Final Wastewater Services

Municipal Service Review

Prepared for

Solano LAFCO

February 27, 2017

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Municipal Service Review

Wastewater Services

Prepared for:

Solano LAFCO

675 Texas Street, Suite 6700
Fairfield, California 94533
www.solanolafco.com

Prepared by:

February 27, 2017

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ACRONYMS

ABAG	Association of Bay Area Governments
ACS	American Community Survey
ADWF	Average Dry Weather Flow
AF	Acre-Feet
AFB	Air Force Base
AMP	Asset Management Plan
BMP	Best Management Practices
BRAC	Base Realignment and Closure
CAFR	Comprehensive Annual Financial Report
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CIP	Capital Improvement Plan
CKH	Cortese-Knox-Hertzberg Reorganization Act of 2000
CCTV	Closed Circuit Television
DAC	Disadvantaged Community
DUC	Disadvantaged Unincorporated Community
DWR	Department of Water Resources
EDU	Equivalent Dwelling Unit
FSSD	Fairfield-Suisun Sewer District
FY	Fiscal Year
FTE	Full-Time Equivalent
GAAP	Generally Accepted Accounting Principles
GASB	Government Accounting Standards Board
GIS	Geographic Information System
GPM	Gallons per Minute
I/I	Infiltration and Inflow
LAFCO	Local Agency Formation Commission
MGD	Million Gallons per Day
MHI	Median Household Income
MSR	Municipal Services Review
NPDES	National Pollutant Discharge Elimination System
OM&R	Operation, Maintenance, and Repair
PDWF	Peak dry-weather flow includes daily sanitary (wastewater) flow
PWWF	Peak wet-weather flow includes infiltration and inflow
RDI/I	Rainfall-dependent infiltration and inflow
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition; a software application
SCS	Sustainable Communities Strategy
SFR	Single Family Residence
SIMMS	Sewer Information Maintenance and Management System. A computer program.
SIU	Significant Industrial User
SOI	Sphere of Influence
SSMP	Sewer System Management (Master) Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
UWMP	Urban Water Management
VSFCD	Vallejo Sanitation and Flood Control District
WDR	Waste Discharge Requirement
WMP	Water Master Plan
WRF	Water Recycling Facility
WWTP	Wastewater Treatment Plant

Chapter 1: INTRODUCTION

1.1: ROLE AND RESPONSIBILITY OF LAFCO

Local Agency Formation Commissions (LAFCO's) are independent agencies that were established by state legislation in 1963 in each county in California to oversee changes in local agency boundaries and organizational structures. It is LAFCO's responsibility to:

- oversee the logical, efficient, and most appropriate formation of local cities and special districts,
- provide for the logical progression of agency boundaries and efficient expansion of municipal services,
- assure the efficient provision of municipal services, and
- discourage the premature conversion of agricultural and open space lands (Government Code [GC] §§ 56100, 56301, 56425, 56430, 56378).

The Cortese-Knox-Hertzberg (CKH) Local Government Reorganization Act of 2000 (CKH Act) requires each LAFCO to prepare a MSR for its cities and special districts. MSRs are required prior to or in conjunction with the update of a Sphere of Influence (SOI). This review is intended to provide Solano LAFCO with the necessary and relevant information related to two wastewater service providers within the County, specifically regarding the appropriateness of each service provider's existing and proposed boundaries and SOI.

ABOUT SOLANO LAFCO

Although each LAFCO works to implement the CKH Act, there is flexibility in how these state regulations are implemented so as to allow adaptation to local needs. As a result, Solano LAFCO has adopted policies, procedures and principles that guide its operations (adopted on March 1, 1999 and last updated on April 8, 2013). The policies and procedures can be found on Solano LAFCO's website (*http://www.solanolafco.com/*).

This MSR is an information tool that can be used to inform the public, facilitate cooperation among agency managers and LAFCO to achieve the efficient delivery of services. Describing existing efficiencies in service deliveries and suggesting new opportunities to improve efficiencies is a key objective of this MSR, consistent with LAFCO's purposes. Since this MSR will be published on LAFCO's website, it also contributes to LAFCO's principle relating to transparency of process and information. A public hearing will be conducted by LAFCO on this MSR, thereby contributing to LAFCO's aim of encouraging an open and engaged process.

This MSR was written under the auspices of the Solano LAFCO. Solano LAFCO is a public agency with five regular Commissioners and three alternate Commissioners as follows:

Staff / Administrative

- Roseanne Chamberlain, Interim Executive Officer
- Michelle McIntyre, Analyst

Additional Information

Additional reference documents, such as previous MSR's or sphere studies are available from LAFCO's office and website and contact information is shown below:

Solano LAFCO
Attn: Roseanne Chamberlain, Interim Officer
675 Texas Street, Suite 6700
Fairfield, California 94533
Phone: (707) 439-3897
http://www.solanolafco.com/

1.2: PURPOSE OF THE MUNICIPAL SERVICE REVIEW

MSRs are intended to provide LAFCO with a comprehensive analysis of services provided by each of the special districts and other service providers identified within this MSR and that fall under the legislative authority of the LAFCO. This review will provide Solano LAFCO with the information and analysis necessary to evaluate existing boundaries and consider spheres of influence for these service providers. The MSR makes determinations in each of seven mandated areas of evaluation, providing the basis for LAFCO to review proposed changes to a service provider's boundaries or SOI. An SOI is defined in GC § 56425 as "a plan for the probable physical boundary and service area of a local agency or municipality as determined by the Commission." LAFCO is required to adopt an SOI for each city and each agency in its jurisdiction.

Ideally, an MSR will support not only LAFCO but will also provide the following benefits to the subject agencies:

- Provide a broad overview of agency operations including type and extent of services provided
- Serve as a prerequisite for a sphere of influence update (included herein)
- Evaluate governance options and financial information

- Demonstrate accountability and transparency to LAFCO and to the public
- Allow agencies to compare their operations and services with other similar agencies

This MSR is designed to provide technical and administrative information on each of the two wastewater service providers to Solano LAFCO, so that LAFCO can make informed decisions based on the best available data for each service provider and area. Written determinations, as required by law, are presented in Sections 3.10 and 4.10 *MSR Determinations* of this MSR for LAFCO's consideration. LAFCO is ultimately the decision maker on approval or disapproval of any determinations, policies, boundaries, and discretionary items.

1.3 METHODOLOGY FOR THIS MSR

In accordance with GC § 56430, LAFCO must prepare municipal service reviews prior to or in conjunction with review of SOIs for the agencies within its jurisdiction. The CKH Act indicates that LAFCO should review and update a sphere of influence every five years, as necessary, consistent with GC § 56425(g) and § 56106. This MSR evaluates the structure and operation of each of the two wastewater service providers and discusses possible areas for streamlining, improvement, and coordination. Key references and information sources for this study were gathered for each agency considered. The references utilized in this study include published reports; review of agency files and databases (agendas, minutes, budgets, contracts, audits, etc.); master plans; capital improvement plans; engineering reports; EIRs; finance studies; general plans; and state and regional agency information (permits, reviews, communications, regulatory requirements, etc.). Additionally, the consulting team, in coordination with the LAFCO Executive Officer, sent each District a Request for Information, and the Districts' responses to these requests were a key information source. Members of the consultant team also conducted site visits and personal interviews with each District.

This MSR forms the basis for specific judgments, known as determinations, about each agency that LAFCO is required to make (GC § 5425, 56430). These determinations are described in the MSR Guidelines from the Office of Planning & Research (OPR) as set forth in the CKH Act, and they fall into seven categories, as listed below:

1. Growth and population projections for the affected area
2. Location and characteristics of any disadvantaged unincorporated communities within or contiguous to the sphere of influence
3. Present and planned capacity of public facilities and adequacy of public services including infrastructure needs or deficiencies
4. Financial ability of agency to provide services
5. Status of, and opportunities for, shared facilities

6. Accountability for community service needs, including government structure and operational efficiencies
7. Any other matter related to effective or efficient service delivery, as required by commission policy

An MSR must include an analysis of the issues and written determination(s) for each of the above determination categories.

1.4: SPHERE OF INFLUENCE

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 requires that LAFCO adopt and periodically update a Sphere of Influence (SOI or Sphere) for each city and special district within the county. A SOI is "a plan for the probable physical boundaries and service areas of a local agency" (GC §56076). In determining the Sphere of Influence for an agency, LAFCO must consider and prepare written determinations with respect to five factors [Government Code §56425(e)]. These factors relate to the present and planned land uses including agricultural and open-space lands, the present and probable need for public facilities and services, the present capacity of public facilities and adequacy of public services, the existence of any social or economic communities of interest in the area, and the present and probable need for public facilities and services of any disadvantaged unincorporated communities within the existing sphere.

This document considers two wastewater districts, the Fairfield Suisun Sewer District and the Vallejo Sanitation and Flood Control District. LAFCO's files indicate that neither of these two districts have a current SOI.

1.5: PUBLIC PARTICIPATION

Solano LAFCO received a presentation for discussion of the Draft MSR on December 12, 2016. Comments from the public were solicited for a 30-day comment period. No comments from the public were received. The public hearing on the Final MSR is scheduled for February 27, 2017.

After this MSR is finalized, it will be published on the Commission's website (http://www.solanolafco.com/), thereby making the information contained herein available to anyone with access to an internet connection. A copy of this MSR may also be viewed during posted office hours at LAFCO's office located at 675 Texas St. Suite 6700, Fairfield CA 94533. In addition to this MSR, LAFCO's office maintains files for each service provider and copies of many of the planning documents and studies that were utilized in the development of this MSR. These materials are also available to the public for review.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) is contained in Public Resources Code § 21000, et seq. Under this law public agencies are required to evaluate the potential environmental effects of their actions. Specifically, LAFCO is required to comply with CEQA (Bozung v. LAFCO (1975) 13 Cal.3d 263). This MSR is exempt from CEQA under a Class 6 categorical exemption. CEQA Guidelines § 15306 states that "Class 6 consists of basic data collection, research, experimental management, and resource evaluation activities that do not result in a serious or major disturbance to an environmental resource." Although MSRs are not subject to CEQA, it is noted that if LAFCO acts to establish or update a SOI for the district, CEQA requirements must be satisfied. The lead agency for future CEQA documents would most likely be LAFCO.

Chapter 2: Executive Summary

This Municipal Service Review (MSR) addresses major issues of service delivery and efficiency and includes an analysis and a written statement of conclusions, known as determinations, for each of the following factors:

- Growth and population projections for the affected area
- Disadvantaged unincorporated communities
- Present and planned capacity of public facilities
- Financial ability of the agency to provide services
- Opportunities for shared facilities
- Accountability for government service needs
- Any other matter relative to service delivery as required by Commission Policy

The specific determinations and the key facts that support each determination for each service provided are discussed in Chapters 3 and 4. The areas of description and analysis contain the essential operational and management aspects for the two service providers and together constitute a review of the ability of the providers to meet the service demands of the residents

within their boundaries. The services considered in this MSR are wastewater collection, treatment, and disposal along with water recycling, storm drainage management, and flood control. These services are primarily provided to residents and visitors by the two special districts, in cooperation with nearby cities. The Districts are typically operated under the provisions of their "principal acts," and they govern the provision of one or more public services. Boundaries and spheres of influence are determined by their Local Agency Formation Commission (LAFCO). This MSR addresses the two wastewater service providers in Solano County: the Fairfield Suisun Sewer District (Chapter 2) and the Vallejo Sanitation & Flood Control District (Chapter 3).

2.1: SUMMARY OF DISTRICTS

The Fairfield Suisun Sewer District and the Vallejo Sanitation & Flood Control District were last reviewed by LAFCO in a MSR in 2006. A concise summary of FSSD is provided in Appendix A-2 (District Brochure). A timeline summarizing VSFCD's 60 years of service is provided in Appendix A-3. The following table summarizes key features of the two Districts evaluated in this MSR.

Table 2.1. Summary of 2 Wastewater Districts

	Fairfield Suisun Sewer District	Vallejo Sanitation & Flood Control District
Population (per 2010 US Census)*	140,400	124,134
Size (sq. mi.)	44.7	36
Services	Sewage collection, treatment, and disposal, water recycling, storm drainage management	Wastewater collection, treatment, and disposal and Flood Control Services
# of sewer connections	54,000 separate sewer connections that ultimately serve 140,400 residents	37,804
Gross Revenue (2015)	$28,049,378	$30,790,632
Monthly rate for a SFR	$36.35	$43.35

Profile of Fairfield Suisun Sewer District

Name of District: Fairfield Suisun Sewer District
Type of District: Sanitation District
Enabling Legislation: Fairfield-Suisun Sewer District Act Chapter 303, Statues of 1951

Functions/Services: Sewage collection, treatment, and disposal, water recycling, storm drainage management

Main Office: 1010 Chadbourne Rd., Fairfield, Ca 94534
Mailing Address: Same

Phone No.: (707) 429-8930
Fax No.: N/A
Web Site: *http://www.fssd.com/*
Email Address: gbaatrup @ fssd.com

Contact Person: Gregory G. Baatrup, General Manager
Phone: (707) 429-8930

Governing Body:

Table 2.2: FSSD Board of Directors

Director	Title	Representing	Term Expiration
Chuck Timm	President	City of Fairfield	November 2018
Mike Segala	Vice President	Suisun City	November 2020
Pam Bertani	Director	City of Fairfield	November 2020
Jane Day	Director	Suisun City	November 2018
Mike Hudson	Director	Suisun City	November 2018
Catherine Moy	Director	City of Fairfield	November 2018
Harry Price	Director	City of Fairfield	November 2018
Pete Sanchez	Director	Suisun City	November 2018
Rick Vaccaro	Director	City of Fairfield	November 2020
Lori Wilson	Director	Suisun City	November 2020

Meeting Schedule: Fourth Monday of each month at 6 p.m. in the.
Meeting Location: Board Room at 1010 Chadbourne Road, Fairfield, California

Date of Formation: May 5, 1951, *per California Code Chapter 303, 1951
Principal County: Solano County

Profile of Vallejo Sanitation & Flood Control District

Name of District: Vallejo Sanitation & Flood Control District
Type of District: Sanitation and Flood Control District
Enabling Legislation: State of California, Act 8934
Functions/Services: Wastewater and Flood Control Services
Main Office: 450 Ryder Street, Vallejo, CA 94590
Mailing Address: same as above

Phone No.: (707) 644-8949
Fax No.: N/A
Web Site: *https://www.vsfcd.com*
Email: mmorton@vsfcd.com

Contact Person: Melissa Morton, District Manager Phone: (707)644-8949
Alternate Contact: Holly Charlety, District Clerk Phone: (707)644-8949

Governing Body: Board of Trustees (Staggered Four-year Terms)

Table 2.3: VSFCD Board of Trustees

Director	Title	Term Expiration
Jess Malgapo	Trustee, Vice-President	January 2019
Bob Sampavan	Trustee	January 2021
Pippin Dew-Costa	Trustee	January 2019
Erin Hannigan	Trustee	January 2018
Robert McConnell	Trustee	January 2021
Katy Miessner	Trustee	January 2019
Hermie Sunga	Trustee	January 2021
Rozzana Verder-Aliga	Trustee	January 2021

Meeting Schedule: Second Tuesday of every month at 6:00 p.m.
Meeting Location: Vallejo City Hall, 555 Santa Clara Street in Vallejo
Date of Formation: April 19, 1952
Principal County: Solano County

2.2: SUMMARY OF FACTORS

Chapters 3 and 4 provide more detailed information on issues and challenges faced by the two Districts. For the purposes of this Executive Summary, however, the most crucial wastewater problems facing the Districts now or in the recent past are encapsulated below.

Growth and Population Projections

Solano County has experienced substantial growth over the past few decades, especially in urban areas located near Interstate 80. The cities of Fairfield and Suisun City are clustered together in the central part of the County, while Vallejo is located in the southern portion of the County adjacent to the Delta. In the future, Solano County is projected to have approximately four percent of the Bay Area's future growth in households and jobs. The population of Solano County is expected to exceed a half million by the year 2040, which represents an addition of 100,000 people above today's population (ABAG, 2013). These new future residents represent potential customers of the wastewater treatment service providers described in this MSR. Future population levels are used to predict future service demands. An economic forecast of Solano County is provided in Appendix A-4.

A population of 140,400 resides within FSSD's boundaries. A population of 124,134 resides within VSFCD's boundaries. Details about population and future growth for the cities of Fairfield and Suisun City are provided in Chapter 3 and for Vallejo are provided in Chapter 4.

Disadvantaged Unincorporated Communities

Senate Bill (SB) 244, which became effective in January 2012, requires LAFCo to consider the presence of any Disadvantaged Unincorporated Communities (DUCs) when preparing a MSR that addresses agencies that provide water, wastewater or structural fire protection services. A DUC is a geographic area characterized as having a median household income of 80 percent or less of the statewide median household income. Chapter 3 describes several areas that could potentially qualify as DUCs within and adjacent to the FSSD service area. Chapter 4 describes two potential DUCs within the VSFCD boundaries, the Starr Subdivision and Homeacres neighborhood. Overall the Vallejo community has a MHI of $58,472 which is less than the statewide MHI but higher than the disadvantaged threshold.

Present and Planned Capacity of Public Facilities

Both FSSD and VSFCD have sufficient capacity to serve existing customers. For the most part, FSSD's 2008 Master Plan facilitates FFSD's accommodation of future growth. However, in some circumstances it is possible that planned developments exceed the population density

envisioned in the 2008 Master Plan and therefore any needed capacity improvements should be assessed on a project-by-project basis.

VSFCD provides wastewater and flood control services to customers within their boundary. The District's major facilities include 415 miles of sewer pipes, 250 miles of storm drain pipes, 10,000 catch basins, 28 sewer pump stations, 5 stormwater pump stations, and the wastewater treatment plant (VSFCD, 2016). VSFCD's wastewater treatment plant is able to meet the wastewater needs of the service area through its current projected buildout.

Financial Ability of the District to Provide Services

Biennial budgets and annual financial statements are prepared by both Fairfield Suisun Sewer District and the Vallejo Sanitation and Flood Control District. These reports provide data which indicate that each has the financial ability to continue providing public services. Key performance indicators and other information are provided in Chapters 3 and 4.

Opportunities for Shared Facilities

Both Districts operate separately and do not jointly own or share capital facilities or services with other agencies. There are no other agencies in geographic proximity that provides wastewater and flood control services, making it difficult to share facilities. Although no opportunities have been identified for the two Districts to share facilities with other public agencies, each District does collaborate with other agencies and organizations in many other ways as described in Chapters 3 and 4. Additionally, it is recommended that the Districts continue to participate in regional planning efforts.

Accountability for Government Service Needs

In a municipal service review, LAFCO is required to make a determination about a district's government structure and accountability. In California, there are three types of special districts:

- Dependent districts: Function as subdivisions of another multi-purpose local government such as a county board of supervisors or a city council.
- Independent districts: Have their own governing board and are usually elected directly by voters.

Both Fairfield Suisun Sewer District and the Vallejo Sanitation and Flood Control District are dependent districts as detailed in Chapters 2 and 3. Both FSSD and VSFCD representatives appear to comply with the requirements of the Brown Act, the Political Reform Act, and similar laws. Each District maintains a website that functions as a communication tool for meeting

agendas, minutes, and adopted resolutions, and provides information about the District's services and programs.

Any Other Matter Relative to Service Delivery as Required by Commission Policy

Cortese-Knox Hertzberg allows LAFCOs to establish policies to implement the law and process applications. Solano LAFCO has implemented eleven standards, six mandatory standards which mirror the requirements of CKH, and five discretionary standards. Application of discretionary standards lies with the Commission. There are no other aspects of wastewater and storm drainage service required to be addressed in this report by LAFCO policies that would affect delivery of services.

CHAPTER 3: FAIRFIELD-SUISUN SEWER DISTRICT

3.1 DISTRICT PROFILE INCLUDING BOUNDARY MAP

Services And Location

Type and Extent of Services

The Fairfield-Suisun Sewer District (FSSD) provides wastewater, water recycling, and storm water management services to citizens, business, and government facilities located within the Cities of Fairfield and Suisun. The FSSD currently serves an area of approximately 44 square miles and approximately 140,400 residents. The geography of the service area includes the City of Fairfield, Suisun City, Travis Air Force Base, the unincorporated area of Cordelia, and parts of Suisun Valley. Travis Air Force Base is the region's largest employer with over 14,000 military personnel and civilian employees. Infrastructure, maintenance, and personnel needs necessary to fulfill these services are reviewed and updated periodically in publicly available master plans and capital improvement plans.

Location and Size

Fairfield-Suisun Sewer District is located in Solano County and the District's boundaries encompass two cities: the City of Fairfield and the City of Suisun City. Fairfield serves as the County seat and is located halfway between the cities of San Francisco and Sacramento along the Interstate-80 corridor. Notable employers include Travis Air Force Base and Jelly Belly. Suisun City is located southeast of Fairfield and it straddles Highway 12. The City of Suisun City is known for its charming marina and historic architecture. Suisun Marsh, located south of Suisun City, is an important part of the San Francisco Bay along with its inland Delta complex, the largest remaining estuary on the west coast of North America.

The City of Fairfield is approximately 40.1 square miles (26,167 acres) in size, which includes the Travis Air Force Base (10 sq. mi.). Suisun City is approximately 4.1 square miles (2,624 acres), in size. Summing the geographic extent of both cities yields the size of FSSD at approximately 44.7 square miles (29,242 acres).

Table 3.1: FSSD Geographic Summary	
Jurisdictional Boundary	
City of Fairfield	40.6 square miles (26,610 acres),
Suisun City	4.1 square miles (2,624 acres)
Fairfield-Suisun Sewer District	44.7 square miles (29,234 acres)
Sphere of Influence	
None	0
Data Source: Solano County GIS NAD_1983_StatePlane_California_II_FIPS_0402_Feet and Solano LAFCO	

A map of the District's boundary is provided as Figure 3.1, below.

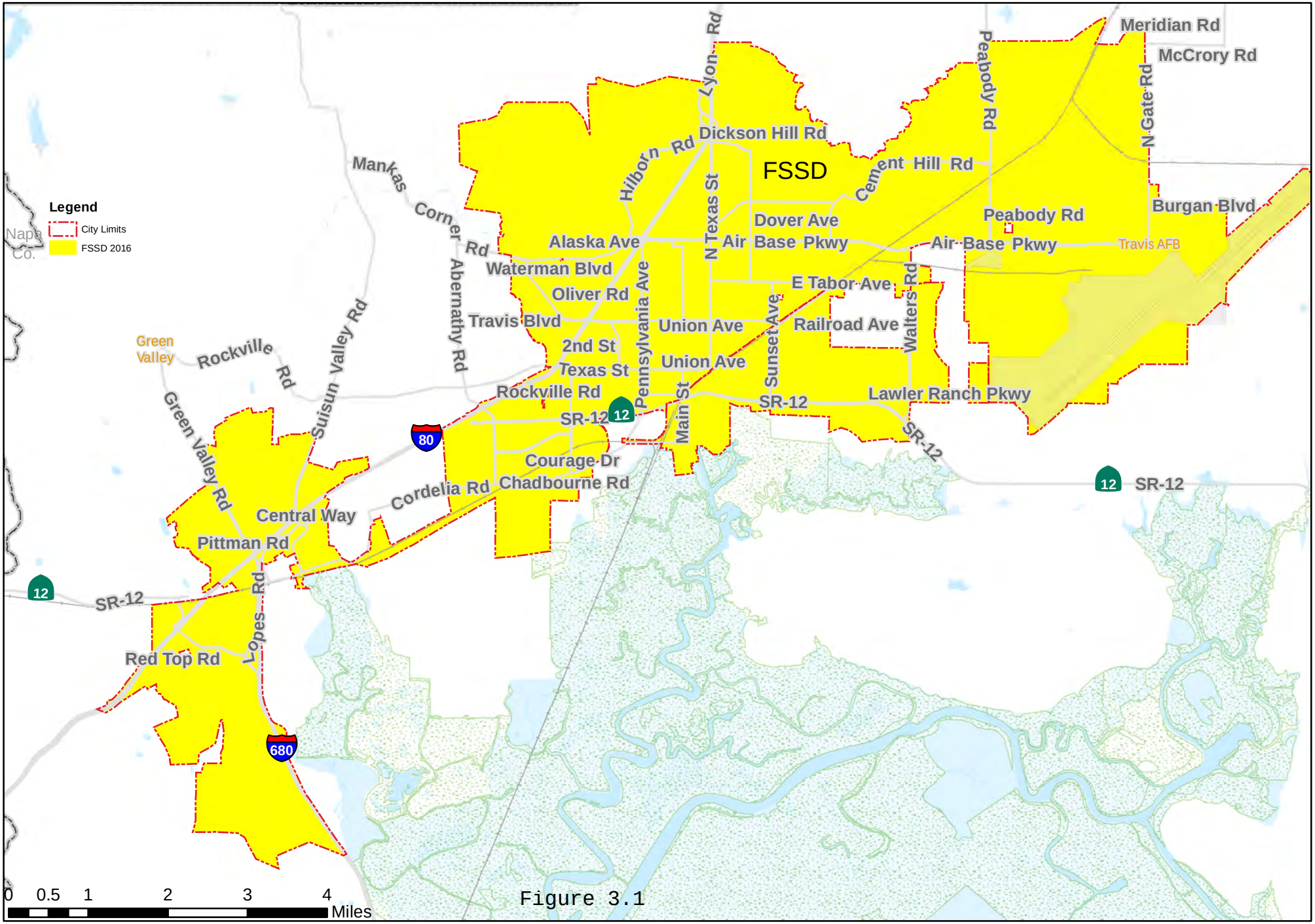


Figure 3.1

Department of Information Technology, GIS Services

Fairfield Suisun Sewer District (FSSD) Boundaries

Solano County

Date: 02/10/2017

Solano County GIS Services
Department of Information Technology
675 Texas Street, Suite 3700
Fairfield, CA 94533
Phone: 707-784-6340
Email: GISStaff@SolanoCounty.com
PRJ_1459

Document Path: Z:\P1401-1500\PRJ_1459_LafcoSewerDist2016\MXD\LafcoFFSSSDFeb2017.mxd

Formation And Boundary

Fairfield-Suisun Sewer District was formed via the Fairfield-Suisun Sewer District Act Chapter 303, Statues of 1951 as amended in 1997 and 2001, and as approved by the California Legislature. The District was formed on May 5, 1951. FSSD is classified as a dependent special district formed by statute which performs wastewater collection and treatment activities and water recycling services for all properties within the boundaries of Fairfield, Suisun City, and Travis Air Force Base. The District also operates a drainage maintenance operation that performs specified storm water management services in conjunction with the cities it serves.

Upon annexation of new territory to the cities, the property automatically annexes into the District boundaries. (Article 1, Section 1). The District's boundaries cannot otherwise expand without an action of the State Legislature. However, the District boundaries and its service area are not equivalent. FSSD's enabling legislation (Fairfield-Suisun Sewer District Act -Chapter 303 of the Statutes of 1951) as amended by AB 776 (Thomson, 2001) defines its boundaries and its service area. Please see "Extra-Territorial Services" on page 3-5.

Boundary History

Consistent with the Fairfield-Suisun Sewer District Act, the District consists "of the territory in Solano County now contained within the Cities of Fairfield and Suisun City. Any territory hereafter annexed to either city shall be a part of the district upon annexation." Therefore, FSSD's boundaries encompass the City of Fairfield (including Travis Air Force Base) and Suisun City. The boundary history of the City of Fairfield is described in the "City of Fairfield 2012 Municipal Service Review Update" available on LAFCO's website. During years 1980 to 2007 there were 50 annexations to the City of Fairfield totaling approximately 6,644 acres. Additionally, in 2012 LAFCO approved the Canon Station annexation to the City, covering 1,244 acres.

The boundary history for Suisun City is described in the "City of Suisun City 2016 Municipal Service Review Update" available on LAFCO's website. Suisun City encompasses approximately 2,624 acres. Since 1986 there have been eight annexations and two detachments from the City. The total area annexed since 1986 is 665.27 acres in size.

Sphere of Influence

The Fairfield-Suisun Sewer District[1] does not yet have a sphere of influence. LAFCO has not established a SOI for this District. The 1951 enabling legislation did not address the District's

[1] The District's enabling legislation does not address a sphere of influence for the District.

SOI, as it was enacted prior to LAFCo Law. However, Article 1, Section 1 requires that property annexed to the District be within the City of Fairfield or the City of Suisun City. The 2001 amendment (AB 776) allows the District to contract for disposal of sewage emanating from buildings outside the District if certain determinations are made (Section 48c).

City SOI's

The sphere of influence for the cities of Fairfield and Suisun City provides some indication about where public services will be needed in the future. The District's sphere is functionally indicated by the cities' spheres of influence. Therefore, discussion of the City's SOI is included herein for analytical purposes. In Fairfield approximately 2,400 acres of land have been annexed to the City from 1987 to 2007 while the last revision to the City's SOI occurred in 2004 (Fairfield MSR, 2012).

FSSD'S PURPOSE

Fairfield-Suisun Sewer District protects public health and the environment for the communities we serve in an efficient, responsible and sustainable manner.

LAFCO has made three amendments to Suisun City's Sphere of Influence since 1976 as described in LAFCO's "City of Suisun City 2016 Municipal Service Review Update" available on LAFCO's website. Also, the Peterson Road SOI amendment for Suisun City was submitted by the landowner in August 2014, but it was later withdrawn.

It is anticipated that the SOI area for each city will be annexed into the city within the long-term. The cities have preliminary land-use plans for the SOI area; although final land-use authority remains with Solano County until the lands are annexed to the cities. In the meantime, Fairfield's preliminary land use plan for the SOI calls for mixed use, very low density residential, and park and recreation. Suisun City's SOI is located east and west of Suisun City and each SOI area has development constraints. Suisun City's General Plan designates these areas as Ag-Open Space Reserve.

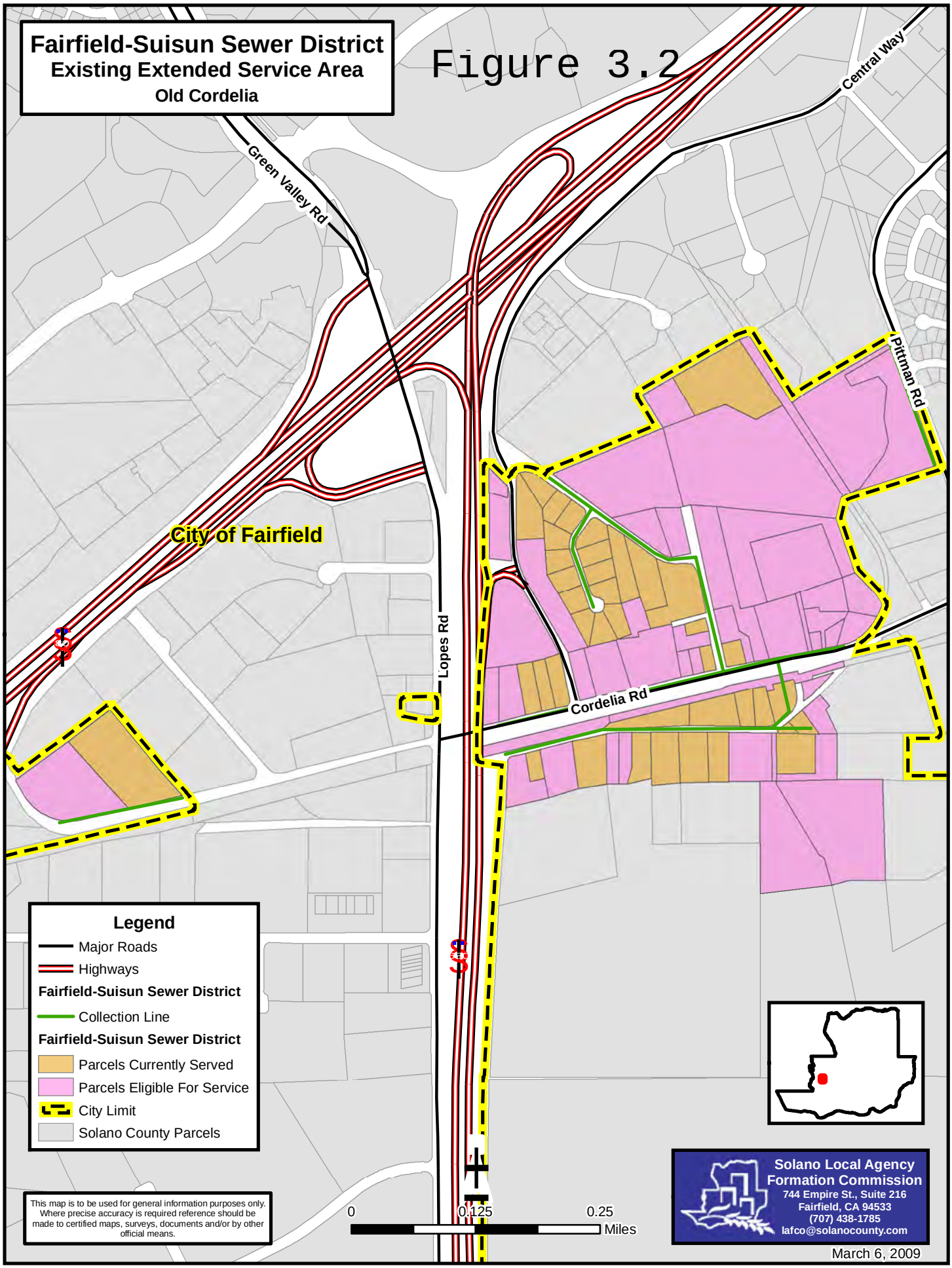
Extra-territorial Services

Although FSSD's enabling legislation (Fairfield-Suisun Sewer District Act -Chapter 303 of the Statutes of 1951) did not originally allow FSSD to provide service outside its formal boundary, a 2001 amendment by AB 776 (Thomson) (Appendix A-6) allows the following:

- (b) The district may accept and contract for the disposal of sewage emanating from buildings outside the district if those buildings are connected to the district's sewage treatment system on March 1, 2002.
- (c) Pursuant to Section 56133 of the Government Code, the district may contract with Solano County or another public entity for the disposal of sewage emanating from buildings outside the district if the board of the district determines that the contract furthers the protection of public health and safety and is in the best interests of the district.

In November 2004, LAFCO approved an out-of-boundary service agreement allowing FSSD to provide sewer service to two areas located outside the District's jurisdictional boundary. The two areas are commonly referred to as "Old Cordelia" and "Suisun Valley Road / Rockville Road Intersection" as shown in Figures 3.2 and 3.3.

FSSD also provides service to customers outside of their jurisdictional boundaries by interagency agreements including, Solano Community College, Truck Scale for the California Highway Patrol, specified parcels in Solano County, and other misc. public buildings (Baatrup, et. al., RFI meeting, 2016). Special districts are required to request and receive written approval from LAFCO before providing new or extended services by contract or agreement outside their jurisdictions but within their spheres, consistent with Government Code Section 56133 and LAFCO policies. Solano LAFCO has several policies related to the provision of service outside of a District's boundaries. Additionally, Solano LAFCO defines an "Existing Extended Service Area of Solano County" as a fixed geographic area to which an agency has extended service, prior to January 1, 2002, as detailed on a LAFCO map. Parcels which are adjacent to existing distribution and/or collection lines, but have yet to connect to that service are included in the Existing Extended Service Area and may make connection per existing legal parcel as of January 5, 2004.


Fairfield-Suisun Sewer District
Existing Extended Service Area
Old Cordelia
Figure 3.2
Green Valley Rd
Central Way
Pittman Rd
City of Fairfield
Lopes Rd
Cordelia Rd
Legend
Major Roads
Highways
Fairfield-Suisun Sewer District
Collection Line
Fairfield-Suisun Sewer District
Parcels Currently Served
Parcels Eligible For Service
City Limit
Solano County Parcels
This map is to be used for general information purposes only. Where precise accuracy is required reference should be made to certified maps, surveys, documents and/or by other official means.
0
0.125
0.25
Miles
Solano Local Agency Formation Commission
744 Empire St., Suite 216
Fairfield, CA 94533
(707) 438-1785
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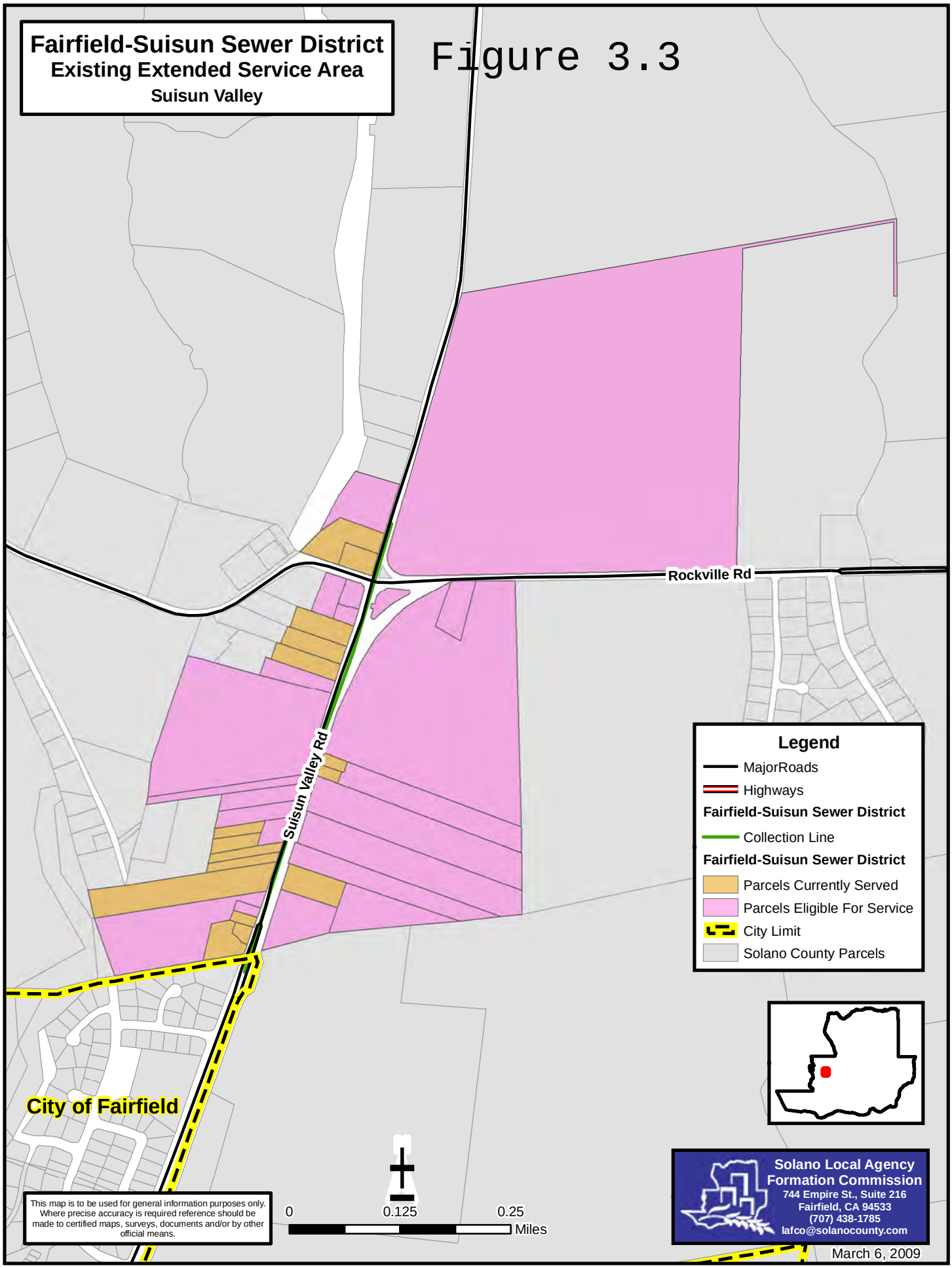
March 6, 2009

Fairfield-Suisun Sewer District
Existing Extended Service Area
Suisun Valley

Figure 3.3



This map is to be used for general information purposes only. Where precise accuracy is required reference should be made to certified maps, surveys, documents and/or by other official means.

Solano Local Agency Formation Commission
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March 6, 2009

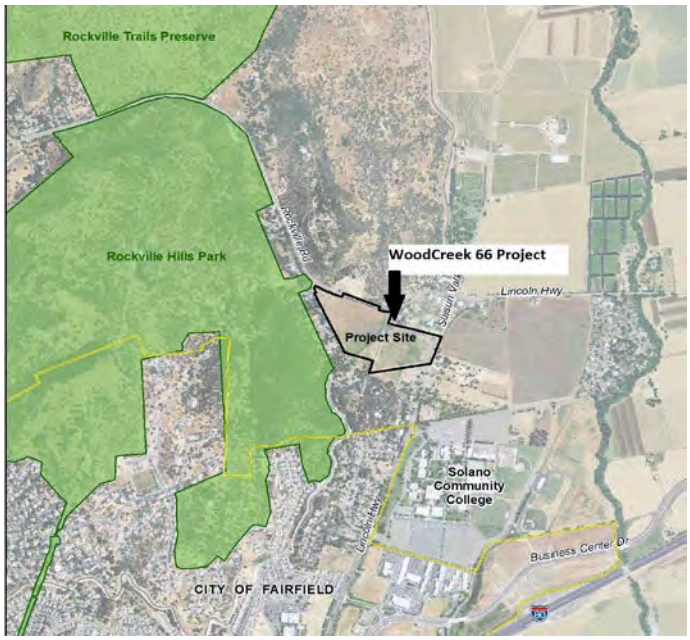
Areas of Interest and/or Future Study Areas for Potential Annexation

Two areas of interest have been identified:

- "Woodcreek 66", and
- "Middle Green Valley Specific Plan Area".

Each of these areas is located outside the District boundary. If the District were to consider the provision of service to these areas, LAFCO regulations and policies would need to be reviewed to ensure compliance and the Out-of-Boundary Service Agreement between the District and the County would need to be amended.

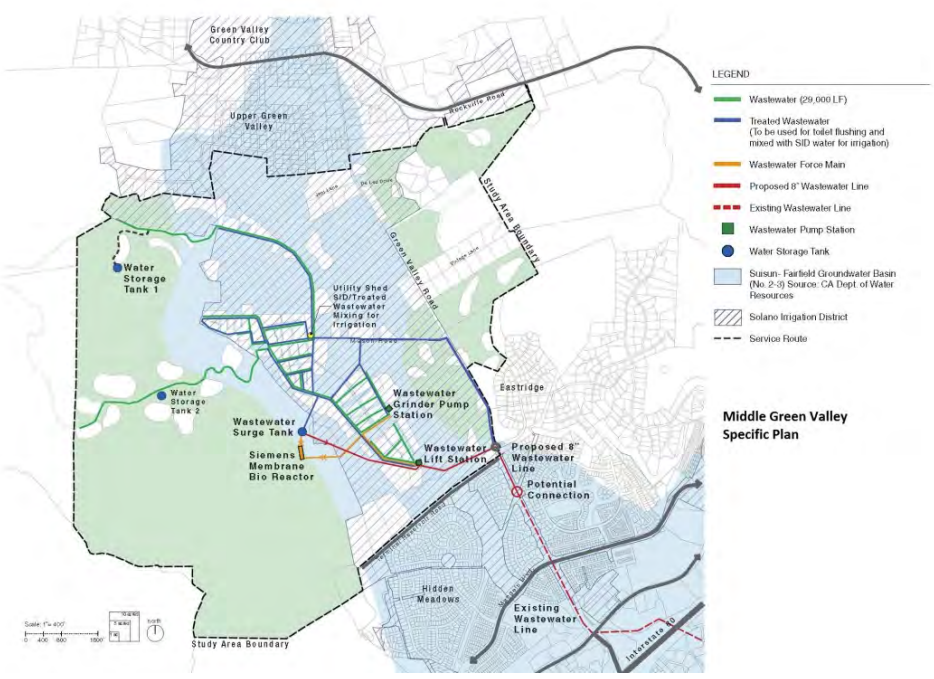
Solano County published the Final Environmental Impact Report[2] in July 2015 for the Woodcreek 66 project. In February 2016, the County approved the Woodcreek 66 project, situated on a 33-acre site and allowing 60 single family homes and a commercial vineyard to be built. The project is located in unincorporated Solano County, northeast of the City of Fairfield in the Rockville area and approximately 1 mile north of Solano Community College. The triangular-shaped project site is bordered by Oakwood Drive to the west, Suisun Valley Road to the east, and Rockville Road to the north. The CEQA analysis anticipated the District providing service to the area and recognized that wastewater infrastructure would need to be constructed in order to service the area (Solano County, 2014).



Solano County's Draft Middle Green Valley Specific Plan covers an area of 1,905-acres located along Green Valley Road, in Green Valley. Specifically, the Specific Plan area is located north of Interstate 80, Jameson Canyon; south of the Green Valley Country Club; and west of the Rockville Hills. The Draft Specific Plan area consists of a valley floor containing Green Valley Creek and Hennessey Creek. The valley is surrounded by oak woodlands and some steep slopes. Existing land use within the Plan Area includes grazing cultivated agriculture including vineyards, several rural buildings and infrastructure elements. The Draft Specific Plan suggests a land use and circulation layout that would facilitate development of 400 new residences, agricultural tourism, local neighborhood retail and community facility uses (Solano County, 2016). Additionally, over 1,400 acres of agriculture and open space would be protected through the use of conservation tools such as development clustering, a TDR program, and conservation easements. The Draft

[2] The EIR for the Wood Creek 66 project is available on Solano County's website at: *http://www.co.solano.ca.us/depts/rm/documents/eir/woodcreek_66.asp.*

EIR for this project was published in June 2016. In October 2016, Solano County published the Responses to Comments on and Revisions to the Second Revised Recirculated Draft Environmental Impact Report. The Specific Plan outlines two options for the provision of wastewater services to the Area. The Plan's Option #A suggests that FSSD could potentially provide wastewater service to the area (Solano County 2010). Currently, the specific plan area is not included within the FSSD boundary.



There are options the project proponents, FSSD, and LAFCO could consider to secure FSSD sewer service to these two areas of interest:

1. SOI option: Currently, LAFCO has not adopted a sphere of influence for FSSD. However, in the future, should LAFCO wish to establish a SOI for the District, then the Woodcreek 66 or Middle Green Valley Specific Plan Area projects could potentially be studied for inclusion within that SOI. Preliminary analysis indicates the two areas of interest could only be included in the District SOI if within one of the City's SOI. However, LAFCO's consideration of this issue would likely need to include additional legal analysis on this topic.

2. Annexation option: The Woodcreek 66 or Middle Green Valley Specific Plan Area projects could potentially be studied for inclusion within the City of Fairfield boundaries. They would therefore be included in the FSSD boundaries consistent with the District's enabling legislation.

3. Study whether it would be possible to amend the Out-of-Boundary Service Agreement between the District and Solano County. Analysis of consistency with LAFCO policies and regulations would also be required.

Each of these options would require LAFCO approval.

3.2 GROWTH AND POPULATION

Existing Population

This section provides information on the existing population and future growth projections for the Fairfield-Suisun Sewer District. Since census data is readily available for the City of Fairfield and the City of Suisun City, these cities are utilized as a proxy for FSSD in this section. Today, FSSD's boundaries contain a population estimated to be 140,400 persons.

City of Fairfield

As of January 1, 2016, the population in the City of Fairfield was estimated by the California Department of Finance at 112,637 persons. Between census years 2000 to 2010, the City of Fairfield's population grew by 9,143 people, which equates to a 0.95 annual growth rate (US Census, 2010). This represents an increase to the annual growth rate by 46 percent between the 2010 U.S. Census and the estimated 2015 population. The average population concentration is roughly 2,700 persons per square mile. The 40.886 square mile area, which includes the Travis Airforce Base, is located in Census Tract 23182 in Solano County (US Census, Geographic Boundary).

Table 3.2: Historic and Existing Population, City of Fairfield

	Total population	Land area (sq. miles)	Population per sq. mile
2010	105,321	37.39	2,817
2015	112,637	40.886	2,755

Data Source: U.S. Census, Fairfield, 2010; California Department of Finance, 2016; US Census Geographic Boundary Change, Fairfield, 2015

Though the population and land area for the City of Fairfield has slightly increased from 2010 to 2015, the population per square mile has decreased. This suggests that the City has enough land to accommodate the population growth in 2015 over what was available in 2010.

Suisun City

As of January 1, 2016, the population in Suisun City is estimated by the California Department of Finance at 29,091 persons. Between census years 2000 to 2010, the Suisun City population grew by 1,993 people, which equates to a 0.76 annual growth rate (US Census, 2010). The average population concentration is about 7,000 persons per square mile. The 4.105 sq. mile area as of 2015,

which includes expansion into areas south of the City boundary as of 2000, is located in Census Tract 75630 in Solano County (US Census, Geographic Boundary).

Table 3.3: Historic and Existing Population, Suisun City			
	Total population	**Land area (sq. miles)**	**Population per sq. mile**
2010	28,111	4.011	7,008
2015	29,091	4.105	7,087
U.S. Census, Suisun, 2010; California Department of Finance, 2016; US Census Geographic Boundary Change, Suisun, 2015			

The slight increase in population and land area from 2010 to 2015 has slightly increased the population per square mile within Suisun City. The increase in land area shown in Table 3.3 is less than 1/10 of a square mile.

