

Municipal Service Review RURAL NORTH VACAVILLE AND MAINE PRAIRIE WATER DISTRICTS

FINAL –January 29, 2015

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ACRONYMS AND ABBREVIATIONS

ACWA	Associated California Water Agencies
AF	acre-foot (feet)
AFY	acre feet per year
AWMC	Agricultural Water Management Council
CCF	hundred cubic feet
CDHS	California Department of Health Services
CDOF	California Department of Finance
CDP	Census Designated Place
CDPH	California Department of Public Health
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CKH	Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000
CSD	Community Services District
CWC	California Water Code
DBP	Direct Benefit Parcels
DRCD	Dixon Resource Conservation District
DSWA	Dixon-Solano Water Authority
DUC	Disadvantaged Unincorporated Community
FPZ	Fire Protection Zone
GC	Government Code (California)
GD	gallons per day
IBP	Indirect Benefit Parcels
JPA	Joint Exercise of Powers Authority
LAFCO	Local Agency Formation Commission
MDD	Maximum Day Demand
MG	million gallons
MGD	million gallons per day
MPWD	Maine Prairie Water District
MSR	Municipal Service Review
NDWA	North Delta Water Agency
PPH	persons per household
RD	Reclamation District
RNVWD	Rural North Vacaville Water District
SCADA	Supervising Control and Data Acquisition
SCWA	Solano County Water Agency
SID	Solano Irrigation District
SOI	Sphere of Influence
SP	Solano Project

1: INTRODUCTION

1.1: Role and Responsibility of LAFCo

The fundamental role of a Local Agency Formation Commission (LAFCO) is to implement the Cortese-Knox-Hertzberg (CKH) Local Government Reorganization Act of 2000 (Government Code (GC) §56000, et seq.), providing for the logical, efficient, and most appropriate formation of local municipalities, service areas, and special districts. The CKH requires all LAFCO's, including Solano LAFCO, to conduct a Municipal Service Review (MSR) prior to updating the spheres of influence (SOI) of the various cities and special districts in the County (GC §56430). CKH requires an MSR and SOI update every 5 years.

1.2: Municipal Service Review Purpose

This MSR provides Solano LAFCO with an informational document that makes determinations prescribed by CKH. This MSR evaluates district structure and operation and discusses possible areas for improvement, coordination, or SOI changes as appropriate. The MSR's purpose is to document and analyze Rural North Vacaville and Maine Prairie Water District's services and operations. Key sources for this study include agency-specific information gathered by reviewing strategic plans, general plans, websites, financial reports, agency audits, research, personal communication, and the MSR Guidelines published by the Governor's Office of Planning and Research. The MSR contains seven elements as prescribed by CKH:

1. **Growth and Population Projections for the Affected Area.** Reviews projected growth within the existing district service boundaries and analyzes the district's plans to accommodate future growth.
2. **The location and characteristics of any disadvantaged unincorporated communities** Identifies disadvantaged unincorporated communities (DUC's) within or contiguous to the SOI. A disadvantaged unincorporated community is defined as inhabited territory with a median household income of 80 percent or less of the statewide median income.
3. **Present and Planned Capacity of Public Facilities and Adequacy of Public Services Including Infrastructure Needs or Deficiencies.** Discusses the services provided including the quality and the ability of the district to provide those services, a discussion of capital improvement projects currently underway, and projects planned for the future where applicable.
4. **Financial Ability of Agencies to Provide Services.** Reviews the district's fiscal data and rate structure to determine viability and ability to meet service demands. It also addresses funding for capital improvement projects.
5. **Status of and Opportunities for Shared Facilities.** Examines efficiencies in service delivery that could include sharing facilities with other agencies to reduce costs by avoiding duplication.
6. **Accountability for Community Service Needs, including Government Structure and Operational Efficiencies.** Examines the district's current government structure, and considers the overall managerial practices. It also examines how well each district makes its processes transparent to the public and invites and encourages public participation.
7. **Matters Related to Effective or Efficient Service Delivery Required by Commission Policy.** Includes a discussion of any Solano LAFCO policies that may affect the ability of each district to provide efficient services.

1.3: Municipal Service Review Uses

This MSR examines the services and operations of the Rural North Vacaville and Maine Prairie Water Districts. It evaluates mandated services and opportunities to provide more effective, efficient services. GC §56375 allows LAFCO to take action on recommendations found in the MSR, such as initiating studies for changes of organization, updating the SOI, or initiating a change of organization.

The MSR also provides the necessary information to help LAFCO make decisions on a proposed SOI update. In evaluating the SOI, the MSR provides the information necessary to determine if the agency has the capability to serve a larger area. The MSR discusses the financial condition of each district, source of revenues, and projected expenses. It also includes a discussion of the projected infrastructure needs that would allow for expansion of those services. The MSR, however, does not address California Environmental Quality Act (CEQA) requirements for the SOI update. That requires a separate analysis.

Alternatively, the MSR can recommend changes of organization: consolidation, dissolution, merger, establishment of a subsidiary district, or new agency formation that may involve a consolidation. Those actions may also require an environmental review, a property tax sharing agreement, and an election.

1.4: Sphere of Influence

The SOI is defined as "a plan for the probable physical boundaries and service areas of a local agency" (GC §56076). The SOI represents one of the most important tools LAFCO uses to "carry out its purposes and responsibilities for planning and shaping the logical and orderly development and coordination of local government agencies" (GC §56425).

CKH requires LAFCO to adopt an SOI for each city and special district in the county. The SOI serves much the same function for LAFCO that general plan planning areas and urban growth boundaries serve for cities and counties. The sphere represents the logical extent of the agency's boundary in the next 5 to 10 years. However, since LAFCO is required to update and review the sphere every 5 years, the sphere in all practicality has a 5-year planning horizon. When adopting the SOI, the Commission must make the following determinations:

- Present and planned land uses in the area. This consists of a review of current and planned land uses, including agricultural and open-space, based on planning documents.
- Present and probable need for public facilities and services. This includes a review of the services available in the area and the need for additional services.
- Present Capacity of Public Facilities. This section includes an analysis of the capacity of public facilities and the adequacy of public services that the district provides or is authorized to provide.
- Social or economic communities of interest. This section discusses the existence of any social or economic communities of interest in the area if the Commission determines that they are relevant to the district. These are areas that may be affected by services provided by the District or may be receiving services in the future.
- Present and probable need for services to disadvantaged communities. Beginning July 1, 2012 the commission must also consider services to disadvantaged communities which are defined as inhabited areas of twelve or more registered voters within the SOI whose median household income is less than or equal to 80 percent of the statewide median income.

A SOI may be amended or updated. An amendment is a relatively limited change to the SOI to accommodate a specific project. Amendments can add or remove territory, address a change in provision of services by an agency, or revise a plan for services when it becomes impractical.

Minor amendments to the SOI, as determined by LAFCO, will not require a municipal service review. An amendment to the SOI of any agency may be processed and acted upon by the Commission if all of the following are met:

- The requested amendment, considered along with all other amendments approved in the last 12 months for the agency in aggregate, are less than 40 acres.
- There are no objections from other agencies that are authorized to provide the services the subject agency provides and whose SOI underlies or is adjacent to the subject territory.
- The Commission finds that the proposed amendment would not significantly interfere with the development of the updated SOI of the agency.

An SOI update is a comprehensive review that includes the map and relevant portions of one or more MSR's. The review allows for the identification of areas that are likely to receive services and to exclude those territories that are not or will not be served.

1.5: California Environmental Quality Act

Public Resources Code §21000, et seq., also known as the California Environmental Quality Act (CEQA), requires public agencies to evaluate the potential environmental effects of their actions. This MSR is exempt from CEQA under 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."

2: EXECUTIVE SUMMARY

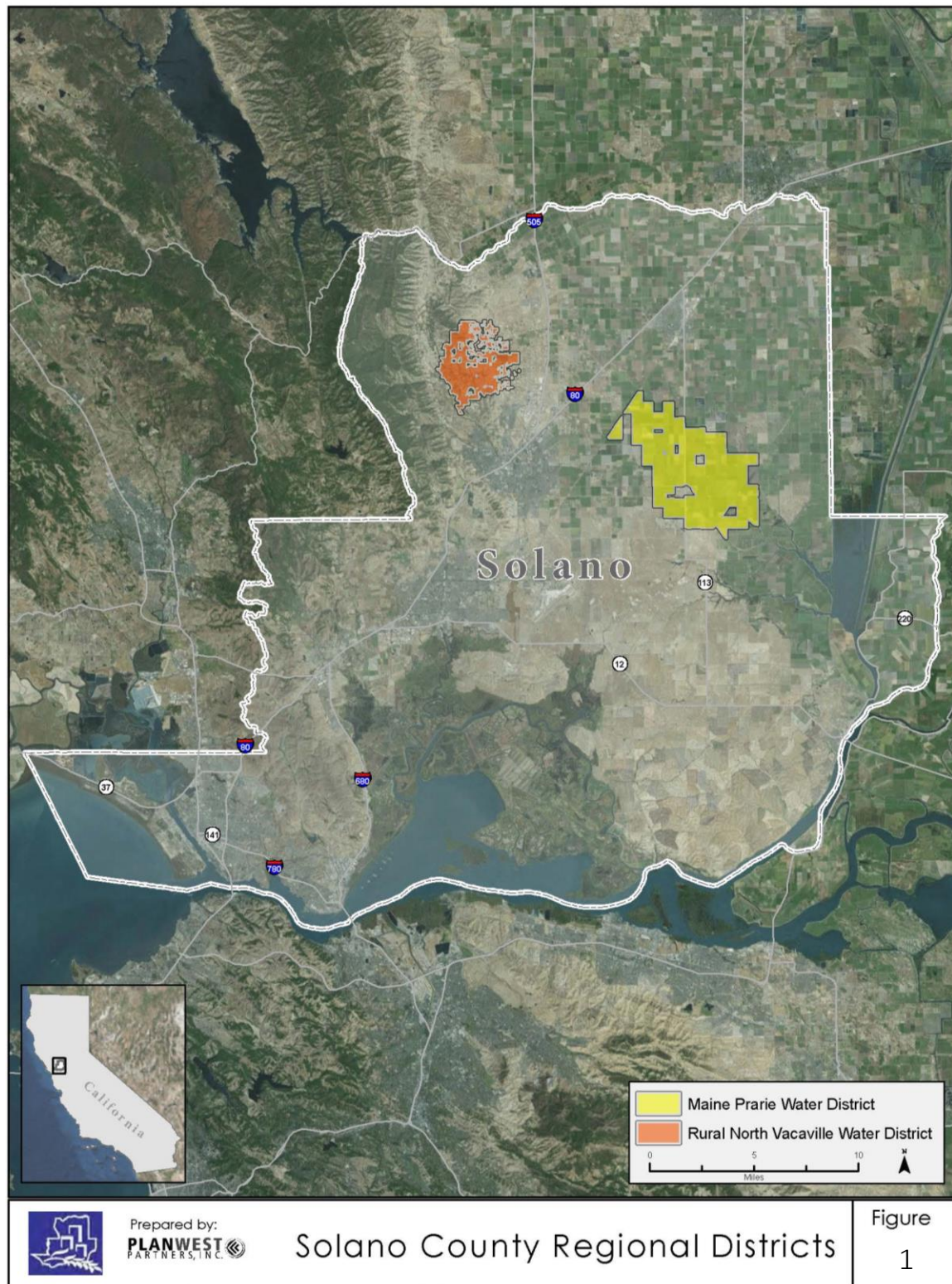
The fundamental role of a Local Agency Formation Commission (LAFCO) is to implement the Cortese-Knox-Hertzberg (CKH) Local Government Reorganization Act of 2000 (Government Code (GC) §56000, et seq.), providing for the logical, efficient, and most appropriate formation of local municipalities, service areas, and special districts. The CKH requires all LAFCO's, including Solano LAFCO, to conduct a Municipal Service Review (MSR) prior to updating the spheres of influence (SOI) of the various cities and special districts in the County (GC §56430). CKH requires an MSR and SOI update every 5 years.

