

Plan for Providing Services - Miramonte Specific Plan

E
EXHIBIT



CITY OF SOLEDAD

Plan for Providing Services Miramonte Specific Plan

Prepared by
EMC Planning Group

November 7, 2018

CITY OF SOLEDAD

Plan for Providing Services Miramonte Specific Plan

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EXECUTIVE SUMMARY

The City of Soledad (hereinafter “city”) has prepared this *Plan for Providing Services for the Miramonte Specific Plan* (hereinafter “plan”) to assist with informing the Soledad Planning Commission and City Council in their decision-making process on the Miramonte Specific Plan, and as part of the city’s application to the Local Agency Formation Commission of Monterey County (hereinafter “LAFCO”) for a Sphere of Influence Amendment, reorganization, and annexation of the plan area to the City of Soledad.



The plan is required by LAFCO for applications for a Sphere of Influence Amendment and subsequent annexation approvals (hereinafter “proposed project”) as an enumeration and description of how services will be provided and which entities would provide the services to the affected territory (hereinafter “plan area”) for the Miramonte Specific Plan. Development of the plan area consistent with the uses identified in the Miramonte Specific Plan will provide 2,392 dwelling units and increase the city’s population by approximately 7,712 persons. This plan addresses how the city and other agencies would provide services to the plan area upon annexation and development of the property, including water, wastewater, storm drainage, solid waste, fire, police, library services, and schools.

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INTRODUCTION

1.1 Background

This plan for the provision of services (Plan for Services) is prepared for the proposed Miramonte Specific Plan and vesting tentative map. This Plan for Services updates the plan for the provision of services that had been prepared for a previously proposed and larger 920-acre project, the Miravale III Specific Plan, for which an EIR was prepared and certified by the City of Soledad City Council in 2010. Although the Miravale III Specific Plan EIR was certified, the applications for the Miravale III project were not acted upon by the City Council. Instead, the City Council requested additional information to address outstanding issues they had with the project as it was then proposed. The currently proposed project includes an amendment to the City of Soledad Sphere of Influence, a pre-zoning, and subsequent annexation of 647 acres (plan area) to the city. The project also includes application requests for city approval of a general plan amendment, the Miramonte Specific Plan, this Plan for Services, and a vesting tentative map on a portion of the former Miravale III Specific Plan site.

1.2 Location and Setting

The plan area is located north of the existing City of Soledad city limit in unincorporated Monterey County. The City of Soledad is located in the Salinas Valley approximately 35 miles southeast of the Monterey Peninsula and 26 miles southeast of the City of Salinas. The City of Gonzales is located nine miles to the north of Soledad and the City of Greenfield is located nine miles south. U.S. Highway 101 is the primary access route through the Salinas Valley in southern Monterey County. [Figure 1-1, Location Map](#), presents the location of the plan area. The 647-acre plan area consists of six parcels and is accessible from U.S. Highway 101 by way of Front Street and San Vicente Road. Surrounding land uses include active agricultural land to the north and west, San Vicente Road and farm-worker housing to the west, residential development within the city limit of Soledad to the south, and undeveloped foothills of the Gabilan Mountain Range to the east.

The plan area is located within portions of three expansion areas identified in the general plan: a 633.8-acre portion of the 1,165-acre Mirrasou Specific Plan Area, approximately 1.28 acres within the Northwest Expansion Area and approximately 9.71 acres within the San Vicente West Specific Plan Area. Approximately 2.05 acres are located within the “North Entry Commercial Specific Plan Area and Entry Commercial Expansion Area. The project would change the names of the affected portions

to “Miramonte Specific Plan.” The plan area is occupied by actively farmed agricultural fields, two city-owned water tanks, two private wells, ancillary storage yard and farm buildings in the southwest corner, a stock pond, and several unpaved farm roads that traverse the site. [Figure 1-2, Aerial Photograph](#), presents the existing conditions on the site and in the vicinity, as well as the existing and proposed Sphere of Influence boundary and current city limit.

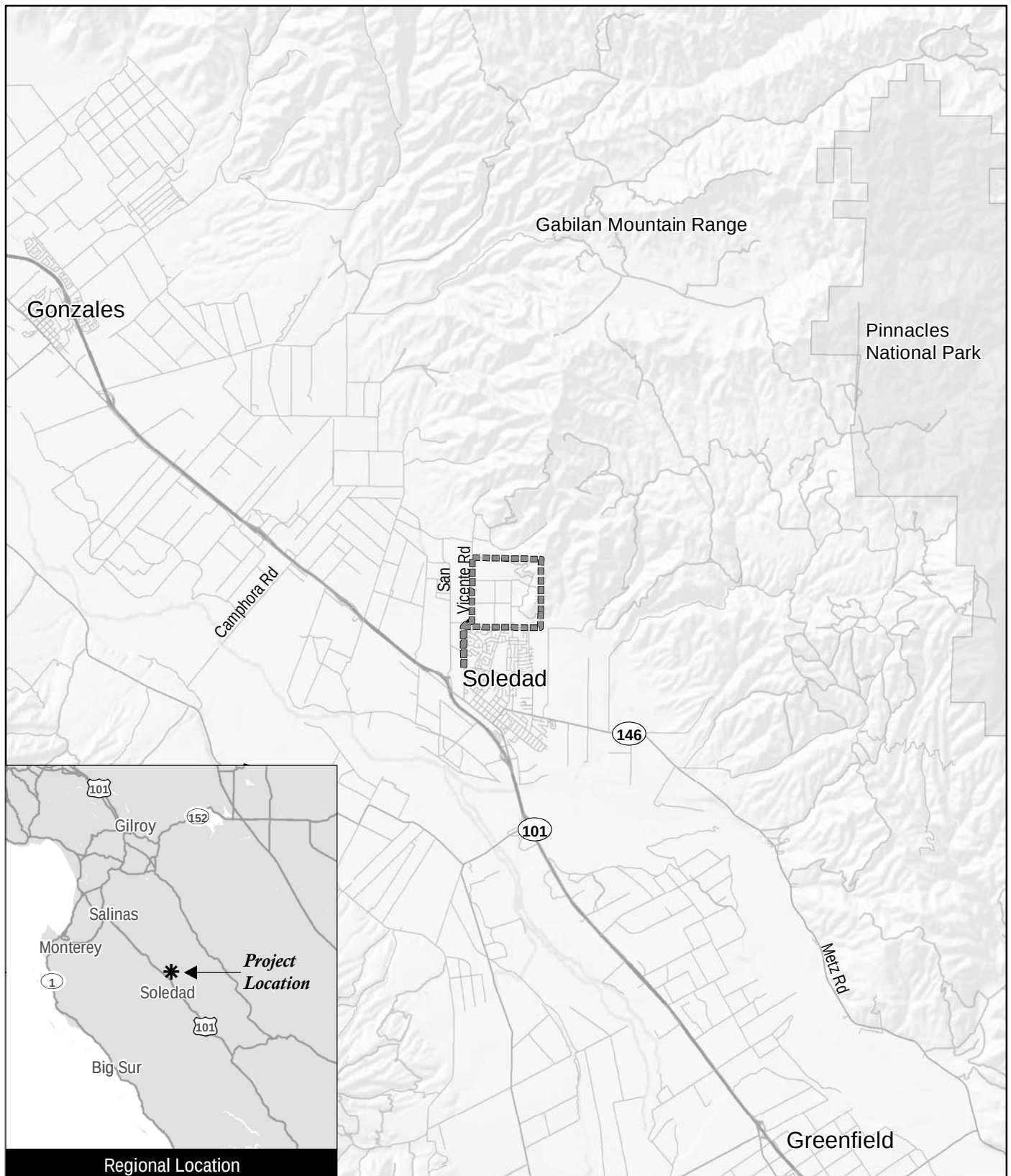
1.3 Cortese Knox Act Requirements

As a mandatory component of a Sphere of Influence amendment application, LAFCO requires the submittal of a plan for providing services prepared in compliance with Government Code Section 56653, that describes how services will be provided and the level and range of those services, including detailed information on the extent, size, location and capacity of existing infrastructure.

The Cortese Knox Act requires the preparation of a plan for providing services when an annexation or similar boundary change is requested. Government Code Section 56653 sets forth the requirements which LAFCO has expanded upon in its Policies and Procedures relating to *Spheres of Influence and Changes of Organization and Reorganization* adopted in February 2013. Pursuant to the Cortese Knox Act, LAFCO has provided the following guidance as it relates to plans for services (LAFCO 2013):

Whenever a local agency submits a resolution of application for a change of organization or reorganization, the local agency shall submit with the resolution of application a plan for providing services within the affected territory. The plan for providing services shall include all of the following information. (Section 56653.):

- a. An enumeration and description of the services to be extended to the affected territory.
- b. The level and range of those services.
- c. An indication of when those services can feasibly be extended to the affected territory.
- d. An indication of any improvement or upgrading of structures, roads, sewer or water facilities, or other conditions the local agency would impose or require within the affected territory if the change of organization or reorganization is completed.
- e. Any conditions which would be imposed or required within the affected territory such as, but not limited to, improvement or upgrading of structures, roads, and sewer or water facilities.
- f. Information with respect to how those services will be financed.



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Plan Area

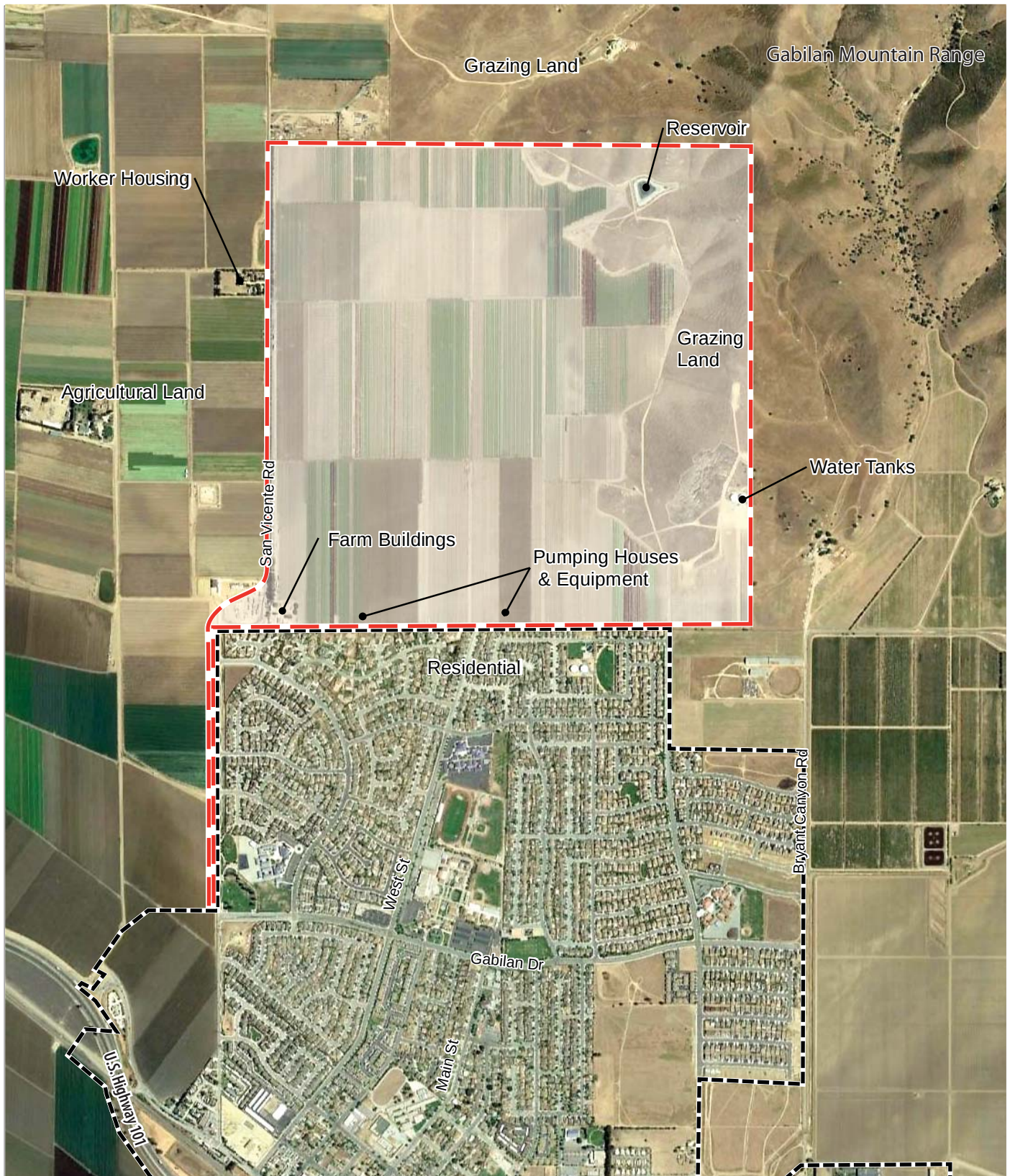
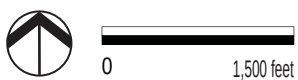
Source: Esri 2017



Figure 1-1
Location Map

Miramonte Specific Plan - Plan For Services

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 Specific Plan Area Boundary

 City Limits

Source: Google Earth 2016



Figure 1-2
Aerial Photograph

Miramonte Specific Plan - Plan for Services

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A plan for providing services may consist of:

- a. A master plan for providing services throughout all or a portion of a city or distinct Sphere of Influence for use in evaluating all proposals affecting the area covered in the master plan.
- b. A proposal-specific supplement which updates and/or provides a higher level of detail than is contained within the master plan for services. Such supplement may include by reference or in summary form those pertinent sections of the master plan for services which remain valid. The supplement need discuss in detail only that information which is not current or discussed in sufficient detail in the master plan for service.

1.4 City Planned Growth

The sphere amendment request is consistent with general plan land uses and densities, and is included within the planned services areas of the city's master utility plans. The city has indicated its intent to eventually provide services to the plan area, and elsewhere within the general plan planning area, in a timely manner without lowering the level of services provided within the existing sphere. The city has adopted a number of programs and infrastructure master plans to implement its general plan policies for the provision of public services. Master plans have been adopted for public facilities, water, recycled water, wastewater, storm drainage, and parks and recreational services. The city is currently preparing a water master plan and hydraulic model for the existing system. Future detailed development submittals will need to consider this new master plan and hydraulic model during the engineering phase of the proposed water system to establish supply (well production), storage, and distribution (transmission) improvements needed to serve these developments.

Adopted programs and policies include cooperative agreements with other agencies to provide services, including crime prevention and fire protection, recreation programs, library services, and wastewater treatment. The city must weigh the extension of services to new areas of development against the cost of those extensions, and consider general plan policy guidance regarding services extensions. The city assesses development impact fees for water, sewer, traffic, and storm drainage, as well as for public facilities such as police, fire, general government, and parks and recreation. The Soledad Unified School District also assesses development impact fees for school facilities. These fees assist in funding extensions to services to accommodate new development and population increases.

General Plan Action 7.5 states that the city's Impact Fee Schedule shall be updated on an annual basis to ensure that public safety facilities and services required by new development are paid for by those developments (page VII-10). The Soledad Municipal Code Chapter 14.06 states that approval of any development project by the city shall be conditioned upon the payment of public facilities impact fees in order to offset the costs of upgrading and expanding public facilities and public services necessitated by such developments. All fees collected pursuant to this provision shall be placed in separate impact fee funds to avoid any commingling of the fees with other revenues and funds, or between services. The fees

collected, and any earnings thereon, shall be expended solely for the acquisition and development of specific public service facilities (e.g., police, or fire, or parks, etc.), the repayment of any indebtedness incurred by the city, or to reimburse developers for the construction of required facilities. See [Figure 1-3, General Planning Area](#), for an illustration of the city's future planning boundaries adopted in the general plan.

1.5 Primary Information Sources

The *Fiscal Impact Analysis of the Miramonte Specific Plan Project* provides a description of the existing fiscal conditions of the city and county, an estimate of the fiscal impacts of the proposed specific plan area at buildout and in a subsequent 10 year time frame from development completion (Applied Development Economics 2017).

The *Cities Service Review- Draft Report* is a Municipal Service Review, which is a comprehensive study of services within designated geographic areas that are completed to obtain information about service delivery, evaluate the provision of services, and recommend actions to promote the provisions of those services (LAFCO 2015a).

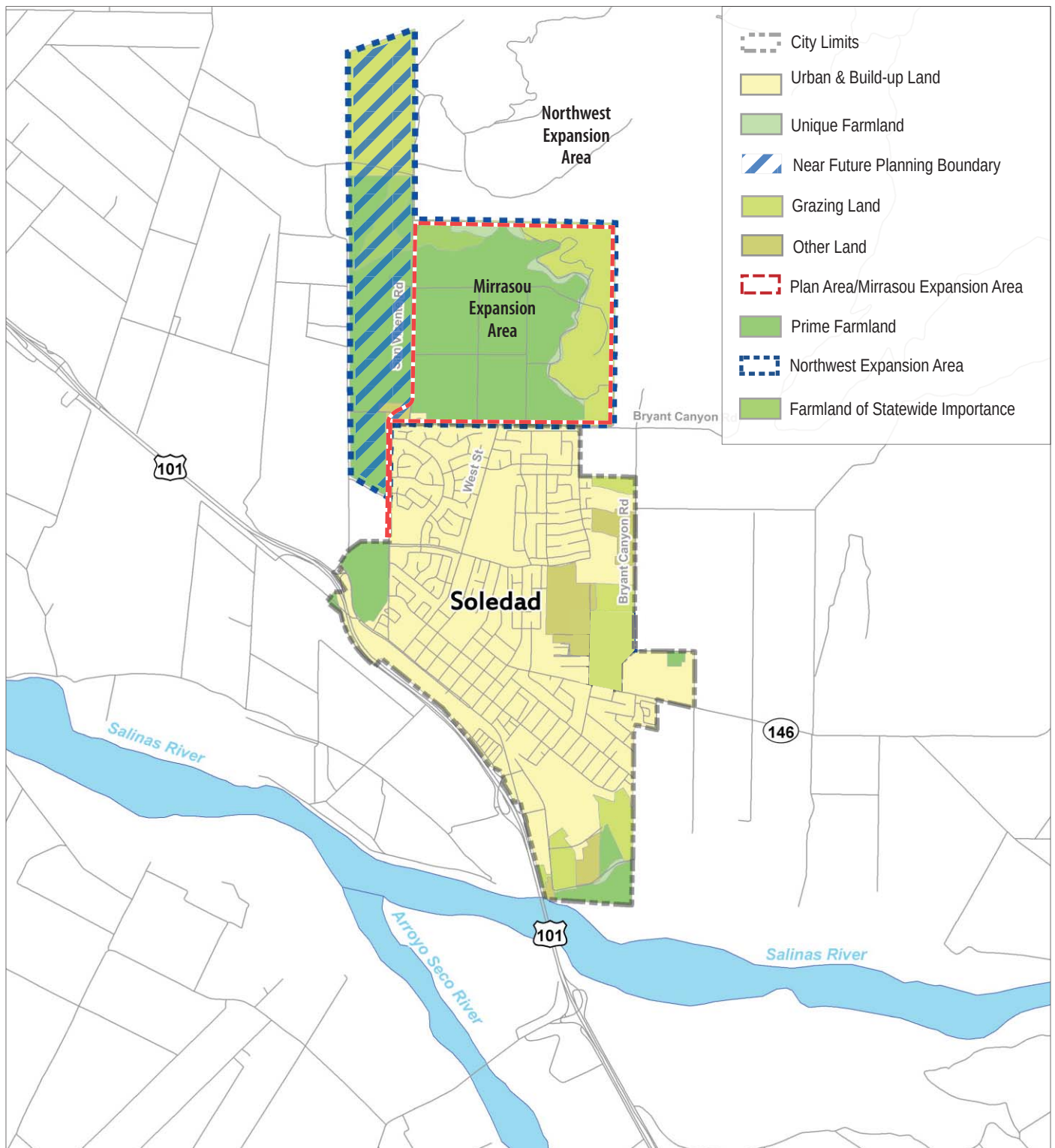
The *City of Soledad General Plan* (general plan) presents an overview of public and community services provided by the City of Soledad and other agencies including water supply and delivery, wastewater collection and disposal, storm water drainage and flood control, utilities, law enforcement, fire protection, and schools (City of Soledad Planning Department 2005a)

The *City of Soledad 2015 Urban Water Management Plan* (urban water management plan) discusses how the City of Soledad will maintain the reliability of urban water supplies and how to respond during a water supply shortage and drought conditions. Additionally, the text describes how the city can continue to promote policies and programs that benefit water conservation (AKEL Engineering Group 2016).

The *Water Supply Assessment for the Miramonte Specific Plan* (water supply assessment) evaluates the effects on water supplies through a 20-year horizon, consistent with SB 610 requirements, from the water demand generated by development consistent with the Miramonte Specific Plan. The water supply assessment also includes a discussion of the specific plan's water supply requirements and potential impact on the city's supply availability (AKEL Engineering 2017).

The city's *Long-Term Wastewater Management Plan* discusses the requirements for upgrading, operating, maintaining, and expanding and City of Soledad's sewer system. This document is used as a guide for building and financing the wastewater collection, treatment, and disposal facilities to meet the city's long-term capacities (City of Soledad 2006).

The *City of Soledad Storm Drain Master Plan 2015 Update* offers a capacity analysis for the city as well as the description of the storm drain network (City of Soledad 2015).



Source: Akel Engineering Group, Inc. 2017

Figure 1-3
General Planning Area

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PLAN AREA DESCRIPTION

2.1 Primary Information Sources

In addition to the primary sources listed in Section 1.0 Introduction, the following sources were used for this section:

The *Miramonte Subdivision Vesting Tentative Map* was provided by the applicant's civil engineer, Bestor Engineers, and illustrates the design and improvement of the plan area (Bestor Engineers 2017).

The *Miramonte Plan for Services City of Soledad* submitted by the applicant's civil engineer, Bestor Engineers offers a condensed version of how the plan area will receive the services necessary to allow annexation of the territory to the City of Soledad (Patrick Ward, correspondence, May 5, 2017).

2.2 Project Description

The city received and processed an application in 2016 for a 633.8-acre subdivision north and west of the City of Soledad city limit, and has prepared a specific plan for the project site. The specific plan area includes an additional 14.1 acres for a total of approximately 647 acres and is located in five of the city's general plan expansion areas. Much of the site is located in the Mirrasou Specific Plan Area, approximately 1.28 acres is located within the Northwest Expansion Area, approximately 9.71 acres are located within the San Vicente West Specific Plan Area, and 2.05 acres are located within the "North Entry Commercial Specific Plan Area and Entry Commercial Expansion Area. The Miramonte Specific Plan and Residential Subdivision contains a mixed-use development consisting of 2,392 residential units, 9 acres of land for commercial development, two 11-acre elementary school sites, a fire and police substation site and facilities, and 196.4 acres of parks and open space (see [Figure 2-1, Specific Plan Map](#)). Access and circulation to and from the plan area is addressed in other chapters of the Specific Plan.

2.3 Miramonte Specific Plan and Vesting Tentative Map

The project is an amendment to the City of Soledad Sphere of Influence, pre-zoning and annexation of the plan area, which includes 647-acres. Applications for a general plan amendment, specific plan, and vesting tentative map have been processed by the city. The Miramonte specific plan and vesting tentative map are used as the basis of the analysis for this Plan for Services. Development associated with the plan area and described in the specific plan and detailed on the vesting tentative map is summarized in [Table 2-1, Miramonte Specific Plan Land Use Summary](#).

Table 2-1 Miramonte Specific Plan Land Use Summary

Land Use	Acres	Dwelling Units	Percent of Total Units	Population
Single Family Residential	286.3	1,3183	55	5,536
Multi-Family Residential/ Affordable Housing ³	41.1	626	26	2,629
Senior Housing ³	6.7	134	6	228 ¹
Residential Study Area ³	35.9	314	13	1,319 ²
Total Residential	370.0	2,392	-	9,712
Commercial	8.6	-	-	-
Fire/Police	1.5	-	-	-
Elementary School	22.0	-	-	-
Collector Road ROW	32.2	-	-	-
San Vicente Road ROW	14.1	-	-	-
Open Space (Hill top)	140.4	-	-	-
Park Area	56.0	-	-	-
Water Tank Area	2.2	-	-	-
Total Non-Residential	277.0	-	-	-
Total Acreage	647.0	-	-	-

Sources: Bestor Engineers 2017, EMC Planning Group 2018, United States Census Bureau 2015, Larson 2015, the Paul Davis Partnership 2017

Notes: 1. Senior housing persons per household is represented with 1.7 persons per household. This is based on an assumed 70 percent two person and 30 percent with only a single occupant.

2. Persons per household for the Residential Study Area is represented with 4.2 persons per household.

3. The unit count for multi-family, affordable housing, and senior living is flexible, but will not exceed the combined total of these unit types.

The estimated population increase for the plan area is 9,712, with 2,392 total residential units. The population estimate is based on the persons per household factors identified in [Table 2-2](#). The proposed single-family uses are the predominant land use and are organized around more centrally-located commercial and higher density multifamily residential uses. Multi-family residential uses include proposed senior living units and affordable housing located in the vicinity of a proposed community park, as well as commercial and public facility sites.

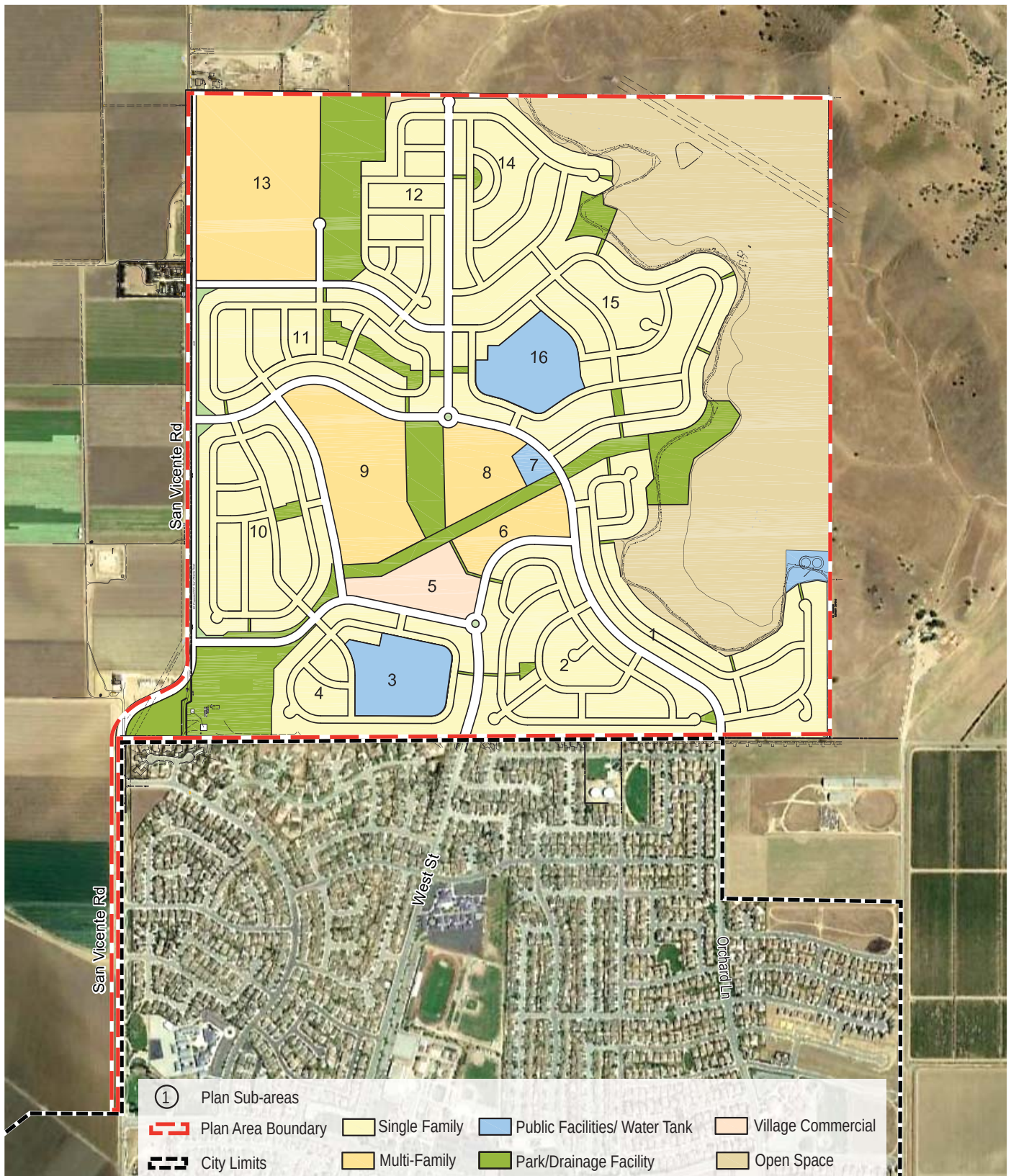
The proposed school and public facility sites are in locations similar to those identified in the general plan land use diagram (City of Soledad 2009). The public facility sites are comprised of a police and fire substation, two existing water tank sites, two school sites, and numerous park sites.