Projected Growth and Development

City of Fairfield

To some extent, population growth in the City is dependent upon land use, general plan designations, and zoning on properties. The General Plan for the City of Fairfield was adopted in June of 1992. In 2002, the City adopted a substantial revision to the General Plan for build out to the year 2020. A new Housing Element was adopted in January 2007, with a draft update currently in review. The City's General Plan is based upon the concept of a "Livable City," envisioning development in a manner that promotes compact and efficient land use patterns, with less emphasis on development that requires the use of the automobile. Thus, the City's Land Use Element incorporates five strategies, which include:

- Strong commitment toward protection of agricultural areas outside of the urban limit line and separation from other urban areas in the County
- Future development to occur within existing City Limits with limited development proposed outside of the City Limits to achieve certain related objectives that would be difficult to achieve within the existing City Limits
- Incentives such as modifications to development regulations and city fees to concentrate development of infill areas within existing City boundaries
- Greater emphasis on pedestrian-oriented development (POD) and transit-oriented development (TOD)

- Provide high quality services and infrastructure in accordance with adopted standards.

(City of Fairfield General Plan, Land Use Element, 2004).

The Association of Bay Area Governments (ABAG) prepares population projections at the County and jurisdictional level. According to ABAG's projections, overall Solano County population will increase by 23.8 percent, with Fairfield having the greatest projected growth in the County at 39.1 percent from 2015 to 2040 as shown in Table 3.4, below. The growth rate for Fairfield is 39.1 percent calculated as the total change from year 2010 to 2040 and this yields an average annual growth rate of about 1.3 percent based on population change from 2015 to 2040.

Table 3.4: Projected Population Growth in Cities (2010–2040)

	2010	2015	2020	2025	2030	2035	2040	*Percent Increase
Benicia	26,997	27,600	28,300	29,000	29,700	30,500	31,400	16.3%
Dixon	18,351	18,700	19,000	19,400	19,800	20,200	20,700	12.8%
Fairfield	105,321	111,500	117,900	124,400	131,400	138,800	146,500	39.1%
Rio Vista	7,360	7,500	7,900	8,300	8,400	8,600	8,800	19.6%
Suisun City	28,111	28,900	29,800	30,700	31,600	32,600	33,700	19.9%
Vacaville	92,428	95,300	98,200	101,700	105,500	109,700	114,000	23.3%
Vallejo	115,942	118,100	121,000	124,200	126,200	128,600	131,800	13.7%
Unincorporated	18,834	19,700	20,600	21.500	22,600	23,700	24,700	31.1%
Solano County	413,344	427,300	442,700	459,200	475,200	492,700	511,600	23.8%

**Percentage increase from (2010 to 2040).*
Data Source: ABAG 2013, Population Projections

Population growth in the unincorporated areas of the County is at 31.1 percent, and the City of Vacaville population growth is 23.3 percent.

Suisun City

As with the City of Fairfield, population growth in Suisun City is dependent upon land use, general plan designations, and zoning laws. The 2035 General Plan for the City was adopted in May of 2015. The City adopted a new Housing Element in January of 2015. The 2035 General Plan is based upon ten strategic goals, some of which include:

- Encourage the development of uses and protection of resources that attract visitors, enhancing the community as a tourist destination
- Develop the downtown as a vibrant, pedestrian-scaled commercial and entertainment center that reflects our community's unique waterfront character
- Provide quality community services and sound infrastructure
- Ensure that neighborhoods maintain their character and vitality
- Practice economically, fiscally, and environmentally responsible municipal decision-making to avoid shifting today's costs to future generations

(Source: Suisun City 2035 General Plan)

Although ABAG has projected the population for the City of Suisun City, projecting future population growth for a small city is problematic due to factors associated with a variable annexation rate. The projected growth rate as a percentage of the total from year 2010 to 2040 is 19.9 percent and this yields an average annual growth rate for Suisun City of 0.76 percent as shown in Table 3.4, above.

Since Suisun City is mostly built-out, its future growth rate is projected to be relatively low at rates consistent with the ABAG projection shown in Table 3.4. The City's 2035 General Plan was created to accommodate a total population of about 32,400 with 11,300 dwelling units and 5.8 million sq. feet of non-residential development at build out. The City's 2035 General Plan indicates that, by 2035 the City should have adequate housing and non-residential development potential to meet population projections.

FSSD

Combining the projected population for the City of Fairfield with that in Suisun City yields the projected growth rate in the study area of the Fairfield-Suisun Sewer District as shown in Table 3.5, below.

Table 3.5: FSSD Projected Population Growth (2010–2040)

Year	2010	2015	2020	2025	2030	2035	2040
FSSD	133,432	140,400	147,700	155,100	163,000	171,400	180,200

Between the years 2010 to 2040, an additional 46,768 persons will reside within FSSD's boundaries. This represents an overall 35 percent increase in projected future population at an average annual (compound) growth rate of 1 percent.

Existing and planned land use

The land-uses that are present today are the result of decades of decisions by the cities and activities by private builders. Since FSSD does not have the legal authority to make land use decisions, this section summarizes existing land-use within Fairfield and Suisun City.

City of Fairfield

Three distinct communities characterize the City of Fairfield: Cordelia, Central Fairfield, and Travis Air Force Base/Northeast area. Land-use in Fairfield includes residential, highway-serving commercial areas, and regional commercial uses. The overall land use pattern is suburban and auto-oriented. The federally owned military base includes the Travis Air Force Base and the Travis Reserve areas. Land-uses on the Air Force Base include the Jimmy Doolittle Air & Space Museum, the David Grant USAF Medical Center, three runways (3L/21R, 3R/21L, 32/212), the C-17 Assault Landing Zone, offices, hangars, and housing (SCALUC, 2002). The former Strategic Air Command Alert Facility is now used by the U.S. Navy to place aircraft including Navy E-6B Mercury TACAMO aircraft. The western portion of Fairfield, near Cordelia, is comprised primarily of residential and business park land uses.

Suisun City

As of January 2016, the City of Suisun City was approximately 4.1 square miles (2,632 acres) including 1,910 acres of land, 675 acres of streets/highways, and 47 acres of water. Approximately 665.27 acres of land have been annexed to the City from 1986 to 2006 for purposes of the development of medium residential, mixed-use, commercial services, and light manufacturing uses (Suisun City MSR, 2016). The City's Zoning Map shows a vast majority of the City's acreage has been developed for low density residential. This is due to the rapid growth during the 1960s and 70s that occurred as the San Francisco Bay Area's suburban ring expanded into Solano County. The location of Suisun City, adjacent to the largest contiguous brackish water marsh remaining on the west coast of North America, has created a community rich in water-oriented natural and recreational resources. In addition, the City has placed great value in existing historic architecture and heritage resources. The City's proximity to Fairfield has provided residents with access to employment and business opportunities of the Fairfield labor and consumer markets, thus few employed residents of Suisun City work in the City (City of Suisun City 2035 General Plan).

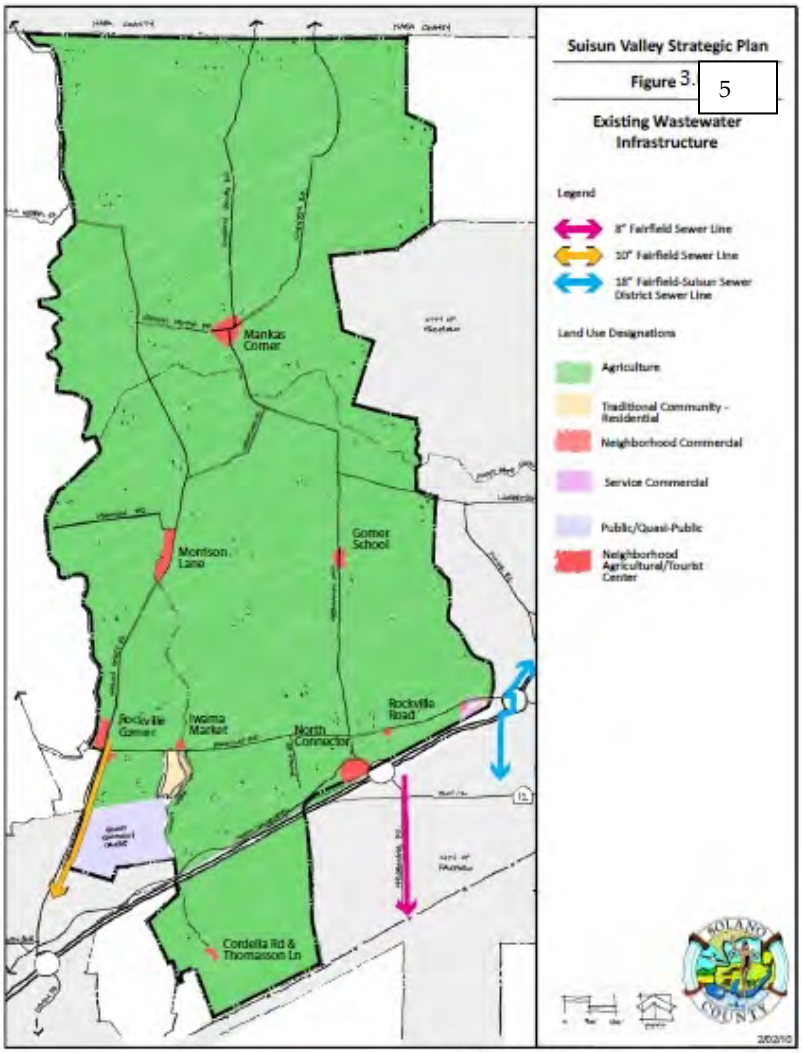
Solano County

Solano County adopted the Suisun Valley Strategic Plan[3] in February, 2010 and codified it via Ordinance Number 2011-1717. The Strategic Plan describes a strategy for the long-term agricultural viability of the Valley. The Plan recommends either septic or packaged wastewater systems within the Specific Plan Area. These can be developed at any time by the owner or occupant and therefore, no action by FSSD was suggested.

Future Development Potential

FSSD does not have the legal authority to make land use decisions. Rather, FSSD aims to provide service to the result of land use and planning decisions that are made by the City of Fairfield and Suisun City.

As part of the Plan Bay Area 2040, ABAG and the Metropolitan Transportation Commission (MTC) have identified priority development areas as shown in Figure 3.5, below. A priority development area serves as the foundation for sustainable regional growth places and is ready for investment, new homes, and job growth.



Data Source: Suisun Valley Strategic Plan | 2-39

[3] The Suisun Valley Strategic Plan is available on Solano County's website at: http://www.co.solano.ca.us/depts/rm/planning/suisun_valley_strategic_plan.asp

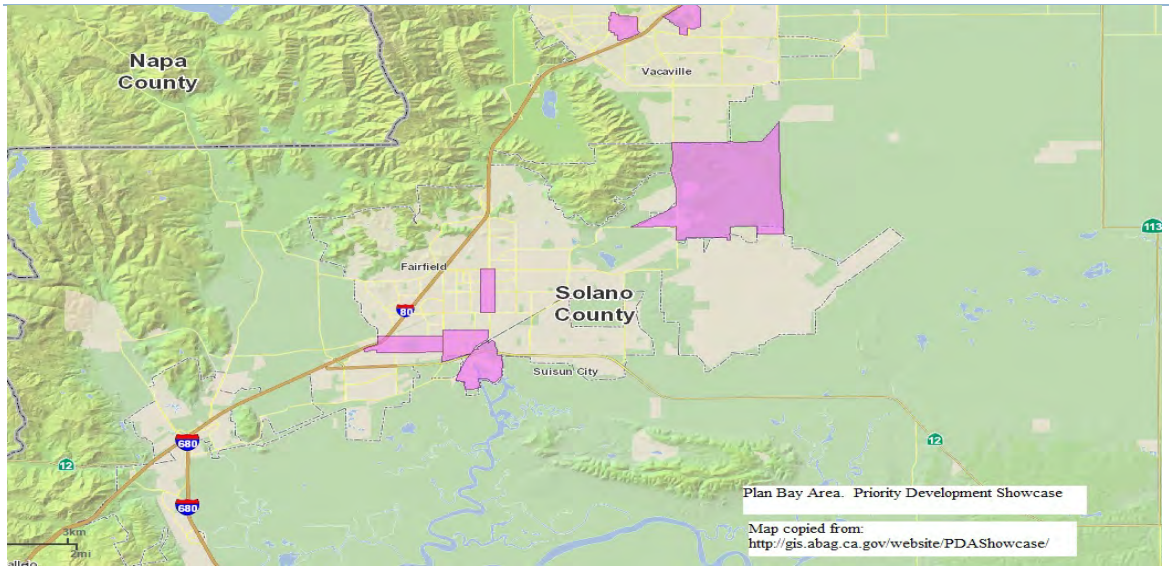


Figure 3.5: ABAG Priority Areas 1

Each of the two cities does have future development potential as described in their respective general plans and zoning ordinances and as listed in Table 3.6 below.

Table 3.6: Potential Future Development Areas in Acres

Project	Developable Acres
Heart of Fairfield Specific Plan	513 acres
Fairfield Train Station Specific Plan	2,972 acres
Canon Station Area in Fairfield	1,244 acres
ABAG PDA areas for Fairfield	420 acres
Suisun City Opportunity Areas	
Waterfront District Specific Plan in Suisun City	30 acres
ABAG PDA for the City of Suisun City - Downtown & Waterfront PDA	291 acres
Total	5,470+ acres

Fairfield General Plan, 2002; ABAG, Plan Bay Area, Priority Development Area Showcase

The potential for new growth and development on Travis Air Force Base has not been assessed recently. This is a federal military facility and its redevelopment is based on the need of the Air Force to operate securely and it currently employs approximately 14,000 military and civilian personnel. Although the City has no jurisdiction over TAFB, new development there could potentially increase the demand for services from FSSD.

Findings & Determinations: Growth and Population

1. The Fairfield-Suisun Sewer District (FSSD) provides wastewater, water recycling, and storm water management services to approximately 140,400 residents, plus business and government facilities in central Solano County.
2. FSSD's enabling legislation defines its service area. The District's boundaries can expand through city annexation and District boundaries cannot otherwise expand without an action of the State Legislature. FSSD's 44 square mile service area includes the City of Fairfield, Suisun City, Travis Air Force Base, the unincorporated area of Cordelia, and parts of Suisun Valley.
3. Between the years 2010 to 2040, an additional 46,768 persons are expected to reside within FSSD's boundaries. This represents an overall 35 percent increase in projected future population at an average annual (compound) growth rate of 1 percent.
4. Though the population and land area for the City of Fairfield has slightly increased from 2010 to 2015, the population per square mile has decreased. This suggests that the City has enough land to accommodate the population growth in 2015 over what was available in 2010.

3.3 DISADVANTAGED UNINCORPORATED COMMUNITIES

Senate Bill (SB) 244 (Wolk), which became effective in January 2012, requires LAFCO to consider the presence of any Disadvantaged Unincorporated Communities (DUCs) when preparing a MSR that addresses agencies that provide water, wastewater or structural fire protection services.

The Wolk Bill created several definitions related to DUCs, in both LAFCO and planning law, including[4]:

1. "Community" is an inhabited area within a city or county that is comprised of no less than 10 dwellings adjacent to or in close proximity to one another;
2. "Unincorporated fringe community" is any inhabited and unincorporated territory that is within a city's SOI;
3. "Unincorporated island community" is any inhabited and unincorporated territory that is surrounded or substantially surrounded by one or more cities or by one or more cities and a county boundary or the Pacific Ocean;
4. "Unincorporated legacy community" as a geographically isolated community that is inhabited and has existed for at least 50 years; and

[4] State of California, Senate Bill 244 (Wolk Bill) (October 7, 2011).

5. "Disadvantaged unincorporated community" is inhabited territory of 12 or more registered voters that constitutes all or a portion of a community with an annual MHI that is less than 80 percent of the statewide annual MHI.

This state legislation is intended to ensure that the needs of these unincorporated communities are met when considering service extensions and/or annexations, in particular, water, wastewater, drainage, and structural fire protection services. Additionally, Solano LAFCO's policy requires written determinations with respect to the location and characteristics of any DUCs within or contiguous to the Sphere of Influence[5]. In 2014, the statewide annual median household income (MHI) was $61,933. This yields a DUC threshold MHI of less than $49,546 (80 percent of the statewide MHI). Relevant data were reviewed for the Fairfield Suisun area. To understand the geographic distribution of disadvantaged communities within FSSD's boundaries, five sources of data were considered:

- LAFCO data
- California Department of Water Resources, on-line mapping tool
- U.S. Census
- Solano County Housing Assessment and other County data
- ABAG and MTC Equity Analysis

Disadvantaged Areas within Cities

LAFCO is required to consider the provision of public services to disadvantaged unincorporated communities (DUCs). However, incorporated areas (within the city limits) can sometimes meet the disadvantaged income threshold. Although LAFCO is not required to study the status of disadvantaged neighborhoods that are located within incorporated cities that provide water, wastewater, drainage and structural fire protection services. However, SB 244 required cities to update their land use and housing elements to include an analysis of the water, wastewater, storm water, and structural fire protection services in the area along with financing options to help encourage investment in disadvantaged areas, should it be needed.

Unincorporated Islands

Unincorporated Islands are areas that are completely surrounded or substantially surrounded by a City and yet remain under the jurisdiction of Solano County. Partially surrounded islands are those that are surrounded on two or more sides by the City. Suisun does contain one unincorporated island (Tolenas), within its larger, outer boundary. The FSSD is legislatively

[5] FSSD does not have a sphere of influence.

limited to which areas they can serve and therefore may not be able to provide services to the unincorporated islands.

Threshold

According to the U.S. Census, the median household income (MHI) for the State was $61,933 in 2014 (US Census, ACS, 2010-2014). This yields a DUC threshold MHI of less than $49,546 (80 percent of the statewide MHI) *(US Census, 2014; Disadvantaged Communities Mapping Tool).* The median household income and relevant data were reviewed for the City of Fairfield area. As of 2014 the median household income (MHI) in the City of Fairfield was estimated to be $81,011 (U.S. Census, 2010-2014). This is significantly higher than the DUC threshold MHI.

The median household income and relevant data were also reviewed for the City of Suisun City. As of 2014 the median household income (MHI) in the City of Suisun city was estimated to be $71,306 (U.S. Census, 2010-2014). This is significantly higher than the DUC threshold MHI.

Because this data reflects values for whole cities, it is possible that there may be unincorporated islands with an MHI that does meet the financial threshold. Therefore additional data sources were explored as described in the following paragraphs.

LAFCO Data

LAFCO's August 8, 2016 staff report identified eight islands in the Fairfield Suisun area as shown in Figure 3.6, below. The eight island areas total approximately 1,411 acres. Five of the island areas are surrounded and three are substantially surrounded. With the exception of Area 2 and Area 7 most areas are less than 150 acres. Area 5 is developed. The two thin areas at the bottom of Area 5 are apparent mapping errors which were omitted when the area was annexed.

Tolenas: Tolenas is Area #2 identified in Figure 3.6, below. It is an unincorporated community located between the City of Fairfield and Suisun City. It is considered an "island" because it is bounded at on the south and west by Suisun City and on the east by Travis Air Force Base (City of Fairfield) and north by the City of Fairfield. Tolenas is 510.52 acres in size and has a population of 488 people living in 163 housing units-(Solano County, 2015 and LAFCO, 2016).

Figure 3.6: Unincorporated Island Territories from LAFCO

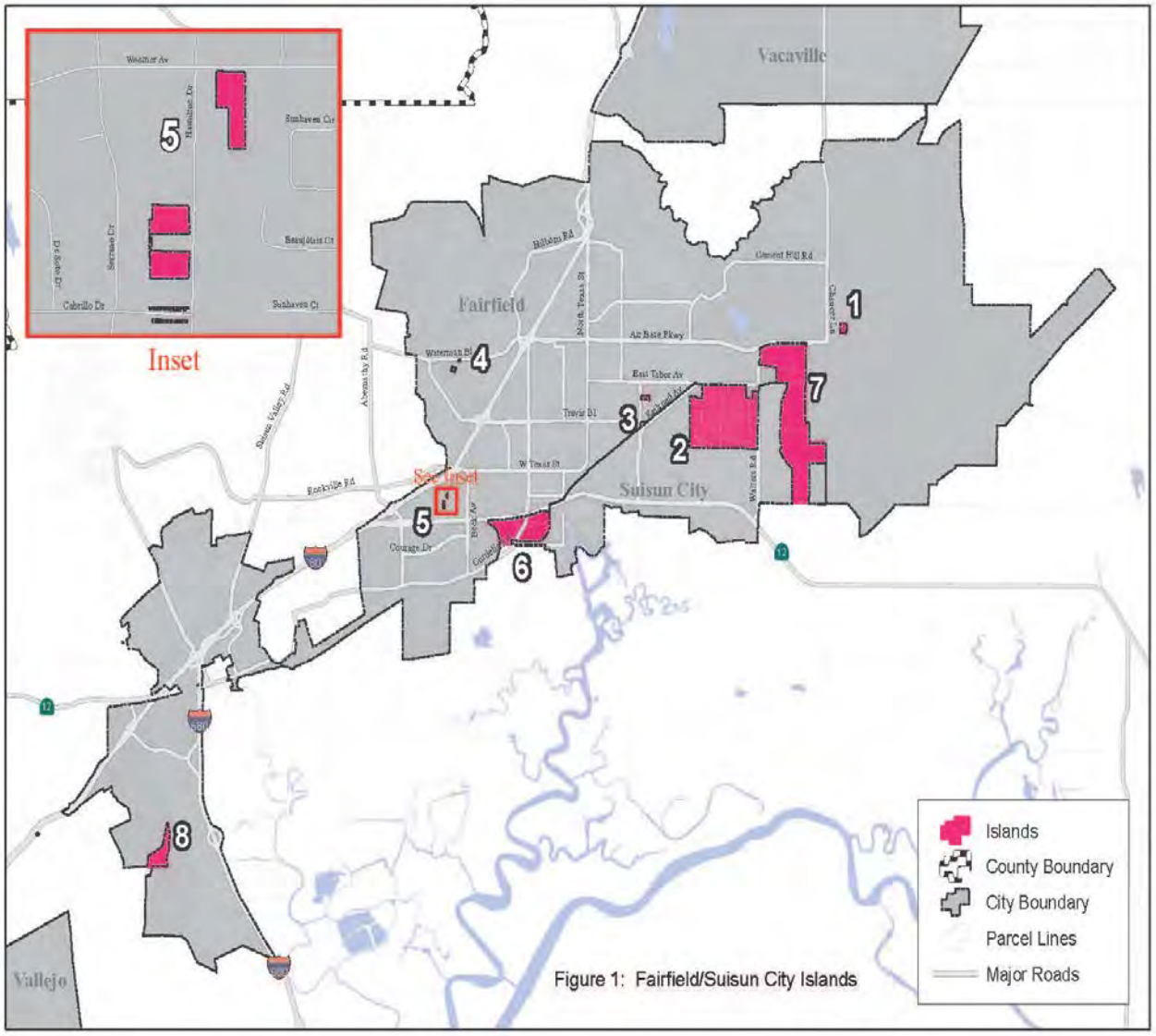


Table 3.7: Unincorporated Islands in the Fairfield Suisun Area

Map Area	Acre	City	Name of Unincorporated	APN	Current Use – According to Assessor	Fire	Sewer	Water
Surrounded								
1	7.1	FF	Divincenzo/Miller	0174-040-040 and 050	Vacant/Light Industrial	Vacaville FPD	none	none
2	510.52	SU	Tolenas	Over 200 parcels. Data available from GIS upon request	Rural Residential	Suisun FPD	none	SID[1]
3	7.65	FF	Cross/Fairfield Vicinity Streams and Covey/Woodruff	0037-060-480 and 490 0037-160-060 and 040	Vacant Residential/Manufacturing	Suisun FPD	none	SID
4	2.76	FF		0152-031-110 0152-032-010	Gov't and Miscellaneous	Suisun FPD	none	none
5	1.43	FF	Woolner/Hamilton	0028-191-010, 020, 040 and 0028-182-020 and 150	Single Family Residential	Suisun FPD	none	SCWA*
Not shown on Figure 3.6	0.24	FF	Lopes L Road Island	0180-110-120	One 3-bedroom house built in 1955	Suisun FPD	?	SCWA*
Partially Surrounded (75%)								
6	139.92	FF	Data not available	003-2010-390 0032-010-250 003-2020-140 0032-020-040	Agriculture	Suisun FPD	none	none

7	668.74	FF	Data not available	0174110030 0174110050 0174110060 0174110070 0174110110 0174110120 0174120080 0174160250 0174160260	Range/Watershed/Misc. Industrial	Suisun FPD	none	none
8	72.8	FF	Old Cordelia	0180090040	Range	Cordelia FPD	none	none

*Note: *Area 5 is within the TRA of the Solano County Water Agency. It is not clear whether physical infrastructure has been installed to serve this area.*
Data Source: Solano LAFCO, August 8, 2016 Staff Report and LAFCO's 2012 MSR for the City of Fairfield

Average lot size in this neighborhood is approximately 15 acres. No indication has been made that the residents wish to annex to a city. The Solano County's Housing Needs Assessment (2015) identified the Tolenas area as being in need of programs to improve housing conditions. The data for census tracts 2526.10, 2526.11 and 2527.07, presented in Table 3.7, below indicate that the MHI for the community of Tolenas is higher than the DUC income threshold. The community does receive water from the Solano Irrigation District and fire protection from the Suisun Fire Protection District. The residents of Tolenas rely upon septic systems and therefore do not receive service from FSSD.

Woolner/Hamilton: The Woolner/Hamilton is Area #5 as described in Tables 3.7 and 3.8. This area has a MHI of $24,858 and it qualifies as a DUC. The five properties in the Hamilton area are unincorporated and do not receive sewer service from FSSD. Septic tanks are used to store wastewater for future pumping. The small[6] parcels sizes may be less than optimal to support the leach fields as listed in Table 3.8. However, since they are existing lots there is no minimum parcel size required by County Environmental Health.

Table 3.8: Parcel Size in Woolner Hamilton Area

APN	Acres
0028191040	0.40
0028191020	0.19
0028182020	0.18
0028191010	0.19
0028182150	0.44

In the recent past, LAFCO approved an annexation on Hamilton Road. However, the annexation was subsequently not completed by the landowner and therefore did not become effective. In the event of a future septic failure, the property owners might wish to request annexation into the City. If annexation to the City were to occur at some future date, then this area would be added to the FSSD boundary. This neighborhood does not meet the disadvantaged status criteria because there are not 12 or more registered voters.

[6] Installation and/or use of septic tanks on residential parcels is regulated by Codes from Solano County and overseen by the Solano County Environmental Health Department. There is no minimum parcel size for use of septic tanks on existing legal lots. However, on existing lots, the septic system must meet setback requirements for streams, creeks, and property wells. On new lots (those newly created by parcel maps or subdivisions) the minimum parcel size is 5 acres for those lots with both a well and a septic system. For those lots using a public water supply and a private septic system, the minimum parcel size is 2.5 acre (personal conversation, Anthony Endo, Solano Co. Env Health on 28Nov2016).

Sunset Area: The Sunset area has 2 parcels that are unincorporated (FSSD, 2016c). This neighborhood does not meet the disadvantaged status criteria because there are not 12 or more registered voters.

Four of the unincorporated islands (#1, 3, 5, and not shown Lopes-L Road) do not meet the disadvantaged status criteria because there are not 12 or more registered voters residing in each island. Detailed financial data about average household income is not available at the highly detailed resolution needed for these small areas.

Adjacent to Fairfield

The Solano County's Housing Needs Assessment (2015) identified four unincorporated areas located outside of, but near the City of Fairfield that are in need of programs to improve housing conditions. Although each of four areas are not classified as DUC's due to their higher MHI, they were carefully evaluated as potential DUCs as part of this MSR. Details are described in the following paragraphs.

Old Cordelia: Old Cordelia is an unincorporated community located west of Fairfield, east of I-680 and south of I- 80. It is shown on Figure 3.6 as Area #8. The townsite of Old Cordelia was established in the late 1800s. The Old Cordelia townsite includes 80 acres located within the City of Fairfield's urban growth line. Old Cordelia has a population of 220 residents in 64 housing units (2000 U.S. Census). Approximately 28 percent of Old Cordelia residents are under 18 years of age. Additionally 12 percent of households are headed by a female in Old Cordelia compared to 5 percent in the greater Unincorporated Area (Solano County, 2015). Information provided in Solano County's Housing Needs Assessment indicated this neighborhood could potentially meet disadvantaged criteria. See also Census Tract 2522.02. The Cordelia Fire Protection District provides fire protection services to this community. Domestic water is provided by the Vallejo Lakes System, a public[7] water system with its own treatment plant and distribution system. This community has a MHI of $$92,450 which is higher than the DUC threshold criteria.

Green Valley: Green Valley is an unincorporated community located northwest of Fairfield along Green Valley and Rockville roads. It is approximately 850 acres in size. Green Valley contains approximately 1,859 people residing in 759 housing units. About 21 percent of the

[7] The Vallejo Lakes System (Lakes System) is a separate public water system with its own treatment plant and distribution system that delivers drinking water to customers residing in the Green Valley, Old Cordelia, Jameson Canyon, Suisun Valley, Willotta Oaks and Gordon Valley areas.

persons are under 18 years of age and seven percent of households are headed by a female[8] (Solano County, 2015). Information provided in Solano County's Housing Needs Assessment indicated this neighborhood could potentially meet disadvantaged criteria; however the US Census reports the MHI ($70,000) is above the DUC financial criteria. See also Census Tract 2522.01.

Rockville: Rockville is an unincorporated community located directly southeast of Green Valley and north of the Fairfield City limits. Specifically it is north of Interstate 80 along Suisun Valley and Rockville Road. Rockville includes a 375 acres area. The community of Rockville is also located outside the urban limit line. The population of Rockville is 243 people residing in 110 housing units. 25 percent of Rockville's total population is aged 65 years and older. 74 percent of Rockville households own their own home (Solano County, 2015). Information provided in Solano County's Housing Needs Assessment indicates this neighborhood could potentially meet disadvantaged criteria. However Census Tracts 2522.01 and 2523.05 are reported to have a MHI of $70,000 and $76,192 respectively, which is above the DUC financial criteria. In July 2015, Solano County released a Final Environmental Impact Report for the Woodcreek 66 project[9]. The Woodcreek project was approved by the Board of Supervisors, but it has not yet been constructed and it has been subject to litigation.

Willotta Oaks: Another unincorporated community is Willotta Oaks consisting of 70 custom ranch homes situated on large lots along on a horseshoe-shaped road. Willotta Oaks is surrounded by the rural farms of the Suisun Valley. The community of Willotta Oaks is also located outside the urban limit line This neighborhood has not been identified as a disadvantaged community.

Data from California Department of Water Resources

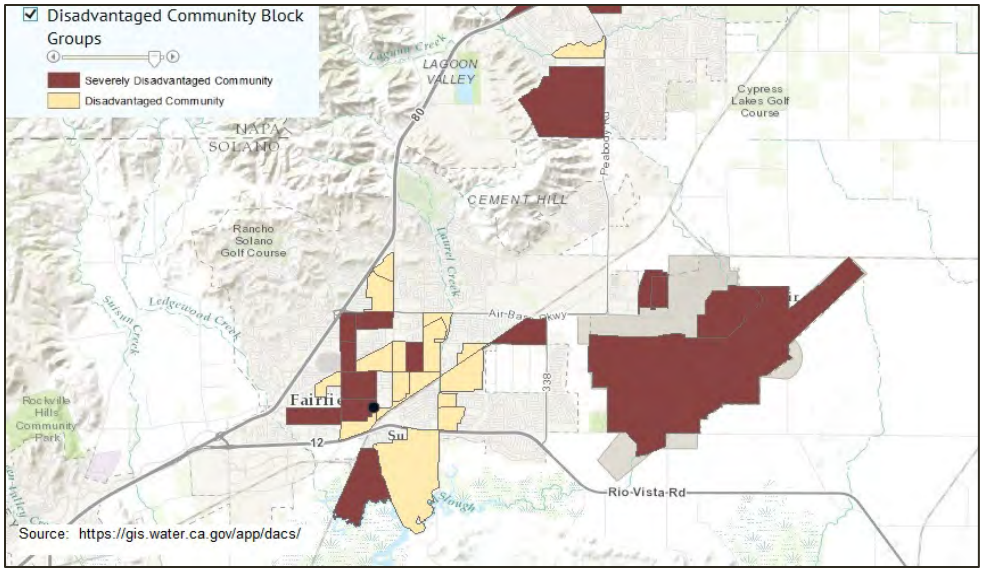
According the California Department of Water Resources on-line mapping tool[10], much of the Fairfield and Suisun area can be considered disadvantaged as shown in Figure 3.7, below.

[8] These types of data points are commonly used by housing experts to determine the socio-economic situation of a neighborhood.

[9] Woodcreek 66 FEIR at: https://www.solanocounty.com/civicax/filebank/blobdload.aspx?BlobID=20799

[10] DWR mapping tool is available at: https://gis.water.ca.gov/app/dacs/

Figure 3.7: DWR DACs



The map (right) depicts Disadvantaged Communities Block Groups. This layer is derived from data of the US Census ACS 2010-2014 showing census block groups identified as disadvantaged communities (less than 80% of the State's median household income) or severely disadvantaged communities (less than 60% of the State's median household income). However, U.S. Census Community Block Group data is low resolution and does not provide information on specific neighborhoods. Therefore, more detailed information on socio-economic conditions in relation to the City of Fairfield and the City of Suisun City are provided herein.

Data from ABAG and MTC Equity Analysis

ABAG and MTC have prepared a Draft Equity Report as part of the Plan Bay Area 2040. The Draft Equity Report includes a map of a "Community of Concern" in Solano County as shown in Figure 3.8. The "community of concern" represents a diverse cross-section of populations and communities that could be considered disadvantaged or vulnerable due to current conditions and potential impacts of future growth. The communities of concern map shows census tracts that have a concentration of both minority and low-income households at specified thresholds of significance, or that have a concentration of three or more of six additional factors such as people with disability, seniors 75 years and over, and cost-burdened renters.

Figure 3.8 ABAG Community of Concern

Source: ABAG

Census Data

Data from the U.S. Census was utilized to determine whether areas met the criteria to be classified as disadvantaged. According to the U.S. Census, the median household income (MHI) for the State was $61,933 in 2014 (US Census, ACS, 2010-2014). This yields a DUC threshold MHI of less than $49,546 (80 percent of the statewide MHI) *(US Census, 2014; Disadvantaged Communities Mapping Tool).* A more detailed query of census data was made based upon census tracts and census block groups within and near FSSD's boundaries. Nine disadvantaged areas have been identified within the City of Fairfield and the City of Suisun City, their SOI, or adjacent areas, as listed in Table 3.9 below.

Table 3.9: Median Household Income in Unincorporated Islands

Map Area	Census Tract	Census Block Group	Median Household Income in Block Group	Margin of Error	Disadvantaged within Margin of Error
Surrounded					
1	2523.17	2	$94,313	29049	No
2	2527.07	3	$76,100	22385	No
3	2526.11	2	$62,632	16174	No
4	2523.06	1	$116,944	26349	No
5	2524.02	5	$24,858	9864	Yes
Not shown on Figure 3.7	2522.02	2	$92,450	20919	No
Partially Surrounded (75%)					
6	2524.02	2	$69,167	17086	No
7	2527.06	1	$90,667	7082	No
8	2522.02	2	$92,450	20919	No
Data Source: US Census, ASC 5-Year Estimates, 2014					

Only one block group, associated with Area #5, meets the financial criteria to be classified as disadvantaged and it has a MHI of $24,858. Area 5 in census tract 2524.02 is shown in the map below. Census tracts are shown in Figures 3.9 and 3.10 (next page).

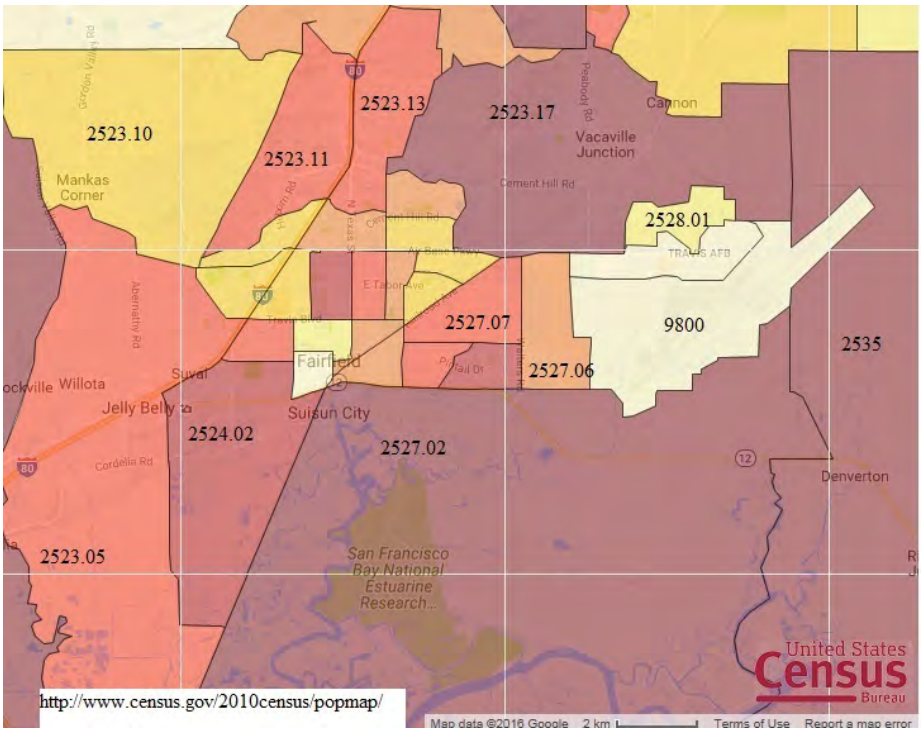


Figure 3.9

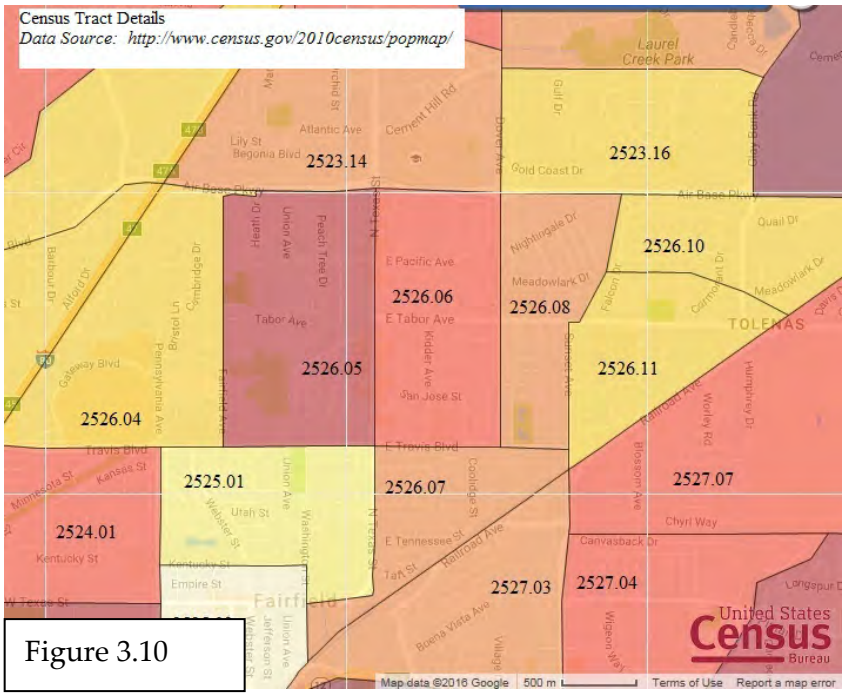


Figure 3.10

DUC Summary

Nine unincorporated islands have been identified within the FSSD boundary area. Although, four unincorporated areas located outside of, but near the City of Fairfield, were identified by the Solano County Housing Needs Assessment, these four areas have MHI's that exceed the threshold criteria and are therefore are not classified as DUCs. Only one (Area #5, Woolner/Hamilton) meets the financial threshold to be classified as disadvantaged.

Although the Woolner/Hamilton is categorized as disadvantaged, it does receive public services from a range of agencies. Specifically, the area receives adequate water, wastewater, and fire protection services. No public health and safety issues have been identified. The geographic extent that FSSD can serve is limited by legislation. Therefore, absent city annexation or other allowed service agreement, FSSD might not be able to serve many of the nine unincorporated islands identified, as shown in Table 3.7.

Findings & Determinations for Disadvantaged Unincorporated Communities

5. The According to the U.S. Census, the median household income (MHI) for the State was $61,933 in 2014 (US Census, ACS, 2010-2014). This yields a DUC threshold MHI of less than $49,546 (80 percent of the statewide MHI). As of 2014 the median household income (MHI) in the City of Fairfield was estimated to be $81,011. This is significantly higher than the DUC threshold MHI. The median household income (MHI) in the City of Suisun city was estimated to be $71,306. This is significantly higher than the DUC threshold MHI.
6. Nine unincorporated islands have been identified within the FSSD boundary area as listed in Table 3.7. The MHI for each unincorporated island is listed in Table 3.9 and it shows that Area #5 known as Woolner-Hamilton has a MHI of $24,858, which meets the financial threshold to be classified as a DUC. The Woolner Hamilton area does, however, receive adequate water, wastewater (small septic systems), and fire protection services, as listed in Table 3-7. No public health and safety issues have been identified.
7. The FSSD is legislatively limited to which areas they can serve and therefore may not be able to provide services to the unincorporated islands.

3.4: PRESENT AND PLANNED CAPACITY OF PUBLIC FACILITIES

Service Overview

The District provides the following public services:

- Wastewater collection and treatment, and disposal
- water recycling, and
- storm drainage

Wastewater Service

FSSD provides wastewater collection, treatment, and disposal to the 140,400 residents and workers located within its boundary and contractual service areas. The collection system works in conjunction with three "satellite collection systems" that consist of the City of Fairfield, Travis Air Force Base, and the City of Suisun City. In general, local collection pipes (gravity sewers) less than 12-inches in diameter are owned and managed by the individual satellite collection system agencies. Sewers 12-inches in diameter and larger are owned and managed by the District. Wastewater treatment is managed at the District owned and operated wastewater treatment plant that serves Fairfield, Suisun City, and Travis Air Force Base. Wastewater undergoes a multi-step treatment process at the central facility and is then discharged into Boynton Slough, or recycled for irrigation. The District is located within the Suisun Hydrologic Basin and surface water discharge is directed towards Suisun Marsh. Further detail about the collection, treatment, and disposal of wastewater is provided in the Facilities (next) section of this MSR. The District approved a Sewer System Management Plan (SSMP) in 2013 that guides the proper management, operation, and maintenance of all parts of the FSSD sanitary sewer system under its control. The SSMP aims to reduce and prevent sanitary sewer overflows (SSOs) and mitigate SSOs if they occur. The 2013 SSMP is available in the District office (FSSD, 2013).

Wastewater Service Facilities

Collection System Infrastructure

FSSD's collection system consists of 70 miles of sewer pipes sized between 12 to 48 inches in diameter and 13 pump stations. The collection system connects the wastewater sources to the District's Wastewater Treatment Plant. FSSD actively manages its District-wide collection system and its system functions in conjunction with three "satellite collection systems" that consist of the City of Fairfield, Travis Air Force Base, and the City of Suisun City. The satellite collection systems collect the wastewater and forward it to FSSD for treatment and disposal. In general, pipelines (gravity sewers) less than 12-inch in size are owned and managed by the

individual satellite collection system. The collection systems in the cities are described in LAFCO's Municipal Service Review for Suisun City (2016) and for the City of Fairfield (2012).

FSSD collects wastewater from 54,000 separate sewer connections that ultimately serve 140,400 residents in Fairfield and Suisun City. One FSSD connection can potentially serve many individual customers. For example, Travis AFB is "one" connection. FSSD works closely with its sister agencies that also provide "collection" service including the City of Fairfield and Suisun City. Most residential customers connect to the sewer via their City sewage collection system, rather than FSSD. The largest institutional/business users of the system include the Travis Air Force Base and industrial scale food and beverage companies such as Anheuser-Busch InBev, and Sunnyside Farms.

FSSD has thirteen pump stations, as listed below, that all contribute to the operation of the collection system. The District's pump stations, forcemains, and related equipment are operated and maintained by the District's Collection System Crew. The Collections Crew is responsible for preventive, corrective, and predictive maintenance of pump stations and associated forcemains. The Inlet Pump Station is located on the treatment plant site and is considered part of the treatment plant; this station is maintained by the treatment plant mechanics.

Pump Stations

The pumping capacity of each of the thirteen pump station is listed in Table 3.10, below.

Table 3.10: Pump Station Flows

Pump Station Name	Location	Pumping Capacity (MGD)
Central	South of Illinois Street, east of Pennsylvania Avenue, Fairfield	32.9
Cordelia	Cordelia Road near Pittman Road, Fairfield	11.8
CBC	Cordelia Road near Beck Street, Suisun City	5.8
Crystal	Crystal Street, Suisun City	0.5
Grobric	Grobric Court, Fairfield	0.1
Inlet	WWTP Site	18.5
Kaiser	Kaiser Drive, Fairfield	0.6
Lawler Ranch 1	Anderson Drive, Suisun City	0.4
Lawler Ranch 2	Lawler Ranch Parkway, Suisun City	1.1
Lopes Road	Lopes Road, Fairfield	3.0
Rancho Solano #3	Pebble Beach Circle, Fairfield	0.4
Rancho Solano #5	Pebble Beach Circle, Fairfield	0.1
Suisun	South End of Civic Center Dr, Suisun City	26.4

Source: Provided by Kevin Cullen, FSSD, October 2015 to LAFCO

A significant amount of flow that routes through Suisun Pump Station originates in Fairfield. The Suisun Pump has a lower elevation and the flow moves downhill.

Treatment System Facilities

Wastewater is collected in the FSSD collection system and then pumped from four major pump stations, to the Fairfield-Suisun Subregional Wastewater Treatment Plant (WWTP), located on 150 acres at 1010 Chadbourne Road in Fairfield. The WWTP provides advanced secondary treatment. The WWTP was originally built in 1974 and it underwent major renovations and expansions in 1982, 1987, and 1989. Additional improvements were completed in the summer of 2010 with an expansion project to increase the plant's capacity from 17.5 to 23.7 mgd average dry weather flow (ADWF) (Fairfield, 2010; LAFCO, 2016; and FSSD comments on Admin Draft MSR Dec2016).

The plant provides advanced secondary treatment which is described in detail in the District's brochure provided in Appendix A-2. The treatment process begins with influent screening and grit removal, and primary clarification as shown in Figure 3.11 (next page). The next steps in the treatment process include optional fixed film roughing filters and intermediate clarification, biological activated sludge, and secondary clarification. The last steps in the treatment process include dual-media filtration and ultraviolet light (UV) disinfection. During wet weather, the plant uses additional facilities including a 111 MG equalization storage basin with optional comminution. FSSD's WWTP provides advanced secondary treatment of wastewater flows up to the 20-year design storm event (SFRWQCB, 2015).

Permitting

The State Water Resources Control Board has jurisdiction throughout California. Created by the State Legislature in 1967, the Board protects water quality by setting statewide policy, coordinating and supporting the Regional Water Board efforts, and reviewing petitions that contest Regional Board actions. There are nine regional water quality control boards that exercise rulemaking and regulatory activities by basins. The San Francisco Bay Regional Water Quality Control Board (SFRWQCB) regulates water quality, including issuance of discharge permits for the Fairfield Suisun Sewer District.

Municipal wastewater treatment plants are classified as major point-source discharges. The SFRWQCB also issues and monitors enforcement actions when water quality standards are violated. Records indicate that overall FSSD has effectively secured needed permits for the WWTP and disposal and has completed its monitoring requirement. The RWQCB has taken informal enforcement actions with the FSSD only a few times. The most recently, in 2007, the

RWQCB issued a fine/citation for chlorine, coliform, and pH violations occurring since 2003. (FSSD, 2016c).

The treatment plant currently operates under Wastewater Discharge Permit Order No. R2-2015-0013 (NPDES No. CA0038024), allowing discharge of treated effluent. At the WWTP, a variety of water quality constituents are sampled and monitored consistent with permits from the San Francisco Regional Water Quality Control Board (SFRWQCB). The constituents monitored include biochemical oxygen demand (BOD5) and total suspended solids (TSS), oil and grease, pH, ammonia (as total nitrogen), turbidity, copper, cyanide, and dioxin-TEQ (SFRWQCB, 2015).

Table 3.12: Summary of FSSD Permits from State Water Board	
Permit #	Description
ORDER No. R2-2015-0013	Current valid permit
NPDES Permit No. CA0038024.	Current permit pursuant to National Pollutant Discharge Elimination System
NPDES Permit Nos. CA0038849 and CA0038873	Valid permits. Establish requirements on mercury and polychlorinated biphenyls (PCBs) and nutrients from wastewater discharges to San Francisco Bay. Order No. R2-2015-0013 does not affect those permits.

In September 2013, FSSD experienced an exceedance of its copper average monthly effluent limitation (AMEL) of 7.9 µg/L with a monthly average concentration of 8.4 µg/L. This incident represents a minor violation (based on a single sample collected on September 4, 2013) of water quality regulations. The Regional Water Board required FSSD to submit additional information and addressed the issue using informal processes (SFRWQCB, 2015). The SFRWQCB also notes that FSSD neglected to properly monitor pH on two occasions, from April 2 through April 3, 2011, and on April 8, 2011, due to operator error. FSSD took proactive steps to correct the problem and formal enforcement was not pursued (SFRWQCB, 2015).

Table 3.13 below lists sanitary sewer overflow (SSO) rates (total SSOs per 100 miles of collection system for each of the past four years) that FSSD has experienced. FSSD had no SSOs in 2011, 2012, and 2014, and two SSOs in 2013, neither of which reached surface waters. FSSD has fewer SSOs as compared to similar sewer districts in the San Francisco Bay region. This demonstrates FSSD's successful and on-going attention to the prevention of blockages, inflows, and malfunctions and this results in safeguarding human and environmental health.