The MSR contains analysis and conclusions, referred to in this document as determinations, regarding seven topic areas set forth in CKH. These areas of analysis contain the essential operational and management aspects for each district, and together constitute a review of the ability of each provider to meet the service demands of the residents within their boundaries.

1. **Growth and Population Projections for the Affected Area.** Reviews projected growth within the existing district service boundaries and analyzes the district's plans to accommodate future growth.
2. **The location and characteristics of any disadvantaged unincorporated communities** Identifies disadvantaged unincorporated communities (DUC's) within or contiguous to the SOI. A disadvantaged unincorporated community is defined as inhabited territory with a median household income of 80 percent or less of the statewide median income.
3. **Present and Planned Capacity of Public Facilities and Adequacy of Public Services Including Infrastructure Needs or Deficiencies.** Discusses the services provided including the quality and the ability of the district to provide those services, a discussion of capital improvement projects currently underway, and projects planned for the future where applicable.
4. **Financial Ability of Agencies to Provide Services.** Reviews the district's fiscal data and rate structure to determine viability and ability to meet service demands. It also addresses funding for capital improvement projects.
5. **Status of and Opportunities for Shared Facilities.** Examines efficiencies in service delivery that could include sharing facilities with other agencies to reduce costs by avoiding duplication.
6. **Accountability for Community Service Needs, including Government Structure and Operational Efficiencies.** Examines the district's current government structure, and considers the overall managerial practices. It also examines how well each district makes its processes transparent to the public and invites and encourages public participation.
7. **Matters Related to Effective or Efficient Service Delivery Required by Commission Policy.** Includes a discussion of any Solano LAFCO policies that may affect the ability of each district to provide efficient services.

This MSR includes the Rural North Vacaville Water District (RNVWD) and the Maine Prairie Water District (MPWD) shown on Figure 1. The main water sources for these districts are the Solano Project which includes Lake Berryessa, Lake Solano, and the Putah South Canal. The North Bay Aqueduct which is part of the State Water Project, and groundwater.

Figure 1. Solano County Regional District Map



This Figure shows the two water districts in relation to the County boundary.

2.1: Rural North Vacaville Water District (RNVWD)

The RNVWD is a Community Services District, formed in 1996, to provide domestic water and fire suppression water services to the rural north Vacaville area in unincorporated Solano County. The RNVWD boundary includes 392 parcels and encompasses approximately 5,068 acres of rural residential and agricultural lands. The District operates a public water distribution system and began supplying water in 2003. The RNVWD is governed by a five-member Board of Directors elected for four-year terms. Table 1 provides a RNVWD Profile, including district contact, service area overview, infrastructure and capacity, a 5-year budget summary, and district governance information.

Table 1: RNVWD District Profile

General Information					
Agency Name	Rural North Vacaville Water District				
Agency Contact	Gordon Stankowski, General Manager				
Address	P.O. Box 5097, Vacaville, CA 95696 3875 Joslin Lane, Vacaville, CA 95688				
Phone	(707) 689-3184				
Email/Website	RNVWDGM@gmail.com / www.rnvwd.com				
General Information					
Agency Type	Community Services District				
Principal Act	California Government Code, Section 61000 et seq.				
Date Formed	June 25, 1996				
Services	Potable water and fire suppression water; serves Cantelow Road, English Hills, Gibson Canyon, and Steiger Hills areas north of Vacaville in unincorporated Solano County				
Service Area					
Acres	5,068				
Land Uses	Rural residential and agriculture				
Water Connections	Active: 394 Total: 533				
Population Served	1,115				
Infrastructure/Capacity					
Facilities	Wells, storage tanks, pipeline, fire hydrants				
Storage Capacity	Two 300,000 gallon storage tanks				
Primary Source	Aquifer/ground water				
Budget Information					
	Actual	Actual	Actual	Actual	Budgeted
	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15
Revenues	\$1,319,793	\$1,403,698	\$1,453,953	\$1,468,121	\$1,409,699
Expenditures	\$1,419,866	\$1,160,926	\$1,376,502	\$1,817,860	\$1,559,699
Operating Reserves				\$115,000	\$150,000
Net	(\$100,083)	\$242,772	\$77,451	(\$234,739)	\$0
Governance					
Governing Body	5-member Board of a President, Vice-President, Secretary, and two Directors				

The RNVWD currently serves 394 customers and has the capacity to serve a total of 533 customers. The remaining 139 connections have been purchased for future developments and/or property subdivisions. The estimated 2014 population served by RNVWD is 1,115 persons based on the average of 2.83 persons per household for Solano County, applied to the current number of active water connections. The projected 2020 district population is 1,168 persons, based on the projected County ten-year growth rate of 4.77 percent (Census Factfinder). If the average persons per household for Solano County stays at its current number, the maximum estimated RNVWD population served would be 1,508. This is a long term projection as limited annual growth is expected within the RNVWD.

There are no unincorporated communities that meet the definition of a disadvantaged unincorporated community (DUC) in Solano County, therefore there are no DUC's adjacent to, or within, RNVWD boundaries. RNVWD operates and maintains two wells, one booster pump station and two 300,000 gallon storage tanks. The maximum daily demand is 494,000 gallons per day (GD) and the pump capacity of each well is 648,000 GD. The additional 600,000 gallons in the storage tanks provide fire suppression capability.

The District operates on a budget of approximately \$1.5 million. Because expenses are projected to continue to increase, an updated rate study is scheduled to be prepared in early 2015. It will assist the Board in adjusting rates to sufficiently cover expenses.

The RNVWD is considering adopting a new water meter testing system to increase revenues. The RNVWD recently started preparation of a Capital Improvement Plan to integrate SCADA and generator replacements, meter replacement every 3-5 years, and provide for a fire hydrant replacement plan and reserves for the district. The RNVWD has two outstanding loans for a total debt of approximately \$7 million. The loans are paid semi-annually, and at the current payment rate, will be retired in approximately 8 more years.

RNVWD contracts with SID for district facilities operations and maintenance. The District is not a member of any water JPA and has no shared facility agreements, though they use the Vacaville Fire Protection District Fire Station #67 for their board meetings through an informal arrangement.

The District is governed by a five-member Board of Directors elected at large to 4-year terms. Board members receive no compensation. Meetings are held monthly on the second Tuesday in Vacaville, are open to the public, and noticed and conducted according to the Brown Act. RNVWD operations are managed by a part-time paid General Manager who reports directly to the board. The District uses both a newsletter and a website to communicate with customers.

LAFCO's policies that can affect service delivery include the sphere policy which is applied to areas that the District would like to serve in the near term and long term.

Based on the analysis and determinations in this MSR, there are two recommendations for the District: transition to district managed backflow prevention device testing and repair to capture more revenue; and review existing water JPA's in the region for shared services opportunities.

2.2: Maine Prairie Water District (MPWD)

The MPWD is a California Water District formed in 1958 to provide agricultural water service and surface irrigation water to a rural area of Solano County located south of the City of Dixon and east of the City of Vacaville. The MPWD is governed by an elected 5-member Board of Directors. Table 2 provides a District Profile, including district contact and background information, service area overview, infrastructure and capacity information, a 5-year budget summary, and district governance information.

Table 2: MPWD District Profile

General Information					
Agency Name	Maine Prairie Water District				
Agency Contact	Meda Benefield, Assistant Secretary / Treasurer				
Address	P.O. Box 73, Dixon, CA 95620 6595 Pit School Rd, Dixon, CA 95620				
Phone	Phone: (707) 678-5332 / Fax: (707) 678-0834				
Email/Website	mpwd@cwns.net; no website				
General Information					
Agency Type	California Water District				
Principal Act	California Water Code, Division 13, Section 34000 et seq.				
Date Formed	December 12, 1958				
Services	Agricultural water service, surface irrigation water (non-potable); serves rural area of Solano County consisting entirely of agricultural land and minimal residential development				
Service Area					
Acres	14,856 acres				
Land Uses	Agriculture and rural homes				
Water Connections	Active: 108 Total: 108				
Population Served	250				
Last SOI Update	2008				
Infrastructure/Capacity					
Facilities	Pumping plants, weirs, District office, and shop area				
Primary Source	Solano Project, agreement with SID, local surface water rights				
Calendar Year (CY)Budget Information					
	CY 2010	CY 2011	CY 2012	CY 2013	CY 2014
Revenues	\$482,347	\$483,673	\$512,049	\$1,189,251	\$1,132,063
Expenditures	\$523,138	\$528,090	\$569,352	\$725,575	\$924,436
Fund balance	(-\$40,791)	(-\$44,417)	(-\$57,303)	\$463,676	\$207,627
Governance					
Governing Body	5-Member Board (elected at-large) comprised of a President, Vice President, Secretary/Treasurer, and two Directors				

The MPWD consists of agricultural land and rural homes on large lots. It is approximately 14,856 acres in size and consists of agricultural land and limited residential development. The MPWD serves a population of approximately 250 residents and is at capacity based on the demand from existing water connections. No major growth within District boundaries is anticipated. There are no unincorporated communities that

meet the definition of a DUC in Solano County, therefore there are no DUC's adjacent to, or within, MPWD boundaries.

