4.15 UTILITIES AND SERVICE SYSTEMS

This section of the EIR evaluates the potential impacts from implementing the proposed utility and infrastructure systems required to serve the proposed Project. Impacts associated with hydrology (groundwater and water-related hazards) and water quality, are addressed in Chapter 4.9, Hydrology and Water Quality.

The analysis within this section discusses the ability of existing and planned systems to accommodate the Project in terms of distribution and supply, and identifies potential environmental impacts from the construction of required new or expanded systems. This analysis is based on information from the Cordes Ranch Specific Plan Infrastructure Evaluation of Potable and Recycled Water Systems Technical Memorandum, the Water Supply Assessment for the Cordes Ranch Specific Plan, the Wastewater Master Plan Technical Memorandum – Cordes Ranch Specific Plan Application Review, and the Cordes Ranch Specific Plan Storm Drainage Technical Report, included in Appendices M.

- Cordes Ranch Specific Plan Infrastructure Evaluation of Potable and Recycled Water Systems Technical Memorandum (Technical Memorandum) was prepared for the City of Tracy by West Yost Associates on December 19, 2012. The Technical Memorandum examines existing and future potable and recycled waters system facilities and improvements necessary to serve the proposed Specific Plan Area.
- Water Supply Assessment for the Cordes Ranch Specific Plan (WSA) was prepared for the City of Tracy by West Yost Associates in January 2013 and approved by City Council on February 5, 2013. The WSA evaluates the City's existing and future water supplies, including groundwater supplies, and existing and projected demands, including the anticipated demands from the development described in the proposed Specific Plan, to assess whether or not the City will have sufficient existing and future supplies to serve the Specific Plan Area and all other existing and planned development.
- Wastewater Master Plan Technical Memorandum – Cordes Ranch Specific Plan Application Review (WWMP Tech Memo) was prepared

for the City of Tracy by CH2MHill in January 2013. The WWMP Tech Memo evaluates the Project in terms of impacts to wastewater system facilities. To estimate the volume of wastewater that may be generated within the proposed Specific Plan Area, the WWMP Tech Memo relies on the proposed land uses described in the draft Cordes Ranch Specific Plan, which are consistent with those used in the WWMP.

- Cordes Ranch Specific Plan Storm Drainage Technical Report (SDTR) was prepared for the City of Tracy by Storm Water Consulting, Inc. and Stantec in December 2012. The SDTR details existing watersheds and design standards for storm drainage facilities, produces hydrologic modeling, analyzes the proposed drainage plan for the Specific Plan Area, and discusses phasing requirements.

This section also includes a discussion of projected energy usage of the project, with an emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy, pursuant to Appendix F in the California Environmental Quality Act (CEQA) Guidelines.

A. Water Supply

This section describes the regulatory framework, existing conditions, and potential impacts of the Project with regard to local water supply, distribution, and treatment.

1. Regulatory Framework

a. State Regulations and Agencies

There are several state laws and regulations that address water supply and distribution planning, as described below.

i. Senate Bill 610

Senate Bill (SB) 610 amended the Public Resources and Water Codes as they pertain to consultation with water supply agencies and water supply assessments.

SB 610 requires water supply assessments (WSAs) for projects, as that term is defined by Water Code Section 10912, that are subject to CEQA. The proposed Cordes Ranch Specific Plan Project, with its proposed Commercial, Office, and Business Park Industrial uses, meets the definition of a "project" as specified in Water Code, therefore requiring the preparation of a WSA in compliance with SB610.

ii. Urban Water Management Planning Act of 1983 (Assembly Bill 901)

The Urban Water Management Planning Act (Division 6 Part 2.6 of the Water Code Section 10610-10656) requires that an Urban Water Management Plan (UWMP) be prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. Every urban water supplier that either provides over 3,000 acre-feet of water annually or serves 3,000 or more connections is required to assess the reliability of its water sources over a 20-year planning horizon considering normal, dry, and multiple dry years.[1] This assessment is to be included in its UWMP, which must be prepared every five years and submitted to the Department of Water Resources. DWR then reviews the submitted UWMP to make sure it meets the requirements of the UWMP Act.

When a water agency has prepared and adopted an UWMP in compliance with DWR requirements, it may rely on that UWMP in various respects in preparing WSAs for individual planning and development approvals.

b. Local Regulations and Agencies

i. City of Tracy

a) Urban Water Management Plan

The City of Tracy adopted an updated UWMP in May 2011. The focus of the City's UWMP is the conservation and efficient use of water in Tracy's service area, and the development and implementation of facilities, infrastructure, and supplies to assure reliable water service in the future. The UWMP

[1] One acre-foot is the amount of water required to cover 1 acre of ground (43,560 square feet) to a depth of 1 foot.

contains projections for future water use, discusses the reliability of Tracy's water supply, describes the City's water treatment system, and contains the water shortage contingency plan described below. In addition, the UWMP contains best management practices (BMPs) for efficient water use.

b) Water Shortage Contingency Plan

The City of Tracy developed a Water Shortage Contingency Plan in 1992, which contains five stages of actions to be undertaken in the event of an interruption of water supplies, such as could occur in a drought or emergency situation. The City Council determines the appropriate stage of action in the event of a crisis, after which the City Manager can authorize and implement applicable water conservation and rationing requirements. The Water Shortage Contingency Plan contains a Water Conservation and Rationing Plan wherein the five stages of action are described in detail. The City's Water Shortage Contingency Plan is included as an appendix to the City's UWMP.

c) Water Shortage Contingency Ordinance/Resolution

Tracy's Water Management Ordinance (Tracy Municipal Code Chapter 11.28) incorporates the Water Conservation and Rationing Plan, a Water Emergency Plan, Variances and Appeals Ordinance. The ordinance provides the legal authority to implement the Water Shortage Contingency Plan.

d) 2001 Groundwater Management Policy

In May of 2001, the City of Tracy adopted the 2001 Groundwater Management Policy. The 2001 Groundwater Management Policy establishes production caps, monitoring criteria, and a Groundwater Allocation Program. The 2001 Groundwater Management Policy set a groundwater production increase to allow a total of 9,000 acre-feet per year (af/yr) to be extracted from the lower aquifer zones of the Tulare Formation. According to the most recent Mitigation Monitoring Report (January 23, 2009), there is no indication that pumping has significantly or adversely affected groundwater levels or water quality. Further, the Mitigation Monitoring Report shows that groundwater levels in the City's wells have increased in recent years.

e) Water Supply Evaluation Criteria

The following Water Supply Evaluation Criteria was used by the City of Tracy to develop the SB 610 Water Supply Assessment to determine the adequacy of the City's water supplies to serve the proposed development in the Cordes Ranch Specific Plan Area, as required under state law.

- Dry Year Conditions: The available supply must be equal to 95 percent of the projected demands
- Wet, Above Normal, and Normal Conditions: Available supply must equal 100 percent of the projected demands.

f) Citywide Water System Master Plan

In January 2013, after completing required environmental review, the City adopted a Citywide Water System Master Plan (WSMP) to evaluate the required backbone potable water and recycled water infrastructure to serve development buildout of the City's General Plan and Sphere of Influence (SOI). An evaluation of the Specific Plan Area was included in the Citywide Water System Master Plan as one of the City's future service areas within the City's SOI.

g) City of Tracy Municipal Code, Chapter 11.30: Recycled and Non-Potable Water

The City of Tracy enacted the Recycled and Non-Potable Water Ordinance in March 2002, and subsequently updated in February 2013. The ordinance requires that planned new developments in Tracy install pipelines and dual distribution systems to supply non-potable water to green spaces for irrigation and to facilities for industrial cooling or processing. Future development, including the Cordes Ranch Specific Plan project, will be required to comply with the ordinance, and to use recycled and/or non-potable water, to the extent available, for irrigation of parks, golf courses, street landscaping and other landscaped areas to reduce the potable water demand.

h) Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance prepared by the state Department of Water Resources was adopted by the Office of Administrative

Law (OAL) in September 2009 and requires local agencies to implement water efficiency measures as part of their review of landscaping plans. The City of Tracy applies the requirements of the model ordinance adopted by the OAL. For new landscaping projects of 2,500 square feet or more that require a discretionary or ministerial approval, the applicant is required to submit a detailed "Landscape Documentation Package" that discusses water efficiency, soil management, and landscape design elements.

ii. City of Tracy General Plan

The City of Tracy General Plan sets forth policies to provide decision-makers with long-range guidance affecting the future character of Tracy. Specifically, the General Plan sets forth goals, policies, objectives and implementation measures that are designed to, among other things, ensure that public utilities have adequate capacity to service existing and planned growth in the community. Those General Plan goals, objectives and policies relevant to the project and water supply issues are listed in Table 4.15-1. A full listing of all General Plan goals, policies, and objectives is included in Appendix C.

iii. San Joaquin County Local Agency Formation Commission

As described in Chapter 3, the San Joaquin County Local Agency Formation Commission (LAFCO) oversees public agency boundary changes, as well as the establishment, update and amendment of SOIs (Gov't Code Sections 56001, 56375, 56425). This analysis has been conducted in accordance with the San Joaquin County LAFCO's Plan for Services requirements, which requires a demonstration that the City can adequately provide water and wastewater services.

2. Existing Conditions

a. Water Service Area

The City of Tracy provides water service to properties within its municipal boundaries as well as in certain portions of unincorporated San Joaquin County, such as the Larch-Clover area (north of the City limits as identified in the General Plan) and Patterson Pass Business Park (the approximate 610-acre business park south of the Specific Plan area), subject to LAFCO

TABLE 4.15-1 **GENERAL PLAN POLICIES RELEVANT TO WATER SUPPLY**

Goal/ Policy No.	Goal/Policy Content
Public Facilities Element	
Goal PF-6	Adequate supplies of water for all types of users.
Objective PF-6.1	*Ensure that reliable water supply can be provided within the City's service area, even during drought conditions, while protecting the environment.*
Policy P1	The City shall promote water conservation by implementing the Best Management Practices contained in the Urban Water Management Plan.
Policy P2	The City shall continue to acquire additional sources of water supplies to meet the City's future demands.
Policy P3	To the extent feasible, the City shall use surface water supplies to meet daily water needs and reduce reliance on groundwater supplies.
Policy P4	The City shall establish water demand reduction standards for new development and redevelopment to reduce per capita and total demand for water.
Objective PF-6.2	*Provide adequate water infrastructure facilities to meet current and future populations.*
Policy P1	The City shall maintain water storage, conveyance, and treatment infrastructure in good working condition in order to supply domestic water to all users with adequate quantities, flows, and pressures.
Policy P2	Storage reservoirs should be buried or partially buried depending on local groundwater conditions to allow for the joint use of the site with parks or recreational facilities, unless reservoirs are elevated to provide a gravity flow system, in which case the reservoirs shall be screened by landscaping and/or earthen berms.
Objective PF-6.3	*Promote coordination between land use planning and water facilities and service.*
Policy P1	Structures with plumbing that are located within the City limits shall connect to the City water supply system.
Policy P2	New developments shall dedicate land for utility infrastructure such as treatment facilities, tanks, pump stations and wells as needed to support the development of their project.

TABLE 4.15-1 **GENERAL PLAN POLICIES RELEVANT TO WATER SUPPLY**

Goal/ Policy No.	Goal/Policy Content
Policy P3	The City shall be responsible for constructing new transmission water lines, as needed to meet future needs. Individual development projects shall be responsible for the construction of all water transmission means.
Policy P4	All new water facilities shall be designed to accommodate expected capacity for buildout of areas served by these facilities but may be constructed in phases to reduce initial and overall costs.
Policy P5	The availability of sufficient, reliable water shall be taken into account when considering the approval of new development.
Policy P6	Costs for water service expansion shall be distributed among new water users fairly and equitably.
Objective PF-6.4	*Design and manage water system facilities for reliability during catastrophic events such as fires, power outages, droughts, and earthquakes.*
Policy P1	Groundwater supplies should be reserved for emergency use during water treatment shutdowns, short-term shortages of surface water supplies or during droughts.
Policy P2	Backup emergency power systems shall be provided at all essential water facilities that rely on electric power.
Policy P3	Storage reservoir facilities should be located at naturally high topographic locations to capitalize on gravity flow, whenever possible.
Policy P4	Future water systems and facilities shall be designed to minimize the likelihood of damage from vandalism or terrorist activity.
Objective PF-6.5	*Use recycled water to reduce non-potable water demands whenever practicable and feasible.*
Policy P1	The City shall provide recycled water systems, including pipelines, pump stations, and storage facilities; to serve primarily City-owned facilities, schools, and parks as funding becomes available.
Policy P2	Recycled water piping systems ("purple pipe") shall be constructed as appropriate in all new development projects to facilitate the distribution and use of recycled water. The specific location and size of the recycled water systems shall be determined during the development review process.
Policy P3	Recycled water shall be used for all public properties and large private open spaces or common areas to the extent feasible.

TABLE 4.15-1 **GENERAL PLAN POLICIES RELEVANT TO WATER SUPPLY**

Goal/ Policy No.	Goal/Policy Content
Policy P4	The City shall plan for recycled water infrastructure in the City's Infrastructure Master Plans and, to the extent feasible, recycled water should be utilized for non-potable uses, such as landscape irrigation, dust control, industrial uses, cooling water, and irrigation of agricultural lands.

Source: City of Tracy General Plan, 2011.

approval. As future developments within the SOI, but outside of the City limits, are approved, they are annexed into the City and served by the City water system. The Specific Plan area is located outside the current City limits; if the City approves the proposed Project, it will apply to LAFCO to annex the Specific Plan Area to the City and the City's water service area.

The City's domestic water system serves domestic, commercial, institutional, irrigation, and industrial customers.

b. Project Site Conditions

On-site domestic (potable) water is provided by individual wells.[2] For non-potable water needs, as explained more fully in the WSA, included in Appendix M of this Draft EIR, the Specific Plan area is currently served by the Byron Bethany Irrigation District (BBID) and the West Side Irrigation District (WSID). Both BBID and WSID obtain water from the United States Bureau of Reclamation (USBR) Central Valley Project (CVP) and have agricultural water contracts and reliability classifications (known as an Ag-reliability supply). Reliability classifications are assigned according to use type, such as ag-

[2] Chuck McCallum, Kier & Wright, personal correspondence with The Planning Center | DC&E, February 22, 2013.

riculture or urban.[3] Each use type is allocated a guaranteed percentage of its contracted water—for example, if a project has an ag reliability of fifty percent, it will receive fifty percent of its contracted water supplies. As described below, it is anticipated that these Ag-reliability supplies will become available to the City as land within these irrigation district service areas is converted from agricultural use to urban use. It is anticipated that when the Specific Plan area is annexed to the City, it would not be de-annexed from the respective irrigation district so as to maintain rights to the historically available water supplies. As described further below, the City has already implemented a water assignment from WSID and the Banta-Carbona Irrigation District (BCID) is anticipating a future assignment from WSID.

c. City's Water Supply[4]

i. Existing City Water Supplies

The City of Tracy obtains water from both surface water and groundwater sources. The amount from either source as a percentage of the total water supply used by Tracy varies from year to year based on contractual agreements, annual precipitation and City policy regarding how to expend water resources. The supply of groundwater sources is dependent on the capacity of the underlying groundwater aquifer.

Surface water has historically made up approximately 50 to 60 percent of the City's total annual water supply. However, in recent years, since the City's acquisition of additional surface water supplies from the South County Water Supply Project from the South San Joaquin Irrigation District (SSJID), groundwater use by the City has decreased significantly. Since the groundwater is a heavily-mineralized source of water, the City would like to reduce its

[3] Bayley, Steve. Public Works Deputy Director, City of Tracy. Personal telephone communication with Melissa McDonough, The Planning Center | DC&E. March 11, 2013.

[4] Additional details regarding the City's existing and planned future water supplies are set forth in the Water Supply Assessment for the Cordes Ranch Specific Plan project, which is included in Appendix M to this Draft EIR.

groundwater use and reserve groundwater for emergency situations and droughts.

The City currently receives water supplies from the following three sources:

- Surface water from the Delta Mendota Canal (Central Valley Project);
- Surface water from the Stanislaus River via the South County Water Supply Project from SSJID; and
- Groundwater pumped from nine groundwater wells located within the City.

a) Central Valley Project Water via the Delta Mendota Canal (US Bureau of Reclamation Contract)

The City has an existing contract with the USBR for 10,000 af of water per year from the Central Valley Project (CVP). This contract is a 40-year municipal and industrial (M&I) water supply contract, which took effect in 1974 and expires in 2014. The City and Bureau have preliminarily agreed to renew the contract prior to 2014. Contract negotiations are on-going and renewal is expected in the near future. The Delta-Mendota Canal conveys USBR water to the City. The water is treated at the John Jones Water Treatment Plant (JJWTP) (which was constructed in 1979 and later expanded in 1988, and also expanded and upgraded in 2007) before it is distributed to the community.

b) Stanislaus River Water

The City, in partnership with the cities of Manteca, Lathrop, and Escalon, and SSJID, constructed a surface water treatment plant near Woodward Reservoir in Stanislaus County and transmission pipeline to deliver treated surface water to each city. The project is called the South County Water Supply Project (SCWSP). This water supply is based on SSJID's senior pre-1914 appropriative water rights to the Stanislaus River, coupled with an agreement with the USBR to store water in New Melones Reservoir. As part of the SCWSP, the City has been allocated up to 10,000 af/yr of water.

c) Groundwater

The City overlies a portion of the San Joaquin Valley Groundwater Basin-Tracy Sub-basin (Tracy Sub-basin). The City currently operates nine groundwater wells, with a total extraction capacity of about 15 millions gallons per day (mgd). The groundwater level is located approximately 90 to 150 feet above mean sea level (msl). Data indicates that, except for seasonal variation resulting from recharge and pumping, water levels in most of these wells have remained stable over at least the last 10 years.

d) Out-of-Basin Water Banking (Pilot Agreement)

The Semitropic Groundwater Storage Bank (Semitropic) is a water storage system that began operation in the early 1990s. Located in Kern County between the California Aqueduct and the Delta-Mendota Canal, Semitropic is one of eight California groundwater banking agencies. Pursuant to groundwater banking agreements, specified banking partners (such as the City of Tracy) deliver surplus water supplies to Semitropic for storage in Semitropic's groundwater storage system. Upon request by a banking partner, Semitropic returns the stored water to the California Aqueduct for delivery to the requesting partner. Semitropic can deliver a maximum of 90,000 af/yr of water to a banking partner via the California Aqueduct. The State would then deliver the water to the banking partners.

ii. Future Water Supplies

The City is currently anticipating the following additional potable water supplies in the future:

- Out-of-basin water banking (Semitropic) (already purchased, and 6,100 acre-feet in storage);
- Additional surface water from the Delta-Mendota Canal (CVP);
- Surface water supplies from BBID pre-1914 water rights;
- Additional supplies from the SCWSP; and
- Aquifer Storage and Recovery (ASR) Program.

a) Out-of-Basin Water Banking (Permanent Agreement)

On June 5, 2012, the City has entered into a permanent, long-term agreement with Semitropic for 3,500 units of water storage. One unit of water storage allows for a withdrawal of up to 1 af/yr for three years; hence, the agreement would allow for withdrawal of 3,500 af/yr for three years (10,500 af total). A Negative Declaration was prepared for the permanent agreement pursuant to the provisions of CEQA (SCH No. 2010092012) and a FONSI (FONSI-09-164) was issued by USBR.[5]

b) Additional Central Valley Project Water via the Delta-Mendota Canal

The City has an option for an additional assignment of 2,500 af/yr of Ag-reliability CVP contract entitlement water from the WSID. Per the agreement with WSID, the City can execute this assignment at any time before midnight on February 27, 2014. Environmental review and all other required reviews and approvals for this assignment have been completed,[6] such that this assignment can be executed with the transfer of the required funds. The City plans to exercise this option in late 2013 or early 2014 prior to the February 27, 2014 deadline.