Table 2-2 Population Estimates

Land Use	Units	Person per Unit	Population
Single Family Residential	1,318	4.2	5,536
Multi-family Residential ¹	626	4.2	2,629
Senior Housing	134	1.7	228
Residential Study Area	314	4.2	1,319
Total	2,392	-	9,712

SOURCE: EMC Planning Group 2017, United States Census Bureau 2015, Larson 2015, The Paul Davis Partnership 2017

NOTE: Single and multi-family residential is based on U.S. Census Bureau data; Multi-family residential includes land designated as Affordable Housing; Senior housing based on 70 percent couples and 30 percent singles.



Source: Google Earth 2016

Figure 2-1

Specific Plan Map

Miramonte Specific Plan - Plan for Services



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2.4 Anticipated Approvals

The City of Soledad General Plan Planning Area includes the Mirrasou Expansion Area. LAFCO's approval of the City of Soledad Sphere of Influence Amendment for the 647 acre plan area would be the first step to including a portion of each of the five expansion areas, identified in Section 2.2, within the city's sphere. Reorganization and annexation of this plan area would be the second step by LAFCO. These LAFCO actions have been preceded by the City Planning Commission and Council actions reaffirming their desire to amend the city's Sphere of Influence, reorganize and annex this area within the city limits, and pre-zone the property consistent with the specific plan. The city decision-makers have also certified the Miramonte EIR and EIR Addendum, adopted the Miramonte Specific Plan as a city General Plan Amendment, adopted this Plan for Services, and, subject to LAFCO's actions, adopted the vesting tentative map and mitigation monitoring plan.

Future actions are expected to include, but may not be limited to, the following: city zoning of the plan area, implementation of subdivision map conditions and EIR Addendum mitigation measures, final subdivision map(s) and improvement plan(s) approval, and architectural and site review approval. Community Facilities District initiation, potential habitat permits, right-of-way abandonments and dedication acceptances, encroachment permits for work within city rights-of-way, and easements/maintenance agreements with the City of Soledad are some of the follow-on implementation items to be accomplished at or post final map adoption and recordation.

2.5 Anticipated Time Frame for Service Delivery

The Miramonte Specific Plan and vesting tentative map assume that development of the plan area would occur in multiple phases over a 10 to 20-year timeframe. The Miramonte Specific Plan assumes several major phases for the purpose of implementing backbone infrastructure (e.g. storm water collection system, water system, wastewater collection, roadways, etc.) that serves the larger plan area. An example would be completing all backbone infrastructure south of the linear park and adjacent to the existing city limits as an initial phase of backbone infrastructure. However, actual development of the land uses described in the specific plan will likely occur in multiple smaller phases over time. Phasing parameters are further discussed in Chapter 6, Implementation.

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3.1 Primary Information Sources

In addition to the primary sources listed in Section 1.0 Introduction, the following sources were used for this section:

The *Existing and Future Water Demand Analysis 2016* analyzes the existing and future water demands for the City of Soledad while providing baseline (existing) water usage and future water demands within the existing city limit (Lepore and Nunley 2016).

The *City of Soledad 2015 Urban Water Management Plan* (urban water management plan) was prepared by Akel Engineering Group and provides an assessment of water availability, updates water use targets for the city, and identifies a 20 percent reduction in urban per capita water usage by the year 2020 in accordance with the Water Conservation Act of 2009 (City of Soledad 2016).

The *Soledad Water Master Plan* discusses the existing water system, demands, and deficiencies and projects future demands (City of Soledad 2005b). Buildout of “Near Future Development,” identified in the plan included the Miravale III project, and the plan identifies new and/or upgraded water storage and distribution facilities that would be necessary to support the level of development anticipated by the Miravale III project.

The *State of the Salinas River Groundwater Basin Report* addresses the complications of prolonged drought by considering changes in groundwater head elevations, groundwater storage, and seawater intrusion in case the existing drought continues (Brown and Caldwell 2014).

The *City of Soledad’s Annual Water Quality Report* provides information on all of the chemicals that are found in the drinking water and whether they are at dangerous levels or not (City of Soledad 2017a).

The City of Soledad Water Supply Assessment and Verification of Supply [for the] Proposed Miravale Phase III Residential Project (City of Soledad and Byron Buck & Associates, August 2007) provides the evaluation of water demand and effect to water supplies that would result from development of the land uses identified in the Miramonte Specific Plan and certified Miravale III Specific Plan EIR, based in part on the adopted 2005 water master plan (City of Soledad 2010).

The *City of Soledad Water Supply Assessment for Miramonte Specific Plan* (water supply assessment) provides an update of the previously prepared Miravale Phase III Project Water Supply Assessment (Byron Buck & Associates, August 2007) and evaluates the water demand and effect to water supplies that would result from development of the land uses identified in the Miramonte Specific Plan (AKEL Engineering Group 2017).

3.2 Existing City Conditions

Municipal Water Supply

The city's sole source of water is groundwater from the Salinas Valley Groundwater Basin (herein referred to as "Basin"), which follows the Salinas River throughout Monterey County. The Basin consists of four subareas: East Side, Pressure, Forebay, and Upper Valley. The City of Soledad is located above the Forebay Subarea of the Forebay Aquifer Subbasin, which is a subbasin of the Salinas Valley Groundwater Basin. According to the 2015 urban water management plan, the total surface area for the Forebay Aquifer Subbasin is 94,000 acres. This capacity includes inflows coming from infiltration of not only the Salinas River but also Arroyo Seco, Reliz Creek, and agricultural return flow (Brown and Caldwell 2014). The groundwater levels are generally stable in the Forebay Subarea even during times of drought. This steadiness is partially due to the location of the subarea being downstream of the convergence between the Salinas River and the Arroyo Seco groundwater subarea. The annual sustainable yield for the Forebay Subarea is assessed at 148,000 acre feet, which is equivalent to the city's projected groundwater supply through the year 2035 (City of Soledad 2016).

The city does not offer water service to any of the three prisons located within the city limits (Gabilan Fire Camp, Correctional Training Facility, and Salinas Valley State Prison). However, the city does provide service to over 3,000 single family residential users, 372 multi-family residential accounts, 187 commercial and institutional accounts, five industrial accounts, 37 landscape accounts, and 10 accounts categorized as other (City of Soledad 2016). The city currently has five groundwater wells that are used to meet these demands and they are located throughout the current city limits (see [Figure 3-1, Location of City Water Production Wells](#)) although one well (Well 9) is currently offline. A 2016 water quality report for the City of Soledad recorded 4,300 gallons per minute of water for the pumping capacity of the four active groundwater wells (Wells 6, 7, 10, and 11) (City of Soledad 2017a). According to the 2015 urban water management plan the firm capacity, or capacity of the system with the highest producing well (Well 11) inactive, is 3.7 million gallons per day (mgd) (City of Soledad 2016), or 2,570 gallons per minute. The urban water management plan states that the Forebay Subarea has met the City of Soledad's water demands in the past and is expected to continue meeting the city's water demands in the coming years (City of Soledad 2016).

A redundancy assessment was completed by MKN and Associates (LePore and Nunley 2016) to gauge the city's ability to meet demand in the event of a system failure under buildout conditions for areas only within the existing city limit. The assessment evaluated system production with the city's best



Source: AKEL Engineering Group 2016,
Google Earth 2016



0 2,000 feet



City Water Production Well



Plan Area Boundary (Partial)



City Limits

Figure 3-1

Location of City Water Production Wells

Miramonte Specific Plan - Plan for Services



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well (Well 11) in and out of service. Maximum daily demand is estimated to be 2,193 gallons per minute per day, and the peak hour demand over a four hour period is estimated to be 4,385 gallons per minute. The assessment predicts that the city's existing water production facilities are capable of meeting the required maximum daily demand with or without Well 11, but without Well 11, will fall short of meeting peak hour demand by approximately 635 gallons per minute over a four hour period. The redundancy assessment concluded that if the currently inactive Well 9 became active and had an assumed minimum pumping capacity of 1,000 gallons per minute (gpm), peak hour demand at city limit buildout could be met (Lepore and Nunley 2016).

Water Treatment and Delivery Infrastructure

As shown in the 2005 water master plan the city water supply system consists of five production wells, three storage tanks, one booster pump station, and almost 40 miles of water distribution pipelines ranging in size between 2" to 16" in diameter. The existing system provides approximately 3,900 metered connections and is classified as a large water system according to the State of California Department of Health Services. After water has been pumped from the well, treatment with a chlorine solution is used to decontaminate the remaining bacteria before the water is transported into the city's distribution system (City of Soledad 2005b). [Figure 3-2, Existing City Water Delivery System](#), illustrates the city's existing water infrastructure pipe system.

The existing municipal water distribution system has two pressure zones for the delivery of water, Zone A and Zone B, to ensure that adequate pressure and services are provided to area residents. The service elevation for Zone A ranges between 180 and 215 feet above sea level and Zone B ranges between 215 and 340 feet above sea level. Although the Zone B service boundary extends to the 340-foot elevation the water system master plan recommends that only development to the 335-foot elevation should be served by Zone B. The storage capacity of Zone A is two million gallons and consists of a storage tanks located in Vosti Park near the city's downtown and a one million gallon tank near the La Cuesta Views subdivision on the northern end of the city along with all production wells. As a result of all production wells being located within Zone A, a booster pump station is located at the La Cuesta site so that the water transported to Zone B has acceptable pressures. This pump station consists of three total pumps (one of which is a backup pump) each with the capacity of 800 gpm. The total capacity for the three pumps is 2,400 gpm, whereas the firm capacity is 1,600 gpm.



Two additional one million gallon storage tanks are located in Zone B within the plan area (refer back to Figure 1-2). As a result, Zone B and the plan area currently provide two million gallons of water storage. The total capacity of all of the existing storage tanks owned by the city is 4.10 million gallons (Donald Wilcox, email message, March 6, 2018). Buildout of "Near Future Development,"

identified in the adopted 2005 water master plan includes the Miravale III project. The plan identifies the need for new and/or upgraded booster pump stations in Zone B and in a newly defined pressure zone, “Zone C.” Additional storage tanks would also have been necessary to accommodate development levels proposed by the Miravale III project. The water master plan determined that at minimum, an additional 1.2 million gallon tank in Zone B would be necessary and that the final design, sizing, and location of system infrastructure would be determined by the city in order to ensure that adequate infrastructure would be provided to meet the project’s demand. The recommended improvements required for the Miravale III project are identified in the 2005 water master plan Table VI. Development of the revised and smaller project, Miramonte Specific Plan, would also require the construction of these or similar improvements to expand city water services to the project area. The city is in the process of updating its water system master plan to address service deficiencies identified within the existing system during the Lepore and Nunley water system redundancy evaluation (2016). The city will require an overall engineered project-specific water system plan as a conditions of map approval.

3.3 Plan Area: Water Infrastructure

Proposed Water Services

Future development of the plan area would exceed the 500-dwelling unit threshold per the requirement of SB 610, and therefore, a water supply assessment is required. SB 221 further requires that the city provide a written confirmation from the intended water service for that area that there will be adequate amounts of water available to serve new development. The city prepared a water supply assessment and verification of water availability for the original Miravale III project prior to the City Council’s certification of the original EIR. The 2017 AKEL water supply assessment updated the analysis and conclusions of the original water supply assessment based on the significantly downsized Miramonte project, took into account the findings of the 2015 UWMP, and also the more recent Nunley and Moore 2016 redundancy analysis that discusses system capacity for water needs at buildout within the current city limit. The conclusions of the recent WSA update are that the proposed project would demand less water than the 1,566.7 acre feet per year than the original project and water consumed by agricultural use of the site, but more water than the existing water system infrastructure can currently provide to meet peak hour demand. Booster pumps and storage improvements and/or conservation activities would still be required to serve the project. The water supply assessment update is attached as Appendix A and incorporated herein by reference.

According to the water supply assessment update, the water demand for the Specific Plan is 980 acre feet per year (afy), which is 99 afy greater than the water demand that was identified in the City’s 2005 Water System Master Plan for a similarly-sized use using the 2005 water demand coefficients, and 587 afy less than the approximately 1,568 afy water demand for the existing agricultural use of the site (AKEL Engineering Group 2017), which was also the net demand of the Miravale III project. In summary, the plan area will have less of a demand on water resources than the current agricultural uses of the area.



Source: City of Soledad 2008

Figure 3-2
Existing City Water Delivery System
Miramonte Subdivision Plan for Services

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Based on the City of Soledad 2015 Urban Water Management Plan (AKEL Engineering Group 2016), there is a total reliable supply of 148,000 afy in the Forebay Subarea, which is sufficient to serve a projected 2035 demand of 143,250 afy. As stated previously, the Specific Plan area will have a water demand of 980 afy; this amount of demand from the plan area can be adequately served by city's groundwater supply. However, development consistent with the specific plan will be required to provide water supply infrastructure to serve the project site.

Future development of the plan area will connect to the municipal water system and be served by water in newly defined pressure zones C or D. Two existing on-site agricultural wells, with a combined capacity of 3,600-3,900 gpm, are located on the east side of the plan area and may be retained to provide non-potable irrigation water for use on public parks and open space areas (Agha, telephone conversation, June 7, 2017). These wells are not intended for domestic potable water use, and sufficient water quality testing will be performed to support their intended use, and to protect the integrity of the City's groundwater supplies. To serve the plan area, a minimum of two (2) new domestic potable wells will need to be constructed, which includes one active well and one back-up well. An additional one million gallon storage tank will also need to be placed on the site to provide gravity-fed water services to development on elevations above the 335-foot elevation that meet the city's standard water pressure range of 45-90 psi for gravity systems. The new storage tank may be placed adjacent to the two existing city-owned storage tanks currently located in the plan area's open space region only if this standard is met. Related water infrastructure may be located elsewhere above the 400-foot contour elevation if there is no feasible alternative at the lower elevation. Furthermore, supplemental pumps are required to provide service to the development on the northeastern side of the plan area that is above the 335-foot contour line.

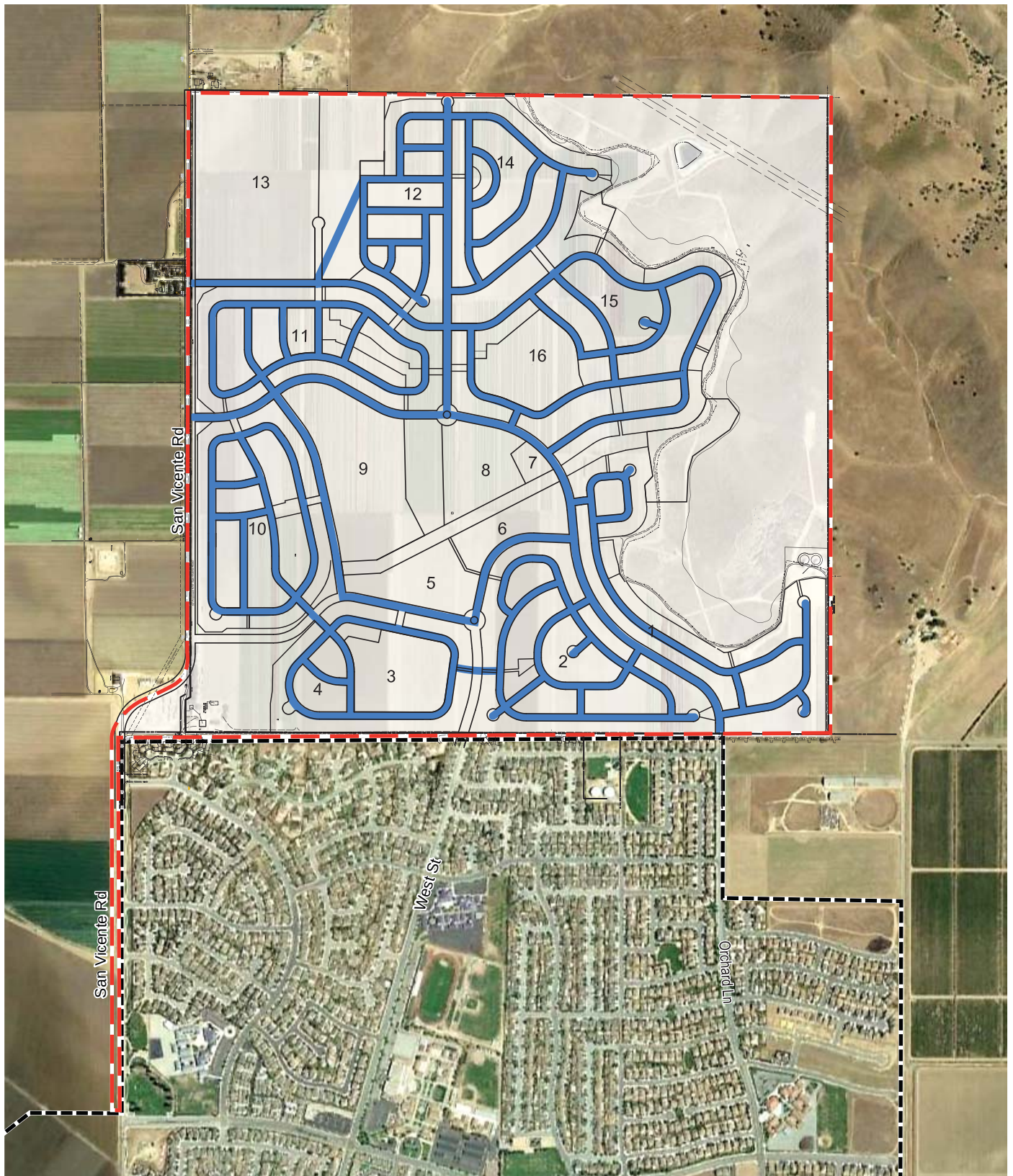
The new water system would be gravity fed and distributed throughout the area by a system of underground water mains. Typically the underground water mains are located in the public streets. The underground water main distribution system will involve pipes with a 12 inch diameter extending throughout the commercial and multi-family areas. The residential areas will be provided with 8 inch diameter pipes, the city's required minimum, as well as fire hydrants distributed throughout the plan area. In the southeast corner of the plan area are two existing water pipes that currently serve Miravale II and La Cuesta Views, one of these pipes is 12 inches in diameter and one is 16 inches in diameter and shall remain in place. See [Figure 3-3, Plan Area Water Delivery System Layout](#), for the conceptual water infrastructure of the plan area. Prior to recordation of the first final map for development of the uses consistent with the Specific Plan, it is anticipated that the city will require preparation of a Miramonte Water Master Plan for required supply infrastructure within the plan area that will need to be reviewed and approved by the City Engineer, before development in the plan area can proceed.

To comply with city standards, all fire hydrants will be placed with 500-foot spacing in between each and will offer pressure over 20 psi residual. Each hydrant will have three outlets; one pumper connection and two hose connections (Patrick Ward, correspondence, May 5, 2017).

3.4 Conclusion

The City of Soledad plans to extend the use of groundwater as its sole source of supply. There appears to be adequate water supply in the groundwater basin underlying the city and the plan area. The existing city water supply and distribution infrastructure does not have storage and distribution facilities with capacity to accommodate increased demand resulting from development consistent with the specific plan land use designations (Donald Wilcox, email conversation, June 5, 2017). Additionally, it is recommended that municipal Well 9 be restored to provide the system with the capability of meeting required standards should municipal Well 11 go offline (Lepore and Nunley 2016). Although the plan area is not currently connected to the municipal water supply system, this system will need to be enlarged and updated to meet the required standards with the increased demand that will occur with all future development outside of the current city limits.

The city is in the process of preparing a 2018 Water Master Plan; however, this master plan does not address serving water to any development outside of the current city limits. Therefore, it is anticipated that the city will require a comprehensive Miramonte Water Master Plan to address the needs of the plan area, with demand based on the most current population data at the time of acceptance of the first final map. The development within the plan area will be required by the city to provide all of the water production, storage, and distribution to adequately serve the project demand. The water system design for the plan area shall develop potable water production from Zone C of D, utilize and expand existing storage, as necessary, within the Specific Plan Area, and connect back to the existing city distribution system. The applicant proposing development within the plan area has committed to drilling a minimum of two (2) new domestic water wells within the plan area, sufficient to meet the projected demand of the plan area at buildout. Treatment of water may be required from new domestic wells within the plan area. Appropriate permitting and well tests observed by the Monterey County Environmental Health Department will be required for all new wells and prior to use of the existing wells for non-potable use. All city development impact fees for water that are applicable at the time of issuance of a building permit are required, but may be offset by developer designed, funded and built capital water system improvements. The City of Soledad Public Works Department, along with the city's Water Quality Control Division, is in control of the management and preservation of the city's water wells and water distribution system (Regional Water Management Group 2012) and will oversee preparation of the Miramonte Water System Master Plan



0 1,200 feet



Plan Area Boundary



City Limits



8" Water Pipeline



Plan Area Neighborhoods

Source: Google Earth 2017

Figure 3-3

Plan Area Water Delivery System Layout

Miramonte Specific Plan - Plan for Services

E

M

C

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WASTEWATER

4.1 Primary Information Sources

In addition to the primary sources listed in Section 1.0 Introduction, the following sources were used for this section:

The *Regional Water Management Group* describes an approach to water resource management in California. Integrated regional water management considers the hydrologic system as a whole (Regional Water Management Group 2012).

4.2 Existing City Conditions

Wastewater Conveyance and Treatment

The City of Soledad is the sole agency responsible for the collection, treatment, and disposal of wastewater within the service area. The city does not offer water service to any of the three prisons located within the city limits (Gabilan Fire Camp, Correctional Training Facility, and Salinas Valley State Prison). However, the prison wastewater is transferred to the city's water reclamation facility located west of U.S. Highway 101. The City's water reclamation facility was issued an approval to construct permit to expand treatment capacity to 5.7 mgd (Donald Wilcox, email message, June 8, 2017) with a disposal capacity of 5.5 mgd. However the permitting is not complete as the water reclamation facility was never fully completed. The city is in this process now and it is anticipated that the facility can be completed and rated as designed. Average daily flow to the water reclamation facility is approximately



2.4 million gallons per day (mgd). In addition, the California Department of Corrections has a “reserved” capacity of approximately 1 mgd (Donald Wilcox, email message, March 7, 2017).

The city’s wastewater receives preliminary, secondary, and tertiary treatments. Preliminary treatment encompasses a screening process to separate the heavier and lighter solid particles. The secondary treatment operates in four phases to allow the removal of microorganisms. Lastly, the tertiary treatment consists of filtering out any remaining floating materials from the water and using ultra-violet-management for decontamination. Any treated wastewater that is not recycled back into the treatment process is discharged into rapid infiltration basins and into the aquifer. It is mentioned in the Urban Water Management Plan that none of the treated wastewater is reused by the city (AKEL Engineering Group 2016).

As shown on Figure 3-1 of the City’s Long Term Wastewater Management Plan Technical Memorandum No. 3, sanitary sewer mains nearest to the plan area are located at the terminus of West Street and Orchard Lane; both pipelines are 8 inch in diameter. Additionally, there is a 12 inch sewer main at the intersection of Gabilan Drive and San Vicente Road. This 12 inch sewer main extends south on San Vicente Road and expands to an 18 inch sewer main between Goldenrod Street and Front Street (City of Soledad 2006). [Figure 4-1, Existing City Sanitary Sewer System](#), provides the location of the existing city sewer lines.

4.3 Plan Area: Wastewater Infrastructure

Proposed Wastewater Generation and Sewer Service

Once the upgrades to the water reclamation facility are finalized, the city’s water reclamation facility will have sufficient capacity to accommodate the addition of wastewater generated by development consistent with the specific plan. The water reclamation facility upgrade was originally designed to accommodate developments outside of the current city limits, and since the upgrade was initiated, little or no development has occurred outside of the current city limits, which has created an abundance of capacity available for the plan area (Akel Engineering Group 2016).

Based on the Long-Term Wastewater Management Plan, the residential wastewater flow factor is 67.5 gallons per capita per day (gpcd) and the commercial flow rate is 2,000 gallons per acre per day (gpac) (Donald Wilcox, email conversation, July 6, 2017). Based on these factors, the residential uses would generate an estimated wastewater flow of 739,125 gallons per day. The estimated wastewater flow for nine acres of commercial uses would be 18,000 gallons per day. The combined estimated wastewater flow generated by the project would be approximately 757,125 gallons per day or approximately 0.76 million gallons per day (mgd). Based on the information provided by Bestor Engineers, wastewater generated by development within the plan area will be approximately 1.5 mgd (Patrick Ward, email message, May 5, 2017).



0 1,000 feet

Source: City of Soledad 2008

Figure 4-1

Existing City Sanitary Sewer System

Miramonte Subdivision Plan for Services

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For the purposes of this analysis, the 1.5 mgd is used to provide a conservative estimate of wastewater flow. When adding the city's current wastewater flow of 2.4 mgd to the projected 1.5 mgd flow from the plan area, the total wastewater flow to the plant would be 3.9 mgd, which can be accommodated by the total facility treatment capacity of 5.7 mgd, including the California Department of Corrections "reserved" capacity.

