation (NOP) was prepared and circulated through the State of California Governor's Office of Planning and Research for a programmatic EIR for the General Plan and UMPS (State Clearing House Number 2017052062); and

On June 8, 2017, the City held a duly-noticed public scoping meeting for the Draft General Plan and UMPS programmatic EIR (Draft EIR) at the Jack Silva Conference Room at the City of Stockton Permit Center, located at 345 N El Dorado St, Stockton, California; and

On July 25, 2017, after numerous public meetings and workshops, and subsequent analysis and consideration of alternative plan ideas, the City Council identified the preferred draft General Plan land use alternative to be analyzed in the General Plan and UMPS programmatic EIR; and

On August 23, 2017, the NOP was reissued, exclusively to reflect a single map correction, which began a second 30-day review period; and

On June 26, 2018, a Notice of Completion of the Draft EIR was prepared and circulated through the State of California Governor's Office of Planning and Research, and the 45-day public review and comment period took place between June 26, 2018 and August 10, 2018; and

On June 26, 2018, a Notice of Availability (NOA) of the Draft EIR and notice of the public comment hearing for the Draft EIR were distributed to responsible agencies; local, State, and federal agencies; interested groups; and interested persons; and on that same day notices thereof were posted at Stockton City Hall, in a local newspaper The Record, and on the General Plan website; and

On August 2, 2018, the Planning Commission held a duly-noticed review and comment meeting on the Draft EIR; and

On October 10, 2018, the City published the Final General Plan and UMPS programmatic EIR (Final EIR), which included responses to comments received on the Draft EIR; and

On October 25, 2018, and November 15, 2018, the Planning Commission held a duly-noticed public hearing regarding the General Plan and UMPS EIR, Adoption of Findings of Fact, Statement of Overriding Considerations, Mitigation Monitoring and Reporting Program, and Draft General Plan and UMPS, and the Commission voted 6-1, Davie dissenting, to recommend that the City Council certify the EIR and approve the General Plan and UMPS; and

On December 4, 2018, the City Council held a duly-noticed public meeting to consider the Final EIR and proposed General Plan and UMPS (together, "the Project") as recommended by the Planning Commission, and the Council received testimony from City staff, City's consultants, and interested persons, now, therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF STOCKTON, AS FOLLOWS:

That the City Council of the City of Stockton does hereby certify that the Final EIR has been completed in compliance with the California Environmental Quality Act, and finds in regard to the Environmental Impact Report that:

1. The City Council of the City of Stockton has reviewed and considered the information contained in the Final EIR prior to approving the proposed General Plan and UMPS.

A. Changes or alterations have been incorporated into the project, including policies and actions contained in the plan and mitigation measures, which mitigate or avoid the significant effects on the environment, including as incorporated into the Mitigation Monitoring and Reporting Program to be adopted for the project (Exhibit 2).

B. Those changes or alterations that are within the responsibility and jurisdiction of another public agency have been, or can and should be, adopted by that other agency.

C. Specific economic, legal, social, technological, or other considerations identified in detail in the Findings of Fact and Statement of Overriding Considerations (Exhibit 1) make infeasible certain mitigation measures or the alternatives identified in the Final EIR.

D. The benefits of the proposed project outweigh the unavoidable adverse environmental effects and, thus, the adverse effects of the project are found to be acceptable as detailed in the Findings of Fact and Statement of Overriding Considerations (Exhibit 1).


E. The significant effects which cannot be mitigated are found to be acceptable to support approval of the Project based upon the information

provided in the Final EIR and in the project record as more particularly described in the Findings of Fact and Statement of Overriding Considerations (Exhibit 1).

2. The City Council of the City of Stockton finds that the Final EIR for the proposed General Plan and UMPS reflects the independent judgment of the City acting as lead agency for the Project.

3. The City Manager is authorized to take such other actions as are necessary and appropriate to carry out the purpose and intent of this Resolution.

PASSED, APPROVED, and ADOPTED December 4, 2018.

  
MICHAEL D. TUBBS, Mayor  
of the City of Stockton

ATTEST:

  
  
CHRISTIAN CLEGG, Deputy City Manager/  
and Interim City Clerk of the City of Stockton

**RESOLUTION CERTIFYING THE ENVIRONMENTAL IMPACT REPORT FOR THE ENVISION STOCKTON 2040 GENERAL PLAN UPDATE (GENERAL PLAN) AND UTILITY MASTER PLAN SUPPLEMENTS (UMPS), ADOPTING THE FINDINGS OF FACT, ADOPTING A MITIGATION MONITORING AND REPORTING PROGRAM, REJECTING LAND USE ALTERNATIVES, AND ADOPTING A STATEMENT OF OVERRIDING CONSIDERATIONS**

**I. INTRODUCTION**

The proposed Envision Stockton 2040 General Plan (General Plan) is the principal policy and planning document for guiding future conservation and development in the city. It represents the basic policy direction of the Stockton City Council on community values, ideals, and aspirations to govern a shared environment through the year 2040. The General Plan addresses all aspects of development including, among others, land use, transportation, housing, economic development, public facilities and infrastructure, and open spaces.

The overall purpose of the proposed General Plan is to create a policy framework that articulates a vision for the City's physical form, while preserving and enhancing quality of life for Stockton residents. The key components of the proposed General Plan include broad community goals for the future of Stockton and specific policies and implementing actions to help meet the goals. The proposed General Plan contains the following chapters:

- Introduction
- Planning Framework
- Land Use
- Transportation
- Safety
- Community Health

The State of California encourages cities to look beyond their borders when undertaking the sort of comprehensive planning required of a general plan. For this reason, the proposed General Plan delineates three partly overlapping areas outside the city limit: the Urban Services Area Boundary (USAB), the Sphere of Influence (SOI), and the Planning Area. The General Plan also delineates the Greater Downtown and Downtown Core areas, and proposes policies and land use standards that are specific to these geographic regions. These planning boundaries are shown in Figure 3-2 of the Draft General Plan and UMPS EIR (Draft EIR) and are more particularly described below. The City has jurisdiction only over land that is within the city limit; however, it is probable that some of the land within the SOI will be annexed by the City of Stockton within the horizon of the proposed General Plan, and would, therefore, be subject to the City's jurisdiction in the future.

Accordingly, the Final General Plan and UMPS EIR (Final EIR) focuses on the analysis of potential changes within the city limit and SOI. This area is referred to herein as the

EIR Study Area. The EIR Study Area boundary is shown on Figure 3-2, Planning Boundaries, of the Draft EIR.

The proposed UMPS identify needed infrastructure improvements to serve future development. Specifically, the UMPS evaluate and identify the following types of infrastructure improvement needs:

- Water storage
- Water pumping facilities
- Water distribution pipelines
- Sewer collection systems
- Wastewater treatment facilities
- Stormwater detention storage
- Stormwater pumping facilities

These facilities are sized for the amount of development included in the 2040 development projection, including approved and pending development projects. The proposed UMPS also present approximate cost information for new infrastructure improvements.

In compliance with the California Environmental Quality Act (CEQA), the Final EIR describes the potential environmental impacts associated with the adoption and implementation of the proposed General Plan and UMPS. Section 15125 of the CEQA Guidelines establishes that the physical environmental conditions at the time of the issuance of the Notice of Preparation (NOP) constitute the baseline conditions by which an impact is determined to be significant. The NOP for the proposed General Plan and EIR was published on May 24, 2017 (California State Clearinghouse #2017052062), and subsequently reissued on August 23, 2017. The City of Stockton is the lead agency for the environmental review of the proposed project.

The Final EIR provides the information and findings on which the City Council may certify that it has prepared the Final EIR for the proposed project in compliance with all of CEQA's procedural and substantive requirements (see **Section II** of this attachment). **Section III** of this attachment provides information and findings regarding the potential environmental impacts of the proposed project and the effectiveness and feasibility of mitigation measures proposed in the Final EIR and the City's adoption of those mitigation measures as conditions of approval of the proposed project. **Sections IV & V** provide information and findings on CEQA-related considerations regarding irreversible or growth inducing impacts and findings on which the City Council may reject or adopt alternatives to the proposed project studied in the Final EIR. Finally, **Section VI** provides a statement of overriding considerations by which the City Council may justify its approval of the proposed project despite the fact that implementation of the proposed project may result in significant and unavoidable adverse environmental impacts.

## II. FINDINGS FOR CERTIFICATION OF THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED GENERAL PLAN AND UTILITY MASTER PLAN SUPPLEMENTS

The City Council finds, based on substantial evidence in the record of this proceeding, that the Final EIR for the proposed General Plan and UMPS, which consists of the Draft EIR and its appendices, Responses to Comments and associated modifications to the Draft EIR, and the Mitigation Monitoring and Reporting Program, has been completed in accordance with the requirements of CEQA, the CEQA Guidelines, the Stockton Municipal Code and all other applicable laws and regulations.<sup>1</sup>

Specifically, the City Council finds, based on substantial evidence in the record of this proceeding, that:

1. The City of Stockton caused an EIR for the proposed project to be prepared pursuant to CEQA, the CEQA Guidelines, and the City of Stockton Municipal Code.
2. A Notice of Preparation (NOP) of the Draft EIR was filed with the California Governor's Office of Planning and Research on May 24, 2017 for a 30-day review period and was circulated for public comments. On August 23, 2017, the NOP was subsequently reissued to revise a figure in the project description that shows the extent of proposed urban to agriculture/open space changes, which began a second 30-day review period. Notices for the NOP were mailed to other agencies (local and federal) and to interested persons and community members. Notices for the NOP were also posted at the County Clerk's Office and in Stockton City Hall.
3. On June 8, 2017, the City held a public meeting to conduct a scoping session for the Draft EIR. Comments were received on the NOP, which were subsequently incorporated into the Draft EIR.
4. A Notice of Completion (NOC) and copies of the Draft EIR were distributed to the California State Clearinghouse on June 26, 2018, to those public agencies that have jurisdiction by law with respect to the project, and to other interested parties and agencies. The City sought the input of such persons and agencies through various means, including direct communication to agency staff. Additional copies of the Draft EIR were distributed by the City to agencies who requested them. The 45-day public review and comment period ended on August 10, 2018.
5. A Notice of Availability (NOA) of the Draft EIR was distributed to all responsible and trustee agencies; other local and federal agencies; and interested groups,

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<sup>1</sup> CEQA is codified at sections 21000, *et seq.* of the California Public Resources Code. The CEQA Guidelines are set forth at California Code of Regulations, Title 14, sections 15000, *et seq.* The Stockton Development Code is set forth at Title 16 of the Stockton Municipal Code. The custodian of the record of this proceeding is the City of Stockton, Community Development Department, 345 N El Dorado Street, Stockton, California.

organizations, and individuals on June 26, 2018. The NOA stated that the City had completed the Draft EIR and that copies were available at the City of Stockton, 425 North El Dorado Street, Stockton and that the document was available for review on the City of Stockton "Envision Stockton" website. The NOA was also delivered electronically to all persons who had requested such notice up to that date. The notice indicated that the official public review period for the Draft EIR was from June 26, 2018 to August 10, 2018.

6. On August 2, 2018, the City's Planning Commission held a review and comment meeting on the Draft EIR, at which time the Commission accepted public comments on the Draft EIR. The comments received at that hearing were included and responded to in the Final EIR.
7. On October 10, 2018, the City published the Final EIR, which included responses to the comments received on the Draft EIR. The City emailed notices of the Final EIR's availability for review to interested persons, including State, federal, and local agencies. The notice further advised that the project and Final EIR would be discussed at the Planning Commission's October 25, 2018 meeting. The City also made available for review the Final EIR at City Hall and on the City's "Envision Stockton" website.
8. On October 10, 2018, the City posted a display ad in The Record, a newspaper of general circulation within the city, advertising the October 25, 2018 meeting of the Planning Commission, when the Commission would discuss and make a recommendation to the City Council regarding the Final EIR for the proposed General Plan and UMPS, the Draft General Plan, and the UMPS. Notice of this meeting was also sent to all responsible and trustee agencies; other local and federal agencies; interested groups, organizations, and property owners; and individuals.
9. On October 25, 2018, and November 15, 2018, the Planning Commission of the City of Stockton held a duly noticed public hearing regarding the General Plan and UMPS EIR, Adoption of Findings of Fact, Statement of Overriding Considerations, Mitigation Monitoring and Reporting Program, and Draft General Plan and UMPS. The Commission voted 6-1, Davie dissenting, to recommend that the City Council certify the EIR and approve the General Plan and UMPS.
10. On November 20, 2018, the City posted a display ad in The Record, a newspaper of general circulation within the city, advertising the December 4, 2018, public hearing of the Stockton City Council to consider certification of the EIR and approval of the General Plan and UMPS. This notice advertised the location and availability of the Final EIR and all documents related to the project.
11. Testimony, documentary evidence, and all correspondence submitted or delivered to the City in connection with the Planning Commission and City Council hearings



on this project and the Final EIR and from community meetings held during the review process have been reviewed and considered by the City Council.

12. All staff reports, memoranda, maps, letters, minutes of meetings, and other documents relied upon or prepared by City staff relating to the project, including but not limited to, the proposed General Plan and UMPS, the Draft EIR, and Final EIR, have been reviewed and considered by the City Council.

Based on the foregoing and substantial evidence in the record of this proceeding, the City Council hereby finds, declares, and certifies that:

1. The Final EIR was prepared, published, circulated, reviewed and completed in accordance with the requirements of CEQA, the CEQA Guidelines and the Stockton Municipal Code, and constitutes an adequate, accurate, objective, and complete Final EIR in accordance with the requirements of CEQA, the CEQA Guidelines and the Stockton Municipal Code.
2. The Final EIR consists of the Draft EIR, Responses to Comments and associated modifications to the Draft EIR, the Mitigation Monitoring and Reporting Program, all appendices, and the documents and materials incorporated by reference into the EIR.
3. The Final EIR has been presented to the City Council, and the City Council has reviewed and considered the information contained therein prior to acting on the proposed project, and the City Council finds that the Final EIR reflects the independent judgment and analysis of the City of Stockton.
4. The Final EIR reflects the best efforts of the City of Stockton to undertake all reasonably feasible and prudent actions to discover, analyze, disclose, and mitigate all potentially significant environmental impacts of the proposed project.
5. The changes and additions to the Draft EIR made in the Final EIR do not constitute "significant new information" within the meaning of Public Resources Code Section 21092.1, and therefore recirculation of the Draft EIR for public review and comment is not required.
6. The Final EIR has been presented to the City Council, and the City Council has reviewed and considered the information contained therein and in the record prior to making these findings or taking action on the proposed General Plan and UMPS.
7. The City Council hereby adopts the attached Findings of Fact and Statement of Overriding Considerations, and a Mitigation Monitoring and Reporting Program to require and ensure that all mitigation measures found to be reasonably feasible and effective are implemented.

### III. FINDINGS OF FACT REGARDING THE ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED ENVISION STOCKTON 2040 GENERAL PLAN UPDATE AND UTILITY MASTER PLAN SUPPLEMENTS INCLUDING THE MITIGATION MEASURES ANALYZED AND RECOMMENDED IN THE FINAL ENVIRONMENTAL IMPACT REPORT

The EIR for the proposed General Plan and UMPS evaluates all potentially significant environmental impacts that could result from the approval of the proposed project, alternatives to the proposed project, and measures designed to mitigate or avoid the potentially significant impacts of the proposed project. A Mitigation Monitoring and Reporting Program has been prepared for the proposed General Plan and UMPS and is included in the project record. This section lists all identified potentially significant or significant impacts of the proposed project and, where applicable, mitigation measures adopted to avoid, reduce, or attempt to reduce those impacts to a less-than-significant level.

#### A. **Less-than-Significant Impacts and Potentially Significant Impacts that are Avoided or Reduced to a Less-than-Significant Level.**

**Findings:** As authorized by Public Resources Code Section 21081 and CEQA Guidelines Sections 15091, 15092, and 15093, the City finds that, unless otherwise stated, all of the changes or alterations to the proposed project listed below have been required, or incorporated into, the proposed project so as to mitigate or avoid the significant or potentially significant environmental impacts listed below, as identified in the Final EIR; that these mitigation measures will be effective to reduce or avoid the potentially significant impacts as described in the Final EIR; and that these mitigation measures are feasible to implement and are within the responsibility and jurisdiction of the City of Stockton to implement or enforce. These Findings of Fact are supported by substantial evidence in the record of proceedings before the City as stated below.

#### **AESTHETICS**

##### a. Less-than-Significant Impact, no mitigation required

**Impact AES-1:** Implementation of the proposed project would not have a substantial adverse effect on a scenic vista.

**Impact AES-2:** Implementation of the proposed project would not substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.

**Impact AES-3:** Implementation of the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings.

**Impact AES-4:** Implementation of the proposed project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

## **AGRICULTURAL AND FORESTRY RESOURCES**

a. No Impact

**Impact AG-3:** Implementation of the proposed project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

b. Less-than-Significant Impact, no mitigation required

**Impact AG-4:** Implementation of the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use.

**Impact AG-5:** Implementation of the proposed project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmlands of concern under CEQA to non-agricultural use or conversion of forest land to non-forest use.

## **AIR QUALITY**

a. Less-than-Significant Impact after mitigation

**Impact AQ-5:** Implementation of the proposed General Plan could expose sensitive receptors to substantial toxic air contaminant concentrations from non-permitted sources.

**Mitigation Measure AQ-5:** Prior to discretionary project approval, applicants for industrial or warehousing land uses in addition to commercial land uses that would generate substantial diesel truck travel (i.e., 100 diesel trucks per day or 40 or more trucks with diesel-powered transport refrigeration units per day based on the California Air Resources Board recommendations for siting new sensitive land uses), shall contact the San Joaquin Valley Air Pollution Control District (SJVAPCD) or the City of Stockton in conjunction with the SJVAPCD to determine the appropriate level of health risk assessment (HRA) required. If preparation of an HRA is required, all HRAs shall be submitted to the City of Stockton and the SJVAPCD for evaluation.

The HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and the SJVAPCD. If the HRA shows that the incremental cancer risk exceeds ten in one million (10E 06) or the risk thresholds in effect at the time a project is considered, or that the appropriate noncancer hazard index exceeds 1.0 or the thresholds as determined

by the SJVAPCD at the time a project is considered, the applicant will be required to identify and demonstrate that measures are capable of reducing potential cancer and noncancer risks to an acceptable level, including appropriate enforcement mechanisms.

Measures to reduce risk impacts may include but are not limited to:

- Restricting idling on-site beyond Air Toxic Control Measures idling restrictions, as feasible.
- Electrifying warehousing docks.
- Requiring use of newer equipment and/or vehicles.
- Restricting offsite truck travel through the creation of truck routes.

Measures identified in the HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of the proposed project.

**Facts in Support of Findings for Impact AQ-5:** After the implementation of the recommended mitigation measure, potential impacts would be reduced to a less-than-significant level.

**Impact AQ-6:** Operation of new industrial land uses accommodated under the proposed General Plan has the potential to create objectionable odors that could affect a substantial number of people.

**Mitigation Measure AQ-6:** Prior to project approval, if it is determined during project-level environmental review that a project has the potential to emit nuisance odors beyond the property line, an odor management plan shall be prepared and submitted by the project applicant prior to project approval to ensure compliance with San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 4102. The following facilities that are within the buffer distances specified from sensitive receptors (in parentheses) have the potential to generate substantial odors:

- Wastewater Treatment Plan (2 miles)
- Sanitary Landfill (1 mile)
- Transfer Station (1 mile)
- Composting Facility (1 mile)
- Petroleum Refinery (2 miles)
- Asphalt Batch Plant (1 mile)
- Chemical Manufacturing (1 mile)
- Fiberglass Manufacturing (1 mile)
- Painting/Coating Operations (1 mile)
- Food Processing Facility (1 mile)
- Feed Lot/ Dairy (1 mile)
- Rendering Plant (1 mile)

The Odor Management Plan prepared for these facilities shall identify control technologies that will be utilized to reduce potential odors to acceptable levels, including appropriate enforcement mechanisms. Control technologies may include but are not limited to scrubbers (e.g., air pollution control devices) at an industrial facility. Control technologies identified in the odor management plan shall be identified as mitigation measures in the environmental document and/or incorporated into the site plan.

**Facts in Support of Findings for Impact AQ-6:** After the implementation of the recommended mitigation measure, potential impacts would be reduced to a less-than-significant level.

## **BIOLOGICAL RESOURCES**

### a. Less-than-Significant Impact, no mitigation required

**Impact BIO-1:** Implementation of the proposed project would not have a substantial adverse effect on any species identified as a candidate, sensitive, or special status species.

**Impact BIO-2:** Implementation of the proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community.

**Impact BIO-3:** Implementation of the proposed project would not have a substantial adverse effect on federally protected wetlands.

**Impact BIO-4:** Implementation of the proposed project would not interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

**Impact BIO-5:** Implementation of the proposed project would not conflict with any local policies or ordinances protecting biological resources.

**Impact BIO-6:** Implementation of the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

## **CULTURAL AND TRIBAL CULTURAL RESOURCES**

### a. Less-than-Significant Impact, no mitigation required

**Impact CULT-1:** Implementation of the proposed project would not cause a substantial adverse change in the significance of an historical resource.

**Impact CULT-2:** Implementation of the proposed project would not cause a substantial adverse change in the significance of an archaeological resource.

**Impact CULT-3:** Implementation of the proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

**Impact CULT-4:** Implementation of the proposed project would not disturb any human remains.

**Impact CULT-5:** Implementation of the proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource.

## **GEOLOGY, SOILS, SEISMICITY, AND MINERAL RESOURCES**

### a. Less-than-Significant Impact, no mitigation required

**Impact GEO-1:** Implementation of the proposed project would not expose people or structures to potential substantial adverse effects involving rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides.

**Impact GEO-2:** Implementation of the proposed project would not result in substantial soil erosion or the loss of topsoil.