The MPWD uses recycled water from the Vacaville wastewater treatment plant, and coordinates with the SID in an Agriculture Management Plan. A county wide increase in the amount of water allocated to drip irrigation has resulted in a reduced amount of drain water available to the MPWD.

Like most districts, MPWD has sufficient capacity in years with normal rainfall and experiences reduced water supply in drought years. In drought years, SID, MPWD, and other agencies participate in the Solano Project Drought Measures Agreement to adjust water delivery based on reduced supply. These agencies share water allotments with cities covered by the SP agreement. This allows the MPWD to purchase additional water from SID and SP to meet customer demands. The MPWD therefore has sufficient capacity for present needs and future needs are not expected to increase much due to no additional projected growth. MPWD has a full-time staff of four employees who are capable of managing the District. The District contracts with SID to provide education programs for MPWD agricultural water users and neighboring Reclamation District (RD) 2068.

The MPWD's primary revenue sources include standby charges and irrigation water sales. The District operates on a budget for approximately \$700,000. The MPWD raised its rates in 2013 to match raised rates from SID. The current financing levels for the MPWD are adequate for providing services within the district. The MPWD needs a financial reserve policy to develop sufficient funds for unexpected expenditures. The MPWD needs to develop a Capital Improvement Plan. MPWD does not have any outstanding debts and all District assets are owned outright.

The District works cooperatively with neighboring entities and special districts to share facilities and water resources, and coordinates with other agencies on multiple plans and reporting programs. The MPWD participates in studies and projects with other local agencies including: countywide conservation programs that apply to agricultural uses, an agricultural water conservation plan, and county-wide Groundwater Management Plan and Pesticide Discharge Management Reporting.

MPWD is governed by an elected five-member Board of Directors who serve 4-year terms. Board members receive no monetary compensation, but do receive a credit towards health insurance from the MPWD. The MPWD complies with the Brown Act.

There are no LAFCO policies that directly affect efficient service delivery of MPWD.

Based on the analysis and determinations in this MSR, It is recommended that the District prepare and adopt a Capital Improvement Plan.

3: RURAL NORTH VACAVILLE WATER DISTRICT

3.1: District Profile and Service Area

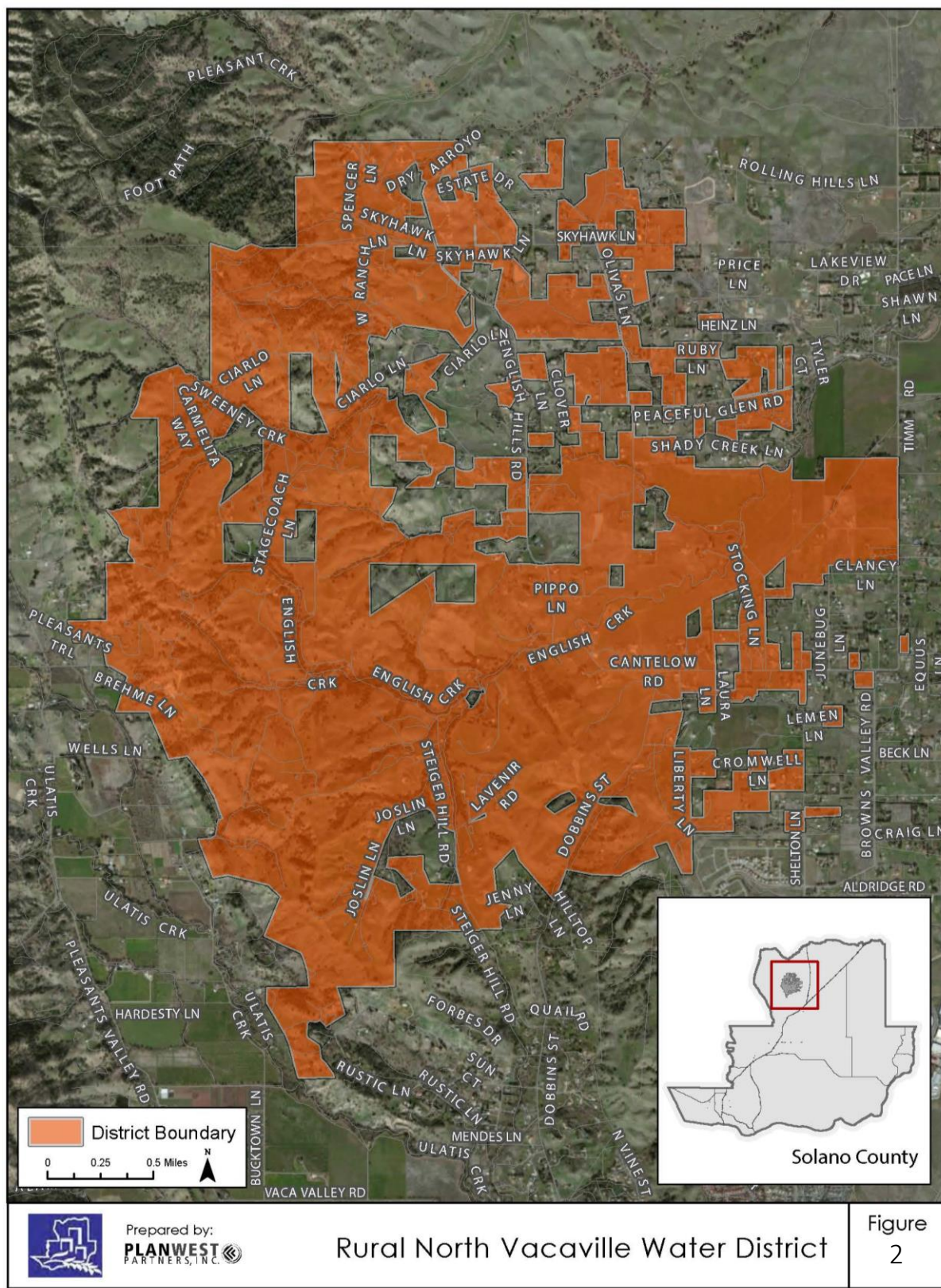
The Rural North Vacaville Water District (RNVWD) is located north of Vacaville in the unincorporated portion of Solano County. The RNVWD was formed on June 25, 1996 pursuant to community services district law (California Government Code (GC) §61000 et seq.). The District was established to address the lack of adequate available water from private wells within the rural North Vacaville area, which includes the Cantelow Road, English Hills, Gibson Canyon, and Steiger Hill areas. The District provides water services for domestic and fire protection purposes.

The RNVWD boundary includes 392 parcels and encompasses approximately 5,068 acres. The RNVWD began delivering water on January 31, 2003. A special assessment was approved by property owners within the RNVWD for the repayment of the two construction loans used to finance the water distribution system. The assessment includes two zones: Zone 1 for domestic connections and fire hydrants, and Zone 2 for fire hydrants only..

Figure 2 shows the current boundaries of the District. The islands within the district boundary are not currently part of the SOI, though the District is seeking to expand their SOI in the near future to include them. The current SOI includes Assessment Zone 1 (The Domestic Water Zone) and excludes Assessment Zone 2 (The Fire Protection Zone). The proposed SOI would include Assessment Zones 1 and 2 to include all parcels located within the RNVWD.

Mission Statement
The mission of Rural North Vacaville Water District is to deliver efficiently and reliably, for many years, quality water for domestic use and fire protection.

Figure 2. RNVWD Boundary Map



3.2: Growth and Population Projections

The RNVWD water distribution system has a maximum capacity of 533 connections, all of which have been allocated. The RNVWD currently serves 394 customers with active water connections and has 139 inactive water connections. Several land owners that have entitlements to connections are currently inactive.

Based on the total number of active water service connections in relation to the countywide average household size of 2.83 persons per household, the estimated population of the RNVWD is approximately 1,115 residents.

The US Census reports Solano County's population in 2010 as 413,344, a 4.77 percent increase over the 10-year period from 2000 to 2010. At this growth rate, the projected population for RNVWD will be 1,168 in the year 2020. However, growth within the District's boundaries is expected to be less than the county-wide growth rate.

According to the District, there are limited available connections for new development within the District boundaries, and any further development is dependent upon the existing water distribution infrastructure. Using the average household size and the maximum number of water connections in the district (533), the maximum estimated population in the RNVWD is 1,508. There is limited growth expected within the RNVWD over the coming years.

Determination 3.2.1: The District currently serves 394 customers, and is anticipated to serve a total of 533 customers once all water connections are activated.

Determination 3.2.2: Based on the current number of active water connections and county persons per household average, the estimated population for the RNVWD is 1,115 people in 2014.

Determination 3.2.3: Based on the historical growth rate in Solano County of 4.77 percent in the last 10 years the projected population for the District will be 1,168 in the year 2020.

Determination 3.2.4: Based on the maximum number of water connections in the district (533) and the average persons per household, the estimated population could reach 1,508 in the year 2020 within RNVWD.

Determination 3.2.5: There is limited growth expected within the RNVWD over the coming years.

3.3: Disadvantaged Unincorporated Communities

GC §56430, as amended by SB 244 (Chapter 513, Statutes of 2011) made changes to the CKH Act related to "disadvantaged unincorporated communities." GC §56033.5 defines a disadvantaged unincorporated community (DUC) as an inhabited community (containing 12 or more registered voters) where the annual median household income is less than 80 percent of the statewide annual median household income.

When preparing municipal service reviews, SB 244 requires a LAFCO to provide written determinations with respect to the location and characteristics of any disadvantaged unincorporated communities within or contiguous to the SOI. When reviewing and updating a special district SOI after July 1, 2012, determinations must include specified infrastructure needs and deficiencies, as well as probable needs

for services in any DUC's within or adjacent to the SOI. This would apply to the SOI of a special district that provides sewer, municipal and industrial water, or structural fire protection services or facilities.