Due to the facility having the capacity to meet the demand of the plan area, the plan area will be provided sanitary sewer service by the city. However, the plan area is not currently connected to the existing wastewater collection system. The city's existing collection system will be required to be extended by the project applicant or subsequent developer to provide services to the plan area. Known line capacity of existing sanitary sewer collection facilities in the city are based on operational observations made by city staff. The city is currently developing a wastewater collection system master plan that will identify existing and necessary line sizes and capacity upgrades for future development consistent with the general plan land use designations, including the project site. In the interim, a conceptual sanitary sewer system for the project is presented in [Figure 4-2, Plan Area Sanitary Sewer System Layout](#), for the plan area.

Although there is capacity at the wastewater facility to meet the demands of the Miramonte Specific Plan Area development, the city's existing sanitary sewer pipes have not been confirmed as capable of serving the plan area. Wastewater generated by the site will be conveyed to the water reclamation facility by constructing a new appropriately-sized sewer interceptor to the facility by construction of a new sewer main from the southwest corner of the plan area south along San Vicente Road to either Gabilan Drive or directly to the water reclamation facility itself. Replacement of an existing sanitary sewer main may also be required between Gabilan Drive and Goldenrod Street.

In sum, the on-site wastewater conveyance system is gravity-fed and will be collected and conveyed by a network of 8-inch or larger pipes throughout the plan area before discharging from the site through a new 18-inch sewer main extension. The sanitary sewer, along with storm drain, and water infrastructure, pipe sizes by sub-area is summarized in [Table 4-1, Conceptual Distribution Pipe Sizes for Wastewater, Storm Drain, and Water Infrastructure](#). Refer also to Figure 2-1, Specific Plan Map.

All new sewer mains will be 8 inches in diameter or larger, as specified by the city's standards, and will be subject to more specific design as a part of improvement plans to be submitted and approved prior to recording of a final map(s). However, portions of the sewer collection system will be at gradients matching street grades. It is expected that as much as 15 percent of the system design will match street grades and will require variations from the published city standards (Patrick Ward, submission to consultant, May 5, 2017). Engineered solutions such as lift stations should be considered during the design phases of the proposed sewer collection system to avoid any unintentional flat design of the sewer pipes. Finalization of required pipe sizes and capacity upgrades would be identified in design-level plans subject to review and approval by the City Engineer.

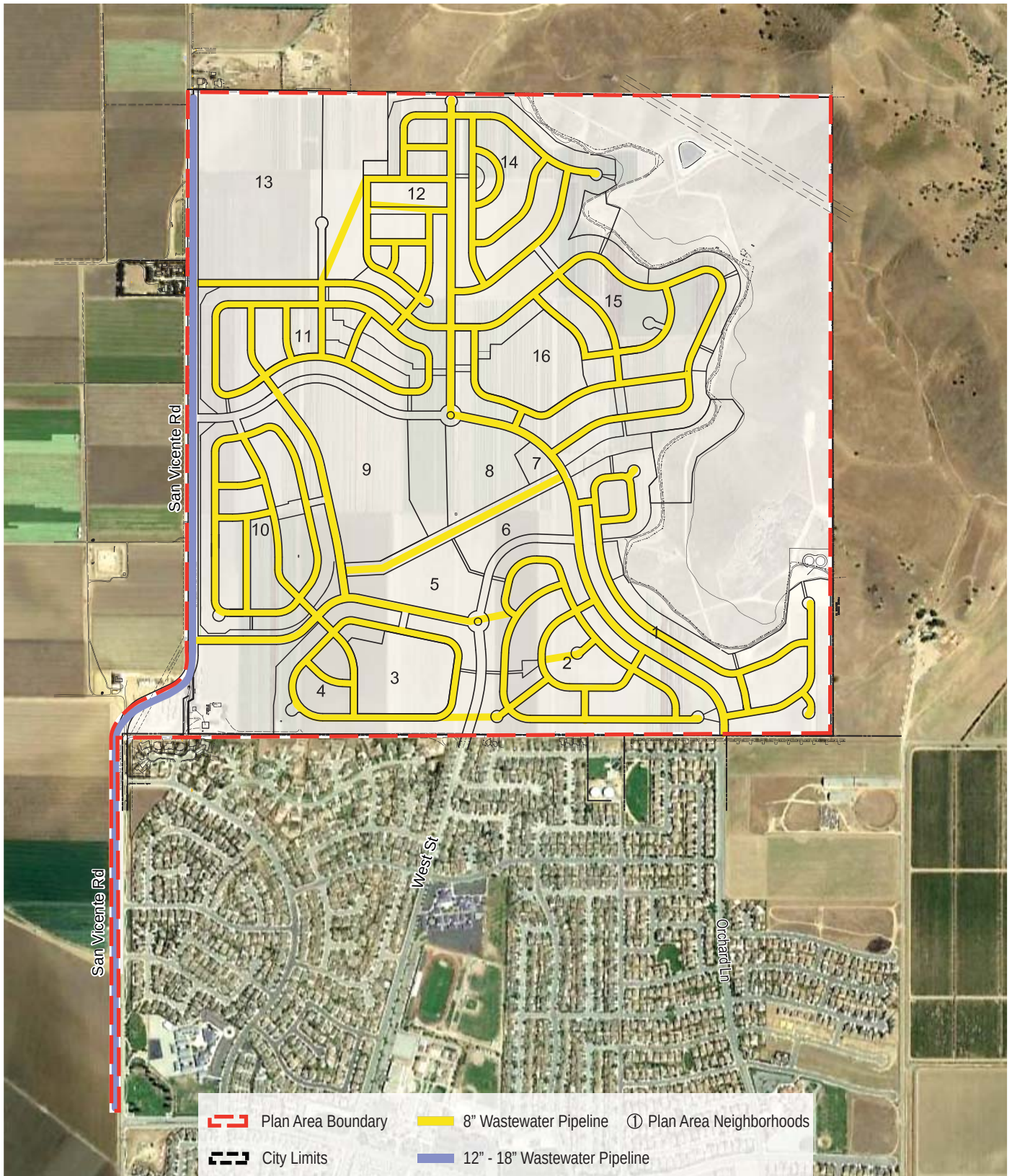
Table 4-1 Conceptual Distribution Pipe Sizes for Wastewater, Storm Drain, and Water Infrastructure¹

Sub-area	Sanitary Sewer	Storm Drain	Domestic Water
1	8	21-27	8
2	8	21-27	8
3	8	21-27	8
4	8-12	27-39	8
5	8-12	21-39	8
6	8-12	21-39	8
7	8-12	21-39	8
8	8-12	21-39	8
9	8	21	8
10	8-12	12-33	8
11	8-12	27-30	8
12	8	33	8
13	8-21	21-33	8
14	8	21-27	8
15	8	12-33	8
16	8	12-33	8

SOURCE: EMC Planning Group 2017, Bestor Engineers 2017

NOTE: ¹ Diameter in inches

It is anticipated that the city will require a Miramonte Wastewater Collection System Master Plan for the project that will need to be approved by the City Engineer prior to City Council acceptance of the first final map. The project developers will design, finance, and construct backbone wastewater infrastructure, necessary for connection to the city's system, in the first phase of development. Additionally, the developers will construct and finance the collector wastewater infrastructure in each sub-area as development proceeds. All infrastructure will be constructed by the developer(s) in accordance with city standards, unless an exception is made by the City Engineer, and would be in place prior to issuance of building permits for any structures. Where site conditions require deviation from city design standards to meet performance thresholds, the applicant will provide engineered site-specific plans demonstrating that performance standards are met. These plans will be provided for review and approval by the City Engineer prior to issuance of any grading permit. The applicant will be responsible for the payment of required development impact fees for new facility construction and may participate in a reimbursement program per Municipal Code Chapter 14.06 for the new sewer main and upgrades to the existing sewer main on San Vicente Road. All sanitary sewer system improvements will be dedicated to the city. Ongoing facility maintenance costs will be financed by the formation of or annexation into a Mello-Roos Community Facilities District or some other form of maintenance district.



Source: Google Earth 2016

Figure 4-2

Plan Area Sanitary Sewer System Layout

Miramonte Specific Plan - Plan for Services

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4.4 Conclusion

The water reclamation facility has sufficient capacity to accommodate the addition of this plan area's wastewater, because the water reclamation facility upgrade was originally designed to accommodate developments outside of the city limits. Since the water reclamation facility upgrade, little or no development has occurred outside of the city limits creating an abundance of capacity available for the plan area (AKEL Engineering Group 2016). Existing flows consist of 1.2 mgd from within the City of Soledad and approximately 1.2 mgd for the California Department of Corrections facilities for a capacity total of approximately 2.4 mgd through the city's water reclamation facility (Donald Wilcox, email message, June 8, 2017). Based on the calculations completed by Bestor Engineers, the sewage projected to be generated by the plan area at buildout will be 1.5 mgd (Patrick Ward, submission to consultant, May 5, 2017). When adding the current flow of 2.4 mgd to the projected flow from the plan area of 1.5 mgd, the total wastewater flow to the plant of 3.9 mgd and is well under the total facility treatment capacity of 5.7 mgd.

Design and construction of the new sewer system within the plan area will be designed, funded, and constructed by the developer, with plans subject to the review and approval of the City Engineer. The city does not currently have an impact fee structure in place for development outside of the current city limits. Prior to the issuance of a building permit, the city shall prepare, at the developers' expense, a Proposition 218 Compliant Impact Fee Study.

The city may require the construction and installation of recycled water pipes that connect from the plan area directly to the reclamation facility that would also be designed and funded by the developer. The facility has capacity for providing recycled water for the plan area but the city has no existing pipes in place to serve it. The re-installation of purple pipes from the existing agricultural wells is a possibility but drawing directly from the reclamation facility may provide more suitable supply for the plan area.

As previously stated, it is anticipated that the city will also require a Miramonte Wastewater Collection System Master Plan for the project to ensure accurate demand and infrastructure information is provided and to identify appropriate sizing and connections from the plan area to the city's current municipal wastewater reclamation system.

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STORM DRAINAGE

5.1 Primary Information Sources

In addition to the primary sources listed in Section 1.0 Introduction, the following sources were used for this section:

The revised City of Soledad Storm Water Management Plan discusses protection of storm water quality and how to prevent pollutants from entering into the city's storm water system (City of Soledad 2010).

The City of Soledad Storm Drain Master Plan identified existing infrastructure and capacities that need to be completed for the city to have adequate storm drain capacity for buildout of the 2005 general plan, including the proposed Miramonte Specific Plan area, based on a 10-year storm event (City of Soledad 2007).

The City of Soledad Storm Drain Master Plan Update identifies existing infrastructure and capacities and \$11.8 M in projects, mostly high priority, that need to be completed for the city to have adequate storm drain capacity for existing uses and provides current pipeline capacities within the existing city limits (City of Soledad 2015).

5.2 Existing City Conditions

The City of Soledad's existing storm drainage collection system is comprised of detention and retention basins, percolation fields, open channels, multiple ditches and swales, and a piping system to transport storm runoff. Two open channels are still in use according to the Public Works Director and City Engineer (Donald Wilcox, email conversation, July 7, 2017).



The two open channels are:

1. Bryant Canyon channel – maintained by the Monterey County Water Resources Agency.
2. Southerly channel along U.S. Route 101 near the Salinas River – maintained by Caltrans.

A third channel the Westerly channel, is maintained by the city and flows along San Vicente Road and ultimately to the city's water reclamation facility, where back flow to the channel is retained in a large retention basin between U.S. Route 101 and the railroad tracks. Along with a few large detention basins, there are a few interim ditches, swales, and detention ponds in the city (City of Soledad 2010).

Storm water runoff is conveyed through storm drain networks and ultimately discharged to various detention and retention basins throughout the City, to Bryant Canyon Channel, to the Salinas River, or the retention basin at the wastewater treatment plant south of U.S. Highway 101. Both the Bryant Canyon channel and the Southerly channel discharge into the Salinas River. The existing drainage network consists of eight separate systems, some of which are interconnected. As reported in the Storm Drain Master Plan (page 1-2), potential improvements to one system may affect the performance of other systems. Most city streets also have curbs and gutters that do not provide energy dissipation prior to runoff entering a catch basin.

Several flood protection facilities including culverts, channels, pump stations, and outfalls are located outside the city's jurisdictional limits. Bryant Canyon Channel and the Salinas River flows are under the jurisdiction of the Monterey County Water Resources Agency (MCWRA). Some pipes flow beneath U.S. Highway 101, and several pipes and one pump station are located beneath the Union Pacific Railroad tracks. Improvement projects and new construction within the railroad right of way are subject to approval by the Union Pacific Railroad.

The city does not use storm water as part of its water supply. Instead, the collection of storm water is transferred to recharge basins located throughout the city, which helps to recharge the groundwater sub basins. However, this recharge is not included in the city's supply calculations (AKEL Engineering Group 2016).

According to the Storm Water Management Plan, the storm drainage system consists of concrete pipes ranging from 8 to 72 inches. Flows that occur to the west of West Street are gathered on San Vicente Road and guided to a retention pond. Flows that occur to the east of West Street, and between West Street and Oak Street, are gathered in a 60 inch storm drain that releases to a percolation field. Flows that occur east of Oak Street and from Oak Street to Third Street, are contained in a 42 inch storm drain that infiltrates to the Caltrans culvert. Flows that occur east of Third Street and above the Union Pacific Railroad are distributed to the County's Bryant Canyon channel. Flows that occur below the Union Pacific Railroad, in the southern corner of the city, are accumulated in a 42 inch storm drain that flows directly into the Salinas River (City of Soledad 2010). The location of the existing storm drain pipes are illustrated in [Figure 5-1, Existing City Storm Drain System](#).

There are currently nine drainage areas in the city. The storm drain master plan update identifies existing conditions and areas of predicted flooding within the nine drainage areas during a ten-year storm event under existing conditions within the city limit. The plan area is located north of the city's Upper San Vicente, Central, and a portion of the Miravale drainage areas.

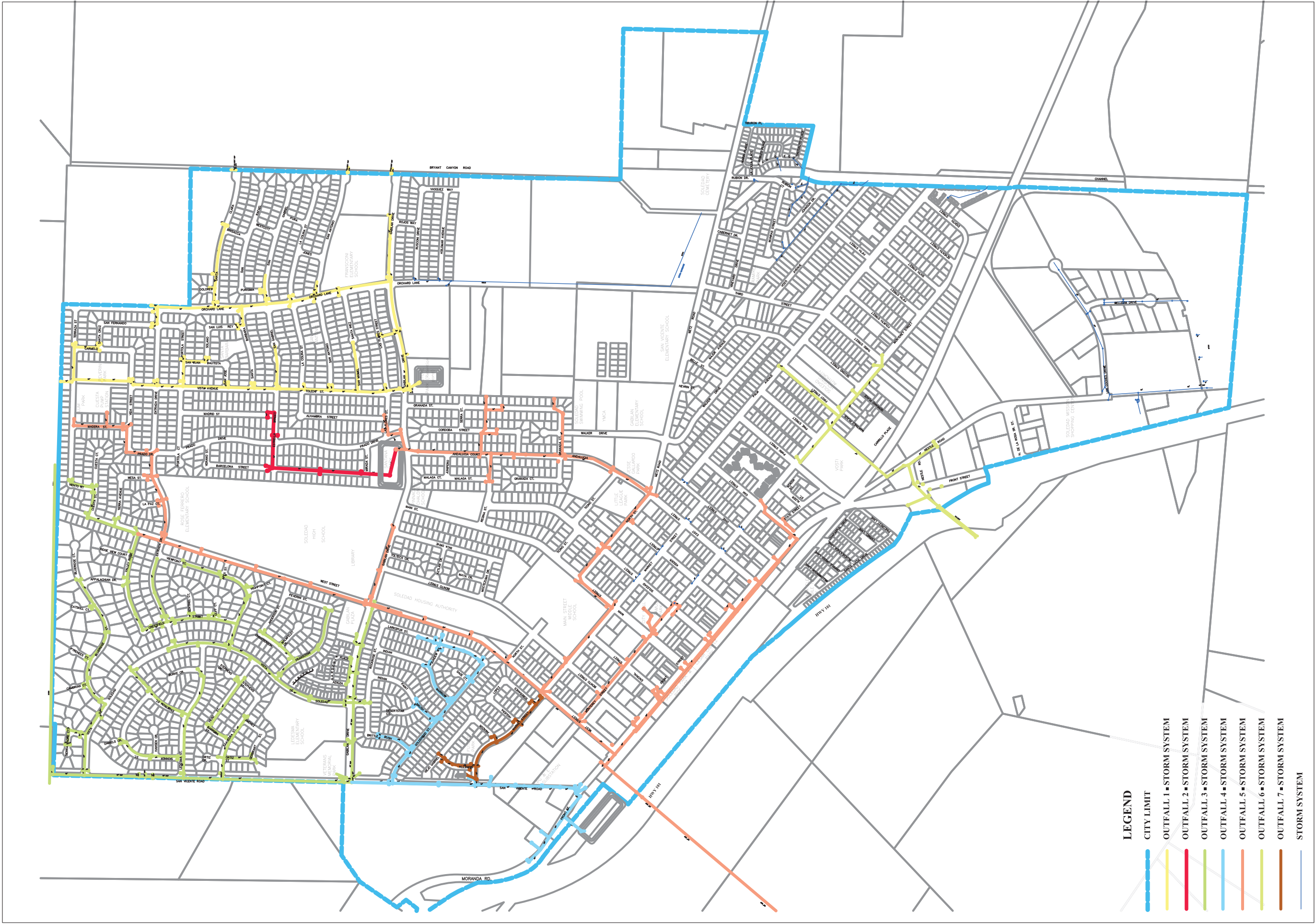


Figure 5-1

Existing City Storm Drain System

Miramonte Specific Plan - Plan for Services

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The Upper San Vicente drainage area is approximately 177 acres with flows to the southwest corner along San Vicente Road. The system consists of 88 manholes and storm drain inlets, the piping system and the Veterans Memorial Park detention basin. The storm drain master plan update identifies historic flooding along San Vicente from storm water volumes with high sediment loads north of the city. Minor flooding of less than six inches in depth is predicted at the existing storm drain facilities at the intersections of San Vicente Road with Gabilan Drive within the Upper San Vicente drainage area (City of Soledad 2015, Figure 4-2). Recommended improvements are identified in the storm drain master plan update Figure 4-3)

The Central drainage area is approximately 499 acres and flows to a 60-inch pipe at the southwest corner, which discharges to a retention basin at the wastewater treatment plant on Morisoli Road. The 2007 storm drain master plan and the 2015 storm drain master plan update report storm water surcharges during large storms that required securing manhole covers along West Street in the Central Drainage Area. According to the 2015 storm drain master plan, moderate (six inches to 12 inches in depth) to severe (greater than 12 inches in depth) is predicted during the ten-year event at several storm drains and manholes. The most severe flooding is predicted to occur in the system branches on Market Street, North Street, Andalucia Drive, and Monterey Street (City of Soledad 2015, Figure 4-6). Recommended improvements are identified in the storm drain master plan update Figure 4-7, and include replacement of Gabilan Drive pipes with 36-inch and 42-inch diameter pipes in Gabilan Drive and removal of the Miravale drainage area detention basin.

The Miravale drainage area is approximately 203 acres and drains to a retention basin at the southwest corner near the intersection of Gabilan Drive and Toledo Street. The storm drain master plan update identifies overtopping at the retention basin during large storm events, and predicts flooding at depths of less than six inches in three locations in the central portion of this drainage (City of Soledad 2015, Figure 4-10). Recommended improvements are construction of the Gabilan Drive improvement in the Central drainage area system before removing the Miravale retention basin.

Minor flooding along San Vicente Road is also identified in the lower San Vicente Drainage area at its intersections with Goldenrod Street, Market Street, Iris Place, and Lily Place. The Storm drain main line pipe on San Vicente Road decreases in size from 84 inches to 18 inches, which forces flows into the Veterans Memorial Park detention basin near Gabilan Drive and to the San Vicente and Market Street detention basin. Choke points where severe flooding is predicted are identified along Front Street and in a third catchment basin near the Union Pacific Railroad tracks south of Front Street. (City of Soledad 2015, Figure 4-4). Recommended improvements are identified in the storm drain master plan update Figure 4-5 and include increasing the depth of and providing a discharge from the southernmost catchment basin, before upsizing pipes to 84 inches on San Vicente Road between Market Street and Front Street.

5.3 Plan Area: Storm Drain Infrastructure

Storm water will be transported in a bio-swale and/or pipe system, which drains to the 15.1-acre designated drainage retention basin located in the southwest corner of the plan area, near San Vicente Road. It is possible that this facility may serve as a dual-use facility for recreational purposes, such as soccer or baseball. Bestor Engineers calculated that the retention volume for this basin is 35 acre feet (Patrick Ward, correspondence, May 5, 2017). The proposed linear park would serve as a drainage bio-swale leading to the retention basin, and will help percolate water back to the groundwater basin and filter pollutants (see [Figure 5-2, Plan Area Storm Drain System Layout](#)). The retention basin requires post-development storm water runoff to be captured within the plan area and percolated into the groundwater, thus not impacting the city's existing storm water system.

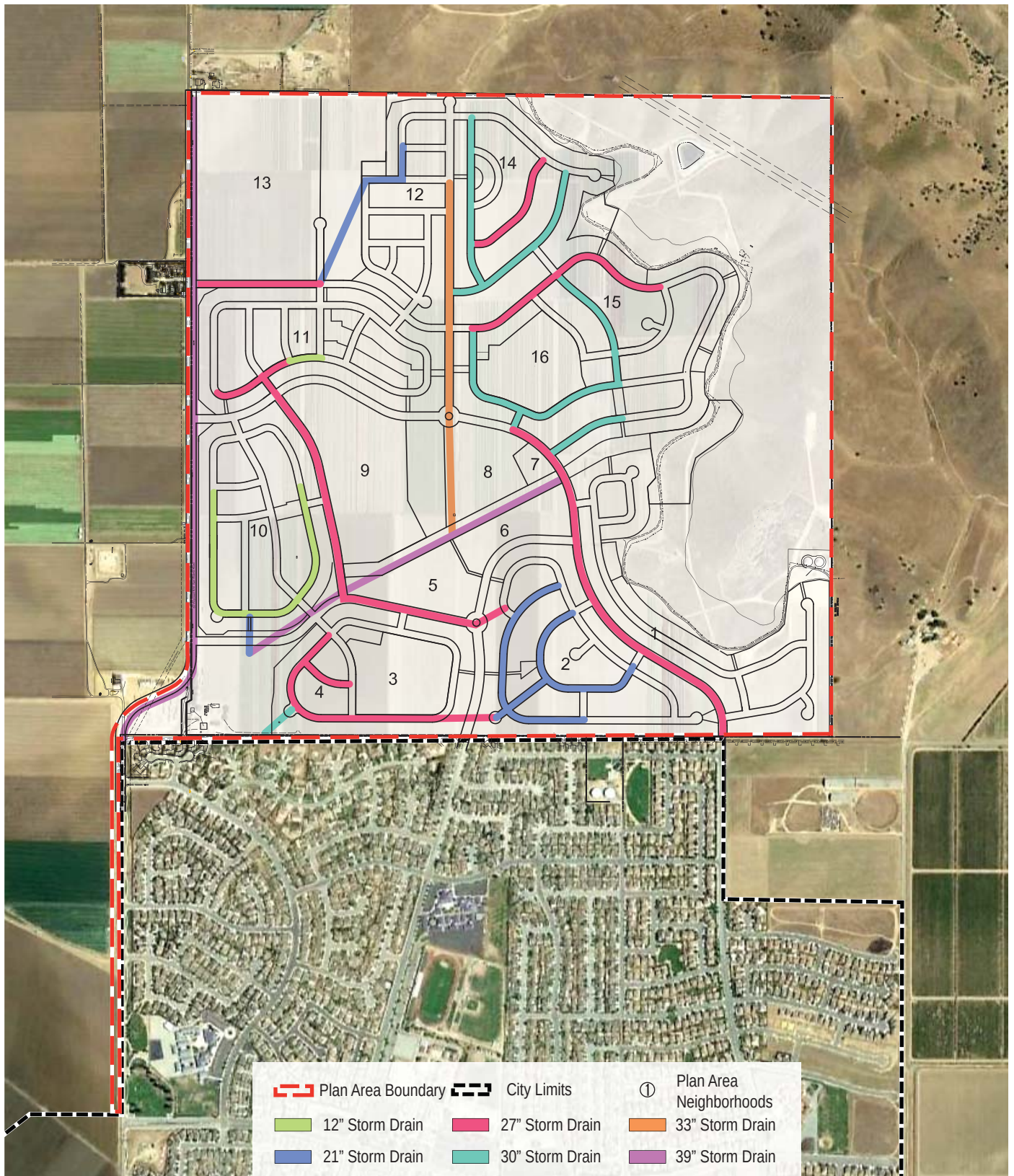


Storm water collection, conveyance, and storage/percolation facilities that will serve the plan area will need to be provided by the developer(s) that buildout the plan area. Current city municipal storm water facilities that are downstream from the project site do not have the capacity to withstand the increased runoff draining from development within the plan area (Donald Wilcox, email conversation, June 5, 2017). All proposed storm water facilities will be designed and constructed with capacity to capture 100-year storm flows and meet city and Regional Water Quality Control Board capacity and water quality requirements for post-construction runoff.



The project developer(s) will design, finance, and construct backbone storm water infrastructure necessary to retain all post-construction storm water runoff in the first phase of development and the storm drain infrastructure in each sub-area by phase as development proceeds. As a standard condition of approval, the city requires the development to incorporate infiltration-based systems to treat and retain the runoff associated with the 95th Percentile Storm. All runoff associated with storms larger than the 95th Percentile Storm may be directed to the linear park and retention basin. This approach complies with City requirements and the Post Construction Stormwater Management Requirements for Development Projects in the Central Coast Region. Should there be a storm runoff overflow from the plan area, pipes will





0 1,200 feet

Source: Google Earth 2016

Figure 5-2

Plan Area Storm Drain System Layout

Miramonte Specific Plan - Plan for Services

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connect with the existing Upper San Vicente drainage area, consistent with the pipe sizing and capacity improvements identified in the storm drain master plan update (City of Soledad 2015).

All infrastructure will be constructed by the developer(s) in accordance with city standards and would be in place prior to issuance of building permits for any structures, including paved roadways or parking areas. The applicant or developer(s) shall be responsible for the payment of required development impact fees for new facility construction and may participate in a reimbursement program per Municipal Code Chapter 14.06 for the construction of new storm drains and upgrades to the existing system. All storm drain system improvements will be dedicated to the city. Ongoing facility maintenance costs will be financed by the formation of or annexation into a Mello-Roos Community Facilities District or some other form of maintenance district.

5.4 Conclusion

The plan area includes the provision of storm drains, collection pipes, a drainage bio-swale within the linear park, a retention basin to capture post-development runoff, and other improvements to capture, retain, and percolate storm water within the plan area consistent with the requirements of the Central Coast Regional Water Quality Control Board.

All development impact fees applicable at the time of issuance of a building permit are required, but may be offset by capital improvements designed, funded, and constructed by the developer(s). The project developer(s) will design, finance, and construct storm water infrastructure using low impact development methods for capturing and percolating storm water runoff. The City of Soledad Public Works Department, along with the city's Water Quality Control Division, is in control of the management and preservation of the city's storm drain system (Regional Water Management Group 2012).