**Impact GEO-3:** Implementation of the proposed project would not result in a significant impact related to development on unstable geologic units or soils or result in lateral spreading, subsidence, liquefaction, or collapse.

**Impact GEO-4:** Implementation of the proposed project would not create substantial risks to property as a result of its location on expansive soil, as defined by Section 1803.5.3 of the California Building Code.

**Impact GEO-5:** Implementation of the proposed project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

**Impact GEO-6:** Implementation of the proposed project would a) result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or b) result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

## GREENHOUSE GAS EMISSIONS

a. Less-than-Significant Impact, no mitigation required

**Impact GHG-2:** Implementation of the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

## HAZARDS AND HAZARDOUS MATERIALS

a. No Impact

**Impact HAZ-6:** Implementation of the proposed project would not be within the vicinity of a private airstrip and would not result in a safety hazard for people residing or working in the project area.

b. Less-than-Significant Impact, no mitigation required

**Impact HAZ-1:** Implementation of the proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

**Impact HAZ-2:** Implementation of the proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

**Impact HAZ-3:** Implementation of the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼-mile of an existing or proposed school.

**Impact HAZ-4:** Implementation of the proposed project would not create a significant hazard to the public or the environment as a result of being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

**Impact HAZ-5:** Implementation of the proposed project would not result in a safety hazard for people residing or working within the airport land use plan area.

**Impact HAZ-7:** Implementation of the proposed project would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

**Impact HAZ-8:** Implementation of the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

**HYDROLOGY AND WATER QUALITY**a. Less-than-Significant Impact, no mitigation required

**Impact HYDRO-1:** Implementation of the proposed project would not violate any water quality standards or discharge requirements.

**Impact HYDRO-2.1:** Implementation of the proposed project would not substantially deplete groundwater supplies.

**Impact HYDRO-2.2:** Implementation of the proposed project would not substantially interfere with groundwater recharge.

**Impact HYDRO-3:** Implementation of the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

**Impact HYDRO-4:** Implementation of the proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

**Impact HYDRO-6:** Implementation of the proposed project would not otherwise substantially degrade water quality.

**Impact HYDRO-7:** Implementation of the proposed project would place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

**Impact HYDRO-8:** Implementation of the proposed project would not place within a 100-year flood hazard area structures which would impede or redirect flood flows.

**Impact HYDRO-9:** Implementation of the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

**Impact HYDRO-10:** Implementation of the proposed project would not cause substantial flood hazards arising from seiche, tsunami, or mudflow.

b. Less-than-Significant Impact after mitigation

**Impact HYDRO-5:** Development allowed under the proposed General Plan could result in existing and planned stormwater drain infrastructure to be undersized or otherwise inadequate, which could lead to flooding and polluted runoff.



**Mitigation Measure HYDRO-5:** Complete a citywide storm drainage master plan, including hydrologic and hydraulic models for existing land use conditions and for the land uses anticipated in 2040 under the proposed General Plan. The master plan should identify the future stormwater infrastructure needs and develop a current stormwater capital improvement plan. As part of this process, identify areas that have constraints, prioritize watersheds to be modeled, and evaluate the City stormwater fee program for potential revisions. In addition, require new development to complete stormwater plans covering drainage, flood control, and storm water quality/permitting. Use the master plan and project-level stormwater plans to assess future development, and require that future development construct the required on- and off-site infrastructure. Implementation of this mitigation measure should be timed to anticipate and precede significant developments that would be most likely to place large demands on the current stormwater system.

**Facts in Support of Findings for Impact HYDRO-5:** After the implementation of the recommended mitigation measure, potential impacts would be reduced to a less-than-significant level.

## LAND USE AND PLANNING

a. Less-than-Significant Impact, no mitigation required

**Impact LU-1:** Implementation of the proposed project would not physically divide an established community.

**Impact LU-2:** Implementation of the proposed project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

**Impact LU-3:** Implementation of the proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan.

## NOISE

a. Less-than-Significant Impact, no mitigation required

**Impact NOISE-1:** The proposed project would not expose people to or generate noise levels in excess of standards established in the General Plan or the Municipal Code, and/or the applicable standards of other agencies.

**Impact NOISE-2:** The proposed project would not expose people to or generate excessive groundborne vibration or groundborne noise levels.

**Impact NOISE-4:** The proposed project would cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

**Impact NOISE-5:** The proposed project would not expose people residing or working in the vicinity of the project area to excessive aircraft noise levels from a public airport or public use airport.

**Impact NOISE-6:** The proposed project would not expose people residing or working in the project area to excessive noise levels from a private airstrip.

## **POPULATION AND HOUSING**

a. Less-than-Significant Impact, no mitigation required

**Impact POP-2:** Implementation of the proposed project would not displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere.

**Impact POP-3:** Implementation of the proposed project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

## **PUBLIC SERVICES AND RECREATION**

a. Less-than-Significant Impact, no mitigation required

**Impact PS-1:** Implementation of the proposed project would not result in the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.

**Impact PS-2:** Implementation of the proposed project would not result in the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives.

**Impact PS-3:** Implementation of the proposed project would not result in the need for new or physically altered park facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.

**Impact PS-4:** Implementation of the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur, or be accelerated.

**Impact PS-5:** Implementation of the proposed project would not include recreational facilities and or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

**Impact PS-6:** Implementation of the proposed project would not result in the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.

**Impact PS-7:** Implementation of the proposed project would not result in the need for new or physically altered library facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives.

## **TRANSPORTATION AND TRAFFIC**

a. Less-than-Significant Impact, no mitigation required

**Impact TRAF-3:** Implementation of the proposed Plan would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

**Impact TRAF-4:** Implementation of the proposed Plan would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

**Impact TRAF-5:** Implementation of the proposed Plan would not result in inadequate emergency vehicle access.

**Impact TRAF-6:** Implementation of the proposed Plan would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

## **UTILITIES AND SERVICE SYSTEMS**

a. Less-than-Significant Impact, no mitigation required

**Impact UTIL-1:** Implementation of the proposed project would have sufficient water supplies available to serve the proposed project from existing entitlements and resources, and would not require new or expanded entitlements.

**Impact UTIL-2:** Implementation of the proposed project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.

**Impact UTIL-3:** Implementation of the proposed project would not exceed wastewater treatment requirements of the CVRWQCB.

**Impact UTIL-4:** Implementation of the proposed project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects.

**Impact UTIL-5:** The City of Stockton Municipal Utilities Department, which would serve the project, has sufficient wastewater treatment capacity to serve the project as well as existing developments in its service area.

**Impact UTIL-6:** Implementation of the proposed project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

**Impact UTIL-7:** Implementation of the proposed project would be served by landfills with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

**Impact UTIL-8:** Implementation of the proposed project would comply with federal, State, and local statutes and regulations related to solid waste.

**Impact UTIL-9:** Implementation of the proposed project would not result in a substantial increase in natural gas and electrical service demands that would require new energy supply facilities and transmission infrastructure or capacity-enhancing alterations to existing facilities, the construction of which would cause significant environmental effects.

## **B. Significant Impacts that Cannot be Avoided**

**Findings:** The City finds that, where feasible, the changes or alterations that have been required or incorporated into the proposed project will reduce the significant environmental impacts identified in the Final EIR, which are listed below, but not to a less-than-significant level. That is because specific economic, legal, social, technological, or other considerations render the mitigation measures analyzed infeasible, as supported by substantial evidence in the record of this proceeding. Unless otherwise noted, the City of Stockton hereby finds the following mitigation measures infeasible or ineffective, and therefore finds the following impacts significant and unavoidable.

### **AGRICULTURAL AND FORESTRY RESOURCES**

#### **a. Significant and Unavoidable Impact after mitigation**

**Impact AG-1:** Although the proposed General Plan includes policies and actions that would reduce and partially offset the conversion of farmland, it designates

approximately 16,160 acres of farmlands of concern under CEQA for non-agricultural uses.

**Mitigation Measure AG-1:** Prior to project approval, if a development project will convert prime farmland, farmland of statewide importance, or unique farmland to a non-agricultural use, the project applicant shall demonstrate participation in the City's agricultural conversion program, which requires either dedication of an agricultural conservation easement at a 1:1 ratio or payment of an in-lieu agricultural mitigation fee.

**Facts in Support of Findings for Impact AG-1:** Conservation easements will not fully mitigate the impact because farmland of concern under CEQA would still be converted to a non-agricultural use. Because these farmland areas are located near existing urbanized areas, they may not be viable for agricultural operations due to conflicts with nearby urbanized areas. The only way to fully mitigate this impact would be to prohibit any development on farmland of concern. CEQA does not require that the project be changed in order to avoid an impact, and much of the farmland of concern that is designated for a non-agricultural use is already entitled for development; no additional mitigation is available, resulting in a significant and unavoidable impact.

b. Significant and Unavoidable Impact (no mitigation available)

**Impact AG-2:** The proposed General Plan designates 2,464 acres of lands with active Williamson Act contracts for non-agricultural uses.

**Facts in Support of Findings for Impact AG-2:** Because these parcels with Williamson Act contracts are located near existing urbanized areas, they may not be viable for agricultural operations due to conflicts with nearby urbanized areas. As discussed under Impact AG-1, above, no additional mitigation is available, resulting in a significant and unavoidable impact.

## AIR QUALITY

a. Significant and Unavoidable Impact after mitigation

**Impact AQ-1:** Implementation of the proposed General Plan would result in the generation of substantial long-term criteria air pollutant emissions that would exceed the SJVAPCD regional significance thresholds and would therefore not be considered consistent with the existing AQMPs.

**Mitigation Measure AQ-1:** Implement Mitigation Measure AQ-3 to further reduce long-term criteria air pollutant emissions.

**Facts in Support of Findings for Impact AQ-1:** The various goals, policies, and actions of the proposed General Plan, in addition to applicable SJVAPCD rules and regulations and Mitigation Measure AQ-1, would contribute to reducing long-

term criteria air pollutant emissions to the extent feasible. However, due to the magnitude and intensity of development accommodated by the proposed General Plan, as well as current and future regional air quality influences beyond the control of the City of Stockton, Impact AQ-1 would remain significant and avoidable.

**Impact AQ-2:** Construction activities associated with implementation of the proposed General Plan and UMPS could exceed the SJVAPCD regional significance thresholds.

**Mitigation Measure AQ-2:** Prior to issuance of any construction permits for development projects subject to California Environmental Quality Act (CEQA) review (i.e., non-exempt projects), development project applicants shall prepare and submit to the City of Stockton Planning and Engineering Division a technical assessment evaluating potential project construction-related air quality impacts. The evaluation shall be prepared in conformance with San Joaquin Valley Air Pollution Control District (SJVAPCD) methodology in assessing air quality impacts. The prepared evaluation for projects that meet the SJVAPCD Small Projects Analysis Level (SPAL) screening criteria shall at minimum, identify the primary sources of construction emissions and include a discussion of the applicable SJVAPCD rules and regulations and SPAL screening criteria to support a less than significant conclusion.

For projects that do not meet the SPAL screening criteria, project-related construction emissions shall be quantified. If construction-related criteria air pollutants are determined to have the potential to exceed the SJVAPCD adopted thresholds of significance, as identified in the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), the City of Stockton Planning and Engineering Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities to below these thresholds. These identified measures shall be incorporated into appropriate construction documents (e.g., construction management plans) submitted to the City and shall be verified by the City's Planning and Engineering Division. Mitigation measures to reduce construction-related emissions could include, but are not limited to:

- Using construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits, applicable for engines between 50 and 750 horsepower. A list of construction equipment by type and model year shall be maintained by the construction contractor on-site, which shall be available for City review upon request.
- Ensuring construction equipment is properly serviced and maintained to the manufacturer's standards.
- Use of alternative-fueled or catalyst-equipped diesel construction equipment, if available and feasible.

## EXHIBIT 1

- Clearly posted signs that require operators of trucks and construction equipment to minimize idling time (e.g., five minute maximum).
- Preparation and implementation of a fugitive dust control plan that may include the following measures:
  - Disturbed areas (including storage piles) that are not being actively utilized for construction purposes shall be effectively stabilized using water, chemical stabilizer/suppressant, or covered with a tarp or other suitable cover (e.g., revegetated).
  - On-site unpaved roads and offsite unpaved access roads shall be effectively stabilized using water or chemical stabilizer/suppressant.
  - Land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled utilizing application of water or by presoaking.
  - Material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained when materials are transported offsite.
  - Operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions.) (Use of blower devices is expressly forbidden.) (Utilize electric-powered vacuums or devices to capture materials.)
  - Following the addition of materials to or the removal of materials from the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
  - Within urban areas, trackout shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
  - Any site with 150 or more vehicle trips per day shall prevent carryout and trackout.
  - Limit traffic speeds on unpaved roads to 15 mph.
  - Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.
  - Install wheel washers for all exiting trucks or wash off all trucks and equipment leaving the project area.
  - Adhere to Regulation VIII's 20 percent opacity limitation, as applicable.
- Enter into a Voluntary Emissions Reduction Agreement (VERA) with the SJVAPCD. The VERA shall identify the amount of emissions to be reduced, in addition to the amount of funds to be paid by the project applicant to the SJVAPCD to implement emission reduction projects required for the project.

**Facts in Support of Findings for Impact AQ-2:** Implementation of the proposed project would occur over a period of 23 years or longer. Construction activities associated with development allowed under the proposed General Plan and UMPS could generate short-term emissions that exceed the SJVAPCD's significance thresholds during this time and cumulatively contribute to the nonattainment designations of the SJVAB. Implementation of Mitigation Measure AQ-2, in addition to applicable regulatory measures (e.g., SJVAPCD Rules 9510 and Regulation VIII) and the proposed Action SAF-4.1.A related to reducing construction-related emissions, would reduce criteria air pollutant emissions from construction-related activities to the extent feasible and may result in reducing construction-related regional air quality impacts of subsequent individual projects to less-than-significant levels. However, due to the programmatic nature of the proposed project, construction time frames and equipment for individual site-specific projects are not available and there is a potential for multiple developments to be constructed at any one time, resulting in significant construction-related emissions. Therefore, despite adherence to Mitigation Measure AQ-2, Impact AQ-2 would remain significant and unavoidable.

**Impact AQ-3:** Operation of development projects allowed under the proposed General Plan would generate emissions that would exceed the SJVAPCD regional significance thresholds for VOC, NOX, CO, PM10, and PM2.5.

**Mitigation Measure AQ-3:** Prior to discretionary approval by the City of Stockton for development projects subject to California Environmental Quality Act (CEQA) review (i.e., non-exempt projects), project applicants shall prepare and submit a technical assessment evaluating potential project operation phase-related air quality impacts to the City of Stockton Planning and Engineering Division for review and approval. The evaluation shall be prepared in conformance with San Joaquin Air Pollution Control District (SJVAPCD) methodology in assessing air quality impacts. If operation-related air pollutants are determined to have the potential to exceed the SJVAPCD-adopted thresholds of significance, as identified in the Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), the City of Stockton Planning and Engineering Division shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during operational activities. The identified measures shall be included as part of the conditions of approval. Possible mitigation measures to reduce long-term emissions can include, but are not limited to the following:

- For site-specific development that requires refrigerated vehicles, the construction documents shall demonstrate an adequate number of electrical service connections at loading docks for plug-in of the anticipated number of refrigerated trailers to reduce idling time and emissions.
- Applicants for manufacturing and light industrial uses shall consider energy storage and combined heat and power in appropriate applications to optimize renewable energy generation systems and avoid peak energy use.



- Site-specific developments with truck delivery and loading areas and truck parking spaces shall include signage as a reminder to limit idling of vehicles while parked for loading/unloading in accordance with Section 2485 of 13 CCR Chapter 10.
- Provide changing/shower facilities as specified, at minimum, or greater than in the guidelines in Section A5.106.4.3 of the CALGreen Code (Nonresidential Voluntary Measures).
- Provide bicycle parking facilities equivalent to or greater than as specified in Section A4.106.9 (Residential Voluntary Measures) of the CALGreen Code.
- Provide preferential parking spaces for low-emitting, fuel-efficient, and carpool/van vehicles equivalent to or greater than Section A5.106.5.1 of the CALGreen Code (Nonresidential Voluntary Measures).
- Provide facilities to support electric charging stations per Section A5.106.5.3 (Nonresidential Voluntary Measures) and Section A5.106.8.2 (Residential Voluntary Measures) of the CALGreen Code.
- Applicant-provided appliances shall be Energy Star-certified appliances or appliances of equivalent energy efficiency (e.g., dishwashers, refrigerators, clothes washers, and dryers). Installation of Energy Star-certified or equivalent appliances shall be verified by Building & Safety during plan check.
- Applicants for future development projects along existing and planned transit routes shall coordinate with the City Stockton and San Joaquin Regional Transit District to ensure that bus pad and shelter improvements are incorporated, as appropriate, and that these transit improvements consider and implement design features (e.g., pullout lanes for buses) to avoid or reduce impediment/queuing of vehicles.
- Applicants for future development projects shall enter into a Voluntary Emissions Reduction Agreement (VERA) with the San Joaquin Valley Air Pollution Control District (SJVAPCD). The VERA shall identify the amount of emissions to be reduced, in addition to the amount of funds to be paid by the project applicant to the SJVAPCD to implement emission reduction projects required for the project.

**Facts in Support of Findings for Impact AQ-3:** Application of State and SJVAPCD rules and regulations, such as Rules 9510 and 9410, and implementation of the proposed General Plan goals, policies, and actions would contribute to reducing operation-related criteria air pollutants generated from energy, area, and mobile sources to the extent feasible. Incorporation of Mitigation Measure AQ-3 would also contribute to reducing criteria air pollutants. Implementation of the aforementioned rules, goals and policies, and mitigation could contribute to reducing operation-phase regional air quality impacts of future individual projects to a less than significant level. However, Impact AQ-3 would remain significant and unavoidable due to the magnitude of the overall development associated with the proposed General Plan, combined with current and future regional air quality influences beyond the control of the City of Stockton.

**Impact AQ-4:** Development allowed under the proposed General Plan and UMPS could result in short- and long-term emissions that could cause or contribute to a violation of the AAQS.

**Mitigation Measure AQ-4a:** Implement Mitigation Measures AQ-2 and AQ-3 to further reduce construction and operation-related criteria air pollutant emissions.

**Mitigation Measure AQ-4b:** Prior to discretionary approval, applicants for development projects that are subject to the California Environmental Quality Act (CEQA) shall assess their projects to the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Rule 9510 Applicability Thresholds as follows:

- 50 residential units;
- 2,000 square feet of commercial space;
- 25,000 square feet of light industrial space;
- 100,000 square feet of heavy industrial space;
- 20,000 square feet of medical office space;
- 39,000 square feet of general office space;
- 9,000 square feet of education space;
- 10,000 square feet of government space;
- 20,000 square feet of recreational space; or
- 9,000 square feet of space not identified above.

Applicants for development projects subject to CEQA that do not meet the SJVAPCD Rule 9510 Applicability Thresholds shall assess whether project-related construction and operational emissions exceed the SJVAPCD 100 pounds per day ambient air quality screening threshold. Applicants for development projects that exceed this ambient air quality screening threshold shall prepare or have prepared an ambient air quality analysis, consistent with the SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts (GAMAQI), to assess whether the subject development project would cause or contribute to a violation of any California Ambient Air Quality Standard or National Ambient Air Quality Standard. The ambient air quality analysis shall identify measures to reduce impacts as necessary. Recommended measures may include those identified in Mitigation Measures AQ-2 and AQ-3. The related recommendations of the ambient air quality analysis shall be incorporated into all construction management and design plans and which shall be submitted to the City and verified by the City's Planning and Engineering Division.

**Facts in Support of Findings for Impact AQ-4:** Application of State and SJVAPCD rules and regulations, implementation of the proposed General Plan policies and actions, and incorporation of Mitigation Measures AQ-4a and AQ-4b would reduce construction and operation-related criteria air pollutants to the extent feasible. However, despite implementation of the proposed plans, policies, and adherence to the mitigation measures, Impact AQ-4 would remain significant

and unavoidable due to the magnitude of development associated with the proposed General Plan and UMPS, combined with current and future regional air quality influences beyond the control of the City of Stockton.

## **GREENHOUSE GAS EMISSIONS**

### a. Significant and Unavoidable Impact after mitigation

**Impact GHG-1:** Implementation of the proposed General Plan would result in a substantial increase in GHG emissions.

**Mitigation Measure GHG-1:** Within 24 months of adoption of the proposed General Plan, the City of Stockton shall proceed to adoption hearings for an update to its Climate Action Plan (CAP). The CAP shall provide:

- GHG inventories of existing and 2030 GHG levels;
- Targets for 2030 from land uses under the City's jurisdiction based on the goals of SB 32; and
- Tools and strategies for reducing GHG emissions in accordance with the 2030 goals of the CAP.

The City shall consider the following GHG reduction measures in its CAP Update:

- Reevaluate the City's current green building requirements (Stockton Municipal Code Chapter 15.72, Green Building Standards) every five years to consider additional requirements for substantial new residential and non-residential development to ensure that new development achieves a performance objective consistent with the best performing (top 25 percent) of city green building measures in the state.
- Require financing and/or installing energy-saving retrofits on existing structures as potential mitigation measures for discretionary projects that have significant GHG impacts as part of the CEQA process.
- Utilize transfer of development rights and other mechanisms, such as an infill mitigation bank, to enhance the viability of development in the Greater Downtown.
- Establish a goal for 15 percent of existing development to install solar panels over carports.
- Establish a goal to achieve 10 percent of non-residential electricity and 5 percent of residential electricity entirely by solar.
- Offer incentives for contractors that use electric equipment when bidding on City contracts.
- Limit non-essential idling of large construction equipment to no more than 3 minutes.