In 2012, the median household income for the State was \$61,400. The table below represents the 2012 median household incomes for all Census Designated Places (CDP) in Solano County. As shown in Table 3, the unincorporated community of Elmira, located approximately one mile east of Vacaville, and approximately 5 miles southeast of the RNVWD boundary, has the lowest median income at 84% of the State's value, so still does not qualify as a DUC. There are no unincorporated communities that meet the definition of a DUC in Solano County, therefore there are no DUC's adjacent to, or within, RNVWD boundaries or SOI.

The current SOI includes Assessment Zone 1 (The Domestic Water Zone) and excludes Assessment Zone 2 (The Fire Protection Zone). The proposed SOI would include Assessment Zones 1 and 2 to include all parcels located within the RNVWD. The District is also interested in considering whether SOI expansion, to include the islands of non-district territory within the district boundary, is practicable. As indicated above, there are no unincorporated communities that meet the definition of a DUC in Solano County, therefore there are no DUC's within or adjacent to the "proposed" SOI.

Table 3: Solano County Census Designated Place 2012 Household Income

Solano County CDP	Median Household Income	% of State's Median Household Income (\$61,400)
Allendale CDP	\$89,984	147%
Elmira CDP	\$52,125	84%
Green Valley CDP	\$139,474	227%
Hartley CDP	\$100,123	163%

Source: California Department of Finance 2013c

Determination 3.3.1: There are no unincorporated communities that meet the definition of a DUC in Solano County, therefore there are no DUC's adjacent to, or within, RNVWD boundaries or the SOI.

3.4: Present and Planned Capacity of Public Facilities

3.4.1 – Present Capacity of Public Facilities

The RNVWD water supply comes from the Tehema Aquifer. Two wells are located in the Solano sub-basin of the Sacramento County Valley groundwater basin (CDWR Basin NO. 5-21.66). The RNVWD water system was designed to supply enough water capacity to supply potable water to a maximum of 533 parcels within the district. In addition to the parcels that benefit from water service, the water system also provides water for fire hydrants to an additional 711 parcels.

RNVWD's water distribution system was constructed to support a maximum of 533 water service connections and all eligible connections have been allocated, however; RNVWD currently only serves 394 customers with active water connections, the remaining 139 connections are not active.

The RNVWD operates two wells and maintains two 300,000-gallon storage tanks. The two 300,000 gallon storage tanks serve as additional non-groundwater supply. One well provides a majority of water while the other has been permitted for emergency standby use because of the change in the State and Federal arsenic standards. The depth of both wells is approximately 1,400 feet, with pumps located at approximately 440 feet.

Well water is treated to remove Iron and Manganese, chlorinated and then discharged into the distribution system to either domestic service connections or the storage tanks. Through the use of the two storage tanks, two booster stations, thousands of linear feet of smaller diameter pipes and a few pressure reduction valves, the system supplies reliable water flow and pressures to every connected parcel within the RNVWD.

The RNVWD infrastructure includes 43 miles of PVC and cast iron pipeline, and 67 fire hydrants. Other major capital assets include two 350-gallon/minute pumps, one at each well site; four 250-gallon/minute pumps at the two storage tank sites; one backup generator; a series of air release valves, pressure release valves, blow-offs, and sampling stations; two chlorine injection systems; one electronic Supervisory Control and Data Acquisition (SCADA) System; and service roads.

The district has a backup generator system to maintain system high zone pressure in the event of a power outage. The two well sites are tied to the Fire Station on Cantelow Road and PG&E has given the RNVWD an outage block 50 designation, which means minimal outages will occur.

There are wells on private property within the district boundaries that do not draw from the same aquifer as the district. Solano County tests the aquifer levels, and the RNVWD monitors well performance. Due to the distance from saltwater bodies, there is little to no potential for saltwater intrusion within the aquifer, and backflows are tested annually in the district.

The district implements a water conservation management plan and has sent a memo to customers to limit water use to two days a week per state guidelines in light of the 2014 drought conditions.

According to conversations with the RNVWD General Manager, the agency's estimated peak demand for potable water is 150 gallons per minute. Average monthly water demand is approximately 3.74 million gallons (MG) per month. It varies from 2.0 MG to 6.0 MG during summer and winter months. Annual consumption is approximately 44.88 MG. The California Department of Public Health (CDPH) 2013, Sanitary Survey Report lists the Maximum Day Demand (MDD) for RNVWD at 0.494 million gallons (MG). The total capacity of active Well #1 was 0.648 million gallons per day (MGD) or 236.5 MG annually. An additional 0.504 MGD emergency source can be supplied by Well #2. RNVWD has an additional 0.600 MG of water storage capacity in their tanks, which is greater than the MDD. RNVWD has sufficient water available to meet its MDD and comply with the CDPH requirements for reliable source, storage, emergency capacity, and fire suppression.

3.4.2 – Planned Capacity of Public Facilities

The RNVWD implements a program in which property owners may transfer or sell inactive connections to other properties. Therefore, any property owner wanting to receive potable water must purchase a water connection for their parcel and must either reside within the RNVWD or be approved for annexation into the RNVWD. The 139 inactive connections are currently reserved for future developments or property subdivisions that have yet to occur. The RNVWD keeps a list of water connections available for sale and purchase on their website.

The program assures that the RNVWD will not exceed its facility capacity of 533 connections. In 2013 RNVWD annexed a 10 acre parcel which implemented the program for transferring inactive connections.

Determination 3.4.1: RNVWD operates and maintains two wells, one booster pump station, and two 300,000 gallon storage tanks. The MDD is 0.494 million gallons per day (MGD) and each well's pump capacity is 0.504 MGD. The additional 600,000 gallons in the storage tanks provide fire suppression capability.

Determination 3.4.2: The RNVWD system was designed to service a total capacity of 533 water connections, only 394 are currently in service, the remaining 139 connections have been purchased for future developments and/or property subdivisions which will not exceed the design capacity or water supply availability.

3.5: Financial Ability to Provide Services

3.5.1 – Revenues and Expenses

The District operates on a budget of approximately \$1.5 million. Revenues and expenses for the most recent 5 years are shown in Table 4. In FY 2013-2014 there was a one-time debt service payment of approximately \$290,000 that resulted in a budget shortfall. In FY 2014-15 the budget excess expenses of \$150,000 are due to planned capital improvement projects, which are funded through the use of operating reserves. The RNVWD adopted reserve policy is attached in Appendix B.

Because expenses are projected to continue to increase, an updated rate study is scheduled to be prepared in early 2015. The rate study is budgeted within the FY 14/15 RNVWD Reserve Expenditures Budget, and bids have been solicited. The Rate Study will coincide with a Capital Improvement Plan that is in progress (See section 3.5.3 - Capital Improvements below). The new rate study will assist the Board in developing a 5-year plan; implementation is yet to be determined.

Table 4: RNVWD Revenues and Expenditures

	FY 2010-11 (Actual)	FY 2011-12 (Actual)	FY 2012-13 (Actual)	FY 2013-14 (Actual)	FY 2014-15 (Budget)
Operating Revenues (Service charges)	\$386,047	\$361,992	\$525,806	\$608,964	\$472,668
Non-Operating Revenues (Property Tax Assessment)	\$933,736	\$1,041,706	\$913,131	\$859,157	\$937,031
Other (money & property use)	--	--	\$15,016	--	--
Total Revenues	\$1,319,783	\$1,403,698	\$1,453,953	\$1,468,121	\$1,409,699
Operating Expenses	\$230,442	\$251,508	\$468,196	\$561,174	\$622,668
Non-Operating Expenses	\$919,424	\$909,417	\$908,306	\$1,256,686	\$937,031
Total Expenses	\$1,419,866	\$1,160,926	\$1,376,502	\$1,817,860	\$1,559,699
Operating Reserves	--	--	--	\$115,000	\$150,000
Net	(\$100,083)	\$242,772	\$77,451	(\$234,739)	\$0

Source: 2011-14 Fiscal Year vs. 2011-14 Actuals and RNVWD Audit Final Reports 2011-2014; rnvwd.com/docs

3.5.2 – Rates

The RNVWD primary source of operating revenue is water sales, billed based on a monthly fee per water connection and water sold on a water rate schedule, sold at different tiered rates (see Tables 5 and 6 above). A rate increase was approved in July of 2008, as the RNVWD found that without a rate increase it would have an approximate \$50,000 shortfall. A new rate study is scheduled to be prepared in early 2015.

Table 5: Monthly Fee Schedule 2013/2014

Class	Old rate	New Rate
Active connections	\$57.49	\$58.00
Inactive connections	\$49.44	\$58.00
Supplemental Future Connections	\$12.84	\$14.00

Source: RNVWD website: rnvwd.com

Table 6: Water Rate Schedule 2013/2014

Tier	CCF	Current Rate/CCF
1	0 to 25	\$1.65
2	25 to 50	\$3.10
3	More than 50	\$6.35

Source: RNVWD website: rnvwd.com

Note: 1 CCF is 100 CF or 748.5 gallons Construction Water Consumption charges equal \$8.00/CCF.

A special assessment was approved by property owners within the RNVWD for the repayment of the two construction loans used to finance the water distribution system. The special assessment provides approximately \$1 million annually towards the loans. The assessments are based on the principal and interest amounts of the two construction loans and are allocated to each water service connection. The assessment district includes two zones. Zone 1 provides potable water and water for fire hydrants, and Zone 2 provides only water for fire hydrants. Zones 1 and 2 are assessed at different rates.

Creation of both Zone 1 (domestic connections and fire hydrants) and Zone 2 (fire hydrants only) were based on the October 12, 1999 Engineer's Report "Method of Assessment Segregation."

The Domestic Water Zone (Zone 1) provides water connections for property owners of parcels that are located within the RNVWD. The total assessment for parcels located within Zone 1 is comprised of five cost components (piping, the well stations, the water treatment system, the booster stations, and the storage reservoirs). These costs have been spread to each parcel on a per connection basis (1 connection unit per parcel). Several property owners of parcels within this zone agreed to purchase supplemental connections and/or reserved connections as described above. Property owners who purchased supplemental connections were assessed the full cost of the connection (1 connection per supplemental connection).