It is anticipated that the city will require a Miramonte Storm water Collection System Master Plan to determine how Miramonte storm water service will be provided and to ensure accurate design, capacity, and interconnection of infrastructure for storm water management in the City of Soledad.

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SOLID WASTE

6.1 Primary Information Sources

In addition to the primary sources listed in Section 1.0 Introduction, the following sources were used for this section:

The California Department of Resources, Recycling, and Recovery (CalRecycle) provides statistics and best management practices for the state's recycle and waste management programs (CalRecycle 2017)

The City of Soledad General Plan and Wastewater Treatment and Disposal Master Plan Final Environmental Impact Report (City of Soledad General Plan EIR) evaluates of the city's General Plan along with the Wastewater Treatment and Disposal Master Plan as an attachment to the mitigation methods called out in the EIR. (City of Soledad 2005a)

The 2015-2016 Annual Report provides the breakdown in disposal from local municipalities that use the landfills owned by the Salinas Valley Solid Waste Authority (Salinas Valley Solid Waste Authority 2017).

The City of Soledad's Solid Waste Operations page on their website provides information about the companies responsible for the collection and disposal needs of the city (City of Soledad 2017b).



6.2 Existing City Conditions

The City of Soledad contracts all residential and commercial solid waste collections of trash, recycle, green-waste, etc. with Tri Cities Disposal and Recycling (TCDR) and all disposals with Salinas Valley Solid Waste Authority (SVSWA). All facilities constructed within city limits must have their collection method approved by TCDR prior to plan approval. All entities must fully comply with all state mandates as administered by California Department of Resources Recycling and Recovery (CalRecycle), including upcoming requirements for commercial food-waste and organics recycling. Rates for both collection and disposal are pass-through as they are set by the TCDR Joint Powers Agency and the

SVSWA Board of Directors. The city collects a Franchise Fee for both disposal and collections to administer both contracts including providing billing and payment collection services for both services (Donald Wilcox, email message, March 13, 2018).

The project area is within the jurisdiction of the SVSWA, which also provides solid waste disposal services to the cities of Gonzales, Greenfield, King City, Salinas, and the unincorporated areas of Monterey County in the Salinas Valley Region. Currently, the SVSWA owns three landfills and a transfer station, and oversees the contract operation of these facilities. The SVSWA is also responsible for overseeing future landfill siting or expansion to meet the area's long-term solid waste disposal needs (City of Soledad 2017b).

As identified in the City of Soledad General Plan EIR, solid waste is primarily disposed of at the Johnson Canyon facility (see [Figure 6-1, Location and Transport Route of Johnson Canyon Landfill from Plan Area](#)), which is located approximately 12 miles northeast of the City of Soledad (City of Soledad 2005a). According to a 2015-2016 report conducted by the SVSWA, 11,009 tons of solid waste was disposed in the landfill by the city (Salinas Valley Solid Waste Authority 2017).

According to Cesar Zuñiga, the SVSWA Operations Manager and Assistant General Manager, the Johnson Canyon Landfill has an estimated closure of June 2055. Zuñiga also states that the Johnson Canyon facility receives between 170,000 to 185,000 tons of refuse annually and has a remaining capacity of approximately 10,275,000 cubic yards, or 13,871,250 tons (Cesar Zuñiga, email message, July 19, 2017).

The SVSWA and the city promote the reuse of solid waste for source reduction, recycling, composting and environmentally-safe transformation of wastes. Moreover, SVSWA and the city provide green waste and recycling services for residential and commercial uses.

6.3 Plan Area: Solid Waste Collection

The SVSWA assumes the responsibility for the solid waste facilities and disposal needs in the City of Soledad. The solid waste generated from the city will continue being disposed at the Johnson Canyon Landfill in Gonzales, as well as the Foothill Sanitary Landfill in Linden and the Monterey Peninsula Landfill in Marina, as needed (City of Soledad 2005a). While the SVSWA is responsible for the disposal needs of the plan area, the TCDR would be responsible for the collection of solid waste generated from the plan area.

According to the information recorded in 2012 by CalRecycle, the population of Soledad produces an average of 1.9 pounds of solid waste per person per day (PPD) (CalRecycle 2017). Future development of the plan area will consist of 2,392 residential units in total, with an approximate population of 10,950 people. This increase in population would generate about 20,805 pounds per day, or about 3,797 tons per year of solid waste from the plan area. When combining the maximum amount of 185,000 tons of solid waste received annually at the Johnson Canyon facility with the 3,797 tons



Source: Google Earth 2016

Figure 6-1



Location of Johnson Canyon Landfill and Transportation Route from Plan Area

Miramonte Specific Plan - Plan for Services

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of solid waste projected to annually be generated by the plan area, the total solid waste the Johnson Canyon facility will receive annually at buildout is approximately 188,797 tons. With the current capacity of 13,871,250 tons, the Johnson Canyon Landfill will have the availability to serve the disposal needs of the plan area.

6.4 Conclusion

Waste collection within the plan area will be handled by the TCDR, while disposal of this waste will be at the SVSWA Johnson Canyon Landfill. The TCDR has the ability to collect waste from the plan area. The Johnson Canyon Landfill has sufficient capacity to serve the solid waste disposal needs for buildout development of the plan area.



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FIRE SERVICES

7.1 Primary Information Sources

In addition to the primary sources listed in Section 1.0 Introduction, the following sources were used for this section:

The Public Resources Code, Section 4291 provides the legislative information for forest, forestry and range, and forage lands in the state of California (California Legislative Information 2010).

The source entitled About ISO provides information about property/casualty insurance risk. ISO collects information that is then used towards an assessment program. The assessments place special importance on mitigation of losses from natural disasters (ISO Mitigation 2017).

The State Response Area: Viewer Launch illustrated where the CALFire service area overlaid with the City of Soledad's Fire Department. (California Department of Forestry and Fire Protection 2017).

7.2 Existing City Conditions

Fire protection service within the City of Soledad and the surrounding rural areas is provided by the City of Soledad Fire Department and the California Department of Forestry and Fire Protection ("CALFire"). The closest fire station is located on 525 Monterey Street in Soledad. CALFire began phasing in its administration of the department in October 2011. Through its contract with the city and Mission Soledad Rural Fire Protection District, CALFire provides the management and personnel needed to provide fire protection and emergency medical services to the city and the surrounding Mission Soledad Rural Fire Protection District. See [Figure 7-1, Current Fire Responsibility Boundaries for City of Soledad and Plan Area](#) for current fire responsibility boundaries of the city, Mission Soledad Rural Fire Protection District, and CALFire. The city, with the District's financial support, continues to provide the fire station, apparatus, and equipment.



Based on the City of Soledad General Plan, the city tries to maintain an Insurance Service Organization rating of 4 or better. The Insurance Service Organization rating is an evaluation of municipal fire-protection efforts in areas around the United States and is based off of a numbering scale between 1 and 10, 10 being the worst. The current rating for the City of Soledad is 4 while the Mission Soledad Rural Fire Protection District received a 9/10 (LAFCO 2012).

The goal response time for fire emergencies over 90 percent of the city is 5 minutes or less. (City of Soledad 2005a). LAFCO calculated that within the fiscal year of 2010-2011, there were 1,611 total calls for service. Only 6 percent of these calls were for fires, while 77 percent were for medical emergency (LAFCO 2012).

7.3 Plan Area: Fire Services

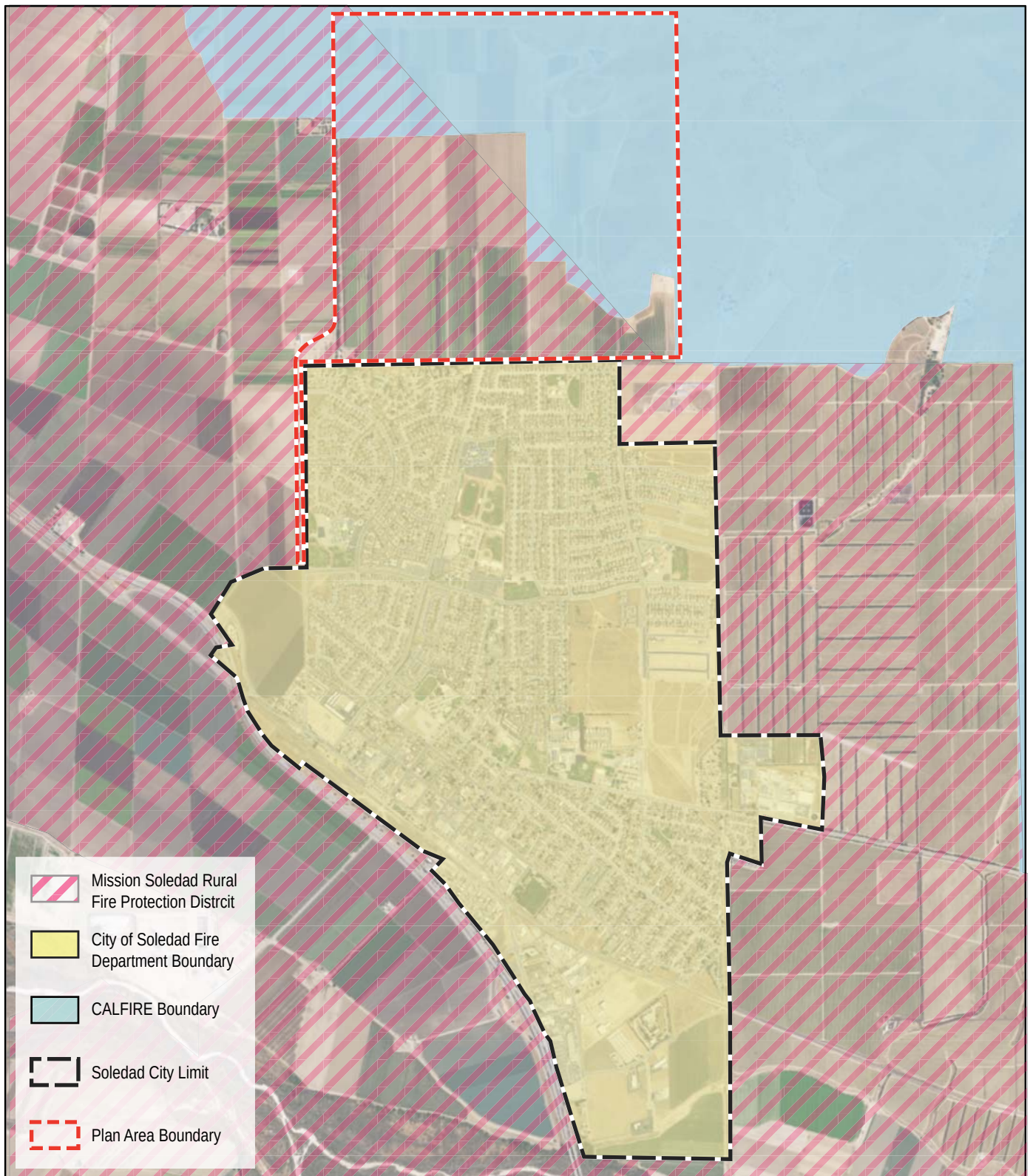
Buildout of the plan area would increase demand on the City of Soledad Fire Department, the Mission Soledad Fire Protection District, and CALFire. The current service area for CALFire overlaps the north-east half of the plan area (California Department of Forestry and Fire Protection 2017) while the southwest half of the plan area is currently the responsibility of the Mission Soledad Fire Protection District (LAFCO 2012). Refer back to Figure 7-1 for current boundary responsibilities. The City of Soledad Fire Department area of responsibility will be expanded to include the plan area and potentially adjacent streets at buildout. Furthermore, with this expansion, the call volume will increase. Supplementary apparatus, special equipment, or specialized training might be necessary to assist residents of the senior housing development. To better serve this region, an expansion of the fire department facilities will be required along with additional staff.



A 1.5-acre public safety (police/fire) substation site in the plan area will be dedicated to the city. The two-acre site will be located approximately 1.6 miles north of the present city fire station on Monterey Street in downtown Soledad (see [Figure 7-2, Existing and Proposed Fire Stations](#)). The new public safety facility property to be dedicated to the city is located at the approximate center of the plan area and should greatly decrease emergency response time. A community facilities district and/or assessment district will be necessary to provide capital improvements, operations, and long-term maintenance of this public safety facility.

7.4 Conclusion

Upon annexation, the city would be responsible for fire protection services for the plan area, while the current mutual aid agreements remain in place. Those mutual aid assessments would need to be expanded to include the plan area, as well as the contract with CALFire to assist the city with fire services. The proposed development of this plan area, consistent with the Miramonte Specific Plan and vesting tentative map, would result in an increase in service demand with the addition of approximately



0 2,200 feet

Source: ESRI 2017, Monterey County GIS Team, LAFCO Monterey County 2011

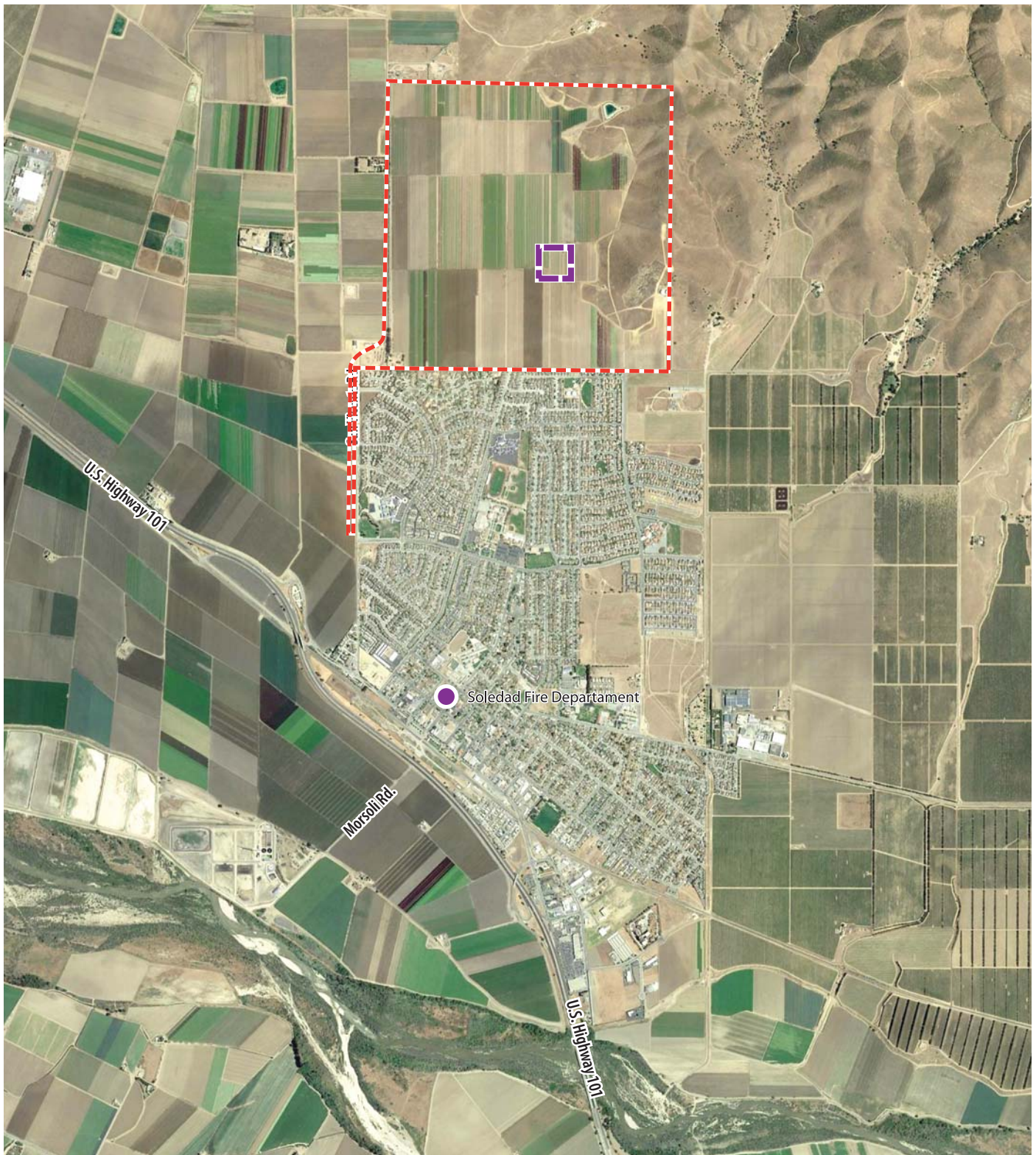
Figure 7-1

Current Fire Responsibility Boundaries for City of Soledad and Plan Area

Miramonte Specific Plan - Plan for Services



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--- Plan Area Boundary
 --- Proposed Fire Department Sub-station Site
 ● Existing Fire Department



Source: Google Earth 2017

Figure 7-2

Existing and Proposed Fire Stations

Miramonte Specific Plan - Plan for Services

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10,950 people. The developer(s) will be required to notify new homeowners of Section 4291 of the California Public Resources Code requiring that property owners and/or occupants maintain a defensible space of 100 feet from each side of a structure to protect against a fire (California Legislative Information 2010).

The developer(s) of the plan area will also be required to participate in a financing district to provide funds to build, operate, and maintain a fire sub-station on the dedicated site within the plan area. Finally, all development impact fees applicable at the time of issuance of a building permit are required, but may be offset by capital improvements designed, funded, and constructed by the developer(s).

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POLICE SERVICES

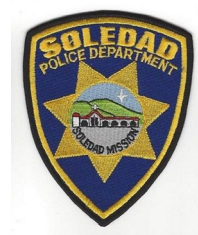
8.1 Primary Information Sources

In addition to the primary sources listed in Section 1.0 Introduction, the following sources were used for this section:

The *City of Soledad Facilities Master Plan* discusses the program needs for each facility within the city limits. The document also goes into detail about what is required before development of new facilities can proceed (City of Soledad 2010).

8.2 Existing City Conditions

The City of Soledad Police Department serves within the jurisdiction of the City of Soledad and is located at 236 Main Street. The city is currently staffed with 18 sworn officers and 4 non-sworn personnel according to the Police Commander in Soledad, Damon Wasson. The city participates in a mutual aid agreement with the cities of Gonzales, Greenfield, King City and the Monterey County Sheriff's Department (Damon Wasson, telephone interview, June 1, 2017). The city also provides the budget for the police services comprising of vehicles, personnel, and essential equipment (City of Soledad Planning Department 2005a).



8.3 Plan Area: Police Services

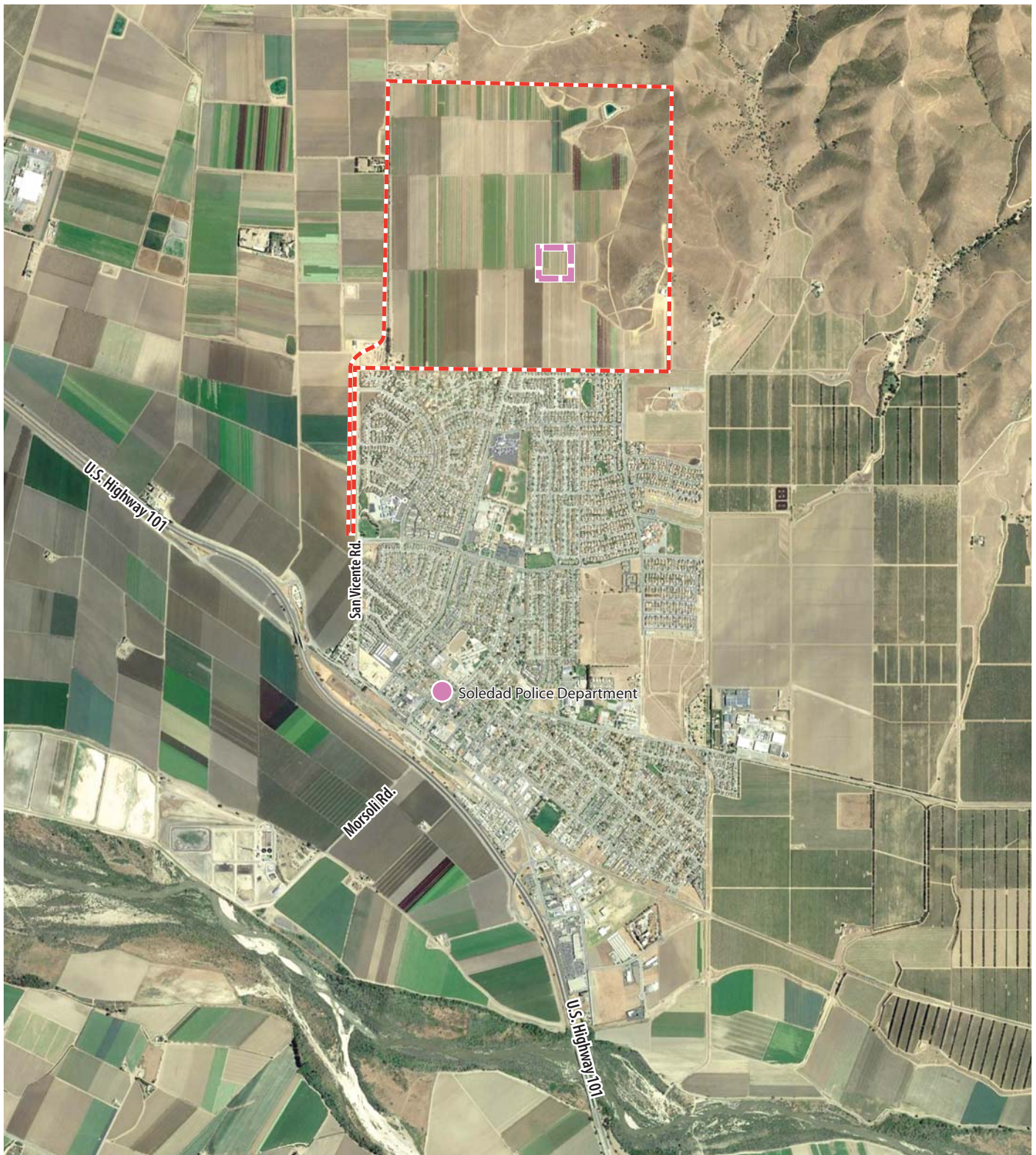
The City of Soledad General Plan requires new development to provide funding to meet the minimum requirements for the following police protection standards: maintaining a minimum ratio of one police officer per 1,000 residents and to maintain an emergency response time of five minutes (City of Soledad Planning Department 2005a). The plan area at buildout would require approximately 11 new police officers to serve an anticipated population of approximately 10,950 persons to meet this required standard. However, the Facilities Master Plan states that the current facility cannot support the amount of employees the city already possesses (City of Soledad 2010).



As a part of the buildout of the plan area, a police substation opportunity site is located approximately 1.6 miles north of the current city police station in downtown Soledad (see [Figure 8-1, Existing and Proposed Police Stations](#)). The substation will be located approximately in the center of the plan area, and its construction and operations will be funded through Mello-Roos Community Facilities District revenues, or benefit assessment district. With the addition of this new substation, Wasson believes that a total of 25 police officers (18 existing sworn officers and 7 new sworn officers) would be ideal for the City of Soledad. This would allow their department to provide three officers and one sergeant per shift (Damon Wasson, telephone interview, June 1, 2017). The City of Soledad Police Department area of responsibility will be expanded to include the plan area and potentially adjacent streets. Additionally, with this expansion, the call volume will increase. However, since the new police facility will be centrally located within the plan area, response times within the plan area and in adjacent areas will be reduced.

8.4 Conclusion

Upon annexation, the city would continue the primary responsibility of police protection services for the plan area, while the current mutual aid agreements remain in place. Future development of the plan area, consistent with the Miramonte Specific Plan and vesting tentative map, would result in an increase in service demand with the addition of approximately 10,950 people. The developer(s) of the plan area will be required to participate in a financing district to provide funds to build, operate, and maintain a police sub-station on the dedicated site within the plan area. Additionally, all development impact fees applicable at the time of issuance of a building permit are required, but may be offset by capital improvements designed, funded, and constructed by the developer(s).



--- Plan Area Boundary
 --- Proposed Police Department Sub-station Site
 ● Existing Police Department



Source: Google Earth 2017

Figure 8-1

Existing and Proposed Police Stations

Miramonte Specific Plan - Plan for Services

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9.1 Primary Information Sources

In addition to the primary sources listed in Section 1.0 Introduction, the following sources were used for this section:

The *Monterey County Free Libraries* website gives information on where libraries are located, what programs are available, and what the County libraries can offer the public (Monterey County Free Libraries 2017).

9.2 Existing City Conditions

The Monterey County Free Libraries (MCFL) network supports Soledad residents with a branch at 401 Gabilan Drive, approximately ¼ mile south of the plan area. The MCFL is considered a less-than-countywide, dependent special district because there are a few cities within the county that operate their



own municipal libraries. The MCFL funds are largely from a portion of the property tax that is collected within its service area (Monterey County Free Libraries 2017).

The Soledad branch has many services including: aquarium pass program, library by mail, and tutoring (Monterey County Free Libraries 2017). The Soledad Branch has 4 full-time employees and 2 part-time employees year-round, but utilizes volunteers during the busier months of May-August

(Denise Campos, telephone interview, June 6, 2017). The County library system offers a service called “Branchlet” within the City of Soledad, which involves mailboxes located in multiple locations where people can select a book for free and replace it with a book of their own (Jayanti Addleman, telephone interview, June 5, 2017). In Soledad, these branchlets are located at: CHISPA Market Street Townhomes (110 Market Street) and Monterey County Behavioral Health Clinic (359 Gabilan Drive) (see [Figure 9-1, Existing Soledad Branch and Branchlets](#)). There are other branchlets located within the Salinas Valley. These branchlet locations in Monterey County can be found at <http://www.co.monterey.ca.us/library/branchlets.html>.



9.3 Plan Area: Library Services

The demand of the current library facility would increase with the development buildout of the plan area, raising the population in the city by approximately 10,950 people. Jayanti Addleman, Monterey County Library Director, suggests investing money into more staff for the Soledad branch so they can continue to provide appropriate levels of service to the public (Jayanti Addleman, telephone interview, June 5, 2017).

Plan area development will be required to reevaluate library service levels due to current demand already stretching thin the staffing levels. Development within the plan area shall be required to pay development impact fees to support the libraries. In addition, it may be appropriate to provide County library services at or near the two designated school sites and/or the commercial site within the plan area (see [Figure 10-1, Existing and Proposed School Facilities](#), in the upcoming School Facilities section). This should be considered by the city as part of a development agreement, improvement plans, and prior to approving final map(s), along with funding mechanisms to provide additional capital facilities, on-going operations, and maintenance.

9.4 Conclusion

Upon annexation of the plan area to the city, consistent with the Miramonte Specific Plan and vesting tentative map, development would result in an increase in service demand with the growth in population. As a result of the current depletion of staffing levels, the city will be required to provide support for the library services in the form of development impact fees paid by project developer(s) and perhaps other funding mechanisms to provide additional capital facilities, on-going operations, and maintenance. All development impact fees applicable at the time of issuance of a building permit are required, but may be offset by capital improvements designed, funded, and constructed by the developer(s).