In addition, to implement the CAP, the City shall develop key ordinances, programs, and policies required to promote voluntary, incentive-based measures in the CAP; establish the planning framework for the performance-based development review process, and support and implement the local mandatory GHG reduction measures. These implementation tasks include:

- Update the community GHG inventory to monitor emissions trends every five years.
- In 2030, develop a plan for post-2030 actions.
- Appoint an Implementation Coordinator to oversee the successful implementation of all selected GHG reduction strategies. The primary function of the Implementation Coordinator will be to create a streamlined approach to manage implementation of the CAP. The Implementation Coordinator will also coordinate periodic community outreach to leverage community involvement, interest, and perspectives.

**Facts in Support of Findings for Impact GHG-1:** Implementation of the proposed General Plan policies and actions, combined with Mitigation Measure GHG-1, would reduce GHG emissions to the extent feasible. However, due to the magnitude of growth associated with the proposed General Plan, it is anticipated that an increase in GHG emissions would remain substantial and would not contribute to net achievement of the State's long-term climate stabilization goals. While adherence to the City of Stockton's CAP would also contribute to reducing GHG emissions in the EIR Study Area and to progress in meeting the year 2020 AB 32 reduction target, additional federal, State, and local measures would be necessary to reduce GHG emissions to meet the long-term GHG reduction goals under Executive Order S-03-05. At this time, there is no plan past 2030 to achieve the long-term GHG reduction goal established under Executive Order S-03-05. As identified by the California Council on Science and Technology, the State cannot meet the 2050 goal without major advancements in technology. Since no additional statewide measures are currently available, Impact GHG-1 would remain significant and unavoidable.

## **NOISE**

- a. Significant and Unavoidable Impact (no mitigation available)

**Impact NOISE-3:** Increased traffic from projected development allowed by the proposed General Plan would result in a significant increase in traffic noise levels compared to existing conditions along the following roadway segments:

1. SR-99 between Farmington Road and Mariposa Road
2. SR-4 west of I-5
3. Eight Mile Road between Mokelumne Drive and Trinity Parkway
4. Eight Mile Road between West Lane and SP Railroad
5. Eight Mile Road between SR-99 and west of Bear Creek
6. March Lane between West Land and Bianchi
7. French Camp Road between McDougald and E.W.S Wood

8. California Street between Park and Weber
9. California Street between Weber and Crosstown Freeway
10. Airport Way between Main and Market
11. Airport Way between Ninth and Tenth
12. Airport Way between Sperry and CE Dixon St
13. Mariposa Road between Stagecoach and SR-99
14. B Street between Ralph Avenue and Arch Airport

**Facts in Support of Findings for Impact NOISE-3:** The following mitigation measures were considered, but as described below, were found to be infeasible.

#### Technological Advances for Noise-Generating Vehicles

Implementation of improved technologies for the prevention or muffling of noise from vehicles could theoretically prevent substantial increases to ambient noise levels; however, this approach would be infeasible as much of this implementation is beyond the jurisdiction of the City.

Beyond currently-accepted State and industry standards and best practices, developing and/or requiring novel technological improvements for noise-generating vehicles would not be affordable, scientifically plausible, or within the City's jurisdiction. Therefore, this potential mitigation measure is regarded as infeasible.

#### Universal Use of Noise-Attenuating Features

The universal use of noise attenuating features such as rubberized asphalt, soundwalls, berms, and improved building sound-insulation, could prevent transmission of excessive noise to the outdoor and indoor areas of sensitive land uses and/or could prevent projected increases in ambient noise levels. However, this approach would be infeasible. Specifically, rubberized asphalt reduces tire-pavement noise and when new, achieves a reduction of approximately 4 dB when compared to normal pavement surfaces. However, these noise reduction properties degrade over time, and the noise reduction would not be sufficient to reduce noise impacts in many areas of Stockton. The typical cost of rubberized asphalt -- more than twice that of conventional treatments -- can also be expected to render this measure economically infeasible.

In many cases, aesthetic concerns, costs, physical constraints, or other issues would prevent the universal implementation of adequate noise-attenuating features. In addition to their expense, soundwalls often block views and are often regarded as unsightly, targets for graffiti, or presenting safety concerns. Moreover, the construction of soundwalls can result in reduced pedestrian and vehicle connectivity, which would contravene other goals of the proposed General Plan and have negative social, economic, and even environmental consequences.

Although improved building construction and insulation beyond that required by California Title 24 and the General Plan could further reduce indoor exposure to

excessive noise, substantial outdoor increases to ambient noise levels would remain. Therefore, this potential mitigation measure is regarded as infeasible.

#### Summary

In summary, for this traffic-generated noise impact, there is no feasible mitigation that would prevent substantial increases in ambient noise levels since all conceivable mitigations would be, in some circumstances, economically impractical, scientifically unachievable, outside the City's jurisdiction, and/or inconsistent with City planning goals and objectives, as demonstrated in the EIR. Thus, because no feasible mitigation measures are available to mitigate noise impacts to a less than significant level, traffic noise would remain a significant and unavoidable impact.

### **POPULATION AND HOUSING**

#### a. Significant and Unavoidable Impact (no mitigation available)

**Impact POP-1:** The proposed General Plan and UMPS would induce substantial employment growth within the EIR Study Area.

**Facts in Support of Findings for Impact POP-1:** In order to reduce the anticipated employment growth by 2040 to an "insubstantial" level that would not exceed SJCOG's projections, the City would have to limit employment development opportunities substantially. As noted in the Draft EIR, 43,750 new jobs are projected within approved and pending development projects alone, a number that itself exceeds SJCOG's employment growth forecast. Since the City cannot rescind existing development entitlements, it would be infeasible to reduce the employment development capacity in the city to SJCOG's projections. The proposed General Plan land use map represents a land use plan that the City believes is appropriate to accommodate growth projected for 2040 and beyond. It is not feasible to mitigate employment growth to a level that is less than "substantial;" therefore, this impact is considered significant and unavoidable.

### **TRANSPORTATION AND TRAFFIC**

#### a. Significant and Unavoidable Impact after mitigation

**Impact TRAF-1:** Implementation of the proposed General Plan, in combination with regional growth, would result in increased vehicle traffic, which would affect the operation of local roadways and freeway segments. As shown in Table 4-14.2 and discussed above, the proposed General Plan would result in significant level of service impacts to roadway and freeway segments.

**Mitigation Measure TRAF-1a:** The City shall implement the following to reduce the severity of potential LOS impacts on the following City roadway segments:

- **March Lane at UPRR.** The adopted 2035 General Plan identifies an eight-lane cross section for this roadway from North El Dorado Street to State Route 99. The proposed General Plan envisions a six-lane cross-section through 2040. With an eight-lane cross-section, the roadway would operate within the established LOS policy. Therefore, to mitigate the impact, the City shall reserve sufficient right-of-way to accommodate an eight-lane cross-section, plus associated turn pockets at intersections. Construction of an eight-lane cross-section would result in an acceptable level of service for vehicles, but could preclude the provision of facilities that would encourage higher levels of transit ridership, walking and bicycling along the corridor.

Prior to the construction of additional roadway improvements along the March Lane corridor, the City shall conduct a focused complete streets study to analyze and evaluate peak hour and daily operations of March Lane between I-5 and State Route 99 to identify the cross-section required to accommodate existing and planned growth. The complete streets study shall consider the potential mode shift under scenarios that provide additional bicycle, pedestrian, and transit facilities along the corridor. Should the complete streets study show that corridor operations would fall within the established level of service standard for the six-lane cross-section, an implementation program of the identified bicycle, pedestrian, and transit improvements shall be required. Alternatively, the mitigation measure is to provide an eight-lane cross-section for vehicles. Implementation of this mitigation measure would reduce the potential impact to a less-than-significant level.

- **March Lane between West Lane and Bianchi Road.** The adopted 2035 General Plan identifies an eight-lane cross section for this roadway from North El Dorado Street to State Route 99. The proposed General Plan envisions a six-lane cross-section through 2040. With an eight-lane cross-section, the roadway would operate within the established LOS policy. Therefore, to mitigate the impact, the City shall reserve sufficient right-of-way to accommodate an eight-lane cross-section, plus associated turn pockets at intersections.

Prior to the construction of additional roadway improvements along the March Lane corridor, the City shall conduct a focused complete streets study to evaluate peak hour and daily operations of March Lane between I-5 and State Route 99 to identify the cross-section required to accommodate existing and planned growth. The analysis shall consider the potential mode shift under scenarios that provide additional bicycle, pedestrian, and transit facilities along the corridor. Should corridor operations fall within the established level of service standard with a six-lane cross-section, the study shall identify bicycle, pedestrian, and transit enhancements that are necessary to serve the corridor. Otherwise, the mitigation measure is to provide an eight-lane cross-section for vehicles. Implementation of this mitigation measure would reduce the potential impact to a less-than-significant level.

- **Dr. Martin Luther King Jr. Boulevard between I-5 and Airport Way.** This section of Dr. Martin Luther King Jr. Boulevard is built out to its ultimate capacity and no further improvements are planned. Provision of parallel capacity in the area would provide alternative travel choices within this area of South Stockton, but is not expected to result in LOS D operations in the Cumulative with Proposed Plan condition. Therefore, this impact would remain significant and unavoidable.
- **8th Street between Pock Lane and D Street.** This roadway section currently provides one travel lane in each direction with on-street parking within a 60-foot curb-to-curb right-of-way. There is sufficient right-of-way to modify the roadway cross-section to maintain on-street parking (8 feet), provide bicycle lanes (6 feet), one travel lane in each direction (10 feet), and a center two-way left-turn lane (12-feet). With modifications within the existing right-of-way, vehicular capacity could increase, reducing the impact to a less-than-significant level. Therefore, to mitigate the impact, the City shall conduct a detailed engineering study of 8th Street between El Dorado Street and Mariposa Road to identify roadway improvements that can be implemented within the existing right-of-way to improve travel for all modes, especially considering the potential for a grade-separated crossing of the railroad tracks, which would provide an additional east-west connection in South Stockton. Implementation of this mitigation measure would reduce this impact to a less-than-significant level.
- **Arch Airport Road between SR 99 and Quantas Lane.** This section of Arch-Airport Road is built out to its ultimate capacity and no further improvements are planned. Provision of parallel capacity in the area would provide alternative travel choices within this area of South Stockton, but is not expected to result in LOS D operations in the Cumulative with Proposed Plan condition. Therefore, this impact would remain significant and unavoidable.
- **California Street between Harding Way and Park Street.** Prior to the construction of roadway improvements along the California Street corridor, the City shall conduct a focused complete streets study to evaluate peak hour and daily operations of California Street from north of Harding Way to south of Park Street. The evaluation shall consider the effect of providing exclusive bicycle facilities on peak hour and daily operations along the corridor. The study shall also evaluate parallel roadway facilities that could potentially see an increase in vehicle traffic with a lane reduction on California Street.

Should the study indicate vehicle operations would fall below the level of service standard for the facility, even considering potential traffic shifts to other roadways (and the secondary impact of those shifts), and the potential mode shift to non-auto travel modes, the mitigation measure is to retain the existing vehicle capacity and explore other alternatives for providing bicycle facilities through the corridor. Should the analysis indicate vehicle levels of service would remain within the City's standard for the roadway facility, the mitigation measure is to construct exclusive bicycle facilities within the



existing cross-section. Implementation of this mitigation measure would reduce this impact to a less-than-significant level.

- **B Street between Dr. Martin Luther King Jr. Boulevard and 4th Street.** The City shall reserve sufficient right-of-way to accommodate a four-lane cross-section, plus associated turn pockets at intersections.

Prior to the construction of additional roadway improvements along the B Street corridor, the City shall conduct a focused complete streets study to evaluate peak hour and daily operations of B Street between Dr. Martin Luther King Jr. Boulevard and Arch-Airport Road to identify the cross-section required to accommodate existing and planned growth. The analysis shall consider the potential mode shift under scenarios that provide additional bicycle, pedestrian, and transit facilities along the corridor. Should corridor operations fall within the established level of service standard with a two-lane cross-section, the study shall identify bicycle, pedestrian, and transit enhancements that are necessary to serve the corridor. Otherwise, the mitigation measure is to provide a four-lane cross-section for vehicles. Implementation of this mitigation measure would reduce the potential impact to a less-than-significant level.

**Mitigation Measure TRAF-1b:** The City shall implement the following to reduce the severity of potential LOS impacts on the following freeway segment:

- **State Route 99 between Farmington Road and Fremont Street.** The Cumulative with Proposed Plan transportation analysis considers the widening of State Route 99 through Stockton to its ultimate planned width. No additional improvements have been identified. Implementation of the proposed General Plan and its associated policies are expected to provide alternative travel choices to Stockton residents and workers, shifting travel patterns and modes. However, deficient operations are expected to occur on State Route 99, and this impact would remain significant and unavoidable.

**Facts in Support of Findings for Impact TRAF-1:** As indicated above, with implementation of Mitigation Measures TRAF-1a and TRAF-1b, the impact would remain significant and unavoidable due to three roadway segments (see underlining above).

**Impact TRAF-2:** Implementation of the proposed General Plan, in combination with regional growth, would result in increased vehicle traffic, which would affect the operation of regional roadways and freeway segments. As discussed above, the proposed General Plan would result in significant level of service impacts to roadway and freeway segments.

**Mitigation Measure TRAF-2:** The City of Stockton shall continue to participate in planning efforts for regional transportation facilities.

**Facts in Support of Findings for Impact TRAF-2:** With implementation of Mitigation Measure TRAF-2, the impact would remain significant and unavoidable.

#### IV. EVALUATION OF ALTERNATIVES

CEQA mandates that an EIR evaluate a reasonable range of alternatives to the project or the project location that generally reduce or avoid potentially significant impacts of the project. CEQA requires that every EIR evaluate a "No Project" alternative. Alternatives provide a basis of comparison to the project in terms of beneficial, significant, and unavoidable impacts. This comparative analysis is used to consider reasonable, feasible options for minimizing environmental consequences of a project.

The proposed General Plan and UMPS Draft EIR analyzed three alternatives, including the No Project alternative, the Corridors Focus Alternative, and the Infill Focus Alternative. Table 5-1, *Comparison of Impacts from Project Alternatives*, of the Draft EIR provides a side-by-side comparison of the three alternatives and their impacts as they relate to the impacts of the proposed General Plan and UMPS.

##### 1. No Project Alternative

As required by CEQA Guidelines section 15126.6(e), the proposed General Plan evaluates a No Project Alternative. The evaluation of the No Project Alternative allows decision makers to compare the impacts of the proposed project to the impacts of the No Project Alternative. CEQA Guidelines section 15126.6(e)(2) requires the No Project Alternative analysis to discuss what would reasonably be expected to occur in the foreseeable future if the project were not approved. Under the No Project Alternative the proposed General Plan and UMPS would not be adopted, future development in Stockton would continue to be subject to existing policies, regulations, and land use designations pursuant to the existing General Plan, and future infrastructure development would continue to be subject to the current Utility Master Plans, which were adopted to support development under the existing 2035 General Plan.

It is estimated that this alternative would likely result in the same horizon-year development levels as the proposed project. The No Project Alternative would include the same level of growth within the General Plan horizon as the proposed project, but under a different land use map, which is shown on Figure 5-3 of the Draft EIR. The main differences in the land use map compared to the proposed General Plan are that residential growth would be directed to villages at the edges of the city (including on approximately 9,000 acres of land designated for open space and agriculture under the proposed General Plan), and commercial and industrial development would be interspersed along key corridors.

##### **Ability to Meet Project Objectives**

The No Project Alternative does not meet the City Council's objectives for the General Plan. By maintaining the Village designation in an extensive area outside the city limit,

maintaining a lower allowed residential density within the Downtown Core and Greater Downtown, and excluding the extensive policies and actions that promote infill development, the No Project Alternative would not support the objectives related to strengthening the city's core through revitalization of the Downtown and other existing neighborhoods, nor the sustainability objectives related to maintaining clear, discrete edges of the city surrounded by agricultural land. By excluding the focused policies and actions related to access to healthy food and physical activity, the No Project Alternative would not further the objective of providing opportunities for the entire Stockton community to maintain active and healthy lifestyles. Finally, by excluding the focused policies and actions related to crime prevention, the No Project Alternative would not support the objective to make all parts of Stockton safer.

### **Summary of Environmental Impacts**

The No Project Alternative would result in several slightly greater impacts than the proposed General Plan and UMPS. These slightly greater impacts are associated with Aesthetics, Agricultural and Forestry Resources, Air Quality, Biological Resources, Cultural and Tribal Cultural Resources, Greenhouse Gas Emissions, Hydrology and Water Quality, Land Use and Planning, Noise, Transportation and Traffic, and Utilities and Service Systems. The No Project Alternative and the proposed General Plan and UMPS would have similar impacts to Geology, Soils, Seismicity, and Mineral Resources; Hazards and Hazardous Materials; Population and Housing; and Public Services and Recreation.

### **Findings**

Specific economic, social, or other considerations make infeasible the No Project Alternative identified in the Final EIR as described below:

- The No Project Alternative would not meet the objectives of strengthening the city's core through revitalization of the Downtown and other existing neighborhoods.
- The No Project Alternative would not accomplish the sustainability objectives related to maintaining clear, discrete edges of the city surrounded by agricultural land.
- The No Project Alternative would not further the objective of providing opportunities for the entire Stockton community to maintain active and healthy lifestyles.
- The No Project Alternative would not support the objective to make all parts of Stockton safer.
- The No Project Alternative would have slightly greater impacts to Aesthetics, Agricultural and Forestry Resources, Air Quality, Biological Resources, Cultural and Tribal Cultural Resources, Greenhouse Gas Emissions, Hydrology and Water Quality, Land Use and Planning, Noise, Transportation and Traffic, and Utilities and Service Systems.

## **2. Corridors Focus Alternative**

Under the Corridors Focus Alternative, the policies and actions in the proposed General Plan would be adopted, but the land use map and the associated UMPS to plan for infrastructure to serve that land use pattern would be different, focusing residential development into village areas at the edge of the city and retail development along major corridors. The land use map for the Corridors Focus Alternative is shown on Figure 5-4 of the Draft EIR. It is estimated that this alternative would likely result in the same horizon-year development levels as the proposed project.

### **Ability to Meet Project Objectives**

The Corridors Focus Alternative does not meet the City Council's objectives for the General Plan. By maintaining the Village designation in a large area outside the city limit, the No Project Alternative would not further the sustainability objectives related to maintaining clear, discrete edges of the city surrounded by agricultural land.

### **Summary of Environmental Impacts**

The Corridors Focus Alternative would result in several slightly greater impacts than the proposed General Plan and UMPS. These slightly greater impacts are associated with Aesthetics, Agricultural and Forestry Resources, Air Quality, Biological Resources, Cultural and Tribal Cultural Resources, Greenhouse Gas Emissions, Hydrology and Water Quality, Noise, Transportation and Traffic, and Utilities and Service Systems. The Corridors Focus Alternative and the proposed General Plan and UMPS would have similar impacts to Geology, Soils, Seismicity, and Mineral Resources; Hazards and Hazardous Materials; Land Use and Planning; Population and Housing; and Public Services and Recreation.

### **Findings**

Specific economic, social, or other considerations make infeasible the Corridors Focus Alternative identified in the Final EIR for the reasons below:

- The Corridors Focus Alternative would not accomplish the sustainability objectives related to maintaining clear, discrete edges of the city surrounded by agricultural land.
- The Corridors Focus Alternative would have slightly greater impacts to Aesthetics, Agricultural and Forestry Resources, Air Quality, Biological Resources, Cultural and Tribal Cultural Resources, Greenhouse Gas Emissions, Hydrology and Water Quality, Noise, Transportation and Traffic, and Utilities and Service Systems.

## **3. Infill Focus Alternative**

Under the Infill Focus Alternative, the policies and actions in the proposed General Plan would be adopted, but the land use map and the associated UMPS to plan for

infrastructure to serve that land use pattern would be slightly different. The most significant difference is that this alternative does not include the Economic and Education Enterprise designation in the area north of Eight Mile Road, and instead designates it primarily for Open Space and Agriculture. Within the core of the city, the Infill Focus Alternative would provide for more Professional Office uses along S Airport Way and more High Density Residential near Weston Ranch. The land use map for the Infill Focus Alternative is shown on Figure 5-5 of the Draft EIR. It is estimated that this alternative would likely result in the same horizon-year development levels as the proposed project.

### **Ability to Meet Project Objectives**

The Infill Focus Alternative does not meet the City Council's objectives for the General Plan. By excluding the Economic and Education Enterprise designation, the Infill Focus Alternative would not further the economic development objectives related to providing job opportunities with competitive wages, attracting major employers and attracting a California State University (CSU) Stockton or similar facility.

### **Summary of Environmental Impacts**

CEQA requires the identification of an environmentally superior alternative in an EIR. The Infill Focus Alternative is identified in the Final EIR as the Environmentally Superior Alternative. By focusing development in the core of the city and designating the area north of Eight Mile Road for Open Space and Agriculture, this alternative would be an improvement over the proposed project with respect to potential negative impacts associated with Aesthetics, Agricultural and Forestry Resources, Air Quality, Biological Resources, Cultural and Tribal Cultural Resources, Greenhouse Gas Emissions, Hydrology and Water Quality, Noise, Transportation and Traffic, and Utilities and Service Systems.

The impacts of the Infill Focus Alternative and the proposed General Plan and UMPS on Geology, Soils, Seismicity, and Mineral Resources; Hazards and Hazardous Materials; Land Use and Planning; Population and Housing; and Public Services and Recreation would be similar.

### **Findings**

Specific economic, social, or other considerations make infeasible the Infill Focus Alternative identified in the Final EIR for the reasons below:

- The Infill Focus Alternative does not further the City Council's objective of providing job opportunities with competitive wages.
- The Infill Focus Alternative does not further the City Council's objective of attracting major employers.
- The Infill Focus Alternative does not further the City Council's objective of attracting a CSU Stockton or similar educational facility.