The area served by the former PVWD is now part of BBID. Due to on-going urbanization in portions of BBID's service area, BBID anticipates that it may have CVP contract entitlement water (with Ag-reliability) available for municipal uses in the future. The City and BBID are negotiating a phased option agreement to assign portions of BBID's CVP/DMC contract right to the City. The estimated quantity of contract entitlement water potentially subject to such an agreement is approximately 11,000 af/yr. The exact quantity

[5] Elizabeth Drayer, West Yost Associates, Email correspondence with The Planning Center | DC&E, February 27, 2013.

[6] A Negative Declaration was prepared pursuant to the provisions of the California Environmental Quality Act (CEQA) (WSID Assignment: SCH No. 2002072107) and a Finding of No Significant Impact (FONSI) was issued. Elizabeth Drayer, West Yost Associates, Email correspondence with The Planning Center | DC&E, February 27, 2013.

of BBID CVP water entitlement is the subject of the future agreement between the City and BBID. However, previous discussions have indicated that a contract entitlement quantity of water equal to 3.4 acre-feet per year per acre of converted agricultural land may be available for M&I use. It is estimated that an agreement between the City and BBID can be achieved within the next few years to allow for the transition of additional CVP supplies to be available to the City by 2015. An approval will be required from the USBR and compliance with CEQA and NEPA will be required.

c) Additional Supplies from the SCWSP

The City is anticipating that an additional 2 mgd of capacity and 3,000 af/yr of treated water supplies will be available from the SCWSP in the future. Delivery of these additional supplies to the City would be subject to approval of the other SCWSP partners. The City anticipates that these additional supplies will be available by 2015.

d) Aquifer Storage and Recovery

The City's proposed ASR Program would allow the City to optimize conjunctive use of its water supplies through injection of treated (potable) drinking water into selected aquifer zones within the groundwater Sub-basin for storage when surplus supplies are available, and recovery of that potable water from the aquifer to optimize water quality and meet seasonal peak demands during drought periods, or when emergency or disaster scenarios preclude the use of imported water supplies.

The City obtained regulatory approval from the Central Valley Regional Water Quality Control Board (RWQCB) to conduct an ASR Demonstration Testing Program. A Negative Declaration was prepared for the project in November 2010 pursuant to the provisions of CEQA (SCH No. 2010112049). The Phase 1 ASR Demonstration Testing was conducted between January 2011 and September 2011 and involved the injection of 233 acre-feet (76 million gallons) of treated SSJID potable water, storage in the confined aquifer

and subsequent extraction of 340 acre-feet (111 million gallons) of water.[7] The Phase 2 ASR Testing was initiated in late December 2011 and was completed in September 2012 with injection of 700 acre-feet. The Tracy City Council approved and adopted a CEQA Negative Declaration (SCH No. 2012102013) for the permanent ASR Program on December 4, 2012.[8] Phase 3 ASR Testing is currently underway.

The next step is to obtain approval to operate a permanent ASR Program from the RWQCB. It is estimated that as much as 685 to 915 af/yr of potable water could be injected into the aquifer, assuming a 5-month continuous injection rate of 1.5 to 2.0 mgd. Implementation of the City's ASR Program will occur incrementally (as new ASR wells are constructed) with up to 3,000 acre-feet of high-quality water ultimately (by 2025) being available in drought years to increase the reliability of the City's water supply. Approximately 1,000 af/yr of ASR supply is anticipated to be available starting in 2015 and increasing to 3,000 af/yr by 2025.[9]

e) Recycled Water

In 2002, the City adopted a Recycled and Non-Potable Water Ordinance requiring all new subdivisions, to the extent practicable, to install the required infrastructure (such as dual-distribution pipelines) to provide recycled water to meet non-potable water demands at parks, golf courses, athletic fields, schools, median island landscapes, and industrial sites.

At buildout of the City's General Plan, it is estimated that the recycled water demand for landscape irrigation will be approximately 7,500 af/yr. The

[7] Interim (Final) Status Report for Well 8 ASR Demonstration Program, Memorandum prepared for City of Tracy by Pueblo Water Resources, dated December 7, 2011; Elizabeth Drayer, West Yost Associates. Email correspondence with The Planning Center | DC&E, February 27, 2013.

[8] Elizabeth Drayer, West Yost Associates. Email correspondence with The Planning Center | DC&E, February 27, 2013.

[9] Elizabeth Drayer, West Yost Associates. Email correspondence with The Planning Center | DC&E, February 27, 2013.

City's future use of recycled water to meet landscape irrigation demands is a critical part of the City's overall future water supply plan to reduce potable water demands and reserve potable water supplies for their most important and beneficial uses.

It is anticipated that adequate recycled water supplies will be available to meet the City's projected non-potable water demands prior to buildout of the City's General Plan, including those associated with the Project. Approvals and permits for the production, distribution and use of recycled water will be required from the RWQCB and the California Department of Public Health (DPH).

iii. Existing Water System Facilities

The following descriptions of the City's existing and planned water system facilities is based on the City's Water System Master Plan, adopted January 2013.

The City of Tracy's existing water system facilities include a surface water treatment plant, pump stations, wells, water mains and storage reservoirs. The John Jones Water Treatment Plant (JJWTP), which is located near the Tracy Municipal Airport, treats surface water from the Delta Mendota Canal (DMC). The JJWTP was initially constructed in 1979, expanded in 1988, and expanded again and upgraded in 2007. The JJWTP currently has a treatment capacity of 30 mgd. The City of Tracy also operates nine groundwater wells that pump from the underlying groundwater aquifer, with a total reliable capacity of about 15 mgd.

The City currently operates four treated water storage reservoirs (two clearwells and two storage tanks) with a combined total available storage capacity of 13.5 million gallons (mg). The two clearwells located at the JJWTP have a combined storage capacity of 4.66 mg (Clearwell #1 is 0.66 mg; Clearwell #2 is 4.0 mg). However, Clearwell #1 operates as a chlorine contact basin and can no longer be counted as available system storage capacity. An additional reservoir is located in the Northeast Industrial (NEI) area with a capacity of 2.4

mg. The fourth storage reservoir is located on Linne Road. It was completed in 2005 and has a capacity of 7.1 mg.

iv. Water Storage and Distribution

The City of Tracy provides water service over a geographical area with significant changes in elevation. Therefore, the City has established three pressure zones for its treated water distribution system. The three pressure zones contain over 390 miles of water main pipelines. The pipes vary in diameter up to 42 inches.

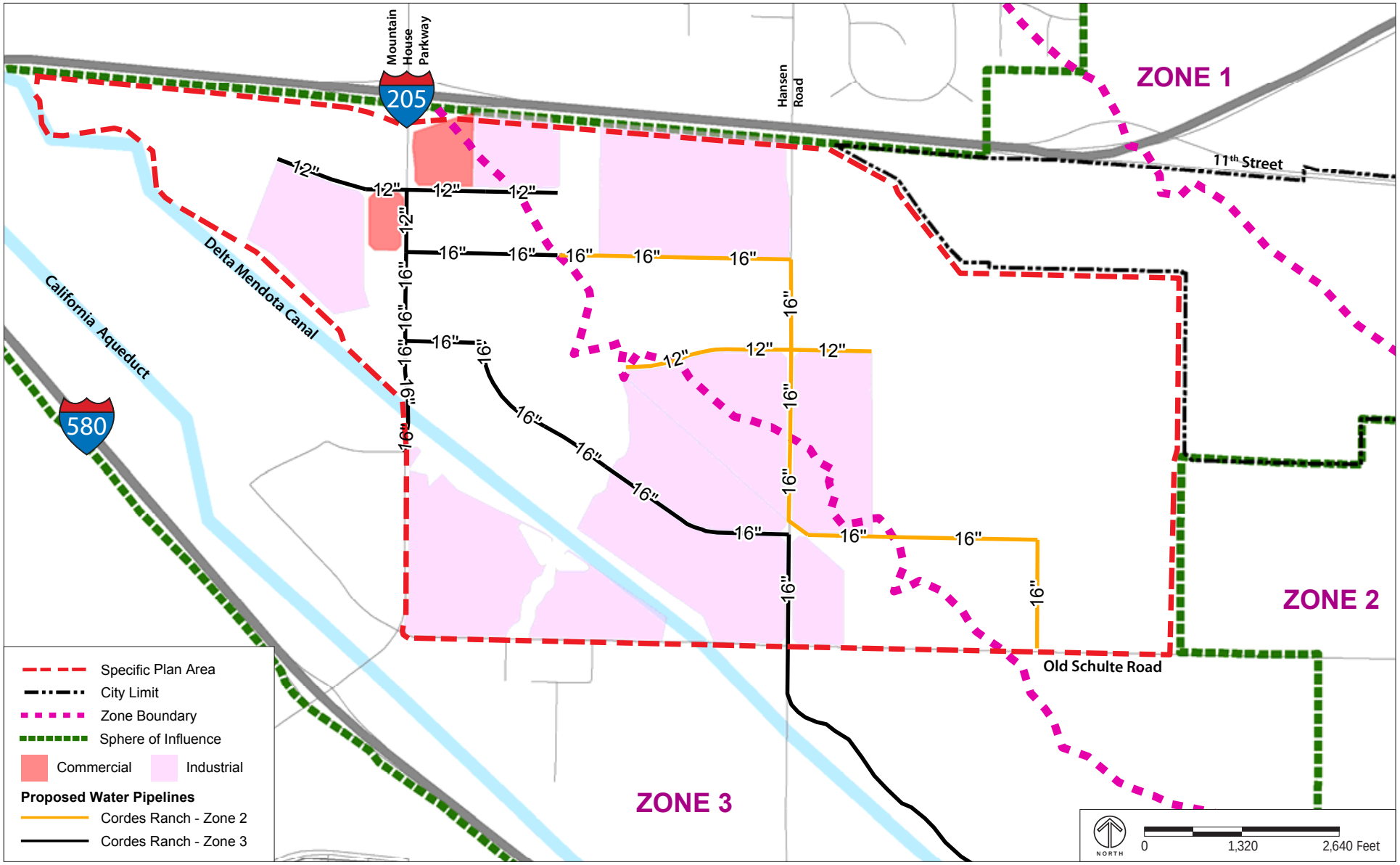
Certain components of the City's existing potable water distribution system are available to serve the Project (as described below, additional facilities would also be required to serve the project). An existing 24-inch diameter water transmission main extends west within Old Schulte Road and terminates at Mountain House Parkway. From the transmission main, a 14-inch diameter water main extends north within Mountain House Parkway along the western property boundary, as shown in Figure 4.15-1.

Two water distribution canals pass through the site. The Delta Mendota Canal enters at the mid portion of the southern property boundary and extends northwest and exits the property at Mountain House Parkway, and then parallels the western property boundary. The WSID Canal enters at the mid portion of the eastern property boundary and extends northwest and exits the property at proposed Commerce Drive, and then parallels the property boundary.

3. Standards of Significance

Water supply impacts associated with the project would be considered significant if the project would:

- Have insufficient water supplies available to serve the project from existing and planned future entitlements and resources.
- Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.



Source: West Yost Associates, 2013.

FIGURE 4.15-1

PHASE 1 WATER FACILITIES

4. Project Impacts

Throughout this section, total potable water demand was considered to include both existing potable water demand as of 2007 and additional potable water demand associated with development projects with approved water supply, consistent with the analysis contained in the WSMP.[10] As more fully described in the WSA, these projects include Residential Areas Specific Plan, Industrial Areas Specific Plan, Interstate 205 Corridor Specific Plan, Plan "C," Northeast Industrial, South MacArthur, Downtown Specific Plan, Infill, Ellis Specific Plan, Gateway Phase 1, Holly Sugar Sports Park, and the Project.

a. Have insufficient water supplies available to serve the project from existing and planned future entitlements and resources.

The proposed Specific Plan contains a series of sustainability principles, including several relevant to water supply, as listed below:

- Landscaping will consist of native species selected for water-efficient characteristics and will include drought tolerant planting materials common to the region.
- Turf will be discouraged and minimized throughout the Project.
- Irrigation systems and devices will be water efficient and will include soil moisture-based irrigation controls and systems.
- The landscape design will meet or exceed requirements of the Water Efficient Landscape Ordinance.
- A purple pipe system will be constructed as part of the infrastructure for the project. Reclaimed water will be utilized for landscape irrigation of public and private landscaped areas when available.
- Watering of non-vegetated surfaces will be restricted and practices for cleaning outdoor surfaces and vehicles will be included in the CC & R's.

[10] The WSMP utilizes 2007 as the baseline year for water demand, noting that water production data from 2007 is more conservative and more representative of water use in Tracy prior to the recent economic downturn.

- Low-impact development practices will be implemented to the extent feasible, to maintain the existing hydrologic character of the drainage and manage and treat stormwater to protect the environment.
- Buildings will be designed to be water-efficient and will include water-efficient fixtures and appliances.

i. Projected Water Demand[11]

As explained more fully in the WSA, the total projected water demand for the Project at buildout is as follows:

- Potable Water Demand = 2,233 af/yr
- Recycled Water Demand = 1,127 af/yr

ii. Projected Water Supply

As noted above, the Project would be served by the City from its existing and future portfolio of water supplies as described further in the WSA.

As discussed above, some portions of the Specific Plan Area are located within irrigation district service areas. The northeast corner of the Specific Plan Area (approximately 100 acres) is within the WSID service area and the northern and eastern portions of the Specific Plan Area (approximately 1,080 acres) are within the BBID service area (it should be noted that this service area was previously part of the PVWD service area). Both BBID and WSID currently obtain water from the USBR (CVP) and have Ag-reliability supplies. It is anticipated that these Ag-reliability supplies will become available to the City as lands within these irrigation district service areas are converted from agricultural to urban use as development occurs within the Specific Plan Area. The City already has an assignment for WSID supplies and an option for an additional assignment of WSID supplies. The water supply entitlement

[11] The potable water demand calculated for the project in the Specific Plan (1,874 af/yr) is lower than the 2,233 af/yr demand calculated in the WSMP (based on the City's 2010 UWMP). However, the recycled water demand calculated for the project in the Specific Plan (1,127 af/yr) is higher than the 1,034 af/yr demand calculated in the WSMP. For the purposed of this Draft EIR, the more conservative of each of the estimates was used.

for purposes of these assignments has historically been assumed to be 3.4 acre-feet per acre per year (af/ac/yr). Thus, the approximately 1,180 acres of the Specific Plan Area overlying BBID and WSID service areas would have an associated water supply entitlement of approximately 4,000 af/yr of Ag-reliability CVP supplies (3.4 af/ac/yr x 1,080 acres). It is proposed that, when annexation to the City occurs, these lands would not be de-annexed from the respective irrigation district so as to maintain the entitlements to the historically available agricultural water supplies.

As discussed above, the Ag-reliability CVP supplies are subject to significant delivery reductions in dry years. Consequently, these entitlements alone are not considered reliable to meet the City's anticipated urban demands under all hydrologic conditions. Therefore, to ensure an adequate water supply for the City, including the Project, under all hydrologic conditions, the City has entered into a long-term agreement with the Semitropic Water Storage District Groundwater Storage Bank (Semitropic) for 3,500 units of water storage. One unit of water storage allows for a withdrawal of up to 1 af/yr for three years; hence, the agreement would allow for withdrawal of 3,500 af/yr for three years during dry years. The City entered into a permanent agreement with Semitropic on June 5, 2012.

The City anticipates that 2 mgd of capacity and 3,000 af/yr of additional treated water supplies will be available from the South San Joaquin Irrigation District (SSJID) South County Water Supply Project (SCWSP). These additional supplies from the SCWSP would be in addition to the SCWSP supplies that the City currently receives.

The recycled water demands for the Project, 1,127 af/yr, would ultimately be met using tertiary-treated recycled water treated at the City's wastewater treatment plant (WWTP). According to the WSMP, adequate recycled water supplies would be available to meet the City's recycled water demands at buildout of the General Plan, including those associated with buildout of the Project, as further discussed in Chapter 6 of the proposed Specific Plan and

the WSA.[12] Recycled water would be delivered to and distributed within the Specific Plan Area via a separate "purple pipe" recycled water distribution system.

As mentioned in Chapter 3, Project Description, the Project includes sustainable landscape design, such as the use of native and climate adapted plant species, high efficiency irrigation systems and lighting, locally sourced and recycled materials and stormwater best management practices. It is not currently known when recycled water supplies from the City's WWTP would be available to serve the Project due to the timing of construction of the required recycled water infrastructure. Therefore, prior to recycled water becoming available, potable water supplies would be used to meet the irrigation demands for the Project. These supplies would be distributed within the Specific Plan Area using the installed "purple pipe" distribution system. Once recycled water becomes available, the "purple pipe" distribution system would be converted to a true recycled water distribution system delivering recycled water supplies to the Specific Plan Area.

iii. Water Supply Availability and Reliability Under Various Hydrologic Conditions

The WSA concluded that the City's existing water supplies with the additional 2,500 af/yr WSID assignment and additional SCWSP supplies are sufficient to meet the City's anticipated water demands, including those associated with the Project. As demonstrated in the WSA, with the City's existing supplies and the additional 2,500 af/yr WSID assignment, Semitropic dry year supplies, and the additional SCWSP supplies, no water supply shortages are anticipated for any of the hydrologic conditions based on existing water demands in addition to those projected water demands associated with planned future uses, including the Project.