Table 3.13: SSO Rates (total SSOs/100 miles of sewer)
(based on CIWQS data analysis completed in February 2015)

	Length	Average Age	2011	2012	2013	2014
Fairfield Suisun Sewer District	83 miles	35 years	0	0	2.4	0
Solano County median of 2 medium systems (10 to 99 miles)	84 miles	33 years	0.7	1.3	2.5	0.6
San Francisco Bay median of 49 medium systems (10 to 99 miles)	38 miles	42 years	5.9	9.3	12	6.3
San Francisco Bay Region median of all 132 systems	41 miles	45 years	4.0	4.6	4.5	2.7
Data Source: SFRWQCB, 2015 (Order No. R2-2015-0013)						

Proposed Improvements to WWTP

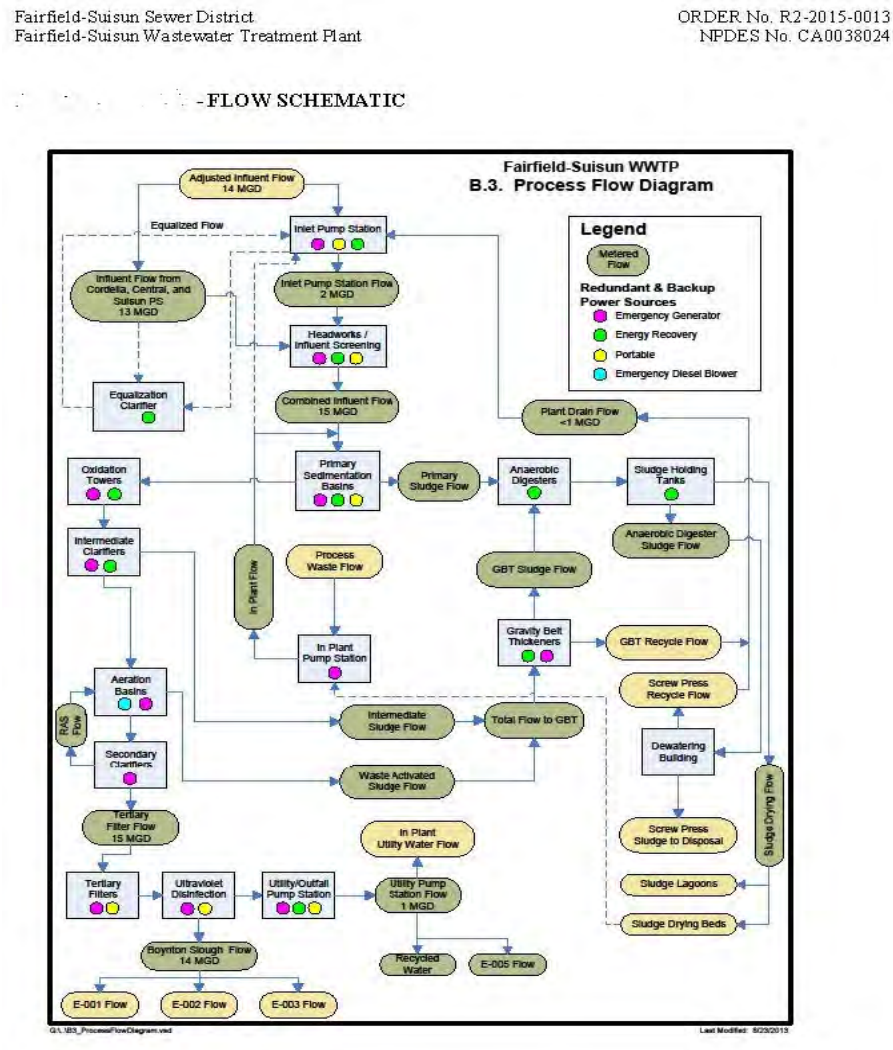
FSSD's 2008 Master Plan and Master Plan EIR describes proposed improvements to the collection system and treatment plant needed to accommodate planned development within the FSSD service area through 2020. Improvements relate to expanding the WWTP and associated infrastructure to increase the rated capacity, including construction of a new 15 inch sewer in the central portion of the Train Station Specific Plan Area along Vanden Road; a new 15-inch pipeline down Peabody Road; and a 21-inch sewer pipeline along Huntington Drive. Additionally, a new pipe along East Tabor Road is also proposed. (FSSD 2005, Fairfield, 2010).

Fairfield-Suisun Sewer District
Fairfield-Suisun Wastewater Treatment Plant
ORDER No. R2-2015-0013
NPDES No. CA0038024

Figure 3.11

New Development

The Train Station Specific Plan within the City of Fairfield would result in the development of new uses that would require wastewater collection and treatment. Wastewater flows from the Train Station Specific Plan Area are estimated to range from approximately 3.65 mgd for average dry weather flows to as high as approximately 5.3 mgd for peak wet weather design



flow, as calculated using FSSD design standards (Fairfield, 2010). The Train Station Specific Plan Area will be larger than anticipated in FSSD's 2008 Master Plan. The Train Station Specific Plan recognized that implementation of the Specific Plan could result in additional wastewater flows to the WWTP that were not previously accounted for and additional improvements to District owned facilities may be needed (Fairfield, 2010[11]). The developer will work with FSSD to address this issue.

Summary

There are several measures of integrity for a wastewater collection system, including peaking factors, efforts to address infiltration and inflow (I/I), and inspection practices. FSSD's capital improvement plan considers these factors. Wastewater flow from connections can be estimated based on use of treated municipal (potable) water supplied to various land-uses as measured with water meters. Water conservation programs can effectively reduce the amount of flow into the FSSD collection system during dry weather.

[11] Data source: DEIR on Fairfield Train Station Specific Plan page 4.15-21 to 4.15-23. Available on-line at: http://www.fairfield.ca.gov/civicax/filebank/blobdload.aspx?blobid=6527

Table 3.11: Summary of FSSD WWTP Capacity	
Facility Permitted Flow	23.7 MGD average dry weather flow
Facility Design Flow	23.7 MGD – average daily dry weather effluent design flow
Actual Average Daily Flow:	12.2 MGD
Source: SFRWQCB, 2015 and Appendix A-2, (http://www.fssd.com/wp-content/uploads/2015/08/District-Brochure-_Publisher_ed.5.pdf)	
***Note: Numbers in this table are preliminary and subject to change.*	

Disposal System Infrastructure

After treatment at the WWTP, the disinfected effluent is either recycled or discharged to Boynton Slough, with intermittent discharges to two duck ponds and Ledgewood Creek. 90% of the effluent is discharged to the Suisun Marsh[12]. The remaining 10% of effluent is recycled (FSSD, 2016c).

Biosolids

Residuals are produced as a result of sewage treatment. The residuals are concentrated and anaerobically digested. After digestion, these residual, also referred to as 'biosolids' are de-watered either via mechanical means or via an open-air solar drying bed/lagoon. In the past (i.e. prior to October 2016) the resulting biosolids were transported to Potrero Hills Landfill for use as alternative daily cover (SFRWQCB, 2015). Recently, FSSD entered into an agreement with Lytsek International whereby Lystek processes the resulting biosolids into a biofertilizer called LysteGro and provides it for application to agriculture lands. Lystek leases a small site from the Fairfield Suisun Sewer District in a public-private partnership for the Organic Material Recovery Center. The Lystek hydrolysis process diverts biosolids from the landfill. The technology can be used to produce biogas for use as green energy by the FSSD. This system presents sustainable, year-round organics management for the Bay Area.

Wastewater Supply/Demand

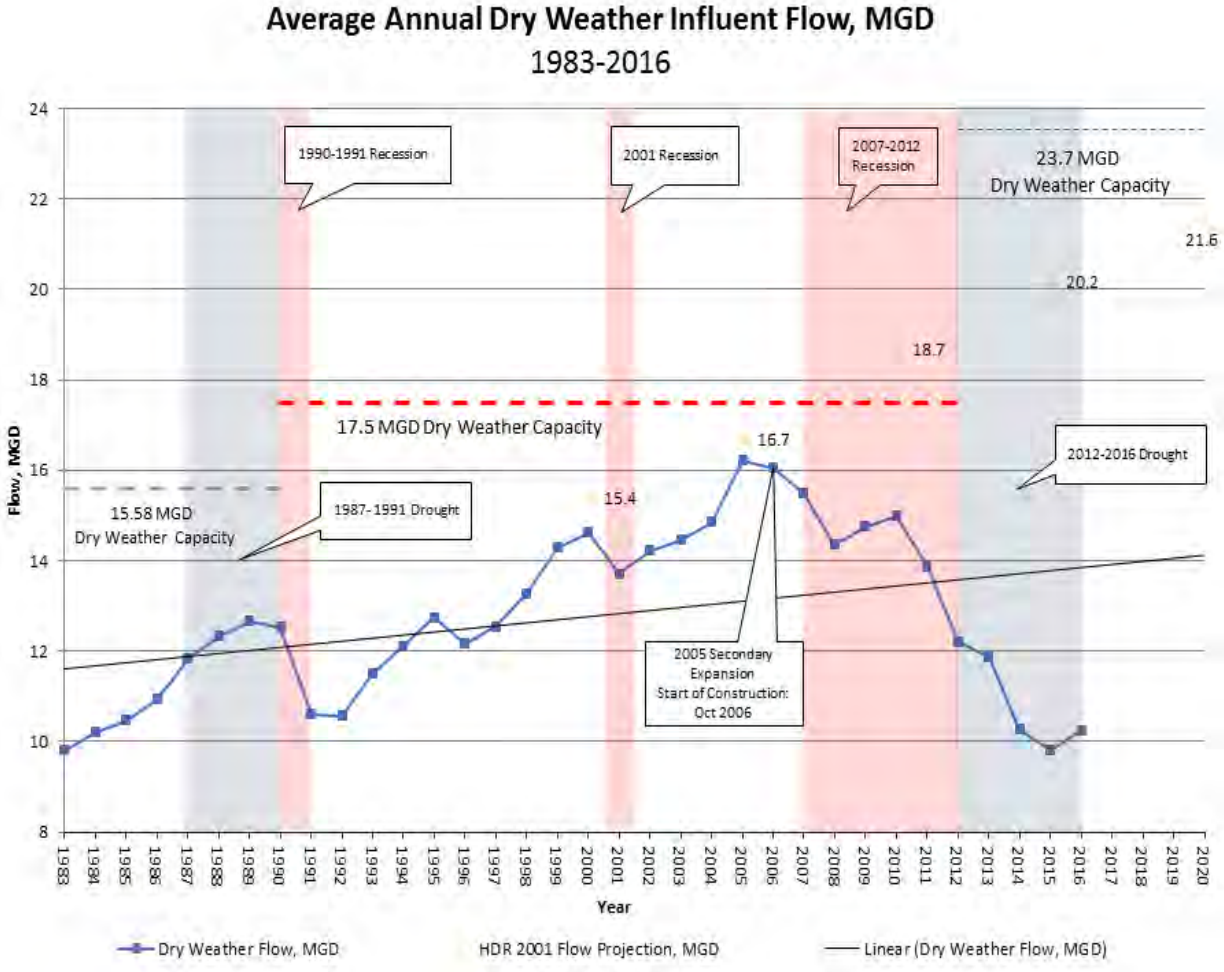
Supply and demand for water and sewer districts are typically influenced by population numbers and land-use. Additionally, new development occurring within the District could result in an increase in the demand for these services and the need for additional infrastructure.

[12] In 2013, the U.S. Environmental Protection Agency and the SFRWQCB recommended two best management practices (BMP) regarding the discharge of FSSD wastewater in to Suisun Marsh. These BMP's are guidelines prepared as part of development of a Total Maximum Daily Load (TMDL) study (EPA and SFRWQCB, 2013) FSSD works with the Solano Resource Conservation District to coordinate effluent releases to the managed wetlands.

Prolonged drought and associated water conservation measures can also result in reduced inflow into the FSSD collection and treatment systems.

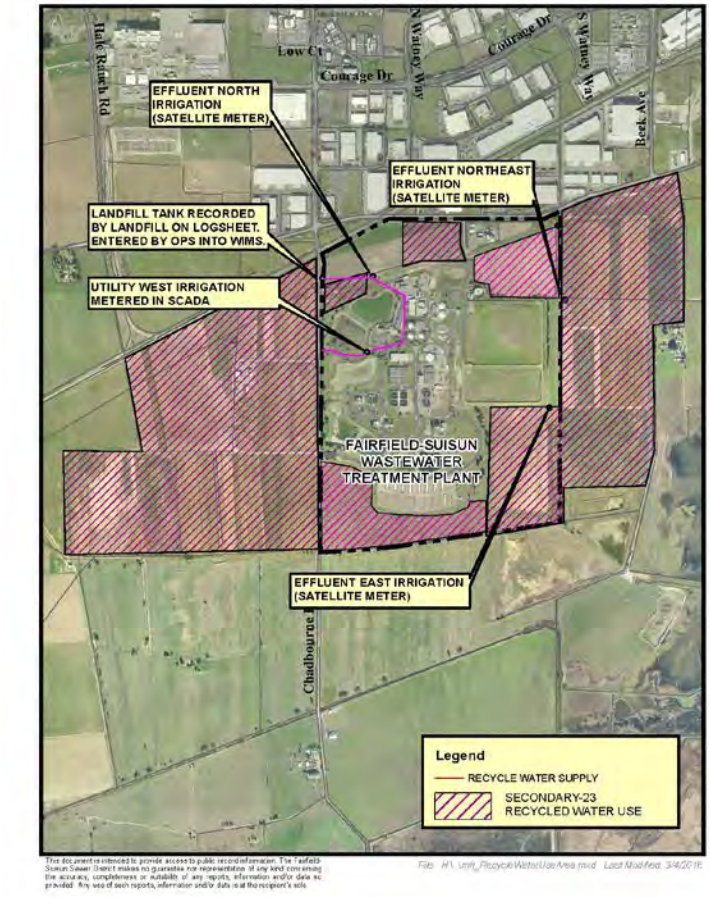
Factors that can influence the District's ability to provide wastewater service to customers include treatment plant capacity and Regional Water Quality Control Board (RWQCB) regulations. The District upgraded its WWTP and construction was completed in 2010. FSSD's infrastructure has been designed to accommodate growth within the two cities. As Fairfield and Suisun City update their General Plan, FSSD utilizes this data to predict future growth rates etc. (FSSD, 2016). FSSD estimates that the population served will grow over the next five years at an average of 1 percent. This is generally consistent with the project growth rate from ABAG shown in Table 3.4 as 1.02 percent.

Figure 3.13, below shows the historic and recent capacity of the WWTP as measured by average annual dry weather flow.



In 2008 FSSD prepared a Sewer System Master Plan that described improvements to the District's collection, treatment, and disposal system through the year 2020. Since wastewater flows have not changed substantially since 2008 due to the drought and the recession, the Master Plan has not been updated. A limited update to the 2008 Master Plan is expected in 2017 (FSSD, 2016).

Although FSSD's collection, treatment, and disposal infrastructure is generally sized to accommodate the anticipated growth for the next five to ten years, incremental planning on a project-by-project basis remains necessary. This also requires close coordination between FSSD and the cities. For example, when a new residential neighborhood is constructed within a city, the private developer typically builds the sewer pipeline collection system, sized only to serve the specific new neighborhood. Management and maintenance of these pipelines is typically specified in the project conditions of approval and could include: 1) maintenance by private HOA, 2) transfer of ownership/maintenance to the City or 3) transfer of ownership/maintenance to the FSSD (FSSD, 2016c). For example, within the City of Fairfield, the Fairfield Train Station Specific Plan has noted that both the Suisun and Central Basins pump stations do not currently have the physical capacity to accommodate planned growth east of Peabody Road, which includes most of the Specific Plan Area. However, the Master Plans and the District budget include projects that provide additional capacity to accommodate the planned growth. For all new annexations in the area, the City of Fairfield requires developers to prepare sewer master plans to indicate how growth will be accommodated (Fairfield, 2010).



Water Recycling

Operating under approval from the state of California, the District recycles treated water derived from its Wastewater Treatment Plant (WWTP). The WWTP produces disinfected advanced secondary treated effluent. The resulting

effluent is either discharged to surface waters or discharged to land as recycled water. The District has produced and managed the use of recycled water consistent with its permit (General Order No. 96-011) from the Regional Water Quality Control Board since 1978. The FSSD Water Recycling Program produced approximately 430 million gallons of recycled water in 2015 (FSSD, 2016a).

Currently, recycled water produced at the FSSD WWTP is delivered to farms adjacent to the WWTP for crop irrigation, and also to a tank near the WWTP entrance. Recycled water is trucked from this tank to the Potrero Hills landfill in Suisun City, where it is used for dust control (FSSD, 2016a).

Approximately 5 to10 percent of the plant's treated effluent is recycled for agricultural and landscape irrigation. Water recycling is regulated for water quality purposes by Regional Water Board Order No. 96-011. Monitoring of water quality is performed by FSSD. No recycled water violations were noted in 2015 (FSSD, 2016a). Based on studies it has conducted, FSSD believes that all existing and currently projected recycled water demands can be met under the existing capacity of the WWTP (FSSD, 2016a).

It should be noted that CA Government Code Section 56133 indicates that a district "may provide new or extended services by contract or agreement outside its jurisdictional boundary only if it first requests and receives written approval from the commission." The Government Code allows exemptions to the requirement to obtain LAFCO approval for situations involving:

- (2) The transfer of nonpotable or nontreated water.
- (3) The provision of surplus water to agricultural lands and facilities

FSSD treats and recycles the water resulting from its wastewater treatment process and delivers this recycled water to customers located outside FSSD boundaries. This service meets the above Government Code Section 56133(e) (2) exemption because the recycled water is "nonpotable" and is "surplus water" used on "agricultural lands".

Water Recycling Facilities

Ten percent of the effluent resulting from the WWTP is utilized as recycled water. If recycled water distribution is to increase in the future, then construction of additional facilities may be necessary. FSSD's annual planning can address future infrastructure needs for their water recycling program.

Storm Drainage

Floods have occurred in the Fairfield Suisun area in 1973, 1978, and 1982. The January 1982 flood was particularly large, bringing storm water up to six feet in depth to the area. Creeks prone to flooding include Ledgewood Creek, Pennsylvania Avenue Creek, Union Avenue Creek, Laurel Creek, and McCoy Creek (USACOE, 2005). To protect their community from future flooding, the Cities of Fairfield and Suisun City partnered with the US Army Corps of Engineers and the California Reclamation Board on a comprehensive flood control plan known as the "Fairfield Vicinity Streams Project" which included construction of new bridges, recreational facilities, channel revegetation, improvements to two detention basins, and creation of diversion channels and drop structures. Through the Fairfield Vicinity Streams Project, the City of Fairfield actively acquired the right-of-way needed for creek improvements. Then, Fairfield collaborated with the Army Corps and the Reclamation Board to execute the Local Cooperation Agreement on June 3, 1986. After the project was completed by USACOE, it was transferred to its local sponsors for operation and maintenance (USACOE, 2005) and the result is the March 1, 1988 "Drainage Maintenance Agreement" among the Fairfield-Suisun Sewer District, the City of Fairfield, and the City of Suisun City. This agreement provided a mechanism for funding the maintenance of the "Fairfield Streams" federal flood control project which serves both cities. Although the District does not own any storm drainage facilities, it is authorized by statute to provide storm drainage services. The District created a storm drainage maintenance enterprise fund and established fees for users of the system which are collected on the county tax roll each year. Revenues are shared by the cities and the District for flood control activities. Currently, the District assists the cities by overseeing the Urban Runoff Management Program, and operating and maintaining city-owned stormwater pumping stations. Annual rates remained unchanged at $20.23 per residence. Total annual revenues collected for Drainage Maintenance Fund is approximately $1.5 million each year.

Although the District's enabling legislation allows FSSD to provide storm water services and storm water collection, outfall and disposal system (Article 4, Section 42), its role is contractual

between the District, the City of Fairfield, and Suisun City. The District has a staff position dedicated to coordinating storm water management with the two cities. FSSD's technical staff provides advice and expertise related to storm water regulatory compliance and permits (FSSD, 2016c). The storm water system is not connected to FSSD's wastewater system; the systems are separate. Each of the two collaborating cities have their own policies and plans. The two cities also own the storm water infrastructure (FSSD, 2016c).

The 150 acre WWTP site also generates its own storm water. Storm water originating on the plant's grounds is directed offsite and regulated under the statewide Industrial Storm Water Permit (NPDES General Permit No. CAS000001).

Adequacy and Challenges in Provision of Service and Infrastructure

The biggest challenges identified regarding FSSD's provision public of services including sewage collection, treatment, disposal, water recycling, storm drainage management are as follows:

- Addressing anticipated future regulations dealing with nutrient loads of water discharged into the San Francisco Bay, and
- Supporting the restoration of Suisun Marsh and participation in the implementation of Total Maximum Daily Loads (TMDL) best management practices (EPA and SFRWQCB, 2013).

In order to continue the adequate provision of public service and infrastructure, FSSD utilizes several best management practices. Best management practices are defined as methods or techniques found to be the most effective and practical means in achieving an objective (such as minimizing pollution) while making optimal use of the District's resources. Some of the FSSD's best management practices are incorporated into its 2008 Master Plan. Additionally, FSSD stays updated on innovations in the wastewater industry. For example, FSSD was recognized by a consortium of national water and wastewater associations, including National

Association of Clean Water Agencies (NACWA) as a "Utility of the Future". One specific best practice is that FSSD stays updated regarding the status of City of Fairfield and Suisun City General Plans (FSSD, 2016c).

FSSD's innovative use of renewable energy associated with wastewater treatment demonstrates that it has already implemented several of the management practices which highlights ongoing good work at the local level to save energy and reduce greenhouse gas emissions.

The challenges faced by FSSD and described above are indicative of an agency that functions in a multi-jurisdictional environment and this contributes to the complexity of situations that FSSD faces. The agencies that FSSD works productively with are numerous. Key players include the City of Fairfield, City of Suisun City, Solano County, Solano LAFCO, the SFRWQCB, and stakeholders in Suisun Marsh. FSSD, like other wastewater providers in the San Francisco Bay Area, faces several challenges and is actively working to address those challenges.

Findings & Determinations: Present and Planned Capacity of Public Facilities

8. FSSD collects wastewater from approximately 54,000 sewer connections that serve 140,400 residents in Fairfield and Suisun City. One FSSD connection can potentially serve many individual customers. For example, Travis AFB is "one" connection. Most residential customers connect to the City-owned collection lines for sewer, not FSSD.
9. The facilities and infrastructure on which FSSD depends have variable ages. FSSD replaces and repairs infrastructure on a regular basis. FSSD has implemented collection system BMPs and addresses preventative maintenance and scheduled replacement of aging infrastructure.
10. FSSD owns and operates its wastewater collection system which connects to its WWTP. The FSSD system functions with the satellite collection systems owned and operated by the Cities of Fairfield and Suisun City and Travis Air Force Base. Each entity has adopted a Sewer System Management Plan.
11. FSSD's recent capacity upgrades (such as the Suisun Pump Station upgrades) demonstrate its continued investment in the system.
12. Actual flow is significantly less than design capacity, hence the WWTP has adequate capacity to accommodate existing customers.
13. FSSD has fewer sanitary sewer overflows as compared to similar sewer districts in the San Francisco Bay region as shown in Table 3.13. This demonstrates FSSD's successful

and on-going attention to the prevention of blockages, inflows, and malfunctions and this results in safeguarding human and environmental health.

14. FSSD has contracted with private company (Lystek) to develop innovative methods and beneficial uses for biosolids that result from the WWTP.
15. Generally, new development occurring within the District could result in an increase in the demand for sewer services and the need for additional infrastructure. For example, the implementation of the City of Fairfield Train Station Specific Plan could result in additional wastewater flows to the WWTP that were not previously accounted for and additional improvements to District owned facilities may be needed.
16. Similar to other sanitation districts, FSSD faces challenges regarding the provision public of services including sewage collection, treatment, disposal, water recycling, and storm drainage management. Challenges include addressing anticipated future regulations dealing with nutrient discharges, and supporting the restoration of Suisun Marsh with the implementation of Total Maximum Daily Loads (TMDL). The challenges faced by FSSD are indicative of an agency that functions in a multi-jurisdictional environment and this contributes to the complexity of situations that FSSD faces.
17. FSSD's innovative use of renewable energy to offset the electricity cost associated with wastewater treatment demonstrates that it has already implemented several management practices which highlights the ongoing work at the local level to save energy and reduce greenhouse gas emissions.

3.5: FINANCIAL ABILITY TO PROVIDE SERVICES

Financing

In California, special districts are classified as enterprise or non-enterprise districts, based on their source of revenue:

- Enterprise districts: Finance of district operations is via fees for public service. Under this model, the customers that consume goods or services such as drinking or irrigation water, waste disposal, or electricity, pay a fee. Rates are set by a governing board and there is a nexus between the costs of providing services and the rates customers pay. Sometimes enterprise district may also receive property taxes which comprise a portion of their budget. (FSSD does not receive property tax revenue.)
- Non-enterprise districts: Districts which receive property taxes are typically classified as non-enterprise districts. Services that indirectly benefit the entire community, such as flood or fire protection, community centers, and cemetery districts are often funded through property taxes.

FSSD is an enterprise district, since most of the revenue come from the rates charged for service. Budgets are adopted in public meetings on a biennial basis. The District prepares and approves a biennial budget, along with a ten-year financial plan. Budget status updates are is presented to the Board of Directors in non-budget years. The District's finances are managed as enterprise funds. The fiscal year begins on July 1 and ends on June 30. Budgets for recent years are available to the public via the District's website[13]. Copies of financial audits are available upon request from District staff. FSSD has one budget policy which it describes in its annual budget as the 2005 policy on Major Maintenance/Replacement Reserve, where an average 1% of plant replacement cost over a 10-year period is reserved. These contributions help the District accumulate sufficient reserves for infrastructure maintenance and replacement (FSSD Budget, 2015). FSSD does not appear to have an adopted management and budget policy which addresses budget preparation, fixed asset accounting, investment of funds, and expense authorization. It is recommended that prior to preparation of the next MSR, FSSD should adopt a policy which addresses budget preparation, fixed asset accounting, investment of funds, and expense authorization and share this policy with LAFCO.

FSSD's financial statements are prepared in accordance with generally accepted accounting principles (GAAP). The Government Accounting Standards Board (GASB) is responsible for establishing GAAP for state and local governments through its statements and interpretations. The District uses the accrual basis of accounting (FSSD, CAFR, 2015). The most recent independent auditor's report was prepared for Fiscal Year (FY) 2014/2015 and dated September 29, 2015, and was attached to the District's Financial Statements. The audit found that there were no issues of noncompliance on financial matters that are required to be reported under Government Auditing Standards (Chavan & Associates, 2015).

Table 3.14: Financial Performance Indicators

MSR Key Performance Indicators	**Notes**
Summary financial information presented in a standard format and simple language.	Yes, in budget and CAFR
Reserve funds and their purpose	Described in biennual budget
District policy on the accumulation and use of reserves	
Plans for the future, including anticipated revenues, expenditures, reserves, and trends in user rates	Described in biennial budget
Rates	Adopted via Ordinance

[13] FSSD budget is available at: *http://www.fssd.com/budget-and-financial-plan/*

Revenues

FSSD has two basic types of revenue:

- Operating revenues consist primarily of charges for services.
- Non-operating revenues and expenses are related to financing and investing type activities

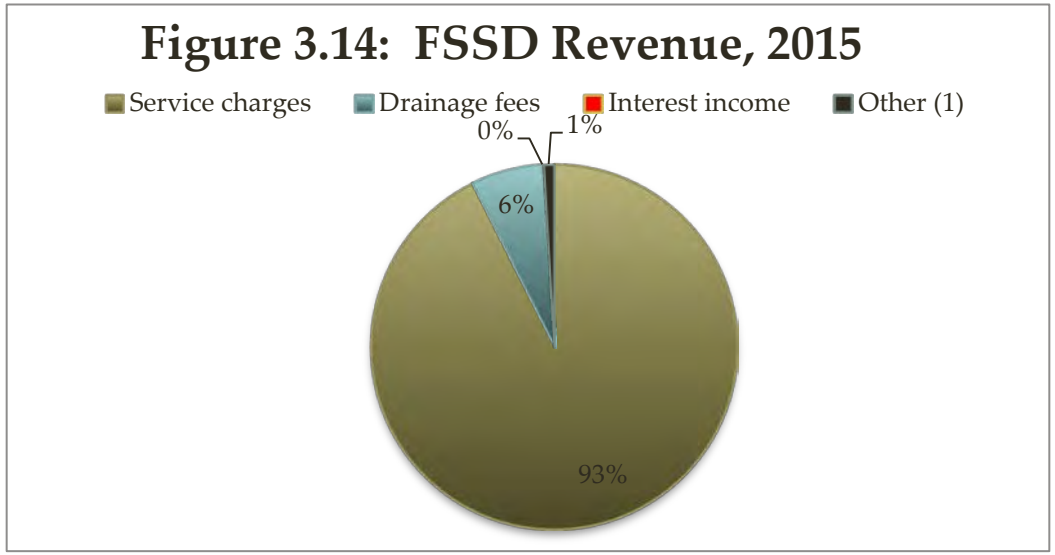
The District primarily receives revenue as fees for service. Sources of revenue include: wastewater service charges, drainage fees, and capacity fees. The District receives no property tax revenues. FSSD also receives interest income which is a non-operating source of revenue.

California's drought and water conservation efforts during years 2010 to 2015 resulted in reduced flows to the wastewater treatment plant. The reduced wastewater flow resulted in reduced sewer service revenue (FSSD CAFR, 2015). Revenues received from commercial and industrial customers comprise 23% of the total sewer service charges (FSSD CAFR, 2015). The District charges a new connection fee when new homes are built that need to connect to the system. On commercial properties, a change of use may trigger a new connection fee if additional sewer use is needed. [Connection fee revenue is trending upward, which is a sign of increased real estate development activities. For example, a restaurant at a shopping center that is leased or sold may be required pay connection fees for the additional sewer use (FSSD CAFR, 2015). Total operating revenues increased by 8% and capacity fees increased by 19% in FY 14/15. In FY 14/15, charges for wastewater service represented 93% of FSSD's revenue as shown in Figure 3.14 and Table 3.15, below. Drainage fees represented 6 percent and other misc. revenue was one percent. The amount of interest income is so small (less than one percent) it is not visible on Figure 3.14.

Table 3.15: FSSD's Schedule 2
Condensed Statements of Revenues
Last Ten Fiscal Years ($000)

	Fiscal Year Ended June 30,									
	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Revenues:										
Service charges	$ 23,067	$ 20,881	$ 19,445	$ 19,115	$ 18,895	$ 18,014	$ 16,960	$ 16,998	$ 16,368	$ 15,960
Drainage fees	1,545	1,501	1,491	1,486	1,455	1,468	1,462	1,470	1,410	1,375
Interest income	61	50	50	52	72	157	589	1,848	2,930	2,110
Other (1)	219	596	178	248	97	316	39	250	877	9
Capacity fees	3,157	2,647	2,472	1,405	1,223	990	979	943	3,767	5,383
Total revenues	28,049	25,675	23,636	22,306	21,742	20,945	20,029	21,509	25,352	24,837

Source: District Audited Financial Statements, 2015



Expenses

In FY 14/15, total expenses (including depreciation, interest expense, and net of pension expense adjustment) were almost $24 million which represents a 0.4 percent decrease from FY 13/14 as shown in Table 3.16. Expenses associated with business operations were the largest category, representing 53% of total expenses as shown in Figure 3.15. Overall expenses for FY 14/15 remained relatively unchanged from the previous year. The increase in business operations, general and administrative, and billing and collection, were offset by the decrease in depreciation and interest expense. Interest expense continues to decline as debt obligation nears maturity and the 2010 Sewer Revenue Refunding matures in 2016. Table 3.16, below, lists operating expenses include the cost of providing and delivering services, administrative expenses, and depreciation on capital assets. All other expenses are classified as non-operating expenses.

Source: FSSD CAFR, 2015

Figure 3.15: FSSD Expenses 2015

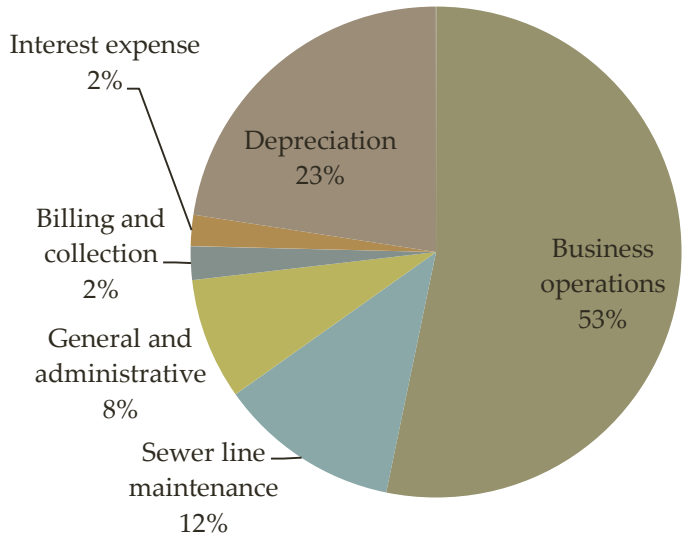


Table 3.16: FSSD's Schedule 2
Condensed Statements of Expenses, and Changes in Net Position
Last Ten Fiscal Years ($000)

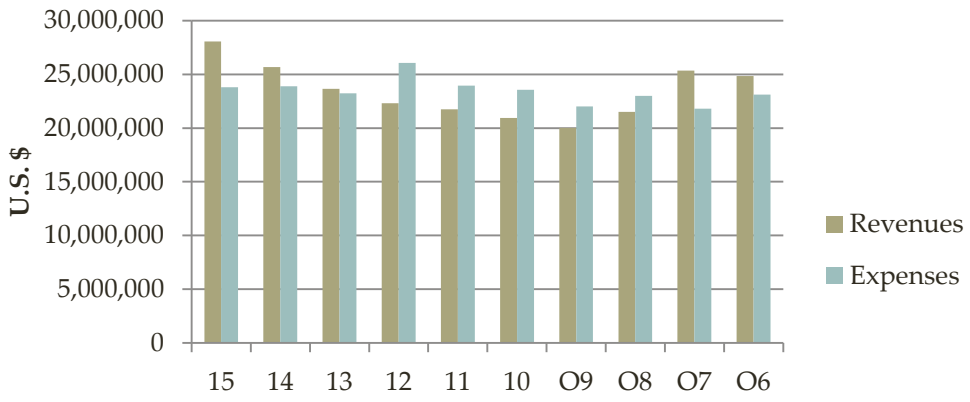
	Fiscal Year Ended June 30,									
	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Expenses:										
Business operations	12,677	12,354	11,500	12,685	12,068	12,351	11,603	11,999	11,413	12,835
Sewer line maintenance	2,836	2,890	2,797	2,780	2,663	2,384	2,503	2,362	2,088	1,983
General and administrative	1,904	1,872	2,038	2,592	1,711	1,821	1,985	3,073	3,065	2,989
Billing and collection	528	511	493	474	459	446	476	427	406	388
Interest expense	489	526	606	655	403	767	833	1,183	1,129	1,275
Depreciation	5,370	5,736	5,807	6,892	6,644	5,799	4,600	3,948	3,703	3,657
Total expenses	23,804	23,889	23,241	26,078	23,948	23,568	22,000	22,992	21,804	23,127
Change in net position	4,245	1,786	395	(3,772)	(2,206)	(2,623)	(1,971)	(1,483)	3,548	1,710
Net position, beginning of period	83,899	82,113	81,718	85,490	87,696	90,319	92,290	93,773	90,225	88,515
Prior period adjustment, GASB 68	(4,343)	-	-	-	-	-	-	-	-	-
Net position, as restated	79,556	82,113	81,718	85,490	87,696	90,319	92,290	93,773	90,225	88,515
Net position, end of period	$ 83,801	$ 83,899	$ 82,113	$ 81,718	$ 85,490	$ 87,696	$ 90,319	$ 92,290	$ 93,773	$ 90,225

(1) Includes net increase (decrease) in fair value of investments

Source: District Audited Financial Statements, 2015

A comparison of annual total revenue to total expenses, as provided in Figure 3.16 below, shows that annual expenses exceeded revenues in half of the ten year study period (i.e. 2012, 2011, 2010, 2009, and 2008). The expenses were used to fund capital improvement projects. Revenues hit a low point during the years 2008 to 2011. This indicates that having sufficient reserve funds is important to FSSD to help it weather the economically lean years. Please also see the discussion of rates presented on page 3-59 of this MSR.

Figure 3.16: FSSD Revenues and Expenses



Data Source: FSSD, CAFR Schedule 2, 2015

Capital Improvement Plan

The District lists upcoming capital improvement projects as line items in the budget's Schedule 4 Projects. Anticipated capital improvement projects include:

- Blower Project funded via SRF Loan
- Cordelia Pump Station
- Northeast Fairfield P.S.
- Peabody Walters S-245A
- Aeration System Rehab
- Suisun Force main Alignment

(Data Source: FSSD, 2015)

These improvement projects are expected to be completed within the next ten years (through year 2025). New construction projects over $45,000 are individually approved by the Board. Additionally, Schedule 4 lists several studies that will be completed in upcoming years including capacity analyses, new development review/inspection, connection fee study, safety, information systems, project planning, sewer service rate study, community outreach upgrade,

and a compensation survey. These studies are expected to be completed within the next ten years (through year 2025).

Reserves

In California, many independent special districts have accumulated reserves. There are no standards guiding the size and use of reserve funds. Reserve and investment policies and practices could be improved through the establishment of guidelines and enhanced scrutiny.

FSSD's long-term financial plan is used is in conjunction with the District's Master Plan to facilitate build-up of reserve funds for use on major expansion projects without accumulating a high debt load. FSSD's 2005 policy on Major Maintenance/Replacement Reserve allows an average 1% of plant replacement cost over a 10-year period is reserved. These contributions help the District accumulate sufficient reserves for infrastructure maintenance and replacement (FSSD Budget, 2015). FSSD has over $17 million in reserves/investments as detailed in Tables 3.17 and 3.18, below.

Table 3.17: FSSD Reserve Funds

Name of Reserve Fund	**Designated Use of Reserve Fund**	**$ Amount in Fund**
Major Maintenance Reserve Fund	Sewer collection, treatment, disposal infrastructure. Maintenance and replacement. Future plant upgrades	Approximately $4,121,000 as described in FY 15/16 and 16/17 biennial budgets. Likely held in investments as detailed below.
Capital Reserve	Making cash contributions to capital projects and making debt service payments	Approximately $275,000 as described in FY 15/16 and 16/17 biennial budgets. Likely held in investments as detailed below.
Operating Reserve		$3,325,000 as described in FY 15/16 and 16/17 biennial budgets. Likely held in investments as detailed below.
Drainage Major Maintenance Reserve	Reserve for unanticipated cost increases in maintenance projects	$373,000 as described in FY 15/16 and 16/17 biennial budgets. Likely held in investments as detailed below.

Drainage Capital Reserve	Reserve accumulated for capital projects to the extent there is available revenue.	$80,000 as described in FY 15/16 and 16/17 biennial budgets. Likely held in investments as detailed below.
Drainage Desilting Reserve		$216,000 as described in FY 15/16 and 16/17 biennial budgets. Likely held in investments as detailed below.
Drainage Operations Reserve	Reserve accumulated for unexpected operations expense.	$150,000 as described in FY 15/16 and 16/17 biennial budgets. Likely held in investments as detailed below.
Debt Service Reserve Funds		
State Revolving Fund reserve for debt service	Funds held by the bond trustee for debt service reserve	$737,038 per FSSD CAFR 2015
2010 Refunding Revenue Bonds debt service reserve	Funds held by the bond trustee for debt service reserve	$1.3 million per FSSD CAFR 2015
Data Source: (FSSD CAFR, 2015 and FSSD Budget FY 15/16 and 16/17).		

Major Maintenance Reserve: This reserve funds major maintenance and repairs, upgrades, and eventual replacement of the treatment plant and sewer system. A 2005 Board adopted policy on contributions to the Major Maintenance and Replacement Reserve calls for a minimum of 1.0% of plant replacement cost to be contributed to the reserve each year that net income allows.

Capital Reserve: This reserve accumulates annual net revenues for two purposes: making cash contributions to capital projects and making debt service payments if capacity fee shortages are experienced. Balances are periodically built up, then, subsequently drawn down to pay for sewer and treatment plant expansion projects.

Debt Service Reserve: Funds are held in debt service reserve by the bond trustee for debt service purposes. The bond reserve of $1.4 million will become available to the District in 2016 when the bond matures, and will be used for final payment. FSSD established the debt service reserve account in November 2011, in compliance with the State Revolving Fund loan

agreement. The Major Maintenance Fund is used to fund this reserve and it is not available to the District until the loan is paid in full in 2031.

Reserve funds are allowed to be invested as authorized by the California Government Code and the District's Investment Policy. FSSD maintains the following investments:

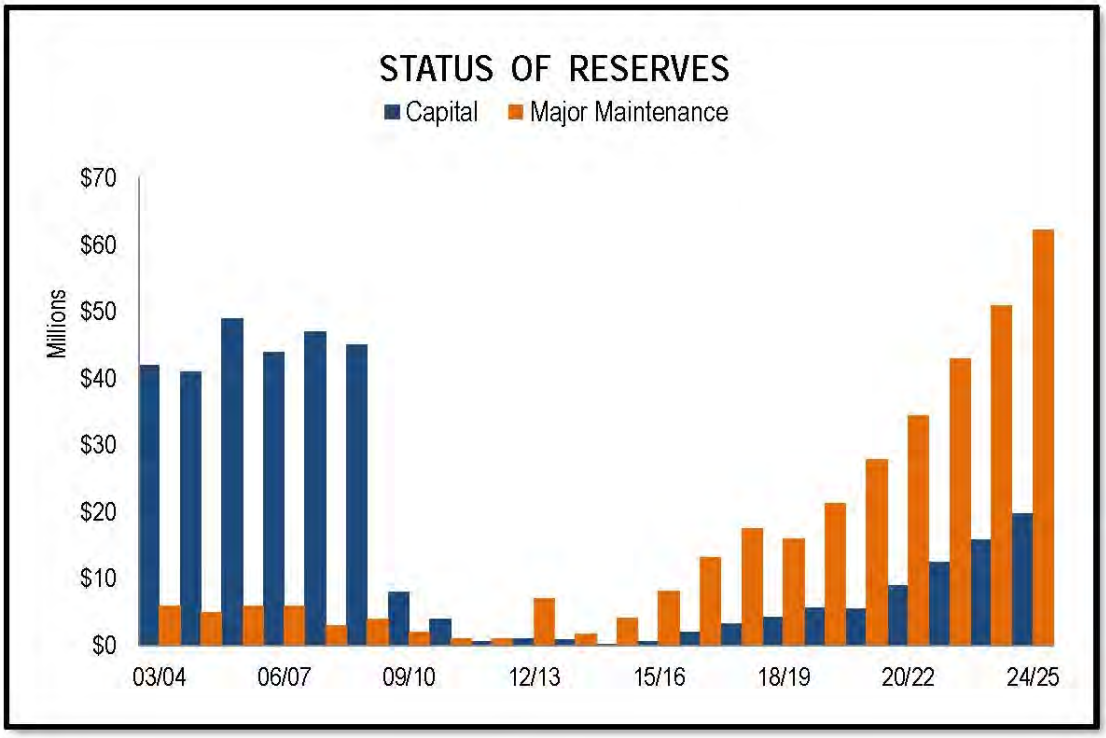
- U.S. Treasury Obligations
- U.S. Agency Securities
- State of California Obligations
- Bankers Acceptances
- Commercial Paper
- Medium Term Corporate Notes
- Mortgage Pass-Through Securities
- Repurchase Agreements
- Reverse Repurchase Agreements
- Negotiable Certificates of Deposit
- California Local Agency Investment Fund
- Mutual Funds
- Money Market Mutual Funds

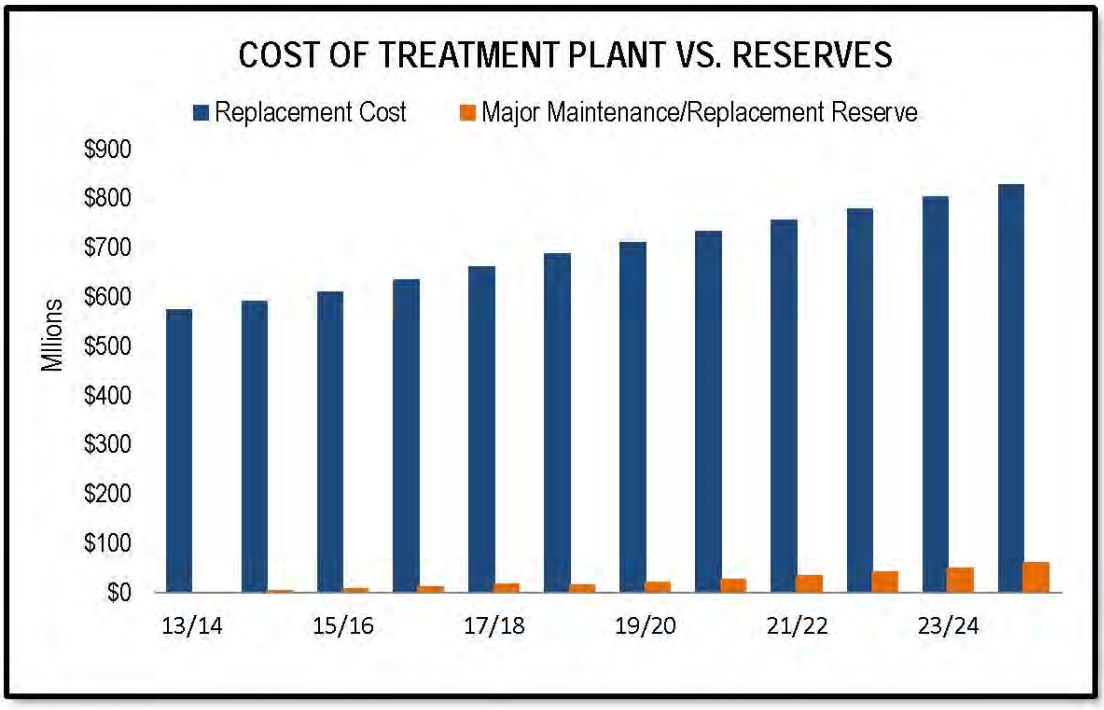
As shown in Table 3.17, below, FSSD has over $16 million in several investment types including U.S. Treasuries, CA Local Agency Investment Fund, and investments held by Trustees. (There are also other funds as previously described in Table 3.17 above).

Table 3.18: FSSD Investment Summary

	June 30, 2015	
	Fair Value	Weighted Ave Years to Maturity
U.S. Treasuries/Money Market	$14,902,964	0.01
CA Local Agency Investment Fund	5,056	0.64
Held by Trustees		
U.S. Government Agencies	1,284,090	0.07
Money Market	2	0.00
Total Investments	$16,192,112	

Data Source for above table: (FSSD CAFR, 2015).





Source: FSSD Budget and Long-Term Financial Plan for FY 15/16 and 16/17

Comparing the size of a district's reserve/investment fund to their annual gross revenue is a common financial metric. Table 3.18, above indicates that total investments are $16,192,112. In FY 14/15, gross revenue was $28,049,378. The comparative calculation shows that total investments are equivalent to 0.58 of annual gross revenue.

Rates

FSSD charges fees for both wastewater and storm drainage service. Fees for wastewater treatment services are established via FSSD's Sewer Capacity and Service Charge Ordinance (Ordinance No. 05-01 and Ordinance No. 77-3, as amended). The District has two types of sewer fees: monthly service charges and capacity fees. Monthly service charges are included on city utility bills at the rates shown in Table 3.19, below.

Table 3.19: Monthly Service Charges

	Customer Class	FY 2014/15	Increase	FY 2016/17 Rate	Increase
A.	Residential Rate	$34.56	5.2%	$36.35	3.1%
B.	Commercial, Regular Strength	$2.73	6.2%	$2.90	3.8%
C.	Commercial, Special Strength	$4.70	3.8%	$4.88	4.9%
D.	Industrial, Regular Strength	$2.73	6.2%	$2.90	-2.4%
E.	Travis Airforce Base	$2.09	3.6%	$2.17	3.9%
F.	Industrial, Case-by-Case				
F.1	Flow charge per million gallon	$2,299.07	7.4%	$2,469.06	-2.5%
F.2	Plus BOD charge per thousand lbs. of	$340.41	3.1%	$351.05	31.7%
F.3	Plus SS charge per Thousand lbs. of SS	$177.76	3.2%	$183.48	9.8%
G.	Anheuser Busch				
G.1	Flow charge per million gallon	$2,400.04	9.4%	$2,624.84	-8.3%
G.2	Plus BOD charge per thousand lbs. of	$339.70	3.3%	$351.05	31.7%
G.3	Plus SS charge per Thousand lbs. of SS	$177.38	3.4%	$183.48	9.8%

Sewer capacity fees are collected for the District by the Cities of Fairfield and Suisun City. Sewer capacity charges must be paid before a Certificate of Occupancy is issued. The rates are shown in Figure 3.18, below.

Table 3.20: Sewer Capacity Charges (2016)	
Residential Class	
Single Family Dwelling	$5,943
Multi-Family Dwelling	
$5,943 First unit in each building	$3,566 Each additional unit in the same building
Hotel, Auto Court, Motel, Rooming House, Trailer Court	
$5,943 First unit in each building	$2,971 Each additional unit or trailer space
Commercial and Industrial Class	
Commercial and Industrial Enterprise	$5,943
Data Source: Staff memorandum to the FSSD Board on November 17, 2016 with Subject: 2016 Sewer Service Charge and Capacity Fee Study Update and available on line at: http://www.fssd.com/wp-content/uploads/2017/01/112816_Agenda-and-Minutes.pdf	

In municipal service reviews, LAFCO often assess whether rates are sufficient to cover operating expenses, debt service, and planned capital improvements. FSSD's biennial budget contains a Long-Term Financial Plan as shown in Schedules 4, 5, 6, and 7. Schedule 6 shows that revenues are expected to exceed expenses through the year 2025. Reserves will be maintained with positive balances through the year 2025. Additionally, in January 2016, the FSSD Board authorized a Consulting Services Agreement with Bartle Wells Associates to conduct an update to the 2005 Cost of Service and Rate Study. Based on this 2016 rate study, FSSD expects to circulate a Prop 218 notice in early 2017 and to prepare a Rate Ordinance for Board consideration in March 2017.