--- Plan Area Boundary (Partial)
 --- City Limits
 ● Branch
 ● Branchlets



Source: Google Earth 2016

Figure 9-1

Existing Soledad Branch and Branchlets

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SCHOOL FACILITIES

10.1 Primary Information Sources

There were no additional sources from Section 1.0 Introduction.

10.2 Existing City Conditions

The plan area is located within the Soledad Unified School District, which provides service to 4,000-4,600 students in the surrounding area. There are currently five elementary schools, one middle school, and one high school in the area along with a continuing education facility adjacent to the current high school. The city provides a few pre-school programs at the elementary and middle schools. The District provides a continuing education program at their Pinnacles Facility, located near the high school at 690 Main Street in Soledad (Louis Vallejo, telephone interview, July 12, 2017), and also lends their elementary school facilities to Monterey County for programs they administer that are referred to as “Migrant Programs.” The city also runs their own extensive after-school program for children each day until 6pm (Louis Vallejo, phone interview, June 6, 2017).



10.3 Plan Area: School Facilities

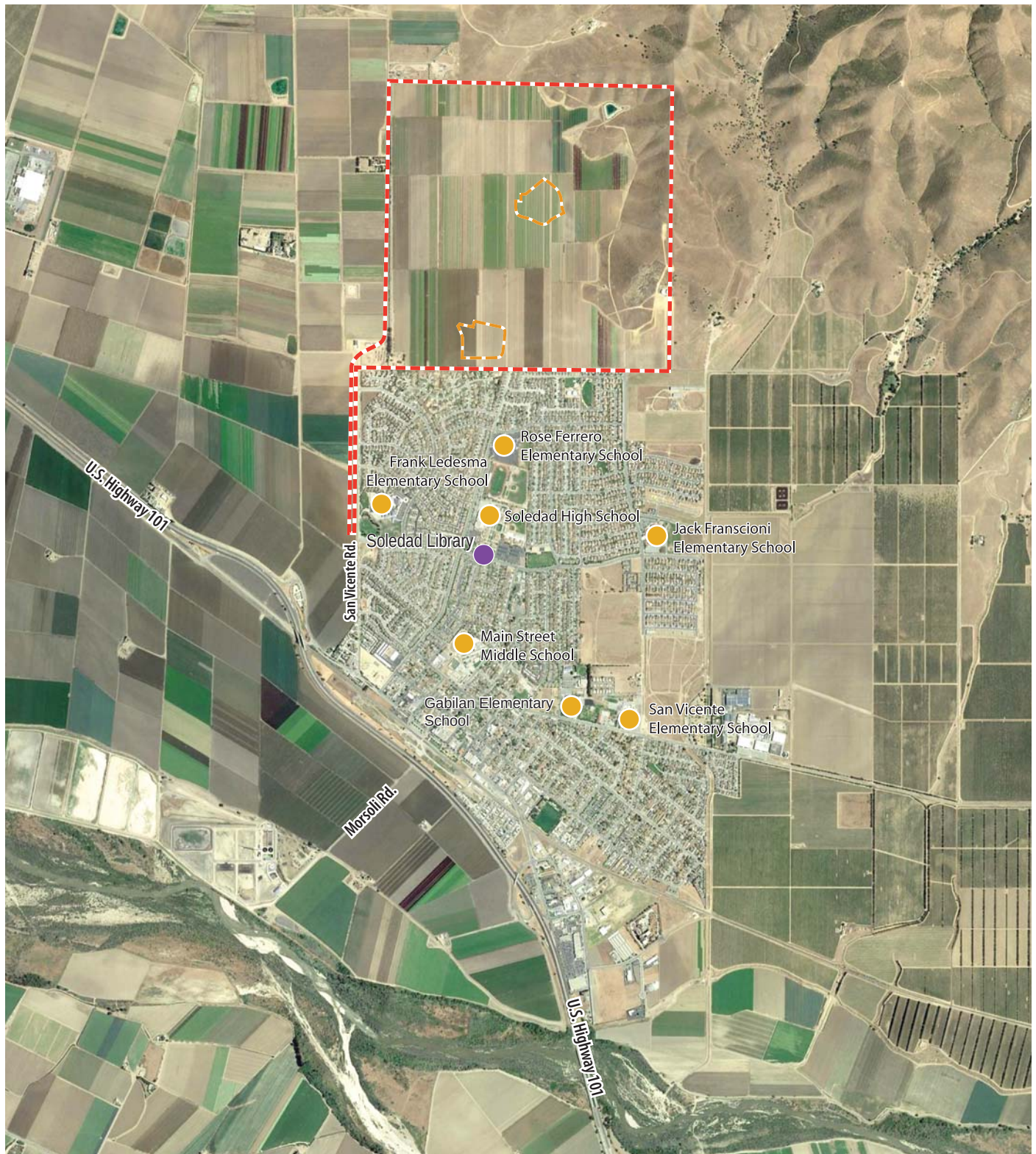
Louis Vallejo, the city’s Director of Maintenance, Operations, Transportation, and Facilities, indicated that the school district is already at capacity with their current facilities and will need additional facilities to absorb the increase in population from development of the plan area. The school district has been working with the city for months on a Facilities Master Plan to determine the appropriate amount of funding needed to absorb current and future community growth (Louis Vallejo, telephone interview, June 6, 2017).

The Miramonte Specific Plan and vesting tentative map provide two designated elementary school sites (see [Figure 10-1, Existing and Proposed School Facilities](#)). A total of 22 acres will be dedicated to the Soledad Unified School District for future development of the schools. Both elementary school sites are located close to collector streets with school traffic passing as few houses as possible.

The applicant and/or developer(s) will provide an offer to dedicate the designated school sites. In addition to the dedication of land, the developer(s) will pay school impact fees as prescribed by the law in effect at the time of payment, unless otherwise dictated by a development agreement or permit conditions. Additionally, at least two acres within the Residential Study Area will be dedicated to the Soledad Unified School District for the Soledad High School FFA program.

10.4 Conclusion

Future development of the plan area, consistent with the Miramonte Specific Plan and vesting tentative map, will increase the number of students within the Soledad Unified School District. The developer(s) within the plan area will be responsible for the dedication of two school sites and the payment of facility impact fees to accommodate the growth in students from the development of the plan area. Agreement shall be established between the developer(s) and the Soledad Unified School District that establishes the timing of the school site dedication. Additionally, all development impact fees applicable at the time of issuance of a building permit are required, but may be offset by capital improvements designed, funded, and constructed by the developer(s).



--- Plan Area Boundary
 --- Proposed School Site
 ● Existing Schools
 ● Soledad Library



Source: Google Earth 2017

Figure 10-1

Existing and Proposed School Facilities

Miramonte Specific Plan - Plan for Services

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PARK AND RECREATION FACILITIES

11.1 Primary Information Sources

There were no additional sources from Section 1.0 Introduction.

11.2 Existing City Conditions

The City of Soledad General Plan states that the parks-to-population ratio goal is 5 acres per 1,000 residents. Brent Slama, Community and Economic Development Director for the City of Soledad, states that the city is strongly deficient of this ratio and wants to see as much park space as possible. The city has dedicated 31.5 acres of land to open space and recreational use, which encompasses a total of 13 parks the city controls (see [Figure 11-1, Existing City Parks](#)). There is a large demand for more soccer and baseball fields according to Donald Wilcox, City of Soledad Public Works Director (email conversation, June 5, 2017)

11.3 Plan Area: Parks and Recreation

The plan area has a designation for open space covering approximately 140.4 acres to the north and east of the proposed residential lots and above the 400-foot contour line on the east side of the plan area. This open space is intended for passive recreation, such as walking trails, educational plaques, interpretive signage, and vista points. Included in this acreage, or adjacent to this acreage, a designated area for public parking needs to be designed, financed, and constructed by the Miramonte Specific Plan development(s) to accommodate those that choose to visit the open space area. A designated location for public parking will reduce the disruptive use of neighborhood streets as parking locations. Additionally, there will be at least two emergency vehicle access points into the open space area. At the discretion of the city, the two locations of emergency vehicle access shall be located on the northern-most and southern-most ends of the open space areas, and/or from the linear park entrance. Pedestrian access to the open space will be provided at about eight other locations throughout the residential areas on the eastern end of the plan area, as identified on [Figure 2-1, Specific Plan Map](#).

Below the 400-foot contour and in the developable portion of the plan area, there are two major park corridors that cross over and connect the plan area. There is a linear park that runs east and west and connects high elevation open space areas with the commercial, residential, and park areas below and a

second major community park corridor that begins at the linear park and extends northward toward the Residential Study Area. Both of these park corridors are centrally located within the plan area and are available to residential areas, the commercial area, the open space area, the schools, and the Residential Study Area. Furthermore, there will be multiple pocket parks in the plan area located throughout the designated residential neighborhoods. These pocket parks may be combined to create larger neighborhood parks or combined with nearby community parks to create larger park spaces. See [Figure 11-2, Plan Area Open Space and Parks](#), for a visual of the plan area's open space and parks.

The plan area also includes a 15.1 acre joint-use designated area at the southwest corner of the site. This designation is for storm water management, more specifically a retention basin, as well as recreational activity. This area has been designed in the lower elevation area of the proposed site to collect storm water run-off during periods of rain. The basin will be constructed with sloping sides and low fencing, while simultaneously providing sufficient access for recreational uses. Sufficient parking will be required along the park's edge, although fully within the dedicated acreage, to accommodate the intended recreational uses within the facility and reduce the use of neighborhood streets as parking locations. There will also be access to trails around the edges of the basin and connection to the linear park.

The plan area will also incorporate a network of different passageways for pedestrians and bicyclists. There will be welcoming public spaces when considering sidewalks, street trees, landscaping, and building placement. The strategy for internal local streets is to have them feed into collector streets to keep traffic volumes low in the residential areas while providing a different network of trails for pedestrians and bicyclists.

To meet the general plan parkland goal of five acres of parkland for every 1,000 residents, the plan area would need to provide a total of 55 acres of parkland, due to the projected population of approximately 10,950 people. The plan area provides 56 acres of parkland and 140.4 acres of passive recreation, for a total of 196.4 acres of parkland and open space. Operations and maintenance of these parks shall be discussed between the city and the developer(s), so as to comply with the desires and/or needs of the city. The use of a Miramonte Specific Plan Area CFD is an appropriate financing mechanism to assist with the parks' design, construction, operations, and maintenance.

11.4 Conclusion

Future development of the plan area, consistent with the Miramonte Specific Plan and vesting tentative map, would result in an increased demand for park facilities within the City of Soledad. However, the plan area exceeds the city's general plan goal of 55 acres of parkland.

The developer(s) of the plan area will be responsible for dedication of the parkland designated in the specific plan, as well as design, finance, and construction of the park areas and public parking for each park location prior to the completion of the phase the park is located within. The open space designations will remain in ownership with the project developer(s) or some other entity; however, there shall be an open space conservation easement over these designated lands specifying the types



● Existing Parks - - - - - Plan Area Boundary (Partial)



0 2,000 feet

Source: AKEL Engineering Group 2016 , Google Earth 2016

Figure 11-1

Existing Parks



Miramonte Specific Plan - Plan for Services

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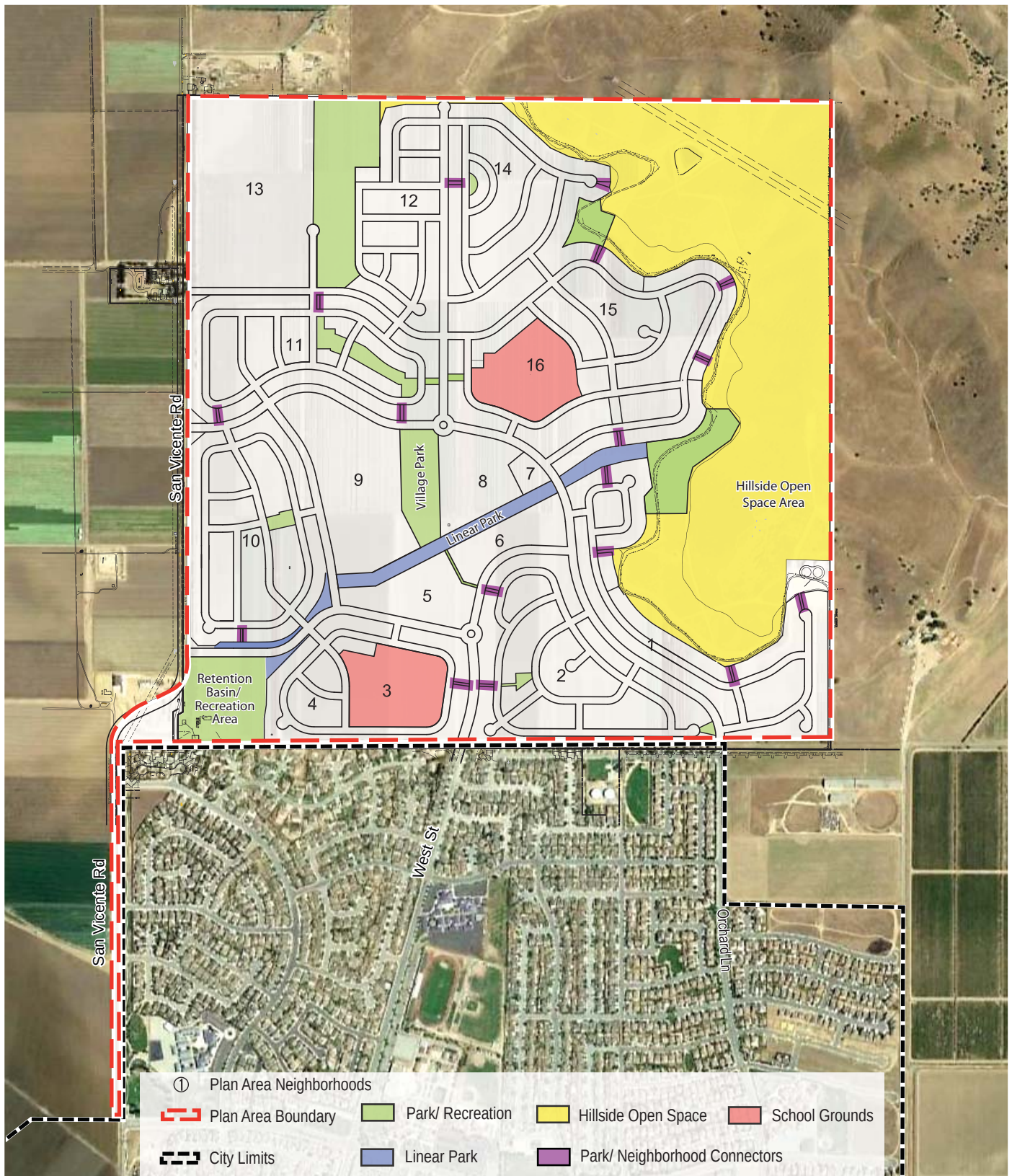


Figure 11-2

Plan Area Open Space and Parks

Miramonte Specific Plan - Plan for Services

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of uses for these areas, which shall include passive recreation. Other uses, in addition to passive recreation, that may be appropriate within the open space conservation easement are infrastructure facilities, alternative energy, a clubhouse serving the residential neighborhoods and the community, and agricultural grazing. Additionally, the developer(s) will be required to include emergency vehicle access to the open space area in at least two locations and public parking to increase pedestrian access to this area without disturbing neighborhoods or using street parking. All development impact fees applicable at the time of issuance of a building permit are required, but may be offset by capital improvements designed, funded, and constructed by the developer(s).

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CEMETERY DISTRICT

12.1 Primary Information Sources

In addition to the primary sources listed in Section 1.0 Introduction, the following sources were used for this section:

The 2015 Municipal Service Review and Sphere of Influence Study of Cemetery Districts in Monterey County Public Review Draft, which provides information on the services and boundaries of the Soledad Cemetery District (LAFCO 2015b).

12.2 Existing City Conditions

The City of Soledad Cemetery District was formed on June 14, 1937 and has a total area of 209.7 square miles, serving the southern portion of the Salinas Valley. The Cemetery District maintains one cemetery within the city, located at 1171 Metz Road, and is estimated to have a remaining 20 years of burial capacity left (LAFCO 2015b).

With a 66.5 square mile Sphere of Influence, the Cemetery District contains one groundskeeper and two part-time maintenance workers. This district shares the contractual services of a general manager with the adjacent Gonzales Cemetery District. According to the 2015 Municipal Service Review, the Cemetery District has no plans for expansion of its Sphere of Influence or annexation of any section of its existing Sphere due to the lack of financial incentive to expand and proximity of adjacent district boundaries (LAFCO 2015b).

12.3 Plan Area: Cemetery District

With the development of the plan area, there may be an increase in use of the only cemetery within the city's boundaries. However, this growth has been anticipated by the Cemetery District Board of Trustees. The Soledad Cemetery District is currently offering acceptable and effective service and is expected to sufficiently meet the future demands for the next 20 years (LAFCO 2015b).

12.4 Conclusion

Future development of the plan area, consistent with the Miramonte Specific Plan and vesting tentative map, will increase the demand in use and operation of the city's cemetery. Future developer(s) of the plan area will be responsible for any fees required to support the Cemetery District to offset the additional demand from the buildout of the Miramonte Specific Plan Area. Additionally, the Cemetery District operations and maintenance costs, to support the buildout of the Miramonte Specific Plan Area, could be included in a CFD to support the long-term operations and maintenance of the District.

SOURCES

- Applied Development Economics, Inc. September 2017. *Fiscal Impact Analysis of the Miramonte Specific Plan*. Walnut Creek, CA.
- Addleman, Jayanti, Library Director, Monterey County. Telephone interview with consultant, 5 June 2017.
- Agha, Nader, project applicant, Miramonte Specific Plan. Telephone conversation with consultant, 7 June 2017.
- AKEL Engineering Group, Inc. June 2016. *City of Soledad 2015 Urban Water Management Plan*. Fresno, CA.
- AKEL Engineering Group, Inc. September 2017. *Water Supply Assessment for the Miramonte Specific Plan*. Fresno, CA.
- Akel Tony, Principal, AKEL Engineering Group, Inc. Letter to Sally Rideout, subject: Miramonte Specific Plan-Water Supply Assessment, dated 21 June 2017.
- Bestor Engineers, Inc. 2017. *Miramonte Subdivision Vesting Tentative Map*. Monterey, CA.
- Brown and Caldwell. 2014. *State of the Salinas River Groundwater Basin Report*; Accessed July 5, 2017. http://www.landwatch.org/pages/issuesactions/water/StateoftheBasin_ES_20141210.pdf
- California Department of Forestry and Fire Protection. “State Response Area: Viewer Launch.” Accessed June 13, 2017. http://www.fire.ca.gov/firepreventionfee/srviewer_launch
- California Department of Resources Recycling and Recovery (CalRecycle). “Soledad Per Capita Disposal Rate Trends.” Accessed on June 6, 2017. <http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=JurisdictionID%3d500%26ReportName%3dDPGraphPopEmpNumbers%26ShowParameters%3dfalse%26AllowNullParameters%3dFalse>
- California Legislative Information. 2010. *Public Resources Code, Section 4291*; Accessed June 5, 2017. http://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=4291.
- Campos, Denise, Librarian, City of Soledad. Telephone interview with consultant, 6 June 2017.
- City of Soledad. February 2010. Storm Water Management Plan. Soledad, CA.
- . September 2005a. City of Soledad General Plan and Wastewater Treatment and Disposal Master Plan Final Environmental Impact Report. Soledad, CA.
- . December 2005b. Soledad Water Master Plan. Soledad, CA.

- . March 2006. Long-Term Wastewater Management Plan. Soledad, CA.
- . April 2010. City of Soledad Public Facilities Master Plan. Soledad, CA.
- . May 2015. Storm Drain Master Plan Update. Soledad, CA.
- . June 2016. City of Soledad 2015 Urban Water Management Plan. Soledad, CA.
- . “Annual Water Quality Report Water Testing Performed in 2016.” Last modified June 13, 2017a. <http://12.236.106.94/weblink/0/edoc/42550/2016%20Water%20Quality%20Report%20dated%20June%202017.pdf>
- . “Solid Waste Operations.” Accessed August 3, 2017b. <http://www.ci.soledad.ca.us/index.aspx?NID=243>
- City of Soledad Planning Department. September 2005a. *City of Soledad General Plan*. Soledad, CA.
- . September 2005b. *Final Environmental Impact Report for the City of Soledad General Plan*. Soledad, CA.
- . August 2013. *8th and Monterey Street Multi-Family Residential General Plan and Zoning Amendment Project*. Soledad, CA.
- City of Soledad Public Works Department. May 2015. *Storm Drain Master Plan Update*. Soledad, CA.
- Denise Duff & Associates. 2008. *Environmental Impact Report for the Miravale Phase III Specific Plan*. Monterey, CA.
- ISO Mitigation. “About ISO.” Accessed June 13, 2017. <https://www.isomitigation.com/about-us/about-iso.html>
- Larson, Amy. 2015. *KSBW: Monterey County supervisors approve farmworker housing in Spreckels*. Monterey, CA.
- Lepore, Robert and Mike Nunley, PE, MKN & Associates. Letter to Frank Lopez, subject: City of Soledad Existing and Future Water Demand Analysis, dated 13 July 2016.
- Local Agency Formation Commission of Monterey County. December 2015a. 2015 Municipal Service Review and Sphere of Influence Study. Monterey County, CA.
- . December 2015b. *2015 Municipal Service Review and Sphere of Influence Study of Cemetery Districts in Monterey County Public Review Draft*. Monterey County, CA.
- . March 2012. *2012 Municipal Service Review and Sphere of Influence Update: Districts Providing Fire Protection and Emergency Medical Services in Monterey County*. Monterey County, CA.
- Monterey County Free Libraries. “Library Services.” Last modified on April 24, 2017. <http://www.co.monterey.ca.us/library/about.html>
- . “Monterey County Free Libraries Branchlets.” Last modified on July 13, 2017. <http://www.co.monterey.ca.us/library/branchlets.html>
- Regional Water Management Group. June 2012. *Integrated Regional Water Management Plan for the Greater Monterey County Region*. Monterey County, CA.

Salinas Valley Solid Waste Authority. "2015-2016 Annual Report." Accessed on July 7, 2017. <http://svswa.org/wp-content/uploads/2015-2016-Annual-Report2.pdf>

Slama, Brent, Community and Economic Development Director, City of Soledad. Telephone interview with consultant, 5 June 2017.

The Paul Davis Partnership. 2016. *Castro Community Agricultural Employee Housing Project*. Monterey, CA.

United States Census Bureau. "Household Type by Household Size." Last modified in 2015. https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_B11016&prodType=table

———. "Tenure by Household Size by Units in Structure." Last modified in 2015. http://factfinder.census.gov/faces/tableservices/jsf/pages/productive.xhtml?pid=ACS_15_5YR_B25124&prodType=table

———. "QuickFacts Soledad city, California." Last modified on July 1, 2016. <https://www.census.gov/quickfacts/table/PST045216/0672520,00>

Vallejo, Louis, Director of Maintenance, Operations, Transportation, and Facilities, City of Soledad. Phone interview with consultant, 6 June 2017.

———. Phone interview with consultant, 12 July 2017.

Ward, Patrick, Registered Civil Engineer, Bestor Engineers, Inc. Submission to EMC Planning Group, subject: Miramonte Plan for Services City of Soledad, dated 5 May 2017.

Wasson, Damon, Police Commander, City of Soledad Police Department. Telephone interview with consultant, 1 June 2017.

Wilcox, Donald, Public Works Director and City Engineer, City of Soledad. Telephone interview with consultant, 5 June 2017.

Wilcox, Donald, Public Works Director and City Engineer, City of Soledad. Email message to consultant, 5 June 2017.

Wilcox, Donald, Public Works Director and City Engineer, City of Soledad. Email message to consultant, 8 June 2017.

Wilcox, Donald, T., P.E., City Engineer, City of Soledad. Email message to consultant, 6 March, 2018.

Wilcox, Donald, T., P.E., City Engineer, City of Soledad. Email message to consultant, 7 March, 2018.

Wilcox, Donald, T., P.E., City Engineer, City of Soledad. Email message to consultant, 8 March, 2018.

Zuñiga, Cesar, Operations Manager and Assistant General Manager, Salinas Valley Solid Waste Authority. Email message to consultant, 19 July 2017.

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SB 610 Water Supply Assessment

A

APPENDIX



CITY OF SOLEDAD

WATER SUPPLY ASSESSMENT

FOR

MIRAMONTE SPECIFIC PLAN

FINAL DRAFT

September 2017

A K E L
ENGINEERING GROUP, INC.

September 29, 2017

EMC Planning Group Inc.
301 Lighthouse Ave, Suite C
Monterey, CA 93940

Attention: Sally Rideout, Principal Planner

Subject: Miramonte Specific Plan – Water Supply Assessment
(SB 610 Requirements)

Dear Sally:

We are pleased to submit this Water Supply Assessment (WSA) report for the Miramonte Specific Plan. This report is intended to satisfy the requirements of SB 610 by evaluating the impact of this project on the water supplies through a 20-year horizon, as stipulated in the SB 610 requirements.

The report quantifies this project's water supply requirements, potential impact on the City's supply availability, a City-wide water demand balance through 2035, discussions on the supply reliability, and supply vs. demand comparisons.

We are extending our thanks to you for your valuable input and reviews during the completion of this study.

Sincerely,

AKEL ENGINEERING GROUP, INC.

Tony Akel, P.E.
Principal

Enclosure: Report

City of Soledad
Miramonte Specific Plan
Water Supply Assessment

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MIRAMONTE SPECIFIC PLAN - WATER SUPPLY ASSESSMENT

1.0 PURPOSE

This Water Supply Assessment (WSA) report for the Miramonte Specific Plan (Project) area is intended to satisfy the requirements of SB 610 by evaluating the impact of this Project's water demands on the water supplies through a 20-year horizon, as stipulated in the SB 610 requirements.

The report includes a discussion of this project's water supply requirements and potential impact on the City's supply availability. This report references the 2005 Water System Master Plan (2005 WSMP), 2010 Urban Water Management Plan (2010 UWMP), and 2015 Urban Water Management Plan (2015 UWMP).

2.0 RELEVANT REPORTS

Several reports provide detail information and factual data related to this analysis. Exhibits from these reports were included in the appendices for ease of referencing.

- **City of Soledad, 2015 Urban Water Management Plan (2015 UWMP).** The 2015 UWMP for the City of Soledad addressed additional amendments of the Urban Water Management Planning Act, as well as the Water Conservation Act of 2009, known as SBX7-7. SBX7-7 requires the state, and its municipal water purveyors, to have water use targets established for year 2015 and 2020, and to achieve a 20 percent reduction in urban per capita water usage by the year 2020.
- **City of Soledad, 2010 Urban Water Management Plan (2010 UWMP).** The City's 2010 Urban Water Management Plan (UWMP) addresses the requirements of the Urban Water Management Planning Act, as well as the Water Conservation Act of 2009, and includes the following elements: existing and future water demand projections, baseline and target gallon per day per capita water use factors, existing water supply facilities, groundwater basin condition, water demand management measures, and a water shortage contingency plan.
- **City of Soledad, 2005 Water System Master Plan (2005 WSMP).** The City's 2005 Water System Master Plan (WSMP) presents historical and projected water demands through 2025, identifies existing and future water system capacity deficiencies, recommends projects to correct these deficiencies, and identifies major water facilities for servicing

future developments. These facilities include pump stations, storage reservoirs, and supply wells.