## V. OTHER CEQA-REQUIRED CONSIDERATIONS

### **Growth Inducement**

Section 15126.2(d) of the CEQA Guidelines requires that an EIR discuss the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Typical growth inducements might be the extension of urban services or transportation infrastructure to a previously unserved or under-served area, or removal of major barriers to development. Not all growth inducement is necessarily negative. Negative impacts associated with growth inducement occur only where the projected growth would cause adverse environmental impacts.

Growth-inducing impacts fall into two general categories: direct or indirect. Direct growth-inducing impacts are generally associated with providing urban services to an undeveloped area. Providing urban services to a site, and the subsequent development, can serve to induce other landowners in the vicinity to convert their property to urban uses. Indirect, or secondary growth-inducing impacts consist of growth induced in the region by additional demands for housing, goods, and services associated with the population increase caused by, or attracted to, a new project.

### **Direct Impacts**

The proposed project (which includes already approved or pending development both within the city limits and outside the City's jurisdiction) would directly induce population, employment, and economic growth by allowing development and associated infrastructure in areas that are currently undeveloped. Implementation of the proposed project would result in the following growth by 2040 based on the buildout methodology described in Chapter 3, Project Description, of the Draft EIR:

- 40,900 new dwelling units, including:
  - 26,300 new single-family units
  - 14,600 new multi-family units
- 132,200 new residents<sup>2</sup>
- 13.8 million square feet of new commercial and office space
- 35.6 million square feet of new industrial space

The primary mechanism for this growth within the city and Sphere of Influence (SOI) is the proposed General Plan land use map, which allows for some development in areas that are not currently developed. The anticipated locations of this growth are shown in Figures 3-3 and 3-5 in Chapter 3, Project Description, of the Draft EIR.

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<sup>2</sup> Based on an assumption of 3.23 persons per household, as reported in: State of California, Department of Finance, 2017. *E-5 Population and Housing Estimates for Cities, Counties and the State* — January 1, 2011- 2017.

The proposed General Plan land use map allows some development in areas of the EIR Study Area presently used as agriculture and vacant land. However, through the Open Space and Agriculture designation in the proposed land use map, combined with policies and actions enacted under the General Plan, the proposed project would control the geographical extent of growth and encourage sustainable patterns of urban land uses. In addition, the proposed General Plan commits the City to controlled and orderly use of its natural resources through policies to conserve agricultural land and promote compact growth.

Specifically, Policy LU-5.3 and Action LU-5.3.B direct the City to define discrete and clear city edges that preserve agriculture, open space, and scenic views, including through the development of a greenbelt or community separator around the city. Goal LU-2 and its associated actions and policies support compact growth by promoting development in the Downtown. Meanwhile, Policy 6.2 and its associated actions direct the City to prioritize development and redevelopment of vacant, underutilized, and blighted infill areas. Actions LU-6.1.B, LU-6.1.E, and LU-6.1.F promote orderly growth by directing the City to monitor the rate of growth to ensure that it does not overburden the City's infrastructure and services, ensure that there is adequate infrastructure to serve new development, and evaluate and implement adjustments to the Public Facilities Fee structure to encourage development in areas where infrastructure is already present and ensure that non-infill development pays its fair share of anticipated citywide capital facilities and operational costs. In addition, Policy LU-5.2 and its associated actions protect natural resource areas, fish and wildlife habitat, scenic areas, open space areas, and agricultural lands.

As a result, while the proposed project would result in increased local growth, the Open Space and Agriculture designation in the proposed land use map, combined with policies and actions included in the proposed General Plan, would reduce the potential for negative impacts associated with direct growth inducement to a less-than-significant level.

### **Indirect Impacts**

While the proposed General Plan does allow growth, it also includes the Open Space and Agriculture designation in the proposed land use map and policies and actions that would control the geographical extent of growth and encourage sustainable patterns of urban land uses, as described above. The proposed General Plan land use map provides a mixture of housing, shopping, public, and employment opportunities so that as the number of residents increase, they do not pressure adjacent communities to provide new commercial and employment opportunities. As stated above, the General Plan commits to only allow development where infrastructure is in place or is planned. As a result, the proposed General Plan and UMPS would result in a less-than-significant indirect growth-inducing impact.

### **Findings Regarding Growth Inducing Impacts**

While the proposed General Plan would result in increased local growth, the Open Space and Agriculture designation in the proposed land use map, combined with policies and actions included in the proposed General Plan, would reduce the potential for negative impacts associated with direct growth inducement to a less-than-significant level.

While the proposed General Plan allows growth, the land use map and policies and actions included in the proposed General Plan would reduce the potential for negative impacts associated with indirect growth inducement to a less-than-significant level.

### **Unavoidable Significant Impacts**

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. More information on these impacts is found in Chapter 4, Environmental Evaluation, of the Draft EIR. Significant and unavoidable impacts are identified in Section III above.

### **Significant Irreversible Changes**

Section 15126.2(c) of the CEQA Guidelines requires discussion of the extent to which a proposed project will commit nonrenewable resources to uses that future generations will probably be unable to reverse.

A project would generally result in a significant irreversible impact if:

- Primary and secondary impacts would commit future generations to similar uses.
- The project would involve a large commitment of nonrenewable resources.
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project.

### **Changes in Land Use that Commit Future Generations**

Development allowed by the proposed General Plan would result in the conversion of some agricultural and vacant lands to residential, commercial, and industrial uses, and the intensification of underutilized areas. In addition, intensification of land uses and development of currently undeveloped lands would contribute to traffic congestion, as described in Section 4.14, Transportation and Traffic, of the Draft EIR. Development allowed under the proposed General Plan would constitute a long-term commitment to residential, commercial, industrial, parking, public, and other urban uses.

### **Irreversible Damage from Environmental Accidents**

Irreversible changes to the physical environment could occur from accidental release of hazardous materials associated with development activities. However, compliance with State and federal hazardous materials regulations and local emergency plans, as



discussed in Section 4.8, Hazards and Hazardous Materials, of the Draft EIR, would reduce this potential impact to a less-than-significant level. No other irreversible changes are expected to result from the adoption and implementation of the proposed General Plan and UMPS.

### **Large Commitment of Nonrenewable Resources**

Implementation of the proposed General Plan and UMPS would result in the commitment of limited, renewable resources such as lumber and water. In addition, development allowed by the proposed General Plan and UMPS would irretrievably commit nonrenewable resources for the construction and maintenance of buildings, infrastructure, and roadways. These non-renewable resources include mined materials such as sand, gravel, steel, lead, copper, and other metals. Development allowed under the proposed General Plan also represents a long-term commitment to the consumption of fossil fuels, natural gas, and gasoline. Increased energy demands would apply to construction, lighting, heating, and cooling of residences, and transportation of people within, to, and from the EIR Study Area. Proposed General Plan Policy LU-5.4 and Action LU-5.4.B promote energy conservation and efficiency, which could minimize or incrementally reduce the consumption of these resources.

### **Cumulative Impacts**

Section 15130 of the CEQA Guidelines states that cumulative impacts shall be discussed when a project's incremental effect is cumulatively considerable. It further states that this discussion shall reflect the level and severity of the impact and the likelihood of occurrence, but not in as great detail as that necessary for the proposed project alone. section 15355 of the CEQA Guidelines defines cumulative impacts to be "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Cumulative impacts represent the change caused by the incremental impact of the proposed project when added to effects of past projects, other current projects and probable future projects in the vicinity.

CEQA Guidelines section 15130 (b)(1) states that the information utilized in an analysis of cumulative impacts should come from one of two sources, either:

1. A list of past, present, and probable future projects producing related cumulative impacts, including, if necessary, those projects outside the control of the agency; or
2. A summary of projections contained in an adopted general plan or related planning document designed to evaluate regional or area-wide conditions.

The cumulative impacts analyses in the EIR use method No. 2. The proposed project consists of the Envision Stockton 2040 General Plan Update and UMPS. Consistent with Section 15130(b)(1)(B) of the CEQA Guidelines, the EIR analyzes the environmental impacts of projected development that will occur under the proposed General Plan through its horizon year of 2040. As a result, this EIR addresses the cumulative impacts of development within the City of Stockton and the region surrounding it, as appropriate.

In most cases, the potential for cumulative impacts is contiguous with the SOI. Potential cumulative impacts that have the potential for impacts beyond the SOI (e.g., traffic, air quality, noise) have been addressed through cumulative growth in the SOI and region. Regional growth outside Stockton has accounted for traffic, air quality, and noise impacts that are identified through use of the regional traffic model, which uses regional growth projections to calculate future traffic volumes.

## VI. STATEMENT OF OVERRIDING CONSIDERATIONS

In determining whether to adopt the General Plan and UMPS, CEQA requires a public agency to balance the benefits of a project against its unavoidable environmental risks. (CEQA Guidelines, section 15093). In accordance with Public Resources Code section 21081(b) and CEQA Guidelines section 15093, the City Council has, in determining whether or not to adopt the General Plan and UMPS, balanced the economic, social, technological, academic, and other benefits of the project against its unavoidable environmental effects, and has found that the benefits of the project outweigh the significant adverse environmental effects that are not mitigated to less-than-significant levels, for the reasons set forth below. This statement of overriding considerations is based on the City Council's review of the Final EIR and other information in the administrative record.

On the basis of the above findings and the substantial evidence in the record of this proceeding, the City specifically finds, and therefore makes this Statement of Overriding Considerations, that as a part of the process of obtaining project approvals, all significant effects on the environment with implementation of the proposed project have been eliminated or substantially lessened where feasible. Furthermore, the City has determined that any remaining significant effects on the environment found to be unavoidable are acceptable due to the following overriding considerations:

1. The proposed General Plan and UMPS represent a vision that accommodates a balance between the City's economic development needs and the quality of life that the community seeks to achieve.
2. The proposed General Plan and UMPS represent a balance between the many interests of community members and agencies who have participated in the General Plan process.
3. The proposed General Plan and UMPS accommodate development that has already been entitled through permit approvals and development agreements, and which contribute substantially to the significant impact findings identified in the Final EIR.
4. The proposed General Plan contains land uses, policies, and actions that will promote a sustainable, infill-focused development pattern while maintaining the opportunity for a major economic development catalyst project to come to Stockton.

5. The General Plan contains land uses, policies, and actions that will provide opportunities and support both residential and employment growth within its existing neighborhoods, while still maintaining the opportunity for large job-generators and/or educational institutions that require large tracks of undeveloped lands to locate in Stockton.
6. The proposed General Plan contains land uses, policies, and actions that will support the revitalization of the Downtown and other existing neighborhoods in Stockton. In the Downtown, revitalization is supported by increasing the allowed residential density in the Downtown Core and Greater Downtown, along with actions that would increase flexibility and provide incentives for Downtown development and that would promote transit-oriented development (TOD) around the Downtown rail stations. Outside the Downtown, revitalization is supported by prioritizing maintenance activities in historically underserved areas and providing incentives for property maintenance, rehabilitation, and redevelopment.
7. The proposed General Plan contains land use and economic development policies and actions that support existing businesses while helping to attract new businesses, particularly uses that are identified in the City's Economic Development Strategic Plan.
8. The proposed General Plan incorporates a combination of non-vehicular and vehicular transportation improvements that meet the transportation challenges of the future so that people can travel safely and conveniently on foot or by car, air, bicycle, and transit. The proposed General Plan also includes or maintains policies that ensure compatibility between the City's land use plans and the surrounding airports.
9. The proposed General Plan includes actions that direct the City to amend its Transportation Impact Analysis Guidelines to consider non-vehicular travel metrics and to establish CEQA thresholds based on vehicle miles traveled (VMT) rather than level of service (LOS), consistent with State law.
10. The proposed General Plan includes land uses, policies, and actions that facilitate and incentivize infill development and establish criteria for balanced growth, helping to fulfill the City's obligations under its 2008 Settlement Agreement to facilitate the development of 4,400 units within the Greater Downtown and an additional 14,000 units within the city limit as it existed in 2008, to provide incentives for infill development, and to establish criteria for balanced growth.
11. The proposed General Plan increases the allowed residential density in the Downtown Core and Greater Downtown, supporting revitalization of the Downtown and helping to fulfill the City's obligations under its 2008 Settlement Agreement to facilitate the development of 4,400 units within the Greater Downtown.

## EXHIBIT 1

12. The proposed General Plan will strengthen the City's goals to provide housing for all needs in the community by supporting and expanding on the policies and goals in the Housing Element, increasing the allowed residential density in the Downtown Core and Greater Downtown, and providing land use designations that allow a variety of housing styles, types, and densities throughout the city.

## EXHIBIT 2

2040 General Plan Update, Utility Master Plan Supplements (UMPS), Mitigation Monitoring and Reporting Program, [www.stockton.gov/envisionstockton](http://www.stockton.gov/envisionstockton)

Resolution No. 2018-12-04-1503-02

## STOCKTON CITY COUNCIL

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### RESOLUTION ADOPTING THE ENVISION STOCKTON 2040 GENERAL PLAN UPDATE (GENERAL PLAN) AND ADOPTING THE UTILITY MASTER PLAN SUPPLEMENTS (UMPS)

On January 26, 2016, the City Council of the City of Stockton initiated a comprehensive update to the Stockton General Plan, known as the Envision Stockton 2040 General Plan Update (General Plan), and supplements to the Stockton Utility Master Plans, known as the Utility Master Plan Supplements (UMPS); and

On October 25, 2018, and November 15, 2018, the Planning Commission of the City of Stockton conducted a public hearing to consider a recommendation on the General Plan and UMPS, and the Commission recommended by a vote of 6-1, Davie dissenting, that the City Council certify the Environmental Impact Report (EIR) for the General Plan and UMPS and adopt the General Plan and UMPS; and

The City Council has considered the Planning Commission recommendations and heard testimony from staff, consultants, landowners, and other interested parties, and the Council has considered the factual information contained in the written record and the testimony given at the public meetings and hearings, and based on this factual information, the City Council finds that with respect to the comprehensive update to the General Plan and the supplements to the Stockton Utility Master Plans:

- A. The proposed General Plan and UMPS are internally consistent with the goals, objectives, and policies of the proposed General Plan;
- B. The proposed General Plan and UMPS establish appropriate goals, policies, and actions to address such issues as land use, transportation, safety, and community health;
- C. The proposed General Plan and UMPS would maintain the appropriate balance of land uses within the city;
- D. The proposed General Plan and UMPS would not be detrimental to the public health, safety, or welfare of the community;
- E. The proposed General Plan has been updated in conformity with the provisions of the State law requirements of California Government Code section 65300 *et seq.*;
- F. The City Council has reviewed and considered the Final EIR for the proposed General Plan and UMPS and has recommended certification of the Final EIR as being adequate under the California Environmental Quality Act (CEQA);


- G. The mitigation measures, findings, and statement of overriding considerations as set forth in detail in the Findings and Statement of Overriding Considerations for the General Plan and UMPS are hereby adopted in relation to the proposed General Plan and UMPS; now, therefore,

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF STOCKTON, AS FOLLOWS

1. The City Council of the City of Stockton does hereby adopt the Envision Stockton 2040 General Plan, and the Utility Master Plan Supplements (UMPS), attached as Exhibit 1, including final revisions as described in the staff report, attached to this resolution and incorporated herein.

2. The City Manager is authorized to take such other actions as are appropriate and necessary to carry out the purpose and intent of this Resolution.

PASSED, APPROVED, and ADOPTED \_\_\_\_\_ December 4, 2018 \_\_\_\_\_.

  
MICHAEL D. TUBBS, Mayor  
of the City of Stockton

ATTEST:

  
  
CHRISTIAN CLEGG, Deputy City Manager/  
Interim City Clerk of the City of Stockton

EXHIBIT 1

2040 General Plan Update, Utility Master Plan Supplements (UMPS),  
[www.stocktongov/envisionstockton](http://www.stocktongov/envisionstockton)



Resolution No. **2018-12-04-1503-03**

## **STOCKTON CITY COUNCIL**

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### **RESOLUTION ADOPTING WRITTEN FINDINGS OF CONSISTENCY WITH THE DELTA PLAN WITH SUPPORTING DOCUMENTATION**

The 2009 Delta Reform Act (the "Act") created the Delta Stewardship Council (the "DSC") and established new state policies aimed at addressing preservation of the California Delta ecosystem while simultaneously ensuring that the important role the Delta plays as a critical link in the state's water infrastructure be continued in a sustainable manner; and

The Act established two "coequal goals": Provide a more reliable water supply for California; and protect, restore and enhance the Delta ecosystem. The coequal goals must be met in a manner that protects and enhances the unique cultural, recreational, natural resource and agricultural values of the Delta as an evolving place; and

The Act mandated that the DSC establish a legally enforceable plan for the management of Delta water and environmental resources (the "Delta Plan") and to ensure compliance with the Delta Plan through oversight and coordination with state and local agencies.

In May of 2013, the DSC adopted the Delta Plan, and all activities that thereafter occur in whole or in part within the legal Delta, and that are deemed Covered Actions under the Delta Plan and the Act, must be undertaken in a manner consistent with the applicable regulatory policies adopted therein; and

Notwithstanding anything to the contrary in this Resolution or the administrative record of this action, the City reserves the right to contest whether its adoption of the Envision Stockton 2040 General Plan Update is a Covered Action pursuant to the exemption provided in Water Code section 85057.5(b)(4) based upon the consistency present between the Envision Stockton 2040 General Plan Update and the Sustainable Communities Strategy and Regional Transportation Plan adopted by the San Joaquin Council of Governments in June of 2018, but in the spirit of comity and transparency the City has adopted this Resolution to provide full disclosure of the pertinent facts and to ensure compliance with applicable law; and

Pursuant to Water Code section 85057.5 the adoption of the Envision Stockton 2040 General Plan Update may be considered a Covered Action, and pursuant to Water Code section 85225, prior to implementing the Covered Action the city must submit to the DSC a written certification of consistency, with detailed findings as to whether this action is consistent with the Delta Plan. This resolution is intended to provide the city's written certification of consistency with the Delta Plan and to provide the detailed findings and supporting documentation for those findings; and

Before the City Council has adopted this certification of consistency it has considered the draft Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements; the Draft and Final Environmental Impact Report; the staff report to City Council; the

October 25 and November 15, 2018 Planning Commission staff reports; the Signed Planning Commission Resolution 2018-11-15-0501; the Policy and Action Changes Memo of November 16, 2018; the September 24, 2018 Ag Belt Memo; the Revised UMPS dated October 2018; the CAPAC General Plan- Settlement Consistency Table; the August 10, 2018 letter from the DSC (attached hereto as **Exhibit 1**) and all of the associated records, correspondence, testimony and information that constitutes the administrative record of the this proceeding as that term is defined in the California Environmental Quality Act and its associated regulations and case law and the City Council hereby incorporates by reference said documents and information as if set forth fully herein; now, therefore,

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF STOCKTON, AS FOLLOWS:

1. The Above recitals are true and correct and are incorporated herein by this reference.

2. For the reasons stated above, based on the findings stated herein, and as otherwise stated and shown in the administrative record of this action, the City Council of the City of Stockton does hereby certify that the Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements are consistent with the Delta Plan.

3. The City Council has made detailed findings to support this certification stated above, pursuant to 23 CCR 5002; Delta Plan Policy G P1.

4. The policies set out in the Delta Plan potentially applicable to this action are 23 CCR 5010 (Locate New Urban Development Wisely - DP P1), 23 CCR 5013 (Require Flood Protection for Residential Development in Rural Areas RR P2), 23 CCR 5014 (Protect Floodways RR P3) and 23 CCR 5015 (Floodplain Protection RR P4).

5. Policy DP P1 requires that new development within the legal Delta be limited to specified areas; including "[a]reas that city or county general plans as of the date of the Delta Plan's adoption, designate for residential, commercial, and industrial development in cities or their spheres of influence...". The areas within the legal Delta designated for such development in the City of Stockton general plan effective on the date of the Delta Plan's adoption are depicted in **Exhibit 2**. Although the terms on that map do not always explicitly say the permitted development is "residential, commercial and industrial" in nature the City's chosen terms have the same effect, as per the stipulated judgement in the Delta Stewardship Council Cases, Judicial Council Coordination Proceeding No. 4758, attached hereto as **Exhibit 3**. As can be seen in the current map depicting the areas of "residential, commercial and industrial" growth to be allowed under the Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements, attached hereto as **Exhibit 4**, such development will be limited to the area previously so designated in the City of Stockton general plan effective on the date of the Delta Plan's adoption.

6. Policy RR P2 requires that new residential development of five or more parcels shall be protected through floodproofing to a level of 12 inches above the 100-year base flood elevation plus sufficient additional elevation against a 55-inch rise in sea level at the Golden Gate, unless the development is located within certain areas including

"[a]reas that city or county general plans, as of the date of the Delta Plan's adoption, designate for development in cities or their spheres of influence...". As explained in paragraph 4, above, the area within the legal Delta designated for residential development in the Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements was previously so designated in the City of Stockton general plan on the date of the Delta Plan's adoption. Further, the Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements impose the flood control requirements of SB 5, including 200-year flood protection, on all new development in the legal Delta.


7. Policy RR P3 prohibits encroachment in a floodway. In the Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements, the City of Stockton has undertaken appropriate analysis of potential stormwater and flood related impacts and has imposed all appropriate and feasible measures in mitigation of those potential impacts; including specifically the imposition of all current standards associated with the design and operation of the City's MS4 and compliance with the City's current and future stormwater permits issued by the State of California, including measures intended to provide 200-year flood protection as required by SB5 and to reduce and/or retain stormwater runoff from future development.

8. Policy RR P4 prohibits encroachments to be constructed in the Lower San Joaquin River Floodplain Bypass area. As depicted in Attachment D, the Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements do not contemplate development and/or encroachments within the Lower San Joaquin River Floodplain Bypass area and further the Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements impose on all new development within the legal Delta the flood control requirements imposed by SB 5.

9. The City reserves the right to contest whether its adoption of the Envision Stockton 2040 General Plan Update and Utility Master Plan Supplements is a Covered Action pursuant to the exemption provided in Water Code section 85057.5(b)(4) based upon the consistency present between the Envision Stockton General Plan Update and the Sustainable Communities Strategy and Regional Transportation Plan adopted by the San Joaquin County Council of Governments in June of 2018.