Findings & Determinations: Financial Ability of District to Provide Services

18. FSSD is an enterprise district.
19. FSSD has one budget policy which it describes in its annual budget as the 2005 policy on Major Maintenance/Replacement Reserve, where an average 1% of plant replacement cost over a 10-year period is reserved. These contributions help the District accumulate sufficient reserves for infrastructure maintenance and replacement (FSSD Budget, 2015). FSSD does not appear to have an adopted management and budget policy which addresses budget preparation, fixed asset accounting, investment of funds, and expense authorization. It is recommended that prior to preparation of the next MSR, FSSD should adopt a policy which addresses budget preparation, fixed asset accounting, investment of funds, and expense authorization and share this policy with LAFCO.
20. The Budget and Long Term Financial Plan are adopted in public meetings on a biennial basis.
21. FSSD receives an audited financial statement on an annual basis.
22. In FY 14/15, total annual revenue was $28 million and total annual expense was almost $24 million. FSSD's biennial budget contains a Long-Term Financial Plan and Schedule 6 shows that revenues are expected to exceed expenses through the year 2025. Reserves will be maintained with positive balances through the year 2025. This data suggests that FSSD has the financial ability to continue to provide public services into the future.
23. FSSD's long-term financial plan is used is in conjunction with the District's Master Plan to facilitate build-up of reserve funds for use on major expansion projects without accumulating a high debt load.

3.6: OPPORTUNITIES FOR SHARED FACILITIES & COST AVOIDANCE

3.6.1. Shared Facilities and Regional Cooperation

LAFCOs describe shared facilities and regional cooperation in municipal service reviews because it is thought that a local government agency's ability to partner with another entity, public or private, in order to accomplish the same level of public service, while splitting the costs to deliver the service will provide an efficiency of service. Ideally, a sharing or cooperative arrangement would yield the same public service at less cost, and with less resources required from a community to pay for those results. Another aim of LAFCO is to avoid the duplication of service.

Due to the geographic location of the District, it would be difficult for it to share wastewater collection, treatment, and disposal facilities with neighboring sanitation districts. However, FSSD has a long history of collaboration with its neighboring government agencies and FSSD performs the following collaborative activities:

- Cooperates with the Cities of Fairfield and Suisun by using the City billing department, such that the Cities bill for sewer on the city water bill.
- Provides technical staff to Cities on storm drain issues.
- Operates and maintains stormwater pump stations (1988 MOU for storm pump).
- Collects and remits storm drain fees for both of the Cities.
- Performs T.V. inspections of city sewer lines.
- Avoids duplication of storm drain service. For example, FSSD provides storm drainage expertise to Suisun City, who benefits from this service efficiency.
- Contributes funds towards the household hazardous waste facility, which is open several days per week and located near the garbage dump.

Additionally, Solano County performs collaborative activities which benefit FSSD and other local governments. For example, Solano County does some billing for sewer service in unincorporated areas that have less than 50 customers. This shared billing service is outsourced to the County (FSSD, 2016c). Another example is that County staff assists with routine inspections of pollution sources. Solano County already performs inspections of local businesses, and FSSD gives the County additional items to inspect for pollution control purposes. This allows the inspections for hazardous materials, storm drains, and wastewater pollution prevention to be conducted concurrently by County staff.

Participation in local watershed associations and integrated regional water management groups may provide additional opportunities for regional cooperation. Additionally, it is recommended that FSSD continue to be open to new opportunities to provide service in a collaborative manner. FSSD can assess new collaborative ideas as they arise.

3.6.2. Cost Avoidance

This section highlights cost avoidance practices given necessary service requirements and expectations. Ideally, proposed methods to reduce costs would not adversely affect service levels. In general, wastewater and storm drainage systems have a fixed cost associated with operations and maintenance and have a variable cost dependent upon water flow. Given these constraints, FSSD pursues an array of cost avoidance techniques that each contributes incrementally towards keeping costs at a reasonable level. Specifically, during the last five

years FSSD has taken the following actions to save money, lower expenses, and improve services:

- Participation in a joint insurance pool with the California Sanitation Risk Management Authority (http://www.csrma.org/). Insurance includes worker's compensation, property damage, and liability.
- Conducts competitive bidding
- Shares its operational staff with the cities by offering technical expertise on storm water permitting issues.
- Conducts energy management to lower energy costs by using solar and windmills (small) to generate electricity. Energy generated powers the FSSD WWTP.
- Participates in state programs such as the Calif Dept. of General Services government rate purchasing program. FSSD staff reviews these rates and compares them to the general marketplace and selects the lowest cost alternative (example, vehicle purchasing).
- Purchases natural gas through a bundled state program.
- Slowed the rate of vehicle purchases. Specifically, most vehicles in the FSSD fleet are older than 5 years. (Source, FSSD, 2016c)

Avoidance of litigation is another method FSSD uses to reduce costs. During the past ten years, FSSD has not been subject to legal actions (FSSD, 2016c).

3.6.3 Facilities in Nearby Sanitation Districts

FSSD is geographically isolated from other sanitation districts as shown in Figure 3.19, below. The nearest sanitation district is the Vallejo Sanitation District located to the west and it is separated from FSSD by open space. This geographic separation makes it physically difficult to connect the two systems.

FSSD staff feels that no jurisdictional reorganizations are needed at this time. The current boundary arrangements work to benefit recipients of FSSD's services. FSSD does not currently have an SOI.

Findings & Determinations: Opportunities for Shared Facilities & Cost Avoidance

24. Due to the geographic location of the District, it is difficult for it to share wastewater collection, treatment, and disposal facilities with neighboring sanitation districts. It does

however align its sewage collection infrastructure with the cities of Fairfield and Suisun City.

25. FSSD has a solid track record of working cooperatively with its neighboring government agencies including the Cities of Fairfield and Suisun City, among others.
26. Participation in local watershed associations and integrated regional water management groups may provide additional opportunities for regional cooperation.
27. It is recommended that FSSD continue to be open to new opportunities to provide service in a collaborative manner.

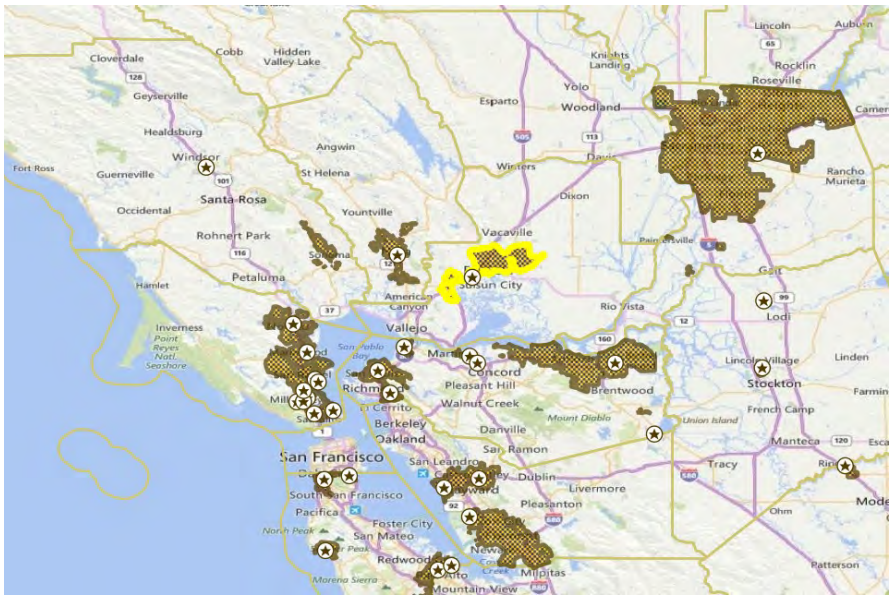
3.7: GOVERNMENT STRUCTURE AND ACCOUNTABILITY

In a municipal service review, LAFCO is required to make a determination about a district's government structure and accountability. In California, there are two types of special districts as defined in GC 56032.5 and 56044:

- Dependent districts: Function as subdivisions of another multipurpose local government. Board members may be ex-officio member of other governing boards such as city councils or the board of supervisors.
- Independent districts: Have their own governing board and are usually elected directly by voters or are appointed to fixed terms.

The Fairfield Suisun Sewer District is a dependent district formed by special statutes. The City Councils for Fairfield and Suisun City appoint their five members (each) to serve on the FSSD Board of Directors; yet the FSSD Board of Directors function and meet independently from the city councils. Regardless of their governance structure, special districts have many of the same governance powers as other local government agencies as defined by their enabling legislation and LAFCo. The districts can assume debt, enter into contracts, and levy taxes and

Figure 3.19: Nearby Districts



assessments. However, special districts do not have land use authority. The FSSD Board of Directors holds public meetings on a regular basis, scheduled for the fourth Monday of each month at 6 p.m. in the Board Room at 1010 Chadbourne Road, Fairfield, California.

Key performance indicators for the FSSD Board of Directors are listed in Table 3.21, below

Table 3.21: Performance Indicators for FSSD Board

MSR Key Performance Indicators	**Status**	**Notes**
Contact information, including email, is available for all board members	Available upon request from FSSD staff. Is not available on FSSD website.	Should be listed on the "About Us" or "Contact" web page.
Terms of office and next election date are disclosed.	Available upon request from FSSD staff. Is not available on FSSD website.	Is available on City websites at: https://www.fairfield.ca.gov/gov/city_council/city_councilmembers/default.asp and *http://www.suisun.com/government/city-council/*
Committee appointments are online.	Information not currently available on-line	The FSSD website should be updated to show committee appointments.
Compensation and benefits are clearly noted		Employee compensation data is on-line at: *http://transparentcalifornia.com/agencies/salaries/*
Compliance with CA Government Code §53235 (two hours of training in ethics at least once every two years and written policy on reimbursements).	Training is conducted by the cities	
Compliance with The CA Political Reform Act (Government Code §81000, et seq.) (conflict of interest codes).	Compliance is managed by the cities	
Compliance with Government Code §87203 (disclose their investments, interests in real property and incomes by filing appropriate forms with the Fair Political Practices Commission each year).	Information about Statements of Economic Interests is available on City websites	

FSSD Board members are compensated at a rate of $143.59 per day of service (as of January 2016). Additionally, minor reimbursements for travel to sanitation related conferences are also provided, consistent with the Board Travel Policy.

Key performance indicators for meeting management are listed below in Table 3.22.

Table 3.22: MSR KPIs for Meeting Management

Performance Indicator	**Status**	**Notes**
Agency posts regular meeting agendas 72 hours in advance and special meeting agendas 24 hours in advance on agency website	Yes. Available on website at: *http://www.fssd.com/board-meetings-agenda/*	Link is also provided from homepage at: http://www.fssd.com/
Meeting minutes and agendas for the current year.	Yes. Available on website at: *http://www.fssd.com/board-meetings-agenda/*	Link is also provided from homepage at: http://www.fssd.com/
Archives of meeting minutes and agendas for three years.	Available on request directly to FSSD staff.	Agendas/minutes only for the past year are available on website.
A meeting calendar that discloses the time and location of public meetings	Yes, available on website at: *http://www.fssd.com/public-meetings/*	Link is also provided from homepage at: http://www.fssd.com/
Compliance with the Brown Act (CA Government Code 54950 *et sec)*	Yes	Based on information presented in this MSR, FSSD does comply with the Brown Act.

All meetings are open to the public, in accordance with the Brown Act (Government Code §§ 54950-54926). Additionally, the agenda for each Board meeting includes a public comment period. Agendas are distributed via the Agency's website, fax, email, and postal mail. The media is notified via e-mail. The Daily Republic, a local newspaper, also publishes meeting notices. The District's website (http://www.fssd.com/) is a communication vehicle for District meeting agendas, meeting minutes, and information on the District's services and programs. The District' legal counsel is present at Board meetings to ensure compliance with the Brown Act and other applicable laws. The Cities of Fairfield and Suisun City monitor the adherence of their council members to the requirements of the Brown Act, the Political Reform Act, and similar laws.

Customer Service:

FSSD has a formal complaint process that allows customers to share their comments or complaints regarding the FSSD's wastewater services via a Customer Service Request Form (a web form) on the FSSD website's contact page at: http://www.fssd.com/contact/. Additionally, customers can telephone district staff directly at (707) 429-8930. FSSD does receive the typical type of complaints associated with sanitation districts, such as sewer backups, odors, etc and staff investigates each one. FSSD's investigations have determined the complainant issues are not caused by FSSD or associated with FSSD facilities. They are usually caused by the local city sewer line.

3.7.1. Management Efficiencies

The District's General Manager reports to the Board of Directors. (Solano LAFCO, 2006). The General Manager represents the District locally, regionally, and at the state and federal levels and ensures the best interests of the Agency are met. The General Manager also:

- Serves as the chief executive officer of the district
- Represents the board's policies and programs
- Prepares and administer the budget
- Responsible for organizing staffing at all levels within the adopted budget and as such is responsible for plant operation and maintenance; finance and planning; engineering; construction design and management; and regulatory compliance

CONTACT INFORMATION:

Gregory G. Baatrup,
General Manager

1010 Chadbourne Rd.,
Fairfield, Ca 94534

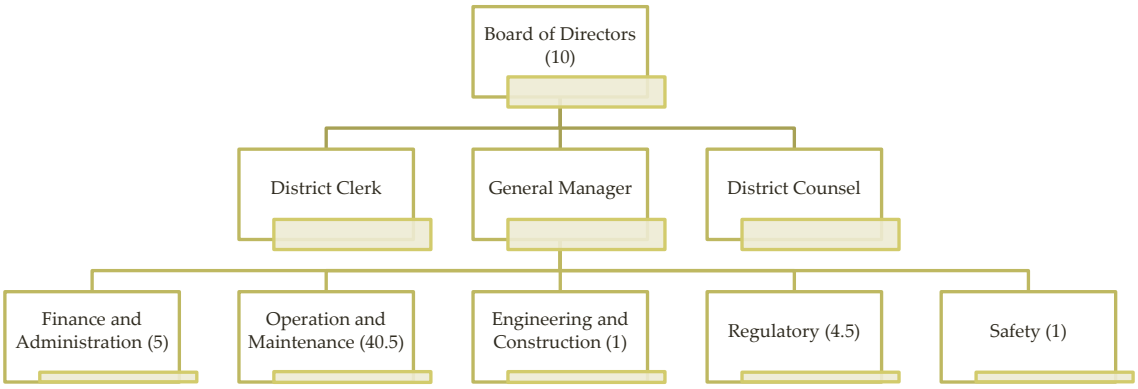
gbaatrup @ fssd.com

There are 60 employees (FTE) of the District. An additional 4.5 positions remain vacant. Figure 3.20, Organization Chart, below.

Strategic Plans & Management Plans

The District has an overall planning strategy including vision, mission, purpose, and core values as outlined on its website at: *https://www.fssd.com/district-purpose-vision-mission-core-values/*. FSSD's vision is to be "a recognized leader in our industry". Its mission is "We achieve our purpose by excelling individually and organizationally." The District describes is purpose to: "protect public health and the environment for the communities we serve in an efficient, responsible and sustainable manner." Ideally, all Districts in Solano County would have an updated strategic plan or master plan that links together goals, objectives, actions, and best management practices.

Figure 3.20: FSSD Organizational Chart



Data Source: Comprehensive Annual Financial Report, For the Year Ended June 30, 2015

District Counsel serves via contract.

A quality assurance or adaptive management plan that shows how activities and actions undertaken contribute to learning and progress which then leads to an adjustment in objectives and best management plans would also be helpful. FSSD has taken positive steps in this direction through its provision of vision, mission, and purpose on its website. It is recommended that FSSD use its website to provide a link to an actual strategic plan, which shows the date approved by the District Board.

FSSD has a Fairfield-Suisun Urban Runoff Management Program with an Integrated Monitoring Report that was prepared in March 2014. Additionally FSSD has a 2013 Sewer System Management Plan. Sewer System Management Plans were completed in 1986, 1994, and 2002, 2008, and most recently in 2013. The Sewer System Management Plan is sometimes referred to as a "Master" Plan. .The District's collection system Capital Improvement Plan (CIP) is based on the Sewer System Management Plan.

Awards

FSSD is nationally recognized for its leadership and innovation. FSSD has received many awards from the following organizations:

- California Association of Sanitation Agencies:
- California Water Environment Association:
- National Association of Clean Water Agencies:
- California Water Environment Association (CWEA)—Sacramento Area Section:
- California Water Environment Association (CWEA)—Redwood Empire Section:
- California Sanitation Risk Management Authority (CSRMA):
- Special recognition of Excellence in Financial Reporting, from GFOA, for eighteen consecutive fiscal years—June 1998 through June 2015

Recently, FSSD received a notable award called the "Utility of Future Award". The National Association of Clean Water Agencies, the Water Environment Federation, the Water Environment Research Foundation and WateReuse, with support from the U.S. Environmental Protection Agency, established a Utility of the Future program in 2016. FSSD received this award during the 2016 annual Water Environment Federation conference.

Details about the awards and recognition the District has received are available on the FSSD website at: *https://www.fssd.com/awards-achievements/.*

Findings & Determinations: Accountability for Community Service Needs

28. The governance structure of FSSD is that of a dependent district such that the City Councils for Fairfield and Suisun City appoint their five members (each) to serve on the FSSD Board of Directors. Yet the FSSD Board of Directors does function and meet independently from the city councils.
29. The FSSD Board of Directors holds public meetings on a regular basis, scheduled for the fourth Monday of each month at 6 p.m. in the Board Room at 1010 Chadbourne Road, Fairfield, California.
30. FSSD Board meetings are noticed according to the Brown Act and the meetings provide an opportunity for public comment.
31. A key performance indicator suggests that archives of meeting minutes and agendas for three years should be available on a district's website. However, agendas/minutes only for the past year are available on the FSSD website. The archives for the two prior years are available upon request directly to FSSD staff. FSSD recently updated its website and is in the process of posting an archive of past meeting minutes and agendas.
32. The FSSD Board of Directors and staff have demonstrated that they understand the needs of their customers and they aim to improve the efficiency of the public services they offer. The core competencies of staff are aligned with customer needs.
33. Ideally, all Districts in Solano County would have an updated strategic plan or master plan that links together goals, objectives, actions, and best management practices. A quality assurance or adaptive management plan that shows how activities and actions undertaken contribute to learning and progress which then leads to an adjustment in objectives and best management plans would also be helpful. FSSD has taken positive steps in this direction through its provision of vision, mission, and purpose on its website. It is recommended that FSSD use its website to provide a link to an actual strategic plan, which shows the date approved by the District Board.

3.8: LAFCO POLICIES AFFECTING SERVICE DELIVERY

Cortese-Knox Hertzberg allows LAFCOs to establish policies to implement the law and process applications. Solano LAFCO has implemented eleven standards, six mandatory standards which mirror the requirements of CKH, and five discretionary standards. Application of discretionary standards lies with the Commission. There are no other aspects of wastewater and storm drainage service required to be addressed in this report by LAFCO policies that would affect delivery of services.

Determination: Any Other Matters Related to Service Delivery as Required by LAFCO Policy

34. There are no other aspects of wastewater or storm drainage service required to be addressed in this report by LAFCO policies that would affect delivery of services.

3.9: SUMMARY OF MSR FINDINGS & DETERMINATIONS

Based on the information included in this report, the following written determinations make statements involving the service factors the Commission must consider as part of a municipal service review[14]. The Commission's final MSR determinations will be part of a Resolution which the Commission formally adopts during a public meeting.

Growth and Population Projections

1. The Fairfield-Suisun Sewer District (FSSD) provides wastewater, water recycling, and storm water management services to approximately 140,400 residents, plus business and government facilities in central Solano County.
2. FSSD's enabling legislation defines its service area. The District's boundaries can expand through city annexation and District boundaries cannot otherwise expand without an action of the State Legislature. FSSD's 44 square mile service area includes the City of Fairfield, Suisun City, Travis Air Force Base, the unincorporated area of Cordelia, and parts of Suisun Valley.
3. Between the years 2010 to 2040, an additional 46,768 persons are expected to reside within FSSD's boundaries. This represents an overall 35 percent increase in projected future population at an average annual (compound) growth rate of 1 percent.
4. Though the population and land area for the City of Fairfield has slightly increased from 2010 to 2015, the population per square mile has decreased. This suggests that the City has enough land to accommodate the population growth in 2015 over what was available in 2010.

[14] The service factors addressed in this report reflect the requirements of California Government Code §56430(a)

Disadvantaged Unincorporated Communities

5. The According to the U.S. Census, the median household income (MHI) for the State was $61,933 in 2014 (US Census, ACS, 2010-2014). This yields a DUC threshold MHI of less than $49,546 (80 percent of the statewide MHI). As of 2014 the median household income (MHI) in the City of Fairfield was estimated to be $81,011. This is significantly higher than the DUC threshold MHI. The median household income (MHI) in the City of Suisun city was estimated to be $71,306. This is significantly higher than the DUC threshold MHI.
6. Nine unincorporated islands have been identified within the FSSD boundary area as listed in Table 3.7. The MHI for each unincorporated island is listed in Table 3.9 and it shows that Area #5 known as Woolner-Hamilton has a MHI of $24,858, which meets the financial threshold to be classified as a DUC. The Woolner Hamilton area does, however, receive adequate water, wastewater (small septic systems), and fire protection services, as listed in Table 3-7. No public health and safety issues have been identified.
7. The FSSD is legislatively limited to which areas they can serve and therefore may not be able to provide services to the unincorporated islands.

Present and Planned Capacity of Public Facilities

8. FSSD collects wastewater from approximately 54,000 sewer connections that serve 140,400 residents in Fairfield and Suisun City. One FSSD connection can potentially serve many individual customers. For example, Travis AFB is "one" connection. Most residential customers connect to the City-owned collection lines for sewer, not FSSD.
9. The facilities and infrastructure on which FSSD depends have variable ages. FSSD replaces and repairs infrastructure on a regular basis. FSSD has implemented collection system BMPs and addresses preventative maintenance and scheduled replacement of aging infrastructure.
10. FSSD owns and operates its wastewater collection system which connects to its WWTP. The FSSD system functions with the satellite collection systems owned and operated by the Cities of Fairfield and Suisun City and Travis Air Force Base. Each entity has adopted a Sewer System Management Plan.
11. FSSD's recent capacity upgrades (such as the Suisun Pump Station upgrades) demonstrate its continued investment in the system.
12. Actual flow is significantly less than design capacity, hence the WWTP has adequate capacity to accommodate existing customers.
13. FSSD has fewer sanitary sewer overflows as compared to similar sewer districts in the San Francisco Bay region as shown in Table 3.13. This demonstrates FSSD's successful

and on-going attention to the prevention of blockages, inflows, and malfunctions and this results in safeguarding human and environmental health.

14. FSSD has contracted with private company (Lystek) to develop innovative methods and beneficial uses for biosolids that result from the WWTP.
15. Generally, new development occurring within the District could result in an increase in the demand for sewer services and the need for additional infrastructure. For example, the implementation of the City of Fairfield Train Station Specific Plan could result in additional wastewater flows to the WWTP that were not previously accounted for and additional improvements to District owned facilities may be needed.
16. Similar to other sanitation districts, FSSD faces challenges regarding the provision public of services including sewage collection, treatment, disposal, water recycling, and storm drainage management. Challenges include addressing anticipated future regulations dealing with nutrient discharges, and supporting the restoration of Suisun Marsh with the implementation of Total Maximum Daily Loads (TMDL). The challenges faced by FSSD are indicative of an agency that functions in a multi-jurisdictional environment and this contributes to the complexity of situations that FSSD faces.
17. FSSD's innovative use of renewable energy to offset the electricity cost associated with wastewater treatment demonstrates that it has already implemented several management practices which highlights the ongoing work at the local level to save energy and reduce greenhouse gas emissions. It is recommended that FSSD continue to implement best management practices aligned with sustainability aims.

Financial Ability of Agency to Provide Services

18. FSSD is an enterprise district.
19. FSSD has one budget policy which it describes in its annual budget as the 2005 policy on Major Maintenance/Replacement Reserve, where an average 1% of plant replacement cost over a 10-year period is reserved. These contributions help the District accumulate sufficient reserves for infrastructure maintenance and replacement (FSSD Budget, 2015). FSSD does not appear to have an adopted management and budget policy which addresses budget preparation, fixed asset accounting, investment of funds, and expense authorization. It is recommended that prior to preparation of the next MSR, FSSD should adopt a policy which addresses budget preparation, fixed asset accounting, investment of funds, and expense authorization and share this policy with LAFCO.
20. The Budget and Long Term Financial Plan are adopted in public meetings on a biennial basis.
21. FSSD receives an audited financial statement on an annual basis.
22. In FY 14/15, total annual revenue was $28 million and total annual expense was almost $24 million. FSSD's biennial budget contains a Long-Term Financial Plan and Schedule

6 shows that revenues are expected to exceed expenses through the year 2025. Reserves will be maintained with positive balances through the year 2025. This data suggests that FSSD has the financial ability to continue to provide public services into the future.

23. FSSD's long-term financial plan is used is in conjunction with the District's Master Plan to facilitate build-up of reserve funds for use on major expansion projects without accumulating a high debt load.

Opportunities for Shared Facilities

24. Due to the geographic location of the District, it is difficult for it to share wastewater collection, treatment, and disposal facilities with neighboring sanitation districts. It does however align its sewage collection infrastructure with the cities of Fairfield and Suisun City.
25. FSSD has a solid track record of working cooperatively with its neighboring government agencies including the Cities of Fairfield and Suisun City, among others.
26. Participation in local watershed associations and integrated regional water management groups may provide additional opportunities for regional cooperation.
27. It is recommended that FSSD continue to be open to new opportunities to provide service in a collaborative manner.

Accountability for Community Service Needs

28. The governance structure of FSSD is that of a dependent district such that the City Councils for Fairfield and Suisun City appoint their five members (each) to serve on the FSSD Board of Directors. Yet the FSSD Board of Directors does function and meet independently from the city councils.
29. The FSSD Board of Directors holds public meetings on a regular basis, scheduled for the fourth Monday of each month at 6 p.m. in the Board Room at 1010 Chadbourne Road, Fairfield, California.
30. FSSD Board meetings are noticed according to the Brown Act and the meetings provide an opportunity for public comment.
31. A key performance indicator suggests that archives of meeting minutes and agendas for three years should be available on a district's website. However, agendas/minutes only for the past year are available on the FSSD website. The archives for the two prior years are available upon request directly to FSSD staff. FSSD recently updated its website and is in the process of posting an archive of past meeting minutes and agendas.
32. The FSSD Board of Directors and staff have demonstrated that they understand the needs of their customers and they aim to improve the efficiency of the public services they offer. The core competencies of staff are aligned with customer needs.

33. Ideally, all Districts in Solano County would have an updated strategic plan or master plan that links together goals, objectives, actions, and best management practices. A quality assurance or adaptive management plan that shows how activities and actions undertaken contribute to learning and progress which then leads to an adjustment in objectives and best management plans would also be helpful. FSSD has taken positive steps in this direction through its provision of vision, mission, and purpose on its website. It is recommended that FSSD use its website to provide a link to an actual strategic plan, which shows the date approved by the District Board.

Any Other Matters Related to Service Delivery as Required by LAFCO Policy

34. There are no other aspects of wastewater or storm drainage service required to be addressed in this report by LAFCO policies that would affect delivery of services.

3.10: ISSUES WITH RECOMMENDATIONS

This MSR describes the provision of wastewater and storm drainage services by FSSD to its constituents. No red flags were found during this analysis. However, several areas for continual improvement were noted and listed in the above determinations with a * (asterisk) symbol. They are also repeated below in Table 3.23.

Table 3.23: Issues with Recommendations

Determination #	Issue	Recommendation
17	FSSD innovative use of renewable energy to offset the electricity cost associated with wastewater treatment demonstrates that it has already implemented several of the management practices which highlights the ongoing work at the local level to save energy and reduce greenhouse gas emissions.	It is recommended that FSSD continue to implement best management practices aligned with sustainability aims.
19	FSSD does not appear to have an adopted management and	It is recommended that prior to preparation of the next MSR, FSSD should adopt a policy

	budget policy which addresses budget preparation, fixed asset accounting, investment of funds, and expense authorization.	which addresses budget preparation, fixed asset accounting, investment of funds, and expense authorization and share this policy with LAFCO.
26	Due to the geographic isolation, it is difficult for FSSD to share infrastructure with neighboring sanitation districts.	Participation in local watershed associations and integrated regional water management groups may provide additional opportunities for regional cooperation.
27	FSSD has a solid track record of working cooperatively with its neighboring government agencies.	*It is recommended that FSSD continue to be open to new opportunities to provide service in a collaborative manner.
33	FSSD's Master Plan was last updated in 2008.	Ideally, all Districts in Solano County would have an updated strategic plan or master plan that links together goals, objectives, actions, and best management practices. A quality assurance or adaptive management plan that shows how activities and actions undertaken contribute to learning and progress which then leads to an adjustment in objectives and best management plans would also be helpful. FSSD has taken positive steps in this direction through its provision of vision, mission, and purpose on its website. It is recommended that FSSD use its website to provide a link to an actual strategic plan, which shows the date approved by the District Board.

3.11: REFERENCES

Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC). Plan Bay Area 2040. San Francisco, Ca. Retrieved from: <*http://planbayarea.org/plan-bay-area.html*>. Accessed on July 27, 2016.

Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC). Appendix A Detailed Methodology. Draft Plan Bay Area Equity Analysis. Part of Plan Bay Area 2040. 64-pages. San Francisco, Ca. Retrieved from: <*http://planbayarea.org/plan-bay-area/plan-elements/equity-analysis.html*>. Accessed on August 1, 2016.

Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC). Plan Bay Area. Priority Development Area Showcase. San Francisco, Ca. Retrieved from: <*http://gis.abag.ca.gov/website/PDAShowcase/* >. Accessed July 28, 2016.

Baatrup, Gregory; Herston, Meg; Sortor, Taylon. (Baatrup, et. al.) June 20, 2016, Kick-off meeting with Harrison and McIntyre. Fairfield, Ca.

California Department of Finance. New State Population Report, 2015. Sacramento, CA. Retrieved from: <*http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-1/documents/E-1_2016PressRelease.pdf*>. Accessed on July 26, 2016.

California Department of Water Resources. Disadvantaged Communities Mapping Tool. Retrieved from: <*https://gis.water.ca.gov/app/dacs/*>. Accessed July 28, 2016.

California Research Bureau (CRB). California State Library. August 2007. Biosolids, Options for Biosolids Management. 101 pages. Sacramento, Ca. Available on-line at: *http://www.library.ca.gov/crb/07/07-007.pdf*

Chavan & Associates, LLP. Certified Public Accountants. Independent Auditor's Report and the Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With Government Auditing Standards. September 29, 2015. San Jose, California. 48-pages.

City of Fairfield. December 2010. Draft Environmental Impact Report. Fairfield Train Station Specific Plan. State Clearinghouse # 2010042093. Available on-line: <*https://www.fairfield.ca.gov/gov/depts/cd/planning/train_station_deir.asp*>. Accessed on July 26, 2016.

City of Fairfield, CA. 2002 City of Fairfield General Plan Update. Retrieved from: <*http://www.fairfield.ca.gov*>. Accessed on July 26, 2016.

City of Fairfield, California. *Heart of Fairfield Plan, Profile Report. 2015*. Retrieved from: <*http://www.heartoffairfield.com/app_pages/view/62*>. Accessed on July 29, 2016.

City of Fairfield, California. *Fairfield Train Station Specific Plan, 2011*. Retrieved from: <*http://www.heartoffairfield.com/app_pages/view/62*>. Accessed July 28, 2016.

City of Fairfield, December 2010. Fairfield Train Station Specific Plan Draft Environmental Impact Report. . State Clearinghouse # 2010042093. Prepared by AECOM. Retrieved from <*https://www.fairfield.ca.gov/gov/depts/cd/planning/train.asp*>. Accessed Aug 14, 2016.

City of Fairfield Department of Community Development. *City of Fairfield 2012 Municipal Service Review Update.* Approved 15 October 2012. Retrieved from: <*http://www.solanolafco.com/Studies/MSR/Cities/Fairfield%20MSR%20Update%202012%20Final.pdf*>. Accessed July 25, 2016.

City of Suisun City, California. 2015-2023 Housing Element. PMC, Rancho Cordova. Retrieved from <*http://www.suisun.com/wp-content/files/Suisun_City_Housing_Element _Final_ Draft.pdf*>. Accessed on July 29, 2016.

City of Suisun City, Community Development Department. City of Suisun City 2035 General Plan. Retrieved from: <*http://www.suisun.com/?s=General+Plan*>. Accessed on July 29, 2016.

Eberling, Barry. 26October2012. "Large Annexation Gives Fairfield New Growth Frontier." *Daily Republic.* Retrieved from: <*http://www.dailyrepublic.com/news /fairfield/large-annexation-gives-fairfield-new-growth-frontier/*>. Accessed July 28, 2016.

Fairfield-Suisun Sewer District (FSSD). March 14, 2016-a. Recycled Water Program Annual Report. January 1, 2015 – December 31, 2015. 19 pages. Fairfield, Ca.

Fairfield-Suisun Sewer District (FSSD). 2016-b. Response to LAFCO's Request for Information.

Fairfield-Suisun Sewer District (FSSD). June 20, 2016-c. Personal communication Gregory Baatrup, Meg Herston, Taylon Sortor.

Fairfield-Suisun Sewer District (FSSD). September 29, 2015. Comprehensive Annual Financial Report, For the Year Ended June 30, 2015. 92-pages. Fairfield, Ca.

Fairfield-Suisun Sewer District (FSSD). March 23, 2015. Budget and Long-Term Financial Plan, Fiscal Years 15/16 and 16/17. 29 pages. Fairfield, Ca.

Fairfield-Suisun Sewer District (FSSD). 2013. Sewer System Management Plan. 158 pages.

San Francisco Bay Regional Water Quality Control Board (SFRWQCB). March 11, 2015. Order No. R2-2015-0013. NPDES No. CA0038024. 144-pages. Oakland, CA.

Solano County Airport Land Use Commission (SCALUC). June 13, 2002.Travis Air Force Base Land Use Compatibility Plan. Prepared by Shutt Moen Associates in Association with Harris Miller Miller & Hanson, Inc. Available on-line at: <*http://www.co.solano.ca.us/civicax/filebank/blobdload.aspx?blobid=3929*>. Accessed August 14, 2016.

Solano County Resource Management Department. December 1, 2010. Middle Valley Specific Plan. Prepared in conjunction with the Hart Howerton Consulting Team. 293 pages. Available on-line at: <*https://www.solanocounty.com/depts/rm/planning/middle_green_valley_specific_plan.asp*>. Accessed 3February 2017.

Solano County Resource Management Department. June 2016. Middle Green Valley Specific Plan Second Revised Recirculated Draft Environmental Impact Report. 90-pages plus Appendices A, B, and C. Available on-line at: <*https://www.solanocounty.com/depts/rm/planning/middle_green_valley_specific_plan.asp*>. Accessed 3February 2017.

Solano County Resource Management Department. October 2016. Middle Green Valley Specific Plan Responses to Comments on and Revisions to the Second Revised Recirculated Draft Environmental Impact Report. 78 pages. Available on-line at: <*https://www.solanocounty.com/depts/rm/planning/middle_green_valley_specific_plan.asp*>. Accessed 3February 2017.

Solano County Department of Resource Management. December 2014. Draft Environmental Impact Report Woodcreek 66. Authored by AECOM Consultants. 382 pages. Available on-line at: <*https://www.solanocounty.com/depts/rm/documents/eir/woodcreek_66.asp*>. Accessed 3February 2017.

Solano Local Agency Formation Commission (LAFCO). November 2006. Sewer Municipal Service Review. Prepared by PMC. 49 pages. Retrieved from: <*http://www.solanolafco.com/studies.htm*>. Accessed July 28, 2016.

Solano Local Agency Formation Commission (LAFCO). October 15, 2012. Municipal Service Review Update, City of Fairfield. Prepared by: City of Fairfield Department of Community Development. 57 pages. Retrieved from: <*http://www.solanolafco.com/*>. Accessed July 28, 2016.

Solano Local Agency Formation Commission (LAFCO). June 13, 2016. City of Suisun City 2016 Municipal Service Review Update. 74-pages. Available on-line at: < *http://www.solanolafco.com/Studies/ MSR/Cities/Suisun%20City%20Final%20MSR.pdf*>. Accessed on July 26, 2016.

Travis Air Force Base (TAFB). December 2008. Travis Air Force Base Facilities Excellence Guide. Prepared by Tran Systems Consultants. 41-pages. Available on-line at: <*https://www.wbdg.org/ccb/AF/AFDG/travis_feg.pdf*>. Accessed August 14, 2016.

U.S. Army Corps of Engineers. 2005. Sacramento District History (1929-2004). Written by Dr. Willie Collins along with Assay, Davy, Doyle, Fanselau, Farris, Fast, Gonzalez, Hagwood, Hays, Layton, Nevins, Stalker, Stevenson, Taylor, VanDam, Weddell, Whitney and Whitney. 262 pages. Retrieved from: <*http://www.dtic.mil/dtic/tr/fulltext/u2/a436393.pdf*>. Accessed Aug 14, 2016.

US Census Bureau, Median Income in the past 12 Months (In 2014 Inflation-Adjusted Dollars) by Census Tract: California, 2010-2014 American Community Survey 5-Year Estimates. Retrieved from: <*http://factfinder.census.gov/faces/tableservices/jsf/pages/ productview.xhtml?pid=ACS_14_5YR_S1903&prodType=table*>. Accessed July 28, 2016.

U.S. Census Bureau Geographic Boundary Change, Fairfield City, CA, 2015. Retrieved from: <*http://factfinder.census.gov/faces/affhelp/jsf/pages/geography.xhtml?lang=en&code=160&name= Fairfield%20city,%20California&src=geoAssist&log=t*>. Accessed July 28, 2016.

U.S. Census Bureau Geographic Boundary Change, Suisun City, CA, 2015. Retrieved from: <*http://factfinder.census.gov/faces/affhelp/jsf/pages/geography.xhtml?lang=en&code=160&name= Suisun%20city,%20California&src=geoAssist&log=t*>. Accessed July 26, 2016.

U.S. Census Bureau 2010 Census Reference Map: Solano County, CA. Retrieved from: <*http://www2.census.gov/geo/maps/dc10map/tract/st06_ca/c06095_solano*>. Accessed July 25, 2016.

U.S. Census Bureau. 2010-2014 American Community Survey 5-Year Estimates." *American Factfinder*. U.S. Department of Commerce. Available on-line at: <*http://factfinder.census.gov /faces/tableservices/jsf/pages/productview.xhtml?src =bkmk*>. Accessed July 28, 2016.

US. Environmental Protection Agency, Region 9 (EPA) and San Francisco Bay Regional Water Quality Control Board (SFRWQCB). January 25, 2013. Best Management Practice Recommendations Suisun Marsh TMDL Development. Prepared by Dan Gillenwater, Stuart Siegel, Jeff Schlueter, Phil Bachand, Karen Summers, and Sujoy Roy. San Francisco, CA. 44-pages. Retrieved from: <*http://www.waterboards.ca.gov/rwqcb2/water_*

issues/programs/TMDLs/suisunmarsh/Suisun%20Marsh%20TMDL%20BMP%20Recommendations.pdf>. Accessed on August 1, 2016.

CHAPTER 4: VALLEJO SANITATION & FLOOD CONTROL DISTRICT

4.1 DISTRICT PROFILE INCLUDING BOUNDARY MAP

Services and Location

Type and Extent of Services

Since its formation in 1952, the Vallejo Sanitation & Flood Control District (VSFCD) has been responsible for collecting and treating the wastewater generated by the residents and businesses of the City of Vallejo and the surrounding areas and providing storm water drainage to protect the Vallejo community from flooding (Solano LAFCo, 2006).

Location and Size

VSFCD is located in the southern-most portion of Solano County along the northeast interior of the San Pablo Bay. The City of American Canyon and unincorporated Napa County lie north of the District. The City of Benicia lies to the southeast and the City of Fairfield lies to the northeast. The Vallejo community is centrally located near several significant regional destinations including: Napa Valley (15 miles), San Francisco (30 miles), and Sacramento (60 miles). Vallejo is home to the Six Flags Discovery Kingdom, Touro University, California Maritime Academy, and various festivals at the Vallejo Waterfront.

The District serves an area slightly larger than the City of Vallejo, including all the area within the City limits. It is important to note that although the City contains islands of unincorporated areas within its boundaries, VSFCD's jurisdictional boundaries include those areas. VSFCD's net overall service area covers thirty-eight and one-half square miles or 24,637 acres (VSFCD Finance Department, 2016). The District's boundary is coterminous with its sphere of influence.

Table 4.1: VSFCD Geographic Summary		
District Boundary	24,637	38.5 sq. mi.
District Sphere	24,637acres	38.5 sq. mi.

Formation and Boundary

The Vallejo Sanitation and Flood Control District was established April 19, 1952 as a special district created by the State of California (Act 8934) to provide wastewater and flood control services to the City of Vallejo and the surrounding community (Solano LAFCo, 2006).

Boundary History

The District's charter and enabling legislation indicate the appropriateness of matching its boundaries with the City. The District filed a formation map and a tax area code change with the California Board of Equalization in March 1953. A summary of boundary related LAFCO actions for this District is listed in Table 4.2, below.

Table 4.2 Summary of Boundary Related LAFCo Actions

Year	Action	LAFCo Resolution Number
1967	Allowed annexation of 34.7 acres for St. Patrick's High School	1-6-67
1973	Allowed annexation of 84.9 acres for Carlsberg Mobile Home Properties	2-5-73
1979	Allowed annexation of 127.9 acres for Morrison Homes Glen Cove Unit #3	1811 and see also 1819
1983	Allowed annexation of 593.6 acres for Glen Cove Unit #4	3079
1987	Allowed annexation of 11.2 acres for Meadowood Subdivision by the Housing Group	87-4128
1987	Allowed annexation of 8 acres for the California Highway Patrol Property	88-4170 and see also 88-24
1988	Allowed annexation of 2,320.94 acres for Sky Valley Company	88-4 (also referred to as 88-4141) and 88-5
1988	Added 12 acres to the SOI for the Sky Valley Company	Not available
2003	Allowed annexation of 2,239.87 acres for the Mare Island Naval Shipyard	2003-4845

Data Source: LAFCO files provided by Michelle McIntyre, Oct 2016

Currently, the boundaries of the District generally follow the City's boundaries; however the boundaries of the two agencies are not coterminous. The District serves an area slightly larger than the City limits, encompassing some surrounding unincorporated areas of Solano County (Figure 4-1) (Solano LAFCO, 2006). Additionally, the City contains a number of unincorporated

islands within its boundaries that are served by and located within the jurisdictional boundaries of the District.

All annexations into the City of Vallejo require concurrent annexation into the Vallejo Sanitation and Flood Control District. LAFCO approved the annexation of Mare Island to the District on September 8, 2003 per Resolution No. 03-09.

The District's boundary and SOI includes 4,666 acres of water or submerged lands that are part of the San Francisco Estuary/San Pablo Bay, as shown in Figure 4.1. This parcel (APN 0067-010-010) was included the District's original 1952 boundary and was identified in the District's original 1953 submittal to the CA Board of Equalization. The District does not provide service to this parcel. Therefore, it is recommended that LAFCO consider detaching the parcel from the District boundary and SOI.

Other than the submerged parcel, the District noted its satisfaction with the existing boundary and SOI arrangement and does not anticipate any foreseeable expansion of the District (Morton, 2016).

Sphere of Influence

The District's Sphere of Influence (SOI) is coterminous with its boundaries (Solano LAFCo, 2006). It is recommended that LAFCO consider detaching APN 0067-010-010 from the District's boundary and SOI.

Extra-territorial Services

The District does not provide any extra-territorial services and does not have any pending will-serve agreements (Morton, 2016).

Areas of Interest

There are no un-served or underserved areas of urban density in the surrounding area which the District could feasibly include as part of its service provision (Solano LAFCo, 2006). There are a few unincorporated areas located outside the City of Vallejo boundaries that may have a Vallejo mailing address and may share certain services with the city residents.

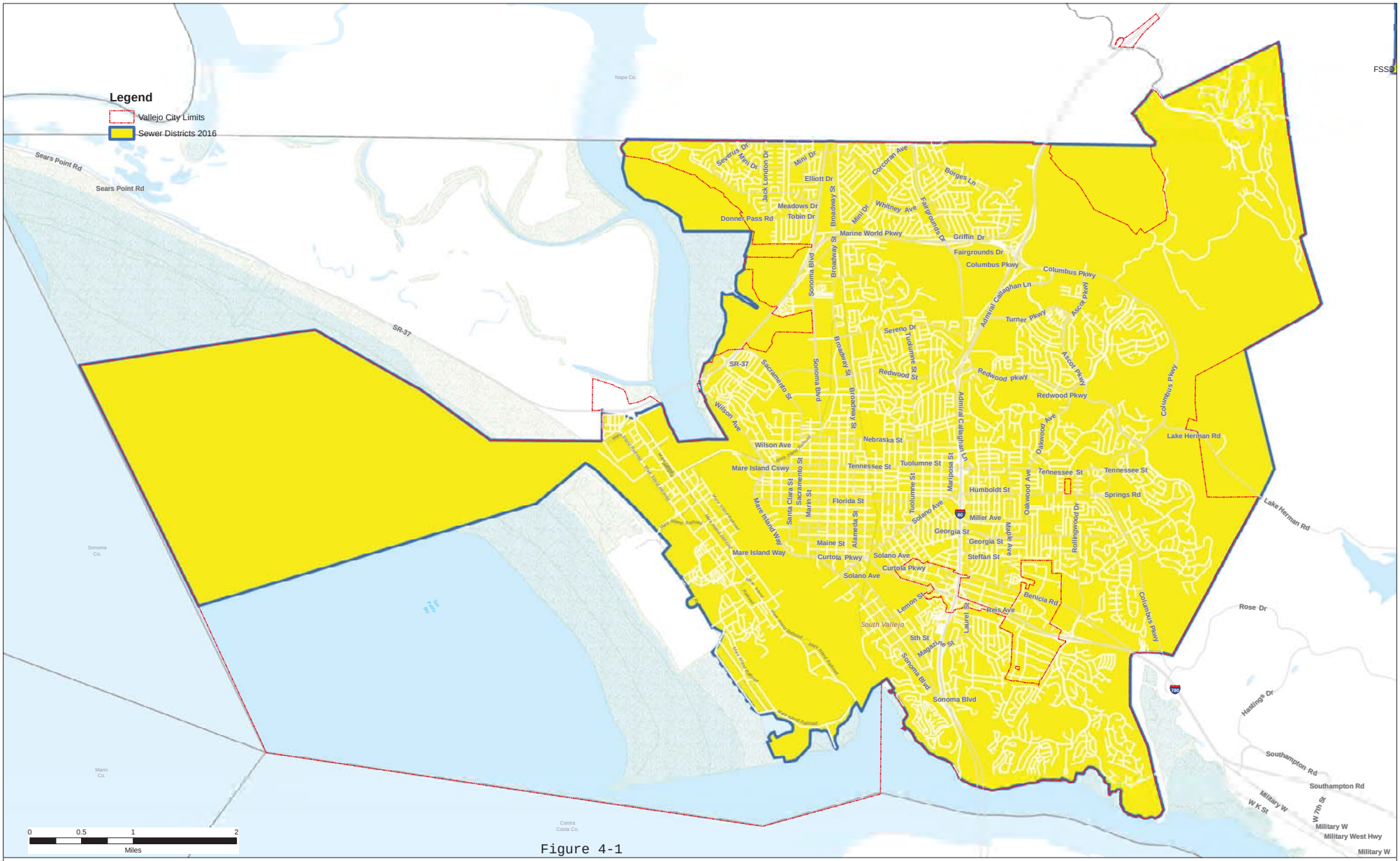


Figure 4-1

Department of Information Technology, GIS Services

Vallejo Sanitation and Flood Control District and City of Vallejo Boundaries 2016

Solano County

Solano County GIS Services
Department of Information Technology
675 Texas Street, Suite 3700
Fairfield, CA 94533
Phone: 707-784-6340
Email: GISStaff@SolanoCounty.com
PRJ_1459, 08/02/2016

The District purchased Tubbs Island in Sonoma County in 1983 and it continues to own and operate the site to spread biosolids (sludge) for agricultural use. The District does not provide services in Sonoma County. Issues related to jurisdictional boundaries on Tubbs Island are overseen by Sonoma LAFCO and a related resolution and map of Tubbs Island are available in LAFCO files. The District has not identified any other areas of interest that require District services within the foreseeable future.

4.2 GROWTH AND POPULATION

Existing Population

This section provides information on the existing population and future growth projections for the VSFCD. Since census data is readily available for the City of Vallejo, it is used as the foundation for VSFCD in this section. As of January 1, 2016, the population in City of Vallejo is estimated by the California Department of Finance at 117,322 persons. Between census years 2000 to 2010, the City's population decreased by 682 people, which equates to a negative annual growth rate of -0.58% per the City's Housing Element. However, the population has increased in recent years, and now represents an increase of 1.01% percent between the 2010 U.S. Census and today. VSFCD currently has a land area of 38.5 square miles, which includes the Mare Island Naval Complex, located in Census Tract 2508 in Solano County. The average population concentration is 3,047 persons per square mile (Table 4.3) and the population density has declined over the past ten years. Vallejo has the largest population of any of the cities in Solano County. Please note that the City of Vallejo's population does not exactly correspond to the population of VSFCD and the current population within the District is estimated to be 124,134 (Morton, 2016).