- **City of Soledad, Existing and Future Water Demand Analysis (2016 MKN TM).** The City's Existing and Future Water Demand Analysis prepared by Michael K. Nunley and Associates analyzes the existing and future water demands for the City. This report also recommends tasks to be completed as part of the process of developing a comprehensive Capital Improvement Plan to meet existing and future City demand conditions.

3.0 PROJECT DESCRIPTION

The Miramonte Specific Plan is comprised of approximately 647 acres of residential, commercial, institutional, and open space land uses ([Table 1](#)). The project is bound to the east, north, and west by existing agricultural and open space land uses. The southern boundary of the project primarily follows the existing City limits, approximately between San Vicente Road and Orchard Lane. The proposed project is a revision to a previously proposed and similar 920 acre development for which an Environmental Impact Report (EIR) was prepared and certified by the City Council in 2010, under the project title Miravale III Specific Plan.

The City's 2020 General Plan was adopted in September 2005. The proposed development would amend the existing general plan, and exceeds 500 dwelling units, which triggers the need for a water supply assessment.

4.0 PROPOSED PROJECT LAND USE

The majority of the 647 acre project is located outside the existing City limits, but inside the near future boundary defined in the 2005 WSMP, as shown on [Figure 1](#). The existing land use consists of approximately 647 acres of agricultural and open space land uses ([Table 1](#)). The City's existing General Plan land use map designates the project site as various land uses, including residential land uses such as low density, medium density, high density, as well as public facilities and open space.

The 2005 WSMP, consistent with the General Plan, documented the ultimate land use of the site as various residential densities, public facilities, and open space. The densities and acreages for the project site vary between the 2005 WSMP and the current planned project site land use, as summarized on [Table 1](#). The amended project site land use was developed from a land use inventory table provided by EMC Planning staff; the project specific plan map provided by EMC planning staff is included in [Appendix A](#).

5.0 PROJECT WATER DEMANDS

The projected water demands in the currently adopted water system master plan 2005 WSMP were based on land use demand factors. The subject project site was located within the City's

near future boundary as outlined in the 2005 WSMP, with land use types and acreages different than those proposed as part of the current project site.

5.1 Comparison of Project Water Demands with 2005 WSMP Assumptions

The 2005 WSMP included water demand projections for the area to be developed as part of the Miramonte Specific Plan, with differences in land use types and acreages. The following sections summarize these differences and compare the demands based on the 2005 WSMP and the currently proposed project site.

- **Baseline Water Demands – 2005 WSMP Assumption.** The 2005 WSMP assumed the project site will develop as a combination of multi-family residential, public facility, and open space land use types; the demand calculations for the project site based on the 2005 WSMP assumptions are summarized on [Table 2](#). It should be noted that the 2005 WSMP assumed lands designated for irrigation were to be served by recycled water. Using the 2005 WSMP demand coefficients, the water demands are estimated at 786,581 gpd or 881 AFY ([Table 2](#)).
- **Updated Project Water Demands Based on Proposed Land Use.** The updated project water demands are based on the proposed land use acreages provided by EMC Planning Staff. Unlike the 2005 WSMP assumptions, the updated project demands do not account for the application of recycled water for irrigation purposes. Using the 2005 WSMP demand coefficients, the updated water demands are estimated at 875,241 gpd or 980 AFY ([Table 2](#)).
- **Comparison of Demands between 2005 WSMP and Proposed Land Use.** As summarized on [Table 2](#), the proposed project increases the projected water demand from the 2005 WSMP by approximately 99 AFY.

It should be noted that the 2016 MKN TM included revised land use demand factors. These demand factors increase the Project water demands by approximately 25%, and thus increase the 99 AFY noted above, to approximately 222 AFY.

5.2 Impact of the Water Conservation Act of 2009 (SBx7-7)

The 2015 UWMP updated the City's water demand projections to meet the Water Conservation Act of The Water Conservation Act of 2009, also known as SBx7-7 (Steinberg, 2009), and to account for a decrease in the pace of development. SBx7-7 requires the state and its municipal water purveyors to achieve a 20 percent reduction in urban per capita water usage by the year 2020. The "20X2020" plan is intended to reduce water usage per capita by 10% by the year 2015, and 20% by the year 2020.

The City's 2005 WSMP estimated the City's ultimate buildout water demands at **8,308 AFY**. Following the adoption of the 2005 WSMP, growth in the City slowed dramatically, thus reducing

the City's projected water demands. The City's 2015 UWMP projected the City's 2035 water demand based on recent water use trends, growth assumptions received from City staff, and required water demand reduction targets at **2,612 AFY**.

5.3 Potential for Further Reductions in Project Water Demands

There are currently plans for a recycled water system to help offset potable use in the City of Soledad. At this time, there are no planned connections to the development, and therefore recycled water was not included as a demand offset for this assessment. However, the 2015 UWMP projects recycled water as a source of supply, starting the year 2020. This reliable source of supply will offset groundwater pumping in the Forebay Aquifer.

5.4 Comparison of Project Water Demands with Potential Agricultural Use

According to information received from EMC Planning staff, the existing project site is comprised of various row crop agricultural lands. **Figure 3** summarizes the agricultural lands, which lists a majority of the existing land to be developed for the proposed project as prime farmland.

The existing water demands were calculated based on the row crop demand factor listed in the Monterey County Water Resources Agency (MCWRA) 2012 Ground Water Summary Report (**Appendix B**). This report estimates row crops water use for the Forebay Aquifer at approximately 3.3 acre feet per acre per year. The comparison of the proposed project water demands and the potential existing agricultural water demands is summarized on **Table 3**. The existing agricultural lands are estimated at 475 acres, which yields a demand of approximately **1,568 AFY**. The water demand for the proposed land use acreages and land use designations is estimated at **980 AFY**. The resulting impact of the Miramonte Specific Plan land uses is estimated at a reduction of approximately **587 AFY**.

It should be noted that the 2016 MKN TM included revised land use demand factors. These demand factors decrease the reduction noted above from 587 AFY noted above, to approximately 464 AFY.

6.0 GROUNDWATER BASIN

The City is located above the Forebay Subarea of the Forebay Aquifer Subbasin, which is a subbasin of the Salinas Valley Groundwater Basin (**Figure 4**). The Forebay Subarea is not an adjudicated groundwater basin and overdraft has not been a historical problem.

The Monterey County Water Resources Agency (MCWRA) prepared a Groundwater Management Plan (GMP) in May 2006. This 2006 GMP provides a comprehensive overview of the Salinas Valley Groundwater Basin and recommends various management strategies for the basin. The plan specifies three Basin Management Objectives, which summarize the overall management objectives for the Salinas Valley Groundwater Basin and are summarized as follows:

- Development of Integrated Water Supplies to Meet Existing and Projected Water Requirements
- Determination of Sustainable Yield and Avoidance of Overdraft
- Preservation of Groundwater Quality for Beneficial Use

The MCWRA 2006 GMP and the City's 2015 UWMP include detailed discussions on the groundwater basin and on the collaborative efforts currently underway to manage the groundwater supplies. Additionally, the District's 2012 Groundwater Management Plan provides updated descriptions and evaluation of the groundwater subbasins.

7.0 WATER SUPPLY RELIABILITY

The supply reliability is considered for the near-term needs (2020) and the long term needs (2020-2035). There are two aspects of supply reliability to be considered. The first relates to immediate service needs and is primarily a function of the availability and adequacy of the supply facilities. This aspect is considered for emergency reliability. The second aspect is climate-related, and involves the availability of water during mild or severe drought periods.

7.1 Groundwater Supply Facilities

The City currently utilizes local groundwater as its primary source of supply. Water supply for the municipal water system is extracted from underground aquifers via five existing groundwater wells located throughout the City ([Table 4](#)).

The City has been constructing water facilities in accordance with the 2005 WSMP, and as the need arises. The City's storage facilities will also enhance long-term reliability. These facilities provide emergency storage sufficient to handle the service area needs during power outages or other emergencies. Adding supply and distribution system enhancements will also add reliability through redundancy.

7.2 Supply during Single Dry and Multiple Dry Years

As stipulated in the MCWRA 2006 GMP and the City's 2015 UWMP, the Forebay Subarea is characterized by generally stable groundwater levels; even during periods of severe drought, drawdown has been limited to 15 to 20 feet. This stability is due in part to the subarea's location just downstream of the confluence of the Salinas River and the Arroyo Seco groundwater subarea. Supply reliability for single dry and multiple dry years were discussed in the City's 2015 UWMP.

8.0 SUPPLY AND DEMAND COMPARISON

The total reliable supply of the Forebay Subarea was based on the 2015 UWMP and quantified at approximately 148,000 AFY ([Table 5](#)). Demands for the Forebay Subarea were estimated as a combination of the City of Soledad, other non-agricultural users, and agricultural users. The 2012 demands shown on [Table 5](#) were extracted from the MCWRA 2012 Ground Water Summary Report. For the City, the existing and projected demands were extracted from the 2015 UWMP. For the non-agricultural users, a demand growth rate consistent with the City was assumed. The total demand for the agricultural users was assumed constant. Total 2035 demands were estimated at 143,250 AFY, which is approximately 3% less than the reliable supply ([Table 5](#)).

9.0 SUMMARY

The Miramonte Specific Plan is a proposed development in the City of Soledad that consists of approximately 647 acres of residential, commercial, institutional, and open space land uses. The project is bound to the east, north, and west by existing agricultural and open space land uses. The southern boundary of the project primarily follows the existing City limits, approximately between San Vicente Road and Orchard Lane. The proposed project is a revision to a previously proposed and similar 920 acre development for which an Environmental Impact Report (EIR) was prepared and certified by the City Council in 2010, under the project title Miravale III Specific Plan.

The Miramonte Specific Plan water demands for this proposed project are as follows:

- **Baseline Water Demands – 2005 WSMP Assumption.** The 2005 WSMP assumed the project site will develop as a combination of multi-family residential, public facility, and open space land use types. Applying the water master plan water demand coefficient documented on [Table 2](#), to the acreages yields an estimated water demand of 786,581 gpd or 881 AFY.
- **Updated Project Water Demands Based on Proposed Land Use.** The updated project water demands are based on the proposed land use acreages provided by EMC Planning Staff. Using the 2005 WSMP demand coefficients, the updated water demands are estimated at 875,241 gpd or 980 AFY ([Table 2](#)).
- **Comparison of Demands between 2005 WSMP and Proposed Land Use.** As summarized on [Table 2](#), the proposed project increases the projected water demand from the 2005 WSMP by approximately 99 AFY.

The 2015 UWMP updated the City's water demand projections to meet the Water Conservation Act of The Water Conservation Act of 2009, also known as SBx7-7 (Steinberg, 2009), and to account for a decrease in the pace of development. SBx7-7 requires the state and its municipal water purveyors to achieve a 20 percent reduction in urban per capita water usage by the year

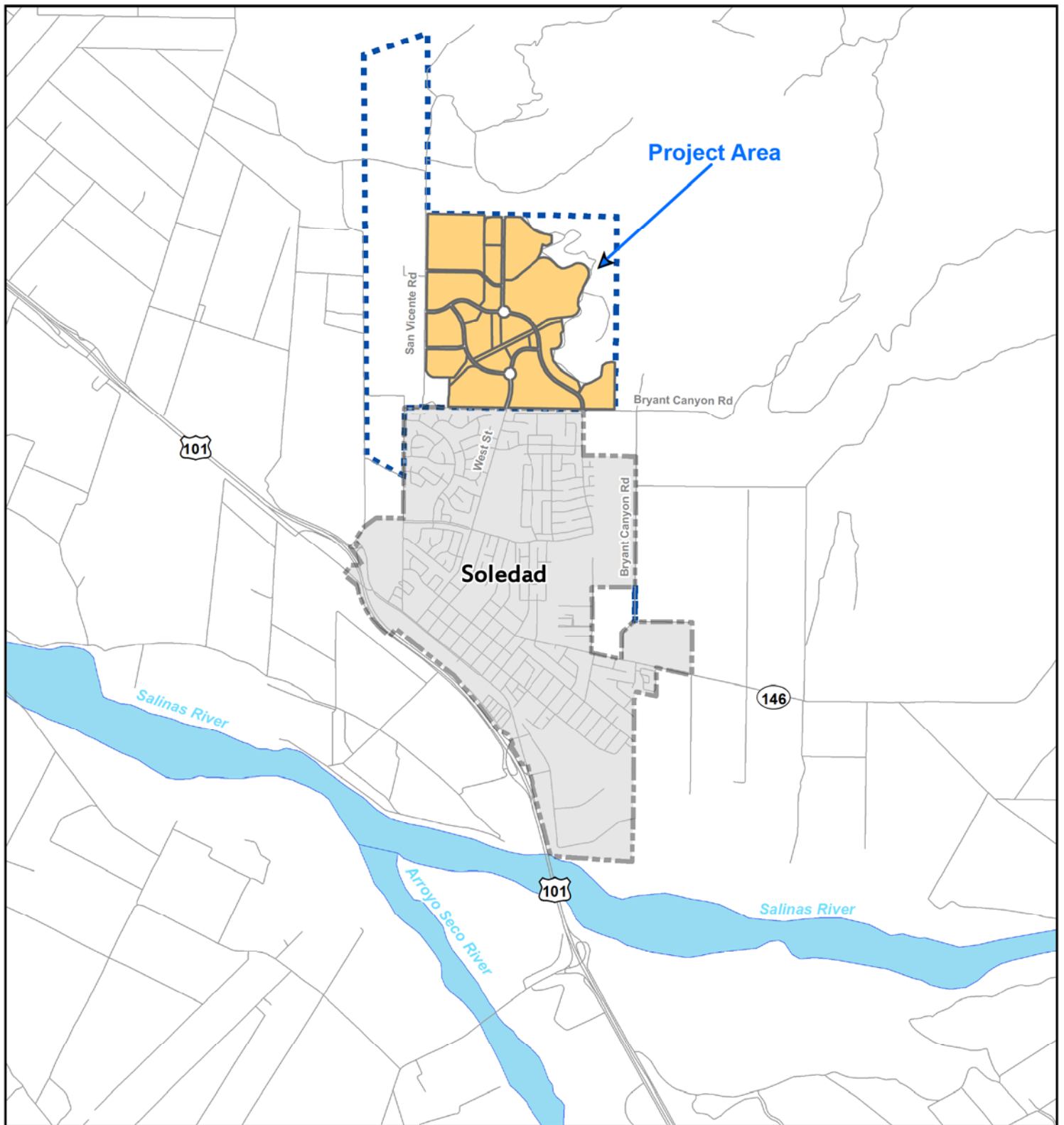
2020. The “20X2020” plan is intended to reduce water usage per capita by 10% by the year 2015, and 20% by the year 2020.

There are currently plans for a recycled water system to help offset potable use in the City of Soledad. At this time, there are no planned connections to the development, and therefore recycled water was not included as a demand offset for this assessment. However, the 2015 UWMP projects recycled water as a source of supply, starting the year 2020. This reliable source of supply will offset groundwater pumping in the Forebay Aquifer.

Based on the analysis in this study, the projected demands of the project site are expected to increase by 99 AFY due to revisions in land use and recycled water assumptions. Alternately, the water use will decrease by 587 AFY due to the conversion of the existing agricultural lands to the proposed land uses. The net offset to water groundwater aquifer is a decrease of approximately 587 AFY due to the conversion of agricultural uses to domestic uses.

MIRAMONTE SPECIFIC PLAN - WATER SUPPLY ASSESSMENT

Figures



Legend

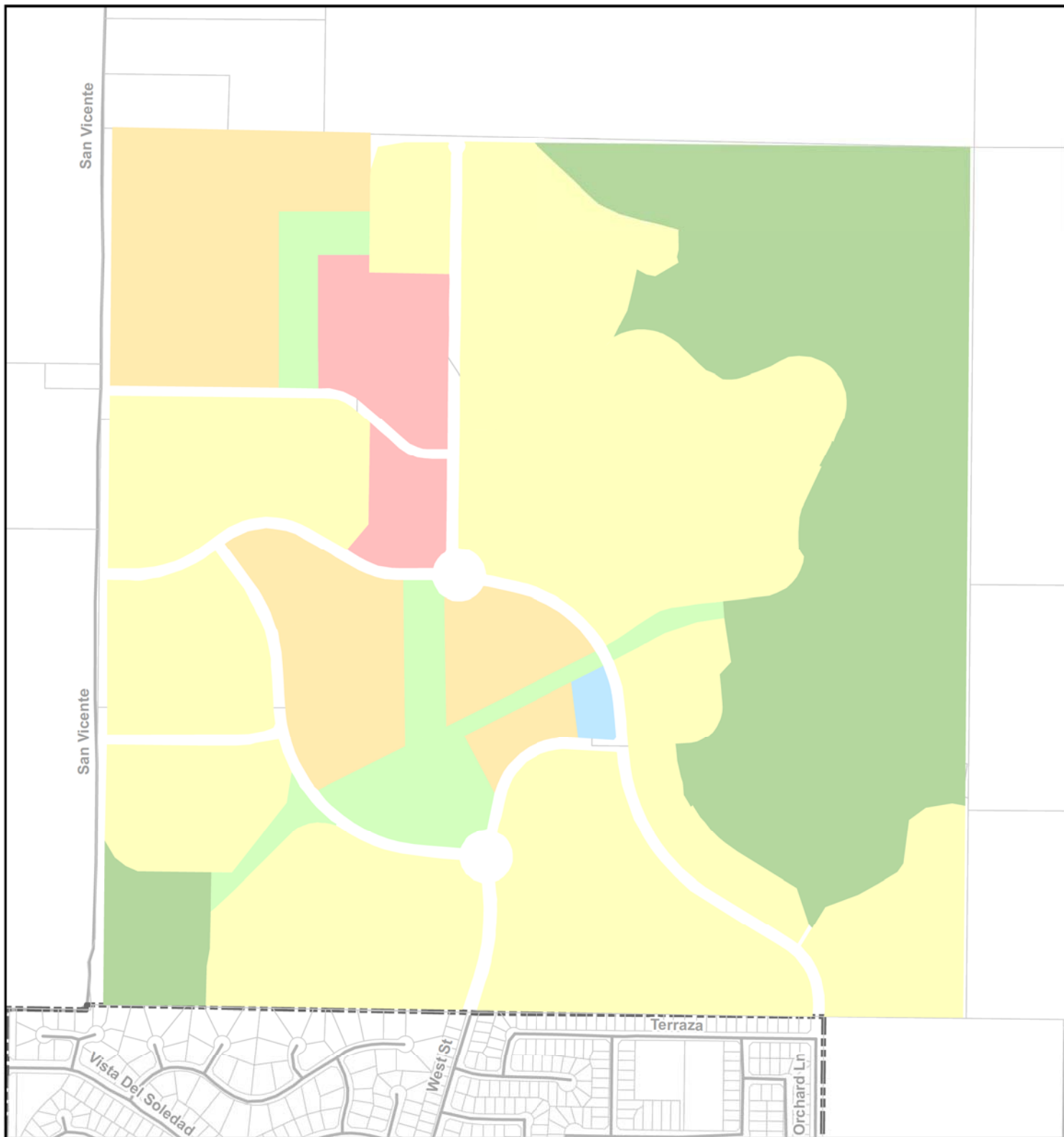
-  Project Area
-  City Limits
-  Near Future Planning Boundary (2005 WSMP)
-  Streets
-  Rivers

PRELIMINARY

Figure 1 Project Location Miramonte Subdivision

Miramonte WSA
City of Soledad





Legend

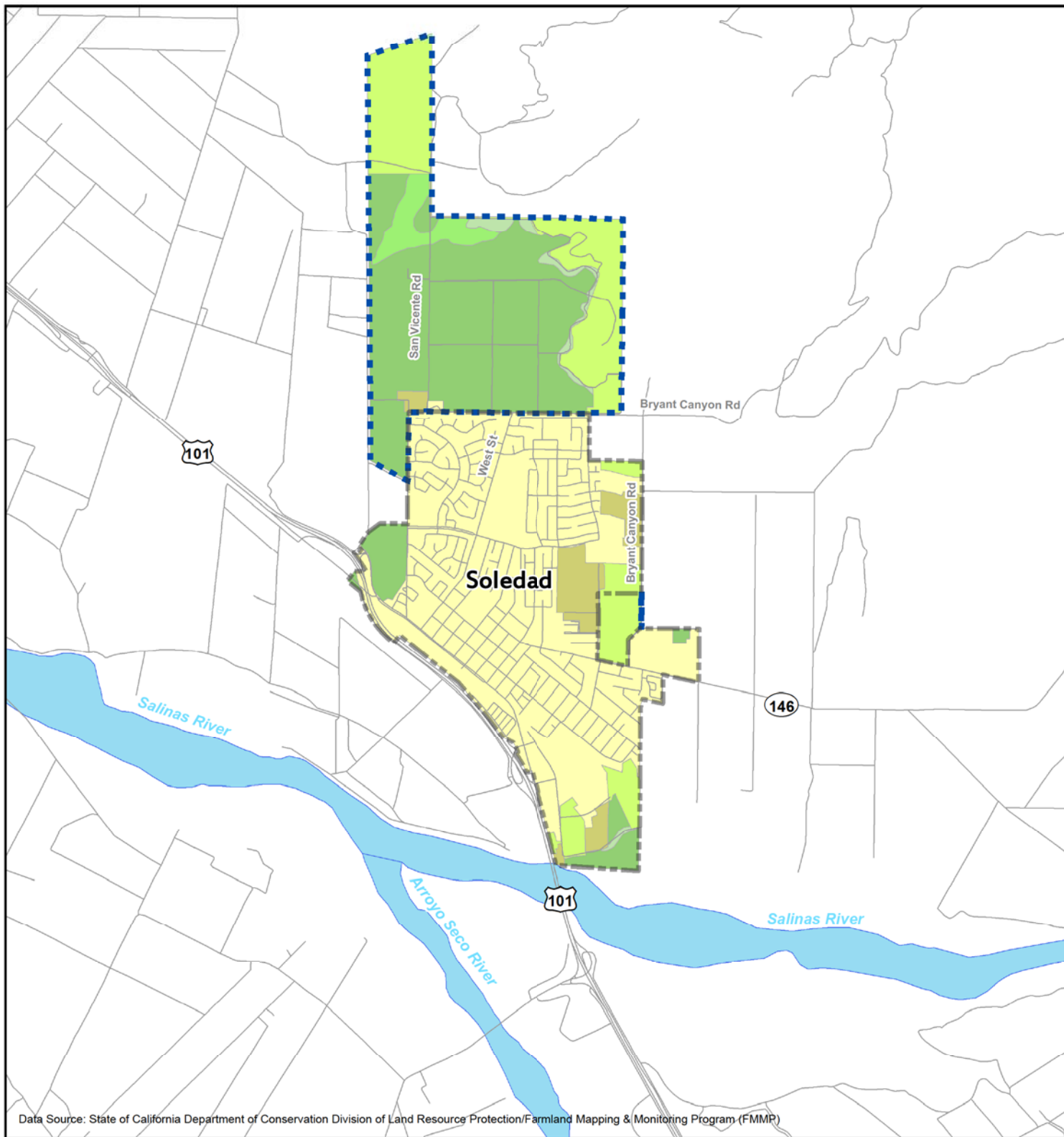
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	Multi-Family Residential		Park		Parcels
	Fire / Police		Open Space		City Limits

PRELIMINARY

Figure 2 Proposed Project Land Use

Miramonte WSA
City of Soledad





Legend

FMMP 2014 Land Designations

- Urban & Built-up Land
- Grazing Land
- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland
- Other Land



City Limits



Near Future Planning Boundary (2005 WSMP)



Streets



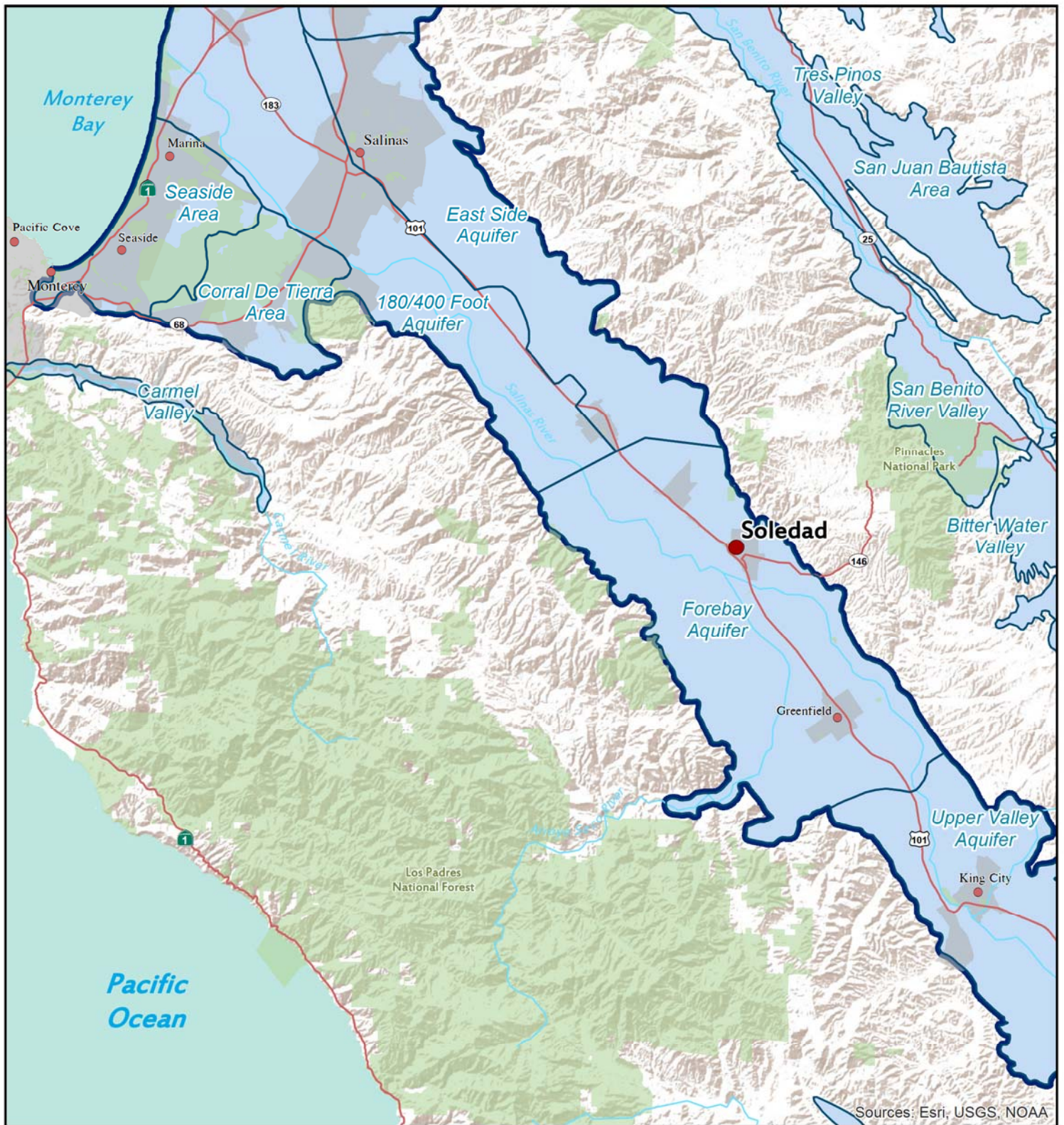
Rivers

PRELIMINARY

Figure 3 Agricultural Lands

Miramonte WSA
City of Soledad





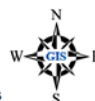
Legend

- DWR Groundwater Basins
- Salinas Valley Basin with Subbasins
- Protected Open Space
- Urbanized Areas

PRELIMINARY

Figure 4 Groundwater Basins

Miramonte WSA
City of Soledad



MIRAMONTE SPECIFIC PLAN - WATER SUPPLY ASSESSMENT

Tables

Table 1 Proposed Project Land Use Inventory
 Miramonte Specific Plan - Water Supply Assessment
 City of Soledad

PRELIMINARY

Land Use Type	Existing Land Use ¹ (acres)	Proposed Land Use	
		2005 Water System Master Plan ² (acres)	Miramonte Specific Plan ³ (acres)
Residential Uses			
Single-family Residential	0.0	0.0	295.3
Multifamily Residential (Townhomes/Apartments)	0.0	24.9	31.3
Senior Housing Units	0.0	0.0	6.6
Workforce/Senior Housing Units	0.0	377.2	0.0
Farmers Village	0.0	0.0	42.6
Subtotal	0.0	402.1	375.8
Other Uses			
Commercial	0.0	0.0	9.0
Institutional	0.0	14.0	26.5
Irrigated Open Space	0.0	164.4	39.2
Agricultural	475.0	0.0	0.0
Other, Non-demand generating ⁴	172.00	0.0	196.5
Subtotal	647.0	178.4	271.2
Total Acreage			
AKEL	647.0	580.5	647.0

A K E L
 ENGINEERING GROUP, INC.