The Fire Protection Zone (FPZ) (Zone 2) include all parcels located within the RNVWD and 233 equivalent connections, which are not located within the RNVWD. Land uses within the FPZ boundary include improved single family residential, vacant single family residential, improved multiple residential, agricultural, range and watershed, and clubs and lodges. The Vacaville Fire Protection District is

responsible for the fire protection of property and structures. Parcels located in the FPZ have been classified into two categories, Direct Benefit parcels (DBP) and Indirect Benefit parcels (IBP). DBP receive direct fire protection benefit and receive one full fire protection assessment per domestic connection or equivalent domestic connection. IBP receive less benefit than a DBP because of the time delay water filling of the Fire Suppression Equipment and do not receive a full fire protection assessment. Due to this delay, IBP parcels are assessed 75% of one full fire protection assessment..

3.5.3 - Capital Improvements

The District currently has an assets and infrastructure inventory list (Appendix A). All assets and infrastructure are approximately 10 years old. For the 2014/15 budget, \$150,000 in reserve funds are set aside in a separate Operations Reserve Savings Account, and accounted for in the Operating Budget. A separate Reserve Expenditures Budget is approved by the Board to allocate these reserve funds for spending. The RNVWD adopted a financial reserve policy on September 9, 2014 (See Appendix B).

The RNVWD also adopted a Capitalization Policy on September 9, 2014 (See Appendix C). A Capital Improvement Plan is in progress and will allow the district to integrate SCADA and generator replacements, meter replacement every 3-5 years, arsenic treatment, and provide for a replacement plan and reserves for replacing fire hydrants in the district. SID has been contracted to develop the CIP within the scope of their currently contracted services for RNVWD. The CIP is expected to be in place by January of 2015.

3.5.4 - Debt

Debts were incurred during construction and the first full year's operation of the potable water system operation. Construction of the RNVWD potable water system was funded through construction loans. Solano County Resource Management Department provided potable water system construction oversight.

The RNVWD received two low interest loans for capital improvements. The California Department of Water Resources loaned the RNVWD \$5 million to construct 43 miles of water mains that make up the RNVWD's water supply distribution system. The RNVWD borrowed an additional \$8,838,365 from the Department of Health Services for the cost of engineering, design, and construction of two deep aquifer wells, two 300,000-gallon storage tanks, and infrastructure to complete the distribution system. The two state construction loans were awarded for a period of 20 years at 2.8 percent interest.

- Loan #1: \$5 million from California State Department of Water Resources (CDWR)
- Loan #2: \$8.8 million from California State Department of Health Services (CDHS)

The water system has system hydrants, 43 miles of pipe, covering roughly a 22 square mile area and two deep wells (1,400 feet). The system designed to run on two wells that pump 350 gallons per minute; two 300,000 gallon tanks with two booster pumps each that pump 250 gallons per minute. The system includes air release valves to maintain pressures in the system and a series of fire hydrants for fire protection throughout the RNVWD. The RNVWD built service roads to each of the tank sites and well sites. The system became operational in 2003, initially supplying water to approximately 270 households.

Both loans are being paid semi-annually with a special assessment. Approximately 60% of these loan amounts are now paid off, with a 40% balance left. The loans will take approximately 9 more years to pay

off. Table 7 is a brief description and a status on the loans (<http://rnvwd.com/>). Each year the RNVWD pays principal and interest on the loans. In 2013 and 2014, according to the RNVWD Debt Service Fund Budget, the total Loan payment, including principal and interest, was approximately \$908,900.

Table 7: Loan Status

Loan #	Amount	Interest	Balance	As Of
#1: E85001	\$5,000,000	2.8%	\$2,474,125.13	10/1/14
#2: SFR1998CX108	\$8,838,365	2.7934%	\$4,524,294.88	7/1/13

Source: RNVWD website: rnvwd.com/index.htm

Determination 3.5.1: The District operates on a budget of approximately \$1.5 million. Because expenses are projected to continue to increase, an updated rate study is scheduled to be prepared in early 2015. It will assist the Board in adjusting rates to sufficiently cover expenses.

Determination 3.5.2: The RNVWD adopted a financial reserve policy on September 9, 2014. The FY 2014-15 anticipates using \$150,000 in reserves to cover a projected shortfall. Reserve funds are set aside in a separate Operations Reserve Savings Account, and accounted for in the Operating Budget; a separate Reserve Expenditures Budget is approved by the board.

Determination 3.5.3: The RNVWD needs to develop a Capital Improvement Plan to integrate SCADA and generator replacements, arsenic treatment, meter replacement every 3-5 years, and provide for a replacement plan or reserves for replacing fire hydrants in the district.

Determination 3.5.4: The RNVWD has two outstanding loans for a total debt of approximately \$7 million. The loans are paid semi-annually, and will take approximately 9 more years to pay off.

3.6: Status and Opportunities for Shared Facilities

3.6.1 – Shared Facilities and Regional Cooperation

In the past, the physical operation and maintenance of the RNVWD water distribution system had been performed by the California Water Service Company, under contract with the RNVWD. As of September 2014, RNVWD now contracts with SID to operate RNVWD facilities; SID performs maintenance of district facilities and repair of system leaks. In that capacity, SID performs all of the required functions to keep the system in running order. SID also conducts water quality testing on RNVWD water. SID meets monthly with the General Manager to keep him informed on the status of the system.

The RNVWD is not a member of any Water JPA and has no shared facility agreements. The RNVWD board meetings are held at the Vacaville Fire Protection District Fire Station #67. RNVWD has no written agreement for shared facilities, but by verbal agreement are allowed to use the fire station for their board meetings.

The RNVWD is currently in a Joint Powers Insurance Authority (JPIA) with other special districts and the Association of California Water Agencies (ACWA). The JPIA provides similar services to all member organizations such as annual property program scheduled values report. These reports provide the districts with a schedule of assets and coverages showing premium discount percentages offered through the JPIA. In the most recent RNVWD report for the April 1, 2014-15 coverage year the discount, or savings, ranged from 0-35 percent.

3.6.2 – Management Efficiencies

Operational staffing includes independent contractors who serve as the General Manager, administrator, bookkeeper, accountant, and meter reader. The water operation is managed by a General Manager who reports directly to the board. SID performs all of the required functions to keep the water system in running order. The District retains ownership of the water distribution system and all of its components.

The district implements a water conservation management plan, which follows State restrictions on water usage during drought events.

Determination 3.6.1: RNVWD contracts with SID for operations and maintenance of district facilities, but is not a member of any water JPA and has no shared facility agreements, though they use the Vacaville Fire Protection District Fire Station #67 for their board meetings. RNVWD has no written agreement for shared facilities, but there may be a verbal agreement as the RNVWD Board President also holds the position as the Vacaville Fire Protection District Board President.

Determination 3.6.2: RNVWD operations are managed by an independent contractor who serves as General Manager and reports directly to the board.

3.7: Government Structure and Accountability

When the District was formed in 1996, the County Board of Supervisors served as the initial Board of Directors. On May 3, 2005, the residents voted to have an independent five-member Board of Directors, elected at large for 4-year terms. As a CSD, the Board of Directors are registered voters that must reside within the District. Board members receive no compensation and serve on a voluntary basis.

The Board of Directors meets monthly on the second Tuesday of each month at 7 p.m. at the Vacaville Fire Protection District Fire Station #67, 4135 Cantelow Road in Vacaville. Meetings are noticed in accordance with the Brown Act.

The RNVWD publishes a newsletter periodically to inform customers of items of interest, and also has its own website at www.rnvwd.com. The District also has a page that is part of the Solano County Resource Management website, which can be accessed through the RNVWD website.

Determination 3.7.1: The District is governed by a five-member Board of Directors elected at large to 4-year terms. Board members receive no compensation.

Determination 3.7.2: Meetings are held monthly on the second Tuesday in Vacaville, are open to the public, and noticed according to the Brown Act.

Determination 3.7.3: The District uses both a newsletter and a website to communicate with customers. In some cases, such as notifications of restrictions, direct memos are used.

3.8: LAFCO Policies Affecting Service Delivery

The RNVWD is a Community Services District, with two zones: Zone 1 for domestic water and fire suppression services, and Zone 2 for fire suppression services exclusively. The RNVWD has contract management and a set capacity for operations. LAFCO's policies that can affect service delivery include the sphere policy which is applied to areas that the District would like to serve in the near term and long term.

Determination 3.8.1: LAFCO's policies that can affect service delivery include the sphere policy which is applied to areas that the District would like to serve in the near term and long term.

3.9: Determinations Summary

Determination 3.2.1: The District currently serves 394 customers, and is anticipated to serve a total of 533 customers once all water connections are activated.

Determination 3.2.2: Based on the current number of active water connections and county persons per household average, the estimated population for the RNVWD is 1,115 people in 2014.

Determination 3.2.3: Based on the historical growth rate in Solano County of 4.77 percent in the last 10 years the projected population for the District will be 1,168 in the year 2020.

Determination 3.2.4: Based on the maximum number of water connections in the district (533) and the average persons per household, the estimated population could reach 1,508 in the year 2020 within RNVWD.

Determination 3.2.5: There is limited growth expected within the RNVWD over the coming years.

Determination 3.3.1: There are no unincorporated communities that meet the definition of a DUC in Solano County, therefore there are no DUC's adjacent to, or within, RNVWD boundaries or in the proposed SOL.

Determination 3.4.1: RNVWD operates and maintains two wells, one booster pump station, and two 300,000 gallon storage tanks. The MDD is 0.494 million gallons per day (MGD) and each well's pump capacity is 0.504 MGD. The additional 600,000 gallons in the storage tanks provide fire suppression capability.

Determination 3.4.2: The RNVWD system was designed to service a total capacity of 533 water connections, only 394 are currently in service, the remaining 139 connections have been purchased for future developments and/or property subdivisions which will not exceed the design capacity or water supply availability.