10. The City Manager is authorized and directed to make such filings as are required pursuant to Water Code section 85225 and all associated policies and regulations, and to take such other actions as are appropriate and necessary to carry out the purpose and intent of this Resolution.

PASSED, APPROVED, and ADOPTED \_\_\_\_\_ December 4, 2018

  
MICHAEL D. TUBBS, Mayor  
of the City of Stockton

ATTEST:



  
CHRISTIAN SLEGG, Deputy City Manager and  
Interim City Clerk of the City of Stockton



# DELTA STEWARDSHIP COUNCIL

*A California State Agency*

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August 10, 2018

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Frank C. Damrell, Jr.  
Michael Gatto  
Maria Mehranian  
Susan Tatayon  
Skip Thomson  
Ken Weinberg

**Executive Officer**  
Jessica R. Pearson

**RE: Comments on Envision Stockton 2040 General Plan Update and Draft Environmental Impact Report for the General Plan Update and Utility Master Plan Supplements**

Dear Mr. Stagnaro:

Thank you for the opportunity to review and provide comments on the Draft Envision Stockton 2040 General Plan Update and Draft Environmental Impact Report (Draft EIR) for the General Plan Update and Utility Master Plan Supplements. Delta Stewardship Council (Council) staff also appreciated the opportunity to attend a workshop on the General Plan Update on July 30, 2018 and to discuss certain aspects of the General Plan Update and Draft EIR with you via telephone on August 6, 2018.

The Council is an independent State of California agency established by the Sacramento-San Joaquin Delta Reform Act of 2009 (SBX7 1; Delta Reform Act). The Council is charged with furthering California's coequal goals for the Delta through the adoption and implementation of the Delta Plan, regulatory portions of which became effective on September 1, 2013.

As stated in the Delta Reform Act, the State has "coequal goals" (which) means two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place" (Water Code section 85054).

Through the Delta Reform Act, the Council was directed to review and provide timely advice to local and regional planning agencies regarding the consistency of local and regional planning documents with the Delta Plan. The Council's input includes, but is not limited to, reviewing the consistency of local and regional planning documents with the ecosystem restoration needs of the Delta and reviewing whether the lands set aside for natural resource protection are sufficient to meet the Delta's ecosystem needs. (Water Code section 85212).

*"Coequal goals" means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place."*

*CA Water Code §85054*

### Covered Action Status

Through the Delta Reform Act, the Council was granted specific regulatory and appellate authority over certain actions of State or local public agencies that take place in whole or in part in the Delta. To do this, the Delta Plan contains a set of regulatory policies with which State and local agencies are required to comply. The Delta Reform Act specifically established a certification process for compliance with the Delta Plan. This means that State and local agencies that propose to carry out, approve, or fund a qualifying action in whole or in part in the Delta, called a "covered action," must certify that this covered action is consistent with the Delta Plan and must file a certificate of consistency with the Council that includes detailed findings.

As noted in the Draft General Plan, most of the western portion of Stockton's Planning Area is located within the Legal Delta, and thus subject to State oversight through the Delta Plan. The City of Stockton (City) has identified the need for the General Plan to be consistent with the Delta Plan (Draft General Plan, p. 3-17). The City has also identified that the Delta Plan includes a requirement for consistency findings for covered actions, which include the proposed General Plan (Draft EIR, pp. 4.2-3, 4.4-6, 4.10-4). The City also acknowledges the role of the Delta Plan's policies to address flood protection for residential development and limit encroachment in floodplains (Draft EIR, p. 4.9-7).

It should be noted that the Delta Reform Act establishes specific criteria and categories for exempting actions from the Council's regulatory authority. One of these exemptions is for actions within the Secondary Zone of the Delta that a metropolitan planning organization determines are consistent with its sustainable communities strategy (SCS). Such proposed actions are not covered actions regulated by the Council (Water Code section 85057.5(b)(4)).

The Draft EIR analyzes consistency with the San Joaquin Council of Governments' (SJCOG) 2014 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (Draft EIR, p. 4.10-18). An updated 2018 RTP/SCS was adopted by SJCOG on June 28, 2018. With respect to land use, the 2018 RTP/SCS is consistent with the Delta Plan. The City may request an evaluation of the updated General Plan's consistency with SJCOG's 2018 RTP/SCS. If SJCOG determines that the updated General Plan is consistent, the proposed project would be exempt from the Council's covered action process.

Additional information on covered actions and the certification process can be found on the Council website, <http://deltacouncil.ca.gov/covered-actions>.

### Comments on the Draft General Plan

Based on our review, Council staff has not identified any specific inconsistency between the Draft General Plan and the Delta Plan pursuant to Water Code section 85212. In fact, several General Plan policies align with the Delta Reform Act and the Delta Plan, including the following:

- **General Plan Land Use Designations.** Council staff is pleased to see that the General Plan Update will re-designate areas depicted as "Village" in the southern portion of the Planning Area to "Open Space/Agriculture". The Council supports this proposed change, which contributes to consistency between the General Plan and the Delta Plan.

Other land use designation changes in the Planning Area within the secondary zone of the Legal Delta appear to align with **Delta Plan Policy DP P1, Locate New Urban Development Wisely** (23 Cal. Code of Regs. section 5010). This includes redesignation of areas north of the City Limits from "Village" to "Economic and Education Enterprise," as the subject area was previously designated for development in the City's General Plan as of the date of the Delta Plan's adoption (May 16, 2013).

- **Climate Change.** The Council supports General Plan Policy CH-5.1A which outlines the City's intention to conduct a "comprehensive climate change vulnerability assessment to inform the development of adaptation and resilience policies and strategies". In a closely related effort, over the next couple of years, the Council will be undertaking a *Climate Change Vulnerability Assessment and Adaptation Strategy for the Sacramento – San Joaquin Delta* that seeks to incorporate stakeholder input, best available science, and identifies specific high-priority options for adapting to the changing climate. Council staff look forward to working with the City as a collaborative stakeholder in this process.

Council staff requests the City incorporate the following technical correction to the Draft General Plan regarding the Delta Plan:

- Land Use Element, p. 3-17, second paragraph. Please change the reference to the "Delta Reform Plan" to the "Delta Plan."

### Comments on the Draft EIR

Council staff appreciates the City's consideration and incorporation of comments we offered on the Notice of Preparation (NOP) for the 2040 General Plan Update and Utility Master Plan Supplements EIR in a letter dated June 22, 2017.

Council staff notes that the City evaluates the potential for conflict with the Delta Plan within the Draft EIR in the discussion of Impact LU-2, on p. 4.10-23. The analysis focuses on how

David Stagnaro  
City of Stockton  
August 10, 2018  
Page4

General Plan goals SAF-3 (Sustain Clean and Adequate Water Supplies) and LU-5 (Protect, Maintain, and Restore Natural and Cultural Resources) and associated policies support the coequal goals. The analysis also identifies that, as discussed above, the proposed General Plan does not allow new residential, commercial, or industrial development in the Delta that was not already allowed in the existing 2007 General Plan, noting consistency with Delta Plan Policy DP P1. The City concludes that implementation of the proposed General Plan policies and actions would support, rather than conflict with the Delta Plan. This information will be useful for the City to present as part of the record accompanying a certification of consistency with the Delta Plan, should it be determined that the General Plan Update is a covered action.

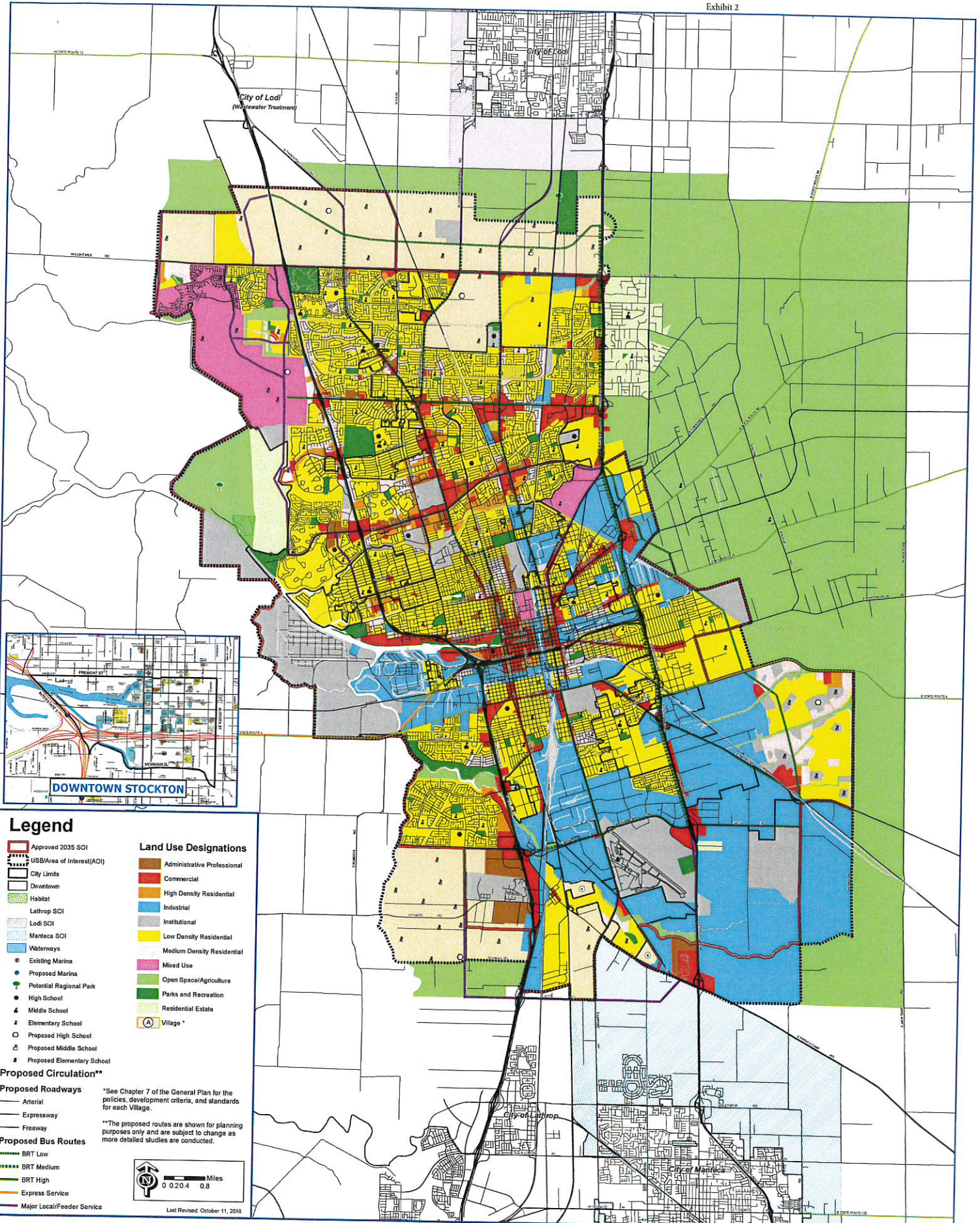
### Closing Comments

We encourage the City to continue early consultation with Council staff and to work collaboratively with SJCOG, as appropriate, to discuss the consistency certification process for the General Plan Update. Continued consultation is an important step to ensure consistency between the 2040 General Plan and the Delta Plan, so that the two plans are complementary and serve to protect the Delta. Please contact Kate Anderson of my staff at (916) 445-5028 or [kate.anderson@deltacouncil.ca.gov](mailto:kate.anderson@deltacouncil.ca.gov) with any questions, comments, or concerns.

Sincerely,



Jeff Henderson, AICP  
Deputy Executive Officer  
Delta Stewardship Council

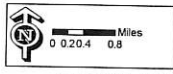


**Legend**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li> Approved 2035 SOI</li> <li> USB/Area of Interest (AOI)</li> <li> City Limits</li> <li> Downtown</li> <li> Habitat</li> <li> Lathrop SOI</li> <li> Lodi SOI</li> <li> Manteca SOI</li> <li> Waterways</li> <li> Existing Marina</li> <li> Proposed Marina</li> <li> Potential Regional Park</li> <li> High School</li> <li> Middle School</li> <li> Elementary School</li> <li> Proposed High School</li> <li> Proposed Middle School</li> <li> Proposed Elementary School</li> </ul> | <p><b>Land Use Designations</b></p> <ul style="list-style-type: none"> <li> Administrative Professional</li> <li> Commercial</li> <li> High Density Residential</li> <li> Industrial</li> <li> Institutional</li> <li> Low Density Residential</li> <li> Medium Density Residential</li> <li> Mixed Use</li> <li> Open Space/Agriculture</li> <li> Parks and Recreation</li> <li> Residential Estate</li> <li> Village *</li> </ul> |
|--|---|

**Proposed Circulation\*\***

- Proposed Roadways**
- Arterial
  - Expressway
  - Freeway
- Proposed Bus Routes**
- BRT Low
  - BRT Medium
  - BRT High
  - Express Service
  - Major Local/Feeder Service
- \*See Chapter 7 of the General Plan for the policies, development criteria, and standards for each Village.
- \*\*The proposed routes are shown for planning purposes only and are subject to change as more detailed studies are conducted.



Last Revised: October 11, 2016

© 2007 City of Stockton. All rights reserved. 2007-2011 Land Use/Circulation Diagram



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Exempt from Filing Fees  
Pursuant to Government  
Code Section 6103

6 Attorneys for Petitioner City of Stockton

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14 Attorneys for Petitioner City of Stockton

15 THE SUPERIOR COURT OF THE STATE OF CALIFORNIA  
16 IN AND FOR THE COUNTY OF SACRAMENTO

17 Coordination Proceeding  
18 Special Title (Rule 3.550),

JUDICIAL COUNCIL COORDINATION  
PROCEEDING NO. 4758

19 DELTA STEWARDSHIP COUNCIL CASES

STIPULATED JUDGMENT

Date Action Filed: June 13, 2013\_

Judge: Honorable Michael Kenny  
Dept.: 31

20 Pursuant to section 664.6 of the Code of Civil Procedure, the Delta Stewardship Council  
21 (Council) and City of Stockton (City) hereby stipulate to the entry of judgment in this matter.

22 The Council and the City enter into this stipulation in light of the following:

23 **RECITALS**

24 A. On May 16, 2013, the Council adopted the Delta Plan, pursuant to the  
25 Sacramento-San Joaquin Delta Reform Act of 2009 (Act) (Wat. Code, §§ 85000 et seq.).

26 B. Subsequently, numerous parties filed a total of seven lawsuits challenging the  
27 Council's adoption of the Delta Plan and its implementing regulations. One of those lawsuits  
28 was filed by the City. Specifically, on June 14, 2013, the City filed a Petition for Writ of

1 Mandate challenging the validity of the Delta Plan, the Delta Plan's regulations, and the Delta  
2 Plan's Environmental Impact Report.

3 C. The City and the Council have determined that the City's challenges can be fully  
4 resolved by documenting the Council's interpretations of one of its regulations, and its  
5 interpretation of a statutory provision, as explained in recitals D through H, below. The City and  
6 the Council are therefore entering this stipulation in order to document those interpretations.

7 D. Delta Plan Policy 1 ("DP P1," codified as 23 California Code of Regulations  
8 section 5010), generally limits new "residential, commercial and industrial development" to  
9 specified geographical areas that a general plan, in existence as of May 16, 2013, designated "for  
10 residential, commercial and industrial development."

11 E. The City is concerned that DP P1 uses the terms "residential, commercial or  
12 industrial development" but that the City's applicable general plan uses different terms for those  
13 same types of development. The City wants the Council to make it clear that the Council  
14 interprets DP P1's terms as applying to the City's functionally equivalent terms. The City is  
15 also concerned that DP P1 could apply to, and potentially prohibit, certain public facilities such  
16 as a public waste water treatment facility.

17 F. The Council always assumed that DP P1's use of the terms "residential,  
18 commercial or industrial development" applied whether a plan used those precise terms, or  
19 functionally equivalent terms. The Council also always assumed that DP P1 does not apply to  
20 public facilities such as a public waste water treatment facility.

21 G. The City is concerned that the Council might interpret the term "covered action"  
22 in Water Code section 85057.5 as including the City's filing a water rights application with the  
23 State Water Resources Control Board, and/or that Board's processing or approving such an  
24 application.

25 H. The Council always assumed that the covered action exclusion for "a regulatory  
26 action of a state agency" in Water Code section 85057.5, subdivision (b) (1) excludes the actions  
27 described in the preceding paragraph (G.)  
28

1 I. The Council's interpretations fully resolve the City's concerns that the Council's  
2 adoption of the Delta Plan and its related actions were potentially inconsistent with the laws  
3 outlined in the City's petition and briefs.

4 **THEREFORE IT IS HEREBY ORDERED, ADJUDGED AND DECREED**

5 1. Interpretation of "residential, commercial and industrial" in DP P1. The  
6 designations "residential," "commercial," and "industrial" used in DP P1 apply to the City's  
7 other functionally equivalent general plan urban-type designations. For example, they apply to  
8 the designations, in the City general plan that was in effect on May 16, 2013, of "Village," "Low  
9 Density Residential," "Medium Density Residential," "High Density Residential,"  
10 "Administrative-Professional," and "Mixed Use." The above does not alter DP P1's limitation  
11 of new "residential, commercial, and industrial development" to areas designated for  
12 development as of May 16, 2013, as shown in Figure 7-10 of Appendix 7 to the Delta Plan's  
13 implementing regulations (23 CCR Appendix 7). (The identical Figure 7-10 can be found in  
14 Appendix 7 to the Delta Plan adopted on May 16, 2013.) Functionally equivalent designations  
15 are also limited to those areas. For example, a proposed action (see 23 CCR § 5001, subd. (y)  
16 for the definition of a "proposed action") in an area designated as "Village" in a City general  
17 plan in effect on May 16, 2013, but that as of that date was located outside of the City or its  
18 sphere of influence, would be inconsistent with DP P1.

19 2. Application of DP P1 to Public Works. Public works are not "residential,"  
20 "commercial" or "industrial." As a result, DP P1 does not apply to any public works projects  
21 such as a public waste water treatment facility. These would include the construction, operation,  
22 maintenance, repair and replacement of public works improvements pursuant to and consistent  
23 with one or more of the plans listed at the end of this paragraph. "Construction" means  
24 designing, building or installing pumps, roadways, conveyance facilities and infrastructure,  
25 structures and other ancillary public improvements. In contrast, DP P1 applies to any proposed  
26 action that involves any new residential, commercial or industrial development (including  
27 functionally equivalent development), even if the development is needed to help fund or  
28 otherwise support a public works project and/or a listed plan.

HELM/CANTRE/ENRAG  
#12345

- 1 • Water Master Plan (Prepared for City of Stockton by West Yost Associates, Consulting  
2 Engineers; dated July 2008)
- 3 • 2035 Wastewater Master Plan (Prepared for City of Stockton by West Yost Associates,  
4 Consulting Engineers; dated October 2008)
- 5 • Regional Wastewater Control Facility Capital Improvement and Energy Management  
6 Plan (dated August, 2011)
- 7 • Portions of the "City of Stockton FY 2016-2021 Capital Improvement Plan Proposed"  
8 (dated May 16, 2016 [date appears on page 1 of that document's embedded City  
9 Manager's Message]) that address Sanitation (P-74 through P-81), Stormwater (P-82  
10 through P-87) and Water (P-158 through P-168)

11 3. The term "covered action" in Water Code section 85057.5 does not apply to the  
12 City's filing a water rights application with the State Water Resources Control Board (SWRCB),  
13 and/or the SWRCB's processing or approval of such an application. Those actions are excluded  
14 by Water Code section 85057.5, subdivision (b) (1), which excludes "a regulatory action of a  
15 state agency." Moreover, SWRCB applications often include details that may point to particular  
16 projects. Those details concerning projects do not convert a SWRCB application, or the  
17 SWRCB's processing or approval of the application, into a covered action. In contrast, other  
18 public agency actions concerning those projects are potentially covered actions. The fact that a  
19 project may potentially or actually receive water subject to the SWRCB water right does not  
20 exempt non-SWRCB government actions concerning the project from being covered actions.  
21 For example, even if a project is described in a SWRCB application and/or approval, a proposed  
22 local government grading permit, zoning change or other action for that project is potentially a  
23 covered action.

24 4. The parties incorporate into this agreement the interpretation presented by the  
25 Trial Court at page 31 line 1 through Page 32 Line 6 of the May 18, 2016 Ruling On Submitted  
26 Matter about the Delta Reform Act. A copy of those pages is attached hereto as Exhibit A.

27 5. City's Right. In the event that the Council, the Legislature or a court (in a final  
28 decision in which appeals have been exhausted or the time to appeal has expired) alters, rescinds

1 or invalidates one or more provision in paragraphs (1-3), above, by entering this agreement the  
2 City does not waive its right to challenge, in a new lawsuit, any such altered measure, or the  
3 application of such rescinded or invalidated measure to the City.

4 6. City's and Council's Right. The City and/or the Council may introduce this  
5 Stipulated Judgment in any judicial or administrative proceeding in which the Council, or any  
6 other entity or individual, asserts that the City has not complied with any of the Council's  
7 regulations.

8 7. Fees and Costs. The City and the Council shall assume and pay for their  
9 respective attorneys' fees and legal costs and expenses related to this stipulation, and the City's  
10 lawsuit against the Council.

11 8. Other Plaintiffs/Petitioners. Except for the City, this judgment does not affect any  
12 plaintiffs or petitioners in this Coordinated Proceeding.