As noted in the WSA, the remaining 2,500 af/yr WSID assignment can be executed by the City at any time before midnight on February 27, 2014 per the existing agreement with WSID. Environmental review and all other re-

[12] City of Tracy, 2013, *WSMP*, pages ES-3, 4-26, and 4-27.

quired reviews and approvals for this assignment have been completed, as the WSA was approved on February 5, 2013. Delivery of the additional SCWSP supplies to the City would be subject to approval of the other SCWSP partners.

According to the WSA, the City's Year 2025 potable water supplies in normal, single dry and multiple dry years would be 37,000 af/yr, 41,250 af/yr, and 37,800 af/yr, respectively. These supplies would be sufficient to meet the City's Year 2025 potable water demands (28,300 af/yr) and the Project's projected water demands (2,233 af/yr).[13] Existing and planned additional water supply would be sufficient to meet water demand for any hydrologic conditions to the year 2035.[14] Additionally, Table 4.15-2 summarizes the City's Year 2035 water supplies and water demands in normal, single dry and multiple dry years. As shown, for all hydrologic conditions, the City's existing and additional water supplies are sufficient to meet the City's Year 2035 water demands. No water supply shortages are anticipated for any hydrologic conditions based on Year 2035 water demands. Therefore, *no impact* would occur.

b. Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

New water facilities would be required to serve the Project, including additional transmission and distribution, water storage facilities, pumping stations, and pressure reducing stations throughout the Specific Plan Area as shown in Figures 4.15-1 and 4.15-2. These improvements, identified in the WSMP and analyzed in the related environmental review, consist of the following:

[13] West Yost Associates, January 2013, *WSA*, pages 16, 17, and 52.

[14] West Yost Associates, January 2013, *WSA*, page 1.

TABLE 4.15-2 **EXISTING AND ADDITIONAL YEAR 2035 DRY YEAR WATER SUPPLY VS. DEMAND**

	Year 2035 Dry Year Water Supply Availability (Af/Yr)		
Supply	Normal Years	Single Dry Years	Multiple Dry Years
Existing Potable Water Supplies			
USBR CVP Contract (City Contract)	7,500	6,500	4,000
USBR CVP (BCID Assignment)	2,500	750	500
USBR CVP (WSID Assignment)	1,250	375	250
Total CVP Deliveries	*11,250*	*7,625*	*4,750*
South County Water Supply Project (pre-1914 rights)	10,000	9,500	9,500
Groundwater[a]	2,500	9,000	9,000
Semitropic Water Storage Bank (Permanent Agreement)[b]	--	2,033	2,033
Additional Potable Water Supplies			
USBR CVP (WSID Option)[c]	1,250	375	250
USBR CVP (BBID contract)[d]	1,850	555	370
BBID (pre-1914 rights)[e]	0	0	0
Additional SCWSP (pre-1914)	3,000	2,850	2,850
Aquifer Storage and Recovery[b]	--	0	0
Total Potable Water Supply	*29,850*	*31,938*	*28,753*
Total Potable Water Demand[g]	*25,740*	*25,740*	*25,740*
Potable Water Supply Shortfall	*0*	*0*	*0*

Supply	Year 2035 Dry Year Water Supply Availability (Af/Yr) Normal Years	Single Dry Years	Multiple Dry Years
Non-Potable Water Supplies			
Recycled Water[d]	9,900	9,900	9,900
Total Non-Potable Water Supplies	*9,900*	*9,900*	*9,900*
Total Non-Potable Water Demand[g]	*1,960*	*1,960*	*1,960*
Non-Potable Water Supply Shortfall	*0*	*0*	*0*

[a] The City is planning to decrease groundwater use to 2,500 af/yr by the year 2015. However, studies described in the WSA have indicated that up to 9,000 af/yr of groundwater is available to the City to make up for shortfalls in the event of a severe drought or other water shortage. Therefore, groundwater pumping during dry year conditions is assumed to be up to 9,000 af/yr with an average annual operational yield of 9,000 af/yr.

[b] The Semitropic Water Storage Bank and Aquifer Storage and Recovery are considered to be dry year supplies and are therefore considered to be zero in normal years. Current available dry year supply of 2,033 af is based on the City's current available storage (6,100 af) as of January 2013.

[c] This option will be exercised by the City prior to the February 27, 2014 deadline, per the agreement between the City and WSID.

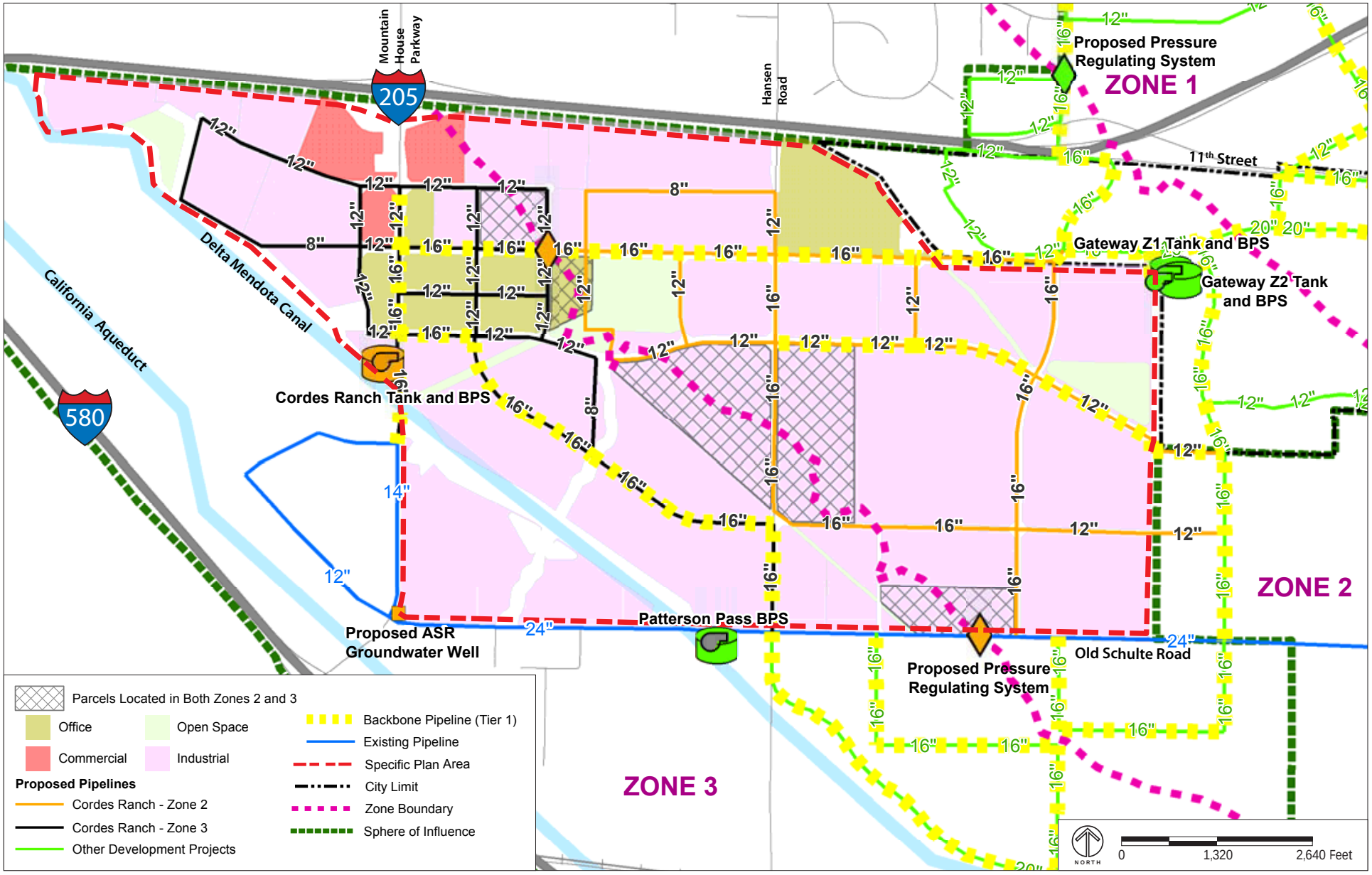
[d] Additional CVP Surface Water (BBID USBR assignment) assumes annexation of 1,080 acres in conjunction with the Project; 1,080 acres x 3.4 af/ac/yr = 3,700 af/yr.

[e] The future water supply anticipated from BBID (pre-1914) has been increased from 3,000 af/yr (as presented in the City's 2010 UWMP) to up to 4,500 af/yr based on recent agreements related to the proposed Tracy Hills project.

[f] Recycled water supply based on 2010 wastewater flows. Recycled water demand = Gateway Phase 1 (84 af/yr) + Holly Sugar Sports Park (485 af/yr) + Ellis Specific Plan (116 af/yr) + the Project (1,127 af/yr) = 1,812 af/yr + 7.5% UAFW = 1,960 af/yr.

[g] Total Potable Water Demand includes existing potable water demand as of 2007 + additional potable water demand associated with development projects with approved water supply, including the Project. These projects are Residential Areas Specific Plan, Industrial Areas Specific Plan, Interstate 205 Corridor Specific Plan, Plan "C," Northeast Industrial, South MacArthur, Downtown Specific Plan, Infill, Ellis Specific Plan, Gateway Phase 1, Holly Sugar Sports Park, and the Project.

Source: West Yost Associates, January 2013, *WSA*, pages 35, 36, and 52; Erler & Kalinowski, Inc., May 2011, *City of Tracy Urban Water Management Plan*, page 5.



Source: West Yost Associates, 2012.

FIGURE 4.15-2

WATER FACILITIES AT FULL BUILDOUT

Potable Water

- Three water storage tanks, one near Old Schulte Road and the Delta Mendota Canal with a minimum active storage capacity of 1.5 million gallon (mg), one near Old Schulte Road and Hansen Road with a minimum active storage capacity of 0.5 mg, and one near the northeast boundary of the Specific Plan area with a minimum active storage capacity of 1.5 mg.
- One aquifer storage and recovery (ASR) well, near Old Schulte Road and Mountain House Parkway, with a minimum firm pumping capacity of 2,500 gallons per minute (gpm).
- Two booster pump stations, one near Mountain House Parkway and the Delta Mendota Canal, with a minimum firm capacity of 4,500 gpm and one near the northeast boundary of the Specific Plan area with a minimum firm pumping capacity of 4,500 gpm.
- Two pressure regulating stations, one near Capital Parks Drive and one near Old Schulte Road and Pavilion Parkway.
- 49,070 linear feet (lf) of 12-inch diameter and 20,750 lf 16-inch diameter pipeline in new and existing streets. Pipelines throughout the Specific Plan area would be installed as streets are constructed or as looping of the distribution system is required.
- Various water backbone pipelines.
- 20-inch diameter pipelines, from JJWTP to the intersection of Corral Hollow Road and Linne Road and from Corral Hollow Road and Linne Road to the intersection of Hansen Road and Old Schulte Road. Prior to construction of the 20-inch pipelines, the Project would utilize an existing 24-inch pipeline.
- 160 lf of 16-inch bore and jack under the Delta Mendota Canal.
- One clearwell, at the JJWTP, with 2.0 mg capacity.

Non-Potable (Recycled) Water

- Three diurnal storage tanks are required under the WSMP, of which the Project is a part; one at the WWTP with 3.0 mg capacity, one near the southwest corner of the Specific Plan area, and one in the Tracy Hills development with 2.0 mg capacity.
- Five non-potable water pump stations are also required under the WSMP, of which the Project is a part;, one at the WWTP with 23 mgd capacity, one near the south end of the Gateway Project on Lammers Road with 14 mgd capacity, one near the southwest corner of the Specific Plan area with 4.1 mgd capacity, and two associated with the Tracy Hills development.
- Various recycled water conveyance pipelines.

The Project would only utilize a proportionate share of these facilities. The following facilities would be constructed at the perimeter of the Specific Plan area, as shown on Figure 4.15-2, off-site in relation to the Specific Plan area, although each location will have to be approved and finalized prior to construction and thus may change: one water storage tank and one booster pump station (near the northeast boundary of the Specific Plan area), portions of the 20-inch diameter pipelines (from JJWTP to the intersection of Corral Hollow Road and Linne Road and from Corral Hollow Road and Linne Road to the intersection of Hansen Road and Old Schulte Road), one clearwell (at the JJWTP), two diurnal storage tanks (one at the WWTP and one in the Tracy Hills development), and four non-potable water pump stations (one at the WWTP, one near the Gateway Project, and two associated with the Tracy Hills Development). The storage tank and booster pump station near the northeast boundary of the Specific Plan area may also be off-site depending on the exact location, when approved and finalized.

Timing of improvements would be determined at the time of development, in accordance with the Specific Plan, other applicable City standards and as required by the City Engineer. As mentioned above, these proposed facilities

were described in the WSMP, and would be required to meet the City's water system operations and performance criteria as described therein.

Also, when available from the City of Tracy, recycled water from the wastewater treatment plant will be utilized. A "purple pipe" system would be installed in all phases of development so that recycled water, when available, can ultimately be conveyed and distributed throughout the Specific Plan Area. Further, the project would utilize the existing Patterson Pass 24-inch water line to serve portions of Phase 1[15] development until such time as Master Plan improvements are required, which is estimated to be the equivalent acre-feet of water for approximately 150 acres of development. However, that demand shall be managed as part of the development process which will take into account factors such as booster stations and storage. Water distribution facilities to serve Phase 1 and buildout of the Project shall be determined during the subdivision mapping and development review processes, as determined by the City, to ensure conformance with the City's Master Plans and to ensure compliance with other applicable standards.

The environmental impacts that may result from the construction of these facilities were evaluated in the environmental review process for adoption of the WSMP and are evaluated in other sections of this EIR, in particular, Chapter 4.3, Air Quality; Chapter 4.4, Biology Resources; Chapter 4.7, GHG Emissions; Chapter 4.8, Hazards and Hazardous Materials; Chapter 4.9, Hydrology and Water Quality; Chapter 4.5, Cultural Resources; Chapter 4.11, Noise; and Chapter 4.14, Transportation and Traffic.

As described above, the Project's water system demands would not exceed the City's existing and planned water system facilities described in the UWMP and the WSMP. The Project would require the construction of certain infrastructure improvements described in the WSMP. Because the Project requires the construction of yet-to-be-built WSMP facilities, and may require the con-

[15] This analysis discusses the Project's impacts that would occur when Phase 1 is developed, as well as those that would occur with full buildout of the Project.

struction of certain interim improvements pending completion of WSMP improvements, the Project is considered to have a *potentially* significant impact. However, the potential environmental impacts from construction and operation of the WSMP improvements were evaluated and mitigated through the environmental review process for the WSMP. To ensure the construction of the WSMP facilities necessary to serve the Project, the Project shall be required to pay appropriate development impact fees. Payment of these development impact fees would reduce this potentially significant impact to a *less-than-significant* level.

5. Cumulative Impacts

This cumulative analysis considers the project in the context of the City's General Plan, which takes into account the entire incorporated area of Tracy and the SOI. Throughout this section, when considering impacts in relation to future demand, total potable water demand was considered to include both existing potable water demand as of 2007 and additional potable water demand associated with development projects with approved water supply, consistent with the analysis contained in the WSA and the WSMP and its accompanying Initial Study/Mitigated Negative Declaration. These projects are Residential Areas Specific Plan, Industrial Areas Specific Plan, Interstate 205 Corridor Specific Plan, Plan "C," Northeast Industrial, South MacArthur, Downtown Specific Plan, Infill, Ellis Specific Plan, Gateway Phase 1, Holly Sugar Sports Park, and the Project.

In the UWMP and the WSMP, the City assessed future water demand for its service area, which includes the City of Tracy SOI. The UWMP determined that the water supply will be sufficient to accommodate future demand in the service area through buildout of the Tracy General Plan in 2035. This analysis was bolstered by the Project-specific WSA, which came to the same conclusion. The WSMP identified existing deficiencies in water treatment capacity in the service area and actions to correct these deficiencies through the improvement projects. Therefore, all reasonably foreseeable projects have been considered in the UWMP, the WSMP, and WSA assessments. The Project was thus already planned for and would not contribute considerably to a cu-

mulatively significant impact to water supply. Further, the Project considered together with other projects in the UWMP, WSMP, and WSA assessments, was also planned for in the context of future development and would not contribute to a cumulative impact when considered together with other projects, and thus would result in a *less-than-significant* cumulative impact on water supply.

6. Impacts and Mitigation Measures

Impact UTIL-1: Because the Project requires the construction of yet-to-be-built WSMP facilities, it is considered to have a potentially significant impact.

Mitigation Measure UTIL-1: To ensure the construction of the necessary WSMP facilities, the Project shall be required to pay appropriate development impact fees as contemplated by WSMP.

Significance after Mitigation: *Less-than-significant.*

B. Wastewater

1. Regulatory Laws and Framework

a. Federal Regulations

i. Clean Water Act

The Federal Water Pollution Control Act of 1972, more commonly known as the Clean Water Act (CWA), regulates the discharge of pollutants into watersheds throughout the nation. Under the CWA, the United States Environmental Protection Agency (US EPA) implements pollution control programs and sets wastewater standards.

ii. National Pollutant Discharge Elimination System

As explained more fully in Chapter 4.9, Hydrology and Water Quality, the National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have

been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant.