Table 4.3: Historic and Existing Population			
Year	**Total Vallejo Population**	**District Land area (sq. miles)**	**Population per sq. mile**
2006	115,298	28	4117.8
2010	115,942	36	3221
2016	117,322	38.5	3047.3
Data Source: California Department of Finance (2016)			

According to the 2010 census, Vallejo has 40,559 total households with an average of 2.89 persons per household and an average family size of 3.36 persons per family. The median age is 37.9 as of the 2010 U.S. Census. The population is ethnically and culturally diverse with a population composed of 32.8% white, 24.9% African American, 28.3% Asian, 13.1% Hispanic, 2.1% American Indian, and 2.1% Pacific Islander (U.S. Census Bureau, 2010). The residents are well educated, with an estimated 24% having college or graduate degrees, and another 36% having attended college or receiving associate degrees. An economic forecast for Solano County is provided in Appendix A-4.

The population of VSFCD (124,134) is estimated to be slightly higher than that of the City because VSFCD serves unincorporated islands, making its service area slightly larger than that of the City.

Projected Growth and Development

To some extent, population growth in the City is dependent upon land use, general plan designations, and zoning on properties. According to the City's 2005 Municipal Service Review, the 2020 build out population is 143,650. The City projects that within the next five years the population could grow by another 1.2%. This build out includes the development of the recently annexed Mare Island, the former Navy Shipyard facility, and other undeveloped parcels within the City and Sphere of Influence.

The General Plan for the City of Vallejo was adopted in July 1999. A new Housing Element was recently adopted May 25, 2015. The City's General Plan is based upon nine goals and objectives: Land Use, Circulation and Transportation, Housing, Educational Facilities, Public Facilities and Other Services, Safety, Noise, Air Quality, and Natural Resources (City of Vallejo, 1999). Currently, a three-year effort (commenced January 2014) to comprehensively update the City's

General Plan, the Citywide Zoning Code, and create a Sonoma Boulevard Specific Plan is underway. The project is titled "Propel Vallejo - General Plan Update", and describes four guiding principles of the project as: Community and People; Nature and the Built Environment; Economy, Education and Training; and Mobility, Transportation, and Connectivity (City of Vallejo, 2014).

The Association of Bay Area Governments (ABAG) publishes population, household, job, labor force, and income projections for the nine-county San Francisco Bay Region. ABAG's Projections 2013 includes a range of growth-related estimates for Vallejo through 2040. ABAG projections for Vallejo relating to population, and jobs are listed in Table 4.4 below. Please note that projecting future population growth for a small City is problematic due to a variety of unknown factors associated with the annexation rate.

Table 4.4 Population Projections for Vallejo

Population	2015	2020	2025	2030	2035	2040	Total Change 2015-2040	% Change 2015-2040
City of Vallejo	118,100	121,000	124,200	126,200	128,600	131,800	13,700	11.6%
Balance of Solano	309,200	321,700	335,000	349,000	364,100	379,800	70,600	22.8%
Solano County Total	**427,300**	**442,700**	**459,200**	**475,200**	**492,700**	**511,600**	**84,300**	**19.7%**
Vallejo Share of County	*28%*	*27%*	*27%*	*27%*	*26%*	*26%*	*16%*	
Bay Area Change								*24.6%*
Jobs								
City of Vallejo	34,230	37,090	38,320	39,610	41,280	43,070	8,840	25.8%
Balance of Solano	108,900	118,040	121,840	125,800	131,190	136,870	27,970	25.7%
Solano County Total	**143,130**	**155,130**	**160,160**	**165,410**	**172,470**	**179,940**	**36,810**	**25.7%**
Vallejo Share of County	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	*24%*	
Bay Area Change								*22.8%*

Sources: Projections 2013; Association of Bay Area Governments (ABAG); BAE, 2014.

As shown in Table 4.4, ABAG predictions suggest that future growth in Vallejo may not keep pace with the rest of Solano County. For the growth period from 2015-2040 ABAG predicts 13,700 new residents in Vallejo, which is only an 11.6 percent increase against a 23 percent expected growth in the remaining Solano County. Even though Vallejo is home to about 28 percent of Solano County's population, ABAG projects only 16 percent of the County's new residential growth will be from the City of Vallejo. Since the City of Fairfield has agreed to be responsible for a significant portion of the RHNA allocation, most of the growth in Solano County is projected to occur in Fairfield.

For further considerations on the projected growth and development for the City of Vallejo, the 2015 -2023 Housing Element Update, adopted May 2015, provides a detailed description of the socio-economic factors with the City, including age distribution, racial distribution, employment, and economic development. The 2015 – 2023 Housing Element is available on-line at the City's website, *http://www.cityofvallejo.net/common/pages/DisplayFile.aspx?itemId=3309812*.

4.3: PRESENT AND PLANNED LAND USES

General Plan, Zoning, and Policies

The District boundary primarily covers land located within the City limits of Vallejo and therefore is mostly under the land use authority of the City of Vallejo. A small portion of the District boundary also encompasses unincorporated areas which are under the land use authority of Solano County. The City of Vallejo's 1999 General Plan establishes land use policies for the physical development of the City which is supported by the 1980 Zoning Ordinance.

Vallejo is working across many fronts to revitalize and improve the City, including concurrent efforts focusing on policies, regulations, and procedures. The Propel Vallejo Project is a revitalization initiative that includes efforts which are currently underway to update the Guiding Principles for Vallejo, the City's General Plan and Zoning Ordinance, and create a Specific Plan for Sonoma Boulevard (City of Vallejo, 2015).

The City's current General Plan prescribes fourteen land use designations as follows:

- Rural Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- General Commercial
- Highway Commercial
- Waterfront Commercial
- Medical Commercial
- Employment
- Open Space – Agricultural Conservation
- Open Space – Urban Reserve
- Open Space – Wetlands
- Open Space – Community Parks

- Mineral Resource Area
  (City of Vallejo, 1999)

The existing land use structure can be viewed through the City of Vallejo's "Vallejo Prospector" GIS mapping website, *http://gis.zoomprospector.com/client/Vallejo/*. This website provides the zoning types layered on a map of Vallejo where each of the zoning areas can be viewed.

The City of Vallejo Zoning Ordinance implements the General Plan and provides the procedures, standards, and regulations for land use decisions. The Zoning Ordinance is within the Vallejo California Municipal Code, Title 16, and can be visited at: *https://www.municode.com/library/ca/vallejo/codes/code_of_ordinances?nodeId=TIT16ZO*. The City's current Zoning Ordinance has the following fifteen basic zoning districts organized into three general use categories:

- Four districts for residential areas: Rural, Low Density, Medium Density, and High Density.
- Nine districts for commercial areas: Freeway-Oriented Shopping, Waterfront Shopping and Service, Professional Office, Limited Office, Pedestrian Shopping, Linear Commercial, Neighborhood Commercial, Public and Quasi Public Facilities, and Medical.
- Two districts for commercial, industrial and industrially compatible areas: Intensive Use and Intensive Use-Limited.
  (City of Vallejo, 2015)

The City is in the process of updating its Zoning Ordinance to more accurately reflect current conditions and trends. It is anticipated that the update of the Zoning Ordinance will allow certain portions of the City where "walkable urbanism" exists or is desired to utilize form-based zoning. Other portions where "auto-oriented suburbanism" exists or is desired may continue to be covered by use-based or conventional zoning. Accordingly, the General Plan land use vision may create a distinction between areas that are within the walkable urban, transect zones, and those that may be regulated by more auto-oriented suburban policies and regulations. This is very different from the way the existing General Plan applies land use designations in a broad and homogenous way (City of Vallejo, 2015).

Mare Island is within the District boundaries and receives services. Mare Island is a former naval shipyard that was decommissioned and approved for redevelopment in the late 1990s. The Mare Island Reuse Plan for the 5,000-acre island includes 1,400 residential homes, roughly 7

million square feet of commercial and industrial space, and numerous recreational amenities. An electric car manufacturing facility is currently proposed for the Island; however it is not in the near-term planning horizon of this document.

Land use on unincorporated parcels, such as the four unincorporated islands or areas within Vallejo's SOI, is regulated by the Solano County General Plan, adopted on August 5, 2008.

Regional Transportation Plans & Sustainable Community Strategies

All regions in California must complete a Sustainable Communities Strategy (SCS) as part of a Regional Transportation Plan (RTP), consistent with the requirements of state law, Senate Bill (SB) 375. Senate Bill 375 requires California's 18 metropolitan areas to integrate transportation, land-use, and housing as part of an SCS to reduce greenhouse gas emissions from cars and light-duty trucks. In the San Francisco Bay Area, the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) work together, along with local governments, to develop a SCS that meets greenhouse gas reduction targets adopted by the California Air Resources Board. The RTP and SCS for the Bay Area is called "Plan Bay Area: Strategy for A Sustainable Region" and was adopted on July 18, 2013 (ABAG et al, 2014).

Senate Bill 215 (Wiggins) was approved by California legislature in 2009 and chaptered in 2010 as part of Government Code Section 56668, relating to local government. This bill requires LAFCOs to consider regional transportation plans and sustainable community strategies developed pursuant to SB 375 before making boundary decisions.

The City of Vallejo is the local agency primarily responsible for planning regional growth patterns within the District through adoption and implementation of a General Plan and Zoning Ordinance. The Vallejo Sanitation and Flood Control District was established to provide wastewater and flood control services and does not have the legal authority to make land use policy decisions that would significantly impact growth in the City of Vallejo. The activities of the District that are indirectly connected with regional growth are limited to determining which areas they will provide with wastewater and flood control services.

Future Development Potential

In recent years, growth within the District has been limited to infill and redevelopment projects within the City of Vallejo and the portion of Solano County within the District boundaries. There have not been any new major development projects built since the 2006 MSR. However, the location of VSFCD and the City of Vallejo within the context of the greater Bay Area presents opportunities for future growth and development. According to the Propel Vallejo

General Plan Economic and Market Trends report (2015), Vallejo's development projects will be linked to overall demands in the form of housing, industrial and warehouse, retail and restaurants, and hotels. Further, major catalytic opportunities in the Downtown/Waterfront, Mare Island Complex, and the Solano 360 projects will be considerable development projects.

Based on growth forecasts, Vallejo will have a market demand from roughly 5,000 to 6,000 housing units over the next 25 years (Propel Vallejo, 2015). Industrial and warehouse developments are limited in Vallejo, but continued investments on Mare Island and the proposed reuse of the former General Mills site by Vallejo Marine Terminal will bring about small development outcomes in the sector. Demand for retail and restaurant development is likely to occur within the Solano 360 project and future projections for the downtown/waterfront will also bring targeted development activities. Vallejo is also likely to attract one or more hotels in the mid-scale to higher price range over the 25-year period (Propel Vallejo, 2015).

Downtown/Waterfront: The Vallejo Downtown Specific Plan (2005) describes downtown development as the enhancement of approximately 97.2 acres in the downtown area. The Waterfront Project consists of 110 acres of improvements and developments of a continuous promenade along Vallejo's waterfront from Solano Avenue on the south to the Mare Island Causeway on the North (City of Vallejo, 2005). Although the Downtown and Waterfront projects are separated as two individual projects, they are complementary. Both plans have been implemented.

Mare Island: After the 1992 Base Realignment and Closure (BRAC) Report recommending the closure of Mare Island Naval Shipyard, the City of Vallejo undertook an extensive community-based planning process for reuse, culminating in the Mare Island Final Reuse Plan (1994), and leading to the subsequent Mare Island Specific Plan (1999). The Specific Plan was later amended in 2004 and once again in 2007. The Specific Plan established a vision for Mare Island as a civilian employment center and focused on the replacement of jobs and economic activity once provided by the military use of the island (Mare Island Specific Plan, 2007). The Specific Plan maintains the goals to create jobs, sustain and improve economic conditions in Vallejo, create a self-sustaining and multi-use community, preserve and enhance the history of Mare Island, and to ensure those impacted from by closure are provided career opportunities and human services needed (Mare Island Specific Plan, 2007). For example, in Fall 2016, new home construction on Mare Island started through Lennar Homes Company. Lennar reactivated the Coral Sea Village

8D residential subdivision, previously approved in 2006 but never constructed due to the downturn in the economy. City planners have coordinated with Lennar Homes to update their approved building plans and exterior designs and recently approved the model home complex and construction staging area. This new neighborhood will include 38 new single-family homes. City planners are also processing a subdivision map amendment for the nearby Coral Sea Village 8C area. This area is west of the 8D subdivision and will include 68 new single family homes and seven four-plex townhomes.

Although new development on Mare Island has been slow to come to fruition, the Propel Vallejo Economic and Market Trends Report (2015) notes that "Mare Island has been gaining ground as a unique industrial and manufacturing hub in the Bay Area." The report indicates that strategies to continue and further enhance this momentum are critical development opportunities. There is a proposed plan for developing an electric car manufacturing plant on Mare Island; however, this proposal will not be completed in the near-term and would likely be implemented in phases starting with a show room and test track (Morton, 2016).

Solano 360: The Solano 360 project aims to revitalize the Solano County Fairgrounds with private mixed-use development. The Solano 360 Final Specific Plan (2011) was developed as a joint effort by the County of Solano, City of Vallejo, and the Solano County Fair Association, "to develop a flexible, long-term framework for redevelopment of the Solano County Fairgrounds, a 149-acre County-owned property located at the crossroads of State Route 37 and Interstate 80 within the City of Vallejo." The Specific Plan states the redevelopment goals as such:

- Generate revenues for Solano County and the City of Vallejo, create jobs and ensure long-term economic sustainability.
- Establish a unique place with an unmistakable identity that serves as a destination for visitors as well as a pedestrian-friendly, community-gathering place.
- Explore a mix of complementary land uses, including retail, commercial, hospitality, recreational, residential, family and youth oriented, educational and civic uses that seamlessly integrate with the "Fair of the Future".
- Explore increased physical connectivity and synergy with Six Flags Discovery Kingdom, downtown Vallejo, the waterfront and other existing commercial operations.
- Provide pedestrian, bicycle, vehicular, and transit facilities that foster access to, from and within the site.
- Incorporate sustainable and green principles in all aspects of the development.

The Solano 360 Final Specific Plan (2011) is intended to guide land use and infrastructure improvements, coordinate public investments, facilitate private investments, and support successful long-term, phased revitalization over the next 25 years, ensuring consistency with the City of Vallejo General Plan and the ability to respond to market conditions and development opportunities.

Properties with the potential to host new housing development is shown in yellow on Figure 4.2. It is important that the City ensure that public services for these potential future units are identified and discussed. LAFCO's most recent municipal service review for the City of Vallejo was approved in 2005. It is recommended that LAFCO consider updating the City's MSR to reflect the future development potential described herein.

Findings & Determinations for Growth and Population Projections

1. The current (year 2016) population of VSFCD is 124,134 permanent residents.
2. Although the population within the City of Vallejo declined during years 2000 to 2010, it recently has experienced an increase of 1.01% percent.
3. The area within the District's boundaries does have potential for future growth especially the City of Vallejo's specific plan areas. However, in the recent past, the pace of new growth has been relatively slow. Between the years 2015 to 2040, the population within the City of Vallejo (and within the District) is expected to grow by 13,700 persons (11.6 percent) as listed in Table 4.4.

Source: City of Vallejo, 2014; Solano County, 2014; USGS, 2014; Lisa Wise Consulting, 2015; PlaceWorks, 2015.

Figure 4.2 -Vacant Land Inventory
Housing Opportunity Sites

4.4: DISADVANTAGED UNINCORPORATED COMMUNITIES

Senate Bill (SB) 244, which became effective in January 2012, requires LAFCO to consider the presence of any Disadvantaged Unincorporated Communities (DUCs) when preparing a MSR that addresses agencies that provide water, wastewater or structural fire protection services. A DUC is an unincorporated geographic area with 12 or more registered voters with a median household income of 80 percent or less of the statewide median household income (MHI). This state legislation is intended to ensure that the needs of these unincorporated communities are met when considering service extensions and/or annexations, in particular, water, wastewater, drainage, and structural fire protection services.

To understand the geographic distribution of disadvantaged communities within VSFCD's boundaries, five sources of data were considered:

- District data
- LAFCO data
- Solano County Housing Assessment and other County data
- California Department of Water Resources, on-line mapping tool
- U.S. Census

ABAG and MTC Equity Analysis Threshold

According to the U.S. Census, the median household income (MHI) for the State was $61,933 in 2014 (US Census, ACS, 2010-2014). This yields a DUC threshold MHI of less than $49,546 (80 percent of the statewide MHI) (US Census, 2014; Disadvantaged Communities Mapping Tool). The median household income and relevant data were reviewed for the City of Vallejo area. As of 2014 the median household income (MHI) in the City of Vallejo was estimated to be $58,472 (U.S. Census, 2010-2014). This is higher than the DUC threshold MHI.

Disadvantaged Areas within Cities

LAFCO is required to consider the provision of public services to disadvantaged unincorporated communities (DUCs). However, incorporated areas (within the city limits) can sometimes meet the disadvantaged income threshold. LAFCO is not required to study the status of disadvantaged neighborhoods that are located within incorporated cities that provide water, wastewater, drainage and structural fire protection services. However, SB 244 required cities to update their land use and housing elements to include an analysis of the water,

wastewater, storm water, and structural fire protection services in the area along with financing options to help encourage investment in disadvantaged areas, should it be needed. As part of this effort, the bill required cities to identify and address any disadvantaged communities within their sphere of influence (SOI). Disadvantaged communities are defined as a "fringe communities" or areas within the cities' SOI that meets the state defined income for DUCs, which is a MHI of 80 percent or less than the statewide median. The cities base their analysis on income levels from the U.S. Census, American Community Survey (ACS), or other supplemental sources. For example, since Vallejo is an incorporated city, by definition it does not contain any unincorporated areas within its jurisdictional boundaries. The U.S. Census 2010 found the median household income (MHI) in the City was $58,472. This is higher than the DUC threshold MHI and *t*herefore, there are no sizeable disadvantaged communities within the City of Vallejo's jurisdictional boundaries.

However, Vallejo does contain several unincorporated islands, within its larger, outer boundary. Unincorporated Islands are areas that are substantially or completely surrounded by the City of Vallejo and yet remain outside of the legal boundary of the city and under the jurisdiction of Solano County. Partially surrounded islands are those that are surrounded on two or more sides by the City.

LAFCO Data

LAFCO's August 8, 2016 staff report identified eleven unincorporated islands in the Vallejo area as shown in Figure 4.3 and Table 4.5 below.

Table 4.5: Vallejo / Benicia Area Island Summary

Area	Acreage	Current Use – According to Assessor	Fire	Sewer	Water
Surrounded					
1	5.29	Manufactured Home Park	East Vallejo FPD	VSFCD	City
2	9.38	Vacant Commercial Industrial/Rural Res	East Vallejo FPD	VSFCD	uncertain
3	270.85	Single Family Residential/ Mixed	Cordelia FPD	none	City and wells
4	11.86	Single Family Residential	East Vallejo FPD	VSFCD	City
5	70.74	Single Family /Multi Family Residential	East Vallejo FPD	VSFCD	City and wells
Substantially Surrounded (75%)					
6	222.13	Marsh/Gov't Misc	East Vallejo FPD	VSFCD	none
7	44.77	Marsh	East Vallejo FPD	VSFCD	none
8	297.6	Park and Recreation (82 ac) / Water Bodies	none	VSFCD	none
9	408.73	Agriculture	East Vallejo FPD	VSFCD	none
10	4.72	Agriculture	East Vallejo FPD	VSFCD	well
11	250.09	Agriculture	Cordelia FPD	none	none

Data Source: LAFCO Staff Report for August 8, 2016 meeting, Agenda Item 7D.
Data Source for water supply: Pamela Sahin, Water Conservation Coordinator, City of Vallejo

[1] SID – Solano Irrigation District
[2] VSFCD –Vallejo Sanitation and Flood Control District

The unincorporated islands also receive utilities from the following service providers:

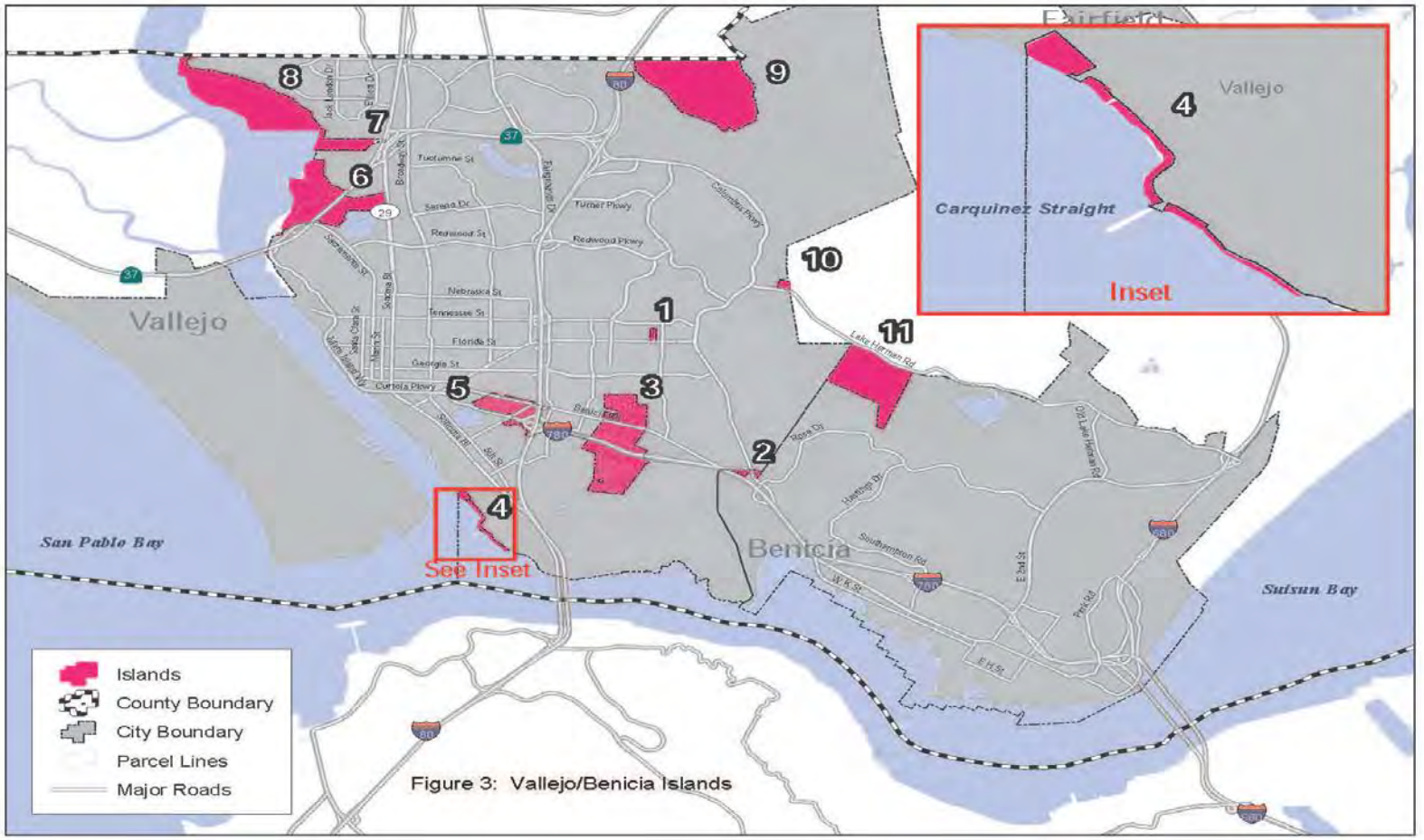
- Electric and Natural Gas: Pacific Gas & Electric (PG&E)
- Cable: DIRECTV and Comcast

As described in the above Table, Areas # 1 to 5 are developed and may utilize public services. Areas # 6 to 11 are undeveloped and used as open space or agriculture and public services are often not necessary.

Solano County Housing Assessment

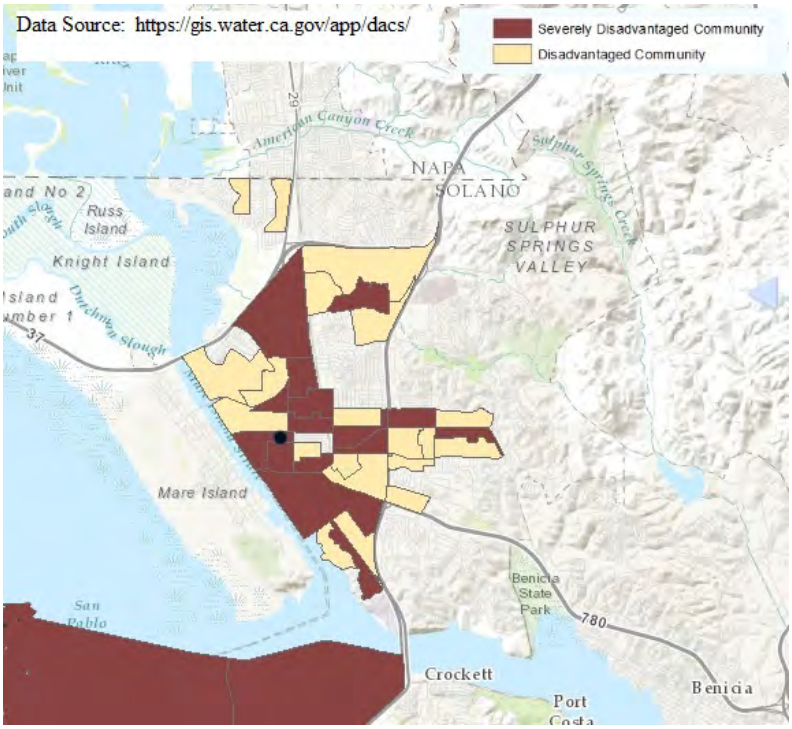
In 2015, Solano County updated its Housing Element, a part of the General Plan. As part of that process, the County prepared a Housing Needs Assessment. This Assessment identified four unincorporated islands within the City of Vallejo and the District that had potential housing needs and which may meet the criteria for a disadvantaged neighborhood. These unincorporated islands are commonly referred to as: 1) Starr Subdivision, 2) Homeacres, 3) Springs Road and 4) Sandy Beach. The four islands are urbanized and surrounded on all sides by the City of Vallejo. Each of the unincorporated islands is served by VSFCD and is located within the District's boundaries.

Figure 4.3: LAFCO's Map of Islands near Vallejo



DWR Mapping Tool

According the California Department of Water Resources (DWR) on-line mapping tool[1], much of the Vallejo area can be considered disadvantaged as shown in Figure 4.4 (right).



The above map depicts Disadvantaged Communities Block Groups. This layer is derived from data of the US Census ACS 2010-2014 showing census block groups identified as disadvantaged communities (less than 80% of the State's median household income) or severely disadvantaged communities (less than 60% of the State's median household income). However, U.S. Census Community Block Group data is low resolution and does not provide information on specific neighborhoods.

Census Data

In 2014, the statewide annual median household income (MHI) was $61,933. This yields a DUC threshold MHI of less than $49,546 (80 percent of the statewide MHI). Relevant census data were reviewed for the Vallejo area. Solano County has a total of 284 Block Groups as defined by the U.S. Census. Of these, 72 Block Groups have a median household income of less than $49,546 and meet the disadvantaged threshold (U.S. Census, 2014). Most of these block groups are outside the geographic area of interest for this study. The U.S. Census Tool called "Census Explorer was used to depict median income for census tracts within and near Vallejo as shown in Figure 4.5, below. Many of the census tracts within Vallejo meet the financial criteria to be classified as disadvantaged.

[1] DWR mapping tool is available at: https://gis.water.ca.gov/app/dacs/

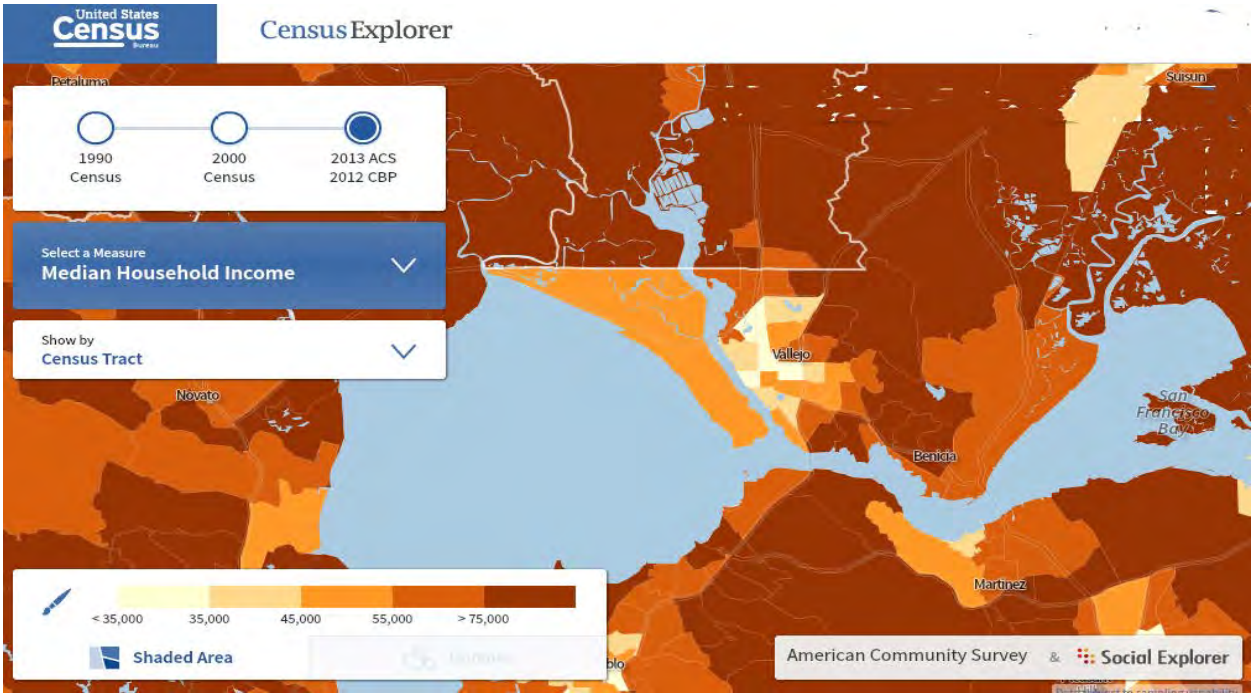


Figure 4.5

The census tracts and block groups that relate to the eleven unincorporated islands that LAFCO identified is shown in Table 4.6, below. The areas listed in Table 4.6 correspond to the area numbers depicted in Figure 4.3, above.

The data for median household income shown in Table 4.6 above indicates that Area 1meets the financial criteria (80% of statewide MHI) to be classified as a disadvantaged unincorporated community. Additionally, portions of Areas 4, 5 and 6 also meet the financial to be classified as a disadvantaged unincorporated community. Area 8 appears to meet the financial criteria; however there is a high margin of error for this area which potentially pushes the MHI above the threshold. Areas 6 and 8 are located along the river and bay shoreline and are comprised of marshland and other habitat features. Since they are not developed, there is not a demand for public services in these two areas.

Table 4.6: 11 Unincorporated Islands with Census Data							
Area	**Acreage**	**Census Tract**	**Census Block Group**	**Median Household Income in Block Group**	**Margin of Error**	**Disadvantaged within Margin of Error**	**Number of Blocks within Block Group**
Surrounded							
1	5.29	2502.00	1	$40,711	4541	Yes	Data not available
2	9.38	2505.02	1 and 2	$69,844 and $62,756	n/a	No	3 blocks
		2521.04		$131,597	n/a	No	Data not available
3	270.85	2505.01	1 and 2	$58,636 and $55,179	n/a	No	25 blocks
		2506.01	1	$62,206	n/a	No	Data not available
4	11.86	2508.01	1	$74,111	n/a	No	6 blocks
		2508.01	3	$38,854	10073	Yes	Data not available
5	70.74	2511	1	$47,837	3817	No	31 blocks
		2507.01	1	$32,750	6439	Yes	Data not available
Substantially Surrounded (75%)							
6	222.13	2518.03	1	$59,545	n/a	No	5 blocks
		2518.02	1	$19,572	4597	Yes	Data not available
7	44.77	2518.03	1	$59,545	n/a	No	Data not available
8	297.6	2518.04	1 and 3	$43,056	28,091	No	Data not available
		2518.03	1	$59,545	n/a	No	Data not available
9	408.73	2501.06	1	$159,844	n/a	No	Data not available
10	4.72	2501.06	1	$159,844	n/a	No	Data not available
11	250.09	2521.04	1 and 2	$131,597	n/a	No	Data not available

Data Source: Solano County GIS data and US Census via http://factfinder.census.gov. Methodology by Caltrans. Data compiled by Stolen & Harrison.

District Data

For low income residents, the District offers a discount on cost of service. The District publishes public information on the Reduced Rate Program and customers are eligible to apply provided they meet the requirements of the PG&E CARE Program. The District uses its property tax revenue to fund the low income program. No health and safety issues have been identified within the unincorporated islands.

DUC Summary

Eleven unincorporated islands have been identified within the VSFCD boundary area. Four areas appear to potentially meet disadvantaged financial criteria as listed in Table 4.6, above. Based on information in the Solano County Housing Needs Assessment, two areas (#3, Starr and #5, Homeacres) are in need of programs to improve housing conditions and could potentially be classified as DUCs. Additionally, census data listed in Table 4.6 shows that at least portions of four areas (1, 4, 5, and 6) meet the financial criteria to be classified as DUCs. These four areas do receive water, fire, and wastewater services as listed in Table 4.5, above. Additionally, no public health and safety issues have been identified. This analysis is based on the best information currently available.

Findings & Determinations for Disadvantaged Unincorporated Communities

4. The median household income (MHI) within the Vallejo community is $58,472. This is higher than the DUC threshold MHI of less than $49,546 (80 percent of the Statewide MHI).

5. There are 11 fully and partially surrounded unincorporated islands within the City of Vallejo and the District. Each of the 11 islands do receive water, wastewater, and fire services. No deficiency in public services to these areas have been identified.

6. Preliminary indications from Solano County's Housing Needs Assessment indicate that Starr Subdivision and Homeacres neighborhood could potentially meet disadvantaged criteria; however specific financial data was not analyzed in the County's Assessment.

7. The median household income for census tracts and block groups near the 11 unincorporated islands was studied as listed in Table 4.6. Based on this analysis, at least

a portion of four unincorporated islands do meet the financial threshold to be classified as DUCs.

8. No health and safety issues have been identified within these four unincorporated islands. Each of the four islands do receive water, wastewater, and fire services. No deficiency in public services to these areas have been identified.

9. For low income residents, the District offers a discount on cost of service. The District publishes public information on the Reduced Rate Program and customers are eligible to apply provided they meet the requirements of the PG&E CARE Program. The District uses its property tax revenue to fund the low income program. No health and safety issues have been identified within the unincorporated islands.

4.5: PRESENT AND PLANNED CAPACITY OF PUBLIC FACILITIES

Service Overview

VSFCD provides wastewater and flood control services to customers within their boundary. The District's major facilities include 436 miles of sewer pipes, 250 miles of storm drain pipes, 10,000 catch basins, 28 sewer pump stations, 5 stormwater pump stations, and the wastewater treatment plant (VSFCD, 2016). District-owned lands include 12.36-acres for the treatment plant and pump stations and 1,417-acres on Tubbs Island where biosolids are spread for agricultural use (VSFCD, 2016).

The number of sewer connections served by the District is estimated to be 37,804 (Table 4.7); approximately 76 percent of the District's customers are residential uses (Morton, 2016) and a significant fraction of the residential customers live in multi-family units (i.e. condominiums or apartments). In 2015, the District regulated approximately 460 businesses including 5 Significant Industrial Users (SIUs), approximately 189 small commercial/industrial businesses, approximately 225 food service facilities (restaurants, delicatessens, rest homes, etc.) and approximately 46 dental practitioners (VSFCD Environmental Services Department, 2016). A 6th SIU is currently completing the permitting process and will be discharging as soon as the process is complete (VSFCD, 2016).

Table 4.7: Summary of Sewer Connections in District	
Type of Sewer Connection	Number of Connections in 2016
Commercial/Industrial Connections	460
Residential Connections	37,344
Total Number of Sewer Connections	37,804

Wastewater Service

The District's original facilities and infrastructure were built in the late 1950s (Solano LAFCo, 2006). The primary infrastructure and capital focus for wastewater service has been on maintaining and improving existing systems. The District facilities and infrastructure system has undergone numerous updates, repairs and expansions. The first comprehensive facilities master plan for the District was created in 1987 and outlined specific maintenance and capacity issues to be addressed. The District periodically updates the existing master plan, with the most recent comprehensive update in 1997. Additionally, in 2002 the District implemented a Storm Drain Master Plan (Solano LAFCo, 2006).

The 1997 Wastewater Facilities Master Plan/Action Plan (current Master Plan) built upon the 1987 Master Plan and its 1992 Interim Update. Since the development of the 1987 Master Plan, the District has experienced almost continuous construction and upgrading at its wastewater treatment plant (WWTP). With the completion of these projects, the treatment plant has expanded its design/permitted capacity to its current 15.5 million gallons per day (MGD) average dry weather flow at full secondary level of treatment. With this treatment capability, the District indicates that the plant, as it currently exists, is able to meet the wastewater needs of the service area through its current projected buildout (Solano LAFCo, 2006).

Collection System Infrastructure

The existing collection system for the District consists of approximately 436 miles of sewer main lines ranging in size from four (4) inches to sixty (60) inches in diameter; 36 pump stations; 11.6 miles of force mains; and 76 miles of lower laterals in the public right-of-way/easement, ranging in size from four (4) inches to eight (8) inches (VSFCD Field Operations Department, 2016).

The current Master Plan emphasizes long-term programs, mainly an infiltration/inflow (I/I) reduction program. The program includes I/I source detection, flow monitoring, computer modeling, and geographic information system (GIS) Continual Condition Assessment. However, corrective maintenance also is a significant component of the Master Plan. This includes improvements to reduce I/I, continuation of an upper lateral (privately-owned pipes) replacement program, replacement and conversion of private sewer mains, and the cyclic replacements and rehabilitation of mains as part of the Capital Improvement Program (VSFCD Field Operations Department, 2016). There are several measures of integrity for a wastewater collection system, including peaking factors, efforts to address I/I, and inspection practices. The specific measures the District takes to ensure integrity of the system are described in the following paragraphs.

VSFCD has an active program of collection system maintenance, inspection, repair and rehabilitation. The District has preventive maintenance programs in place to continually assess the condition of the system during maintenance activities. The District uses closed circuit television (CCTV) inspections, both on a spot check basis and as part of a continual system wide assessment, with feedback from field crews to adjust maintenance schedules as maintenance is being performed (VSFCD, 2016).

The District plans for cleaning and inspection of the system on regular cycles including jet inspection every 3-4 years and CCTV inspection every 8 years. The District tracks the frequency of service calls, CCTV condition assessment, preventative maintenance schedule frequency, and I/I reduction to help plan for repair and

rehabilitation of the system infrastructure. The District also has I/I reduction strategies in place including manhole inspection/rehabilitation, main line condition assessment, an Upper Lateral I/I Reduction Program, and Smart Cover monitoring of the collection system (VSFCD, 2016).

VSFCD utilizes Infor Public Sector Version 8.3 software for its Computerized Maintenance Management System. The District upgraded in 2014 from Hansen version 7.7 to Infor Public Sector 8.3 to stay current with new management technologies. Infor allows the District to track schedules, manage workloads, record CCTV Data to track changes over time, and make decisions regarding in-house repairs and system-wide rehabilitation. The District is planning to upgrade the software to Infor Public Sector 8.5 to enhance mobile computing capabilities for the field crew. The District currently uses laptops and iPads in the field to access and input information into Infor and to manage USA tickets, GIS, and emails as needed (VSFCD, 2016).

VSFCD uses these strategies and programs to reduce sanitary sewer overflows (SSOs) in the system, which has significantly reduced SSOs from 73 occurrences in 2006 to 20 in 2015 (VSFCD, 2016).

Treatment System Infrastructure

The District operates under the State Water Resources Control Board (SWRCB) Order No. 2006-0003-DWQ which specifies water discharge requirements for the District's Sanitary Sewer Collection System. The District operates under the San Francisco Bay Regional Water Quality Control Board Order No. R2-2012-0017 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037699, which specifies the Waste Discharge Requirement (WDR) for the District's WWTP on Ryder Street. The current WDR for the treatment plant prohibits the discharge of average dry weather flows greater than 15.5 MGD and average wet weather flows greater than 60 MGD (VSFCD Field Operations Department, 2016).

In 2015, the District's average annual flow volume at the WWTP was 8.8 MGD and the peak daily flow for the year was 49.1 MGD (VSFCD, 2016). A formal enforcement action (R2-2016-1009) was taken in March 2016 in response to a chlorine violation on November 14, 2014; the

mandatory minimum penalty was applied (VSFCD, 2016).

The WWTP uses trickling filters/solids contact to achieve a secondary level of treatment (VSFCD, 2016). Order No. R2-2012-0017 and NPDES Permit No. CA0037699 includes the following facility and discharge description for the District. The Discharger owns and operates a collection system and secondary wastewater treatment facility. The treatment system consists of screens, aerated grit removal, primary sedimentation, biofiltration, biological aeration, mechanical skimming, secondary clarification, disinfection by chlorination and/or ultraviolet light, and dechlorination. Wastewater is discharged from Discharge Point No. 001 to the Carquinez Strait and from Discharge Point No. 002 to Mare Island Strait, both waters of the United States. Wastewater is discharged from Discharge Point No. 001 during normal operations. Discharge through Discharge Point No. 002 occurs only during wet weather when effluent flows exceed 30 MGD. Lime stabilization and gravity thickening are used to treat solids removed from the wastewater stream; belt filter presses are also used to dewater solids. The Discharger hauls and disposes of stabilized and dewatered biosolids off-site.

Solids are de-watered and stabilized with lime to meet land application requirements required under the Code of Federal Regulations (CFR) Title 40, Part 503 rules. Biosolids are transported by District trucks to a farm owned by the District on Tubbs Island[2] in Sonoma County. Biosolids are stockpiled on a storage pad and applied to fields annually in September, in a rotating 5 year schedule (VSFCD, 2016).

The District does not currently produce recycled water; however, the District has received a Proposition 1 Planning Grant to partially fund a Recycled Water Feasibility Study (VSFCD, 2016).

Sewer Demand

Demand for wastewater service is typically impacted by development occurring within the District that could result

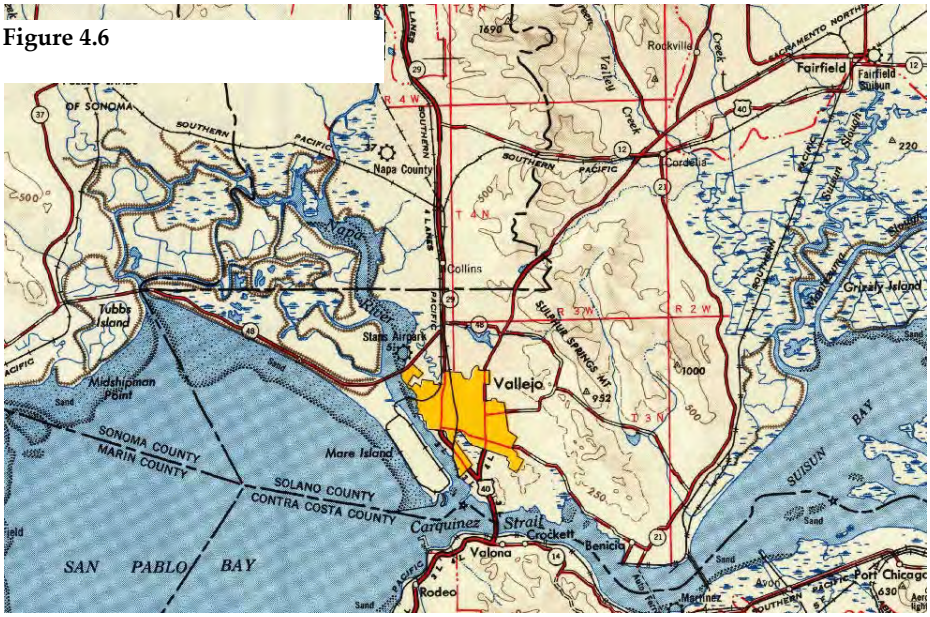
in an increase in the demand for those services and the need for additional infrastructure. For example, the addition of 1,400 residential homes, and 7 million square feet of commercial and industrial space as envisioned by the Mare Island Reuse Plan could add about 0.7 to 1.0 MGD of Average Dry Weather Flow (ADWF) to be treated. However, VSFCD will further analyze potential impacts of growth on the collection, treatment, and disposal system as development projects are proposed. At a cursory level, future growth within VSFCD's boundaries is expected to be approximately 2 percent within the 20 year planning period (VSFCD, 2016).

In 2012 the District prepared a Local Limit Assessment which studied current capacity and treatment efficiency, but did not reflect future growth. Based on this study, current flows into the WWTP are little over 50% of plant capacity based on the current loading and in compliance with the NPDES permit. District engineers indicate it is unlikely that the WWTP will reach its capacity within the next 10 years, even if Mare Island development rate were to increase substantially. The District's present wastewater treatment facilities are built to accommodate potential growth in the City of Vallejo (personal communication Dan Tafolla, and Johnson Ho December 2016). However, the District's collection system would likely require upgrades to accommodate new development. For example, the geographic distribution of the collection sewer pipes may need to be expanded to reach new neighborhoods and typically this expansion is the responsibility of private land developers. Additionally, the size of some neighborhood sewer pipes may be too small to accommodate new growth. Again, responsibility for increasing the size of sewer pipes sometimes falls to private land developers who wish to accommodate new growth.

Flood Control Service

The District is responsible for an extensive storm water drainage system. The District manages over 11,400 storm drain structures, including 239 miles of pipe, 11.5 miles of open channel, 5 detention basins, and 9 pump stations (VSFCD Field Operations Department, 2016). Vallejo contains several natural creeks including Blue Rock Springs Creek and Hanns Rindler Creek which drain to San Pablo Bay, part of the Bay/Delta estuary. Additionally, several lakes are located in the watershed including Lake Chabot and Lake Dalwigk. Flood Zones within the City are shown in Figure 4.6. The basic topography and hydrology of the area is shown in Figure 4.7, (next page) which is an excerpt from a 1947 map by the U.S. Geological Survey. A more detailed map of the watersheds in the area has been prepared by VSFCD and is shown in Figure

Figure 4.6



4.7. The creeks receive drainage and precipitation from storm events and may periodically be subject to flooding.

The storm water system bypasses the WWTP and is discharged directly to San Pablo Bay (VSFCD, 2016). Several of VSFCD's storm water basins drain into Lake Dalwigk, a storm water storage facility which VSFCD owns (VSFCD Finance Department, 2016). Lake Dalwigk and the parklands that surround it are managed by the Greater Vallejo Recreation District. The park contains marsh habitat for amphibians and other wildlife.

The District inspects all storm water drainage inlets annually in preparation for the winter storm season so as to minimize the potential for maintenance-related localized flooding. As an example, of the 11,400 storm drain structures maintained by the District, approximately 7,600 are drain inlets that are inspected annually to determine specific cleaning needs. Of the drain inlets the District inspected in 2015, 300 needed follow up cleaning; a number that has been fairly static each year since this inspection process has been in place.

The District has an active outreach program to educate the public regarding storm water discharges to the natural environment, which has made a noticeable difference in the reduction of debris in the drain inlets. Maintenance of all the open channels, drainage ditches, and creeks in the District is managed in compliance with the appropriate permits, which limit maintenance activities to mowing and specific obstructive debris removal. The District is beginning a permit and project process to allow more targeted debris removal of drainage channels to allow for improving conveyance capacity over time and through on-going maintenance efforts (VSFCD Field Operations Department, 2016).

Any new development projects are required to provide storm water infrastructure, such as debris capture devices that meet District requirements as outlined in the District's storm water ordinances (VSFCD, 2016).

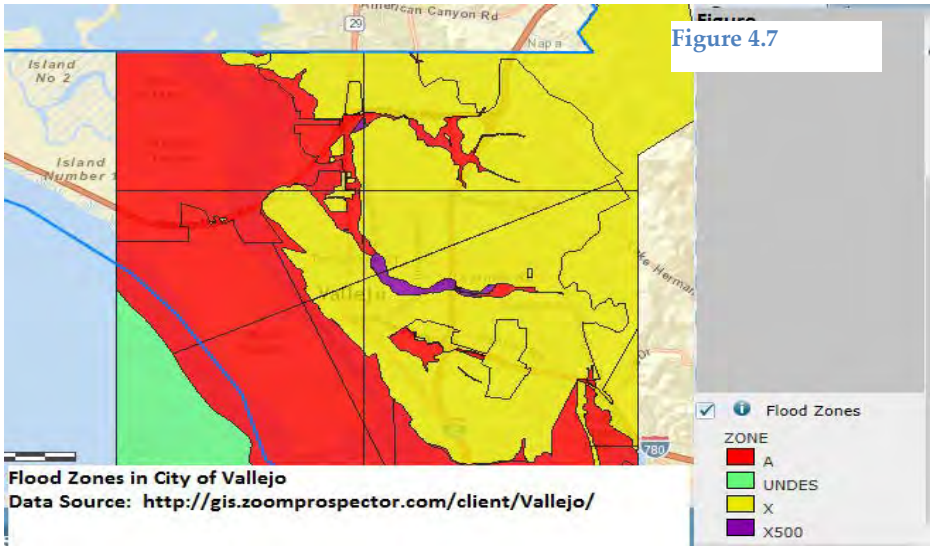


Figure 4.7

Adequacy and Challenges in Provision of Service and Infrastructure

The potential challenges the District has identified regarding the provision of wastewater and flood control services include (Vallejo, 2016):

- Increased water quality regulations for the San Pablo Bay discharge permit
- Expansion of the wastewater treatment plant for production of recycled water
- Reduction in wastewater flows from water conservation efforts
- Rapid increase in implementation of major development projects

Figure 4.8: Watersheds in the Vallejo Area

Findings &Determinations for Present and Planned Capacity of Public Facilities

10. The number of sewer connections served by the District is estimated to be 37,804; approximately 76 percent of the District's customers are residential uses. There are approximately 460 commercial and industrial customers, including 5 Significant Industrial Users (SIUs), served by the District.