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FRUM CHAIRMAN RANDI  
AMONG

1 Dated: Oct 27, 2016

DELTA STEWARDSHIP COUNCIL

2

3

By Randy Fiorini  
Randy Fiorini, Chair

4

5 APPROVED AS TO FORM:

5

6

Bethany Pane

7

Bethany Pane, Acting Chief Counsel

8

9

10 Dated: Dec. 13, 2016

CITY OF STOCKTON

11

12

By Kurt Wilson  
Kurt Wilson, City Manager

13

14 APPROVED AS TO FORM:

14

15

16

John Luebbecke, City Attorney

17

18

19 GOOD CAUSE APPEARING THEREFORE IT IS SO ORDERED:

20

21 Dated: \_\_\_\_\_, 2016

\_\_\_\_\_  
Judge of the Superior Court

22

23

24

25

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27

28

HEALTH CARE SERVICES DIVISION

**EXHIBIT A**

1           Petitioner's stated concern is that WR P1 permits a Southern-California water supplier to  
2 achieve priority in obtaining water. However, the plain language of WR P1 does not affect water  
3 right priorities. WR P1 does not provide that if a consistency certification is undergoing the  
4 appeals process, another water supplier may come in and usurp the challenged party's water  
5 rights or priority. Clearly, Respondent has no authority over water-priority determinations, and  
6 any plan or project subject to WR P1 would only be valid to the extent it sought water that a  
7 supplier was entitled to via its water rights. Accordingly, the Court finds WR P1 does not alter or  
8 affect water rights or priorities.

9           With regard to whether WR P1 affects water right applications, Respondent argues water  
10 rights applications are not covered actions pursuant to section 85057.5, subdivision (b)(1):

11           “(b) ‘Covered action’ does not include any of the following:  
12           (1) A regulatory action of a state agency.”

13           WR P1 cannot apply to the granting or denial of a water rights application, a matter  
14 controlled by the SWRCB (§§ 1250, et seq.). Petitioner argues that the plain language of WR P1  
15 could prevent action pursuant to a granted water rights application. While the SWRCB may grant  
16 appropriation rights pursuant to section 1253, those rights are still subject to a certification of  
17 Delta Plan consistency pursuant to 23 CCR section 5002. However, the requirement of reducing  
18 Delta reliance to the extent feasible and cost effective is merely a statutory enumeration of the  
19 principles of reasonable use and the public trust doctrine.

20           Section 85023 provides “[t]he longstanding constitutional principle of reasonable use and  
21 the public trust doctrine shall be the foundation of state water management policy and are  
22 particularly important and applicable to the Delta.” Accordingly, the Legislature affirmed its  
23 intent that these principles continue to apply to limit an owner's interest in water. (*Alegretti & Co*  
24 *v. County of Imperial* 138 Cal.App.4th 1261, 1279 [water rights are restricted to a “reasonable  
25 beneficial use” consistent with article X, section 2 of the California Constitution]; *National*  
26 *Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 437 [“parties acquiring rights in trust  
27 property...can assert no vested right to use those rights in a manner harmful to the trust.”]) If an  
28



1 in-Delta supplier seeks to exercise its water rights without undertaking locally cost effective and  
2 technically feasible projects that reduce reliance on the Delta, such an undertaking is contrary to  
3 both the principle of reasonable use and the public trust doctrine. Consequently, WR P1 is an  
4 assessment of whether a water supplier is compliant with reasonable use and the public trust  
5 doctrine. As such, it does not modify water rights in contravention of the Delta Reform Act or  
6 preexisting water rights protections.

7 Conclusion

8 The petition for writ of mandate with regard to the statutory challenges heard in this  
9 bifurcated proceeding is **DENIED** in accordance with the above ruling.

10 In accordance with Local Rule 1.06, counsel for Respondent is directed to prepare an  
11 order denying the petition, incorporating this ruling as an exhibit to the order, and a separate  
12 judgment; submit them to counsel for Petitioner for approval as to form in accordance with Rule  
13 of Court 3.1312(a); and thereafter submit them to the Court for signature and entry in accordance  
14 with Rule of Court 3.1312(b).

15 *C. Save the California Delta Alliance v. Delta Stewardship Council*

16 Petitioner Save the California Delta Alliance argues the Delta Plan is deficient in the  
17 following five areas:

- 18 1. Appendix A and the BDCP Covered Activity Consistency Rule contain unlawful  
19 underground regulations determining that BDCP projects are exempt from the Delta  
20 Plan.
- 21 2. The BDCP exemption rule impairs the scope of the Delta Reform Act.
- 22 3. The flow policy violates the Delta Reform Act.
- 23 4. The Delta Plan does not contain any conveyance or storage policies, in violation of the  
24 Delta Reform Act.
- 25 5. The Council has effectively "rubber-stamped" the BDCP for Delta Plan inclusion,  
26 contrary to Section 85321.

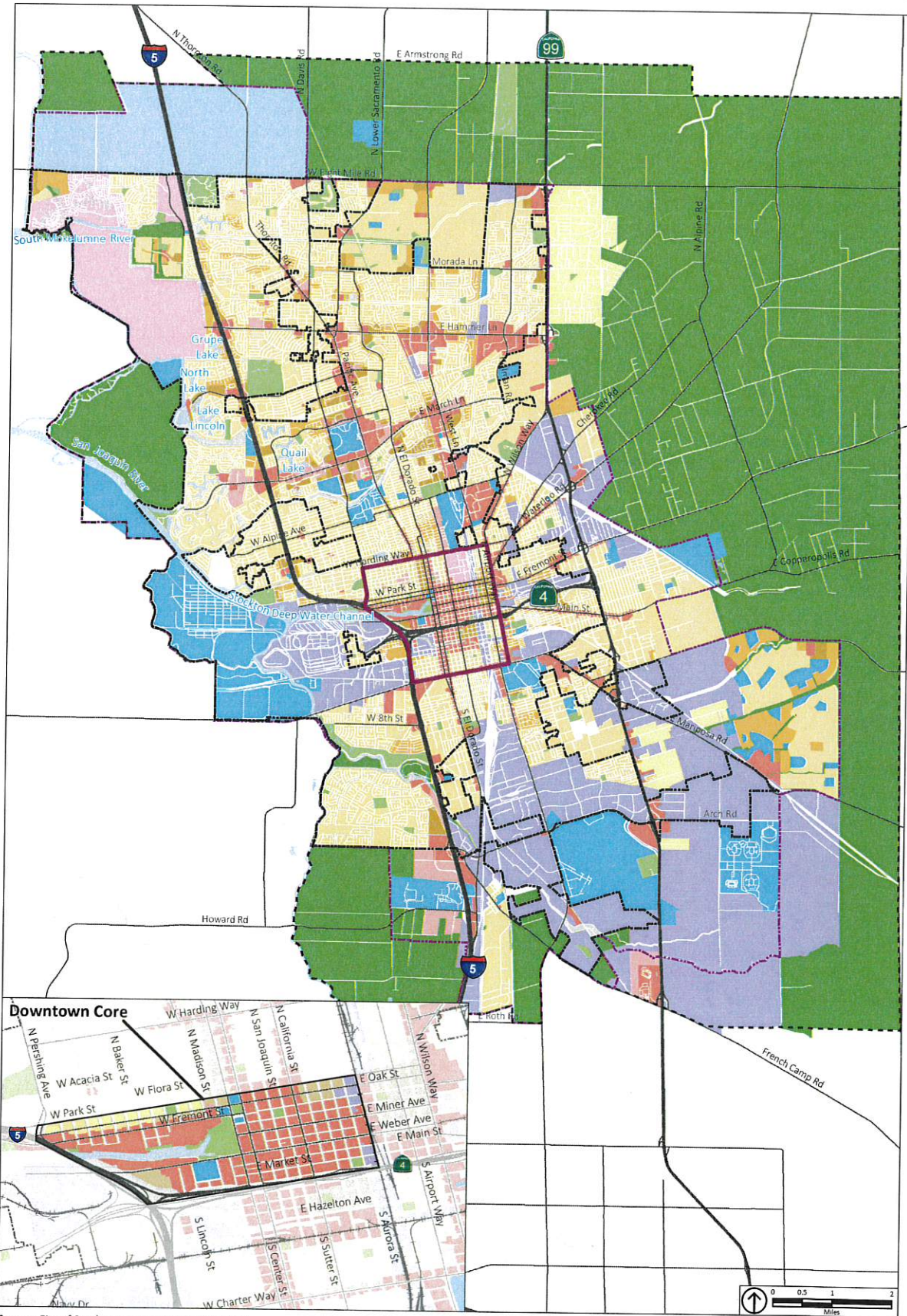
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PROJECT DESCRIPTION



Source: City of Stockton, 2017; PlaceWorks, 2017.

- |                            |                             |                                   |                            |                           |
|----------------------------|-----------------------------|-----------------------------------|----------------------------|---------------------------|
| Residential Estate         | Mixed Use                   | Economic and Education Enterprise | City Limit                 | Greater Downtown Boundary |
| Low Density Residential    | Commercial                  | Institutional                     | Sphere of Influence        |                           |
| Medium Density Residential | Administrative Professional | Parks and Recreation              | General Plan Planning Area |                           |
| High Density Residential   | Industrial                  | Open Space/Agriculture            |                            |                           |

Figure 3-3  
 Proposed General Plan Land Use Map

December 4, 2018

TO: City Council

FROM: David W. Kwong, Community Development Director

**SUBJECT: AGENDA ITEM 15.3 – RESPONSES TO SIERRA CLUB/CAMPAIGN FOR  
COMMON GROUND COMMENT LETTER**

The City received a letter on November 29, 2018, from the Sierra Club/Campaign for Common Ground (attached), which includes comments on the Draft General Plan and Final Environmental Impact Report (EIR) that will be considered for adoption and certification by the City Council on December 4, 2018. The comments do not introduce any new information or raise any new issues or concerns. All issues raised in the November 29, 2018 letter were previously considered and responded to by City staff and consultants. Although the responses to these comments are already part of the administrative record for approval of the Envision Stockton 2040 General Plan, this memorandum summarizes and repeats those responses for the convenience of City Council during the December 4, 2018 hearing.

The first section of this memorandum responds to comments on the Draft General Plan, and the second section responds to comments on the Final EIR. Again, this memorandum does not include any new information that has not already been considered through the Envision Stockton 2040 General Plan process.

### **Comments on the Draft General Plan**

#### **Comment 1: Deleting or greatly reducing the 3,800-acre “Economic and Education Enterprise” land use designation (*pages 3 to 5 of the comment letter*)**

The comment opposes the Economic and Education Enterprise designation in the Draft General Plan, stating that it has no public support and that staff has misinterpreted the City Council's direction regarding the extent of the land area over which it is applied and to the amount of development that it could accommodate. The comment also states that the characterization of the designation as a “holding designation” is not appropriate because it specifies development standards. The comment requests eliminating the designation or reducing it to 500 acres.

The staff report for the November 15, 2018 Planning Commission hearing addresses these comments. As indicated in that staff report, the City Council directed staff to maintain an urban land use designation in the area north of Eight Mile Road at its July 25, 2017 Study Session on the Envision Stockton General Plan. Prior to providing this direction, the City Council reviewed community input from the land use alternatives process, which supported Alternative C, the Infill Focus Alternative. The City Council directed that staff proceed with Alternative C, with the modification to maintain an urban designation in the area North of Eight Mile Road. At that meeting, the City Council discussed applying the designation to a targeted area that would accommodate a catalyst project (i.e., 500 acres), but ultimately directed staff to apply the designation over a larger area to allow flexibility for the locations of potential future projects based on the needs of individual projects.

As discussed in that staff report, staff recommended revising the Economic and Education Enterprise designation to clarify that a General Plan Amendment would be required prior to development, and the Planning Commission included that recommendation to the City Council in forwarding the project to the Council at their November 15, 2018 hearing. Therefore, if the City Council concurs with the Planning Commission recommendation, the General Plan will explicitly state that a General Plan Amendment would be required prior to development in the Economic and Education Enterprise designation, which would support its characterization as a "holding designation." The development standards that are identified for this designation in the Draft General Plan represent the maximum potential density and intensity of development, but the actual development standards would be specific to one or more proposed projects, and established through the General Plan Amendment process.

**Comment 2: Significantly revise the definition of the specific uses that would be allowed** *(page 5 of the comment letter)*

The comment requests that the description of the Economic and Education Enterprise designation be revised to limit the types of allowed. The comment argues that the current definition, which includes businesses within a Core Business Cluster industry as specified in the City's Economic Development Strategic Plan, is too broad, includes low-paying jobs, and excludes education businesses. The comment also requests that the description be revised to specify that a certain percentage (i.e., majority or more) of jobs be above median income.

The description of the Economic and Education Enterprise designation includes a reference to the Core Business Cluster industries in the Economic Development Strategic

Plan because the General Plan Update is intended to support the City's Economic Development Strategic Plan. The Core Business Cluster industries are determined in the Economic Development Strategic Plan to be appropriate to target for the City's economic development efforts. While some individual business types listed as Core Business Cluster industries in the Economic Development Strategic Plan may not meet the spirit of the Economic and Education Enterprise designation as well as others may, the designation establishes criteria beyond simply being listed as a Core Business Cluster industry to ensure that future development would meet the intent of the designation. Namely, the designation specifies that businesses envisioned for this designation include those that provide a significant number of jobs offering wages above Area Median Income. The goal of providing jobs with wages above Area Median Income was consistently raised at community engagement events organized by staff and attended by hundreds of Stockton residents. As explained in the staff report for the October 25, 2018 Planning Commission hearing on the General Plan, staff, and now the Planning Commission, recommends maintaining the current language regarding job wages to maintain some flexibility to facilitate future economic development.

Finally, while the Core Business Cluster industries do not address education uses, the Economic and Education Enterprise designation clearly accommodates educational institutions in its first sentence: "Development in this designation is intended to support the City's economic development goals by attracting new businesses, industries, and/or educational institutions that provide high-quality jobs to the local workforce."

**Comment 3: Explicitly require a General Plan Amendment process for land developed in the Economic and Education Enterprise zone, and require that any future housing constructed in the zone may not occur until the first phase of the major job generator has been completed (page 6 of the comment letter)**

The comment requests that the General Plan be revised to explicitly require an applicant to submit a General Plan Amendment prior to development in the Economic and Education Enterprise designation and to limit the construction of any future housing that accompanies a major job generator to occur after the first phase of development with job generation.

As explained in the staff report for the upcoming City Council hearing on December 4, 2018, the Planning Commission recommended that the Economic and Education Enterprise designation in the Draft General Plan be changed to explicitly require a General Plan Amendment prior to development.

The description of the Economic and Education Enterprise designation specifies that housing would be a supportive use to a major job generator. Development of supportive housing that is completed together with a major job generator, may reduce vehicle miles travelled (VMT) and greenhouse gas emissions (GHG) as part of a sustainable, smart growth land use strategy.

**Comment 4: Amend Policy LU-5.3 and Action LU-5.3B to finally establish an Ag Belt between Stockton and Lodi** *(page 6 of the comment letter)*

The comment requests amendments to the Draft General Plan to strengthen the ag belt policy, including working with the California Farmland Trust and establishing an Ag Belt Action Plan.

The staff report for the November 15, 2018 Planning Commission hearing addresses these comments. As indicated in that staff report, staff recommended revising Action LU-5.3B based on community concerns and a recognized need for coordination with San Joaquin County, and the Planning Commission agreed with that recommendation at the November 15, 2018 hearing and revised the Action language. The revised Action LU-5.3B states: "Coordinate with San Joaquin County and property owners in unincorporated areas to preserve agricultural land and open space areas in the unincorporated county that contribute to maintaining clear boundaries between cities."

This action, as revised, provides for a separation between Stockton and Lodi, and is consistent with San Joaquin County General Plan Policy LU-1.5, Clear Boundaries, which directs the County to strive to preserve agricultural and open space areas that contribute to maintaining clear boundaries among cities and unincorporated communities. The recommended policy revisions were developed in coordination with County staff. It is important to recognize that the City's General Plan land use map and the County's General Plan and Zoning maps classify the vast majority of land between Lodi and Stockton for open space and agricultural uses.

The creation of a greenbelt or ag belt program would be an extensive process that requires participation among the Cities, County and property owners in the proposed greenbelt/ag belt area. The previous years-long attempt by the Cities of Stockton and Lodi and the County to create a greenbelt ultimately failed due to the overall lack of willingness to participate among property owners. In closing, it is important to note that the proposed General Plan Update reduces the Stockton urban footprint by 8,000 acres, nearly 12.5 square miles.

**Comment 5: Add an action item to ensure adequate water supply is phased to meet the demands of growth (pages 6 to 8 of the comment letter)**

The comment requests that an action be added to the General Plan to ensure adequate water supply is phased to meet the demands of new growth, and states that State law requires that a Water Supply Assessment (WSA) be prepared for the General Plan.

As explained in the response to comment A13-61 on pages 5-88 to 5-89 of the Final EIR, Section 10910 of the California Water Code requires a WSA for certain projects, with "project" defined in Section 10912. Section 10912 defines the following as projects needing a WSA, which are all large-scale development projects triggered by project applications submitted to the City.

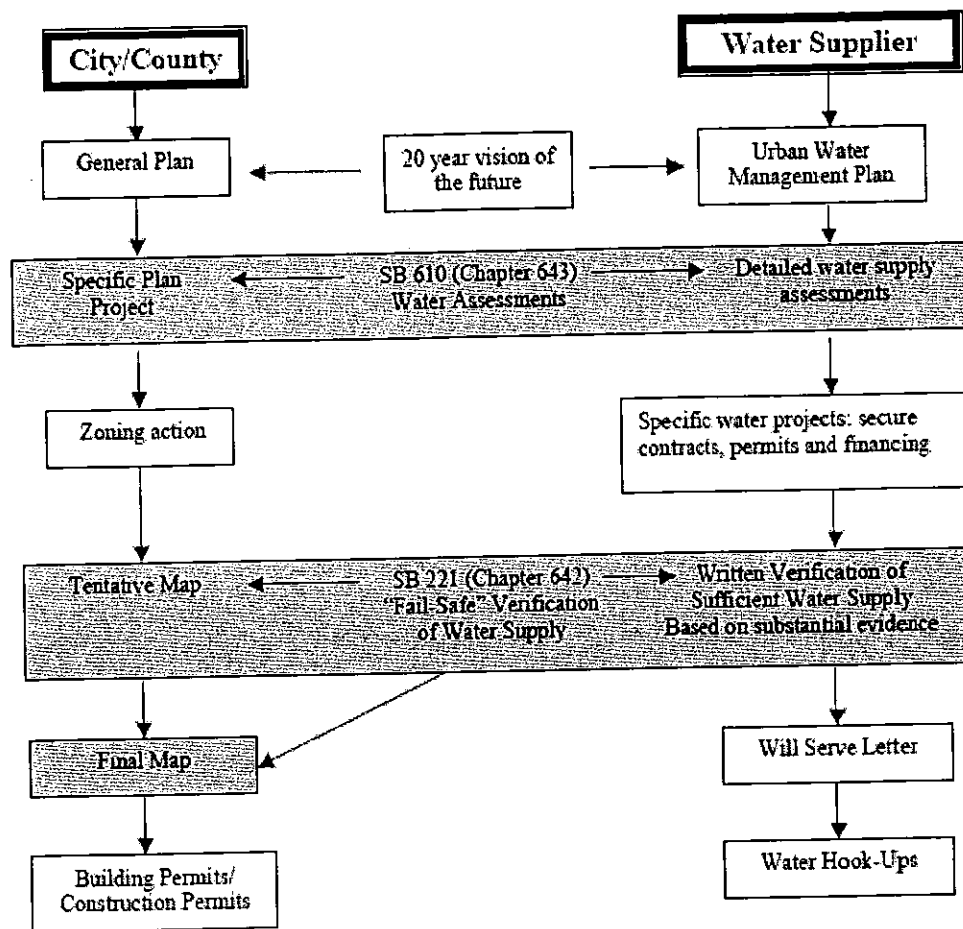
- A proposed residential development of more than 500 dwelling units.
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.
- A proposed hotel or motel, or both, having more than 500 rooms.
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
- A mixed-use project that includes one or more of the projects specified in this subdivision.
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

The General Plan does not constitute a specific development project, such as a residential development or shopping center, as outlined in the Water Code definition. Rather, the General Plan is a policy and guidance document that serves as the City's long-term blueprint for future growth.

In addition, preparing a WSA for a General Plan risks inefficiency and constant revision to account for changed plans that could nullify the results of such a WSA.

Furthermore, guidance from the California Department of Water Resources (DWR) shows that the timing for WSA preparation should coincide with the specific plan phase of a project, when specific project details are known. See Figure 1, which reproduces a figure from the *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001*, a document prepared by DWR, showing the relationship between land use and water planning, indicating the appropriate timing to prepare a WSA to be after a general plan phase, during the specific plan phase of a project.

**Figure 1: State Guidance on Land Use and Water Planning Integration**



Source: California Department of Water Resources, 2003, *Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001*, page v.

Regarding the suggested new action, as indicated in the staff report for the November 15, 2018 Planning Commission hearing, Action LU-6.1E already directs the City to not approve new development unless there is infrastructure in place or planned and funded to support the growth. As detailed in Appendix B to the Final EIR, if Phase 2 of the Delta Water Supply Project does not happen, there is still adequate water supply to serve the projected development through 2040.

**Comment 6: Consider adoption (not just a study) of an inclusionary housing program (page 8 of the comment letter)**

The comment requests amendments to the Draft General Plan to direct the City to consider adoption of an inclusionary housing program, as opposed to the current draft language directing a feasibility study.



The staff report for the November 15, 2018 Planning Commission hearing addresses these comments. As indicated in that staff report, the first step towards developing an inclusionary housing program is to conduct a feasibility study, which is directed in the original draft action, and consistent with the direction provided in the City's adopted 2015-2023 Housing Element.

## **Comments on the Final EIR**

### **Comment 1: The FEIR's Use of Two Development Scenarios in the Project Description and Impact Analysis Is Misleading and Unlawful** *(pages 8 to 9 of the comment letter)*

This comment repeats comments submitted on the Draft EIR (comment A03-4 on pages 5-22 to 5-24 and comments A13-3, A13-4, A13-9, and A13-16 on pages 5-61 to 5-67 of the Final EIR) that state that the EIR should evaluate impacts resulting from the theoretical full buildout of the General Plan beyond the General Plan year 2040 time frame. The comment also cites a portion of the master response that was included in the Final EIR to respond to those and other similar comments, and states that the commenter disagrees with the response.