In California, the federal requirements are administered by the State Water Resources Control Board, and individual NPDES permits are issued by the California RWQCB, as discussed more fully in Chapter 4.9, Hydrology and Water Quality.

b. State Laws and Regulations

Wastewater treatment and planning is regulated at the State level, as described more fully below.

i. Central Valley Regional Water Quality Control Board

The Central Valley RWQCB is the local division of the State Water Resources Control Board (SWRCB). The SWRCB is a State department that provides a definitive program of actions designed to preserve and enhance water quality and to protect beneficial uses of water in California. The Central Valley RWQCB issues NPDES permits in Tracy. NPDES permits allow the RWQCB to collect information on where the waste is disposed, what type of waste is being disposed, and what entity is disposing of the wastes. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance. The current wastewater treatment plant discharge to the Old River is regulated by discharge requirements stated in Order No. R5-2012-0115. The City's treatment plant's current in-

dustrial pretreatment pond, industrial holding ponds, sludge drying beds, and biosolids storage area are regulated by separate waste discharge requirements as defined in Order No. R5-2007-0038.

c. Local Regulations

i. City of Tracy Municipal Code, Article 4

The City of Tracy Municipal Code (Code), Article 4, Wastewater Discharge Surveys, Permits, Monitoring, and Administration, consists of a number of provisions relating to wastewater, including Section 5.24.390 (Wastewater discharge surveys) which requires that all potential dischargers, as determined by the City, must file an annually updated Discharge Survey Report. Section 5.24.410 (Mandatory Discharge Permits) requires significant industrial users connecting to or discharging into the sewer to obtain a wastewater discharge permit. The application for the wastewater discharge permit must include a baseline monitoring report that details wastewater constituents and characteristics and total, average, and peak wastewater flow rates, spill prevention and control measures, and certification that Pretreatment Standards are being consistently met, in compliance with Section 5.24.440 (Permit application and baseline monitoring report) of the Code. Wastewater Discharge Permits may contain a variety of conditions, as described in Section 5.24.450 (Permit conditions) of the Code, including the average and maximum allowable wastewater constituents and characteristics, limits on rate and time of discharge, specifications for monitoring programs, civil penalties and fees for non-compliance, and specifications as to what waste streams are authorized for discharge. Other sections of the Code relevant to wastewater include Section 5.24.550 (Data Collection) and Section 5.24.560 (Reporting Requirements) which describe the information that wastewater dischargers must provide, how such information will be collected, and the various standards that must be met in order to comply with discharge reporting requirements.

ii. Citywide Wastewater Master Plan

In January 2013, after completing appropriate CEQA review, the City adopted its Citywide Wastewater Master Plan (WWMP) to identify infrastructure requirements necessary to serve the buildout of the City's General Plan. The

WWMP evaluated wastewater generation rates, estimated wastewater flow and mass loadings for projects with approved wastewater capacity and future service areas within the City and its SOI.

Additionally, the WWMP examined current and forecasted regulations relating to discharge requirements and evaluated wastewater facilities to determine necessary improvements to serve future needs. The WWMP found, among other things, that new wastewater generation factors proposing a reduction of the City's standard flow rate to 80 gallons per capita per day result in a reduction in wastewater generation rates for most land use categories.

iii. City of Tracy General Plan

Goals, policies, and objectives from the Tracy General Plan relating to wastewater that are relevant to this analysis are included in Table 4.15-3. A full listing of all General Plan goals, policies, and objectives is included in Appendix C.

iv. San Joaquin County Local Agency Formation Commission

As explained previously, LAFCO oversees public agency boundary changes, as well as addressing amendments to a city's SOI. As discussed above, the overall goal of LAFCO is to encourage the orderly formation and extension of governmental agencies. The City would provide recycled water and wastewater treatment services to the Project, upon LAFCO's approval of the City's annexation request. As part of LAFCO's consideration of that request, LAFCO would evaluate the City's proposed Plan for Services to confirm the adequate provision of such services to the Project.

2. Existing Conditions

The City of Tracy provides wastewater collection and treatment service to properties within the City's municipal boundaries as well as certain portions of unincorporated San Joaquin County, such as the Patterson Pass Business Park (the approximate 610-acre business park south of the Specific Plan Area), per a LAFCO-approved pre-annexation agreement.

TABLE 4.15-3 **GENERAL PLAN POLICIES RELEVANT TO WASTEWATER**

Goal/ Policy No.	Goal/Policy Content
Public Facilities Element	
Goal PF-7	Meet all wastewater treatment demands and federal and State regulations.
Objective PF-7.3	*Promote coordination between land use planning and wastewater conveyance, treatment and disposal.*
Policy P1	Wastewater collection and treatment facilities shall be designed to serve expected buildout of the areas served by these facilities but constructed in phases to reduce initial and overall costs.
Policy P2	The City shall construct new wastewater trunk lines as needed. Individual development projects shall be responsible for construction of all collection lines other than trunk lines.
Policy P3	The approval of new development shall be conditioned on the availability of sufficient capacity in the wastewater collection and treatment system to serve the project.
Policy P5	New development shall fully fund the cost of new wastewater treatment and disposal facilities.
Policy P6	Prior to any development approvals within an Urban Reserve, the City shall complete new wastewater master planning and wastewater treatment and disposal studies, particularly for the west side of the city. These studies are to be funded by proponents of new development and must show how adequate wastewater treatment will be provided to the Urban Reserve in question.

Source: City of Tracy General Plan, 2011.

The City manages its utilities in a manner to maximize the use of existing capacities, and phases improvements in order to accommodate anticipated growth. In so doing, the City recognizes that development occurs in reaction to market forces over time, in phases and across multiple different project locations. For example, housing development, in part, is in response to a growing job market, while retail development is typically in response to a growing housing market. Cordes Ranch is intended to be a major employment generator for the City of Tracy. In addition, in balancing the use of utilities, sustainability measures – including, among other things, water and

energy conservation measures, the use of recycled water, etc. – are enabling the City to make more efficient use of existing infrastructure and scarce resources. For example, actual wastewater generation rates are anticipated to be reduced through the implementation of sustainable measures, updated Code requirements and new technologies. In managing these utilities, the City, in its reasonable discretion, and based on technical and legal constraints and other relevant data, may determine that a portion of its utility capacity is to be identified for specific projects.

a. Treatment Facilities

The existing City of Tracy wastewater treatment plant (WWTP) is located at the intersection of Holly Drive and Larch Road. Currently, the WWTP is operating below its permitted treatment capacity of 10.8 mgd. The WWTP is currently permitted to discharge up to 16 mgd in phased expansions (as identified and planned for in the WWMP). The existing WWTP meets all current discharge requirements imposed by the RWQCB.

The existing uses within the Specific Plan Area are served by on-site septic systems.

b. Conveyance Facilities

The wastewater collection and conveyance facilities for properties within the Specific Plan Area are described below. An existing 21-inch diameter sanitary sewer pipeline (Hansen Road Trunk Sewer) traverses the Specific Plan Area. This line has approximately 0.145 mgd of capacity.[16] This line extends from the northeast Specific Plan Area boundary to Hansen Road and continues within Hansen Road to the southern boundary at Old Schulte Road, and then further continues to the west at the intersection of Old Schulte Road and Mountain House Parkway.

[16] Steve DeCou, CH2M Hill, Email correspondence with The Planning Center | DC&E, February 27, 2013.

3. Standards of Significance

Wastewater impacts associated with the Project would be considered significant if the Project would:

- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Generate a demand for wastewater treatment capacity that is currently not available.
- Exceed wastewater treatment requirements of the applicable RWQCB.

4. Project Impacts

a. Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

i. Wastewater Demand

Given the proposed phasing of the Project and how this would relate to the City's planned infrastructure expansion, this analysis discusses the Project's impacts that would occur when Phase I is developed as well as those impacts that would occur at full buildout.

The projected wastewater demand for the Project is estimated as follows:

- Phase 1 Demand: 0.69 mgd average dry weather flow rate and 2.33 mgd peak wet weather flow rate.
- Buildout Demand: 1.72 mgd average dry weather flow rate and 5.84 mgd peak wet weather flow rate.

This demand calculation estimates the flow parameter for each land use type (i.e. ,industrial, office, commercial) based primarily on the corresponding flow generation factors set forth in the WWMP and considering average weather in the area (i.e., average dry weather flow rate) and peak wet weather, such as storms. However, for the lands covered by the I-205 Overlay, the

WWMP flow generation rate for office land use was used and the corresponding floor-to-area ratio (FAR) was modified from 0.45 to 0.40.[17]

ii. Wastewater Facilities

a) Treatment Facilities

As discussed above, the City manages its utilities in a manner to efficiently utilize existing capacity.[18] To that end, as set forth in the Technical Memorandum (Appendix M), initially, the Project would rely on existing treatment capacity from the WWTP, up to 0.145 mgd. At such time as when the Project generates wastewater flows in excess of 0.145 mgd, new or expanded facilities may be required to serve the Project. As identified in the WWMP, these facilities would include expanded outfall capacity to Old River as well as expanded treatment capacity at the WWTP. The City's plans to expand and improve the WWTP up to 20 mgd would be completed over time, in phases, as the City and its SOI is built out and would provide enhanced capacities as well as improve the quality of the discharged effluent.

The Draft and Final EIR for the Tracy Wastewater Treatment Plant Expansion (SCH No. 2000012039) evaluated the impacts associated with expanding and improving the City's WWTP. The Final EIR was completed in September 2002, and was certified in November 2002.

Because the Project would require expanded wastewater treatment facilities, this is a potentially significant impact. However, each of the improvements necessary to serve the Project are also required to serve other developments within the City, to accommodate planned growth under the City's General Plan.

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[17] Floor area ratio (FAR) is an expression of building intensity, indicating the ratio of gross building floor area (excluding areas designated for parking, etc.) to net lot area, both expressed in square feet.

[18] As part of managing his utility capacity, the City would identify 0.145 mgd to those lands within the Specific Plan Area that are covered by the proposed development agreement.

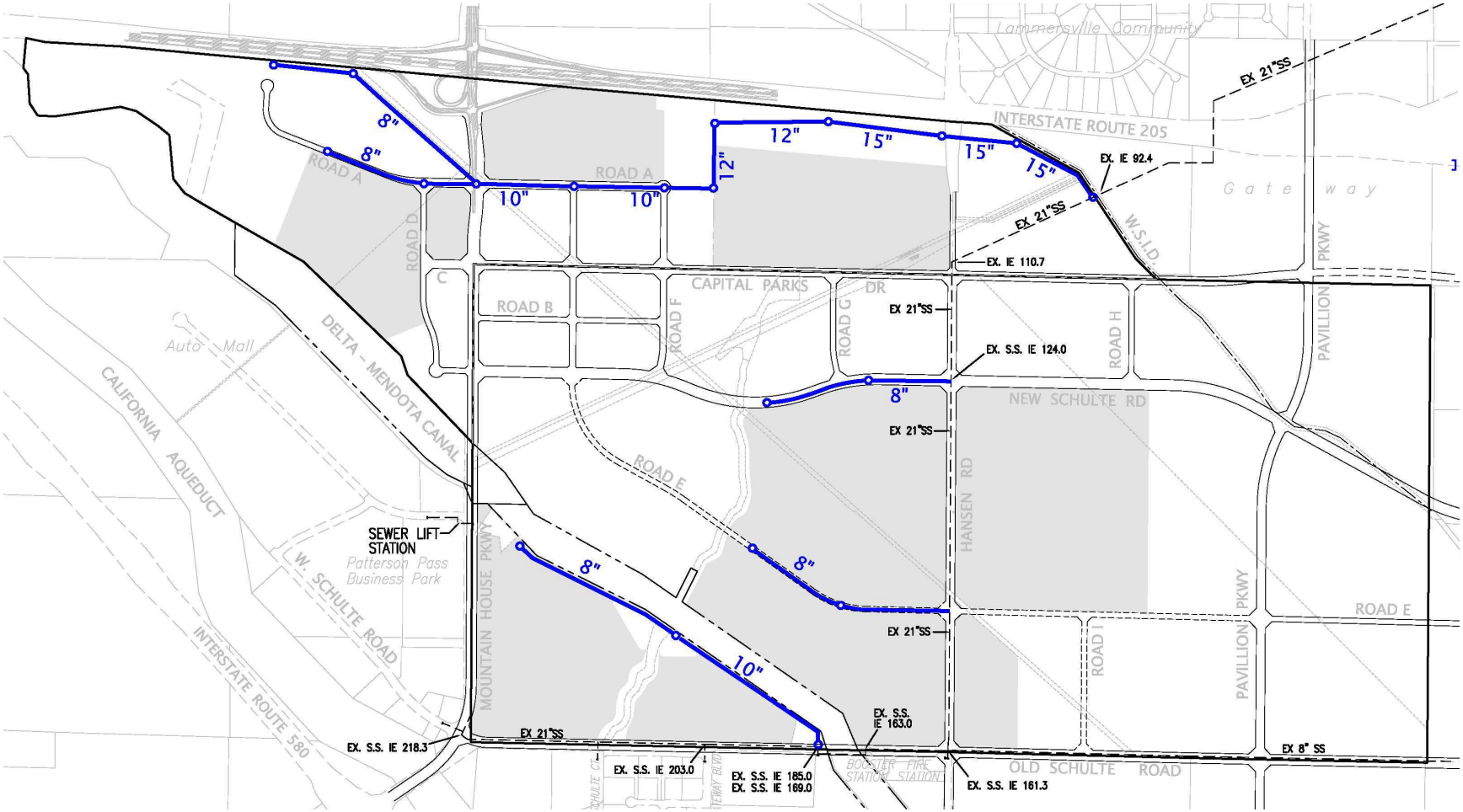
b) Conveyance Facilities

Wastewater conveyance in the Specific Plan Area, as mentioned previously, is currently served by the Hansen Trunk Sewer, a 21-inch diameter sanitary sewer pipeline.[19] As set forth in the Technical Memorandum (Appendix M), initially, the Project would rely on existing wastewater conveyance capacity, as provided by the Hansen Trunk Sewer. Specifically, at such time as when the Project generates wastewater conveyance flows in excess of 0.145 mgd, new or expanded facilities may be required to serve the Project. As shown in Figure 4.15-3, initially, the Project would construct several extension lines connecting the Project to the existing City collection system, including the Hansen Trunk Sewer. Impacts that could result from the construction of the extension lines are analyzed in other sections of this Draft EIR, including Chapter 4.3, Air Quality; Chapter 4.4, Biology Resources; Chapter 4.7, GHG Emissions; Chapter 4.8, Hazards and Hazardous Materials; Chapter 4.9, Hydrology and Water Quality; Chapter 4.5, Cultural Resources; Chapter 4.11, Noise; and Chapter 4.14, Transportation and Traffic.

Also as set forth in the Technical Memorandum, there may be opportunities for the Project to further utilize existing capacity within the Hansen Trunk Sewer by upgrading the Hansen Lift Station and monitoring flows within the Hansen Trunk Sewer.

Before the Project could utilize more than 0.145 mgd of capacity in the Hansen Trunk Sewer, the City must determine the extent of the remaining available capacity based on flow monitoring and capacity for other projects. In addition to the above-referenced monitoring and improvements to the Hansen Lift Station, conveyance capacity may be increased by the construction of the Lammers Trunk Sewer, including the completion of a connection pipeline from Node 6W in the Gateway project site, as set forth in the WWMP. Pipes would be sized in accordance with the WWMP and applicable City requirements. These off-site collection improvements have been planned for and

[19] As part of managing his utility capacity, the City would identify 0.145 mgd to those lands within the Specific Plan Area that are covered by the proposed development agreement.



Source: Cordes Ranch Specific Plan, January 2013.

FIGURE 4.15-3

PHASE 1 WASTEWATER COLLECTION FACILITIES

evaluated in the WWMP and its related environmental documentation, to support future development in the west catchment area, which includes the Specific Plan Area. Consistent with General Plan Objective PF-7.3-P2, the relevant provisions of the Specific Plan, and requirements under the Subdivision Map Act and the City's Subdivision Ordinance, remaining conveyance infrastructure would be installed, as needed, to serve individual development projects within the Specific Plan Area as defined in the WWMP.

Because the Project would require the construction of wastewater conveyance facilities (e.g. trunk sewer, pipelines), this is considered a potentially significant impact. However, each of the improvements necessary to serve the Project are also required to serve other developments within the City, to accommodate planned growth under the City's General Plan.

b. Generate a demand for wastewater treatment capacity that is currently not available.

i. Treatment Capacity

As explained above, it is anticipated that the Project would utilize existing treatment capacity for initial development. However, once the Project generates more than 0.145 mgd, then additional or expanded facilities, as identified in the WWMP, may be necessary to serve the Project as well as other developments within the City and its SOI. Specifically, as identified in the WWMP, these facilities may include expanded outfall capacity to Old River as well as expanded treatment capacity at the WWTP. As described above, the City's plans to expand and improve its treatment facilities would be completed over time as the City and its SOI is built out and would provide for expanded infrastructure capacities as well as improved quality of the discharged effluent. The Draft and Final EIR for the Tracy Wastewater Treatment Plant Expansion (SCH No. 2000012039) evaluated the impacts associated with expanding and improving the City's treatment facilities.

However, because there would be insufficient treatment capacity available to serve full buildout of the Project, this is considered a potentially significant impact.

ii. Conveyance Capacity

As discussed above, it is anticipated that the Project would utilize existing conveyance capacity for initial development. However, once the Project generates more than 0.145 mgd of conveyance flows, then it is anticipated that additional or expanded facilities, as identified in the WWMP, may be necessary to serve the Project as well as other developments within the City and its SOI. Specifically, as identified in the WWMP, these facilities may include flow monitoring, upgrades to the Hansen Lift Station, and constructing the Lammers Trunk Sewer. As described above, the City's plans to expand and improve its conveyance facilities would be completed over time as the City and its SOI is built out and would provide for expanded infrastructure capacities as well as improved quality of the discharged effluent. The Draft and Final EIR for the Tracy Wastewater Treatment Plant Expansion (SCH No. 2000012039) evaluated the impacts associated with expanding and improving the City's conveyance facilities.

However, because there would be insufficient conveyance capacity available to serve full buildout of the Project, this is considered a potentially significant impact.

c. Exceed wastewater treatment requirements of the applicable RWQCB.

As described in Section B.1, the NPDES program requires all dischargers obtain a permit to release effluent into surface waters. Since the City's WWTP releases effluent into the Old River, the City is subject to NPDES permitting requirements, as implemented by the RWQCB. As noted above, the City is currently in compliance with all applicable discharge requirements. However, to accommodate future planned growth, the City plans to implement a wastewater treatment system upgrade in accordance with the WWMP and as evaluated in the related environmental documentation.