11. New development projects are required to provide storm water facilities as part of project improvement plans.

12. As a result of the District's measures to ensure integrity of the wastewater collection system, VSFCD has significantly reduced Sanitary Sewer Overflows (SSOs) from 73 occurrences in 2006 to 20 in 2015.

13. The treatment plant has sufficient design and permitted capacity to meet projected growth for the City of Vallejo and unincorporated areas within District boundaries.

14. The Capital Improvement Plan focuses on improvements for effectiveness of the maintenance program and to reduce I/I in the sewer collection system, and plans for projects to correct these deficiencies in a timely manner. Implementation of the CIP would appear to allow the sewer system to function effectively throughout the plan period.

4.6: FINANCIAL ABILITY TO PROVIDE SERVICES

In California, special districts are classified as enterprise or non-enterprise districts, based on their source of revenue:

- Enterprise districts: Primary revenue source is fees for public service. Under this model, the customers that consume goods or services such as drinking or irrigation water, waste disposal, or electricity, pay a fee. Rates are set by a governing board and there is a nexus between the costs of providing services and the rates customers pay. Sometimes enterprise district may also receive property taxes which comprise a portion of their budget.
- Non-enterprise districts: Districts which receive property taxes are typically classified as non-enterprise districts. Services that indirectly benefit the entire community, such as flood or fire protection, community centers, and cemetery districts are often funded through property taxes.

VSFCD is primarily an enterprise district but also receives a property tax share. VSFCD has three enterprise funds including: wastewater, storm water, and upper lateral. Additionally, VSFCD also provides non-enterprise functions which are funded through property taxes. Property taxes are administered by County of Solano program and these tax revenues are considered subventions not restricted as to purpose.

VSFCD has several accounting policies which are described in the beginning of its annual Comprehensive Annual Financial Report (CAFR) (i.e. financial statements). A few of the key policies include Long-Term Debt Costs of Issuance Policy, Risk Retention Policy, and Net Position Policy. It has an adopted management and budget policy addressing budget preparation, fixed asset accounting, investment of funds, and expense authorization. Budgets are adopted in public meetings on a biennial basis by the District's Board of Trustees (not by the City of Vallejo). The fiscal year begins on July 1 and ends on June 30. The Budget and financial audits for the most recent year is available to the public via the District's website[3]. Financial information for previous years is available upon request from District staff.

Although VSFCD is a separate legal entity, apart from the City of Vallejo, its finances are a Component Unit of the City of Vallejo. Component units are legally separate organizations and are utilized for agencies where elected officials of the primary government are financially accountable. Financial accountability exists in situations where a voting majority of an organization's governing body is substantively the same as the governing body of the primary government. VSFCD's Board of Trustees[4] approves the annual budget and audit. Additionally, specific financial information is submitted to the State Controller's Office and the County of Solano (VSFCD, CAFR, 2016).

Financing Corporation

Many districts in California utilize nonprofit corporations (referred to as "63-20 Corporations") in structuring public/private infrastructure debt. Public agency members can restrict the purposes or powers of the nonprofit in its certificate of incorporation. The Vallejo Sanitation and Flood Control District's Financing Corporation was organized only to provide financial assistance to the District by acquiring, constructing, improving and financing various facilities, land and equipment, and by leasing or selling certain facilities, land and equipment for the use, benefit and enjoyment of the public served by the District. The Financing Corporation has no

[3] VSFCD budget is available at: *https://www.vsfcd.com/SitePages/financials.aspx*

[4] VSFCD is governed by an eight-member Board of Trustees composed of the seven-members of the Vallejo City Council and one member from the Solano County Board of Supervisors that serve staggered four-year terms.

members and its Board of Directors consists of the same VSFCD Trustees. No separate financial statements are prepared for the Financing Corporation.

Financial Performance Indicators

Table 4.8: Financial Performance Indicators

Key Performance Indicators	**Notes**
Summary financial information presented in a standard format and simple language.	The District's biennial budget does provide text and tables that summarize financial information.
Reserve funds and their purpose	Area for improvement.
District policy on the accumulation and use of reserves	VSFCD currently has a reserve policy that is being evaluated and updated as part of the upcoming rate study*.
Plans for the future, including anticipated revenues, expenditures, reserves and trends in user rates	The District is in the process of completing a long-term financial plan and rate study which is anticipated to be completed in early 2017 for Board of Trustee consideration*.
Rates	Rates for storm water were adequately described to voters during a recent ballot measure. Wastewater rates are currently being reviewed as part of a rate study which will ensure rates are adequate for the cost of providing service and maintaining infrastructure*
**Data Source: Ms. Mary Morris, VSFCD Director of Finance, personal communication, December 2016*	

VSFCD's enterprise funds are accounted for using the full accrual basis of accounting. With this accounting method, revenues from user fees and other sources are recorded when earned, and expenses for goods and services are recorded when obligations are incurred (VSFCD, CAFR, 2016). Additionally, the District's financial statements are prepared in accordance with generally accepted accounting principles (GAAP). The Government Accounting Standards Board (GASB) is responsible for establishing GAAP for state and local governments through its statements and interpretations. The District uses the accrual basis of accounting. VSFCD has received several Certificates of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association for its' Comprehensive Annual Financial Report (VSFCD, CAFR, 2016).

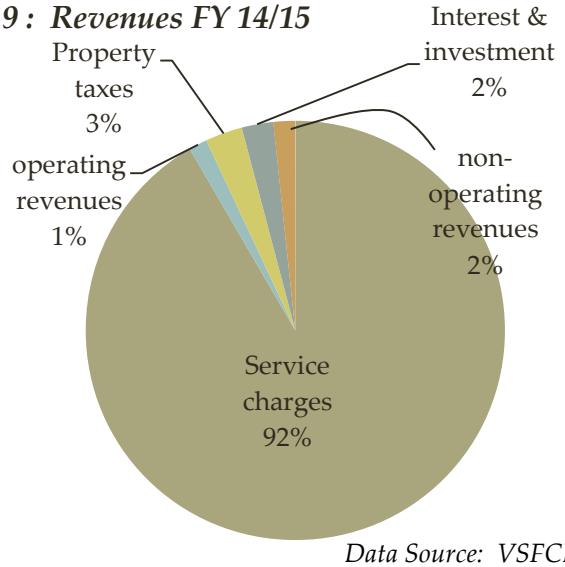
The most recent independent auditor's report was prepared for Fiscal Year (FY) 2014/2015 and dated January 12, 2016, and was attached to the District's Financial Statements. The audit found that VSFCD's financial statements fairly presented their financial position in all material respects. Accounting principles generally accepted in the United States were followed. (Vavrinek, Trine, Day & Company LLP, 2016). The Comprehensive Annual Financial Report (CAFR) contains a Statement of Net Position, Statement of Revenues and Expenses and Changes in Net Position, Statement of Cash Flows and Notes to Basic Financial Statements. Increases or decreases in net position over time are an indicator of the District's overall financial health and should be considered together with management's short and long-term plans for prospectively financing programs and services.

Revenues

VSFCD has two basic types of revenue,

- Operating revenues consist primarily of charges for services.
- Non-operating revenues and expenses are related to financing and investing type activities. Property tax receipts are also an example of non-operating revenue.

Figure 4.9 : Revenues FY 14/15



Data Source: VSFCD, CARF, 2016

The District primarily (91% to 92%) receives revenue as fees for service as shown in Figure 4.9, below. Sources of revenue include: wastewater service charges, drainage fees, connection fees, interest income, and property tax. For the fiscal year 2015-16, the VSFCD served approximately 38,000 customer accounts and gathered approximately $31 million in revenue from rate-based service charges and total revenues were almost $34 million as shown in Table 4.9, below (VSFCD, CAFR, 2016). VSFCD receives an allocation of property taxes as authorized by the State of California. In FY 15/16, property tax revenue was $949,071. This is slightly higher than in prior years due to an increase in property tax values (VSFCD, CAFR, 2016).

Table 4.9: Condensed Statements of Revenues

Description	Fiscal Year Ended 6/30/2011	Fiscal Year Ended 6/30/2012	Fiscal Year Ended 6/30/2013	Fiscal Year Ended 6/30/2014	Fiscal Year Ended 6/30/2015	Amount Increase (Decrease) 2015-2014	Percent Increase (Decrease) 2015-2014
Revenues							
Service charges	$25,192,643	$25,917,040	$26,778,540	$ 27,312,302	$ 28,208,614	$ 896,312	3.3%
Other operating revenues	731,993	743,917	662,325	761,584	434,531	(327,053)	-42.9%
Property taxes	762,361	729,637	811,231	778,473	876,878	98,405	12.6%
Interest and investment	1,042,068	1,606,780	275,791	1,209,719	752,513	(457,206)	-37.8%
Other non-operating revenues	200,344	329,894	323,932	453,552	518,096	64,544	14.2%
Total revenues	**27,929,409**	**29,327,268**	**28,851,819**	**30,515,630**	**30,790,632**	**275,002**	**0.9%**

Source: VSFCD, CAFR, 2016, 2014, and 2012

Expenses

In FY14/15, operating expenses were $25 million for the wastewater system, $2.4 million for storm water, and $0.47 million for the upper lateral system. Breaking expenses down by categories (including non-operating interest expense) shows that in FY 14/15 salaries and benefits for employees are the largest (43%) expense for the District as shown in Figure 4.10, below. In FY15/16, operating expenses were $26.5 million for the wastewater system, $2.4 million for storm water, and $0.66 million for the upper lateral system. (VSFCD, CAFR, 2016).

Figure 4.10: VSFCD Expenses FY 14/15

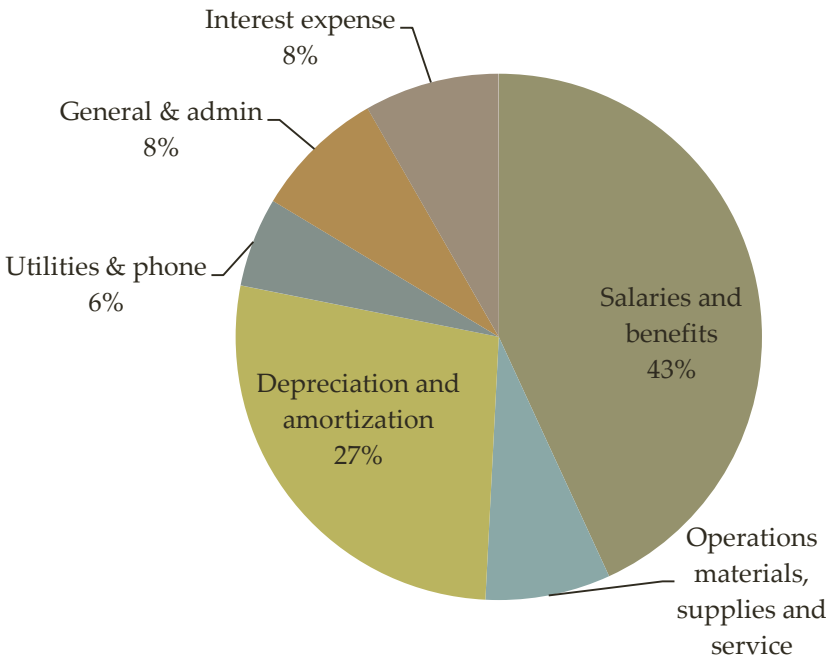
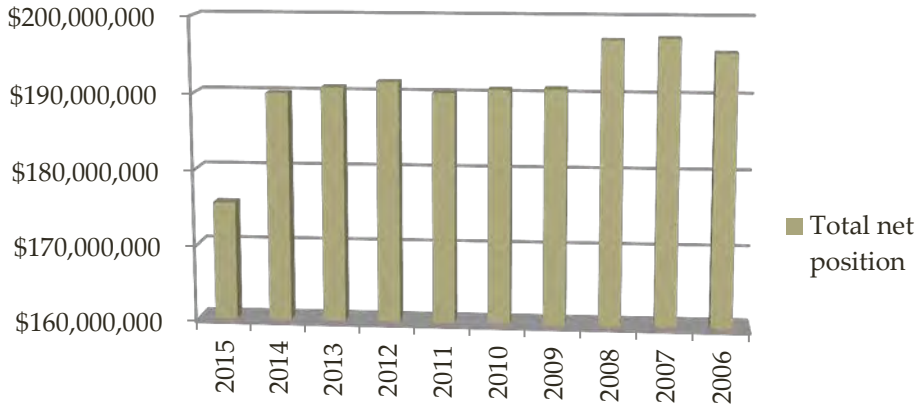


Table 4.10: Condensed Statements of Expenses and Changes in Net Position						
Description	Fiscal Year Ended 6/30/2011	Fiscal Year Ended 6/30/2012	Fiscal Year Ended 6/30/2013	Fiscal Year Ended 6/30/2014	Fiscal Year Ended 6/30/2015	Percent Increase (Decrease) 2015-2014
Expenses						
Salaries and benefits	11,806,666	15,326,564	11,933,622	12,893,571	13,144,752	1.9%
Operations materials, supplies and	2,645,808	2,607,931	2,513,384	2,953,539	2,338,680	-20.8%
Depreciation and amortization	8,164,530	8,279,443	8,317,451	8,336,273	8,328,691	-0.1%
Utilities and telephone	1,737,079	1,357,460	1,647,826	1,548,515	1,670,587	7.9%
General and administrative	1,686,030	1,996,831	2,237,321	2,558,376	2,461,696	-3.8%
Interest expense	3,244,200	3,195,587	3,034,667	2,676,177	2,529,416	-5.5%
Total expenses	29,284,313	32,763,816	29,684,271	30,966,451	30,473,822	-1.6%
Income before capital contributions	(1,354,904)	(3,436,548)	(832,452)	(450,821)	316,810	-170.3%
Connection fee revenue	214,574	306,174	57,990	216,982	100,179	-53.8%
Contributions from developers	629,636	4,507,084	0	0	0	0
Net Position						
Increase (decrease) in net position	(510,694)	1,376,710	(774,462)	(233,839)	416,989	-278.3%
Net position - beg of year	190,705,810	190,195,116	$191,571,826	190,233,312	175,184,366	-7.9%
Net position - end of year	$190,195,116	$191,571,826	$190,797,364	$ 189,999,473	$175,601,355	-7.6%
Source: VSFCD, CAFR, 2016, 2014, 2012						

Note: The 2013/2014 and the 2014/2015 Net Position at the beginning of the year is a restatement due to the implementation of GASB 68.

The District's annual Financial Statement provides financial trend information to assist the public with understanding changes in financial performance and financial outcomes. Between the years 2006 to 2015, VSFCD's total net position has declined by ten percent as shown in Figure 4.11. The decline is attributable to less net investment in capital assets, less restricted funds for capital and debt service, less unrestricted funds (property tax and other), and implementation of new GASB statements that increase long-term liabilities. Overall, having a stable net position shows that a district has been able to maintain a positive fund balance, such that spending is in line with revenues (or in some situations reserves are available to maintain the fund balance).

Figure 4.11: Total net position



Source: VSFCD, CAFR, 2016

Table 1 - Net Position by Component										
	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Net investment in capital assets	$136,530,088	$141,859,146	$140,221,220	$138,851,945	$135,723,775	$135,364,590	$138,291,219	$140,677,072	$143,318,390	$148,047,266
Restricted for capital	26,231,838	24,637,821	24,664,739	27,038,852	30,462,287	30,153,562	28,120,839	32,688,370	28,843,900	31,064,034
Restricted for debt service	4,993,354	6,953,027	8,031,854	8,164,933	6,149,838	7,723,681	7,497,595	7,320,913	7,103,919	7,136,370
Unrestricted	7,846,075	16,549,479	17,879,551	17,516,096	17,859,216	17,463,977	16,948,213	16,479,170	18,166,498	9,413,376
Total net position	$175,601,355	$189,999,473	$190,797,364	$191,571,826	$190,195,116	$190,705,810	$190,857,866	$197,165,525	$197,432,707	$195,661,046

Source: VSFCD, CAFR, 2016

In recent years, operating revenue has exceeded operating expenses. However, during years 2006 to 2012, expenses exceeded revenues and the difference was made whole from reserve funds. This situation indicates that VSFCD revenues are sensitive to the state of the local economy. This also indicates that having sufficient reserve funds is important to VSFCD to help it weather the economically lean years. Figure 4.12 and Table 4.11 below compares operating revenue to operating expenses over the ten year study period.

Figure 4.12 : VSFCD Operating Revenues and Expenses

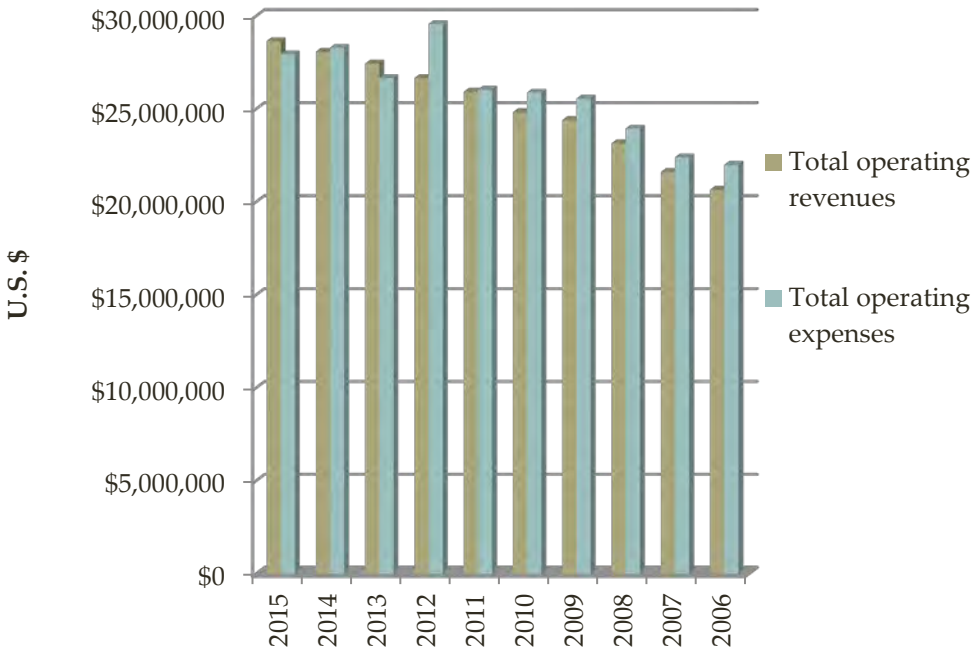


Table 4.11: Changes in Net Position

Table 2 - Changes in Net Position										
OPERATING REVENUES:	**2015**	**2014**	**2013**	**2012**	**2011**	**2010**	**2009**	**2008**	**2007**	**2006**
Service charges	$28,208,614	$27,312,302	$26,778,540	$25,917,040	$25,192,643	$24,122,220	$23,390,622	$22,513,304	$21,033,004	$20,162,008
Other operating revenues	434,531	761,584	662,325	743,917	731,993	709,218	1,011,602	642,567	576,336	496,057
Total operating revenues	28,643,145	28,073,886	27,440,865	26,660,957	25,924,636	24,831,438	24,402,224	23,155,871	21,609,340	20,658,065
OPERATING EXPENSES:										
Salaries and benefits	13,144,752	12,893,571	11,933,622	15,326,564	11,806,666	11,046,193	10,881,103	10,414,622	9,073,619	8,515,621
Operations materials, supplies and services	2,338,680	2,953,539	2,513,384	2,607,931	2,645,808	2,893,886	3,445,494	2,751,303	3,083,084	3,256,371
Depreciation and amortization	8,328,691	8,336,273	8,317,451	8,279,443	8,164,530	8,207,116	8,173,334	7,993,277	7,335,657	7,141,545
Utilities and telephone	1,670,587	1,548,515	1,647,826	1,357,460	1,737,079	1,699,546	1,559,545	1,512,589	1,409,592	1,345,132
General and administrative	2,461,696	2,558,376	2,237,321	1,996,831	1,686,030	2,034,036	1,495,933	1,271,444	1,496,382	1,732,090
Total operating expenses	27,944,406	28,290,274	26,649,604	29,568,229	26,040,113	25,880,777	25,555,409	23,943,235	22,398,334	21,990,759
Operating income (loss)	**698,739**	**(216,388)**	**791,261**	**(2,907,272)**	**(115,477)**	**(1,049,339)**	**(1,153,185)**	**(787,364)**	**(788,994)**	**(1,332,694)**

Changes in net position reflect several factors. Connection fee revenue is highly variable and is somewhat dependent on the rate of new home or commercial development. Property tax revenue reached a peak high of $1 million in 2008.

Non-operating costs reached a peak high in 2009 at $5.7 million. This was also at the peak of the recession. The high cost can be partly attributable to interest expense in 2009 at $3.5 million and investment losses also at $3.5 million. Funds utilized for capital or other permissible purposes also change through time. Changes in unrestricted net position reflect swings due to the utilization of cash to construct capital assets or other financing activities.

Table 2 - Changes in Net Position, continued

NONOPERATING REVENUES (EXPENSES):	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
Property taxes	$876,878	$778,473	$811,231	$729,637	$762,361	$853,499	$998,959	$1,092,213	$1,026,061	$401,520
Interest and other investment income	752,513	1,209,719	275,791	1,606,780	1,042,068	2,328,809	(3,504,338)	1,634,261	3,111,249	1,258,267
Interest expense	(2,529,416)	(2,676,177)	(3,034,667)	(3,195,587)	(3,244,200)	(3,380,499)	(3,524,461)	(3,535,757)	(3,614,296)	(2,911,351)
Other nonoperating revenue (expense)	518,096	453,552	323,932	329,894	200,344	189,135	241,895	247,080	64,536	37,705
Total nonoperating revenues	(381,929)	(234,433)	(1,623,713)	(529,276)	(1,239,427)	(9,056)	(5,787,945)	(562,203)	587,550	(1,213,859)
Income (loss) before capital contributions	316,810	(450,821)	(832,452)	(3,436,548)	(1,354,904)	(1,058,395)	(6,941,130)	(1,349,567)	(201,444)	(2,546,553)
Add: connection fee revenue	100,179	216,982	57,990	306,174	214,574	906,339	633,471	982,385	880,760	2,191,787
Add: contributions from developers				4,507,084	629,636			100,000	1,092,345	1,733,511
Increase (decrease) in net position	416,989	(233,839)	(774,462)	1,376,710	(510,694)	(152,056)	(6,307,659)	(267,182)	1,771,661	1,378,745
Net position - beg of year	189,999,473	190,797,364	191,571,826	190,195,116	190,705,810	190,857,866	197,165,525	197,432,707	195,661,046	194,282,301
Add (less): prior period	(14,815,107)	(564,052)								
Net position - end of year	$175,601,355	$189,999,473	$190,797,364	$191,571,826	$190,195,116	$190,705,810	$190,857,866	$197,165,525	$197,432,707	$195,661,046

Source: VSFCD Audited District Financial Statements, 2016

Assessed Value of Property Within VSFCD Boundaries

A portion of VSFCD's revenues are from local property taxes. Property tax revenue is dependent upon the value of the properties within the District's boundaries. The Solano County Assessor's Office assigns assessed values to properties. The County Auditor's Office retains records of property assessed values and property taxes collected.

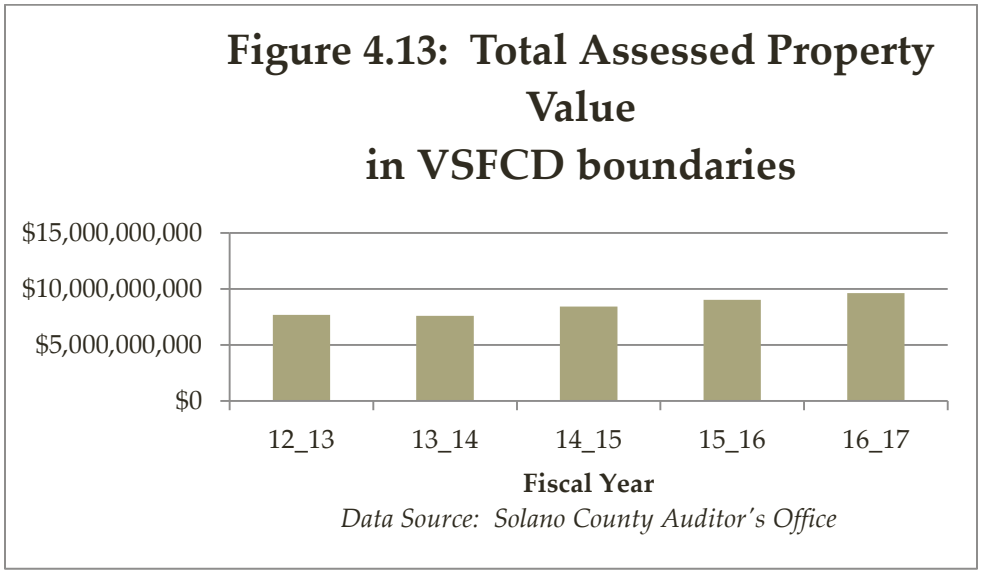
The Auditor-Controller groups taxable properties into Tax Rate Areas (TRAs). The TRA contains the taxing authority for each area as established by the State Board of Equalization, as well as the tax rates for each authority, including districts such as VSFCD. The TRA is shown on the property tax bill that is mailed to owners of property in the County. VSFCD has 98 TRAs within its boundaries including TRA # 7000-7088 and # 92002 -92023.

The total value of assessed properties within the District's boundaries is $9.6 billion as shown in Table 4.12, below. VSFCD also has a bond debt that is financed based partially on assessed property value within the benefit area at $2.4 billion. For comparison purposes, the total net value of all assessed properties in Solano County is $48.8 billion.

Table 4.12: Assessed Property Value by Fund for FY 16/17

FUND	*DESCRIPTION*	*NET SECURED VALUE*	*SBE VALUE*	*NET UNSECURED*	*TOTAL NET VALUE*
1	GENERAL COUNTY*	$45,983,277,526	$26,822,206	$2,835,057,918	$48,845,157,650
22	VSFCD OPERATING	$9,309,385,695	$271,792	$315,514,075	$9,625,171,562
285	VSFCD BOND DEBT	$2,382,768,228	$271,792	$17,191,644	$2,400,231,664
Data Source: Solano County Auditor's Office Report # R720102B					
Available on-line at: http://www.co.solano.ca.us/civicax/filebank/blobdload.aspx?BlobID=25551					

The value of assessed properties change over time. This annual variation for the past five fiscal years for VSFCD's Fund 22 is shown in Figure 4.13, below. Since 2014, the total assessed property value has increased slightly each year.



Based on property values, the County Auditor makes projections about expected tax revenue during an upcoming year to help agencies monitor their finances. For FY 16/17, the Auditor projects that VSFCD will receive approximately $1.04 million in tax revenue as shown in Table 4.13 and Figure 4.14, below.

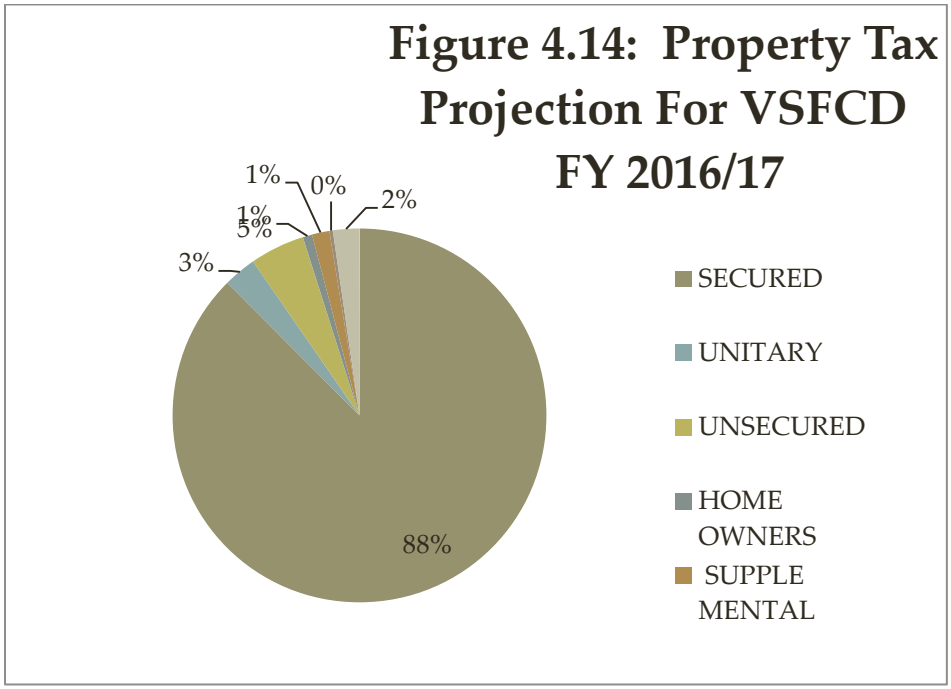


Table 4.x: Property Tax Projection for County and VSFCD for FY 16/17

FUND NO.		SECURED	UNITARY	UNSECURED	HOME OWNERS	SUPPLEMENTAL	RDA PASS-THRU	RDA RES. BALANCE	TOTAL PROPERTY TAXES
GENERAL COUNTY	FD 001	$70,694,669	$3,125,279	$3,833,700	$919,690	$1,700,000	$15,849,682	$4,450,545	$100,573,565
VSFCD	FD 022	$908,178	$29,527	$49,095	$8,426	$15,575	$3,162	$23,672	$1,037,635

Data Source: Solano County Auditor's Office, 2016.
http://www.co.solano.ca.us/depts/auditor/divisions/proptax/prop_tax_info/2016_201

Capital Improvement Plan

VSFCD Capital Improvement Plan (CIP) aims to upgrade and replace aging District sewer system and focuses on line rehabilitation and elimination of overflows. The CIP costs approximately $3M annually and is financed via rates on a pay-as-you-go basis. During FY 14/15, the District completed several CIP projects and construction costs totaled $8,760,436 (VSFCD, CAFR, 2016). VSFCD routinely inventories its capital assets and performs condition assessments to identify projects to include in the CIP. The CIP is a five-year rolling plan that funds projects which take more than one year to complete. The District lists its upcoming capital improvement projects as line items in budget worksheets. Anticipated capital improvement projects include:

Wastewater Capital Projects

- Mare Island Strait outfall #122916
- Meadows force main #130612
- Army Reserve sewer #130516
- Mare Island force main replacement
- Alabama Street sewer #132816
- Gary Circle/Magazine #131012
- Denton Court #2 #152516
- Skibbereen/Monteith 8" sewer #071027
- Pepper Drive #131412
- Chase Street
- GIS implementation and upgrade (software)
- #3 water station
- Distributive Control Systems (DCS) upgrade
- Biotower media replacement - one per year
- Lateral replacement - 25 each year
- Permit mandated Collection Sys Repairs
- Solids Processing blding improvements
- GPS equipment
- Recycled Water Facility
- Facility Maintenance bldg improvements
- Advanced Treatment for Nutrients

- MIPS mechanical improvements
- Levee Maintenance
- Treatment plant seawall

(Data Source: VSFCSD, Budget 2015)[5]

The District aims to spend $7.2 million in FY 15/16 and $5.2 million in FY 16/17 on capital improvement projects. The above listed improvement projects are expected to be completed within the next five years (through year 2020) at an estimated cost of $21 million.

The District is developing an Asset Management Plan (AMP) to guide the process of identifying best practices and prioritizing maintenance, rehabilitation, and replacement efforts to ensure longevity of District facilities and infrastructure. The AMP will also help the District plan for potential changes to water quality regulations (VSFCD, 2016) (Morton, 2016).

Reserves

In California, many special districts have accumulated reserves. There are no standards guiding the size and use of reserve funds. Reserve and investment policies and practices could be improved through the establishment of guidelines and enhanced scrutiny. VSFCD is in the process of updating its reserve policy (VSFCD, 2016).

Table 4.13 below shows that each of the three enterprise funds has a reserve account and the total District-Wide Reserve Cash & Investments Reconciliation for FY 2015-16 is $42.5 million. Interest and investment income in FY 15/16 totaled $840,119. Investments include custody securities with a fiscal agent and construction and reserve funds with trustee banks.

One of VSFCD's major initiatives is to perform a reserve analysis in connection with long-term financial planning to find the right balance between rates, reserve levels, use of debt, and a consistent capital replacement program.

[5] From Five-Year Capital Projects Worksheet on page 27 of pdf

Table 4.14: Cash & Investments	
Name of Account	**Amount**
Wastewater Funding Reserve Cash & Investments Reconciliation FY 2015-16	$17 million
Storm Water Funding Reserve Cash & Investments Reconciliation FY 2015-16	$24 million
Upper Lateral Reserve Cash & Investments Reconciliation FY 2015-16	$1.5 million
District-Wide Reserve Cash & Investments Reconciliation FY 2015-16 (Total)	**$42.5 million**
Data Source: VSFCD, CAFR, 2016	

In addition to reserve cash and investments, VSFCD has specified debt service reserves as follows:

- 2014 Revenue Bonds Debt Service Reserve Fund
- 2011 Revenue Bonds Debt Service Reserve Fund
- 2006 Certificates of Participation Debt Service Reserve Fund
- 1993 Certificates of Participation Debt Service Reserve Fund

These debt service reserves total almost $5 million and are designed to hold funds for payment of debts and loans made to the District for capital improvement projects (VSFCD, CAFR, 2015).

Comparing the size of a district's reserve/investment fund to their annual gross revenue is a common financial metric. Table 4.14, above indicates that total investments are $41.5 million. In FY 14/15, gross revenue was $30.8 million. The comparative calculation shows that total investments are equivalent to 1.3 of gross revenue.

Undesignated reserves are called the Unrestricted Net position in VSFCD financial documents. These total $13.7M (not cash). Essentially all these funds would be designated for operating or capital reserve (Ms. M Morris, personal communication, December 2016).

Debt and Liabilities

The District's debt is all associated with its Wastewater Fund. Standard & Poor's, a credit rating agency, has assigned the District an AA- credit rating. As of June 2015, the District's long-term debt burden was $59 million which represents a per capita decreased $34 from last year to $456 (VSFCD, CAFR, 2016). Long-term debt net of premium (discount) is shown in Table 4.15, below.

Table 4.15: Long-term debt				
Description	Fiscal Year Ended		Amount Increase	Percent Increase
	June 30, 2015	6/30/2014	(Decrease)	(Decrease)
2014 Revenue bonds - net	$ 33,089,018	$ 34,277,971	$ (1,188,953)	-3.5%
2011 Revenue bonds - net	2,591,818	2,799,545	(207,727)	-7.4%
1993 Cert of participation -	11,718,624	13,718,280	(1,999,656)	-14.6%
2008 State Revolving Fund loan	2,792,753	3,037,308	(244,555)	-8.1%
2004 State Revolving Fund loan	6,503,828	7,230,146	(726,318)	-10.0%
Interfund note - wastewater-storm water	2,780,962	3,098,618	(317,656)	-10.3%
Long term liabilities - net	$ 59,477,003	$ 64,161,868	$ (4,684,865)	-7.3%
Source: VSFCD, CAFR, 2016				

In 2015, the district reduced the principal on its debt by $4,230,872.

Rates

VSFCD charges fees for both wastewater and flood control services. The District's rates cover the costs of operation, maintenance, and repair (OM&R) and debt financed capital improvements plus other costs anticipated in connection with its programs. The rates are consistent with requirements of the State Water Resources Control Board. Rates are set for the District's three programs as follows:

- Wastewater fund: rate adjustments were approved by the Board of Trustees for fiscal years beginning July 1, 2012, 2013, and 2014 to fund debt service, maintain a capital program, keep with rising costs, and in accordance with the District's Long Term Financial Plan. The rate adjustments were 2.5% for each of the three fiscal years, respectively.
- Storm water fund: Rates were last set in 1998 at $1.97 per month. A rate equity study found the rate structure to be inequitable since the rate does account for runoff and pollutant loadings for customer classifications. A recent ballot initiative updates rates for the storm water fund with an effective date of July 1, 2015.
- Upper lateral fund: This fund's rates were adjusted during the 2004-05 fiscal year from .69 cents per month to $1.38 per month. The upper lateral rate is a function of program demand that remains high.

Wastewater Rate Details

Wastewater rates provide for the following:

1. regular costs of operation and maintenance,
2. funding capital replacements, improvements, and collection systems rehabilitation,
3. debt service on improvements and upgrades to wastewater infrastructure, and
4. debt coverage requirements in accordance with bonded indebtedness contractual obligations.

The last formal study of sewer rates was completed in 2000. Since then, rates have been raised to keep pace with inflation to some degree and not due to capital projects (Ms. Morris, personal communication, December 2016). For example, sewer rates were last raised in June 2012 at a public meeting of the Board of Trustees by 2.5 percent annually. Sewer rates are raised only after other alternative funding sources are considered. A new rate study is currently in progress. Wastewater rates are $43.35 per month for a single family residence. This is comparable to neighboring sewer agencies as shown in Table 4.16, below.

Table 4.16: Comparison of Wastewater Rates

	Monthly Residential Wastewater Rate (2014-15)	Monthly Residential Wastewater Rate (2015-16)	Monthly Residential Wastewater Rate (2016-17)
Fairfield-Suisun	$32.71		
Napa	39.15		
Vallejo Sanitation and Flood Control	43.35		
American Canyon	48.97		
Rio Vista	51.60 and 87.92		
Benicia	53.26	55.39	56.49
Vacaville	56.61		
Sonoma County Water Authority (8 districts)	65.17 through 158.25		
Santa Rosa	101.04		

Source: VSFCD, Budget, 2015

Storm Water Rates

A 2015 ballot measure established storm water rates consistent with the requirements of Proposition 218 (California Constitution Article XIII, Sections C and D). Residential rates for storm water services are an annual flat-rate (paid bi-monthly) in one of three categories:

1) high density (multi-family) at $12.46 per unit,
2) single-family standard lots at $23.64 per parcel, and
3) single-family large lots (>10,450 sq. ft.) at $36.70 per parcel.

Commercial/industrial rates are an annual area based parcel fee (paid bi-monthly) in one of three categories:

1) light runoff load (unimproved lots) at $0.79 per 1,000 sq. ft.,
2) medium runoff load (landscaped lots) at $4.66 per 1,000 sq. ft., and
3) heavy runoff load (impervious surface lots) at $10.25 per 1,000 sq. ft.

When special circumstances exist, the District's Group IV Special rate may be used to calculate the annual fee.

In municipal service reviews, LAFCO often assesses whether rates are sufficient to cover operating expenses, debt service, and planned capital improvements. Bond obligations sometimes require a district to maintain specific ratios of income to expenses. VSFCD's Budget notes that net revenues of the wastewater activity meet the bond covenant test and comply with the required coverage. Rates for flood control recently passed the scrutiny of a public ballot initiative.

Findings &Determinations for Financial Ability of Agency to Provide Services

15. VSFCD has three enterprise funds, the wastewater fund, the storm water fund, and the upper lateral fund. VSFC also collects a small amount of property taxes. VSFCD is an enterprise district since most of its revenues are derived from its rate structure.

16. VSFCD's adopted management and budget policy has been shared with the MSR authors. This policy addresses budget preparation, fixed asset accounting, investment of funds, and expense authorization.

17. The VSFCD Budget is adopted in public meetings on a biennial basis by the District's Board of Trustees (not by the City of Vallejo). The fiscal year begins on July 1 and ends on June 30.

18. Although VSFCD is a separate legal entity, apart from the City of Vallejo, its finances are a Component Unit of the City of Vallejo. Component units are legally separate organizations and are utilized for agencies where elected officials of the primary government are financially accountable.

19. VSFCD's Board of Trustees receive an audited financial statement on an annual basis.

20. In FY 14/15, total annual revenue was almost $31 million and total annual expense was almost $30.5 million.

21. During years 2006 to 2012, expenses exceeded revenues and the difference was made whole from reserve funds. This situation indicates that VSFCD revenues are sensitive to the state of the local economy. This also indicates that having sufficient reserve funds is important to VSFCD to help it weather the economically lean years. Additional detail is provided in Figure 4.12 and Table 4.11.

22. The data presented in this MSR suggests that VSFCD has the financial ability to continue to provide public services into the future.

4.7: STATUS AND OPPORTUNITIES FOR SHARED FACILITIES

4.6.1. Shared Facilities and Regional Cooperation

The District does not jointly own or share capital facilities or services with other agencies (VSFCD, 2016). Nor is there any other agency in the District's sphere of influence that provides wastewater and flood control services (Solano LAFCo, 2006). The 2006 MSR did not identify specific opportunities for the District to share facilities with other agencies and no specific opportunities were identified during the preparation of this MSR. It is recommended that the District continue to participate in regional planning efforts and be open to new opportunities to share facilities and to assess these ideas as they arise.

Although no opportunities have been identified at this time for the District to share facilities with other public agencies, the District does collaborate with other agencies and organizations in other ways, including the following:

- The District works in conjunction with the Solano County Disaster Council, a coalition of Solano County safety personnel, to adequately prepare and respond in the event of an emergency. The District also participates in joint training efforts with the greater area for emergency response and safety (VSFCD Finance Department, 2016).
- The District participates in the City of Vallejo's General Plan process (VSFCD, 2016).
- The District participates in department head meetings with the City of Vallejo (Morton, 2016).
- The District participates in executive and staff level interagency meetings twice a month (Morton, 2016).
- The District participates in the following organizations: National Association of Clean Water Agencies (NACWA), California Association of Sanitation Agencies (CASA), Water Environment Federation (WEF), California Water Environment Association (CWEA), and Bay Area Clean Water Agencies (BACWA) (Morton, 2016).
- The District helped organize the formation of the Vallejo Watershed Group (Solano LAFCo, 2006).

Findings & Determinations for Opportunities for Shared Facilities

23. VSFCD works cooperatively with many different agencies including its regulatory agencies such as the RWQCB, and other local service providing agencies such as Solano County and the City of Vallejo. Additionally, the District participates in several organizations including the National Association of Clean Water Agencies and the California Association of Sanitation Agencies among others. The District also helped organize the formation of the Vallejo Watershed Group.

24. VSFCD does not jointly own or share capital facilities or services with other agencies. There are no other agencies in the District's sphere of influence that provide wastewater and flood control services. It is recommended that the District continue to be open to new opportunities to share facilities and to assess these ideas as they arise.

25. VSFCD is well managed and operated as evidenced by its compliance with regulatory permits, open meeting laws and by the numerous awards it has received. Additionally, VSFCD works cooperatively with other local agencies and organizations.
26. Because the District discharges treated water into a nearby brackish marsh, water quality is important to the public, wildlife, and to regulators. Therefore, it is recommended that the District participate in local watershed associations and Integrated Regional Water Management (IRWM) groups.

4.8: GOVERNMENT STRUCTURE AND ACCOUNTABILITY

In a municipal service review, LAFCO is required to make a determination about a district's government structure and accountability. In California, there are two types of special districts, as defined in GC 56032.5 and 56044:

- Dependent districts: Function as subdivisions of another multipurpose local government. Board members may be ex-officio member of other governing boards such as city councils or the board of supervisors.
- Independent districts: Have their own governing board and are usually elected directly by voters or are appointed to fixed terms.

The VSFCD is a dependent district. It is governed by an eight-member Board of Trustees, composed of the seven- members of the Vallejo City Council and one member from the Solano County Board of Supervisors. The current Board of Trustee members are identified in Section 4.1. The representative from Solano County Board of Supervisors is appointed annually in January by the Board of Supervisors (VSFCD Webmaster).

Terms of the Trustees expire at the time of their departure from the City Council or Board of Supervisors (Solano LAFCo, 2006). The District is a component unit of the City of Vallejo under accounting rules but is a separate legal entity. The Board sets policy for the District and appoints the District Manager and Treasurer who serve at the pleasure of the Board (VSFCD Finance Department, 2016).

The seven Trustees associated with the Vallejo City Council receive $100 per month, regardless of attendance. The Trustee that is the member-at-large, typically a Solano County Supervisor, receives $100 per meeting attended (VSFCD, 2015).

Regularly scheduled Board meetings are held on the second Tuesday of every month at 6:00 p.m., at Vallejo City Hall, 555 Santa Clara Street in Vallejo. Additional special meetings are held as needed. The Board has adopted 'Rules of Order and Procedure' by which it governs its

meetings in compliance with the requirements of California Government Code sections 54950 through 54963 (The Brown Act). The Protocols were last updated in May 12, 2015.

All meetings are publicly posted a minimum of 72 hours prior to the meeting. Postings are located on public information boards at Vallejo City Hall and the District office. The Board meeting agenda and supplemental materials are also posted on the District's website at: *https://www.vsfcd.com/SitePages/minutes_and_agendas.aspx*. The agenda for each Board meeting includes a general public comment period entitled *Community Forum* for anyone wishing to address the Board on any matter. All meetings are open to the public in accordance with the Brown Act.

The District's website is a communication tool for meeting agendas, minutes, and adopted resolutions, and provides information about the District's services and programs. District customers can complete a customer service survey online, in paper form, or in person (VSFCD, 2016). To keep its customers informed about the District's activities and services, the District Public Information Office produces a bimonthly newsletter, *The Current.* The District also helped organize the formation of the Vallejo Watershed Group to coordinate efforts of local government agencies and private citizens to address water quality/environmental concerns at Lake Chabot and White Slough (Solano LAFCo, 2006).

The Board of Trustees and its representatives appear to comply with the requirements of the Brown Act, the Political Reform Act, and similar laws. The existing structure of the District, created by special enabling legislation[6] by the California legislature in 1952 by Enabling Act 8934, is sufficient to allow the District to continue service provision in the foreseeable future. There are no legal or administrative limitations on the District to future service provision (Solano LAFCo, 2006).

[6] A copy of the District's enabling legislation is available on the District's website at: *https://www.vsfcd.com/Site_PDFs/DistrictEnablingAct8934.pdf*

4.8.1. Management Efficiencies

The VSFCD's mission is to provide quality wastewater and flood control services to the Vallejo community in order to protect the public's health, safety and the environment. The VSFCD's vision is that the District will continue to be a model of customer service, environmental sensitivity, innovation and regional cooperation (VSFCD Finance Department, 2016).

The District operates under the direction of the Board of Trustees. The District Manager reports to the Board and is responsible for directing District operations. The District Manager is the chief administrative officer responsible for the District's day-to-day operations in accordance with Board policies, approved budget, and legal and regulatory compliance. The Treasurer is charged with cash and investment management in accordance with California law, policy, and general direction (VSFCD Finance Department, 2016).

CONTACT INFORMATION:

Melissa Morton, District Manager
450 Ryder Street
Vallejo, CA 94590
mmorton@vsfcd.org

As shown in Figure 4.15, the District Manager oversees the Management Team consisting of the District Clerk, HR Administrator, Finance Director, Safety and Risk Management Director, District Engineer, Field Operations Superintendent, Plant Operations and Maintenance Director, Environmental Services Director. As of July 1, 2015, VSFCD had a total staff of 85.95 full-time equivalents (FTE) to manage and operate the wastewater treatment plant (VSFCD, 2016). This includes VSFCD staff and consultants with 16.96 FTE for Administration, 8.28 FTE for Management, and 60.71 FTE for Wastewater Service (VSFCD, 2016).

The District implements a successful Capital Improvement Plan (CIP) program which is necessary to upgrade and replace aging facilities and infrastructure. District staff routinely inventories its capital assets and performs condition assessments to identify projects to include in the CIP. The District is also developing an Asset Management Plan (AMP) to guide the process of identifying best practices and prioritizing maintenance, rehabilitation, and replacement efforts to ensure longevity of District facilities and infrastructure.

Strategic Plans & Management Plans

Ideally, all Districts in Solano County would have an updated strategic plan or master plan that links together goals, objectives, actions, and best management practices. Every five years, the VSFCD's public meeting agenda allows time for the Board to consider district-wide strategic goals. The most recent goal setting session occurred on October 22, 2014 where they developed the following goals:

- Goal 1. Succession Planning
- Goal 2. Capital Improvement/Infrastructure Viability
- Goal 3. Communication/Public Education and Outreach
- Goal 4. Innovation

In addition to agreeing on the above goals, the effort resulted in the development of a 2014/2017 Action Plan[7], which lists the responsible parties and key milestone dates.

The District prepares for natural diasters such as flood, earthquake, sea level rise, and more by the development of a Local Hazard Mitigation Plan Update (LHMP). The LHMP, which is required by federal law to be eligible for mitigation grant consideration. The District is currently in the last stages of updating its LHMP as noted on its website at: *https://www.vsfcd.com/SitePages/disasters.aspx* .

In June 2015, the District awarded a contract to a consultant to prepare an Asset Management Program to implement asset management best practices for investment and management decision making. The life cycle of the District's infrastructure will be analyzed and tradeoffs between cost of service and risk of asset failure will be studied.

The development and implementation of a strategic action plan and other management plans such as VSFCD's Asset Management Plan and Local Hazard Mitigation Plan Update are measures of management efficiency and effectiveness.