9/28/2017

Notes:

1. Existing agricultural acreage estimated based on aerial imagery.
2. Acreage estimated from 2005 Water System Master Plan.
3. Source: Miramonte Specific Plan Land Use Summary Table, received from EMC Planning staff September 27, 2017.
4. Other non-demand generating land use types may include non-irrigated open space, detention/retention ponds, water tank sites, and roads/right-of-ways.

Table 2 Comparison of Project Water Demands with 2005 WSMP

Miramonte Specific Plan - Water Supply Assessment
City of Soledad

PRELIMINARY

Description	Units	Proposed Land Uses										Total
		Residential Uses					Other Uses					
		Single-family Residential	Multifamily Residential (Townhomes/Apartments)	Senior Housing Units	Workforce/Senior Housing Units	Farmers Village	Commercial	Institutional	Irrigated Open Space	Agricultural	Other, Non-demand generating	
Baseline Water Demands - 2005 Water System Master Plan												
Area	Acres	0.0	24.9	0.0	377.2	0.0	0.0	14.0	164.4	0.0	0.0	580.5
Average Annual Water Demand Coefficients ¹	gpd/acre	1,771	3,125	3,125	1,829	1,829	1,354	1,354	2,750	2,946	0	
	ac-ft/ac/yr	2.0	3.5	3.5	2.0	2.0	1.5	1.5	3.1	3.3	0.0	
Baseline Development Water Demands (Assuming Recycled Water Irrigation)	gpd	0	77,808	0	689,823	0	0	18,950	0 ²	0	0	786,581
	AFY	0	87	0	773	0	0	21	0 ²	0	0	881
Updated Project Water Demands Based on Proposed Land Use												
Area	Acres	295.3	31.3	6.6	0.0	42.6	9.0	26.5	39.2	0.0	196.5	647.0
Average Annual Water Demand Coefficients	gpd/acre	1,771	3,125	3,125	1,829	1,829	1,354	1,354	2,750	2,946	0	
	ac-ft/ac/yr	2.0	3.5	3.5	2.0	2.0	1.5	1.5	3.1	3.3	0.0	
Baseline Development Water Demands	gpd	523,035	97,806	20,624	0	77,907	12,182	35,870	107,816	0	0	875,241
	AFY	586	110	23	0	87	14	40	121	0	0	980
Comparison of Demands between 2005 WSMP and Proposed Land Use												
Total	gpd	523,035	19,999	20,624	-689,823	77,907	12,182	16,920	107,814	0	0	88,657
	AFY	586	22	23	-773	87	14	19	121	0	0	99

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9/28/2017

Notes:

1. Agricultural water demand coefficient extracted from MCWRA 2012 Ground Water Summary Report. All other water demand coefficients extracted from City of Soledad 2005 Water System Master Plan.
2. Consistent with the City of Soledad 2005 Water System Master Plan, this analysis assumes the demands for the proposed irrigated open space lands are to be met by recycled water.

Table 3 Comparison of Project Water Demands with Potential Agricultural Use

 Miramonte Specific Plan - Water Supply Assessment
 City of Soledad

PRELIMINARY

DescriptionUnits		Proposed Land Uses										Total
		Residential Uses					Other Uses					
		Single-family Residential	Multifamily Residential (Townhomes/Apartments)	Senior Housing Units	Workforce/Senior Housing Units	Farmers Village	Commerdal	Institutional	Irrigated Open Space	Agricultural	Other, Non-demand generating	
Agricultural Water Demands - Existing Land Use												
Area	Acres	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	475.0	172.0	647.0
Average Annual Water Demand Coefficients ¹	gpd/acre	1,771	3,125	3,125	1,829	1,829	1,354	1,354	2,750	2,946	0	
	ac-ft/ac/yr	2.0	3.5	3.5	2.0	2.0	1.5	1.5	3.1	3.3	0.0	
Existing Land Use Water Demands	gpd	0	0	0	0	0	0	0	0	1,399,307	0	1,399,307
	AFY	0	0	0	0	0	0	0	0	1,568	0	1,568
Updated Project Water Demands Based on Proposed Land Use												
Area	Acres	295.3	31.3	6.6	0.0	42.6	9.0	26.5	39.2	0.0	196.5	647.0
Average Annual Water Demand Coefficients ¹	gpd/acre	1,771	3,125	3,125	1,829	1,829	1,354	1,354	2,750	2,946	0	
	ac-ft/ac/yr	2.0	3.5	3.5	2.0	2.0	1.5	1.5	3.1	3.3	0.0	
Baseline Development Water Demands	gpd	523,035	97,806	20,624	0	77,907	12,182	35,870	107,816	0	0	875,241
	AFY	586	110	23	0	87	14	40	121	0	0	980
Comparison of Demands between Agricultural and Proposed Land Use												
Total	gpd	523,035	97,806	20,624	0	77,907	12,182	35,870	107,816	-1,399,307	0	-524,067
	AFY	586	110	23	0	87	14	40	121	-1,568	0	-587

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Notes:

1. Agricultural water demand coefficient extracted from MCWRA 2012 Ground Water Summary Report. All other water demand coefficients extracted from City of Soledad 2005 Water System Master Plan.

9/28/2017

Table 4 Existing Water Supply Facilities

Miramonte Specific Plan - Water Supply Assessment City of Soledad

PRELIMINARY

Well No.	Location	Current Production Capacity ¹	
		(gpm)	(afy)
6	Intersection of East St and North St	500	805
7	Intersection of Pine St and Monterey St	1,200	1,932
9	900' SE of intersection of 8th St and Pacifico Pl	0	0
10	100' NW of the intersection of Gabilan Dr and Vista Del Soledad	750	1,208
11	Corner of Iris Pl and Flax Pl	1,300	2,093
Total		3,750	6,038

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6/13/2017

Notes:

1. Source: City of Soledad 2015 Urban Water Management Plan

Table 5 Existing and Projected Supply vs Demand Comparison
 Miramonte Specific Plan - Water Supply Assessment
 City of Soledad

PRELIMINARY

Demand Condition	Year					
	2012 (AFY)	2015 (AFY)	2020 (AFY)	2025 (AFY)	2030 (AFY)	2035 (AFY)
Existing and Projected Water Supply of the Forebay Subarea^{1,2}						
Estimated Sustainable Groundwater Yield	148,000	148,000	148,000	148,000	148,000	148,000
Planned Recycled Water Supply ³	0	0	108	144	173	173
Total	148,000	148,000	148,108	148,144	148,173	148,173
Existing and Projected Average Daily Water Demands for the Forebay Subarea						
City of Soledad ^{2,3}	2,519	1,731	1,905	2,097	2,283	2,439
Other Non-Agricultural Groundwater Users ^{2,4}	4,969	3,415	3,758	4,137	4,503	4,811
Agricultural ^{2,5}	136,000	136,000	136,000	136,000	136,000	136,000
Total	143,488	141,146	141,663	142,234	142,786	143,250
Supply vs Demand Comparison						
Difference (Supply - Demand)	4,512	6,854	6,337	5,766	5,214	4,750
Percent of Total Supply	97%	95%	96%	96%	96%	97%



Notes:

6/13/2017

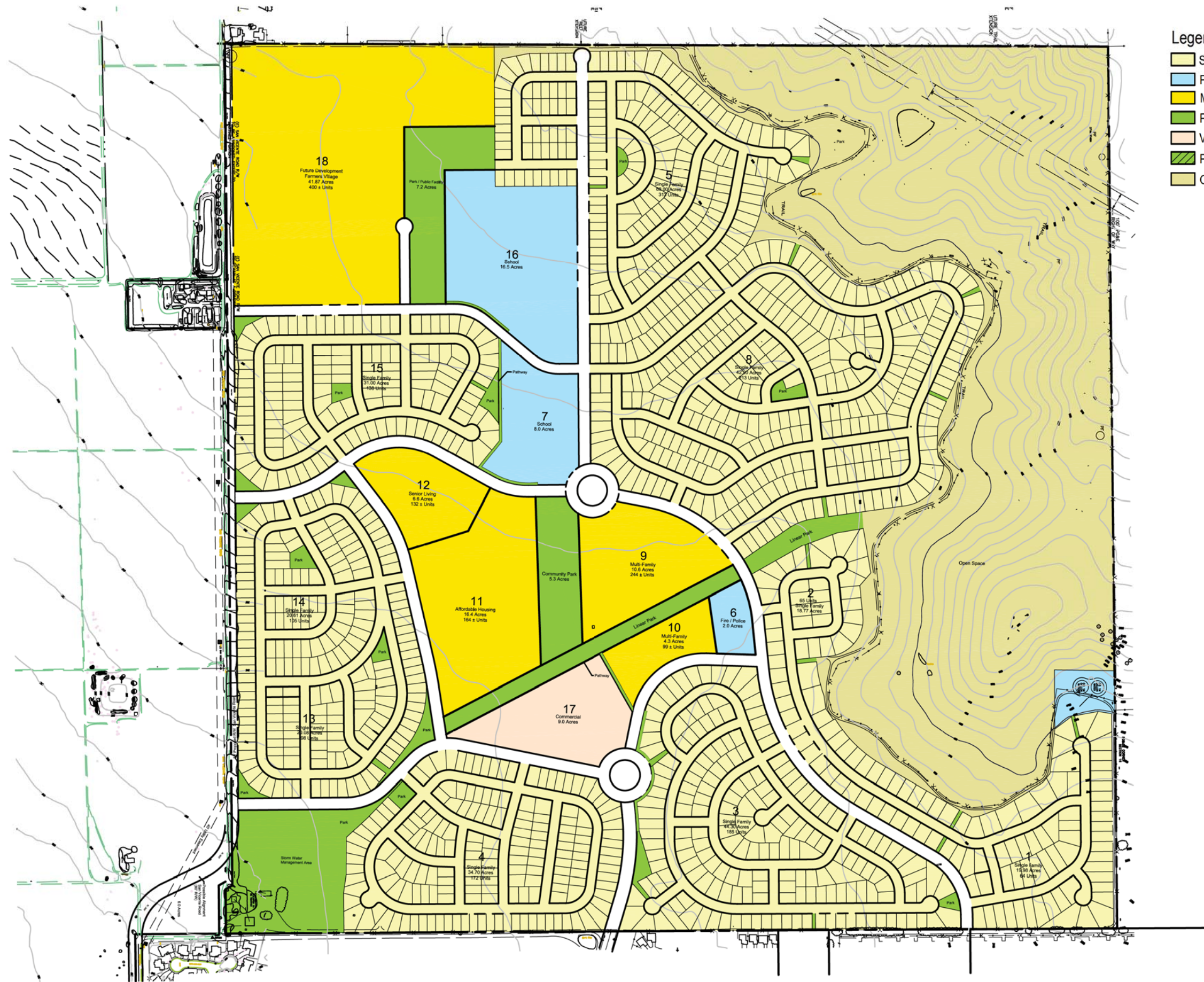
1. Estimated sustainable groundwater yield extracted from the City of Soledad 2015 UWMP.
2. 2012 demand extracted from the MCWRA 2012 Ground Water Summary Report
3. Source: City of Soledad 2015 UWMP.
4. For planning purposes, 2015 and projected demand calculated assuming rate of change consistent with the City's water use.
5. For planning purposes, agricultural water use assumed to remain constant.

MIRAMONTE SPECIFIC PLAN - WATER SUPPLY ASSESSMENT

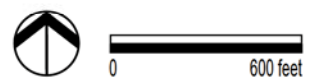
Appendices

MIRAMONTE SPECIFIC PLAN - WATER SUPPLY ASSESSMENT

**Appendix A – Miramonte Specific Plan
Map**



- Legend**
- Single Family - ±299.7 AC, 1,353 DU
 - Public Facilities - ±23.0 AC
 - Multi-Family - ±87.4 AC, 1,039 DU
 - Park - ±30.4 AC
 - Village Commercial - ±9.0 AC
 - Park/ Public Facility - ±6.1 AC
 - Open Space - ±149.8 AC



Source: Bestor Engineers, Inc. 2017

Figure 1-4
 Miramonte Specific Plan Land Use Diagram
 Miramonte Specific Plan

MIRAMONTE SPECIFIC PLAN - WATER SUPPLY ASSESSMENT

**Appendix B – MCWRA 2012 Ground
Water Summary Report**

Ground Water Summary Report 2012



Monterey County Water Resources Agency

October 2013



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Overview of the Ground Water Reporting Program

History of the Ground Water Reporting Program

In February 1993, the Monterey County Board of Supervisors adopted Ordinance No. 3663 that required water suppliers within Zones 2, 2A, and 2B to report water-use information for ground water extraction facilities (wells) and service connections to the Monterey County Water Resources Agency (Agency). Monterey County Ordinance No. 3717, which replaced Ordinance No. 3663 and was adopted in October 1993, modified certain other requirements in the previous ordinance while keeping the ground water extraction reporting requirements in place for wells with a discharge pipe having an inside diameter of at least three inches.

The Agency has collected ground water extraction data from well operators, for the period beginning November 1 and ending October 31, starting with the 1992-1993 reporting year. Information received from the 300-plus well operators in the above-referenced zones of the Salinas Valley is compiled by the Ground Water Extraction Management System (GEMS) portion of the Water Resources Agency Information Management System (WRAIMS), a relational database maintained by the Agency. The intent of the ground water reporting program is to provide documentation of the reported amount of ground water that is extracted from Zones 2, 2A, and 2B of the Salinas Valley Ground Water Basin each year.

Since 1991, the Agency has required the annual submittal of Agricultural Water Conservation Plans (Ordinance 3851), which outline the best management practices that are adopted each year by growers in the Salinas Valley. In 1996, an ordinance was passed that requires the filing of Urban Water Conservation Plans (Ordinance 3886). Developed as the urban counterpart of the agricultural water conservation plans, this program provides an overview of the best management practices being implemented by urban water purveyors as conservation measures.

2012 Ground Water Summary Report

The purpose of this report is to summarize the data submitted to the Agency by well operators in February 2013 from the following annual reports:

- Ground Water Extraction Reports (agricultural and urban)
- Water Conservation Plans (agricultural and urban)
- Water and Land Use Forms (agricultural)

The agricultural data from the ground water extraction program covers the reporting year of November 1, 2011, through October 31, 2012; the urban data covers calendar year 2012. The agricultural and urban water conservation plans adopted for 2013 are also summarized. This report is intended to present a synopsis of current water extraction within the Salinas Valley, including agricultural and urban water conservation improvements that are being implemented to reduce the total amount of water pumped. It is not the purpose of this report to thoroughly analyze the factors that contribute to increases or decreases in pumping.

Reporting Methods

The Ground Water Conservation and Extraction Program provides well operators with a choice of three different reporting methods for each of their wells: Water Flowmeter, Electrical Meter, or Hour Meter (timer). The summary of ground water extractions presented in this report is compiled from data generated by all three reporting methods. Ordinance 3717 requires annual pump efficiency tests and/or meter calibration of each well to ensure the accuracy of the data reported.

Disclaimer

While the Agency has made every effort to ensure the accuracy of the data presented in this report, it should be noted that the data are submitted by individual reporting parties and are not verified by Agency staff. In addition, since so many factors can affect the extraction calculations, it is understood that no reporting method is 100 percent accurate. The Agency maintains strict quality assurance in the compilation, standardization, and entry of the data received. The Agency received Ground Water Extraction Reports from ninety-seven percent (97%) of the 1867 wells in the Salinas Valley for the 2012 reporting year. Agricultural and Urban Water Conservation Plan submittals for 2013 were ninety-four percent (94%) and one hundred percent (100%), respectively.

Reporting Format

Ground water extraction data are presented in this report by measurement in acre-feet. One acre-foot is equal to 325,851 gallons.

Ground Water Extraction Data Summary

The Salinas Valley Ground Water Basin is divided into four major hydrologic subareas whose boundaries are derived from discernible changes in the hydrogeologic conditions of the underground aquifers. Figure 1 (below) illustrates the Agency-designated Zones of the Salinas Valley in relation to the hydrologic subareas.

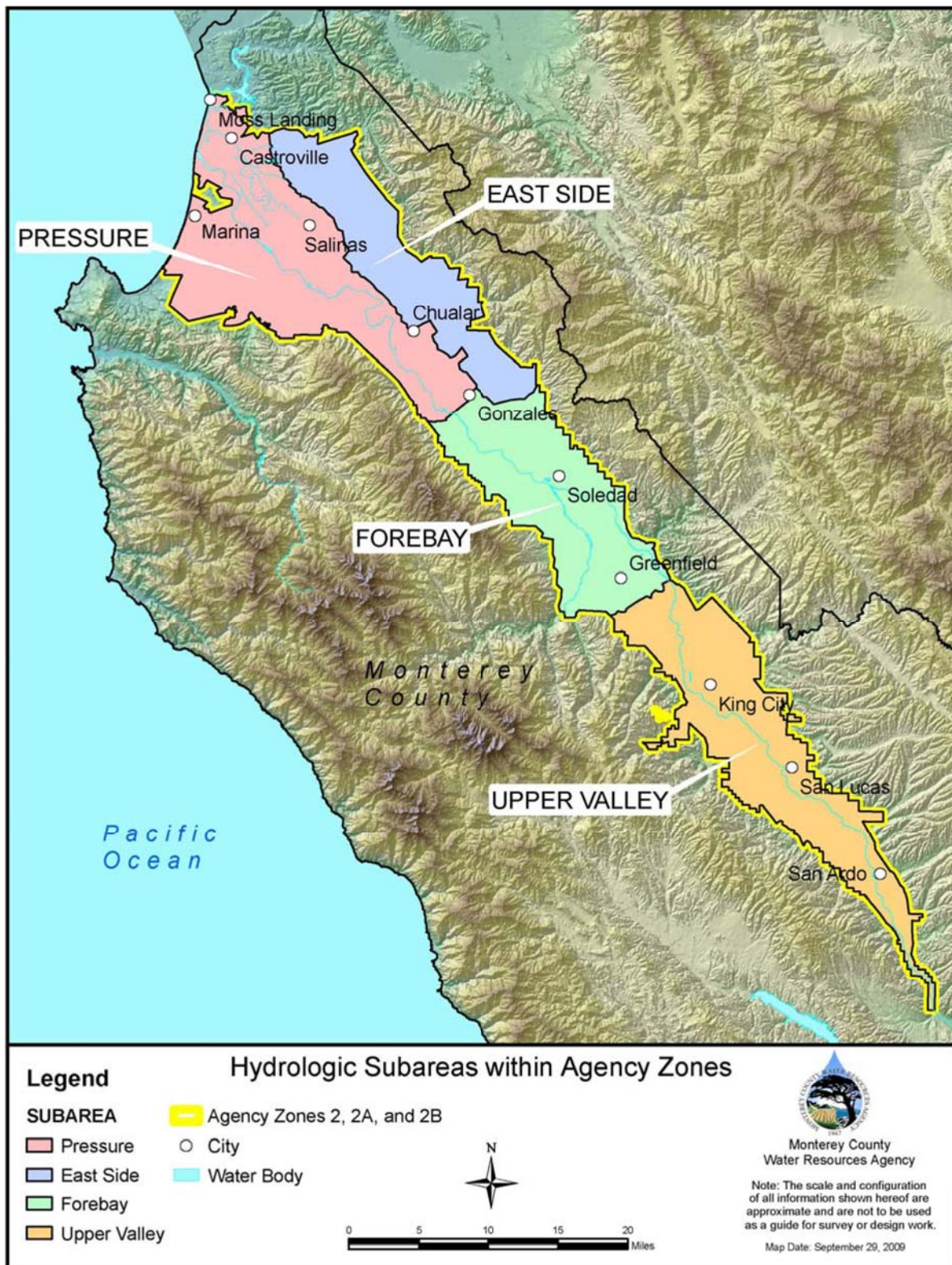


Figure 1. Agency Zones and hydrologic subareas of the Salinas Valley Ground Water Basin

Ground Water Extraction Data Summary (continued)

Summary of Methods Used for Extraction Reporting

The distribution of methods used for ground water extraction reporting (agricultural and urban) for the 2012 reporting year is shown in Table 1; a percentage distribution by volume is shown in Figure 2.

Table 1. Total extraction data by reporting method

Reporting Method	Acre-Feet per Reporting Method	Wells per Reporting Method
Water Flowmeter	343,597	1,380
Electrical Meter	136,543	407
Hour Meter	9,101	18
Total (2012)	489,241	1,806
Average ('03-'12)	495,968	1,756

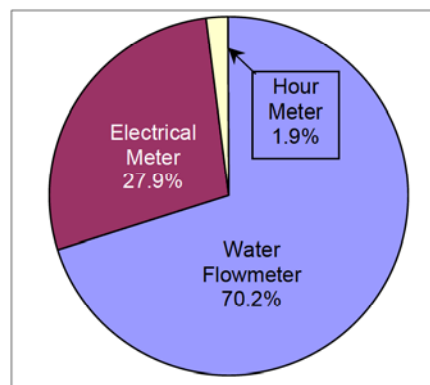


Figure 2. Percentage distribution by volume of methods used for extraction reporting

Total Extraction Data by Hydrologic Subarea and Type of Use

The total ground water extractions for the 2012 reporting year are summarized by hydrologic subarea, type of use (agricultural and urban in Table 2), and percentage (Figure 3).

Table 2. Total extraction data by hydrologic subarea and type of use

Subarea	Agricultural Pumping (acre-feet)	Urban Pumping (acre-feet)	Total Pumping (acre-feet)
Pressure	95,814	18,084	113,898
East Side	82,451	13,092	95,543
Forebay	135,971	7,488	143,459
Upper Valley	132,383	3,957	136,341
Total	446,620	42,621	489,241
Percent of Total	91.3%	8.7%	100%

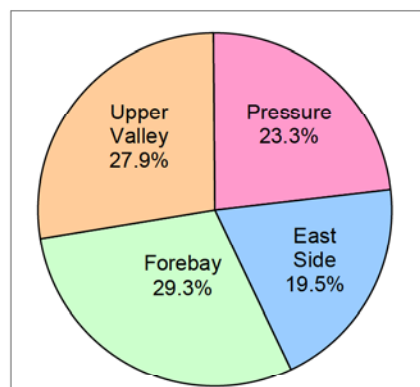


Figure 3. Percentage of total extractions by hydrologic subarea

Urban Extraction Data by City or Area

The total ground water extractions attributed to urban (residential, commercial/institutional, industrial, and governmental) pumping for the 2012 reporting year are summarized by city or area in Table 3. Figure 4 shows how the total urban pumping for 2012 is apportioned among each city or area.

Table 3. Urban extraction data by city or area

City or Area	Urban Pumping (AF)	Percentage of Total
Castroville	776	1.82%
Chualar	130	0.30%
Gonzales	1,454	3.41%
Greenfield	2,426	5.69%
King City	2,735	6.42%
Marina	4,129	9.69%
Other Areas (OA)		
OA-Pressure	3,893	9.13%
OA-East Side	3,434	8.06%
OA-Forebay	933	2.19%
OA-Upper Valley	1,081	2.54%
Salinas	17,360	40.73%
San Ardo	110	0.26%
San Lucas	31	0.07%
Soledad	2,519	5.91%
Soledad Prisons	1,610	3.78%
Total	42,621	100.00%

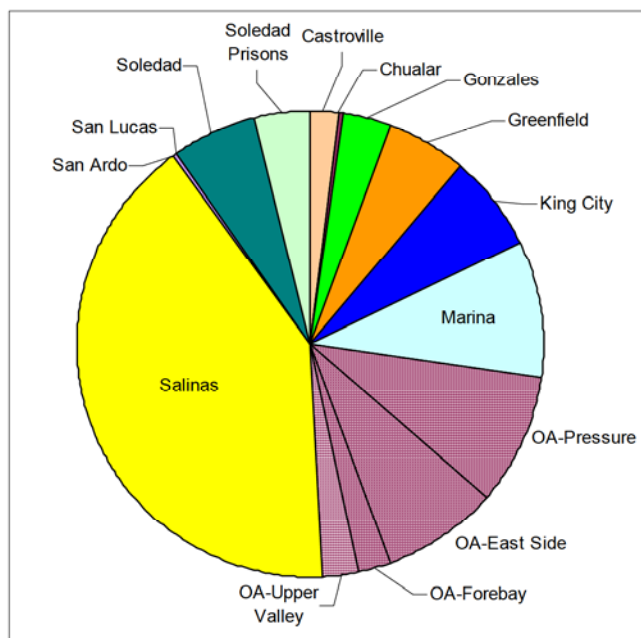


Figure 4. Distribution of urban extraction by city or area

Agricultural Water Conservation Plans

The Agricultural Water Conservation Plans include net irrigated acreage, irrigation method, and crop category. This information is forecasted and indicates what the grower plans to do in the upcoming year. It reflects the changing trends in irrigation methods in the Salinas Valley. Tables 4, 5, 6, and 7 show the distribution of irrigation methods by crop type for 1993, 2011, 2012 and 2013, respectively. Figure 5 (on the following page) illustrates the irrigation method trends from 1993 to 2013.