As discussed above, the Project would be utilizing the City's wastewater treatment facilities. Anticipated wastewater generated by the Project is not expected to result in any exceedance of any wastewater treatment require-

ments of the applicable RWQCB. Therefore, there would be a *less than significant* impact.

5. Cumulative Impacts

This cumulative analysis considers the Project in the context of the City's General Plan, which takes into account the entire incorporated area of Tracy and the SOI.

Although the Project would increase the volume of wastewater for treatment at the Tracy WWTP, this increase would not exceed the planned expansion capacity as set forth in the WWMP. Additionally, with the implementation of Mitigation Measures UTIL-1 and UTIL-2a through UTIL-2c, described in Sections A.6 and B.6 of this Chapter, the impacts on the City's wastewater treatment capacity and requirements would be reduced to a less-than-significant level. Additionally, the WWMP identified the need for new and expanded facilities to accommodate existing needs and planned future growth in the City and its SOI. Similarly, other cumulative developments would also be requiring utility service, which would need to be accommodated by various City improvements. For these reasons, there is a cumulative impact with regard to wastewater facilities if the Project, in combination with other cumulative development, is constructed.

As discussed above, the City's master infrastructure planning process has planned for existing needs and future growth to be accommodated through the construction of new and expanded facilities, the impacts of which have been evaluated by the City as part of that master planning process. Because new and expanded facilities would be needed to serve the Project, along with other cumulative development, this would constitute a cumulatively considerable contribution to this cumulative impact.

6. Impacts and Mitigation Measures

Impact UTIL-2: The Project would require new or expanded wastewater facilities to serve full buildout, in accordance with the WWMP. This is a significant impact. All of the following mitigation measures shall apply.

Mitigation Measure UTIL-2a: At no cost to the City, flow monitoring equipment shall be installed in the Hansen Sewer Line, as approved by the City, prior to the issuance of the certificate of occupancy for the first (1st) building constructed as part of the Project. Flow monitoring shall be used to determine available capacities to serve site-specific developments proposals under the Specific Plan. In monitoring flows for purposes of determining available capacity, the initial 0.145 shall be attributable to those lands within the Specific Plan identified in the proposed development agreement.

Mitigation Measure UTIL-2b: As part of the development process for each individual site-specific development under the Specific Plan, the applicant shall pay its applicable development impact fees for wastewater facilities prior to issuance of building permits.

Mitigation Measure UTIL-2c: As part of the development process for each individual site-specific development under the Specific Plan, the City shall review flow monitoring, at the applicant's cost, to determine available capacity. If the City determines, based on technical and legal constraints and other relevant data, that existing capacity is available to serve the development at issue, then no further mitigation is required. However, if the City determines, based on technical and legal constraints and other relevant data, that existing capacity is not available to serve the development at issue, then the improvements as identified in the Master Plan must be constructed that are necessary to create the additional capacity required, subject to any applicable credit and/or reimbursement provisions, as determined by the City.

Significant After Mitigation: Construction of the identified master-plan improvements would mitigate the Project's impacts to a less than significant level. However, given the citywide nature of the necessary improvements, which would require significant funding from other developments, the construction of such improvements cannot be guaranteed

when the need is triggered by the Project. Therefore, the Project's impact in this regard remains *significant and unavoidable*.

C. Stormwater

1. Regulatory Framework

This section summarizes existing federal, State, and local laws, policies, and regulations that pertain to stormwater. Further discussion of the regulatory framework relating to storm water is included in Chapter 4.9, Hydrology and Water Quality, of this Draft EIR.

a. Federal Laws and Regulations

i. Clean Water Act

The CWA, initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal, industrial, and construction stormwater discharges under the National Pollution Discharge Elimination System (NPDES) Program. The State Water Resources Control Board (SWRCB) is responsible for implementing the CWA and issues NPDES permits to dischargers. Section 404 of the CWA is administered through the Regulatory Program of the US Army Corps of Engineers (USACE) and regulates the water quality of all discharges of fill or dredged material into waters of the United States including wetlands and intermittent stream channels.

ii. Federal Emergency Management Agency

The City of Tracy is a participant in the National Flood Insurance Program (NFIP), a federal program administered by the Federal Emergency Management Agency (FEMA). Participants in the NFIP must satisfy certain mandated floodplain management criteria. The City of Tracy has adopted a floodplain management ordinance as a part of its Municipal Code that exceeds the minimum requirements established by FEMA.

b. State Laws and Regulations

i. SWRCB General Permits/Water Quality

As mentioned above the SWRCB implements the CWA and issues NPDES permits. The Specific Plan area is located within a portion of the state that is regulated by the Central Valley RWQCB.

a) Construction Activities

The SWRCB has adopted a NPDES General Permit for construction activities, known as the Construction General Permit (CGP) Order No. 1009-0009-DWQ, as amended by Order No. 2010-0014-DWQ. The CGP requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list BMPs the discharger will use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a Construction Site Monitoring Program (CSMP) to demonstrate that the site is in compliance with the CGP. Depending on the construction site risk level, the CSMP includes varying levels of visual monitoring and water quality sampling and analysis.

b) Municipal Activities[20]

On December 8, 1999, the United States Environmental Protection Agency (USEPA) circulated regulations requiring permits for stormwater discharges from Small Municipal Separate Storm Sewer System operators. Permits for small municipal storm sewer systems (MS4s) generally fall under the "Phase II" permits program, which regulate non-point source pollutants. In California, the NPDES Program is administered by the SWRCB. Federal regulations allow two permitting options for stormwater discharges (individual permits and general permits). The SWRCB elected to adopt a statewide gen-

[20] United States Environmental Protection Agency (US EPA), Effluent Limitation Guidelines, http://water.epa.gov/scitech/wastetech/guide/index.cfm, December 1999.

eral permit (Water Quality Order No. 2003-0005-DWQ) for small MS4s covered under the CWA to efficiently regulate numerous stormwater discharges under a single permit. Permittees must meet the requirements in Provision D of the General Permit that require the development and implementation of a stormwater management plan (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable. The City of Tracy is defined as a small MS4 under the existing General Permit. As of February 2013, the Phase II Small MS4 General Permit was adopted, and will be effective as of July 2013.[21] This newly adopted Phase II eliminates the requirement to submit a SWMP to the Regional Water Board provides criteria for designation or opting out of the permit, establishes water quality monitoring prioritization, and adds the following requirements:

- Implementation of Low Impact Development (LID) principles.
- Hydromodification management procedures tied to State Water Board-identified watershed processes.
- Protections for Areas of Special Biological Significance.
- Total Maximum Daily Load requirement implementation.
- Specific management measures.
- Active management of stormwater programs.
- Submission of Notices of Intent and Annual Reports through the Storm Water Multi-Application Reporting and Tracking System.
- Program effectiveness assessments.[22]

c) Industrial Activities

The SWRCB has also issued a statewide General Permit (Water Quality Order No. 97-03-DWQ) for regulating storm water discharges associated with industrial activities. This General Permit requires the implementation of management measures that will achieve the performance standard of best

[21] SWRCB, Municipal Program, http://www.swrcb.ca.gov/water_issues/programs/stormwater/municipal.shtml, accessed on March 8, 2013.

[22] SWRCB, *Phase II Small MS4 General Permit Renewal Fact Sheet*, http://www.swrcb.ca.gov/water_issues/programs/stormwater/municipal.shtml, accessed on March 8, 2013; SWRCB, January 24, 2013, *Waste Discharge Requirements for Storm Water Discharges from Small MS4s* (draft), page 23.

available technology economically achievable (BAT) and best conventional pollutant control technology (BCT). It also requires the development of a SWPPP, a monitoring plan, and the filing of an annual report.

ii. Total Maximum Daily Loads[23]

Under CWA Section 303(d) and California's Porter-Cologne Water Quality Control Act of 1969 (discussed in subsection c), the State of California is required to establish beneficial uses of state waters and to adopt water quality standards to protect those beneficial uses. Section 303(d) of the CWA requires states to create a list of waters that are not attaining water quality standards after implementation of technology-based limits. For waters on this list, the states must develop total maximum daily loads (TMDLs) that account for all sources of the pollutants that placed the water on the list. These include "nonpoint" sources, which are sources of pollutants not connected to a specific discharger. TMDLs are established at the level necessary to implement the applicable water quality standards. The City of Tracy's SOI is within the jurisdiction of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) adopted by the Central Valley RWQCB.

iii. Porter-Cologne Water Quality Control Act[24]

In 1969, the California Legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the State's water resources. The act established the SWRCB and nine RWQCBs as the principal state agencies with the responsibility for controlling water quality in California. Under the act, water quality policy is established, water quality standards are enforced for both surface water and groundwater, and the discharges of pollutants from point and non-point sources are regulated.

[23] 33 USC Section 1251 et seq., 1972.

[24] California Wetlands Information System, Summary of the Porter-Cologne Water Quality Control Act, http://ceres.ca.gov/wetlands/permitting/Porter_summary.html, accessed January 31, 2012.

iv. California Water Quality Certification Process[25]

Pursuant to Section 401 of the federal CWA, projects that are regulated by the USACE must obtain water quality certification from the applicable RWQCB. The RWQCB also has independent authority over discharges to waters of the State under the Porter-Cologne Act, known as waste discharge requirements (WDRs). The RWQCB has a policy of no-net-loss of wetlands and typically requires the identification of mitigation for all impacts to wetlands before it will issue water quality certification. For most projects, RWQCB requires the use of construction and post-construction BMPs.

v. California Fish and Wildlife Code[26]

Section 1600 of the Fish and Game Code governs the issuance of Streambed Alteration Agreements by California Fish and Game (CDFG). Streambed Alteration Agreements are required whenever project activities substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated as such by CDFG.

vi. SB 5 Legislation[27]

SB 5 contains regulations pertaining to floodplain management for portions of the State that drain to the Sacramento-San Joaquin Valley, including the City of Tracy and San Joaquin County. It requires that the State develop and adopt a Central Valley Flood Protection Plan (Flood Protection Plan) by the year 2012 status. In addition, SB 5 establishes a requirement that "urban areas" and "urbanizing areas," such as the City of Tracy, begin applying a 200-year return period storm level of flood protection standard (urban level of flood protection) to new development no later than 36 months after the Flood Protection Plan is adopted by the State. The only mapped floodplains in the City of Tracy's SOI are limited to the northernmost areas in the SOI, mostly north of Interstate 205.

[25] 33 USC Section 1251 et seq., 1972.

[26] California Fish and Wildlife Code Section 1600 et seq., 2013.

[27] SB 5, California Government Code Section 65007, 65302.9, 65860.1, 65865.5, 65962, and 66474.5, 2007.

c. Local Regulations and Policies

i. City of Tracy General Plan

The City of Tracy General Plan includes a number of goals that are relevant to the handling of stormwater issues and opportunities associated with new development. Table 4.15-4 lists these relevant goals. A full listing of all General Plan goals and policies is included in Appendix C.

ii. City of Tracy Engineering Design & Construction Standards (City Standards)[28]

The City of Tracy applies an updated set of standards to the design and construction of projects. These standards address requirements for the design of storm drainage facilities. Detention basins must be designed using criteria approved by the City Engineer. The following list contains City Standards relating to the sizing of temporary retention basins (multiple parcel):

- Where terminal drainage is required, all retention basins shall have outlet facilities capable of emptying a full basin within 48 hours.
- The volume of storage required shall be 200 percent of the computer volume of storage.
- Retention basins shall be designed to empty 100 percent of the computed volume within ten calendar days.
- Storm Drainage Basin Capacity shall be determined by basic run-off coefficients and formulas as shown in Table 4.15-5.
- The maximum design water surface of the basin shall be a minimum of 1 foot below the elevation of the top of the curb of the lowest catch basin inlet within the tributary area.

[28] City of Tracy, 2008, *Engineering Design and Construction Standards*, http://www.ci.tracy.ca.us/documents/Design_Standards.pdf, accessed on February 16, 2013.

TABLE 4.15-4 **GENERAL PLAN POLICIES RELEVANT TO STORMWATER**

Goal/ Policy No.	Goal/Policy Content
Public Facilities and Services Element	
Goal PF-8	Protect property from flooding.
Objective PF-8.1	*Collect, convey, store and dispose of stormwater in ways that provide an appropriate level of protection against flooding, account for future development and address applicable environmental concerns.*
Policy PF-8.1 P1	Stormwater infrastructure shall be maintained in good condition.
Policy PF-8.1 P2	Stormwater infrastructure shall minimize local flooding by attaining capacity that conforms to the Storm Drainage Master Plan and City Design Standards.
Policy PF-8.1 P3	New permanent stormwater infrastructure shall be designed to serve dual purposes to the extent possible. This includes the following: ¨ Drainage facilities integrated into recreation corridors with bike paths, sidewalks, and landscaping. ¨ Drainage channels integrated with transportation and environmental corridors. ¨ Storm water detention basins shall incorporate active and passive recreation areas where feasible. These areas shall not count towards parks dedication requirements.
Policy PF-8.1 P4	When temporary retention or detention facilities are no longer needed after an outfall system is constructed, the sites shall be backfilled and disconnected from the storm drainage system.
Policy PF-8.1 P5	The City shall ensure a fair and equitable distribution of costs for stormwater system upgrades, expansion and maintenance.
Policy PF-8.1 P6	Design of storm drainage facilities shall be consistent with State and Federal requirements, including NPDES requirements.
Policy PF-8.1 P7	Planning for stormwater facilities should consider possible future retrofitting needs associated with changing regulations pertaining to storm water quality, including NPDES requirements.
Objective PF-8.2	*Provide effective storm drainage facilities for development projects.*
Policy PF-8.2 P1	To the extent feasible, new development projects shall incorporate methods of reducing storm runoff within the project to reduce the requirements for downstream storm drainage infrastructure and improve stormwater quality.

TABLE 4.15-4 **GENERAL PLAN POLICIES RELEVANT TO STORMWATER**

Goal/ Policy No.	Goal/Policy Content
Policy PF-8.2 P2	New storm drainage facilities shall meet adopted City standards, including the standards and policies contained in the Storm Water Management Plan, the Storm Drainage Master Plan and the Parkways Design Manual.
Policy PF-8.2 P3	New development projects shall only be approved if necessary stormwater infrastructure is planned and is in compliance with environmental regulations.
Policy PF-8.2 P4	If sufficient downstream stormwater infrastructure has not yet been constructed, new development projects shall be required to implement temporary on-site retention facilities in conformance with City standards.
Safety Element	
Goal SA-2	A reduction of hazards related to flooding or inundation.
Objective SA-2.1	*Minimize flood risks to development.*
Policy SA-2.1 P1	Development shall only be allowed on lands within the 100-year flood zone, if it will not: ¨ Create danger to life and property due to increased flood heights or velocities caused by excavation, fill, roads and intended use. ¨ Create difficult emergency vehicle access in times of flood. ¨ Create a safety hazard due to the unexpected heights, velocity, duration, rate of rise and sediment transport of the flood waters expected at the site. ¨ Create excessive costs in providing governmental services during and after flood conditions, including maintenance and repair of public facilities. ¨ Interfere with the existing water flow capacity of the floodway. ¨ Substantially increase erosion and/or sedimentation. ¨ Contribute to the deterioration of any watercourse or the quality of water in any body of water.
Policy SA-2.1 P2	Public and private development in the 100-year flood zones shall have the lowest floor elevated at least 1 foot above the base flood level, or be of flood proof construction.

TABLE 4.15-4 **GENERAL PLAN POLICIES RELEVANT TO STORMWATER**

Goal/ Policy No.	Goal/Policy Content
Policy SA-2.1 P3	The City shall prevent the construction of flood barriers within the 100-year flood zone that divert flood water or increase flooding in other areas.
Policy SA-2.1 P4	Property owners within the 100-year floodplain are encouraged to purchase National Flood Insurance, which reduces the financial risk from flooding and mudflows.
Objective SA-2.2	*Maintain a high level of preparedness in the event of flooding.*
Policy SA-2.2 P1	The City shall maintain operational contingency plans for essential public facilities in the event of flooding.
Policy SA-2.2 P2	The City shall locate, when feasible, new essential public facilities outside of flood hazard zones, including hospitals and health care facilities, emergency shelters, fire stations, emergency command centers, and emergency communications facilities, or identify construction or other methods to minimize damage if these facilities are located in flood hazard zones.
Policy SA-2.2 P3	The City shall continue to work with other public agencies responsible for flood protection, including the Central Valley Flood Protection Board, the San Joaquin Office of Emergency Services, and the US Army Corps of Engineers.

Source: City of Tracy General Plan, 2011.

iii. City of Tracy Storm Water Management Program[29]

The CWA was amended in 1972 to prohibit the discharge of pollutants to Waters of the United States from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. Section 402(p) was added to the CWA in 1987 to establish the framework for regulating construction, municipal, and industrial stormwater discharges under the NPDES program through a two-phase implementation plan. The City of Tracy is subject to the Phase II municipal program regulations and has prepared a Storm Water Management Program (SWMP) to comply with the regulations (General Permit Number CAS000004, Water

[29] 33 USC Section 1251 et seq., 1972.

Quality Order No. 2003-0005-DWQ). The intent of the SWMP is to implement BMPs to reduce the discharge of pollutants from the City to the Maximum Extent Practicable.

iv. Manual of Stormwater Quality Control Standards for New Development and Redevelopment[30]

The City adopted a Manual of Stormwater Quality Control Standards for New Development and Redevelopment (SWQC Manual) in August 2008. The SWQC Manual has the following goals:

- Assist new development in reducing urban runoff pollution to prevent or minimize water quality impacts.
- Provide standards for developers, design engineers, agency engineers, and planners to use in the selection, design, and implementation of General Site Design Control Measures for Low Impact Design (LID) and appropriate site-specific source and treatment control measures.
- Provide maintenance procedures to ensure that the selected control measures will be maintained to provide effective, long-term pollution control.

LID is an approach to managing stormwater runoff that mimics the natural pre-development hydrology of a development site by using design techniques that infiltrate, filter, store, treat, evaporate, and detain stormwater runoff close to the source. LID will help reduce the amount of runoff entering the City's system and will aid in recharging ground water.

v. Citywide Storm Drainage Master Plan[31]

The City of Tracy has prepared a Citywide Storm Drainage Master Plan (SDMP), and related environmental analysis, to support the recent updating of the General Plan. This SDMP is intended to be utilized as a guideline doc-

[30] City of Tracy, *Manual of Stormwater Quality Control Standards for New Development and Redevelopment*, http://www.ci.tracy.ca.us/documents/ Stormwater_Quality_Control_Standards.pdf, August 2008.