The full text of Master Response #2 on pages 5-3 to 5-9 of the Final EIR responds to the concerns outlined in these comments. As indicated in that response, CEQA requires that the EIR project definition include the "whole of an action." This project is defined as the adoption and implementation of the proposed General Plan and Utility Master Plan Supplements (UMPS). Implementation of the General Plan includes development that is allowed by the General Plan land use map, as well as adherence to the General Plan policies and actions. As enumerated in General Plan Action LU-6.1A, if and when approved development reaches the amount of development projected and evaluated in the EIR, additional environmental analysis must be conducted to address any changes to the General Plan buildout assumptions, consistent with CEQA and the CEQA Guidelines.

Furthermore, Action LU-6.1B directs the City to monitor the rate of growth to ensure that it does not overburden the City's infrastructure and services and does not exceed the amounts analyzed in the General Plan EIR. As a result, the proposed actions will prevent the land use assumptions contained in the EIR from being exceeded unless subsequent environmental review is conducted. Because these actions are part of the project, and they require development beyond the amount analyzed in the EIR to be evaluated through subsequent environmental analysis, the 2040 horizon-year projections used in the quantitative analyses accurately capture the potential impacts of the whole of the project.

**Comment 2: "Piecemealing" a Project Is Not Allowed Under CEQA (pages 9-10 of the comment letter)**

The comment repeats comments submitted on the Draft EIR (comment A03-4 on pages 5-22 to 5-24 and comment A13-17 on pages 5-67 to 5-68 of the Final EIR) that state that the EIR piecemeals the project, resulting in deferral of environmental analysis. The comment also cites a portion of the master response that was included in the Final EIR to respond to those and other similar comments about the development projections, states that the response is weak and unconvincing, and requests clarification regarding a portion of the response.

As explained in the response to comment A13-17 on pages 5-67 to 5-69 of the Final EIR, a program EIR may evaluate environmental effects "at a broad level," so long as to the extent a subsequent project is not covered, additional CEQA review occurs.<sup>1</sup> A programmatic-level document is purposely designed to provide a level of detail for the public to be informed and decision-makers to make decisions that intelligently take into account environmental consequences consistent with CEQA Guidelines Section 15151.

An advantage of using a program EIR is that it will "[a]llow the lead agency to consider broad policy alternatives and program wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts."<sup>2</sup> Many site-specific details may be properly considered in a later environmental review document.<sup>3</sup>

As further explained in the Final EIR, the EIR serves as a "first-tier" document that assesses the broad environmental impacts of a program with the understanding that more detailed site-specific environmental reviews may, and will likely, be required to assess future projects implemented under the program. As individual projects with specific site plans and facilities are proposed, the City will evaluate each project to determine the extent to which the General Plan EIR adequately addressed the potential impact of the project and to what extent additional environmental analyses may be required for each specific future project.<sup>4</sup>

In addition, as explained in the response to Comment 1 above, Master Response #2 in the Final EIR demonstrates how the EIR evaluates potential impacts from the "whole of the project." The comment requests clarification on the following portion of that response:

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<sup>1</sup> See *Committee for Green Foothills v. Santa Clara County Bd. of Supervisors* (2010) 48 Cal.4th 32, 45.

<sup>2</sup> CEQA Guidelines Sections 15168(a) and 15168(b)(4).

<sup>3</sup> See *In the Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1173.

<sup>4</sup> See Public Resources Code Sections 21083.3, 21093, and 21094 and CEQA Guidelines Sections 15152, 15168, and 15183.

"The EIR's reliance on a horizon-year projection for the quantitative analyses does not risk speculative potentially higher rates of development escaping environmental review."

This sentence means that the EIR's evaluation of the horizon-year development projection (as opposed to evaluation of the theoretical full buildout which may not occur for many decades, if ever) does not risk the potential for the project to result in more development than was evaluated in the EIR. This statement is based on the explanation provided in the master response that is summarized in the response to Comment 1, above – specifically that the proposed General Plan actions will prevent the land use assumptions contained in the EIR from being exceeded unless subsequent environmental review is conducted, and that because these actions are part of the project, and they require development beyond the amount analyzed in the EIR to be evaluated through subsequent environmental analysis, the horizon-year projections used in the quantitative analyses accurately capture the potential impacts of the whole of the project.

**Comment 3: Agricultural Impacts Are Not Adequately Mitigated** (*pages 10 to 11 of the comment letter*)

The comment repeats comments submitted on the Draft EIR (comments A13-23, A13-25, and A13-26 on pages 5-71 to 5-73 of the Final EIR) that cite the agricultural impact findings in the Draft EIR, state that the EIR's analysis of agricultural impacts should have been made more robust with additional specific mitigations, and suggest that a mitigation measure be added directing the City to prepare an Agricultural Buffer Action Plan.

As explained in the response to comment A13-23 on page 5-71 of the Final EIR, the Draft EIR adequately discloses impacts to agricultural resources and the Final EIR considered policy suggestions to mitigate agricultural impacts. As shown on page 3-4 of the Final EIR, a mitigation measure was added requiring development projects that would convert farmlands of concern under CEQA to a non-agricultural use to participate in the City's existing agricultural conservation program, which requires either dedication of an agricultural conservation easement at a 1:1 ratio or payment of an in-lieu agricultural mitigation fee.

As explained in the response to comment A13-26 on page 5-73 of the Final EIR, the City's existing agricultural conservation program offers a mitigation option to pay an in-lieu fee for development that would convert farmlands of concern under CEQA to urban uses. Such fees are transmitted to the Central Valley Farmland Trust to fund the conservation of agricultural resources in the region. Resolution 07-0080 of the Stockton City Council, which established the program, specifies that agricultural lands to be conserved using mitigation funds must be located within the "Central Zone" of San Joaquin County, as

defined in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan, which includes Stockton and its surrounding area. Therefore, agricultural mitigation fees are already used for local conservation efforts.

As further explained in the Final EIR, an agricultural buffer around the city would not reduce the acreage of farmlands of concern under CEQA that could be converted to a non-agricultural use nor reduce the acreage of land under active Williamson Act contracts that would be designated for a conflicting use, so it would not mitigate the impact. Finally, the proposed General Plan reduces the Stockton urban footprint by 8,000 acres, nearly 12.5 square miles. The lands that are intended to remain open for agricultural purposes are denoted on the proposed General Plan land use map through the Open Space/Agriculture designation.

**Comment 4: The FEIR Fails to Evaluate Potential Impacts and Propose Feasible Mitigation Measures to Reduce the Plan's Significant Impacts Related to Transportation** *(page 11 of the comment letter)*

The comment repeats comments submitted on the Draft EIR (comments A13-28 and A13-29 on pages 5-73 to 5-74 of the Final EIR) that state that the EIR does not provide traffic analysis or mitigation for growth north of Eight Mile Road or for approved projects, suggesting that the EIR should summarize the mitigation requirements for the approved projects' certified EIRs, development agreements, and/or conditions of approval.

As explained in the response to comment A13-28 on page 5-73 of the Final EIR,<sup>5</sup> the transportation forecasts reflect the projected level of development over the General Plan planning horizon, which is 2040. As explained in Master Response #2 on pages 5-6 to 5-7 of the Draft EIR, the 2040 development projection does not include development in the area north of Eight Mile Road because the Economic and Education Enterprise designation does not allow development without additional future City action. Any development in that area would necessitate a General Plan Amendment, and most likely a Specific Plan, along with project-specific environmental review. The designation is considered a "holding designation" for future development that would undergo additional planning review once a development project is identified (as discussed in the response to Comment 1 on the Draft General Plan in the first section of this memorandum).

The response to comment A13-28 further explains that land use forecasts for areas outside of the EIR Study Area are based on 2040 forecasts from the SJCOG Sustainable Communities Strategy. Travel forecasts that include full theoretical buildout levels of

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<sup>5</sup> The response to comment A13-28 in the Final EIR references other responses (i.e., A13-19 and Master Response #2, which are summarized here.

development within the EIR Study Area, but current growth projections outside the study area, can result in misleading model results as productions and attractions are not balanced (i.e., the model could under-assign traffic, or not fully account for travel on regional roadways if there was no receiving end for a trip). Should development be proposed on the parcels north of Eight Mile Road, additional detailed land use and transportation planning would be required to identify the roadway network needed to support development in that area. However, no development is currently proposed within that area.

Regarding approved development projects, the response to comment A13-29 on page 5-74 of the Final EIR explains that the EIRs' transportation analysis included the approved amount of development from the projects that were approved as of the issuance of the Notice of Preparation, which include all of the projects cited in the comment (see Table 3-4 on page 3-27 of the Draft EIR for the full list of approved projects). The analysis also considered the roadway network improvements that would be built as part of those projects, and the mitigation measures that are required to be constructed as part of the project. The mitigation requirements for each of these projects are summarized in the various approval documents, which are available on the City's website:

<http://www.stocktonca.gov/government/departments/communityDevelop/cdPlanEnv.htm>

**Comment 5: The Draft General Plan Policies are Not Consistent with the Settlement Agreement** (*pages 11 to 12 of the comment letter*)

The comment repeats comments submitted for the Draft EIR (comments A13-44 and A13-45 on pages 5-80 to 5-82 of the Final EIR) that state that the General Plan is not consistent with the Settlement Agreement because of the distribution of future growth and lack of performance standards for development within the Economic and Education Enterprise designation.

As explained in the response to comment A13-44 on pages 5-80 to 5-81 of the Final EIR, Table 4.7-8 on page 4.7-35 of the Draft EIR identifies the projected 2040 development under the proposed General Plan within the Greater Downtown and city limit as it existed in 2008. The table specifies that the 2040 projection includes over 7,600 units in the Greater Downtown and over 21,000 units in the 2008 city limit, which are significantly more units than previously anticipated within those boundaries (4,400 units and an additional 14,000 units, respectively). This means that, out of the 40,900 units projected by 2040, almost 20 percent is projected to occur within the Greater Downtown, and over 50 percent is projected to occur within the 2008 city limit. Therefore, less than half of the projected 2040 development would occur outside the 2008 city limit. Much of that development outside of the 2008 city limit that is included in the 2040 development

projection is due to approved and pending projects over which the proposed General Plan has no control.

In addition, as explained in the response to comment 13-45 on pages 5-81 to 5-82 of the Final EIR, the area designated Economic and Education Enterprise on the proposed land use map is currently designated for urban development through the Village and Low Density Residential designations in the existing 2035 General Plan. Therefore, staff does not agree that this designation is "a very significant amendment to the existing General Plan".

Pages 4.7-36 to 4.7-37 of the Draft EIR provide a summary of proposed General Plan policies and actions that would establish minimum levels of services and infrastructure for all projects (including projects proposed within the Economic and Education Enterprise designation), including proposed Actions LU-6.1B through LU-6.1G that ensure new growth can be supported by essential public services and infrastructure, and Policies TR-4.1 through TR-4.3 and their associated actions that maintain roadway levels of service and reduce VMT per capita. In addition, Action LU-6.2B directs the City to not approve future annexations or City utility connections unless they are consistent with the overall goals and policies of the General Plan and do not adversely impact the City's fiscal viability, environmental resources, infrastructure and services, and quality of life, and Action LU6.3A requires development to mitigate any impacts to existing sewer, water, stormwater, street, fire station, park, or library infrastructure that would reduce service

**Infill Focus Alternative, with substantial increases in development potential for the Downtown and Greater Downtown.**

- **Reduction of the increase in Vehicle Miles Travelled (VMT)**
- **Curbs on Greenhouse Gas (GHG) emissions**
- **Transit system support/improvements**
- **Safe Routes to School**
- **Increased Waste Diversion**
- **Energy efficiency projects/programs**

**Comment 6: The Final EIR Fails to Include a Water Supply Assessment** *(page 12 of the comment letter)*

The comment repeats a comment submitted on the Draft EIR (comment A13-61 on pages 5-88 to 5-89 of the Final EIR) that states that the City is required by State law to complete a Water Supply Assessment (WSA) for the proposed General Plan. Please see the response to Comment 5 in the first section of this memorandum, which provides

responses to comments on the Draft General Plan. If you have any questions, please call me at 937-8090.

DAVID W. KWONG  
COMMUNITY DEVELOPMENT DIRECTOR

Attachment

emc: City Manager  
City Attorney

December 4, 2018

TO: City Council

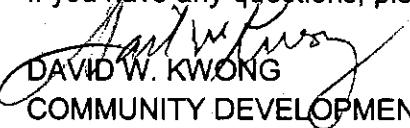
FROM: David W. Kwong, Community Development Director

**SUBJECT: AGENDA ITEM 15.3 – DELTA STEWARDSHIP COUNCIL FINDING OF CONSISTENCY RESOLUTION**

It is recommended that City Council adopt an additional resolution related to the Envision Stockton 2040 General Plan Update. The additional resolution is intended to provide the City's written certification of consistency with the Delta Plan and to provide detailed findings in support thereof. The 2009 Delta Reform Act created the Delta Stewardship Council (the "DSC") and established new state policies. The state policies are aimed at preservation of the California Delta ecosystem and maintaining it as a critical component of the state's water infrastructure. The DSC is responsible for establishing the Delta Plan, which is a legally enforceable plan for the management of Delta water and environmental resources. The DSC is also responsible for oversight and coordination with state and local agencies to ensure compliance with the Delta Plan.

Staff consulted with the DSC to offer an opportunity to review the Envision Stockton 2040 General Plan Update and Draft Environmental Impact Report for the General Plan Update and Utility Master Plan Supplements. Written comments were received from the DSC on August 10, 2018 indicating that the draft General Plan Update would be consistent with the Delta Plan. An official finding cannot be applied for and made until the City Council adopts the General Plan Update. In the spirit of comity with other public agencies and transparency, it is recommended that City Council adopt the proposed resolution to provide full disclosure of the pertinent facts and to ensure compliance with applicable law. Consistent with State Water Code section 85212, the City preserves the right to contest whether adoption of the Envision Stockton 2040 General Plan Update is a Covered Action based upon the consistency present between the Envision Stockton 2040 General Plan Update and the Sustainable Communities Strategy and Regional Transportation Plan adopted by the San Joaquin Council of Governments in June of 2018.

If you have any questions, please call me at 937-8090.

  
DAVID W. KWONG

COMMUNITY DEVELOPMENT DIRECTOR

Attachment

emc: City Manager  
City Attorney





# DELTA STEWARDSHIP COUNCIL

*A California State Agency*

980 NINTH STREET, SUITE 1500  
SACRAMENTO, CALIFORNIA 95814  
HTTP://DELTACOUNCIL.CA.GOV  
(916) 445-5511

August 10, 2018

David Stagnaro  
Planning Manager  
City of Stockton  
425 North El Dorado Street  
Stockton, CA 95202  
[David.Stagnaro@stocktonca.gov](mailto:David.Stagnaro@stocktonca.gov)

**Chair**  
Randy Fiorini

**Members**  
Frank C. Damrell, Jr.  
Michael Gatto  
Maria Mehranian  
Susan Tatayon  
Skip Thomson  
Ken Weinberg

**Executive Officer**  
Jessica R. Pearson

**RE: Comments on Envision Stockton 2040 General Plan Update and Draft Environmental Impact Report for the General Plan Update and Utility Master Plan Supplements**

Dear Mr. Stagnaro:

Thank you for the opportunity to review and provide comments on the Draft Envision Stockton 2040 General Plan Update and Draft Environmental Impact Report (Draft EIR) for the General Plan Update and Utility Master Plan Supplements. Delta Stewardship Council (Council) staff also appreciated the opportunity to attend a workshop on the General Plan Update on July 30, 2018 and to discuss certain aspects of the General Plan Update and Draft EIR with you via telephone on August 6, 2018.

The Council is an independent State of California agency established by the Sacramento-San Joaquin Delta Reform Act of 2009 (SBX7 1; Delta Reform Act). The Council is charged with furthering California's coequal goals for the Delta through the adoption and implementation of the Delta Plan, regulatory portions of which became effective on September 1, 2013.

As stated in the Delta Reform Act, the State has "'coequal goals' (which) means two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place" (Water Code section 85054).

Through the Delta Reform Act, the Council was directed to review and provide timely advice to local and regional planning agencies regarding the consistency of local and regional planning documents with the Delta Plan. The Council's input includes, but is not limited to, reviewing the consistency of local and regional planning documents with the ecosystem restoration needs of the Delta and reviewing whether the lands set aside for natural resource protection are sufficient to meet the Delta's ecosystem needs. (Water Code section 85212).

*"Coequal goals" means the two goals of providing a more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The coequal goals shall be achieved in a manner that protects and enhances the unique cultural, recreational, natural resource, and agricultural values of the Delta as an evolving place."*

### **Covered Action Status**

Through the Delta Reform Act, the Council was granted specific regulatory and appellate authority over certain actions of State or local public agencies that take place in whole or in part in the Delta. To do this, the Delta Plan contains a set of regulatory policies with which State and local agencies are required to comply. The Delta Reform Act specifically established a certification process for compliance with the Delta Plan. This means that State and local agencies that propose to carry out, approve, or fund a qualifying action in whole or in part in the Delta, called a "covered action," must certify that this covered action is consistent with the Delta Plan and must file a certificate of consistency with the Council that includes detailed findings.

As noted in the Draft General Plan, most of the western portion of Stockton's Planning Area is located within the Legal Delta, and thus subject to State oversight through the Delta Plan. The City of Stockton (City) has identified the need for the General Plan to be consistent with the Delta Plan (Draft General Plan, p. 3-17). The City has also identified that the Delta Plan includes a requirement for consistency findings for covered actions, which include the proposed General Plan (Draft EIR, pp. 4.2-3, 4.4-6, 4.10-4). The City also acknowledges the role of the Delta Plan's policies to address flood protection for residential development and limit encroachment in floodplains (Draft EIR, p. 4.9-7).

It should be noted that the Delta Reform Act establishes specific criteria and categories for exempting actions from the Council's regulatory authority. One of these exemptions is for actions within the Secondary Zone of the Delta that a metropolitan planning organization determines are consistent with its sustainable communities strategy (SCS). Such proposed actions are not covered actions regulated by the Council (Water Code section 85057.5(b)(4)).

The Draft EIR analyzes consistency with the San Joaquin Council of Governments' (SJCOG) 2014 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (Draft EIR, p. 4.10-18). An updated 2018 RTP/SCS was adopted by SJCOG on June 28, 2018. With respect to land use, the 2018 RTP/SCS is consistent with the Delta Plan. The City may request an evaluation of the updated General Plan's consistency with SJCOG's 2018 RTP/SCS. If SJCOG determines that the updated General Plan is consistent, the proposed project would be exempt from the Council's covered action process.

Additional information on covered actions and the certification process can be found on the Council website, <http://deltacouncil.ca.gov/covered-actions>.

### Comments on the Draft General Plan

Based on our review, Council staff has not identified any specific inconsistency between the Draft General Plan and the Delta Plan pursuant to Water Code section 85212. In fact, several General Plan policies align with the Delta Reform Act and the Delta Plan, including the following:

- **General Plan Land Use Designations.** Council staff is pleased to see that the General Plan Update will re-designate areas depicted as "Village" in the southern portion of the Planning Area to "Open Space/Agriculture". The Council supports this proposed change, which contributes to consistency between the General Plan and the Delta Plan.

Other land use designation changes in the Planning Area within the secondary zone of the Legal Delta appear to align with **Delta Plan Policy DP P1, Locate New Urban Development Wisely** (23 Cal. Code of Regs. section 5010). This includes redesignation of areas north of the City Limits from "Village" to "Economic and Education Enterprise," as the subject area was previously designated for development in the City's General Plan as of the date of the Delta Plan's adoption (May 16, 2013).

- **Climate Change.** The Council supports General Plan Policy CH-5.1A which outlines the City's intention to conduct a "comprehensive climate change vulnerability assessment to inform the development of adaptation and resilience policies and strategies". In a closely related effort, over the next couple of years, the Council will be undertaking a *Climate Change Vulnerability Assessment and Adaptation Strategy for the Sacramento – San Joaquin Delta* that seeks to incorporate stakeholder input, best available science, and identifies specific high-priority options for adapting to the changing climate. Council staff look forward to working with the City as a collaborative stakeholder in this process.

Council staff requests the City incorporate the following technical correction to the Draft General Plan regarding the Delta Plan:

- Land Use Element, p. 3-17, second paragraph. Please change the reference to the "Delta Reform Plan" to the "Delta Plan."

### Comments on the Draft EIR

Council staff appreciates the City's consideration and incorporation of comments we offered on the Notice of Preparation (NOP) for the 2040 General Plan Update and Utility Master Plan Supplements EIR in a letter dated June 22, 2017.

Council staff notes that the City evaluates the potential for conflict with the Delta Plan within the Draft EIR in the discussion of Impact LU-2, on p. 4.10-23. The analysis focuses on how

David Stagnaro  
City of Stockton  
August 10, 2018  
Page4

General Plan goals SAF-3 (Sustain Clean and Adequate Water Supplies) and LU-5 (Protect, Maintain, and Restore Natural and Cultural Resources) and associated policies support the coequal goals. The analysis also identifies that, as discussed above, the proposed General Plan does not allow new residential, commercial, or industrial development in the Delta that was not already allowed in the existing 2007 General Plan, noting consistency with Delta Plan Policy DP P1. The City concludes that implementation of the proposed General Plan policies and actions would support, rather than conflict with the Delta Plan. This information will be useful for the City to present as part of the record accompanying a certification of consistency with the Delta Plan, should it be determined that the General Plan Update is a covered action.