Table 4. 1993 - net acre distribution of irrigation methods by crop type (based on 94% companies reported)

1993	Furrow	Sprinkler & Furrow	Hand Move Sprinklers	Solid Set Sprinklers	Linear Move	Drip	Other ¹	Total
Vegetables	2,349	84,060	30,764	6,607	3,827	3,682	0	131,289
Field Crops	575	2,173	2,236	90	50	48	0	5,172
Berries	1	0	0	0	0	4,158	0	4,159
Grapes	261	0	0	13,347	0	15,976	0	29,584
Tree Crops	0	0	122	251	0	1,216	10	1,599
Forage	41	202	1,327	0	48	0	189	1,807
Unirrigated								N/A
Total	3,227	86,435	34,449	20,295	3,925	25,080	199	173,610

Table 5. 2011 - net acre distribution of irrigation methods by crop type (based on 94% companies reported)

2011	Furrow	Sprinkler & Furrow	Hand Move Sprinklers	Solid Set Sprinklers	Linear Move	Drip	Other ¹	Total
Vegetables	30	24,027	23,409	9,907	869	62,275	185	120,702
Field Crops	35	444	266	80	1,416	544	0	2,785
Berries	0	38	0	340	0	6,810	0	7,188
Grapes	0	0	0	620	0	33,008	0	33,628
Tree Crops	0	0	0	366	0	1,742	0	2,108
Forage	18	0	133	0	0	0	132	283
Other Type ²	0	126	2,427	175	12	1,321	100	4,161
Unirrigated								6,137
Total	83	24,635	26,235	11,488	2,297	105,700	417	176,992

Table 6. 2012 - net acre distribution of irrigation methods by crop type (based on 92% companies reported)

2012	Furrow	Sprinkler & Furrow	Hand Move Sprinklers	Solid Set Sprinklers	Linear Move	Drip	Other ¹	Total
Vegetables	0	22,556	19,469	7,476	677	69,040	2,001	121,219
Field Crops	0	323	284	206	1,416	389	140	2,758
Berries	0	122	0	100	0	7,707	0	7,929
Grapes	0	0	0	363	0	34,381	0	34,744
Tree Crops	0	0	0	0	0	1,724	0	1,724
Forage	0	138	172	0	0	1	0	311
Other Type ²	36	126	2,297	126	12	886	20	3,503
Unirrigated								6,317
Total	36	23,265	22,222	8,271	2,105	114,128	2,161	178,505

Table 7. 2013 - net acre distribution of irrigation methods by crop type (based on 94% companies reported)

2013	Furrow	Sprinkler & Furrow	Hand Move Sprinklers	Solid Set Sprinklers	Linear Move	Drip	Other ¹	Total
Vegetables	389	19,621	15,737	12,209	591	69,773	2,463	120,783
Field Crops	0	167	166	121	0	280	0	734
Berries	0	122	0	0	0	6,610	0	6,732
Grapes	0	0	0	363	0	34,358	0	34,721
Tree Crops	0	0	0	0	0	1,695	0	1,695
Forage	0	145	107	2	0	1	68	323
Other Type ²	0	126	2,592	126	7	900	25	3,776
Unirrigated								1,280
Total	389	20,181	18,602	12,821	598	113,617	2,556	170,044

¹ "Other" may include an irrigation system not listed here or a different combination of systems

² "Other Type" are for other crop types not included, i.e. cactus, flower bulbs, etc.

NOTE: Percentage of companies reported varies from year to year

Agricultural Water Conservation Plans (continued)

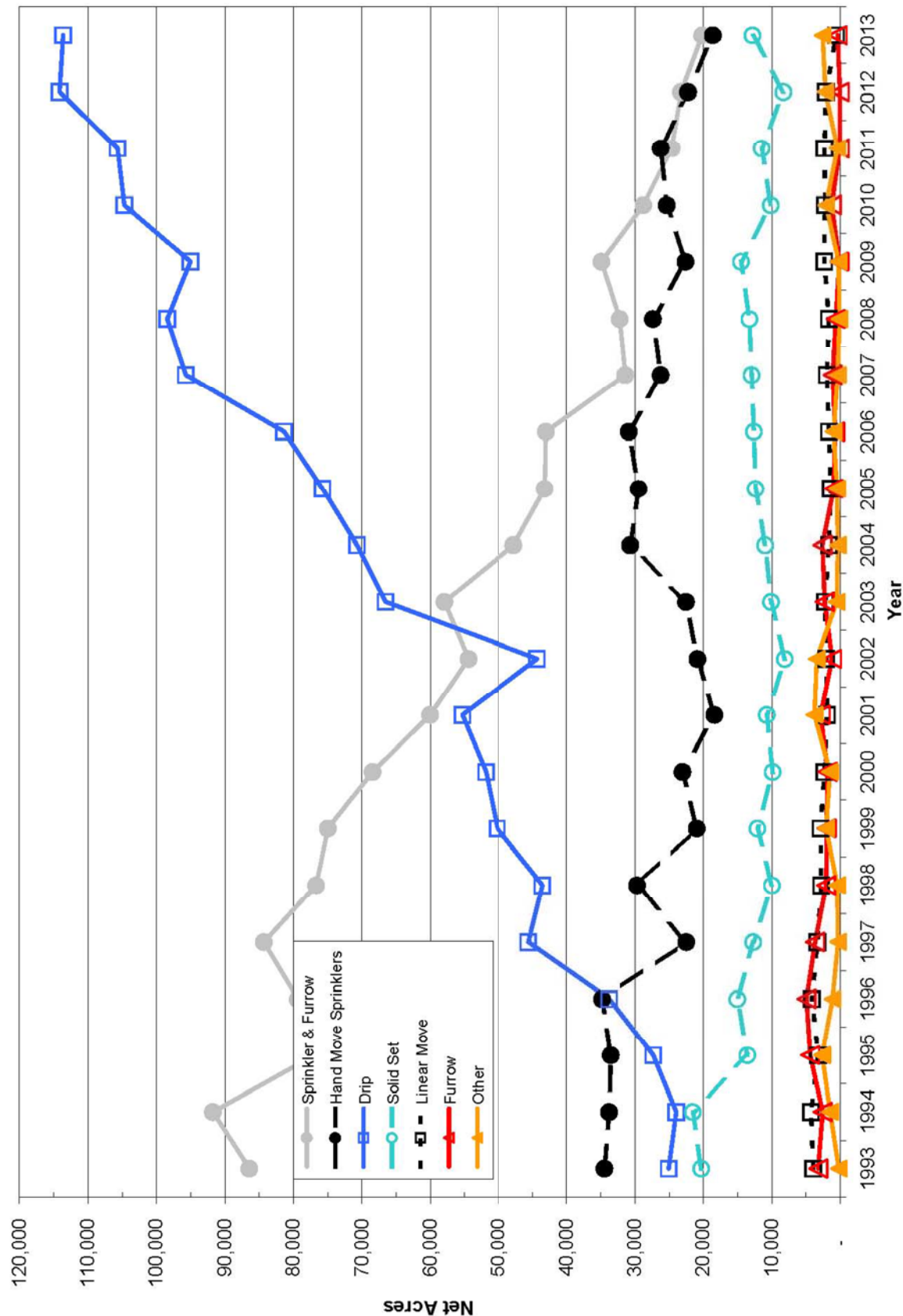


Figure 5. Types of irrigation methods used in the Salinas Valley based on companies reported

NOTE: Reported net acres vary from year to year

Agricultural Water Conservation Plans (continued)

Since 1991, Salinas Valley growers have submitted Agricultural Water Conservation Plans to the Agency. Table 8 shows the number of net acres, by year, for selected Best Management Practices (BMPs) or water conservation measures which were reported to be implemented over the past five years.

Table 8. Agricultural Best Management Practices reported to be adopted from 2009 through 2013

Best Management Practices	2009	2010	2011	2012	2013
12 Months Set Aside	9,043	7,447	3,285	8,172	1,314
Summer Fallow	509	692	1,944	688	1,462
Water Flowmeters	124,561	138,957	144,353	141,595	132,104
Time Clock/Pressure Switch	126,694	144,853	153,715	152,488	144,693
Soil Moisture Sensors	32,427	44,644	46,121	46,309	45,953
Pre-Irrigation Reduction	84,693	96,908	99,362	94,954	92,338
Reduced Sprinkler Spacing	83,046	90,065	97,926	90,503	89,289
Sprinkler Improvements	105,495	111,889	115,517	115,946	108,617
Off-Wind Irrigation	107,552	114,843	116,209	114,110	108,243
Leakage Reduction	105,702	113,820	115,255	113,372	110,565
Micro Irrigation System	71,710	67,383	87,464	93,146	84,031
Surge Flow Irrigation	7,182	8,785	11,473	12,275	10,154
Tailwater Return System	10,046	16,581	15,402	13,577	8,220
Land Leveling/Grading	56,482	73,361	76,436	79,534	65,306

Note: Due to unique crop rotations, it is difficult to account for each BMP used on total Crop Acres; therefore Net Acres were used.

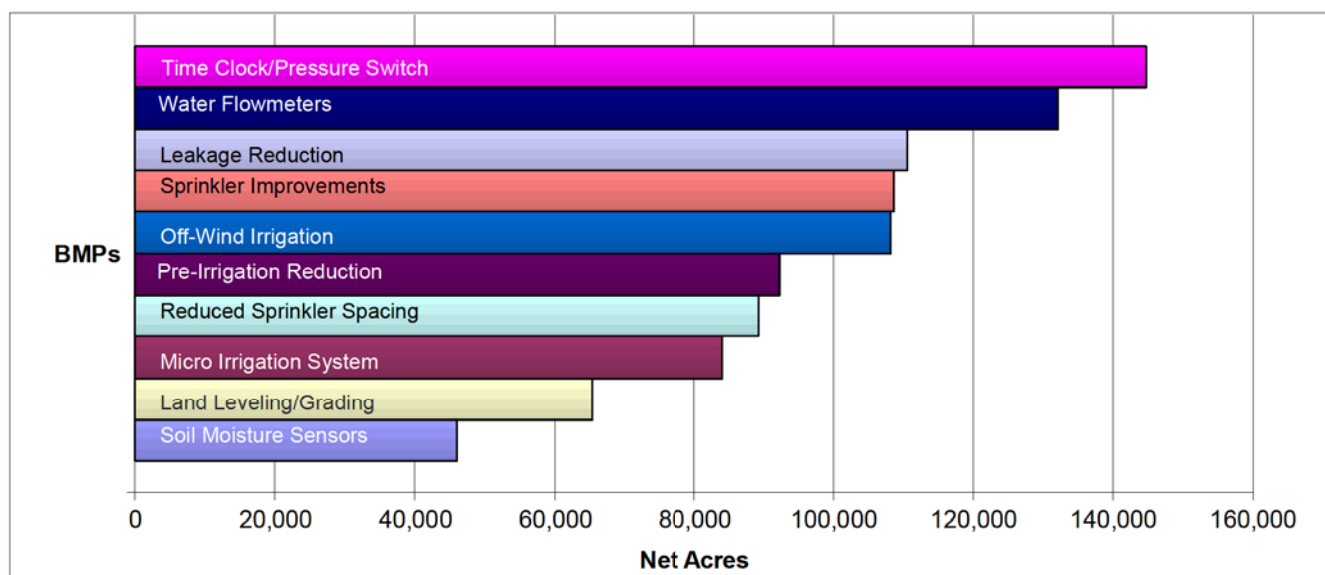


Figure 6. Top Ten Best Management Practices forecasted for 2013 based on reported net acres

Water and Land Use Forms

Agricultural Water Pumped

The following three figures present the agricultural water pumped (Fig. 7), irrigated net acres (Fig. 8), and amount of water used per acre (Fig. 9) by hydrologic subarea and crop type. The data was compiled using the reported acreage and water pumped from the 2012 Water and Land Use Forms. The data accounts for all crop types reported and all reporting methods: Water Flowmeter, Electrical Meter, and Hour Meter.

Changing weather patterns, variable soils, and crop types affect the amount of water needed for efficient irrigation. Even during a normal rain year, pumping rates will vary from one subarea to another and crop types will vary depending on economic demand.

Water and Land Use Forms (continued)

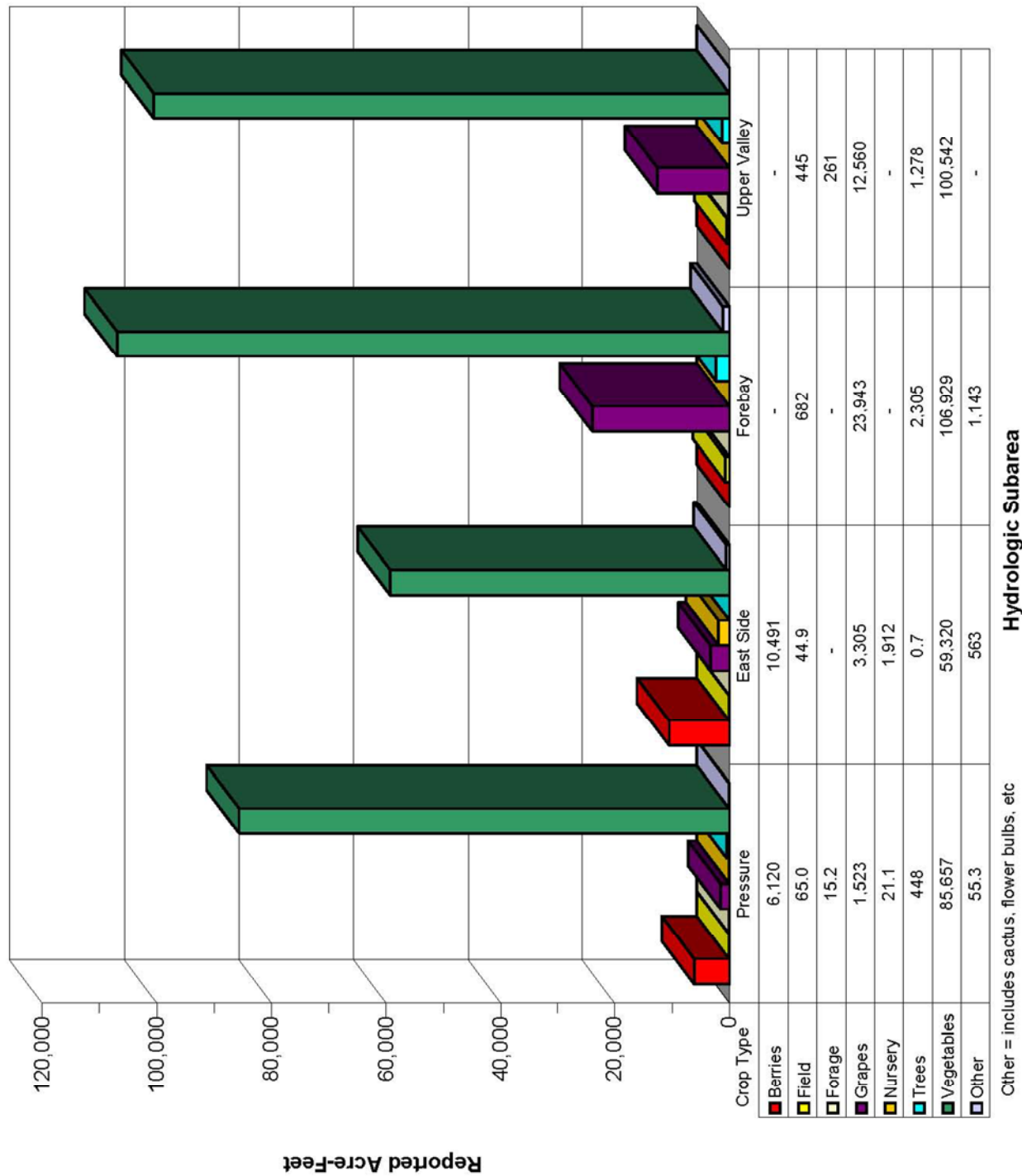


Figure 7. 2012 reported acre-feet by crop type & hydrologic subarea

Water and Land Use Forms (continued)

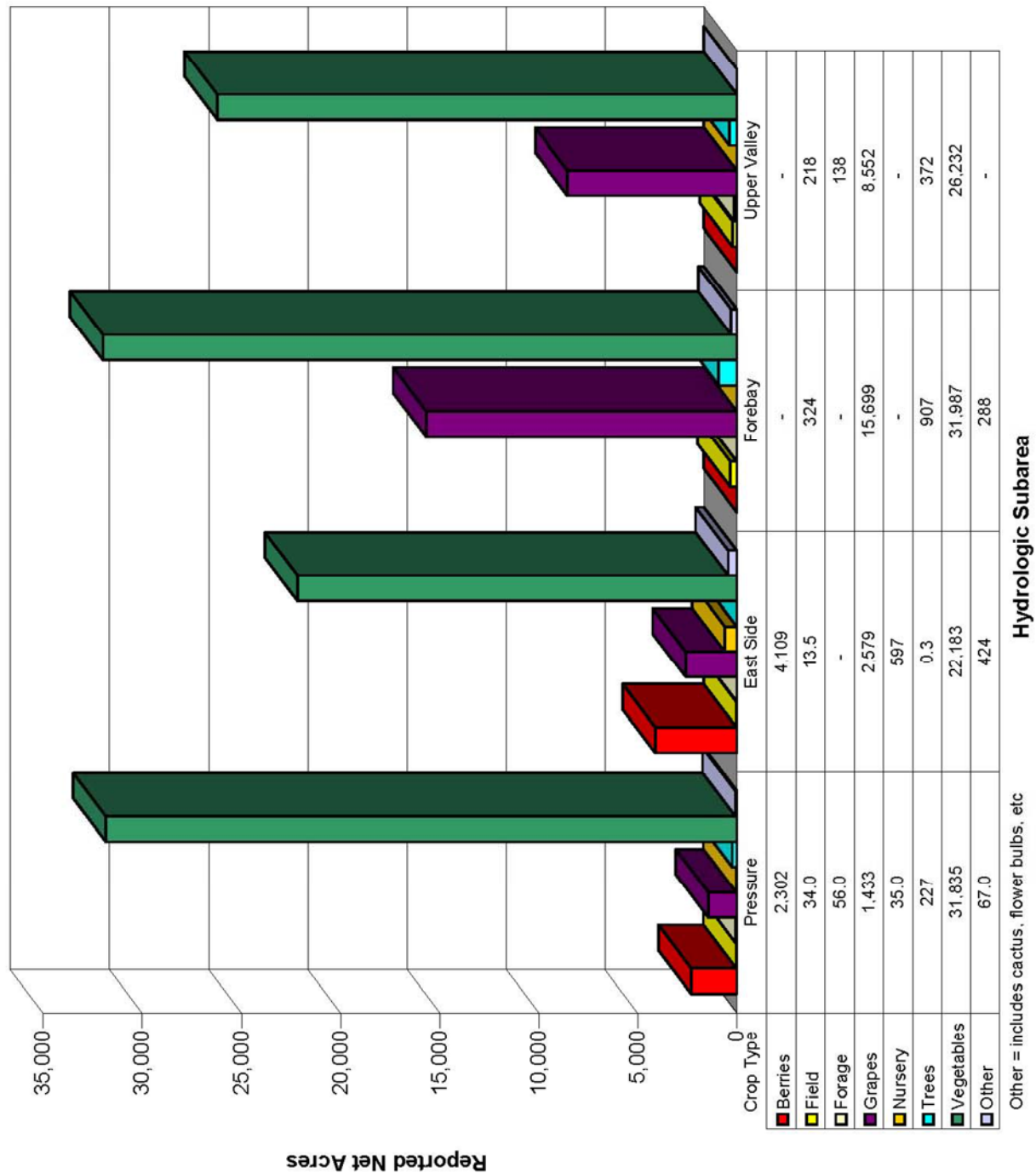


Figure 8. 2012 reported net acres by crop type & hydrologic subarea

Water and Land Use Forms (continued)

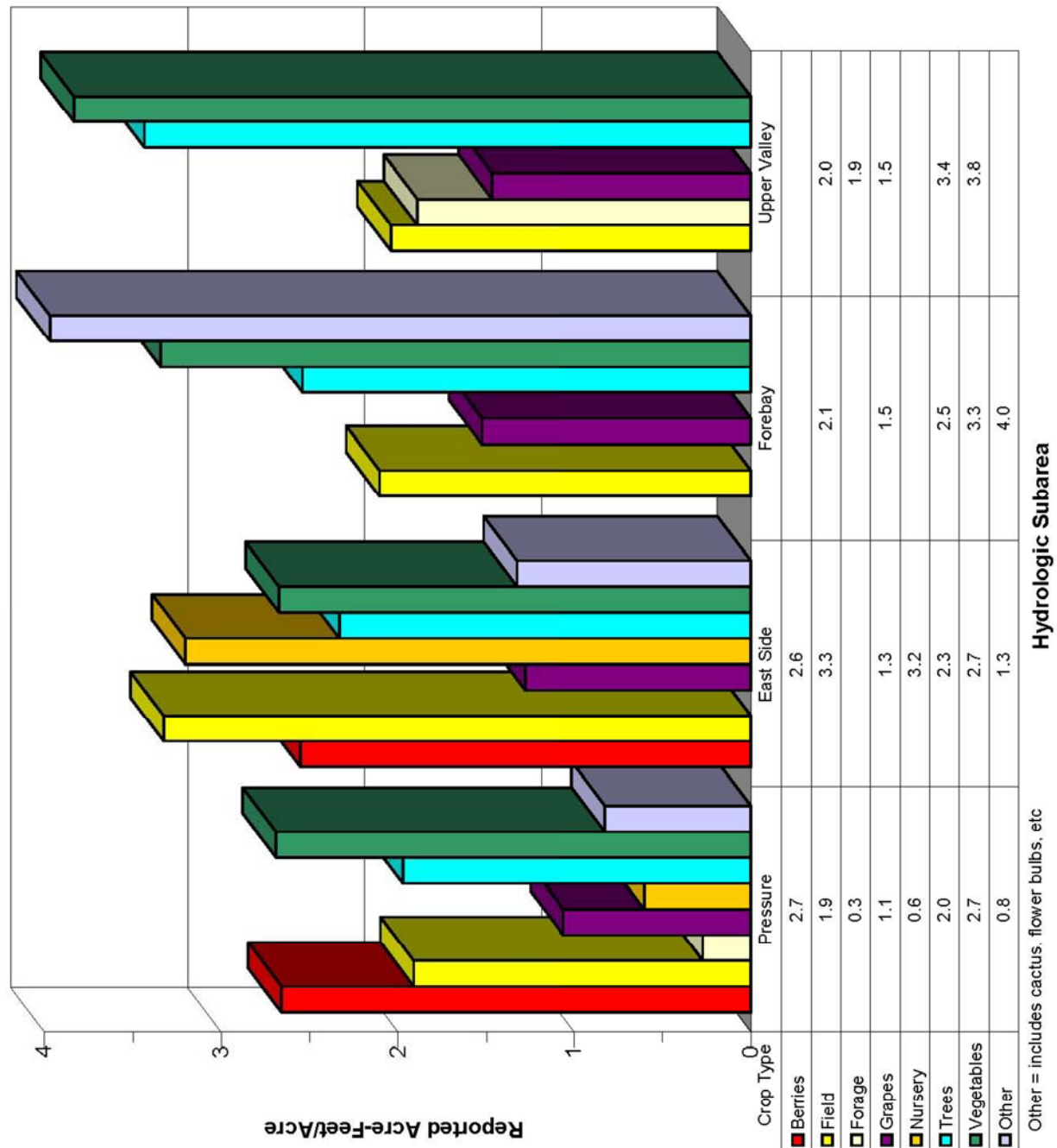


Figure 9. 2012 reported acre-feet/acre by crop type & hydrologic subarea

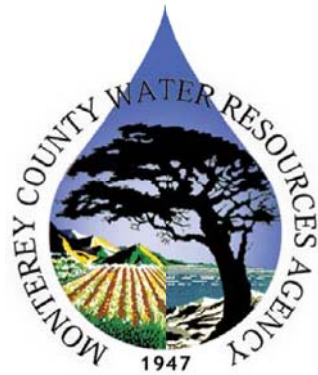
Urban Water Conservation Plans

Since 1996, the Agency has been collecting data for the Urban Water Conservation Plan program. Table 9 shows the forecasted adoption of “Best Management Practices” (water conservation measures) for the past three years, as a percentage of total acreage reported. It is important to note that, while all of the listed practices apply to “large” water systems (200 or more customer connections), not all apply to “small” water systems (between 15 and 199 customer connections). The practices that apply **only** to large systems are printed in **bold** below.

Table 9. Urban Best Management Practices reported to be adopted from 2011 through 2013

Best Management Practices	2011	2012	2013
Provide speakers to community groups and media	85%	81%	85%
Use paid and public service advertising	74%	96%	89%
Provide conservation information in bill inserts	94%	95%	94%
Provide individual historical water use information on water bills	92%	92%	96%
Coordinate with other entities in regional efforts to promote water conservation practices	94%	95%	94%
Work with school districts to provide educational materials and instructional assistance	61%	92%	91%
Implement requirements that all new connections be metered and billed by volume of use	99%	99%	98%
Establish a program to retrofit any existing unmetered connections and bill by volume of use	77%	78%	39%
Offer free interior and exterior water audits to identify water conservation opportunities	98%	100%	98%
Provide incentives to achieve water conservation by way of free conservation fixtures (showerheads, hose end timers) and/or conservation “adjustments” to water bills	94%	90%	89%
Enforcement and support of water conserving plumbing fixture standards, including requirement for ultra low flush toilets in all new construction	78%	98%	94%
Support of State/Federal legislation prohibiting sale of toilets using more than 1.6 gallons per flush	96%	97%	97%
Program to retrofit existing toilets to reduce flush volume (with displacement devices)	66%	34%	48%
Program to encourage replacement of existing toilets with ultra low flush (through rebates, incentives, etc.)	89%	95%	89%
Provide guidelines, information, and/or incentives for installation of more efficient landscapes and water-saving practices	94%	90%	94%
Encourage local nurseries to promote use of low water use plants	78%	78%	77%
Develop and implement landscape water conservation ordinances pursuant to the “Water Conservation in Landscaping Act”	63%	63%	63%
Identify and contact top industrial, commercial, and/or institutional customers directly; offer and encourage water audits to identify conservation opportunities	89%	87%	89%
Review proposed water uses for new commercial and industrial water service, and make recommendations for improving efficiency before completion of building permit process	64%	84%	84%
Complete an audit of water distribution system at least every three years as prescribed by American Water Works Association	74%	92%	93%
Perform distribution system leak detection and repair whenever the audit reveals that it would be cost effective	79%	97%	98%
Advise customers when it appears possible that leaks exist on customer’s side of water meter	99%	99%	97%
Identify irrigators of large landscapes (3 acres or more) and offer landscape audits to determine conservation opportunities	90%	89%	90%
Provide conservation training, information, and incentives necessary to encourage use of conservation practices	91%	92%	96%
Encourage and promote the elimination of non-conserving pricing and adoption of conservation pricing policies	91%	86%	86%
Implementation of conservation pricing policies	96%	91%	91%
Enact and enforce measures prohibiting water waste as specified in Agency Ordinance No. 3932 or as subsequently amended, and encourage the efficient use of water	64%	71%	76%
Implement and/or support programs for the treatment and reuse of industrial waste water / storm water / waste water	53%	67%	66%

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Simón Salinas	District #3
Jane Parker	District #4
Dave Potter	District #5

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Brent Buche, Assistant General Manager, Chief – Operations and Maintenance
Cathy Paladini, Finance Manager – Administrative Services
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