[31] City of Tracy, November 2012, *Citywide Storm Drainage Master Plan*.

ument for the identification of storm drainage facilities needed to serve future land development projects under the buildout condition for the City and its SOI and storm drainage facility upgrades needed to correct existing deficiencies, as well as serving as a reference document for existing storm drainage facilities and their functional characteristics.

In the SDMP, new master plan level storm drainage facilities that are being recommended have been sized in accordance with adopted City standards.

vi. Municipal Code[32]

Chapter 9.52 of the City's Municipal Code addresses floodplain regulations and requirements for new development and construction within Special Flood Hazard Areas delineated on Flood Insurance Rate Maps published by the Federal Emergency Management Agency. Chapter 11.34 of the City's Municipal Code addresses City requirements for stormwater management and discharge control, including controlling non-stormwater discharges to the stormwater conveyance system, eliminating discharges to the stormwater conveyance system from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in urban stormwater discharges to the maximum extent practicable.

2. Existing Conditions

This section describes existing regional and local hydrologic conditions that are relevant to proposed development of the project. It addresses the topics of climate, precipitation, topography, watersheds, major drainage features, flooding, soils, groundwater depths, and water quality. Overall, there are several storm water conditions which would need to be addressed prior to development in the Specific Plan area, including:

- Absence of conveyance features at locations where roadways cross over surface flow conveyance features (e.g. open channels).
- Limitations in downstream outfalls and discharge capacities.

[32] City of Tracy, 2013, Municipal Code Section 9.52.010 et. seq.

- Limitations in capacity of downstream storage facilities within the Lammers Watershed to accommodate significant runoff.
- Potential downstream flooding derived from Sub-basin OFF2 (an off-site sub-basin located to the southwest of the Specific Plan area).
- Restricted discharge rate relating to the capacity of the overchute across the Delta Mendota Canal.
- Shallow flooding conditions at the southeast corner of the Specific Plan area.[33]
- Shallow flooding conditions where Patterson Run approaches Interstate 205 at the end of the right-of-way.
- Storm water quality issues relating to pollutant concentrations and storage opportunities.

a. Regional Hydrology and Drainage

The City of Tracy is located near the southern tip of San Joaquin County and is a part of the greater Central Valley. The most prominent regional drainage feature in the area is the San Joaquin River that drains the portion of the Central Valley south of the Sacramento-San Joaquin Delta and north of the Tulare Lake Basin. The San Joaquin River has a watershed of over 15,880 square miles and discharges to the Sacramento-San Joaquin Delta about 35 miles to the northwest of the City of Tracy. Principal streams that are tributary to the San Joaquin River within the watershed include the Cosumnes, Mokelumne, Calaveras, Stanislaus, Tuolumne, Merced, Chowchilla, and Fresno Rivers. Major lakes and reservoirs within the watershed include Camanche, Pardee, New Hogan, New Melones, Don Pedro, McClure, and Millerton.[34]

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[33] As more fully discussed in Chapter 4.9, Hydrology and Water Quality, of this Draft EIR, the Specific Plan area is not located within a designated flood plain hazard area. However, this does not preclude shallow flooding conditions.

[34] California Department of Water Resources, Water Data Library, http://www.water.ca.gov/waterdatalibrary/ accessed January, 2013; Western Regional Climate Centers, Climate Summaries, http://www.wrcc.dri.edu/climate-summaries/ accessed January, 2013.

The City of Tracy resides on transitional slopes extending between the hills to the southwest that separate the San Joaquin Valley from the San Ramon Valley and the San Joaquin Valley floor to the north. Positive drainage in the Tracy area primarily discharges to Old River to the north; Old River then joins the San Joaquin River near the Sacramento-San Joaquin Valley further north.

b. Local Hydrology and Drainage

i. Climate and Precipitation

Like much of the San Joaquin Valley, the Tracy area has two distinct weather seasons; wet and cool winters along with dry and hot summers. Average high temperatures in the coolest months in the winter are in the mid-50s, and average high temperatures in the hottest months of the summer are in the low 90s.[35]

Precipitation records obtained from various rain gages monitored by the California Department of Water Resources and the Western Regional Climate Center in the Tracy area at elevations ranging from 61 to 625 feet indicate that the amount of normal annual rainfall in the Tracy area averages less than 12 inches per year.[36] Approximately 95 percent of this rainfall typically occurs from early fall through mid-spring (generally October through May), although infrequent summer showers do occur. Storm events during the rainy season consist of either individual storms or clusters of storms.[37] Major storms of greater magnitude and duration generally occur during the rainy

[35] California Department of Water Resources, Water Data Library, http://www.water.ca.gov/waterdatalibrary/ accessed January, 2013; Western Regional Climate Centers, Climate Summaries, http://www.wrcc.dri.edu/climate-summaries/ accessed January, 2013.

[36] California Department of Water Resources, Water Data Library, http://www.water.ca.gov/waterdatalibrary/ accessed January, 2013; Western Regional Climate Centers, Climate Summaries, http://www.wrcc.dri.edu/climate-summaries/ accessed January, 2013.

[37] National Oceanic and Atmospheric Administration, 2011, Atlas 14, Volume 6, Version 2.

season; however, high intensity thunderstorms (though relatively infrequent) can occur in any season.

The 100-year and 10-year 24-hour return period depths of precipitation applicable to the Tracy area are approximately 2.71 inches and 1.75 inches, respectively, per National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 6, Version 2 (2011).[38] The SDMP for Tracy has adopted 100-year and 10-year 24-hour return period depths of precipitation of 2.69 inches and 1.85 inches, respectively, for the geographical area in which the Specific Plan area is situated, based on a review of available precipitation depth frequency data for nearby precipitation gage sites.[39]

ii. Topography

The Specific Plan area is located within a transitional topographic zone between adjacent hillsides to the southwest and the broad valley floor of the San Joaquin Valley to the north. Generally, the Specific Plan area is flat, sloping from southwest to northeast at an average topographic gradient ranging from 1 to 2 percent. Ground surface elevations range from about 225 feet near the southwest corner of the Specific Plan area down to about 90 feet near the northeast corner of the Specific Plan area. The high elevation in off-site watersheds extending upgradient into the hills to the southwest is about 2,150 feet.[40]

iii. Major Irrigation and Drainage Features

There are a number of major drainage features within the Specific Plan area and vicinity. These major drainage features are described below and are

[38] California Department of Water Resources, Historical Data, http://cdec.water.ca.gov/selectQuery.html, accessed January 2013.

[39] California Department of Water Resources, Historical Data, http://cdec.water.ca.gov/selectQuery.html, accessed January 2013.

[40] City of Tracy, November 2012, *Citywide Storm Drainage Master Plan*, page 1.14.

shown on Figure 4.9-1 of Chapter 4.9, Hydrology and Water Quality, of this Draft EIR:[41]

- *California Aqueduct* – The California Aqueduct traverses across the drainage slopes upstream of the Specific Plan area and perpendicular to the direction of drainage flow dictated by topography. Storm runoff is collected on the upstream side of the aqueduct and is delivered to overchutes that cross over the aqueduct or culverts that pass underneath the aqueduct. The California Aqueduct tends to consolidate runoff to fewer locations and often limits the flow rates discharged to lands below the aqueduct.

- *Delta Mendota Canal* – The Delta Mendota Canal runs generally parallel to and just downslope from the California Aqueduct. It passes through the southwest quadrant of the Specific Plan area and further reduces the number of locations where storm runoff is concentrated. Storm runoff passes over or under the canal via overchutes and culverts and further limits the rates discharged to lands below the canal. The Delta Mendota Canal also contains a significant number of locations where local drainage flow that is collected on the upstream side of the canal directly enters the canal directly via drain inlets and is not released to downstream lands.

- *West Side Irrigation District (WSID) Upper Main Canal* – Similar to the California Aqueduct and the Delta Mendota Canal, though considerably smaller in size and capacity, the WSID Upper Main Canal extends along an alignment that is perpendicular to the direction of drainage flow dictated by topography. Local drainage flows are intercepted by the WSID Upper Main Canal and existing tailwater ponds discharge to the canal at several locations. The WSID Upper Main Canal extends through the northeast portion of the Specific Plan area.

- *Off-site Watersheds* – Certain watersheds with headwaters in the hills to the southwest of the Specific Plan area drain toward the Specific Plan area. Flows generated within these off-site watersheds enter the Specific

[41] California Department of Water Resources, Historical Data, http://cdec.water.ca.gov/selectQuery.html, accessed January 2013.

Plan area at locations dictated by culverts and overchutes that cross the existing aqueducts and canals. Some flow paths are well defined as they pass through the Specific Plan area and some lose definition as they continue downstream.

- *WSID Tailwater Ditches* – WSID retains several tailwater ditches downstream of the Specific Plan area that collect irrigation tailwater and urban runoff from designated portions of the City and convey it to their intake area connecting to Old River at Wicklund Road. The main tailwater ditch is the WSID Main Drain and a secondary ditch, the WSID Sub-Main Drain, is a significant tributary to the WSID Main Drain.
- *Patterson Run* – In the west portion of the Specific Plan area west of Mountain House Parkway, a drainage channel/corridor collecting runoff generated from a large off-site watershed that extends upstream to the southwest enters the Specific Plan area via an existing culvert underneath the Delta Mendota Canal and extends through and then exits the Specific Plan area at an existing culvert crossing under Interstate 205. Downstream to the north of Interstate 205, Patterson Run discharges into agricultural properties and downstream storm drainage facilities operated by the Mountain House Community Services District (CSD).
- *Old River* – Old River is located to the north of the Specific Plan area and is a part of the San Joaquin River system of interconnected waterways that eventually connect to the San Joaquin Delta.
- An existing swale and drainage channel extends from the southern Specific Plan area boundary to the mid-portion of the Specific Plan area, terminating at a small basin. From this basin, a series of ditches convey the stormwater to the east to Hansen Road, and then north along Hansen Road to a pumping station that pumps the storm water to the north side of Interstate 205. The channel and basin area have both been delineated as jurisdictional wetlands.

iv. Local Watersheds

The majority of the Specific Plan Area resides to the east of Mountain House Parkway and is located in the Lammers Watershed, as defined in the SDMP.

However, the westernmost portion of the Specific Plan Area resides to the west of Mountain House Parkway and is located in the Mountain House Watershed, as defined in the SDMP. These watersheds were delineated based on topography, physical features, land use, and existing and proposed locations of future discharge of storm water. Both watersheds also receive storm runoff contributions originating from off-site watersheds extending upstream into the hills to the southwest.

a) Lammers Watershed[42]

The Lammers Watershed is a large area contiguous to the west of urbanized portions of the City of Tracy and is substantially undeveloped at present. Excluding the off-site watersheds that extend into the hills to the southwest and upstream of Interstate 580, the Lammers Watershed consists of an area of about 8.6 square miles. The Lammers Watershed is roughly bounded by Mountain House Parkway on the west, Interstate 580 on the south (plus off-site watersheds extending upstream to the southwest of Interstate 580), Lammers Road on the east, and Interstate 205 and Grant Line Road on the north. Other existing drainage features within the Lammers Watershed include agricultural ditches and tailwater ponds, and low capacity tailwater ditches. WSID's Upper and Lower Main Canals also traverse across the watershed and intercept various upstream irrigation discharges and storm water flows. Local sub-basins within the Lammers Watershed include on-site detention basins that provide attenuation of on-site runoff during major storms (such as the 10-year and 100-year storms) but provide little attenuation during minor storms.

Certain Cordes Ranch property owners have a private drainage agreement with WSID that authorizes potential future discharge to the WSID Upper Main Canal for Sections 26 and 27 within the Specific Plan area (discharge location within the northeast quadrant of Section 26) on an interim basis until an outfall system that will serve future development within the Lammers Watershed is constructed.

[42] California Department of Water Resources, Historical Data, http://cdec.water.ca.gov/selectQuery.html, accessed January 2013.

The westernmost off-site sub-basin (OFF2) is located upstream of Interstate 580 to the southwest of the Specific Plan area and storm runoff enters the existing Patterson Pass Business Park via a culvert crossing of the California Aqueduct. Storm runoff is routed through a small detention basin and discharged to an existing channel within the Specific Plan area on the north side of Old Schulte Road. The existing channel (the aforementioned swale and drainage channel/delineated jurisdictional wetlands) extends to the Delta Mendota Canal and continues on the north side of the canal, but loses definition at a location about 1 mile north of Old Schulte Road, near the proposed alignment of future Capital Parks Drive, with continued drainage to the north of Interstate 205. Facilities north of Interstate 205 within San Joaquin County have little capacity and downstream flooding of streets and properties occurs during major storms and will continue to occur after development of the Specific Plan Area during major storm events. However, no additional flooding impacts are anticipated in the future after development of the Specific Plan Area during major storm events.

The second off-site sub-basin (OFF3) is located to the south of the Specific Plan area and upstream of Interstate 580, and during a major storm event storm runoff enters the SOI on the south side of the Safeway Distribution Center via an overchute crossing of the California Aqueduct and a bridge crossing of the Union Pacific Railroad. Flows are then conveyed eastward in an existing open channel extending along the south side of the Safeway Distribution Center, crossing Hansen Road via an underground conduit. Runoff will then spill northeasterly and cross over the Delta Mendota Canal. There is no defined provision for collection and conveyance of this runoff below the Delta Mendota Canal and flooding will occur to the northeast across the West Side Industrial planning area and the southeast corner of the Specific Plan area before exiting the SOI during a major storm event.

b) Mountain House Watershed

The Mountain House Watershed includes areas within the City's SOI that are located west of Mountain House Parkway, including the westernmost portion of the Specific Plan area. It is traversed by a generally well-defined chan-

nel/corridor known as the Patterson Run. Excluding an upstream off-site watershed for the Patterson Run, the Mountain House Watershed is about 1.8 square miles in area and is bounded by Interstate 580 on the southwest (with an additional small off-site sub-basin, OFF1, extending upstream to the southwest), Interstate 205 on the north, and Mountain House Parkway on the east. A detention basin, constructed off-line from the Patterson Run channel within the Golden Gate Auto Auction development, collects runoff from existing developed areas to the south and from OFF1, discharging s to Patterson Run. Patterson Run enters the Golden Gate Auto Auction via a culvert crossing of the California Aqueduct, exits the auction area via an underground conduit crossing beneath the Delta Mendota Canal, and exits the SOI via underground conduits that cross underneath Interstate 205. North of Interstate 205, Patterson Run discharges to existing agricultural properties and facilities operated by the Mountain House CSD. The northeast portion of the Mountain House Watershed (located between the Delta Mendota Canal and Interstate 205) consists of the westernmost portion of the Specific Plan area.

3. Standards of Significance

Stormwater impacts associated with the Project would be considered significant if the Project would:

- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

4. Project Impacts

a. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

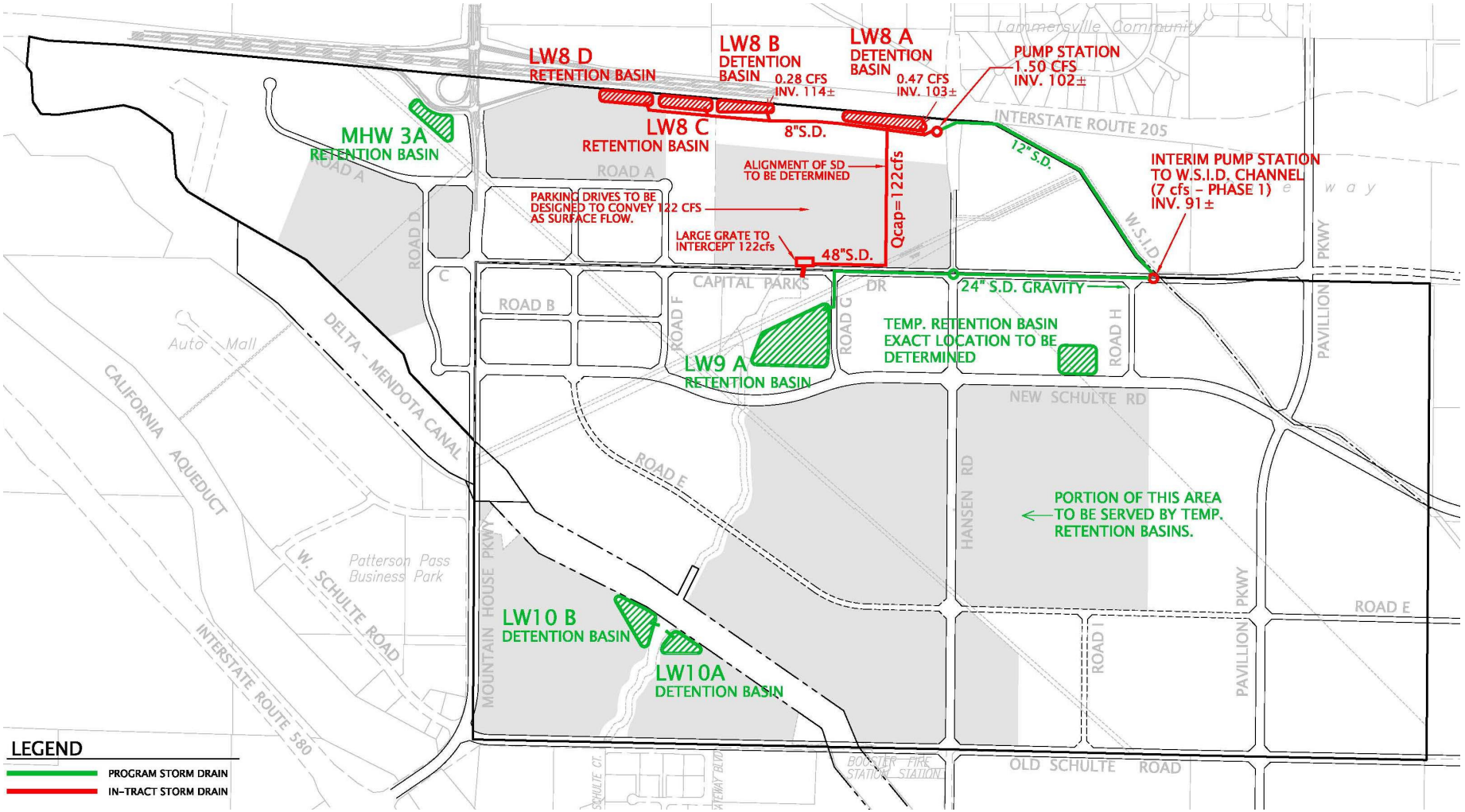
As discussed more fully in the Specific Plan (Chapter 6), the Technical Memorandum for Storm Drainage (Appendix I), and Chapter 4.9 of this Draft EIR (Hydrology and Water Quality), for the properties within the Specific Plan Area that are within the Lammers Watershed, the Project's proposed drainage plan is integrated to function with a broader drainage plan for storm drainage

facilities that would serve new development in the overall Lammers Watershed. For that portion of the Specific Plan Area that is within the Mountain House Watershed it would have its own storm drainage facilities that would discharge to a different outfall. Overall, the Project proposes to provide significant storage, attenuation, and storm water quality treatment through temporary retention basins, permanent detention basins, and implementation of various low impact development (LID) measures, which is discussed more fully in Chapter 3 of this Draft EIR (Project Description) and Chapters 5 and 6 of the Specific Plan. A schematic representation of the proposed storm drainage facilities for the Project is provided on Figures 4.15-4 and 4.15-5.