- Determination 3.5.1:** The District operates on a budget of approximately \$1.5 million. Because expenses are projected to continue to increase, an updated rate study is scheduled to be prepared in early 2015. It will assist the Board in adjusting rates to sufficiently cover expenses.
- Determination 3.5.2:** The RNVWD adopted a financial reserve policy on September 9, 2014. The FY 2014-15 anticipates using \$150,000 in reserves to cover a projected shortfall. Reserve funds are set aside in a separate Operations Reserve Savings Account, and accounted for in the Operating Budget; a separate Reserve Expenditures Budget is approved by the board.
- Determination 3.5.3:** The RNVWD needs to develop a Capital Improvement Plan to integrate SCADA and generator replacements, arsenic treatment, meter replacement every 3-5 years, and provide for a replacement plan or reserves for replacing fire hydrants in the district.
- Determination 3.5.4:** The RNVWD has two outstanding loans for a total debt of approximately \$7 million. The loans are paid semi-annually, and will take approximately 9 more years to pay off.
- Determination 3.6.1:** RNVWD contracts with SID for operations and maintenance of district facilities, but is not a member of any water JPA and has no shared facility agreements, though they use the Vacaville Fire Protection District Fire Station #67 for their board meetings. RNVWD has no written agreement for shared facilities, but there may be a verbal agreement as the RNVWD Board President also holds the position as the Vacaville Fire Protection District Board President.
- Determination 3.6.2:** RNVWD operations are managed by an independent contractor who serves as General Manager and reports directly to the board.
- Determination 3.7.1:** The District is governed by a five-member Board of Directors elected at large to 4-year terms. Board members receive no compensation.
- Determination 3.7.2:** Meetings are held monthly on the second Tuesday in Vacaville, are open to the public, and noticed according to the Brown Act.
- Determination 3.7.3:** The District uses both a newsletter and a website to communicate with customers.
- Determination 3.8.1:** LAFCO's policies that can affect service delivery include the sphere policy which is applied to areas that the District would like to serve in the near term and long term.

3.10: Issues with Recommendations

Water Joint Powers Authority – Review existing water JPA's for shared services opportunities.

Joint Powers Authorities (JPA) offer efficiencies through mutually beneficial agreements for combining management, purchasing, operations, and risk. They typically involve three or more entities offering similar services and having similar responsibilities. The RNVWD is currently in a Joint Powers Insurance

Authority (JPIA) with other special districts and the Association of California Water Agencies (ACWA). The JPIA provides similar services to all member organizations such as annual property program scheduled values report. These reports provide the districts with a schedule of assets and coverages showing premium discount percentages offered through the JPIA. In the most recent RNVWD report for the April 1, 2014-15 coverage year the discount, or savings, ranged from 0-35 percent.

JPA benefits to special districts delivering water services could include operational savings through agreements for shared staff and mobile maintenance and testing equipment; and fiscal savings through bulk capital equipment or commodity purchasing in quantities larger than those needed by individual districts. Another potential benefit is the ability to bring training and educational opportunities to the local area, instead of sending staff out of the area.

JPAs may be formed pursuant to California Government Code Section 6500 et seq. They are public agencies governed by a board of directors which notice and conduct meetings in compliance with the Brown Act.

Backflow Prevention Device Testing – Transition annual backflow prevention device testing to the District.

Currently there are approximately 400 backflow prevention devices used by customers in the District. These are required where the customer has both an on-site well and a metered connection from the District. The device prevents well water from reaching the district water system beyond the customer meter. The testing must be done annually, per State of California health requirements.

Currently the District contracts for this service. With the purchase of testing equipment that could be amortized over several years and staff training, the district could take on this testing, repair, and replacement service when necessary. Since these devices need to be tested annually, this would provide a steady annual revenue source for the District. In addition, should repairs or replacement of the device be determined as needed by testing, the District may charge the customer for time and materials for that work. This not only provides the district with a revenue source, it also provides a direct record for each device, for water quality monitoring and reporting purposes.

4: MAINE PRAIRIE WATER DISTRICT

4.1: District Profile and Service Area

The Maine Prairie Water District (MPWD) is a California Water District formed December 12, 1958, enabled under the California Water Code, Division 13 as a California Water District, to deliver agricultural irrigation water. The MPWD provides agricultural water service and surface irrigation water to its customers for farming operations. The MPWD does not supply potable water.

The District serves the rural area of Solano County and is located east of the Vaca Mountains and south of Interstate 80. It is approximately 4 miles east of the City of Vacaville and 3 miles south of the City of Dixon. The MPWD serves approximately 250 people on 14,856 acres, with 158 parcels of agriculture land, with some residential acreage mixed in, all of it unincorporated land.

The MPWD land is typical of Sacramento Delta agricultural lands with a gently sloping plain of older alluvial material at a southeasterly gradient of approximately six feet (6') per mile and elevations ranging from approximately 5 to 45 feet above sea level.

The District has several islands within the district boundary that are not served by the district, and do not receive irrigation water, yet are agriculture lands. The islands within the District's boundaries fall within the District's SOL. Some of these areas are hilly, which would make water delivery difficult, and would require pumping. The MPWD does not receive requests for water outside of its service area. The water belongs to the District, and individual land owners cannot sell their allotments.

The following (Figure 3) is a Location Map showing the MPWD boundaries in relation to nearby cities and landmarks, as well as the MPWD's service area. There are no anticipated land use changes for the MPWD. See Table 2 in Executive Summary for further information on MPWD.

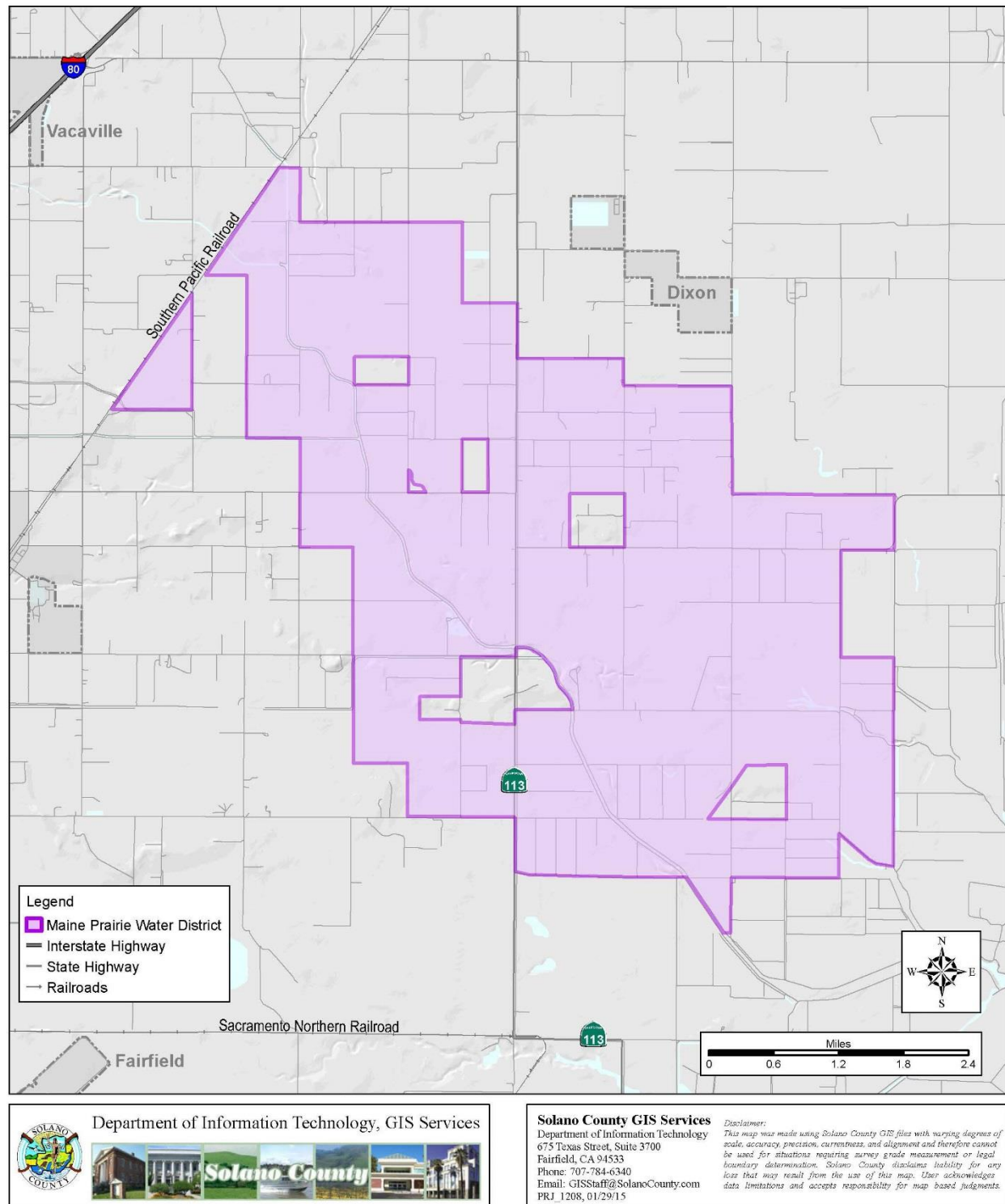
4.2: Growth and Population Projections

The MPWD lies in the rural unincorporated area of Solano County and consists entirely of agricultural land and rural homes. As of 2010, the MPWD had a population of 250 people.

The US Census reports Solano County's population in 2010 as 413,344, a 4.77 percent increase over the 10-year period from 2000 to 2010. At this growth rate, the projected population is estimated to be 262 in the year 2020. However, growth within the District's boundaries is expected to be less than the county-wide growth rate.

The Solano County Board of Supervisors adopted the County General Plan, and it was passed by the voters on November 4, 2008, extending the Orderly Growth Initiative (ORDINANCE NO. 2008-01) until December 31, 2028 (<http://www.co.solano.ca.us/>). With the County's City-Centered-Growth Policy, and land uses consisting entirely of agricultural land and rural homes within the MPWD, no major growth in MPWD boundaries is anticipated.

Figure 3. MPWD Boundary Map



Determination 4.2.1: The MPWD lies in the rural unincorporated area of Solano County and consists entirely of agricultural land and rural homes. As of 2010, the MPWD had a population of 250 people.

Determination 4.2.2: With the County's City-Centered-Growth Policy, and land uses consisting entirely of agricultural land and minimal rural homes within the MPWD, no major growth in MPWD boundaries is anticipated.

4.3: Disadvantaged Unincorporated Communities

GC §56430, as amended by SB 244 (Chapter 513, Statutes of 2011) made changes to the CKH Act related to "disadvantaged unincorporated communities." GC §56033.5 defines a disadvantaged unincorporated community (DUC) as an inhabited territory (containing 12 or more registered voters) where the annual median household income is less than 80 percent of the statewide annual median household income.