### Closing Comments

We encourage the City to continue early consultation with Council staff and to work collaboratively with SJCOG, as appropriate, to discuss the consistency certification process for the General Plan Update. Continued consultation is an important step to ensure consistency between the 2040 General Plan and the Delta Plan, so that the two plans are complementary and serve to protect the Delta. Please contact Kate Anderson of my staff at (916) 445-5028 or [kate.anderson@deltacouncil.ca.gov](mailto:kate.anderson@deltacouncil.ca.gov) with any questions, comments, or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Henderson", followed by a long horizontal line extending to the right.

Jeff Henderson, AICP  
Deputy Executive Officer  
Delta Stewardship Council

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Exempt from Filing Fees  
Pursuant to Government  
Code Section 6103

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10

11 THE SUPERIOR COURT OF THE STATE OF CALIFORNIA  
12 IN AND FOR THE COUNTY OF SACRAMENTO

13 Coordination Proceeding Special Title (Rule 3.550),	JUDICIAL COUNCIL COORDINATION PROCEEDING NO. 4758
14 DELTA STEWARDSHIP COUNCIL CASES	STIPULATED JUDGMENT
15	Date Action Filed: June 13, 2013_
16	Judge: Honorable Michael Kenny
17	Dept.: 31

18  
19 Pursuant to section 664.6 of the Code of Civil Procedure, the Delta Stewardship Council  
20 (Council) and City of Stockton (City) hereby stipulate to the entry of judgment in this matter.

21 The Council and the City enter into this stipulation in light of the following:

22 **RECITALS**

23 A. On May 16, 2013, the Council adopted the Delta Plan, pursuant to the  
24 Sacramento-San Joaquin Delta Reform Act of 2009 (Act) (Wat. Code, §§ 85000 et seq.).

25 B. Subsequently, numerous parties filed a total of seven lawsuits challenging the  
26 Council's adoption of the Delta Plan and its implementing regulations. One of those lawsuits  
27 was filed by the City. Specifically, on June 14, 2013, the City filed a Petition for Writ of  
28

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1 Mandate challenging the validity of the Delta Plan, the Delta Plan's regulations, and the Delta  
2 Plan's Environmental Impact Report.

3 C. The City and the Council have determined that the City's challenges can be fully  
4 resolved by documenting the Council's interpretations of one of its regulations, and its  
5 interpretation of a statutory provision, as explained in recitals D through H, below. The City and  
6 the Council are therefore entering this stipulation in order to document those interpretations.

7 D. Delta Plan Policy 1 ("DP P1," codified as 23 California Code of Regulations  
8 section 5010), generally limits new "residential, commercial and industrial development" to  
9 specified geographical areas that a general plan, in existence as of May 16, 2013, designated "for  
10 residential, commercial and industrial development."

11 E. The City is concerned that DP P1 uses the terms "residential, commercial or  
12 industrial development" but that the City's applicable general plan uses different terms for those  
13 same types of development. The City wants the Council to make it clear that the Council  
14 interprets DP P1's terms as applying to the City's functionally equivalent terms. The City is  
15 also concerned that DP P1 could apply to, and potentially prohibit, certain public facilities such  
16 as a public waste water treatment facility.

17 F. The Council always assumed that DP P1's use of the terms "residential,  
18 commercial or industrial development" applied whether a plan used those precise terms, or  
19 functionally equivalent terms. The Council also always assumed that DP P1 does not apply to  
20 public facilities such as a public waste water treatment facility.

21 G. The City is concerned that the Council might interpret the term "covered action"  
22 in Water Code section 85057.5 as including the City's filing a water rights application with the  
23 State Water Resources Control Board, and/or that Board's processing or approving such an  
24 application.

25 H. The Council always assumed that the covered action exclusion for "a regulatory  
26 action of a state agency" in Water Code section 85057.5, subdivision (b) (1) excludes the actions  
27 described in the preceding paragraph (G.)

28

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1 I. The Council's interpretations fully resolve the City's concerns that the Council's  
2 adoption of the Delta Plan and its related actions were potentially inconsistent with the laws  
3 outlined in the City's petition and briefs.

4 **THEREFORE IT IS HEREBY ORDERED, ADJUDGED AND DECREED**

5 1. Interpretation of "residential, commercial and industrial" in DP P1. The  
6 designations "residential," "commercial," and "industrial" used in DP P1 apply to the City's  
7 other functionally equivalent general plan urban-type designations. For example, they apply to  
8 the designations, in the City general plan that was in effect on May 16, 2013, of "Village," "Low  
9 Density Residential," "Medium Density Residential," "High Density Residential,"  
10 "Administrative-Professional," and "Mixed Use." The above does not alter DP P1's limitation  
11 of new "residential, commercial, and industrial development" to areas designated for  
12 development as of May 16, 2013, as shown in Figure 7-10 of Appendix 7 to the Delta Plan's  
13 implementing regulations (23 CCR Appendix 7). (The identical Figure 7-10 can be found in  
14 Appendix 7 to the Delta Plan adopted on May 16, 2013.) Functionally equivalent designations  
15 are also limited to those areas. For example, a proposed action (see 23 CCR § 5001, subd. (y)  
16 for the definition of a "proposed action") in an area designated as "Village" in a City general  
17 plan in effect on May 16, 2013, but that as of that date was located outside of the City or its  
18 sphere of influence, would be inconsistent with DP P1.

19 2. Application of DP P1 to Public Works. Public works are not "residential,"  
20 "commercial" or "industrial." As a result, DP P1 does not apply to any public works projects  
21 such as a public waste water treatment facility. These would include the construction, operation,  
22 maintenance, repair and replacement of public works improvements pursuant to and consistent  
23 with one or more of the plans listed at the end of this paragraph. "Construction" means  
24 designing, building or installing pumps, roadways, conveyance facilities and infrastructure,  
25 structures and other ancillary public improvements. In contrast, DP P1 applies to any proposed  
26 action that involves any new residential, commercial or industrial development (including  
27 functionally equivalent development), even if the development is needed to help fund or  
28 otherwise support a public works project and/or a listed plan.

HELM CRANDICE, CLERK  
City of San Diego

- 1 • Water Master Plan (Prepared for City of Stockton by West Yost Associates, Consulting  
2 Engineers; dated July 2008)
- 3 • 2035 Wastewater Master Plan (Prepared for City of Stockton by West Yost Associates,  
4 Consulting Engineers; dated October 2008)
- 5 • Regional Wastewater Control Facility Capital Improvement and Energy Management  
6 Plan (dated August, 2011)
- 7 • Portions of the "City of Stockton FY 2016-2021 Capital Improvement Plan Proposed"  
8 (dated May 16, 2016 [date appears on page 1 of that document's embedded City  
9 Manager's Message]) that address Sanitation (P-74 through P-81), Stormwater (P-82  
10 through P-87) and Water (P-158 through P-168)

11 3. The term "covered action" in Water Code section 85057.5 does not apply to the  
12 City's filing a water rights application with the State Water Resources Control Board (SWRCB),  
13 and/or the SWRCB's processing or approval of such an application. Those actions are excluded  
14 by Water Code section 85057.5, subdivision (b) (1), which excludes "a regulatory action of a  
15 state agency." Moreover, SWRCB applications often include details that may point to particular  
16 projects. Those details concerning projects do not convert a SWRCB application, or the  
17 SWRCB's processing or approval of the application, into a covered action. In contrast, other  
18 public agency actions concerning those projects are potentially covered actions. The fact that a  
19 project may potentially or actually receive water subject to the SWRCB water right does not  
20 exempt non-SWRCB government actions concerning the project from being covered actions.  
21 For example, even if a project is described in a SWRCB application and/or approval, a proposed  
22 local government grading permit, zoning change or other action for that project is potentially a  
23 covered action.

24 4. The parties incorporate into this agreement the interpretation presented by the  
25 Trial Court at page 31 line 1 through Page 32 Line 6 of the May 18, 2016 Ruling On Submitted  
26 Matter about the Delta Reform Act. A copy of those pages is attached hereto as Exhibit A.

27 5. City's Right. In the event that the Council, the Legislature or a court (in a final  
28 decision in which appeals have been exhausted or the time to appeal has expired) alters, rescinds



1 or invalidates one or more provision in paragraphs (1-3), above, by entering this agreement the  
2 City does not waive its right to challenge, in a new lawsuit, any such altered measure, or the  
3 application of such rescinded or invalidated measure to the City.

4 6. City's and Council's Right. The City and/or the Council may introduce this  
5 Stipulated Judgment in any judicial or administrative proceeding in which the Council, or any  
6 other entity or individual, asserts that the City has not complied with any of the Council's  
7 regulations.

8 7. Fees and Costs. The City and the Council shall assume and pay for their  
9 respective attorneys' fees and legal costs and expenses related to this stipulation, and the City's  
10 lawsuit against the Council.

11 8. Other Plaintiffs/Petitioners. Except for the City, this judgment does not affect any  
12 plaintiffs or petitioners in this Coordinated Proceeding.

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Dated: Oct 27, 2016

DELTA STEWARDSHIP COUNCIL

By Randy Fiorini  
Randy Fiorini, Chair

APPROVED AS TO FORM:

Bethany Pane  
Bethany Pane, Acting Chief Counsel

Dated: Dec. 13, 2016

CITY OF STOCKTON

By Kurt Wilson  
Kurt Wilson, City Manager

APPROVED AS TO FORM:

John Luebberke  
John Luebberke, City Attorney

GOOD CAUSE APPEARING THEREFORE IT IS SO ORDERED:

Dated: \_\_\_\_\_, 2016

\_\_\_\_\_  
Judge of the Superior Court

HEALTH CARE REFORM BOARD

**EXHIBIT A**

1 Petitioner's stated concern is that WR P1 permits a Southern-California water supplier to  
2 achieve priority in obtaining water. However, the plain language of WR P1 does not affect water  
3 right priorities. WR P1 does not provide that if a consistency certification is undergoing the  
4 appeals process, another water supplier may come in and usurp the challenged party's water  
5 rights or priority. Clearly, Respondent has no authority over water-priority determinations, and  
6 any plan or project subject to WR P1 would only be valid to the extent it sought water that a  
7 supplier was entitled to via its water rights. Accordingly, the Court finds WR P1 does not alter or  
8 affect water rights or priorities.

9 With regard to whether WR P1 affects water right applications, Respondent argues water  
10 rights applications are not covered actions pursuant to section 85057.5, subdivision (b)(1):

11 "(b) 'Covered action' does not include any of the following:  
12 (1) A regulatory action of a state agency."

13 WR P1 cannot apply to the granting or denial of a water rights application, a matter  
14 controlled by the SWRCB (§§ 1250, et seq.). Petitioner argues that the plain language of WR P1  
15 could prevent action pursuant to a granted water rights application. While the SWRCB may grant  
16 appropriation rights pursuant to section 1253, those rights are still subject to a certification of  
17 Delta Plan consistency pursuant to 23 CCR section 5002. However, the requirement of reducing  
18 Delta reliance to the extent feasible and cost effective is merely a statutory enumeration of the  
19 principles of reasonable use and the public trust doctrine.

20 Section 85023 provides "[t]he longstanding constitutional principle of reasonable use and  
21 the public trust doctrine shall be the foundation of state water management policy and are  
22 particularly important and applicable to the Delta." Accordingly, the Legislature affirmed its  
23 intent that these principles continue to apply to limit an owner's interest in water. (*Alegretti & Co*  
24 *v. County of Imperial* 138 Cal.App.4th 1261, 1279 [water rights are restricted to a "reasonable  
25 beneficial use" consistent with article X, section 2 of the California Constitution]; *National*  
26 *Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 437 ["parties acquiring rights in trust  
27 property...can assert no vested right to use those rights in a manner harmful to the trust."]) If an  
28

1 in-Delta supplier seeks to exercise its water rights without undertaking locally cost effective and  
2 technically feasible projects that reduce reliance on the Delta, such an undertaking is contrary to  
3 both the principle of reasonable use and the public trust doctrine. Consequently, WR PI is an  
4 assessment of whether a water supplier is compliant with reasonable use and the public trust  
5 doctrine. As such, it does not modify water rights in contravention of the Delta Reform Act or  
6 preexisting water rights protections.

7 Conclusion

8 The petition for writ of mandate with regard to the statutory challenges heard in this  
9 bifurcated proceeding is **DENIED** in accordance with the above ruling.

10 In accordance with Local Rule 1.06, counsel for Respondent is directed to prepare an  
11 order denying the petition, incorporating this ruling as an exhibit to the order, and a separate  
12 judgment; submit them to counsel for Petitioner for approval as to form in accordance with Rule  
13 of Court 3.1312(a); and thereafter submit them to the Court for signature and entry in accordance  
14 with Rule of Court 3.1312(b).

15 *C. Save the California Delta Alliance v. Delta Stewardship Council*

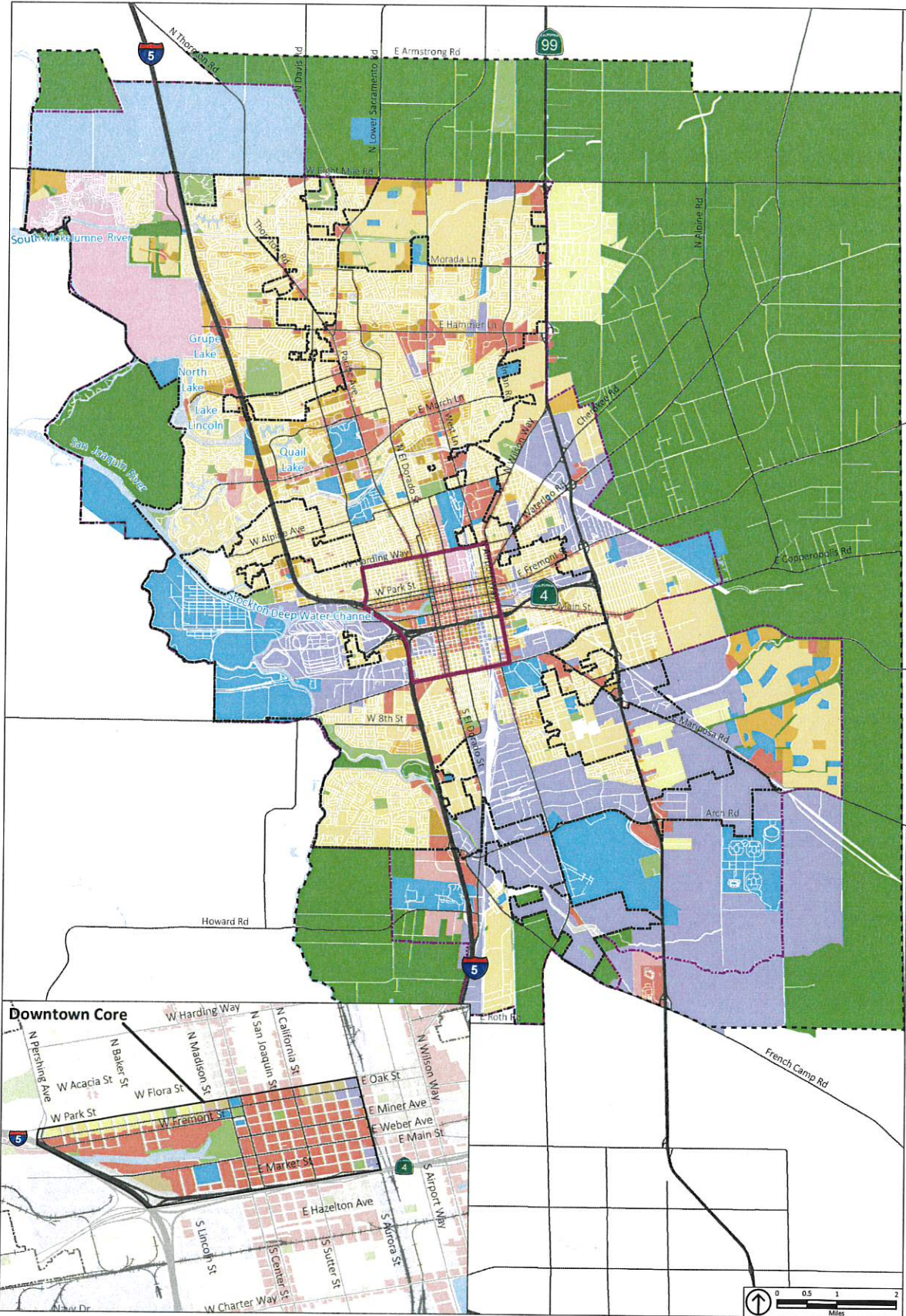
16 Petitioner Save the California Delta Alliance argues the Delta Plan is deficient in the  
17 following five areas:

- 18 1. Appendix A and the BDCP Covered Activity Consistency Rule contain unlawful  
19 underground regulations determining that BDCP projects are exempt from the Delta  
20 Plan.
- 21 2. The BDCP exemption rule impairs the scope of the Delta Reform Act.
- 22 3. The flow policy violates the Delta Reform Act.
- 23 4. The Delta Plan does not contain any conveyance or storage policies, in violation of the  
24 Delta Reform Act.
- 25 5. The Council has effectively "rubber-stamped" the BDCP for Delta Plan inclusion,  
26 contrary to Section 85321.

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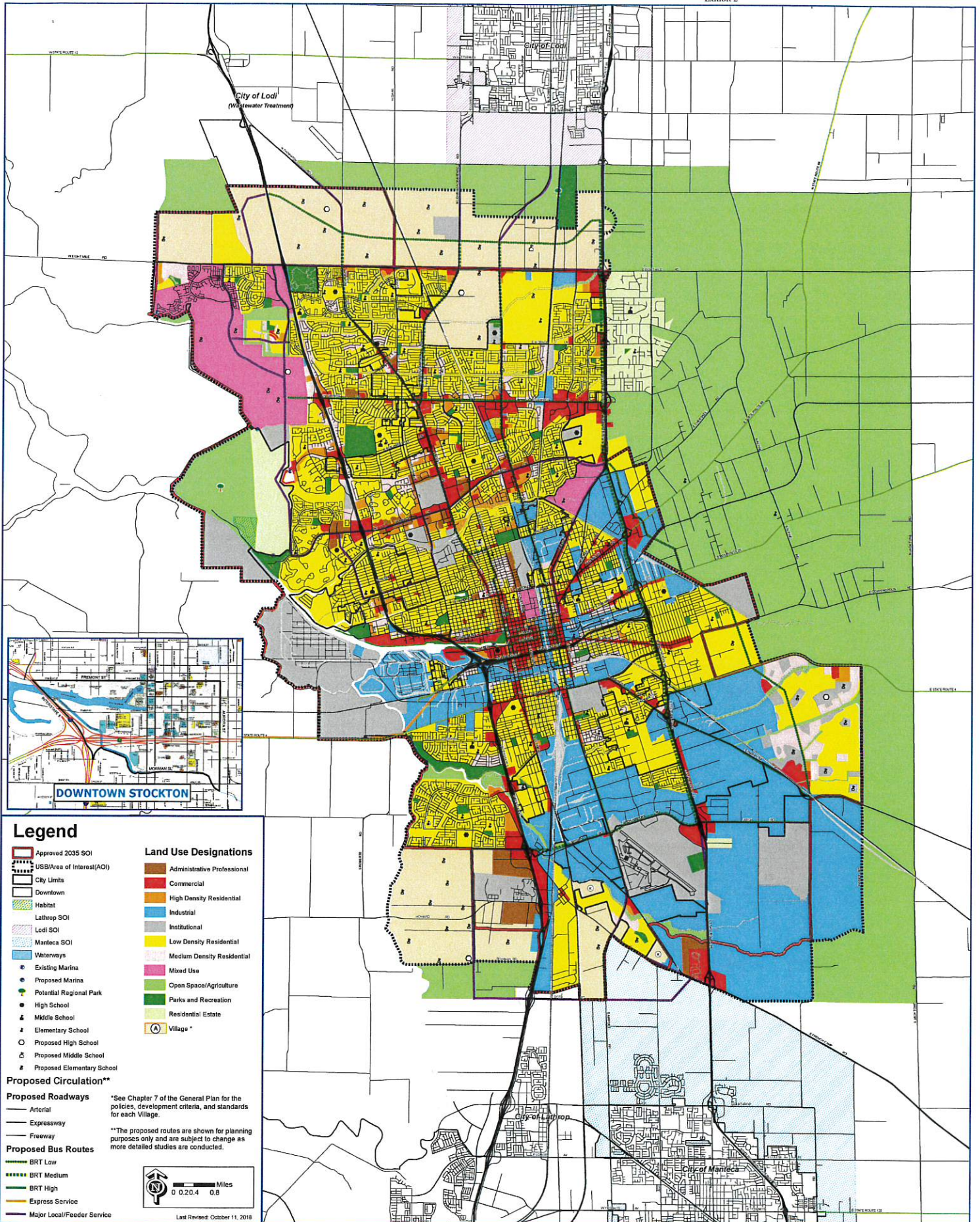


Source: City of Stockton, 2017; PlaceWorks, 2017.



Figure 3-3

Proposed General Plan Land Use Map



### Legend

Approved 2035 SOI	Administrative Professional
USB/Area of Interest(AOI)	Commercial
City Limits	High Density Residential
Downtown	Industrial
Habitat	Institutional
Lathrop SOI	Low Density Residential
Lodi SOI	Medium Density Residential
Manteca SOI	Mixed Use
Waterways	Open Space/Agriculture
Existing Marina	Parks and Recreation
Proposed Marina	Residential Estate
Potential Regional Park	Village *
High School	
Middle School	
Elementary School	
Proposed High School	
Proposed Middle School	
Proposed Elementary School	

### Proposed Circulation\*\*

**Proposed Roadways**

- Arterial
- Expressway
- Freeway

**Proposed Bus Routes**

- BRT Low
- BRT Medium
- BRT High
- Express Service
- Major Local/Feeder Service

\*See Chapter 7 of the General Plan for the policies, development criteria, and standards for each Village.

\*\*The proposed routes are shown for planning purposes only and are subject to change as more detailed studies are conducted.

0 0.2 0.4 0.8 Miles

Last Revised: October 11, 2018