As discussed above, the Project would build stormwater drainage facilities to accommodate the Project's drainage, as well as to address some existing drainage issues on properties adjacent to the Specific Plan Area. The construction of new stormwater drainage facilities or expansion of existing facilities could cause significant environmental effects. These effects have been evaluated in other chapters of this Draft EIR, including Chapter 4.2 (Agricultural Resources), Chapter 4.3 (Biological Resources), Chapter 4.5 (Cultural Resources), Chapter 4.6 (Geology, Soils and Seismicity), Chapter 4.8 (Hazards and Hazardous Materials), and Chapter 4.9 (Hydrology and Water Quality). To the extent that significant impacts in any of the above environmental topic areas are identified, then feasible mitigation has been included as well. Accordingly, because construction of the Project's stormwater drainage facilities may have significant impacts without mitigation, the Project's impacts in this regard are considered *significant*.

5. Cumulative Impacts

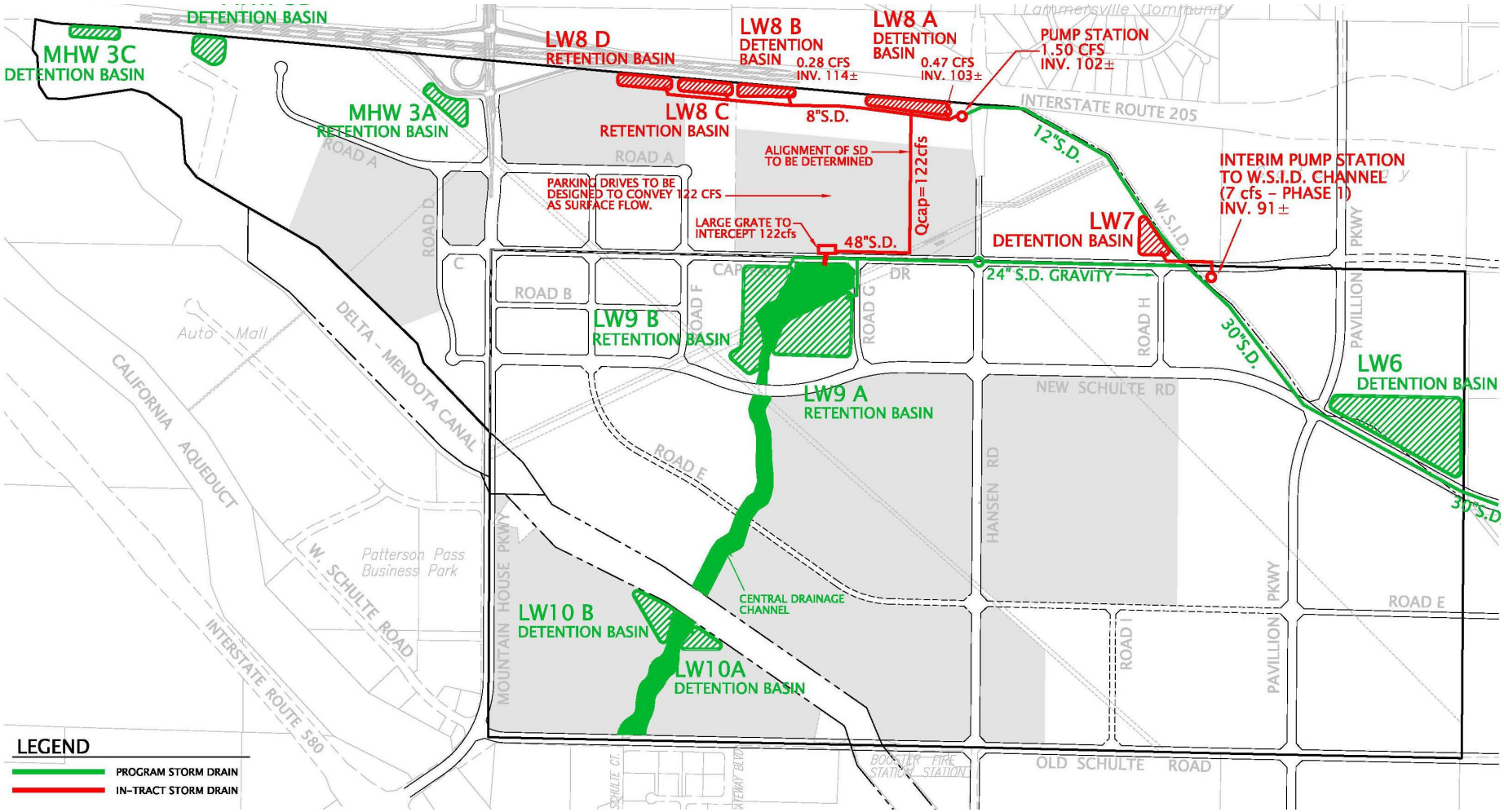
This cumulative analysis considers the Project in the context of the City's General Plan, which takes into account the entire incorporated area of Tracy and the SOI. The SOI, for the purposes of stormwater analysis, includes the Eastside Channel, Westside Channel, Lammers, Mountain House, and Tracy Watersheds.



Source: Cordes Ranch Specific Plan, January 2013.

FIGURE 4.15-4

PHASE 1 STORM DRAINAGE FACILITIES



Source: Cordes Ranch Specific Plan, January 2013.

FIGURE 4.15-5

STORM DRAINAGE FACILITIES AT FULL BUILDOUT

Other cumulative developments within the City of Tracy and its SOI would also be required to construct stormwater drainage facilities to accommodate project drainage. Construction of these facilities may result in significant development footprint impacts with respect to a number of different environmental topic areas, including, among others, agricultural resources, biological resources, cultural resources, geology, soils and seismology, hazards and hazardous materials, and hydrology and water quality. However, these cumulative developments, as would the Project, would be mandated to comply with all applicable standards and other requirements in building these drainage facilities, and would be required to mitigate construction-related impacts accordingly. Furthermore, the City has prepared a Citywide Storm Water Master Plan (SWMP), which identifies necessary infrastructure to serve existing and future growth within the City and its SOI; all cumulative development would be required to be consistent with the SWMP.

As described above, to the extent that construction of the Project's drainage facilities would result in any significant impacts, the Project would be required to mitigate those impacts to the extent feasible. Furthermore, the Project's drainage facilities are site-specific and not dependent on nor adversely impact other cumulative developments' facilities. Accordingly, the Project would not have a cumulatively considerable impact in this regard.

6. Impacts and Mitigation Measures

Impact UTIL-3: Construction of the Project's stormwater drainage facilities may result in significant impacts without mitigation.

Mitigation Measure UTIL-3: See Mitigation Measures AQ-2a, AQ-2b, AQ-4, CUL-1, CUL-2, CUL-3, GEO-1, HYDRO-1a, HYDRO-1b, HYDRO-2a, HYDRO-2b, and HYDRO-2c.

Significance After Mitigation: The above mitigation measures would reduce construction-related impacts to the extent feasible; however, it is not certain that these impacts can be reduced to a less-than-significant level. Therefore, the impact is *significant and unavoidable.*

D. Solid Waste

This section describes existing conditions and the Project's potential environmental impacts with regard to solid waste services.

1. Regulatory Laws and Framework

a. State Regulations

i. California Integrated Waste Management Act

California's Integrated Waste Management Act of 1989 (Assembly Bill (AB) 939) requires that cities and counties divert 50 percent of all solid waste from landfills as of January 1, 2000 through source reduction, recycling, and composting. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity. To help achieve this goal, this Act requires that each City and County prepare a Source Reduction and Recycling Element to be submitted to the Department of Resources Recycling and Recovery (CalRecycle), a new department within the California Natural Resources Agency, which administers programs formerly managed by the State's Integrated Waste Management Board and Division of Recycling. As part of California's Integrated Waste Management Board's (CIWMB's) Zero Waste Campaign, regulations affect what common household items can be placed in the trash. As of February 2006, household materials including fluorescent lamps and tubes, batteries, electronic devices and thermostats that contain mercury are no longer permitted in the trash.

In 2007, SB 1016 amended AB 939 to establish a per capita disposal measurement system. The per capita disposal measurement system is based on a jurisdiction's reported total disposal of solid waste divided by a jurisdiction's population. CIWMB sets a target per capita disposal rate for each jurisdiction. Each jurisdiction must submit an annual report to CIWMB with an update of its progress in implementing diversion programs and its current per capital disposal rate. Tracy's disposal rate in 2011 was 4.4 pounds per person per day, which was well below the CIWMB target of 7.9 pounds per person

per day.[43] Additionally, CalRecycle reports that, as of 2011, the most recent year for which this information is available, Tracy has implemented 43 waste diversion programs.[44]

ii. California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act requires areas in development projects to be set aside for collecting and loading recyclable materials. The Act required CalRecycle to develop a model ordinance for adoption by any local agency relating to adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model, or an ordinance of their own, governing adequate areas in development projects for collection and loading of recyclable materials.

iii. CALGreen Building Code

The California Green Building Standards Code (CALGreen Code) comes into effect for all projects beginning after January 1, 2011. Section 4.408, Construction Waste Reduction Disposal and Recycling mandates that, in the absence of a more stringent local ordinance, a minimum of 50 percent of nonhazardous construction and demolition debris must be recycled or salvaged. The Code requires the applicant to have a waste management plan for on-site sorting of construction debris. CALGreen is adopted by reference in section 9.14.030 of the Tracy Municipal Code. The Specific Plan:

- Identifies the materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.

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[43] CalRecycle, http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionPost2006.aspx, accessed on January 10, 2013; CalRecycle, http://www.calrecycle.ca.gov/lgcentral/Reports/OnLineDisposalRateCalc.aspx?ReportingEntityID=1493&ReportYear=2011&Mode=Edit, accessed on January 9, 2013.

[44] CalRecycle, *Jurisdiction Diversion Program Status Summary*, http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=JurisdictionID%3d534%26Reportname%3dDPCodeSummary%26ShowParameters%3dfalse%26AllowNullParameters%3dFalse, accessed on February 17, 2013.

- Specifies if materials will be sorted on-site or mixed for transportation to a diversion facility.
- Identifies the diversion facility where the material collected will be taken.
- Identifies construction methods employed to reduce the amount of waste generated.
- Specifies that the amount of materials diverted shall be calculated by weight or volume, but not by both.

b. Local Policies and Regulations

i. San Joaquin County Environmental Health Department

The San Joaquin County Environmental Health Department (EHD) is the State-certified Local Enforcement Agency (LEA) for solid waste in San Joaquin County.[45] The LEA is authorized to enforce the solid waste laws and regulations established by legislation and the CIWMB as well as local enactments, including Public Resources Code and California Code of Regulations. The LEA also issues permits to all solid waste facilities and operations within the county. Solid waste facilities and operations in the county include four landfills, 22 active and 9 closed solid waste facilities, and 381 refuse vehicles.

ii. Tracy Delta Solid Waste Management

Tracy Delta Solid Waste Management (TDSWM) provides solid waste and residential recycling services for the City of Tracy and southwestern unincorporated San Joaquin County.[46]

iii. City of Tracy General Plan

Goals, policies, and objectives from the Tracy General Plan that are relevant to solid waste are listed in Table 4.15-5.

[45] San Joaquin County Environmental Health Department, http://www.sjcehd.com/Programs/Others/solid_waste.htm, accessed on January 10, 2013.

[46] Tracy Delta Solid Waste Management, http://www.tdswm.com/about-us.shtml, accessed on January 10, 2013.

TABLE 4.15-5 **GENERAL PLAN POLICIES RELEVANT TO SOLID WASTE**

Goal/ Policy No.	Goal/Policy Content
Public Facilities and Services Element	
Goal PF-5	Reduction in the volume of solid waste.
Policy P1	Promote redesign, reuse, composting and shared producer responsibility of discarded materials.
Policy P2	The City shall strive to meet or exceed the State's goal of diverting 50 percent of all solid waste from landfills.
Policy P3	The City shall encourage local businesses to expand their recycling efforts and to reduce packaging of products manufactured in the city.
Policy P5	Salvage and reuse of construction and demolition materials and debris is encouraged at all construction projects in the city.
Policy P6	Residential, industrial, commercial and retail buildings should be designed or improved to accommodate an increase in the amount and type of recycled materials.

Source: City of Tracy General Plan, 2011.

iv. City of Tracy Municipal Code

Chapter 5.20 of Title 5 (Sanitation and Health) of the Tracy Municipal Code addresses the handling, collection, and disposal of solid waste and recycling materials.

2. Existing Conditions

TDSWM collects solid waste from residences and businesses in Tracy, transporting it to the Tracy Material Recovery Facility (MRF) and Transfer Station on South MacArthur Drive before being sent to the Foothill Sanitary Landfill on Shelton Road.[47] The MRF, which is operated by TDSWM, has a daily intake capacity of 1,000 tons of solid waste per day, and, on average takes in 354 tons per day. The MRF receives 277 tons per day from Tracy.[48]

[47] City of Tracy General Plan, 2011, page 7-17.

[48] Gina Lewis, Tracy Delta Solid Waste Management, personal communication with The Planning Center | DC&E, January 11, 2013.

The total amount of solid waste generated by Tracy in 2011, the most recent reported data available, was 67,504 tons.[49]

Existing uses on the Specific Plan Area are served by Delta Disposal, part of TDSWM.[50]

The Foothill Sanitary Landfill is permitted to receive up to 1,500 tons of waste per day.[51] The Foothill Sanitary Landfill covers approximately 800 acres. It receives, on average, 620 tons of waste per day, representing less than half of the amount it is permitted to receive, and currently diverts approximately 1.55 percent of material from disposal.[52] The CIWMB lists the expected closure date of the landfill as December 31, 2082.[53] The landfill has a maximum permitted capacity of 138 million cubic yards and a remaining capacity of approximately 90 percent, or 125 million cubic yards.[54]

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[49] CalRecycle, http://www.calrecycle.ca.gov/lgcentral/Reports/OnLineDisposalRateCalc.aspx?ReportingEntityID=1493&ReportYear=2011&Mode=Edit, accessed on January 9, 2013.

[50] Tracy Delta Solid Waste Management, http://www.tdswm.com/about-us.shtml, accessed on January 10, 2013.

[51] CalRecycle, http://www.calrecycle.ca.gov/SWFacilities/Directory/39-AA-0004/Detail/, accessed on January 10, 2013.

[52] San Joaquin County, http://www.sjgov.org/solidwaste/Foothill%20home.htm, accessed on January 10, 2013. Diversion percentage was calculated by dividing 3,392 (the amount of material diverted) by 218,190 (the total amount of waste delivered to the landfill). All numbers are from 2011, the most recent year for which data was available.

[53] CalRecycle, http://www.calrecycle.ca.gov/SWFacilities/Directory/39-AA-0004/Detail/, accessed on January 10, 2013.

[54] CalRecycle, http://www.calrecycle.ca.gov/SWFacilities/Directory/39-AA-0004/Detail/, accessed on January 10, 2013. The percent remaining capacity was determined by dividing reported remaining capacity (125 million cubic yards) by the maximum permitted capacity (138 million cubic yards).

3. Standards of Significance

Solid waste impacts associated with the Project would be considered significant if the Project would:

- Not be served by a landfill with sufficient permitted capacity to accommodate the buildout of the project's solid waste disposal needs.
- Not comply with federal, State, and local statutes and regulations related to solid waste.

4. Project Impacts

a. Not be Served by a Landfill with Sufficient Permitted Capacity to Accommodate the Buildout of the Project's Solid Waste Disposal Needs

As described in Chapter 4.12, Population, Housing and Employment, of this Draft EIR, there would be approximately 591,980 square feet of commercial development, 2.65 million square feet of office development, and 27.789 million square feet of manufacturing and distribution development to the Specific Plan Area, resulting in approximately 36,708 additional employees. However, substantial employment growth and the associated solid waste generation were considered in the Tracy General Plan.

CALRecycle has produced a study characterizing, among other things, the typical waste generation rates associated with different industry groups. Some of the industry groups were expressed as pounds per square foot developed, while others were calculated as pounds per employee. The highest waste generation rate was attributed to food stores, at 16,578 pounds per employee and the lowest was attributed public venues at 244 pounds per every 100 visitors. Table 4.15-6, Waste Generation Estimates shows the industry groups chosen for the purposes of this analysis.[55] According to the estimates

[55] CALRecycle, June 2006, *Targeted Statewide Waste Characterization Study: Waste Disposal and Diversion Findings for Selected Industry Groups,* pages 12 and 88. Every effort was made to insure that the most conservative estimate was used. For example if two industry groups would be allowed to develop under a particular land use designation, the industry group with the higher waste generation rate was chose.

TABLE 4.15-6 **ANNUAL WASTE GENERATION ESTIMATES**

Land Use	Land Use (SF)	Industry Group	Industry Group, Waste Generation Rate	Project, Waste Generation Rate (Lbs)
Commercial	591,980	Anchor Stores at Shopping Malls[a]	3,520 pounds/ 1,000 sf	2,083,770
Office	2.65 million	Large Office Bldgs	1,998 pounds/ 1,000 sf	529,470
Manufacturing/ Distribution	27.789 million	Non-Durable Wholesale Distributors	6,931 pounds/ employee[b]	5,859,259
Total Project Waste Generation				8,472,499

[a] This, while not a use proposed for the Project, represents a conservative estimate for worst case scenario commercial waste generation.