When preparing municipal service reviews, SB 244 requires a LAFCO to provide written determinations with respect to the location and characteristics of any disadvantaged unincorporated communities within or contiguous to the SOI. When reviewing and updating a special district SOI after July 1, 2012, determinations must include specified infrastructure needs and deficiencies, as well as probable needs for services in any DUC's within or adjacent to the SOI. This would apply to the SOI of a special district that provides sewer, municipal and industrial water, or structural fire protection services or facilities.

In 2012, the median household income for the State was \$61,400. The table below represents the 2012 median household incomes for all Census Designated Places (CDP) in Solano County. As shown in Table 8, Elmira, located approximately 1 mile east of Vacaville and 3 miles west of the MPWD, has the lowest median income at 84% of the State's value and still does not qualify as a DUC. There are no unincorporated communities that meet the definition of a DUC in Solano County, therefore there are no DUC's adjacent to, or within, MPWD boundaries or in the SOI.

Table 8: Solano County CDP 2012 Household Income

Solano County CDP	Median Household Income	% of State's Median Household Income (\$61,400)
Allendale CDP	\$89,984	147%
Elmira CDP	\$52,125	84%
Green Valley CDP	\$139,474	227%
Hartley CDP	\$100,123	163%

Source: California Department of Finance 2013c

Determination 4.3.1: There are no unincorporated communities that meet the definition of a DUC in Solano County, therefore there are no DUC's adjacent to, or within, MPWD boundaries or in the SOI.

4.4: Present and Planned Capacity of Public Facilities

4.4.1 – Present Capacity of Public Facilities

The MPWD's water supply comes from three sources: the Solano Project, an agreement with the Solano Irrigation District (SID), and local surface water rights. The MPWD provides surface irrigation water to its customers for farming operations and does not supply potable water. The first weirs and ditches utilized to serve users in the MPWD were constructed in the early sixties. Initially, the MPWD served its customers with water diverted from the natural sloughs and drainage channels crossing the MPWD. Soon after the MPWD's formation, it was realized that the aforementioned structure was not a feasible means of maintaining the needs of the growers within the MPWD. Figure 4 shows current MPWD facilities that include three pumping plants, ten weirs, and the MPWD office and shop area on 2.2 acres. Individual landowners own approximately 120 pumps, motors, meters, and valves. All maintenance, repairs, replacement, and electrical costs are the responsibility of the landowner.

Currently, the MPWD implements an on-demand based system for water deliveries to its farmers. The MPWD maintains 10 weirs throughout its conveyance system that act as monitoring points to regulate deliveries and store water for reuse within the MPWD, they are installed on various flood control drainage channels in April and removed in October (November in drought years) annually. The existing conveyance system channels receive drainage return flows from upslope farmers. The water is blended with the existing water supply and is reused downstream.

Operational spills from MPWD canals and drainage channels flow back into Ulatis Creek or into drainage channels flowing easterly where they become a source of supply for landowners outside the MPWD or by Reclamation District No. 2068. Due to County growth, however, an increase in water allocation to drip irrigation has resulted in a reduction in the amount of drain water available to the MPWD.

The MPWD holds post-1914 appropriative rights with the State Water Resources Control Board, as well as contracts with Solano County Water Agency (SCWA), SID, and the Dixon Resource Conservation District (DRCD).

Table 9: Yearly Totals of Water Supplied to MPWD

	2011	2012	2013
Solano Project Water	7,584.56 AF	10,339.26 AF	10,867.44 AF
Solano Irrigation District (drain water)	18,765.36 AF	20,275.62 AF	15,183.83 AF
Water Rights (water reported to State)	15,036.83 AF	16,294.70 AF	28,850.33 AF
Total Water Received	41,385.75 AF	46,909.58 AF	54,901.60 AF

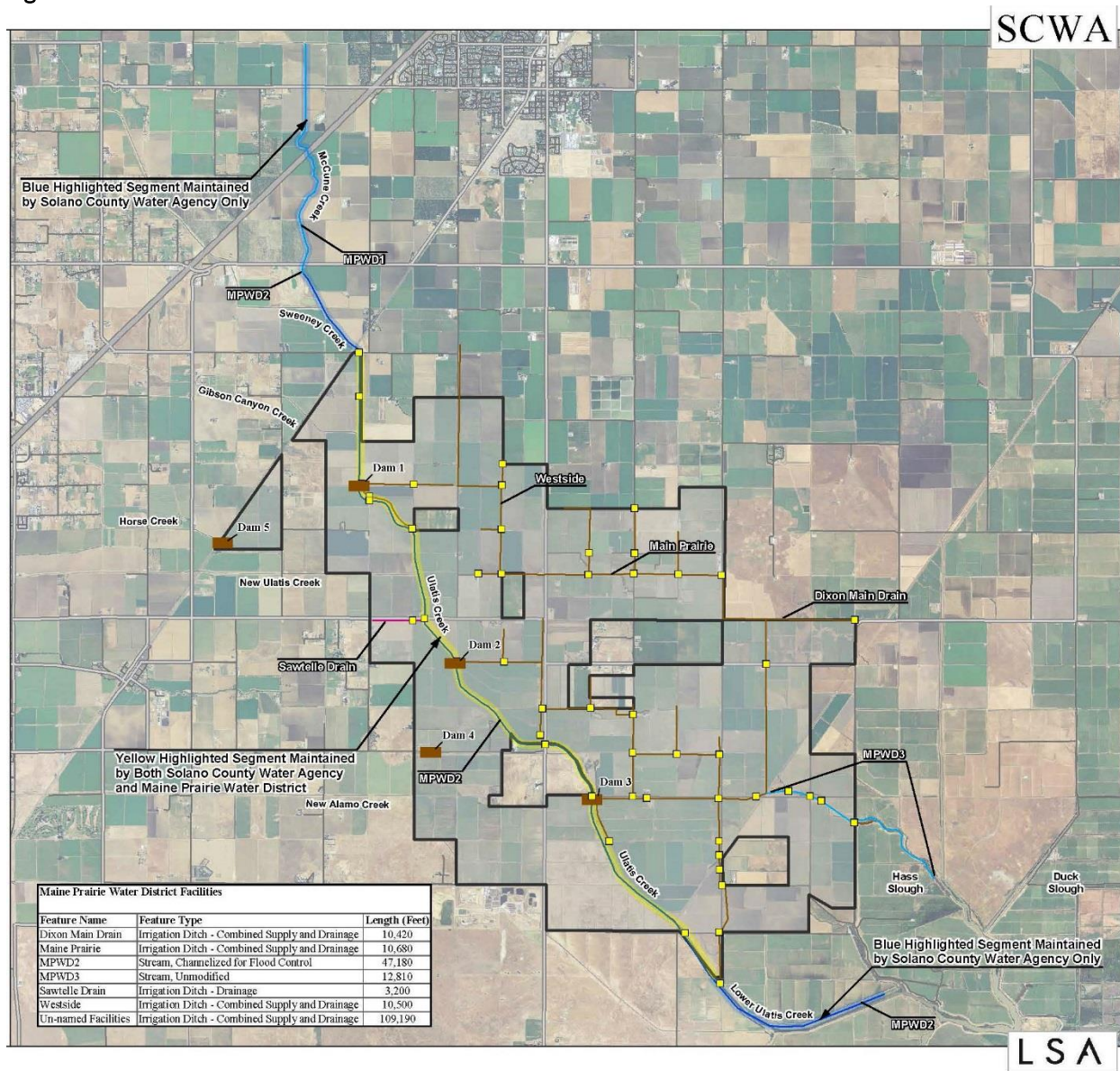
Source: Personal Communication with Assistant Secretary/Treasurer Meda Benefield of MPWD

Note: 2014 data not available at this time, all units in acre-feet (AF)

In 2013, the MPWD received 54,901.60 AF of water supplied to the district (see Table 9). According to records received by MPWD, the MPWD sold 58,817.46 AF of water (see Table 11). Comparing the amount of water delivered to the MPWD in 2013 with the water sold in 2013, the district was short 3,915.86 AF in supply.

The MPWD has contracts with SID and SP to purchase additional water as needed, and has done so in the past to meet customer demands. Customers who exceed their assigned allotment are charged \$2.00 per AF. In 2013 the 3,915.86 AF was supplied as tail water, where drainage return flows from upslope farmers are reused downstream.

Figure 4 MPWD Facilities



Source: Solano Habitat Conservation Plan Figure A-11

4.4.2 – Other Service Providers

Solano County Water Agency

Prior to the MPWD formation, the Solano County Flood Control and Water Conservation District, now the SCWA, had entered into a master contract on March 7, 1955 with the U.S. Bureau of Reclamation for a supply of water from the Solano Project. After district formation, the contract between the MPWD and

SCWA was entered into to provide project water from Lake Berryessa, in an amount not to exceed 15,000 acre-feet (AF). Water stored in Lake Berryessa flows down Putah Creek into the Putah Diversion Dam approximately 13 miles downstream. The water is diverted through the Putah South Canal and Sweeney Creek to the MPWD, approximately 7 miles downstream of the Sweeny turnout. The Solano Project water can also be diverted to the creek system at various other locations in SID. The MPWD has the option to purchase additional Solano Project water available from SID as needed.

Solano Irrigation District

The MPWD entered into a contract with SID on January 21, 1963 to utilize SID's drain water and return flows. In 1984 the MPWD and SID signed the Irrigation Tail Water Exchange Agreement. That agreement allows the MPWD to exchange up to 10,000 AF of Solano Project water at a rate of 2 AF of tail water for 1 AF of Solano Project Water. A new 5-year agreement was signed on November 19, 2013 to extend the original agreement. On occasion, the MPWD purchases supplemental contract water when sufficient SID tail-water is not available.

Local Surface Water Rights

Another MPWD source includes surface rights to local streams. The contribution from local streams is uncertain and varies from year to year. Based on the data in Table 9 local surface rights is a key source for water in the District.

Dixon Resource Conservation District

A study of the City of Dixon watershed was completed to make improvements along Lateral No. 1 that parallels Highway 113. The MPWD is part of a Joint Powers Agreement for operation and maintenance of this project and other projects that will improve drainage. The MPWD holds a contract with the Dixon Resource Conservation District for the use of "winter" water drainage services via their Dixon Regional Watershed Joint Powers Authority Program.