[7] The District's Action Plan is available on the District's website at: *https://www.vsfcd.com/Site_PDFs/Supplemental_Information_2015_02_10.pdf*

District Awards

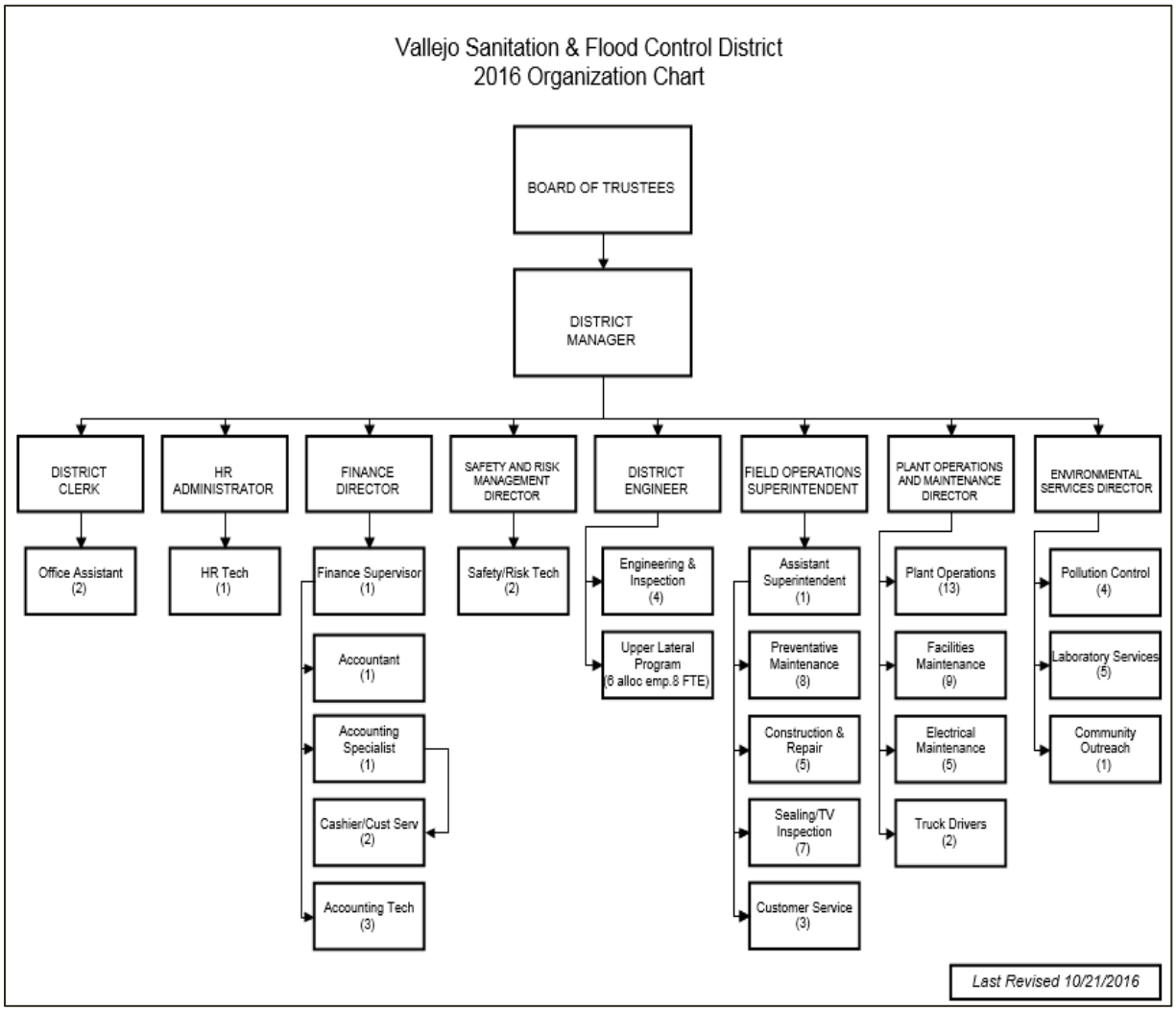
The District is the recipient of many awards of excellence at the local, state and national levels for maintaining an efficient, well-run operation. These awards are received from the local chapter of the California Water Environment Association (CWEA), the state CWEA, the national Water Environment Federation, and the National Association of Clean Water Agencies (NACWA). Awards received typically are for plant of the year, collection system of the year, Burke award for safety, excellence in management recognition, and awards for individual achievements. The District recently received the NACWA Platinum Award for five continuous years of "0" violations. The District received the Certificate of Achievement for Excellence in Financial Reporting for its Comprehensive Annual Financial Report from the Government Finance Officers Association of the United States and Canada for the fiscal year 2015. The current Report for 2016 conforms to Certificate of Achievement program requirements and has been submitted for award consideration. VSFCD has won many awards for public service (VSFCD Finance Department, 2016).

Findings & Determinations for Accountability for Community Service Needs

27. VSFCD is governed by an eight-member Board of Trustees composed of the seven-members of the Vallejo City Council and one member from the Solano County Board of Supervisors that serve staggered four-year terms. The VSFCD Board meets at Vallejo City Hall, 555 Santa Clara Street in Vallejo, on the second Tuesday of the month. VSFCD meetings are noticed according to the Brown Act and the meetings provide sufficient opportunities for public comment.

28. The existing structure of the District, created by special enabling legislation by the California legislature in 1952 by Enabling Act 8934, is sufficient to allow the District to continue service provision in the foreseeable future. There are no legal or administrative limitations on the District to future service provision.
29. The District's boundary and SOI includes 4,666 acres of water or submerged lands that are part of the San Francisco Estuary/San Pablo Bay, as shown in Figure 4.1. This parcel (APN 0067-010-010) was included the District's original 1952 boundary and was identified in the District's original 1953 submittal to the CA Board of Equalization. The District does not provide service to this parcel. Therefore, it is recommended that LAFCO consider detaching the parcel from the District boundary and SOI.

Figure 4.15 District Organizational Chart



4.9: LAFCO POLICIES AFFECTING SERVICE DELIVERY

Cortese-Knox Hertzberg allows LAFCOs to establish policies to implement the law and process applications. Solano LAFCO has implemented eleven standards, six mandatory standards which mirror the requirements of CKH, and five discretionary standards. Application of discretionary standards lies with the Commission. There are no other aspects of wastewater and storm drainage service required to be addressed in this report by LAFCO policies that would affect delivery of services.

Finding & Determination: Any Other Matters Related to Service Delivery as Required by LAFCO Policy

30. There are no other aspects of wastewater or storm drainage service required to be addressed in this report by LAFCO policies that would affect delivery of services.

4.10: SUMMARY OF MSR FINDINGS & DETERMINATIONS

Based on the information included in this report, the following written determinations make statements involving the service factors the Commission must consider as part of a municipal service review.[8] The determinations listed below are recommendations from the consultant to the Commission. The Commission's final MSR determinations will be part of a Resolution, which the Commission formally adopts during a public meeting.

Growth and Population Projections

1. The current (year 2016) population of VSFCD is 124,134 permanent residents.
2. Although the population within the City of Vallejo declined during years 2000 to 2010, it recently has experienced an increase of 1.01% percent.
3. The area within the District's boundaries does have potential for future growth especially the City of Vallejo's specific plan areas. However, in the recent past, the pace of new growth has been relatively slow. Between the years 2015 to 2040, the population

[8] The service factors addressed in this report reflect the requirements of California Government Code §56430(a) as of January 1, 2008.

within the City of Vallejo (and within the District) is expected to grow by 13,700 persons (11.6 percent) as listed in Table 4-4.

Disadvantaged Unincorporated Communities

4. The median household income within the Vallejo community is $58,472. This is higher than the DUC threshold MHI of less than $49,546 (80 percent of the Statewide MHI).

5. There are 11 fully and partially surrounded unincorporated islands within the City of Vallejo and the District. Each of the 11 islands do receive water, wastewater, and fire services. No deficiency in public services to these areas have been identified.

6. Preliminary indications from Solano County's Housing Needs Assessment indicate that Starr Subdivision and Homeacres neighborhood could potentially meet disadvantaged criteria; however specific financial data was not analyzed in the County's Assessment. No health and safety issues have been identified within the unincorporated islands studied by Solano County.

7. The median household income for census tracts and block groups near the 11 unincorporated islands was studied as listed in Table 4.6. Based on this analysis, at least a portion of four unincorporated islands do meet the financial threshold to be classified as DUCs.

8. No health and safety issues have been identified within these four unincorporated islands. Each of the four islands do receive water, wastewater, and fire services. No deficiency in public services to these areas have been identified.

9. For low income residents, the District offers a discount on cost of service. The District publishes public information on the Reduced Rate Program and customers are eligible to apply provided they meet the requirements of the PG&E CARE Program. The District uses its property tax revenue to fund the low income program. No health and safety issues have been identified within the unincorporated islands.

Present and Planned Capacity of Public Facilities

10. The number of sewer connections served by the District is estimated to be 37,804; approximately 76 percent of the District's customers are residential uses. There are approximately 460 commercial and industrial customers, including 5 Significant Industrial Users (SIUs), served by the District.

11. New development projects are required to provide storm water facilities as part of project improvement plans.

12. As a result of the District's measures to ensure integrity of the wastewater collection system, VSFCD has significantly reduced Sanitary Sewer Overflows (SSOs) from 73 occurrences in 2006 to 20 in 2015.

13. The treatment plant has sufficient capacity to meet projected growth for the City of Vallejo and unincorporated areas within District boundaries.

14. The Capital Improvement Plan focuses on improvements for effectiveness of the maintenance program and to reduce I/I in the sewer collection system, and plans for projects to correct these deficiencies in a timely manner. Implementation of the CIP would appear to allow the sewer system to function effectively throughout the plan period.

Financial Ability of Agency to Provide Services

15. VSFCD has three enterprise funds, the wastewater fund, the storm water fund, and the upper lateral fund. VSFC also collects a small amount of property taxes. VSFCD is an enterprise district since most of its revenues are derived from its rate structure.

16. VSFCD's adopted management and budget policy has been shared with the MSR authors. This policy addresses budget preparation, fixed asset accounting, investment of funds, and expense authorization.

17. The VSFCD Budget is adopted in public meetings on a biennial basis by the District's Board of Trustees (not by the City of Vallejo). The fiscal year begins on July 1 and ends on June 30.

18. Although VSFCD is a separate legal entity, apart from the City of Vallejo, its finances are a Component Unit of the City of Vallejo. Component units are legally separate organizations and are utilized for agencies where elected officials of the primary government are financially accountable.

19. VSFCD's Board of Trustees receives an audited financial statement on an annual basis.

20. In FY 14/15, total annual revenue was almost $31 million and total annual expense was almost $30.5 million

21. During years 2006 to 2012, expenses exceeded revenues and the difference was made whole from reserve funds. This situation indicates that VSFCD revenues are sensitive to the state of the local economy. This also indicates that having sufficient reserve funds is important to VSFCD to help it weather the economically lean years. Additional detail is provided in Figure 4.12 and Table 4.11.

22. .The data presented in this MSR suggests that VSFCD has the financial ability to continue to provide public services into the future.

Opportunities for Shared Facilities

23. VSFCD works cooperatively with many different agencies including its regulatory agencies such as the RWQCB, and other local service providing agencies such as Solano County and the City of Vallejo. Additionally, the District participates in several organizations including the National Association of Clean Water Agencies and the California Association of Sanitation Agencies among others. The District also helped organize the formation of the Vallejo Watershed Group.

24. VSFCD does not jointly own or share capital facilities or services with other agencies. There are no other agencies in the District's sphere of influence that provide wastewater and flood control services. It is recommended that the District continue to be open to new opportunities to share facilities and to assess these ideas as they arise.

25. VSFCD is well managed and operated as evidenced by its compliance with regulatory permits, open meeting laws and by the numerous awards it has received. Additionally, VSFCD works cooperatively with other local agencies and organizations.
26. Because the District discharges treated water into a nearby brackish marsh, water quality is important to wildlife and to regulators. Therefore, it is recommended that the District participate in local watershed associations and Integrated Regional Water Management (IRWM) groups.

Accountability for Community Service Needs

27. VSFCD is governed by an eight-member Board of Trustees composed of the seven-members of the Vallejo City Council and one member from the Solano County Board of Supervisors that serve staggered four-year terms. The VSFCD Board meets at Vallejo City Hall, 555 Santa Clara Street in Vallejo, on the second Tuesday of the month. VSFCD

meetings are noticed according to the Brown Act and the meetings provide sufficient opportunities for public comment.

28. The existing structure of the District, created by special enabling legislation by the California legislature in 1952 by Enabling Act 8934, is sufficient to allow the District to continue service provision in the foreseeable future. There are no legal or administrative limitations on the District to future service provision.

29. *The District's boundary and SOI includes 4,666 acres of water or submerged lands that are part of the San Francisco Estuary/San Pablo Bay, as shown in Figure 4.1. This parcel (APN 0067-010-010) was included the District's original 1952 boundary and was identified in the District's original 1953 submittal to the CA Board of Equalization. The District does not provide service to this parcel. Therefore, it is recommended that LAFCO consider detaching the parcel from the District boundary and SOI.

Any Other Matters Related to Service Delivery as Required by LAFCO Policy

30. There are no other aspects of wastewater and flood control service required to be addressed in this report by LAFCO policies that would affect delivery of services.

4.11: ISSUES WITH RECOMMENDATIONS

This MSR describes the provision of wastewater services by VSFCD to its constituents. No red flags were found during this analysis. However, one area for continual improvement was noted and listed in the above determinations with a * (asterisk) symbol. They are also repeated below in Table 4.17.

Table 4.17: Issues with Recommendations

Determination #	Issue	Recommendation
25	The District's boundary and SOI includes 4,666 acres of water or submerged lands that	It is recommended that LAFCO consider detaching the parcel from the District boundary and SOI.

	are part of the San Francisco Estuary/San Pablo Bay, as shown in Figure 4.1. This parcel (APN 0067-010-010) was included the District's original 1952 boundary and was identified in the District's original 1953 submittal to the CA Board of Equalization. The District does not provide service to this parcel.	

4.12: REFERENCES

Association of Bay Area Governments (ABAG). 2013. "Projections 2013." Association of Bay Area Governments.

ABAG et al. 2014. The Context. Plan Bay Area 2040. [Online]. Available at: *http://www.planbayarea.org/the-plan/the-context.html*. Accessed July 20, 2016.

City of Vallejo. 1999. *Vallejo General Plan*. City of Vallejo Planning Commission. Vallejo City Council.

City of Vallejo. 2005. *City of Vallejo: 2005 Municipal Service Review*. City of Vallejo Planning Commission.

City of Vallejo. 2005. *Downtown Vallejo Specific Plan*. Vallejo City Council.

City of Vallejo. 2007. *Mare Island Specific Plan*. Vallejo City Council.

City of Vallejo. 2014. "Propel Vallejo – General Plan Update, Project Components." City of Vallejo Planning Commission. Vallejo City Council. Web. 25 July 2016.

City of Vallejo. July 2015. Propel Vallejo: General Plan Update, Zoning Code Update: Code Diagnosis Memo. [Online]. Available at: *http://propelvallejo.com/zoning-code-update/*. Accessed July 20, 2016.

Morton, Melissa. 2016. Personal interview by Kateri Harrison, Uma Hinman, and Elliot Mulberg. June 20.

Smith-Heimer, Janet. 2015. *Economic & Market Trends Report*. Submitted to Mark Hoffheimer, Senior Planner. City of Vallejo.

Solano County. April 2015. 2015–2023 Housing Element Update Appendix A: Housing Needs Assessment. 61-pages. [Online]. Available at: *https://www.solanocounty.com/civicax/filebank/blobdload.aspx?blobid=8762*. Accessed July 27, 2016.

Solano LAFCo. November 2006. Solano LAFCo Sewer Municipal Service Review. 45-pages. Davis, California.

State of California Controller's Office. 2016. Government Compensation in California. [Online]. Available at: *http://publicpay.ca.gov/*. Accessed July 14, 2016.

State of California Department of Finance. 2016. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2016 with 2010 Census Benchmark." Web. 20 July 2016.

SWA Group, MacKay & Somps, Fehr + Peers, Goodwin Consulting Group, and BAR Architects. 2013. *Solano 360 Final Specific Plan*. Prepared for County of Solano, City of Vallejo, and Solano County Fair Association. Approved by the Solano County Board of Supervisors.

U.S. Census Bureau. 2010. "Vallejo City Quickfacts." *American Factfinder*. U.S. Department of Commerce. Web. 18 July 2016.

U.S. Census Bureau. 2014. "Median Household Income In The Past 12 Months (In 2014 Inflation-Adjusted Dollars). 2010-2014 American Community Survey 5-Year Estimates." *American Factfinder*. U.S. Department of Commerce. Web. *http://factfinder.census.gov/faces/nav/jsf/pages/ searchresults.xhtml?refresh=t&keepList=t#none.* Accessed 23October2016.

Vallejo Sanitation and Flood Control District (VSFCD). June 17, 2016. District Response to Information Request from the Local Agency Formation Commission of Solano County in preparation for the 2016 Municipal Service Review. 12-pages. Available at LAFCo's office upon request.

Vallejo Sanitation and Flood Control District (VSFCD). 2015. Vallejo Sanitation and Flood Control District Code. [Online]. Available at: *https://www.vsfcd.com/Site_PDFs/District_Code_Thru_Supp_17_Entire.pdf*. Accessed July 25, 2016.

Vallejo Sanitation and Flood Control District (VSFCD) Environmental Services Department. January 29, 2016. Vallejo Sanitation and Flood Control District Annual Treatment Plant Summary 2015. 38-pages. Vallejo, California.

Vallejo Sanitation and Flood Control District (VSFCD) Field Operations Department. 2016. Revisions to 2006 Solano LAFCo Sewer MSR. 7-pages. Available at LAFCo's office upon request.

Vallejo Sanitation and Flood Control District (VSFCD) Finance Department. January 2016. Comprehensive Annual Financial Report, A Component Unit of the City of Vallejo, Years Ended June 30, 2015 With Comparative Amounts for June 30, 2014. 71-pages. Vallejo, California.

Vallejo Sanitation and Flood Control District. (VSFCD). Webmaster. Board of Trustees. [Online]. Available at: *https://www.vsfcd.com/SitePages/board_trustees.aspx*. Accessed July 14, 2016.

Vallejo Sanitation and Flood Control District (VSFCD). Finance Department. January 12, 2016. Comprehensive Annual Financial Report, A Component Unit of the City of Vallejo for Years Ended June 30, 2015 With Comparative Amounts for June 30, 2014. 71 pages. Vallejo, California.

Vallejo Sanitation and Flood Control District (VSFCD). June 9, 2015. Biennial Budget for Fiscal Years 2016 and 2017. 166 pages. Vallejo, California. Retreived from <*https://www.vsfcd.com/SitePages/financials.aspx*>. Accessed August 23, 2016.

Vavrinek, Trine, Day & Company LLP. Certified Public Accountants. January 4, 2016. Independent Auditor's Report. Pleasanton, CA.

Chapter 5: Comments Received and Responses to Comments

The Draft MSR/SOI Update was distributed to the two service providers described in this MSR and it was posted to LAFCo's website on December 12 2016. The Commission held a public meeting on the Draft MSR/SOI Update on Monday, December 12, 2016. The public was encouraged to provide comments for staff to review and incorporate into this Final MSR. No public comments were received during the public comment period.

Chapter 6: Glossary

Annexation: The annexation, inclusion, attachment, or addition of territory to a city or district.

Average base flow (ABF): Flow in the sanitary sewer during dry-weather months, measured when no appreciable rain is falling. Base flow consists of sanitary flow plus groundwater infiltration.

Average dry-weather flow (ADWF): The 30-day rolling average wastewater flow from May through October.

Average wet-weather flow (AWWF): The 30-day rolling average wastewater flow from November through April.

Best Management Practices: Best management practices are defined as methods or techniques found to be the most effective and practical means in achieving an objective (such as minimizing pollution) while making the optimum use of the District's resources.

Bond: An interest-bearing promise to pay a stipulated sum of money, with the principal amount due on a specific date. Funds raised through the sale of bonds can be used for various public purposes.

Buildout: The maximum development potential when all lands within an area have been converted to the maximum density allowed under the General Plan.

Board of Directors: The legislative body or governing board of a district.

Board of Supervisors: The elected board of supervisors of a county.

City: Any charter or general law city.

Community Services District (CSD): A geographic subarea of a county used for planning and delivery of parks, recreation, and other human services based on an assessment of the service needs of the population in that subarea. A CSD is a taxation district with independent administration.

Consolidation: The uniting or joining of two or more districts into a single new successor district.

Contiguous: In the case of annexation, territory adjacent to an agency to which annexation is proposed. Territory is not contiguous if the only contiguity is based upon a strip of land more than 300 feet long and less than 200 feet wide.

Cost avoidance: Actions to eliminate unnecessary costs derived from, but not limited to, duplication of service efforts, higher than necessary administration/operation cost ratios, use of outdated or deteriorating infrastructure and equipment, underutilized equipment or buildings or facilities, overlapping/inefficient service boundaries, inefficient purchasing or budgeting practices, and lack of economies of scale.

Crown (of the sewer): The upper portion of the sewer pipes.

Design flow: The selected flow condition for wastewater collection system design, determined by adding corresponding peak sanitary flow and peak groundwater infiltration. This is also referred to as peak dry-weather flow.

Design storm: An abstraction based on historical data that determines the amount of stormwater inflow and rainfall-dependent infiltration.

Detachment: The removal from a city or district of any portion of the territory of that city or district.

Development Fee: A fee charged to the developer of a project by a county, or other public agency as compensation for otherwise-unmitigated impacts the project will produce. California Government Code Section 66000, et seq., specifies that development fees shall not exceed the estimated reasonable cost of providing the service for which the fee is charged. To lawfully impose a development fee, the public agency must verify its method of calculation and document proper restrictions on use of the fund.

Dissolution: The termination of the existence of a district or city and the cessation of all its corporate powers, except for the purpose of winding up the affairs of the district.

District or special District: An agency of the state, formed pursuant to general law or special act, for the local performance of governmental or proprietary functions within limited boundaries. "District" or "special district" includes a county service area. Also is referred to as a district of limited powers. May include the following: airport district, community services district, municipal utility district, public utilities district, fire protection district, harbor district, port district, recreational harbor district, small craft harbor district, resort improvement district, library district, local hospital district, local health district, municipal improvement district formed pursuant to any special act, municipal water district, police protection district, recreation and park district, garbage disposal district, garbage and refuse disposal district, sanitary district, or county sanitation district.

Dry-weather flow: Wastewater flow monitored during the dry season, occurring May through October. Consists of sanitary flow and groundwater infiltration.

Excessive infiltration and inflow: The quantities of infiltration/ inflow that can be economically eliminated from a wastewater collection system by rehabilitation, as determined by a cost-effective analysis.

Formation: The formation, organization, or creation of a district or city.

Function: Any power granted by law to a local agency or a county to provide designated governmental or proprietary services or facilities for the use, benefit, or protection of all persons or property.

Functional revenues: Revenues generated from direct services or associated with specific services, such as a grant or statute, and expenditures.

General plan: A document containing a statement of development policies including a diagram and text setting forth the objectives of the plan. The general plan must include certain state mandated elements related to land use, circulation, housing, conservation, open-space, noise, and safety.

General revenues: Revenues not associated with specific services or retained in an enterprise fund.

Groundwater: Water under the earth's surface, often confined to aquifers capable of supplying wells and springs.

Independent Special District: Any special district having a legislative body all of whose members are elected by registered voters or landowners within the district, or whose members are appointed to fixed terms, and excludes any special district having a legislative body consisting, in whole or in part, of ex officio members who are officers of a county or another local agency or who are appointees of those officers other than those who are appointed to fixed terms. "Independent special district" does not include any district excluded from the definition of district contained in §56036.

Infiltration: The water entering a sewer system and service connections from the ground, through such means as, but not limited to, defective pipes, pipe joints, connections, or manhole walls. Infiltration does not include, and is distinguished from, inflow.

Infiltration and inflow (I&I): The collective term used to describe the extraneous flow in a wastewater collection system from both rainfall-dependent infiltration and inflow or groundwater infiltration.

Infrastructure: Public services and facilities, such as pipes, canals, levees, water-supply systems, other utility, systems, and roads.

LAFCo: Local Agency Formation Commission.

Local accountability and governance: A style of public agency decision making, operation and management that includes an accessible staff, elected or appointed decision-making body and decision making process, advertisement of, and public participation in, elections, publicly disclosed budgets, programs, and plans, solicited public participation in the consideration of work and infrastructure plans; and regularly evaluated or measured outcomes of plans, programs or operations and disclosure of results to the public.

Local agency: A city, county, or special district or other public entity, which provides public services.

Management Efficiency: The organized provision of the highest quality public services with the lowest necessary expenditure of public funds. An efficiently managed entity (1) promotes and demonstrates implementation of continuous improvement plans and strategies for budgeting, managing costs, training and utilizing personnel, and customer service and involvement, (2) has the ability to provide service over the short and long

term, (3) has the resources (fiscal, manpower, equipment, adopted service or work plans) to provide adequate service, (4) meets or exceeds environmental and industry service standards, as feasible considering local conditions or circumstances, (5) and maintains adequate contingency reserves.

Merger: The termination of the existence of a district, by the assumption of the district's responsibilities by a city.

Municipal services: The full range of services that a public agency provides, or is authorized to provide, except general county government functions such as courts, special services and tax collection. As understood under the CKH Act, this includes all services provided by Special Districts under California law.

Municipal Service Review (MSR): A study designed to determine the adequacy of governmental services being provided in the region or sub-region. Performing service reviews for each city and special district within the county may be used by LAFCO, other governmental agencies, and the public to better understand and improve service conditions.

Ordinance: A law or regulation set forth and adopted by a governmental authority.

Peak flow: Maximum measured daily flow. Commonly measured in cubic feet per second (cfs). Typically occurs during wet-weather events and can also be referred to as peak wet-weather flow.

Peaking Factor: The ratio of peak hourly wet-weather flow to base flow.

Per Capita Water Use: The water produced by or introduced into the system of a water supplier divided by the total residential population; normally expressed in gallons per capita per day (gpcd).

pH: A measure of the relative acidity or alkalinity of water. Water with a pH of 7 is neutral; lower pH levels indicate increasing acidity, while pH levels higher than 7 indicate increasingly basic solutions.

Plan of reorganization: A plan or program for effecting reorganization and which contains a description of all changes of organization included in the reorganization and setting forth all terms, conditions, and matters necessary or incidental to the effectuation of that reorganization.

Potable Water: Water of a quality suitable for drinking.

Principal act: In the case of a district, the law under which the district was formed and, in the case of a city, the general laws or a charter, as the case may be.

Principal LAFCO for municipal service review: The LAFCO with the lead responsibility for a municipal service review. Lead responsibility can be determined pursuant to the CKH Act §56388 and is typically, the LAFCO in the Principal County with the greatest assessed value. See also definition of a Principal LAFCO as it applies to government

organization or reorganization actions, by negotiation, or by agreement among two or more LAFCOs.

Proceeding: A course of action taken at a public meeting.

Public agency: The state or any state agency, board, or commission, any city, county, city and county, special district, or other political subdivision, or any agency, board, or commission of the city, county, city and county, special district, or other political subdivision.

Rainfall-dependent infiltration and inflow (RDI/I): Rainfall runoff from both infiltration and inflow sources that enter the wastewater collection system during and shortly after a rain event. RDI/I consists of stormwater inflow and rainfall-dependent infiltration.

Rate restructuring: Rate restructuring does not refer to the setting or development of specific rates or rate structures. During a municipal service review, LAFCO may compile and review certain rate related data, and other information that may affect rates, as that data applies to the intent of the CKH Act (§56000, §56001, §56301), factors to be considered (§56668), SOI determinations (§56425) and all required municipal service review determinations (§56430). The objective is to identify opportunities to positively impact rates without adversely affecting service quality or other factors to be considered.

Reorganization: Two or more changes of organization initiated in a single proposal.

Responsible LAFCO: The LAFCO of a county other than the Principal County that may be impacted by recommendations, determinations or subsequent proposals elicited during a municipal service review being initiated or considered by the Lead LAFCO.

Retained earnings: The accumulated earnings of an enterprise or intragovernmental service fund which have been retained in the fund and are not reserved for any specific purpose (debts, planned improvements, and contingency/emergency).

Reserve: (1) For governmental type funds, an account used to earmark a portion of fund balance, which is legally or contractually restricted for a specific use or not appropriable for expenditure. (2) For proprietary type/enterprise funds, the portion of retained earnings set aside for specific purposes. Unnecessary reserves are those set aside for purposes that are not well defined or adopted or retained earnings that are not reasonably proportional to annual gross revenues.

Service lateral: A sewer connecting a building or house to the mainline sewer.

Service review: A study and evaluation of municipal service(s) by specific area, subregion or region culminating in written determinations regarding seven specific evaluation categories.

Sewage: Sewage is the wastewater released by residences, businesses and industries in a community. Typically it is 99.94 percent water, with only 0.06 percent of the wastewater

dissolved and suspended solid material. The cloudiness of sewage is caused by suspended particles which in untreated sewage ranges from 100 to 350 mg/l.

Specific plan: A policy statement and implementation tool that is used to address a single project or planning problem. Specific plans contain concrete standards and development criteria that supplement those of the general plan.

Sphere of influence (SOI): A plan for the probable physical boundaries and service area of a local agency, as determined by the LAFCO.

Sphere of influence determinations: In establishing, amending, or updating a sphere of influence, the Commission must consider five written determinations related to present and planned land uses, need and capacity of public facilities, adequacy of public services that the agency provides, the existence of social and economic communities of interest, including disadvantaged unincorporated communities, and the effect of LAFCO policies.

Stormwater runoff: Rainwater which does not infiltrate into the soil and runs off the land.

Subject agency: Each district or city for which a change of organization is proposed or provided in a reorganization or plan of reorganization.

Total Dissolved Solids (TDS): A quantitative measure of the residual minerals dissolved in water that remains after evaporation of a solution. Usually expressed in milligrams per liter.

Treated water: Raw water which has been treated for human consumption through secondary or tertiary processes at a water treatment plan (WTP).

Watershed: An area of land that drains water, sediment and dissolved materials to a common receiving body or outlet. The term is not restricted to surface water runoff and includes interactions with subsurface water. Watersheds vary from the largest river basins to just acres or less in size. In urban watershed management, a watershed is seen as all the land which contributes runoff to a particular water body.

Zoning: The primary instrument for implementing the general plan. Zoning divides a community into districts or "zones" that specify the permitted/prohibited land uses.

Chapter 7: Acknowledgments

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Appendices

This MSR Update for Wastewater Services by Solano LAFCO includes several appendices as follows:

Appendix 1	Wastewater Regulations
Appendix 2	FSSD District Brochure
Appendix 3	VSFCD Timeline
Appendix 4	Solano County Economic Forecast by Caltrans
Appendix 5	Drainage Maintenance Agreement Among the Fairfield-Suisun Sewer District, the City of Fairfield, and the City of Suisun City Compiled, as amended, through January 23, 1995

Appendix 1: Wastewater Regulations

REGULATIONS FOR WASTEWATER SYSTEMS

Both state and federal regulatory authority exists for the control of water quality in surface waters of California. Under the Clean Water Act (CWA), the Environmental Protection Agency (EPA) regulates municipal and industrial effluent discharges to navigable waters through the issuance of National Pollutant Discharge Elimination System (NPDES) permits. The basic approach used in both state and federal processes is 1) to designate beneficial uses to be protected, 2) to set water quality objectives that are protective of the most sensitive uses, and 3) to control municipal, industrial, and other sources to meet these objectives.

Federal Wastewater Treatment Regulations

Clean Water Act

The Clean Water Act (33 U.S.C. § 1251 et seq.) is the federal law that governs and authorizes water quality control activities by the EPA. Pursuant to federal law, the EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations (40 CFR). The CWA regulates water pollution through two different and supplementary approaches:

- Water quality and technology-based standards; and
- Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States.

The two approaches to regulating water pollution are implemented through the use of discharge permits, which contain mass or concentration-based effluent limits for the pollutants in the permittee's wastewater. These approaches are applied to pollutant dischargers through the implementation of the national wastewater discharge permitting program set up under the CWA. The CWA established national goals to eliminate pollutant discharges to navigable waters and to assure that all navigable waters would be fishable and swimmable.

National Pollutant Discharge Elimination System (NPDES)

The NPDES permit system was established under section 402 of the CWA to regulate municipal and industrial discharges to surface waters of the United States. The discharge of wastewater to surface waters is prohibited unless an NPDES permit has been issued which allows that discharge. Each NPDES permit contains limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge. Under the NPDES program, dischargers are required to monitor and provide reports on compliance with their permit limits. These reports, formally titled Discharge Monitoring Reports (DMRs), are submitted to the appropriate regulatory agency, and they describe water quality data and analysis. The regulatory agency or any interested citizen can review this data to determine whether or not the discharger has complied with its NPDES permit requirements, and, if appropriate, pursue action to enforce compliance.

Stormwater: Areas within Solano County are subject to the NPDES stormwater permit regulations, and are subject to the Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008 (the "2015 Permit" or "Permit"). The 2015 Permit regulates the discharge of stormwater runoff from the municipal separate storm sewer systems ("MS4s") and other designated stormwater discharges from municipalities and flood management agencies in Alameda County, Contra Costa County, San Mateo County, Santa Clara County, and the Cities of Fairfield, Suisun City, and Vallejo and the Vallejo Sanitation and Flood Control District in Solano County. The purpose of the stormwater permitting program is to prevent pollution in local waterways. Stormwater can adversely impact avian, aquatic, and plant life in receiving waters and can cause serious human health impacts. For example, high mercury levels in the Bay make regular consumption of fish unsafe. Urban stormwater runoff is one of the largest sources of pollution in San Francisco Bay and its tributaries. On April 1, 2016, FSSD prepared a Watersheds and Management Areas Plan[1] for Polychlorinated Biphenyls (PCBs) and Mercury (Hg) and submitted it to the San Francisco Bay Regional Water Quality Control Board (Regional Board) by the Fairfield-Suisun Urban Runoff Management Program (FSURMP), as required by Provisions C.11.a.iii.(1) and C.12.a.iii.(1) of the Municipal Regional Stormwater NPDES Permit (MRP) (Order R2-2015-049). The Vallejo Sanitation and Flood Control District also submitted a similar plan[2] to the Board on April 1, 2016.

Wastewater: The California Regional Water Quality Control Board is responsible for implementing the NPDES permit system as it pertains to wastewater discharge. Fairfield

[1] The entire FSSD Plan is available online at: *http://www.swrcb.ca.gov/sanfranciscobay/water_issues/programs/stormwater/Municipal/wma/C.11-12.a.iii%20Progress%20Rpt%20FSURMP.pdf*

[2] The VSFCD Mercury And PCBs Control Measures Implementation Status Report is available online at: *http://www.swrcb.ca.gov/sanfranciscobay/water_issues/programs/stormwater/Municipal/wma/C.11-12.a.iii%20Progress%20Rpt%20VSFCD_033116.pdf*

Suisun Sewer District's WWTP operates under Order No. R2-2015-0013 (NPDES No. CA0038024). Vallejo Sanitation and Flood Control District's wastewater treatment plant operates under Permit Order No. R2-2012-0017 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037699).

Enforcement of NPDES guidelines and permits in Solano County falls within jurisdiction of the San Francisco Bay Regional Water Quality Control Board (RWQCB) and is subject to review by the EPA Regional Administrator (EPA Region IX, San Francisco Office). In addition, the RWQCB regulates activities involving discharges to land or groundwater from diffused sources. A Report of Waste Discharge must be filed with the CVRWQCB to obtain a Waste Discharge Requirement (WDR) for these types of non-surface water discharge.

Congress amended the CWA in 1987 to include non-point source pollutants. Non-point source pollutants are often chemicals from lawns or gardens, automobile residues, urban runoff, or household cleaning agents or compounds. Non-point source pollution can also include runoff from agricultural uses. Most non-point source pollutants enter the wastewater stream and the water supply in large quantities and sudden surges, largely due to storm events. Although the EPA has established NPDES requirements for storm water, control of this type of pollution has proven to be difficult and could require upgrades to existing wastewater treatment plants. On August 12, 2015, the EPA[3] approved SWRCB's Six-Year Plan (2014-2020) with Regional Water Quality Control Boards. These new regulations may further affect the wastewater agencies in Solano County, especially those with high storm water infiltration rates.[4]

Section 303(d) Impaired Waters List and TMDLs

Under Section 303(d) of the CWA, states are required to develop lists of water bodies which will not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries) (40 C.F.R. §130.7(b)(4)). For example, the EPA and RWQCB are developing a TMDL for dissolved oxygen in Suisun Marsh. See SFRWQCB website at: *http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/suisunmarshtmdl.shtml* for additional details.

National Toxics Rule

The EPA established the National Toxics Rules (NTR) to create numeric criteria for priority toxic pollutants for California and 13 other states and territories that were not in complete compliance with the CWA. For California, the NTR established water quality standards for protection of aquatic life and/or human health for 36 pollutants for which water quality criteria exist, but which were not covered under California's statewide water quality regulations.

[3] EPA's approval letter for the Six Year Plan is available on-line at: *http://www.waterboards.ca.gov/water_issues/programs/nps/docs/plans_policies/usepa_approval_2014to202020.pdf*

[4] State Water Resources Control Board. Nonpoint Source Pollution (NPS) Control Program. www.waterboards.ca.gov/water_issues/programs/nps.

California Toxics Rule

The Clean Water Act (33 U.S.C. § 1251 et seq.) is the federal law that governs and authorizes water quality control activities by the EPA. Pursuant to federal law, the EPA has the NTR. There are 126 constituents listed in the California Toxics Rule (CTR) criteria, which include the previously issued NTR criteria for California. Some of the key elements of the CTR include:

- Amended numeric standards for 30 toxic pollutants and added new criteria for 8 toxic pollutants to protect aquatic life and human health uses for water bodies.
- Dissolved-based standards for most trace metals and endorsement of the use of translator mechanisms for determination of local metals objectives.
- Provisions for compliance schedules to provide time for permittees to meet the new toxics standards.
- Provisions for mixing zones when calculating toxic constituent effluent limitations.
- Use of interim effluent limits to provide time for dischargers to take actions to meet final limits.

The EPA promulgated numeric water quality criteria for priority toxic pollutants and other water quality standards for waters in the State of California pursuant to section 303(c)(2)(B) of the CWA if those pollutants could be reasonably expected to interfere with the designated uses of states' waters. Although California had adopted numeric criteria for priority toxic pollutants in 1992, the courts ordered California to rescind these water quality control plans in 1994 and the new water quality criteria rule, known as the California Toxics Rule (CTR), temporarily replaced the standards adopted in 1991. The CTR established:

- Ambient aquatic life criteria for 23 priority toxics;
- Ambient human health criteria for 57 priority toxics; and
- Compliance schedule provision.

Under the CTR various regional water quality control boards will issue schedules of compliance for new or revised NPDES permit limits based on the federal criteria when certain conditions are met. Currently each basin plan, as prepared by the regional water quality control board, contains a water quality criterion that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This has been contested by local jurisdictions all over California since it is expected to add significantly to the cost of wastewater treatment.

EPA contends that since California is implementing EPA's current regulations, the CTR will not impose any incremental costs and that the water quality criterion does not directly create economic impacts. EPA staff notes that California has some discretion to develop mechanisms that could result in more flexibility for local areas (e.g., site-specific criteria, phased TMDL program).

For Solano County, the San Francisco RWQCB does not require a separate and specific CTR permit. The wastewater agencies that discharge to surface waters were required to complete a number (depending on whether discharger is major or minor, municipal or industrial) of rounds of sampling under the CTR. Recently written permits include effluent limitations based

on the results of the CTR samples; future permits will identify specific pollutants and limits based on current testing.

California Wastewater Treatment Regulations

The California Water Code is the principal state regulation governing the use of water resources within the State of California. This law controls, among other issues, water quality protection and management, and management of water-oriented agencies. Division 7 of the California Water Code, commonly referred to as the Porter-Cologne Act, is the principal mechanism for regulation of water quality and pollution issues within California. This act established a regulatory program to protect the water quality and beneficial uses of all state waters. The Porter-Cologne Act also established the State Water Resources Control Board and California Regional Water Quality Control Boards (RWQCB) as principal state agencies responsible for water quality control. The SWRCB has divided California into nine regions with Solano County located in the San Francisco Bay RWQCB.

The Porter-Cologne Act grants the SWRCB and regional offices broad powers to protect water quality and is the primary vehicle for implementation of California's responsibilities under the federal CWA. These broad powers include the authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of hazardous materials and other pollutants. The Porter-Cologne Act also includes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil/petroleum product.

The San Francisco Bay RWQCB, as with all other regional boards, must formulate and adopt a water quality plan for its region which must conform to the Porter-Cologne Act. The Porter-Cologne Act also provides that a regional office, such as the San Francisco Bay RWQCB, may include within its regional plan water discharge prohibitions applicable to local conditions, areas, and types of waste. The regional offices are also authorized to enforce discharge limitations, take actions to prevent violations, and conduct investigations about the quality of any of the waters of the state. Civil and criminal penalties are applicable to persons who violate the requirements of the Porter-Cologne Act or SWRCB/RWQCB orders.

The Porter-Cologne Act also requires local governments to notify their regional office of the filing of tentative subdivision maps of six (6) or more family units unless the development discharges waste into a community sewer system. It also requires that any person discharging or proposing to discharge waste, even individual septic systems for single-family residences, to file a report with the regional offices. For more than 20 years, the San Francisco Bay RWQCB has waived the filing of those reports for individual septic systems in Solano County since the County's Department of Environmental Health (EH) had adopted substantially similar policies and ordinances[5] regulating waste discharge. However, local jurisdictions in Solano County are still required to notify the San Francisco Bay RWQCB of development with six units or more.

[5] Solano County Sewage Standards in Chapter 6.3 of the County Ordinance is available on-line at: *https://www.solanocounty.com/civicax/filebank/blobdload.aspx?blobid=7909*

Other state agencies with jurisdiction or involvement in water quality regulation in California include the Department of Public Health (DPH) for drinking water regulations and water reclamation criteria, the Department of Pesticide Regulation, the Department of Fish and Game, and the Office of Environmental Health and Hazard Assessment.

California Storm Drainage & Flood Control Regulations

SB 985 addresses Runoff recapture and requires that state and local agencies regulating stormwater diversion systems to identify opportunities for capturing that runoff -- including summer season runoff -- for some form of reuse.

Local Wastewater Regulations

The Cities of Fairfield and Suisun City have policies and procedures consistent with the San Francisco Bay RWQCB recommendation for connection to a public wastewater system in urbanized areas. Specifically, both cities generally require areas receiving sewer service to be annexed to the city.

Wastewater Solids Regulations

Solids generated at a wastewater treatment facility comprise screenings, grit, primary or raw sludge (PS) and secondary or waste activated sludge (WAS). The screenings and grit are typically dewatered and disposed in a landfill. Sludge generated by a wastewater treatment facility is defined as biosolids once beneficial use criteria, as determined by compliance with EPA regulations, have been achieved through stabilization processes. Stabilization processes are described as those that help reduce pathogens and reduce vector attraction.

Several federal, state, and local regulations are in place that influence whether biosolids from municipal wastewater treatment plants can be reused or disposed of. Increased concerns and debate over biosolids disposal and its associated environmental impacts have led to more stringent revisions and amendments for many of these regulations. Continuing changes in regulations affecting biosolids management make a flexible management program essential.

Federal, state, and local agencies are responsible for regulating biosolids beneficial reuse/disposal. The authority of each agency varies based on the beneficial reuse/disposal methods employed. However, overall guidelines are established by the EPA. These guidelines are in turn implemented by state and local governments. Many state and local agencies in California have developed additional rules, guidelines, and criteria for biosolids management.

In order to implement the long-term biosolids permitting program, required by the Water Quality Act of 1987, the EPA initiated two rule makings. The first rulemaking established requirements and procedures for including biosolids management in NPDES permits, procedures for granting state biosolids management programs primacy over federal programs, or for federal programs to implement biosolids permits if a state so chooses.

The second rulemaking proposed to regulate and control biosolids permitting was 40 CFR Part 503, Standards for the Use and Disposal of Sewage Sludge. This rule addresses three general categories of beneficial reuse/disposal of biosolids including:

- Land application of sewage sludge for beneficial use of organic content;

- Surface disposal of biosolids in a monofill, surface impoundment, or other dedicated site; and
- Incineration of sewage sludge with, or without, auxiliary fuel.

Future Regulatory Considerations

This section provides insight into the future regulatory considerations that may affect County sewer systems' effluent discharges. Identifying future regulatory trends is critical for the following reasons:

- Developing treatment scenarios and alternatives;
- Planning for process and layout requirements for future regulatory compliance; and
- Making budget considerations for major design and construction projects.

Identifying future pollutants of concern (POCs), such as metals, nutrients, and/or pathogens, will help to develop alternatives that are flexible and can be easily expanded or upgraded to treat future POCs. For example, planning may include reserving space in the site layout for nutrient reduction, tertiary filtration, advanced oxidation, or an alternative disinfection method that would provide treatment of future POCs.

Nutrients, including nitrogen and phosphorus, are the leading cause of impairments to the nation's surface waters and as a result are receiving greater regulatory scrutiny regarding their contribution to the overall quality of the nation's receiving waters. Although appropriate amounts of nutrients are vital for the health and proper functioning of water bodies, excessive nutrient concentrations can cause water quality degradation.

Nationwide Nutrient Criteria

In November 2007, the National Resources Defense Council (NRDC) filed a petition with the EPA to require that nutrient removal be included in the definition of secondary treatment. The petition stated that "there are many [biological processes] which can achieve total phosphorus levels of 1.0 milligrams per liter (mg/L) as a monthly average, and a total nitrogen of 6 to 8 mg/L as an annual average" (NRDC et al, 2007).

In response to the petition by NRDC, the National Association of Clean Water Agencies (NACWA) wrote to the EPA in February 2008, September 2009, and June 2010 urging the EPA to deny the petition to modify the secondary treatment regulations for several legal, technical, and political reasons including but not limited to the potentially exorbitant cost to publically owned treatment works and the inappropriateness of establishing national limits for local and regional water quality issues (NACWA, 2008; NACWA, 2009). In October 2009, the EPA stated they were actively analyzing the data and information to prepare a report and preliminary response to the NRDC petition. They stated they would consider NACWA, other stakeholders, and all information carefully before taking action on the NRDC petition (U.S. EPA, 2009a).

Due to the scientific uncertainties associated with the development of numeric nutrient criteria and the magnitude of the expected costs of compliance, nutrient water quality policies are very controversial and have sparked several legal actions across the country. The State of Florida has become the initial focus of environmental groups' efforts to push the EPA to develop federal numeric nutrient criteria to be imposed on the states. The EPA has agreed to a consent decree in

the environmental suit, and has made a determination that numeric nutrient standards are necessary in Florida. Proposed criteria for total nitrogen and total phosphorus were released in January 2010. This action is possibly precedential, and may result in environmental groups suing the EPA to impose nutrient criteria in other areas of the country.

State of California Nutrient Numeric Endpoints

In addition to the increasingly stringent regulation of nutrients, there is a trend towards increasing regulation of emerging microconstituents and bioaccumulative pollutants in treated effluent discharges.

Microconstituents and Bioaccumulative Constituents

Microconstituent, also referred to as "contaminants of emerging concern" (CECs) by the EPA Office of Water, are substances that have been detected in surface waters and the environment and may potentially cause deleterious effects on aquatic life and the environment at relevant concentrations. Microconstituents include:

- Persistent organic pollutants (POPs) such as polybrominated diphenyl ethers (PBDEs; used in flame retardants, furniture foam, plastics, etc.) and other organic contaminants.
- Pharmaceuticals and personal care products (PPCPs), including a wide suite of human prescribed drugs, over-the-counter medications, bactericides, sunscreens, and synthetic musks.
- Veterinary medicines such as antimicrobials, antibiotics, anti-fungals, growth promoters, and hormones.
- Endocrine-disrupting chemicals (EDCs), including synthetic estrogens and androgens, naturally occurring estrogens, as well as many other compounds capable of modulating normal hormonal functions and steroidal synthesis in aquatic organisms.
- Nanomaterials such as carbon nanotubes or nano-scale particulate titanium dioxide.

Bioaccumulative constituents are substances that are taken up by organisms at faster rates than the organisms can remove them. As a result, these constituents accumulate in the organism and the food chain, and can remain in the environment for long periods of time. Mercury, polychlorinated biphenyls (PCBs), and dioxins are some bioaccumulative constituents that are being increasingly regulated.

Monitoring requirements for these trace pollutants are increasing, including requirements to analyze constituents at lower detection limits. It is likely that water quality criteria followed by new effluent limits will be added to permits. Implementation of CEC standards is not expected to be imminent as the EPA is currently focused on assessing the potential impact CECs have on the environment and human health.

The State Water Resources Control Board (SWRCB) is in the process of developing statewide policies for nutrients. The SWRCB held a scoping meeting in October 2011 to seek input on content for a proposed Nutrient Numeric Endpoint (NNE) framework and policy for inland surface waters.

California State Recycled Water Policy

The SWRCB adopted a Recycled Water Policy (RW Policy) in 2009 and updated in 2013 to establish more uniform requirements for water recycling throughout the State and to streamline the permit application process in most instances[6]. The RW Policy includes a mandate that the State increase the use of recycled water over 2002 levels by at least 200,000 acre-feet per year (AFY) by 2020 and by at least 300,000 AFY by 2030. It also includes goals for stormwater reuse and conservation and potable water offsets by recycled water. The onus for achieving these mandates and goals is placed on both recycled water purveyors and potential users. Since the recycled water project permit process is streamlined, projects will not be required to include a monitoring component. If any regulations arise from new knowledge of risks associated with CECs, then projects will be given compliance schedules. Regulations are not expected to arise in the imminent future.