[b] Since manufacturing/distribution represent 89.55 percent of the land use, for the purposes of this calculation it was assumed that it also represents 89.5 percent of the total employees, or 32,872. All numbers were rounded to the nearest whole number.

Source: CALRecycle, 2006, *Targeted Statewide Waste Characterization Study: Waste Disposal and Diversion Findings for Selected Industry Groups,* pages 12 and 88. Every effort was made to insure that the most conservative estimate was used. For example if two industry groups would be allowed to develop under a particular land use designation, the industry group with the higher waste generation rate was chose. The industry groups with the highest and lowest waste generation rates (i.e. Food Stores and Public Venues & Events) were excluded as outliers. Square footages are those provided by the applicant.

in Table 4.15-6, the Project would produce 8,472,499 pounds of waste annually, or 23,934 pounds per day (approximately 0.01 ton).[56] This would be a small addition (approximately 0.04 percent) to the overall tons per day Tracy currently generates.

The industry groups with the highest and lowest waste generation rates (i.e. Food Stores and Public Venues & Events) were excluded as outliers.

[56] The pounds per day calculation is based on the days per year the MRF is in operation (i.e. 311).

Also, as discussed previously, the Specific Plan Area would be served by the Foothill Sanitary Landfill which has sufficient permitted capacity to 2082. Additionally, General Plan Goal PF-5 and its associated policies described in Table 4.15-5, would apply to the Project and would help reduce Project-related solid waste volume. Therefore, overall, the Project would result in a *less-than-significant* impact to landfill capacity.

b. Not Comply with Federal, State and Local Statutes and Regulations Related to Solid Waste

The Specific Plan contains the following two sustainability principles related to solid waste:

- Individual developers of projects will be encouraged to reuse and recycle construction and demolition waste, including soil, vegetation (green waste), concrete, lumber, metal, and cardboard, to the extent feasible.
- Individual developers of projects will be encouraged to locate interior and exterior storage bins for recyclables and green waste and adequate recycling containers in public areas.

The City has implemented 43 waste diversion programs and is currently exceeding its State residential disposal rate target by over 50 percent.[57] The waste diversion programs, together with adherence to the CALGreen Code as described above and the Development Review process described in Chapter 3 of this Draft EIR, are sufficient to ensure that implementation of the project would not compromise the ability to meet or perform better than the State-mandated target. Therefore, the project would comply with applicable statutes and regulations and the impact would be *less than significant*.

[57] CalRecycle, http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionPost2006.aspx, accessed on January 10, 2013; CalRecycle, http://www.calrecycle.ca.gov/lgcentral/Reports/OnLineDisposalRateCalc.aspx?ReportingEntityID=1493&ReportYear=2011&Mode=Edit, accessed on January 9, 2013.

5. Cumulative Impacts

This cumulative analysis considers the Project in the context of the City's General Plan, which takes into account the entire incorporated area of Tracy and the SOI, and the Mountain House community.

The Project would not make a significant contribution to cumulative impacts relating to solid waste management or disposal. As discussed above, the City's 43 waste diversion programs ensure that solid waste from future development would meet or exceed California's 50 percent solid waste diversion regulations. Additionally, as mentioned earlier, the Project would not generate substantial waste such that it would cause impacts to landfill capacity and the Foothill Sanitary Landfill has sufficient permitted capacity to 2082. Therefore, cumulative impacts from the proposed Plan would be *less than significant*.

6. Impacts and Mitigation Measures

The project would not result in any significant impacts to solid waste facilities; therefore, no mitigation measures are necessary.

E. Energy Conservation

The following describes current conditions and potential impacts of the Specific Plan with regard to energy resources.

1. Regulatory Framework

This section summarizes existing federal, State and local laws, policies and regulations that apply to energy conservation.

a. Federal Regulations and Agencies

There are no federal regulations regarding energy conservation that are applicable to the Specific Plan.

b. State Regulations and Agencies

i. California Public Utilities Commission

The California Public Utilities Commission (CPUC) was established by Constitutional Amendment as the California Railroad Commission in 1911 and in 1912, the Legislature passed the Public Utilities Act. This Act expanded the CPUC's regulatory authority to include natural gas, electric, telephone, and water companies as well as railroads and marine transportation companies. In 1946, the Commission was renamed the California Public Utilities Commission. The CPUC regulates privately-owned telecommunications, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. The CPUC is responsible for assuring California utility customers have safe, reliable utility service at reasonable rates, protecting utility customers from fraud and promoting the health of California's economy.

ii. Title 24, Part 6 of the California Code of Regulations (1978)

The Energy Efficiency Standards for Residential Buildings were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The efficiency standards apply to new construction of both residential and non-residential buildings, and regulate energy consumed for heating, cooling, ventilation, water heating, and lighting. The building efficiency standards are enforced through the local building permit process. Local government agencies may adopt and enforce energy standards for new buildings, provided that these standards meet or exceed those provided in Title 24 guidelines, which as of January 1, 2011 include compliance with the mandatory provisions of the 2010 California Green Building Standards (CALGreen) Code.[58] On January 12, 2010, the California Building Standards Commission adopted CALGreen and became the first state in the United States to adopt a statewide green building standards code. As of January 1, 2011, CALGreen requires new buildings to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials.

[58] California Building Standards Commission Website, http://www.bsc.ca.gov/default.htm, accessed on February 12, 2013.

The Specific Plan would be required to adhere to all applicable federal, State, and local statutes and regulations related to construction and operation.

iii. California Environmental Quality Act, Appendix F

Appendix F, Energy Conservation, of the California Environmental Quality Act (CEQA) contains guidelines for considering the energy implications of a proposed project.[59] Appendix F does not contain specific thresholds or standards, but outlines possible energy impacts, such as project effects on local energy supply and project compliance with existing energy standards. It also provides potential energy conservation strategies, such as siting and designing to increase energy efficiency and implementing various recycling efforts.

According to Appendix F of the Guidelines, energy conservation can be achieved through reduced reliance on natural gas and oil, increased reliance on renewable energy sources, and decreased overall per capita energy consumption. Energy can be reduced and cost efficiencies can be realized through mitigation measures that:

- Reduce inefficient and wasteful energy consumption during the life of the project;
- Include efficiencies in design and transportation related features of the project;
- Reduce peak energy demand;
- Promote the use of alternative, renewable energy fuels; and
- Conserve nonrenewable resources through recycling.

c. Local Regulations and Agencies

i. City of Tracy General Plan

The City of Tracy General Plan contains long-term guidance in the form of goals and policies to aid in decisions affecting the future character of Tracy. In particular, the General Plan includes goals, policies, objectives, and imple-

[59] Section 15126.4 (a)(1) CEQA Guidelines.

mentation measures relevant to energy conservation, as listed in Table 4.15-7. A full listing of all General Plan goals and policies is included in Appendix C.

ii. City of Tracy Sustainability Action Plan

The City of Tracy Sustainability Action Plan provides a series of measures intended to help the city reach long-term sustainability goals in greenhouse gas (GHG) emissions, energy, transportation and land use, solid waste, water, agriculture and open space, biological resources, air quality, public health, and economic development.

2. Existing Conditions

The Pacific Gas and Electric Company (PG&E) provides natural gas and electricity services to the Specific Plan Area and vicinity. PG&E provides natural gas and electric to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California. PG&E produces or buys its energy from a mix of conventional and renewable generating sources, which travel through our electric transmission and distribution systems to reach customers. Several phone service providers are available for local and long distance service in the Specific Plan Area.

3. Standards of Significance

In accordance with State CEQA Guidelines (Appendix F), the Project would have a significant effect on energy if it would result in inefficient, wasteful, and unnecessary consumption of energy. To determine this, Appendix F notes that, if applicable or relevant to the Project, the impacts may include:

- The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials maybe discussed.*
- The effects of the project on local and regional energy supplies and on requirements for additional capacity.
- The effects of the project on peak and base period demands for electricity and other forms of energy.

TABLE 4.15-7 **GENERAL PLAN POLICIES RELEVANT TO ENERGY CONSERVATION**

Goal/Policy No.	Goal/Policy Content
Open Space and Conservation Element	
Goal OSC-5	Efficient use of resources throughout the City of Tracy.
Objective OSC-5.1	*Promote resource conservation.*
Policy P1	The City shall promote development patterns and construction standards that conserve resources through appropriate planning, housing types and design, and energy conservation practices.
Policy P2	The City shall encourage the establishment and maintenance of trees on public and private property to create an urban forest.
Policy P3	The City shall encourage landscaping that is water- and energy-efficient.
Policy P4	The City shall encourage buildings to incorporate energy-and water-efficient technologies.
Objective OSC-5.2	*Ensure that development is designed for maximum energy efficiency.*
Policy P1	New development projects should be designed for solar access and orientation. Maximum efficiency is gained by siting homes on an east-west axis.
Policy P2	New development projects should include measures to reduce energy consumption through site and building design, material selection and mechanical systems.
Policy P4	Use of on-site alternative energy sources, such as photovoltaic (PV) cells for commercial, residential and industrial users shall be encouraged.
Policy P7	The City shall encourage businesses to replace diesel vehicles with less polluting alternatives such as compressed natural gas (CNG), bio-based fuels, hybrids and electric cars.
Circulation Element	
Goal CIR-3	Safe and convenient bicycle and pedestrian travel as alternative modes of transportation in and around the city.
Objective CIR-3.1	*Achieve a comprehensive system of citywide bikeways and pedestrian facilities.*

TABLE 4.15-7 **GENERAL PLAN POLICIES RELEVANT TO ENERGY CONSERVATION**

Goal/Policy No.	Goal/Policy Content
Policy P4	The City's bicycle and pedestrian system shall have a high level of connectivity, especially between residences and common local destinations, such as schools, shopping and parks. A higher level of bicycle and pedestrian connectivity is defined as a shorter or similar distance to common destinations for bicycles and pedestrians compared to distances for vehicles.
Policy P5	The City shall establish a ½-mile walkability standard for residents to access goods, services and recreational facilities.
Goal CIR-4	A balanced transportation system that encourages the use of public transit and high occupancy vehicles.
Objective CIR-4.1	*Promote public transit as an alternative to the automobile.*
Policy P5	The City shall require development to provide for transit and transit-related increased modal opportunities, such as adequate street widths and curb radii, bus turnouts, bus shelters, park-and-ride lots and multi-modal transit centers through the development and environmental review processes, if appropriate.
Community Character Element	
Goal CC-2	A high level of connectivity within the City of Tracy.
Objective CC-2.2	*Provide connections that reinforce the role and function of the Building Blocks within the City.*
Policy P4	Neighborhoods shall be designed so that daily shopping errands and trips to their Focal Points can generally be completed within easy walking or biking distances or within a short car drive.
Land Use Element	
Objective LU-1.5	*Encourage development near transit stations including the multi-modal station in Downtown, and the Altamont Commuter Express (ACE) station or stations.*
Policy P1	Development with a vertical mix of uses, such as residential or office above retail is encouraged within ¼-mile of existing and proposed transit stations.

Source: City of Tracy General Plan, 2011.

- The degree to which the project complies with existing energy standards.
- The effects of the project on energy resources.
- The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

The asterisked impacts were excluded from analysis in this Draft EIR as requiring a finer-grain of detailed information than is available at this time.

4. Impact Discussion

a. The effects of the project on local and regional energy supplies and on requirements for additional capacity.

The commercial, office, and business park industrial land uses and supporting infrastructure, such as street lighting, would require direct energy (electricity and natural gas) for lifetime operation. PG&E would provide gas and electricity to the Project by connecting to existing distribution systems. The Specific Plan does not include any unusual features requiring direct energy in excess of that which would be used in comparable development locally, regionally, or elsewhere in California.

b. The effects of the project on peak and base period demands for electricity and other forms of energy.

As mentioned above, the commercial, office, and business park industrial land uses and supporting infrastructure would require direct energy, however, the Specific Plan does not include any unusual features requiring direct energy in excess of that which would be used in comparable development and thus would likely have similar effects as comparable development on peak and base period demands for electricity. Additionally, full build-out of the Specific Plan would generate an estimated 15,215 AM / 16,865 PM peak hour trips, as discussed more fully in Chapter 4.14, Transportation and Traffic, of this Draft EIR. These vehicle trips would also consume energy primarily in the form of fuel consumption. Construction of the proposed Project would also require indirect energy consumption. Indirect energy is the energy required to build and maintain the development envisioned under the Specific Plan, primarily in the form of vehicle miles traveled (VMT) by construction trucks

and service vehicles. However, as explained below, the proposed Project features would reduce the Project's energy demands both during construction and operation, including consumption associated with transportation energy use.

c. The degree to which the project complies with existing energy standards. The Specific Plan, as discussed in Chapter 3, Project Description, contains a series of sustainability principles. These principles help to ensure Project compliance with federal, State, and local regulations discussed in Section E.1., Regulatory Framework. Many of these principles are relevant to energy conservation, including the following:

- Orienting streets on an east/west axis to allow buildings to be sited to take advantage of shade and work with the existing topography.
- Designing the site to reduce mass grading to the extent feasible and to decrease the use of earth moving equipment needed to grade the site.
- Utilizing sloped floors in large warehouse and logistic buildings that will better conform to the existing topography. The reduction in grading and earth movement will decrease the total emissions from construction equipment.
- Utilizing energy efficient lighting and control systems as an integral part of lighting systems in all buildings.
- Encouraging the use of daylight or clerestory windows as a means of providing natural light and reducing the need for lighting during day light hours.
- Requiring light colored "cool" roofs will be required for all new buildings.
- Choosing tree species based on their large canopy characteristics at maturity, and strategically placing trees in the west and east portions of the site to shade paving areas and building elevations to minimize heat gain.
- Encouraging canopies, awnings, and architectural shade structures are encouraged as part of the design guidelines. These design elements will be

strategically sized to shade paving areas and building elevations and minimize heat gain.

- Considering locally sourced, salvaged and recycled materials for use throughout the landscape and hardscape design.
- Utilizing high efficiency lighting, such as LED, for traffic, street and other outdoor lighting.
- Requiring exterior lighting to be controlled by timers and only lighting required for security will be provided at night.
- Meeting applicable standards for energy efficiency in building construction, such as: energy efficient heating and cooling systems, and energy efficient appliances, equipment, and HVAC control systems.
- Incorporating Class I and/or II bicycle paths on all streets wider than 75 feet and within a ½ mile of all uses within the Specific Plan Area.
- Including sidewalks on all streets within the Specific Plan Area to promote access and connectivity.
- Designing streets on a grid system to promote shorter travel distances and encourage pedestrian and bicycle connectivity.
- Incorporating pedestrian and bicycle-friendly intersections and crossings.
- Requiring electrical service connections for plug in of refrigerated trailers to reduce idling time and associated emissions.
- Holding a pre-construction meeting and distributing a pamphlet to describe idling procedures for construction vehicles.
- Requiring adequate bicycle parking near building entrances.

Additionally, the Project would comply with CALGreen. As described above, in compliance with the CALGreen Codes, the Project would be required to reduce water consumption by 20 percent, divert 50 percent of construction waste from landfills, and install low pollutant-emitting materials. Also, the landscaping plan for the Specific Plan includes the use of native vegetation and climate adapted plant species to reduce the amount of irrigation

required. The Project proposes to use high efficiency irrigation systems and stormwater management best practices and to decrease the impacts of construction activities and waste generation, consistent with the City's Sustainability Action Plan.

Furthermore, the Specific Plan would comply with the goals, objectives, and policies relevant to energy conservation as listed in Table 4.15-7.

d. The effects of the project on energy resources.

The Project, as mentioned previously, does not contain unusual features that would require direct energy in excess of that which would be used in comparable development, and the Specific Plan contains a number of sustainability measures which would minimize the effects of the Project on energy resources.

e. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

As previously described, the Project would generate an estimated 15,215 AM / 16,865 PM peak hour trips (see Chapter 4.14, Transportation and Traffic, of this Draft EIR) which would consume energy primarily in the form of fuel consumption. Construction of the proposed Project would also require indirect energy consumption, primarily in the form of vehicle miles traveled (VMT) by construction trucks and service vehicles. However, as explained above, the proposed Project's sustainability measures would reduce the Project's energy demands both during construction and operation, including consumption associated with transportation energy use.

Overall, through the inclusion of energy-conserving Project features and with compliance and implementation of federal, State, and local laws and regulations, the effects of the Project on local and regional energy supplies and capacity, electricity and other energy source demands, energy resources, and transportation energy use would be minimized to the maximum extent practical. Since the Project's use of energy during construction and operation

would not result in wasteful, inefficient, and unnecessary consumption of energy, this impact would be considered *less than significant*.

5. Cumulative Impacts

This cumulative analysis considers the Project in the context of the City's General Plan, which takes into account the entire incorporated area of Tracy and its SOI.

Cumulative development that is constructed will consume energy in significant amounts. However, the City's Sustainability Action Plan includes 17 measures which aid the City in reducing energy consumption. With these measures, in 2020 energy consumption in Tracy is projected to be 2.6 million metric British thermal units (MMBtu), a 40 percent decrease from business-as-usual conditions and a 20 percent decrease from 2006 conditions (3.2 million MMBtu).[60] Further, California has one of the lowest per capita rates of electricity consumption in the country (Rank 48th).[61] This is because implementation of energy efficiency standards and the promotion of energy conservation has proven effective in limiting per capita consumption to date. Additionally, cumulative development within the entire incorporated area of Tracy and the SOI, is required to meet State regulations in regards to energy conservation, including Title 24.

The Project would be required to implement the sustainability measures detailed in the Specific Plan, as well as adhere to applicable requirements and standards for energy conservation (i.e., Title 24), and be consistent with the City's Sustainability Action Plan initiatives, and General Plan policies supportive of energy conservation. Therefore, the Project would not have a cumulatively considerable contribution in this regard. Therefore, the Project's impacts would be *less than significant*.

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[60] City of Tracy, 2011, *Sustainability Action Plan*, pages 6-1 to 6-2.

[61] US Department of Energy website, http://www.eia.gov/beta/state/?sid=ca., accessed on February 13, 2013.