[6] Details are at the State Water Board website at www.swrcb.ca.gov/water_issues/programs/water_recycling_policy/.

REFERENCES

Alameda County Water District et. al. September 2013. San Francisco Bay Area Integrated Regional Water Management Plan. 973-pages. Authored by Kennedy/Jenks Consultants in consultation with ESA, and Kearns & West. Available on-line at: *http://bairwmp.org/docs/2013-bairwm-plan-update/2013-final-plan/San%20Francisco%20Bay%20Area%20IRWMP%20Final_September%202013.pdf*

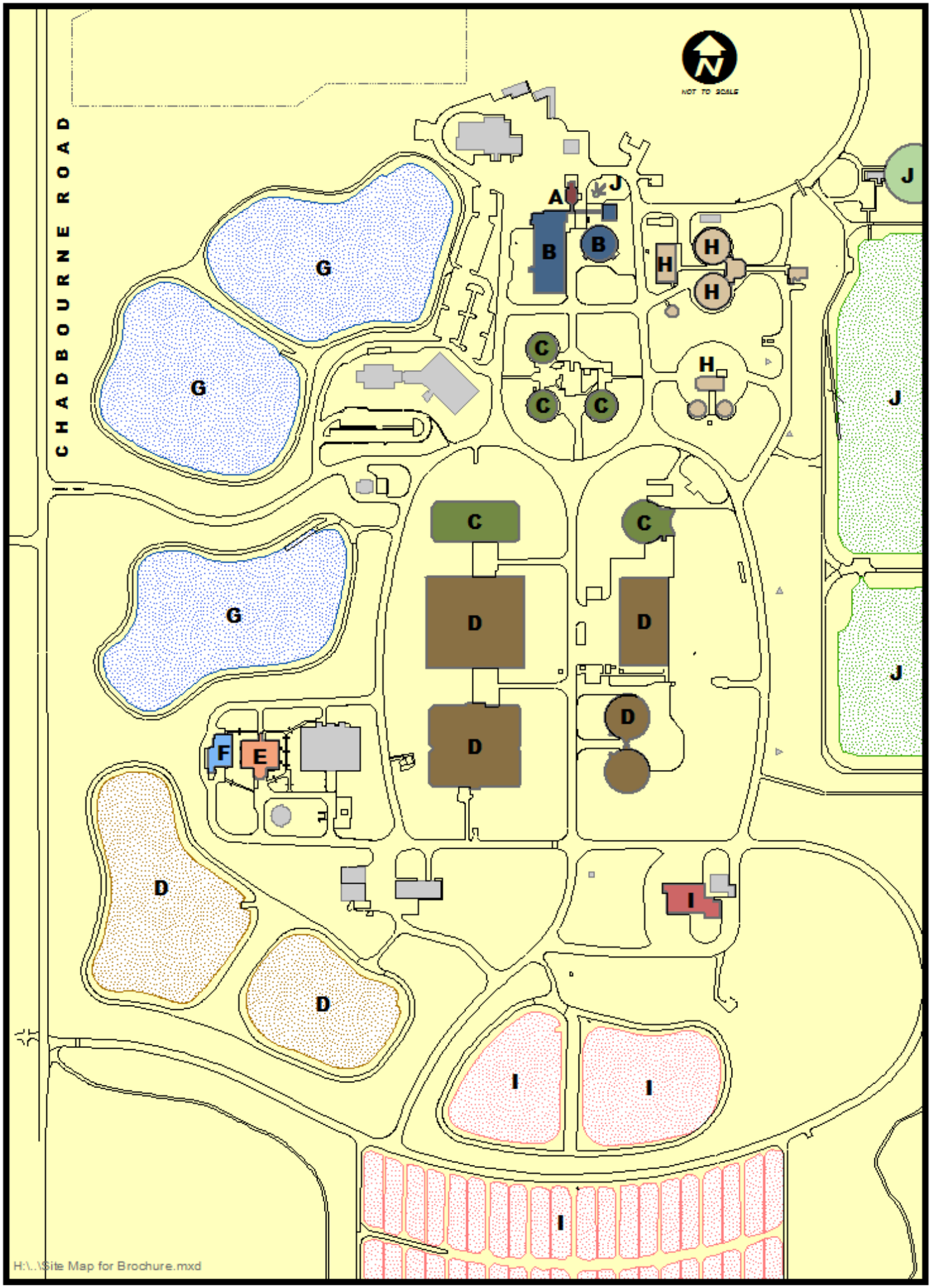
City of Suisun City. *Sewer System Management Plan*, Feb 2014. 106-pages Available on-line at: *http://www.suisun.com/wp-content/files/Elements_1-11_-_Sewer_System_ Management_Plan_-_2014.pdf*.

State Water Resources Control Board. *2010 Integrated Report* (Clean Water Act Section 303(d) List / 305(b) Report).

State Water Resources Control Board. *Nonpoint Source Pollution (NPS) Control Program*. www.waterboards.ca.gov/water_issues/programs/nps.

Fairfield-Suisun Sewer District

Appendix 2


CHADBOURNE ROAD
NOT TO SCALE
A
B
C
D
E
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H
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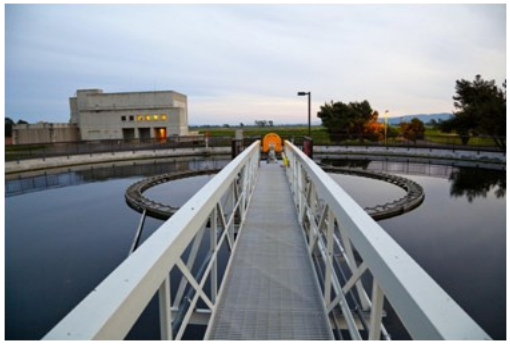
J

A. Preliminary Treatment
Debris and grit that are harmful to downstream equipment are removed with bar screens and degritting equipment. Influent flow is measured and recorded at this location.

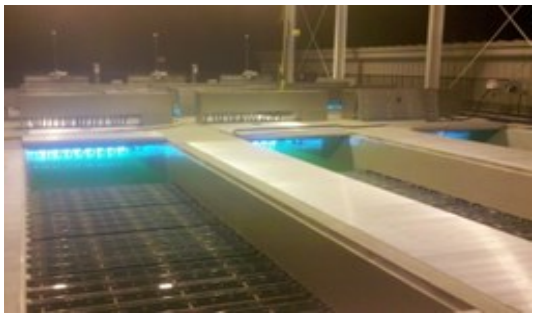
B. Primary Treatment
The primary clarifiers at the head of the facility remove heavier solids through settling.

C. Intermediate Treatment
The oxidation towers and intermediary clarifiers remove soluble organic matter.



D. Secondary Treatment
Secondary treatment is accomplished in the aeration tanks and secondary clarifiers. Bacteria consume organic matter in the intermediate treatment effluent, generating an 'activated' sludge. To survive, bacteria need oxygen that is provided in the aeration tanks. Secondary clarifiers remove the activated sludge through settling.

E. Tertiary Treatment
Filters provide a polishing step to remove the few suspended particles remaining in the secondary clarifier effluent.



F. Ultraviolet Disinfection (UV)
UV light destroys the genetic makeup of pathogenic organisms to prevent the spread of waterborne diseases to downstream users and the environment.

G. Final Effluent Storage
Final effluent can be discharged directly into the Suisun Marsh, or temporarily stored in large, earthen reservoirs for later use in irrigation or utility applications.

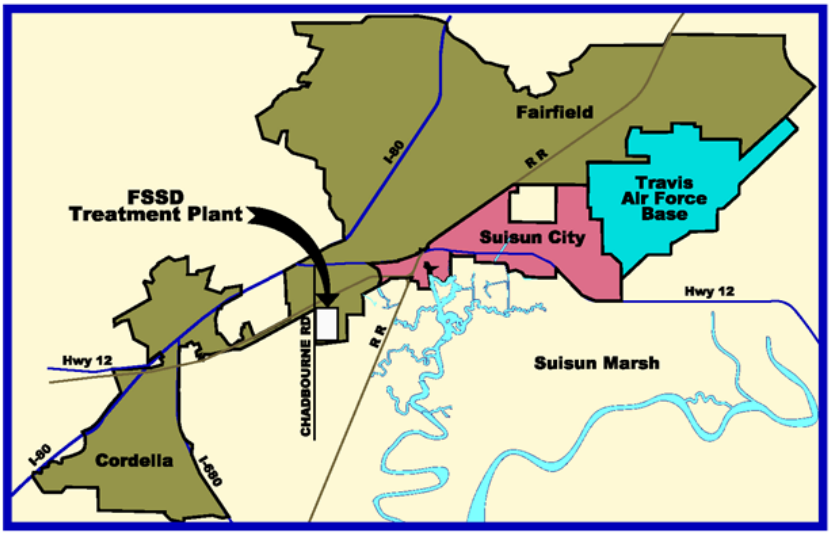
H. Anaerobic Digestion
Solids removed in the clarifiers are thickened and then digested in a closed vessel. Digesters provide an environment to reduce the organic matter and disease-causing organisms. Methane is produced as the solids are digested and is used as a fuel for on-site electrical generators.

I. Dewatering
The digested solids are pumped to the dewatering building or solar drying beds, where excess water is removed.

J. Flow Equalization
Flow equalization facilities are used to divert and temporarily store incoming flows during high flow, wet weather periods. The stored wastewater is routed back to the plant for treatment.

Fairfield-Suisun Sewer District

1010 Chadbourne Road
Fairfield, CA 94534
(707) 429-8930
www.fssd.com



The Fairfield-Suisun Sewer District oversees wastewater collection and treatment, water recycling, and stormwater management services in a 41-square-mile area of Solano County, California. The service area encompasses the cities of Fairfield and Suisun City as well as one of the nation's most strategically important military installations, Travis Air Force Base.

The District owns and operates a system of sanitary sewers and pumping stations that serves 135,000 residential, commercial and industrial customers and government Agencies. Major industries includes Anheuser-Busch Brewery, Travis Air Force Base, and Super Store Industries. Households, retail businesses, major food and beverage producers, light industries, manufacturers and vital military Operations depend upon this service.

The District's collection system consists of 13 pump stations and a 70-mile network of 12 to 48 inch diameter sewer pipes that collect and transport sanitary waste to a modern, efficient wastewater treatment plant. The treatment facilities, which occupy about 150 acres, replaced three older plants in 1976 and have undergone major renovation and expansion to keep pace with the region's population and economic growth, as well as technological advancements in the wastewater industry.

The District's mission is to safeguard public health and the environment. Just south of the District's boundary is the sensitive Suisun Marsh, which is the nation's largest brackish water marsh as well as the largest wetland on the Pacific Coast. This 116,000-acre region not only supports abundant plant life but also serves as a stopover for up to 1.5 million migratory birds traversing the Pacific Flyway each year. Protecting public and environmental health requires the District to ensure that discharged water meets stringent water quality standards set by Federal, State and Regional agencies.

FLOWS AND LOADING

Average Daily Flow:
12.2 million gallons per day

Biosolids Disposal:
10,400 wet tons annually

Suspended Solids Removed:
99.5% of incoming solids

Dry Weather Capacity:
23.7 million gallons per day

Irrigation/Utility Water Output:
193 million gallons

POWER

Consumed:
11,642 MWh annually

Sources:
PG&E, solar, wind and methane co-generation

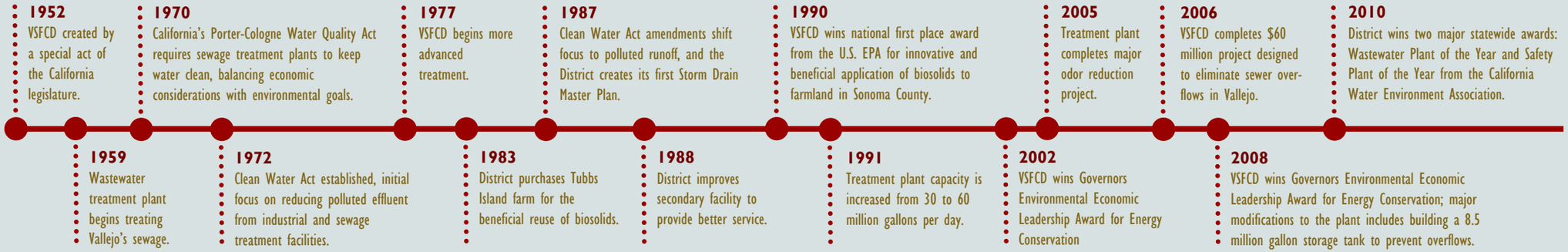
Wind Turbine Power

Wastewater treatment is an energy-intensive process. The District's wastewater treatment facilities are the first in California to be powered by wind turbines. The four are rated at 50 kw and became operational in early 2010.

Solar Power

The District's property is host for the solar system owned and operated by SunEdison. The solar system has the capacity to deliver 1 MW of power to the treatment plant at 12 KV and produces approximately 20% of electricity used each year.

VALLEJO SANITATION & FLOOD CONTROL DISTRICT



CELEBRATING **60 YEARS** OF SERVICE **1952 - 2012**

Appendix 3

6 VALLEJO SANITATION FLOOD CONTROL DISTRICT
CELEBRATING
60 YEARS OF SERVICE

Appendix 4

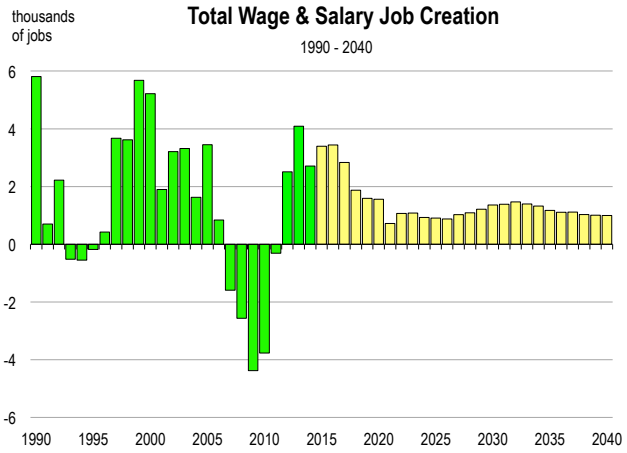
Solano County Economic Forecast

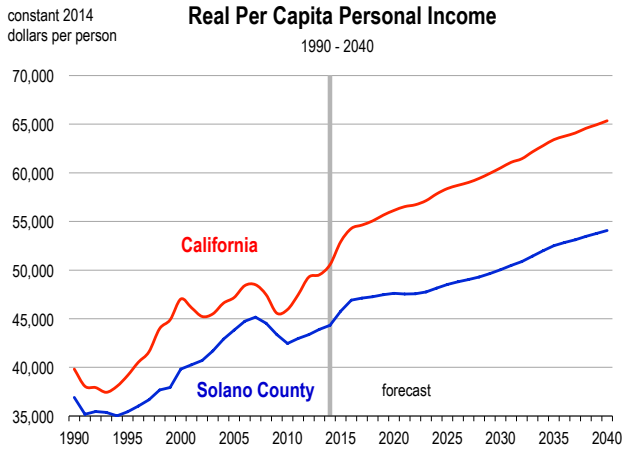
Solano County is located on the Northeast edge of the San Francisco Bay, approximately halfway between San Francisco and Sacramento. Solano County has a population of 427,700 people and a total of 129,900 wage and salary jobs. The per capita income in Solano County is $43,319 and the average salary per worker is $67,135.

In 2014, employment in Northern California increased by 3.4 percent, whereas employment in the greater Bay Area grew by 4.0 percent. In Solano County, a total of 2,700 wage and salary jobs were created, representing an increase of 2.1 percent. The unemployment rate improved significantly, falling from 9.0 percent in 2013 to 7.4 percent in 2014.

Most major sectors gained jobs in 2014. The largest increases were observed in manufacturing (+630 jobs), leisure and hospitality (+600 jobs), education and healthcare (+550 jobs), and wholesale and retail trade (+420 jobs). The largest losses occurred in construction (-190 jobs) and financial activities (-190 jobs).

From 2009 to 2014, the Solano County population increased at an annual average rate of 0.7 percent. This growth was due largely to the natural increase (new births), as net migration was low.





Forecast Highlights

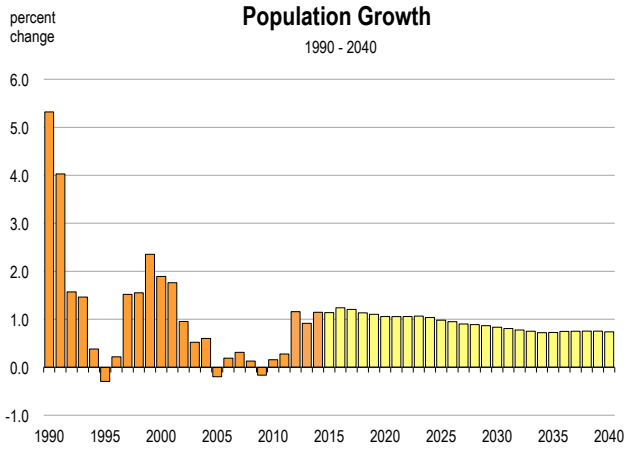
- In 2015, total employment will increase by 2.6 percent. Between 2015 and 2020, the annual growth rate is expected to average 1.6 percent.
- Average salaries in Solano County are virtually identical to the California state average. Between 2015 and 2020, inflation-adjusted salaries are projected to increase by 0.7 percent per year in Solano County, compared to 0.6 percent per year across the state.
- Between 2015 and 2020, the largest employment increases will occur in education and healthcare (+2,600 jobs), construction (+1,800 jobs), leisure and hospitality (+1,700 jobs), and professional services (+1,500 jobs). Together, these sectors will account for 68 percent of net job creation in the county.
- The population is expected to grow by 1.2 percent in 2015. Annual growth in the 2015 to 2020 period is forecast to average 1.1 percent.
- Net migration will remain positive over the forecast period. From 2015 to 2020, an average of 2,800 net migrants will enter the county each year.
- Real per capita income is forecast to rise by 3.3 percent in 2015. Between 2015 and 2020, real per capita income will grow at an average rate of 0.8 percent per year.
- Total taxable sales, adjusted for inflation, are expected to increase by an average of 1.7 percent per year during the 2015-2020 period.
- Industrial production is expected to increase by 4.8 percent in 2015. Between 2015 and 2020, the growth rate is forecasted to average 3.1 percent per year.

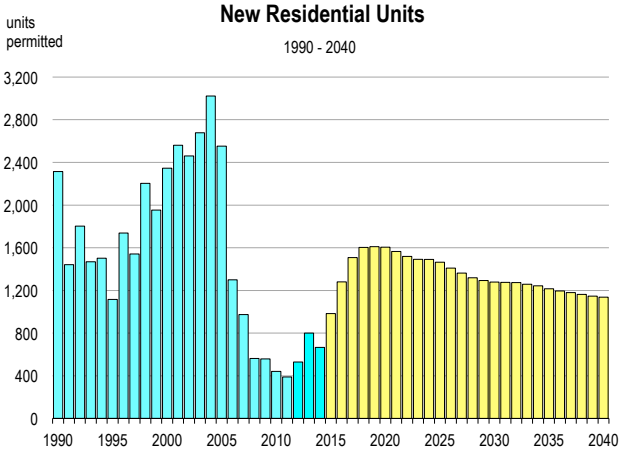
This Forecast was prepared by Caltrans, Economic Analysis Branch. Available on-line at: http://www.dot.ca.gov/hq/tpp/offices/eab/socio_economic_files/2015/Final%20Forecasts/Solano.pdf

Solano County Economic Forecast

2006-2014 History, 2015-2040 Forecast

	Population (people)	Net Migration (people)	Registered Vehicles (thousands)	Households (thousands)	New Homes Permitted (homes)	Total Taxable Sales (billions)	Personal Income (billions)	Real Per Capita Income (dollars)	Inflation Rate (% change in CPI)	Real Farm Crop Value (millions)	Real Industrial Production (billions)	Unemployment Rate (percent)
2006	411,351	-2,268	380	140.0	1,300	$6.5	$15.3	$44,748	3.2	281.6	2.9	4.9
2007	412,636	-1,836	375	140.5	973	$6.3	$16.0	$45,157	3.4	312.7	3.0	5.3
2008	413,167	-2,468	371	141.1	562	$6.0	$16.2	$44,527	2.9	331.5	3.2	6.9
2009	412,488	-3,558	372	140.9	559	$5.3	$15.9	$43,359	0.8	282.9	3.0	10.6
2010	413,129	-1,769	371	141.8	441	$5.2	$15.8	$42,448	1.3	287.5	2.9	12.5
2011	414,268	-1,198	365	142.4	388	$5.8	$16.5	$42,971	2.7	314.9	2.8	12.1
2012	419,064	2,605	368	142.8	529	$6.0	$17.3	$43,358	2.7	360.4	2.9	10.6
2013	422,899	1,619	381	143.3	800	$6.4	$18.1	$43,914	2.3	358.1	2.9	9.0
2014	427,743	2,559	389	143.9	666	$6.8	$19.0	$44,319	2.8	358.7	3.2	7.4
2015	432,611	2,622	395	144.5	983	$7.1	$20.0	$45,765	1.2	359.9	3.3	6.5
2016	437,971	3,122	400	145.4	1,280	$7.6	$21.4	$46,907	3.2	362.2	3.5	5.6
2017	443,249	3,021	404	146.6	1,508	$8.0	$22.5	$47,132	3.2	366.5	3.6	5.3
2018	448,274	2,746	408	148.0	1,603	$8.4	$23.5	$47,259	3.0	371.0	3.7	5.2
2019	453,218	2,638	411	149.5	1,610	$8.7	$24.6	$47,474	2.8	375.4	3.8	5.1
2020	458,006	2,458	414	150.9	1,605	$9.0	$25.6	$47,608	2.9	376.7	3.9	5.1
2021	462,840	2,506	416	152.4	1,565	$9.3	$26.7	$47,548	3.0	378.9	4.0	5.1
2022	467,732	2,566	418	153.9	1,519	$9.6	$27.8	$47,568	3.1	380.5	4.1	5.1
2023	472,718	2,654	420	155.3	1,492	$9.9	$28.9	$47,740	2.7	381.4	4.2	5.0
2024	477,616	2,572	421	156.6	1,491	$10.3	$30.2	$48,139	2.6	382.8	4.3	5.0
2025	482,301	2,376	423	158.0	1,464	$10.6	$31.6	$48,515	2.8	384.3	4.4	5.0
2026	486,879	2,281	425	159.3	1,409	$11.0	$33.0	$48,790	2.8	385.8	4.5	5.0
2027	491,269	2,107	427	160.6	1,363	$11.4	$34.4	$49,023	2.8	387.2	4.7	5.0
2028	495,635	2,111	429	161.9	1,319	$11.9	$35.9	$49,301	2.7	388.7	4.8	5.0
2029	499,928	2,048	432	163.1	1,293	$12.4	$37.3	$49,640	2.5	389.7	5.0	5.0
2030	504,098	1,943	434	164.3	1,278	$13.0	$38.8	$50,042	2.4	391.6	5.1	5.0
2031	508,164	1,841	436	165.5	1,276	$13.6	$40.4	$50,488	2.3	393.5	5.2	5.0
2032	512,107	1,719	439	166.6	1,274	$14.3	$42.0	$50,870	2.5	395.4	5.4	5.0
2033	515,951	1,609	441	167.8	1,258	$14.9	$43.7	$51,444	2.1	397.3	5.6	5.0
2034	519,667	1,485	443	169.0	1,243	$15.6	$45.5	$51,997	2.3	399.3	5.8	5.0
2035	523,433	1,555	446	170.1	1,216	$16.2	$47.4	$52,512	2.4	401.3	5.9	5.0
2036	527,344	1,702	448	171.2	1,195	$16.9	$49.4	$52,831	2.8	403.2	6.1	5.0
2037	531,302	1,773	450	172.3	1,180	$17.5	$51.4	$53,117	2.8	405.2	6.3	5.0
2038	535,303	1,839	452	173.4	1,163	$18.1	$53.5	$53,469	2.7	407.2	6.5	5.0
2039	539,331	1,895	454	174.5	1,147	$18.8	$55.8	$53,760	2.8	409.3	6.7	5.0
2040	543,311	1,856	455	175.5	1,137	$19.4	$58.1	$54,076	2.8	411.3	6.9	5.0

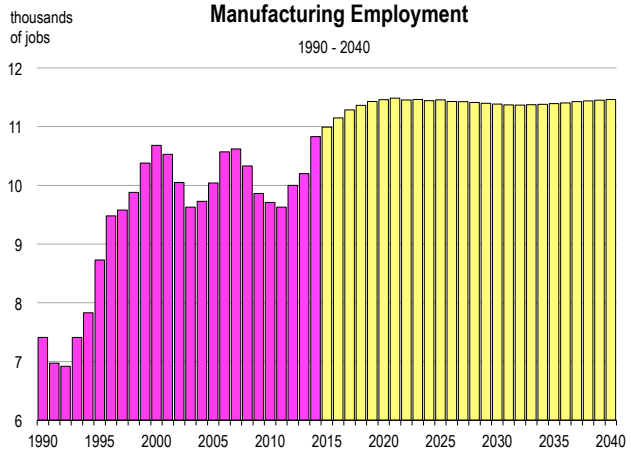


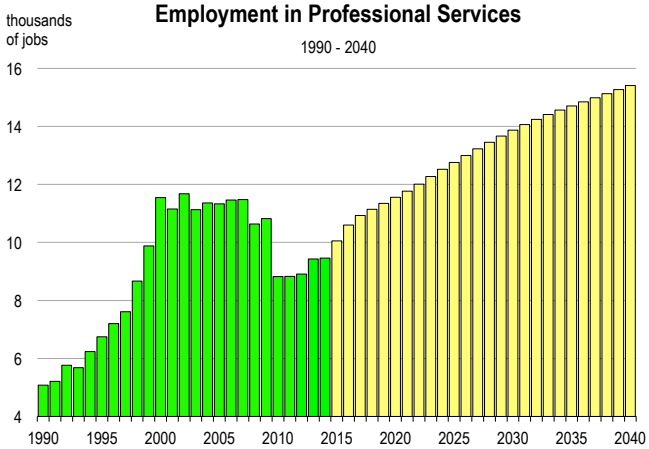


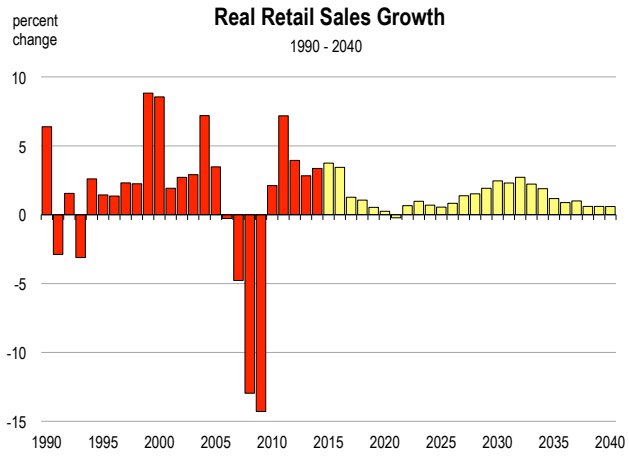
Solano County Employment Forecast

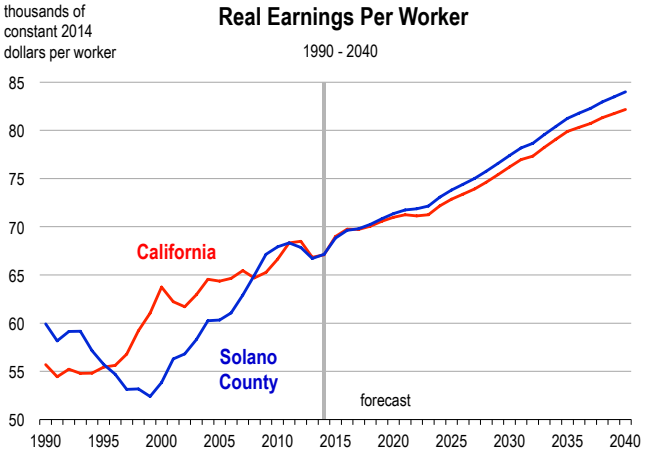
2006-2014 History, 2015-2040 Forecast

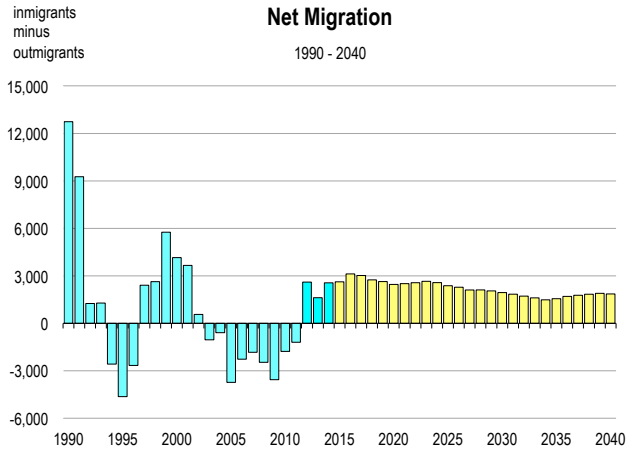
	Total Wage & Salary	Farm	Construction	Manufac-turing	Transportation & Utilities	Wholesale & Retail Trade	Financial Activities	Professional Services	Information	Health & Education	Leisure	Government
	employment (thousands of jobs)											
2006	133.2	1.73	12.6	10.6	4.2	23.0	6.2	11.5	1.6	17.9	13.5	26.0
2007	131.6	1.55	10.7	10.6	4.5	22.4	5.6	11.5	1.6	18.6	13.7	26.6
2008	129.0	1.60	9.2	10.3	4.6	21.8	5.1	10.6	1.5	19.2	13.9	26.9
2009	124.7	1.56	7.4	9.9	4.6	20.3	5.1	10.8	1.3	19.8	13.8	26.1
2010	120.9	1.39	7.2	9.7	4.2	20.6	5.2	8.8	1.3	20.2	13.7	24.9
2011	120.6	1.41	7.8	9.6	3.7	20.5	5.1	8.8	1.1	20.4	13.9	24.3
2012	123.1	1.49	8.1	10.0	3.7	21.2	5.0	8.9	1.1	21.2	14.2	24.1
2013	127.2	1.67	8.6	10.2	3.9	21.4	5.1	9.4	1.1	23.0	14.6	24.0
2014	129.9	1.88	8.4	10.8	4.1	21.8	4.9	9.5	1.1	23.6	15.2	24.3
2015	133.3	1.88	8.8	11.0	4.3	22.2	4.9	10.1	1.1	24.4	15.9	24.4
2016	136.7	1.89	9.1	11.1	4.4	22.6	5.0	10.6	1.1	25.0	16.6	25.0
2017	139.6	1.91	9.8	11.3	4.5	22.8	5.1	10.9	1.1	25.4	17.1	25.3
2018	141.4	1.92	10.1	11.4	4.5	23.0	5.1	11.1	1.1	26.0	17.4	25.4
2019	143.0	1.94	10.4	11.4	4.6	23.2	5.1	11.3	1.1	26.5	17.6	25.5
2020	144.6	1.94	10.5	11.5	4.6	23.3	5.1	11.6	1.1	27.0	17.7	25.9
2021	145.3	1.95	10.6	11.5	4.6	23.4	5.1	11.8	1.1	27.6	17.7	25.6
2022	146.4	1.95	10.7	11.5	4.6	23.5	5.1	12.0	1.1	28.1	17.7	25.6
2023	147.5	1.96	10.7	11.5	4.6	23.6	5.1	12.3	1.1	28.7	17.7	25.7
2024	148.4	1.96	10.7	11.4	4.7	23.7	5.1	12.5	1.1	29.2	17.7	25.8
2025	149.3	1.97	10.7	11.5	4.7	23.8	5.1	12.8	1.1	29.6	17.7	25.9
2026	150.2	1.97	10.7	11.4	4.7	23.9	5.1	13.0	1.1	30.1	17.8	26.1
2027	151.2	1.98	10.6	11.4	4.7	24.0	5.1	13.2	1.1	30.5	17.9	26.3
2028	152.3	1.98	10.6	11.4	4.7	24.1	5.1	13.5	1.1	30.9	17.9	26.6
2029	153.5	1.98	10.5	11.4	4.7	24.2	5.1	13.7	1.1	31.4	18.1	26.9
2030	154.9	1.99	10.5	11.4	4.7	24.3	5.1	13.9	1.1	31.8	18.2	27.3
2031	156.2	2.00	10.5	11.4	4.7	24.4	5.1	14.1	1.1	32.3	18.3	27.8
2032	157.7	2.00	10.5	11.4	4.7	24.5	5.1	14.2	1.1	32.8	18.5	28.4
2033	159.1	2.01	10.5	11.4	4.8	24.6	5.1	14.4	1.1	33.2	18.6	28.9
2034	160.4	2.02	10.5	11.4	4.8	24.7	5.1	14.6	1.1	33.7	18.8	29.4
2035	161.6	2.02	10.4	11.4	4.8	24.8	5.1	14.7	1.2	34.1	18.9	29.7
2036	162.7	2.03	10.4	11.4	4.8	24.9	5.1	14.8	1.2	34.6	19.1	30.0
2037	163.8	2.03	10.4	11.4	4.8	24.9	5.1	15.0	1.2	35.1	19.2	30.3
2038	164.9	2.04	10.4	11.4	4.8	25.0	5.1	15.1	1.2	35.5	19.4	30.5
2039	165.9	2.05	10.3	11.5	4.8	25.0	5.1	15.3	1.2	36.0	19.5	30.7
2040	166.9	2.06	10.3	11.5	4.8	25.1	5.1	15.4	1.2	36.4	19.7	30.8

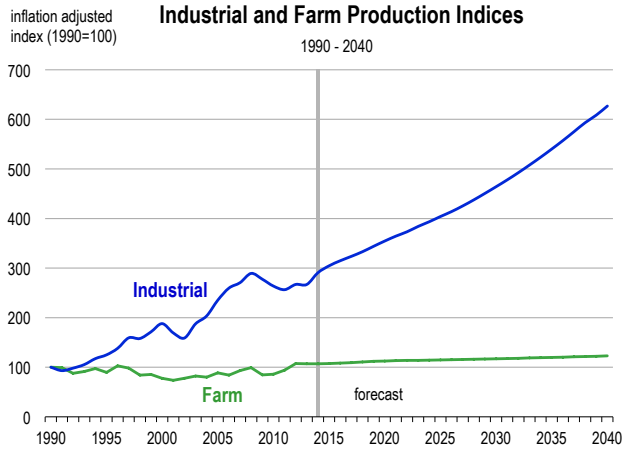












County Economic and Demographic Indicators

Projected Economic Growth (2015-2020)

Expected retail sales growth:	6.7%
Expected job growth:	8.5%
Fastest growing jobs sector:	Construction
Expected personal income growth:	10.1%

Expected population growth:	5.9%
Net migration to account for:	55.1%
Expected growth in number of vehicles:	4.8%

Demographics (2015)

Unemployment rate (March 2015):	6.3%
County rank* in California (58 counties):	20th
Working age (16-64) population:	66.1%

Population with B.A. or higher:	24.0%
Median home selling price (2014):	$300,000
Median household income:	$64,618

Quality of Life

Violent crime rate (2013):	473 per 100,000 persons
County rank* in California (58 counties):	41th
Average commute time to work (2015):	31.1 minutes

High School drop out rate (2014):	10.6%
Households at/below poverty line (2015):	10.4%

* The county ranked 1st corresponds to the lowest rate in California

Appendix 5

Drainage Maintenance Agreement
Among the Fairfield-Suisun Sewer District,
the City of Fairfield, and the City of Suisun City
Compiled, as amended, through January 23, 1995

DRAINAGE MAINTENANCE AGREEMENT

THIS AGREEMENT MADE AND ENTERED INTO ON THIS FIRST DAY OF MARCH, 1988, BY AND BETWEEN

FAIRFIELD-SUISUN SEWER DISTRICT, a public corporation, hereinafter referred to as "DISTRICT,"

AND

CITY OF FAIRFIELD, a municipal corporation, hereinafter referred to as "FAIRFIELD,"

AND

CITY OF SUISUN CITY, a municipal corporation, hereinafter referred to as "SUISUN CITY,"

RECITALS

1. The U.S. Army Corps of Engineers is constructing the modified Fairfield Vicinity Streams Project on land owned by the State of California and FAIRFIELD and SUISUN CITY.

2. FAIRFIELD and SUISUN CITY have agreed with the United States and the State of California to operate and maintain the drainage facilities constructed as part of the Fairfield Vicinity Streams Project.

3. DISTRICT has completed a drainage maintenance feasibility study and additional analyses which demonstrated advantages to regionalizing the maintenance management of certain storm water drainage facilities including the federal Fairfield Vicinity Streams Project.

4. FAIRFIELD and SUISUN CITY are desirous of DISTRICT, through exercise of its statutory authority, assuming limited responsibility for maintenance of drainage facilities.

5. DISTRICT is amenable to assuming such limited responsibility.

NOW, THEREFORE, in consideration of the covenants and conditions herein contained, the parties hereto agree as follows:

SECTION I

DEFINITIONS

1. CITIES – collective reference to FAIRFIELD and SUISUN CITY acting as individual parties to this agreement.

2. District Engineer – The General Manager/District Engineer of the DISTRICT or such other person as may be designated to act on behalf of DISTRICT by the Board of Directors.

3. Director of Public Works – The Director of Public Works or such other person as may be designated to act on behalf of the city by the city council.

4. Local Facilities – those storm drainage facilities for which DISTRICT provides supplemental maintenance funding only under the terms of this agreement but for which CITIES retain direct operation and maintenance responsibility.

5. Regional Facilities – those storm drainage facilities for which DISTRICT accepts limited maintenance responsibility under the terms of this agreement.

6. Natural Creeks – open drainage channels which have not been materially altered in either channel shape or alignment from their natural state.

7. Improved Channels – open drainage channels which have been altered from their natural state in order to improve their capacity to carry water.

SECTION II

DISTRICT AGREES:

1. Regional Facilities – To assume responsibility for the following maintenance activities on Regional Facilities owned by or under the control of CITIES:

    A. Storm Water Pumping Stations

        1) perform all required preventive and corrective maintenance of existing and future pumping stations which are turned over to the DISTRICT in acceptable structural and mechanical condition.

        2) make recommendations for station improvements to increase reliability and/or capacity.

3) make no modifications or improvements to facilities which would adversely affect pumping capacity or reliability without the express written consent of the Director of Public Works of the city in which the facility is located.

4) inspect for operational readiness during dry weather conditions.

5) monitor operational status during wet weather conditions and make reasonable efforts to keep the station in operation.

6) maintain written records of work performed and make such records available for inspection by the Director of Public Works during normal business hours.

B. Other Facilities – provide periodic inspection, cleaning and repair of Regional Facilities including pipelines, improved channels, natural creeks, detention basins, bridge foundations, sloughs, culverts and appurtenant structures as required to maintain design hydraulic capacity in accordance with this agreement, but not including maintenance of fences, gates, guardrails, barricades or other devices intended to limit public access or contact with the maintained facilities.

C. Replace equipment and structures that fail, provided that the District's obligation shall not exceed $50,000 per fiscal year.

D. Prepare and submit such reports on maintenance activity as may be required by non-city agencies. CITIES shall provide data to DISTRICT for preparation of said reports for those facilities maintained by CITIES.

E. Act as Lead Agency for purposes of obtaining permits, licenses, easements or other instruments that may be necessary to carry out DISTRICT responsibilities.

F. Regional Facility Inventory – implement and maintain a computerized data base inventory of regional drainage facilities and make summary reports and data available to CITIES as requested.

G. Act as Lead Agency for the purpose of dealing with the Regional Water Quality Control Board, EPA and other agencies promulgating non-point source pollution control regulations.

H. Insurance – require DISTRICT contractors or other parties working on any activities associated with this contract to indemnify and hold harmless CITIES, and to name CITIES as additional insureds.

I. With approval of DISTRICT Board of Directors, participate in the construction of specific capital improvements to the drainage system.

Section II.I. is added 01/23/1995

2. Local Facilities – Provide supplemental funding to CITIES at levels set by the DISTRICT in accordance with procedures established herein.

3. Enterprise Fund – establish a separate enterprise fund to account for revenues and expenditures related to drainage maintenance activities of the DISTRICT. Revenues shall include drainage maintenance fees, interest income and grants-in-aid related to activities under this agreement.

   A. Restrictions – to make no transfers into or out of the enterprise fund unless authorized by the DISTRICT Board of Directors.

   B. Annual Financial Report – to prepare an annual financial report of the enterprise fund audited by an independent Certified Public Accountant. The report shall be prepared in accordance with generally accepted accounting principles and standards and submitted to the DISTRICT Board of Directors within six months of the close of each fiscal year.

   C. Budget – to prepare an annual budget for the activities covered by this agreement, including estimated revenues, fees, and maintenance and capital expenses and allocation to and status of reserves.

SECTION III

CITIES AGREE:

1. to allow DISTRICT and its contractors and agents free and unencumbered access to facilities for the purpose of performing its obligations under this agreement.

2. to furnish DISTRICT with all available spare parts, construction drawings, maintenance manuals, maintenance records, operational records, equipment guarantees, financial records and related materials for each facility for which DISTRICT assumes limited maintenance responsibility.

3. to warrant the overall structural and mechanical integrity of the facilities as of the effective date of this agreement and make such repairs as may be required by DISTRICT to bring existing facilities up to acceptable structural and mechanical condition. Work shall be completed before the effective date of this agreement.

4. fund and construct such capital improvements to increase reliability and/or hydraulic capacity as may be recommended by DISTRICT and determined to be financially feasible by CITIES.

5. that new storm water pumping stations will be designed and constructed to conform with minimum engineering standards established by DISTRICT.

6. submit to District on or before May 1 each year an annual report on maintenance activities completed during the prior calendar year.

SECTION IV

THE PARTIES MUTUALLY AGREE:

1. Maintenance Planning Committee – there shall be established a Maintenance Planning Committee, hereinafter COMMITTEE, consisting of the District Engineer of DISTRICT, the Director of Public Works of FAIRFIELD and the Director of Public Works of SUISUN CITY, or their respective designees. The COMMITTEE shall meet on a regular basis, but not less than once each calendar year, to review and plan regional maintenance priorities for the upcoming year, and make recommendations to DISTRICT for consideration in preparation of the annual budget.

2. Local Facility Maintenance

Section IV.2.A amended 06/27/1994 & 01/23/1995

   A. Enterprise Fund Accounts – CITIES shall each establish a separate enterprise fund account within their respective financial accounting systems to account for revenues and expenditures directly related to maintenance of local facilities under the terms of this agreement. Revenues include the annual DISTRICT funding and other revenues such as interest earnings or grants-in-aid related to activities under this agreement.

      1) Eligible Expenditures – Eligible expenditures shall be limited to the following:

         a. Direct expenses related directly to the maintenance and rehabilitation of such facilities including salaries, employee fringe benefits, equipment costs, materials, and supplies.

         b. Indirect expenses may be charged to the enterprise fund but not exceeding 15% of the eligible direct expenses.

         c. Capital improvements to the drainage system which have been budgeted and approved by the DISTRICT.

      2) Interfund Transfers and Loans – No interfund transfer of funds into or out of the enterprise fund shall be made unless authorized by the DISTRICT.

      3) Annual Financial Report – CITIES shall prepare an annual financial report of the enterprise fund for the fiscal year which shall be audited by

an independent certified public accountant. The report shall be prepared in accordance with generally-accepted accounting principles and standards and submitted within six months of the close of the fiscal year.

4) Reserve Account – CITIES shall create a reserve account within the enterprise fund for major maintenance and replacement of local facilities. Any funds not spent during the fiscal year shall be deposited to this reserve account. The minimum fund balance shall be maintained at no less than twenty-five percent (25%) of the average annual revenues allocated to CITY by DISTRICT.

5) Disaster Relief Funds – In the event of a flooding emergency for which CITIES apply and receive state and/or federal relief funds, that portion of said relief funds related to repayment of enterprise fund expenditures associated with the emergency shall be deposited in the enterprise fund to offset eligible expenses incurred during the emergency. The CITIES are responsible for providing documentation of the eligible emergency expenses and shall be responsible for responding to the state or federal audits of said funds and expenses.

B. Facility Inventory – CITIES and DISTRICT agree to jointly develop a computerized data base inventory of drainage maintenance facilities within their jurisdictions. The inventory shall be in a format approved by the District Engineer and, as a minimum, contain information on location, type of facility, size, materials of construction, date installed and maintenance history. CITIES shall submit to DISTRICT on or before May 1 each calendar year a printed report listing all facilities within their respective jurisdictions by type and size and an updated copy of the complete inventory on magnetic media. This report shall include all new facilities placed in service during the previous calendar year as well as all previously-inventoried facilities. This inventory shall subdivide facilities into Local and Regional categories for purposes of this agreement. Pipelines under 36" in diameter and appurtenant structures shall be included as local facilities. Designation of larger facilities as local shall be at discretion of CITIES, but local facilities inventory for facilities larger than 33" diameter may not be increased or decreased more than 10 percent in any fiscal year as measured by effect on total supplemental funding by DISTRICT unless authorized by DISTRICT Board.

C. Maintenance Cost Allowance – DISTRICT shall annually remit to CITIES for deposit to each city's enterprise fund an amount of money which shall be calculated on the basis of Unit Maintenance Cost Allowances and number of units maintained in accordance with procedures established herein. Unit Maintenance Cost Allowances shall be established annually by the DISTRICT by incorporation into the annual budget.

The amount to be deposited by DISTRICT shall be determined by multiplying the number of units of each type of facility in each city's Local Facility Inventory by the Unit Maintenance Cost Allowance for that type of facility and subtracting the city's local contribution to the fund as shown in the example attached as EXHIBIT A.

D. Neither DISTRICT nor any officer or employee thereof shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by FAIRFIELD under or in connection with any work, authority or jurisdiction not delegated to DISTRICT under this agreement. It is also agreed that, pursuant to Government Code § 895.4, FAIRFIELD shall fully indemnify and hold DISTRICT harmless from any liability imposed for injury (as defined by Government Code § 810.8) occurring by reason of anything done or omitted to be done by FAIRFIELD under or in connection with any work, authority or jurisdiction not delegated to DISTRICT under this agreement.

E. Neither FAIRFIELD nor any officer or employee thereof, is responsible for any damage or liability occurring by reason of anything done or omitted to be done by DISTRICT under or in connection with any work, authority or jurisdiction delegated to DISTRICT under this agreement. It is also agreed that, pursuant to Government Code § 895.4, DISTRICT shall fully indemnify and hold FAIRFIELD harmless from any liability imposed for injury (as defined by Government Code § 810.8) occurring by reason of anything done or omitted to be done by DISTRICT under or in connection with any work, authority, or jurisdiction delegated to DISTRICT under this agreement.

F. Neither DISTRICT nor any officer or employee thereof shall be responsible for any damage or liability occurring by reason of anything done or omitted to be done by SUISUN CITY under or in connection with any work, authority or jurisdiction not delegated to DISTRICT under this agreement. It is also agreed that, pursuant to Government Code § 895.4, SUISUN CITY shall fully indemnify and hold DISTRICT harmless from any liability imposed for injury (as defined by Government Code § 810.8) occurring by reason of anything done or omitted to be done by SUISUN CITY under or in connection with any work, authority or jurisdiction not delegated to DISTRICT under this agreement.

G. Neither SUISUN CITY nor any officer or employee thereof, is responsible for any damage or liability occurring by reason of anything done or omitted to be done by DISTRICT under or in connection with any work, authority or jurisdiction delegated to DISTRICT under this agreement. It is also agreed that, pursuant to Government Code § 895.4, DISTRICT shall fully indemnify and hold SUISUN CITY harmless from any liability imposed for injury (as defined by Government Code § 810.8) occurring by reason of anything done

or omitted to be done by DISTRICT under or in connection with any work, authority, or jurisdiction delegated to DISTRICT under this agreement.

3. Termination – Either CITY may terminate its participation in this agreement by giving written notice to the DISTRICT no later than May 31 of any year. Such termination shall be effective on July 1 of that year. The DISTRICT may terminate its participation in this agreement with respect to either CITY by giving written notice no later than March 1 of any year. Such termination shall be effective on July 1 of that year.

4. FAIRFIELD agrees to provide supplemental financial management services to DISTRICT for Drainage Maintenance activities in accordance with the provisions of the existing financial management agreement between DISTRICT and FAIRFIELD. As compensation for these supplemental services, DISTRICT agrees to pay $2500 per year in addition to compensation provided under existing agreement. Supplemental compensation shall be adjusted annually by the mechanism provided under existing agreement.

5. Mutual Aid – DISTRICT and CITIES agree to provide mutual aid and assistance for drainage maintenance when requested during emergency situations, and agree to reimburse each other for expenses related to said aid and assistance.

6. Effective Date – the effective date of this agreement shall be 12:01 A.M. July 1, 1988.

IN WITNESS the parties hereto have executed this Agreement on the day first above-written.

EXHIBIT A

Example Calculation of Local Facilities Maintenance Cost Allowance

Facility Inventory				Unit Maintenance		Total
Type of Facility	Units	No. of Units		Cost Allowance		Allowance
Storm drain pipes less than 33"	L.F.	200,000	X	$0.20	=	$40,000
Storm drain pipes greater than 33"	L.F.	15,000	X	0.20	=	3,000
Box culvert drains	L.F.	1,000	X	0.35	=	350
Improved Earth Channel	L.F.	15,000	X	2.50	=	37,500
Natural Creek	L.F.	25,000	X	2.00	=	50,000
				Total		130,850
				Less local contribution		-50,000
				District contribution		$80,850