Water Collection, Delivery and Management

At the beginning of each fiscal year, MPWD sets annual customer allotments. Customers who exceed their assigned allotment are charged \$2.00 per AF. In years when drought conditions are expected, allocations and the allotment exceedance charge are adjusted. Peak demand from the MPWD is estimated at 360 AF per day, which can be maintained for 1 to 2 days.

The MPWD, in conjunction with the other water agencies, has a drought plan in place called the Solano Project (SP) Drought Measures Agreement. The Drought Measures Agreement can be summarized as follows. If on December 1 SP storage is 800,000 AF or less, the District develops a drought contingency plan. On April 1 the District takes certain measures based on available storage. If storage is 1.1 million AF the District drops the drought plan. If storage ranges from 550,000 to 800,000 AF the parties reduce their allotment by 5%. If storage is between 450,000 and 550,000 AF the parties reduce their allotment by 10%. The reduced allotments are referred to as Restricted Carryover. When storage improves then Restricted Carryover allotments can be used. However, when storage falls below 450,000 AF the reduced allotments or Restricted Carryover must be used for municipal purposes. As part of the plan, the Board of Directors will then set water delivery restrictions. Agricultural water users are informed of the restriction plan so that they may adjust their cropping plans.

4.4.3 – Planned Capacity of Public Facilities

The MPWD does not anticipate any major growth within the MPWD boundaries, and therefore does not forecast future service needs in relation to population growth.

Peak demand from the MPWD is estimated at 360 AF per day, which can be maintained for 1 to 2 days. The MPWD also has contracts with SID and SP to purchase additional water as needed, and has done so in the past to meet customer demands. At the beginning of each fiscal year, MPWD sets annual customer allotments. Customers who exceed their assigned allotment are charged \$2.00 per AF.

The MPWD has a working plan to adjust water delivery in drought years. In years when drought conditions are expected, allocations and the allotment exceedance charge are adjusted.

With little to no growth anticipated within the district, and the ability to purchase additional water from SID and SP to meet customer demands, the MPWD has sufficient capacity for present and future needs.

Determination 4.4.1: The main sources of water for the MPWD are Solano Project water up to 15,000 AF, SID drain water and local surface water rights. By agreement with SID the District can trade up to 10,000 AF of Solano Project water for 20,000 AF of SID tail water. Surface water rights, when available amounts to approximately 28,000 AF. The MPWD has the ability to purchase additional water from SID and SP to meet customer demands.

Determination 4.4.2: MPWD in conjunction with other agencies participates in the Solano Project Drought Measures Agreement to adjust water delivery in drought years. MPWD is affected by drought, but in normal years, has sufficient capacity to meet demand.

Determination 4.4.3: The MPWD anticipates little to no growth within the district. With current sources plus the ability to purchase additional water from SID and SP is able to meet customer demands at present and in the future.

4.5: Financial Ability to Provide Services

4.5.1 – Revenues and Expenses

The MPWD is an enterprise district. Funding comes from three main sources: standby charges (paid by the landowner), water charges (paid by the water user), and a 1-percent county property tax (received from Solano County). Water sales account for a majority of the funding, while the rest of revenues are classified as standby charges, County funds, interest, and other revenues.

In 2013, Solano Irrigation District entered into a new contract with MPWD (5 year "new contract"). The new contract with SID included rate increases, so the MPWD held a Proposition 218 Election to address increasing water rates to cover the new SID rates. There was one protest at the open hearing. The rates changed from \$7.00/AF to \$18.00/AF for farmer pumped irrigation water and from \$9.00/AF to \$21.00/AF for gravity flow deliveries. The rate difference was implemented to account for extra costs associated with pumping the irrigation water (pumps, repairs, electrical cost of pumping, etc.). The District serves 14 gravity flow turnouts and 89 land owner/farmers owned pumps. In 2014 MPWD had 29 water users and 69 land owners. Seven district water users are not land owners. The figures below in

Table 10 represent the revenues and expenditures after the rate increase in 2013. The MPWD budget is a calendar year budget as opposed to a fiscal year budget. Table 10 summarizes revenues and expenditures for four years 2010-2013 of actuals and one budget year 2014.

Table 10: MPWD Revenues and Expenditures

	CY 2010	CY 2011	CY 2012	CY 2013	CY 2014 (Budget)
Operating Revenues (Service charges)	\$343,554	\$321,456	\$370,748	\$1,031,078	
Non-Operating Revenues (Property Tax Assessment)	\$138,793	\$162,217	\$141,301	\$158,173	
Total Revenues	\$482,347	\$483,673	\$512,049	\$1,189,251	\$1,132,063
Operating Expenses	\$523,138	\$528,090	\$569,352	\$725,575	
Non-Operating Expenses	-	-	-	-	-
Total Expenses	\$523,138	\$528,090	\$569,352	\$725,575	\$924,436
Net	(-\$40,791)	(-\$44,417)	(-\$57,303)	\$463,676	\$207,627

Note: CY is calendar year.

Sources: 2010-2013 Fiscal Year Audits, Adopted 2014 Budget

The MPWD's primary revenue sources include standby charges and sale of irrigation water. MPWD water charges are currently \$18.00 /AF for owner pumped water, and \$21.00 /AF for gravity flow water. The difference is due to pumping the gravity flow water by the district as opposed to pumping by the land owner. Water sold in excess of 5.5 AF are charged an additional \$2.00 per AF. Up until 2012, the pumped irrigation water and gravity flow delivered water were not separated in sales logs, just added together and reported to the Board monthly. In Table 11 below, the two types are separated out for 2013.

Table 11: MPWD Water Amounts Sold in Acre-Feet (AF) 2013

2013	Owner Pumped @\$18.00/ AF	Gravity flow @ \$21.00/ AF
March	3,586.13	847 .95
April	4,062.77	640.30
May	8,807.77	982.31
June	9,461.39	945.59
July	10,455.30	1,186.37
August	8,254.75	1,031.27
September	5,179.63	502.76
October	2,641.11	232.06
Totals	52,448.85 AF	6,368.61 AF

Source: Personal Communication with Assistant Secretary/Treasurer Meda Benefield of MPWD

In the table above, there are some additional costs: over allotment charges, no notice turnoff charges, etc. that affects the cost of water, that are not figured into totals above.

The District Board reviews the charges annually and determines if the rates need to be adjusted. Standby charge rates can only be raised by a vote of the MPWD's landowners. Water charge rates are voted on by the Board of Directors and are set each year with the budget.

The MPWD does not have a reserve policy, however each year net reserves are rolled over and allocated to the general fund for the upcoming year to be spent as needed. The District does not operate separate debt service funds or reserve funds. The current financing levels for the MPWD are adequate for providing services within the district.

4.5.2 – Capital Improvements

The District has an inventory list of assets and infrastructure. Vehicles are scheduled to be replaced every five to six years, depending on expenses and available revenue. Building maintenance and repairs are completed as needed. Equipment replacement is on an as needed basis. District staff performs all basic equipment and vehicle maintenance.

Developing a capital improvement plan will allow the district to provide for a budgeted replacement plan or reserves for replacing equipment and facilities in the district.

4.5.3 – Outstanding Debts

MPWD does not have any outstanding debts, all District assets are owned outright.

Determination 4.5.1: The MPWD’s primary revenue sources include standby charges and irrigation water sales. The District operates on a budget for approximately \$700,000. The MPWD raised its rates in 2013 to match raised rates from SID. The current financing levels for the MPWD are adequate for providing services within the district.

Determination 4.5.2: The MPWD has no reserve policy and no capital improvement plan. Net reserves are rolled over and allocated to the general fund for the upcoming year. The District maintains an inventory list of assets and infrastructure, and equipment is replaced on an as needed basis.

Determination 4.5.3: MPWD does not have any outstanding debts and all District assets are owned outright.

4.6: Status and Opportunities for Shared Facilities

4.6.1 – Shared Facilities and Regional Cooperation

Some of the canal system maintained by the MPWD also serves as a winter drainage system for the City of Vacaville, the City of Dixon, and the Dixon Resource Conservation District. The MPWD is a member agency of the Solano County Water Agency and it has a contract to receive water from the Solano Project.

The MPWD and the SID have an agreement wherein SID receives 10,000 AFY of the District’s Solano Project entitlement. In return, the District receives a larger amount of agricultural return flows. The MPWD coordinates with other agencies on multiple plans and reporting programs.

The MPWD participates in studies and projects with other local agencies. They include the Coordinated Groundwater Analysis Project to study and monitor the Putah Fan/Tehama Formation Groundwater

Basin. In addition to the MPWD, participants include the SID, City of Vacaville, City of Dixon, Reclamation District 2068, Solano County, and the Solano County Water Agency.

The MPWD also participates in the Association of California Water Agencies (ACWA), Joint Powers Insurance Authority, and the Agricultural Water Management Council (AWMC). The AWMC concentrates on countywide conservation programs that apply to agricultural uses. As part of the conservation efforts, the MPWD is required to have an agricultural water conservation plan that meets the Federal Central Valley Project standards.

MPWD is a member of the North Delta Water Agency (NDWA), though water supplies from NDWA are not currently being used by the MPWD. Parts of the MPWD are in the NDWA. The NDWA has an agreement with the Department of Water Resources to provide supplemental water to landowners within the boundary of the NDWA when their water rights from the State Water Resource Control Board are reduced or cut off because of Delta water quality standards.

In addition, the MPWD uses recycled water from the Vacaville wastewater treatment plant discharged into Alamo Creek. During the summer irrigation season the treated wastewater, agricultural return flows, natural runoff, and Solano Project water are stored behind temporary weirs installed by the MPWD and the SID. The water is used for irrigation.

4.6.2 – Management Efficiencies

The MPWD coordinates with SCWA on a county-wide Groundwater Management Plan and Pesticide Discharge Management Reporting. The Groundwater Management Plan was adopted on February 21, 1995, pursuant to Water Code §10753. The plan monitors seven wells within the county, one of which is within the MPWD boundary. The program is monitored by the SCWA and reports to the Bureau of Reclamation. The MPWD also participates in a Pesticide Discharge Management Reporting, which is also handled by the SCWA.

The MPWD coordinates with the SID in an Agriculture Management Plan, which is reported to the Bureau of Reclamation. The SID, in conjunction with the other water agencies as part of the Solano Project agreement, has a drought plan in place called the Solano Project (SP) Drought Measures Agreement. In drought years, SID and MPWD will share water allotments with the cities covered by the SP agreement.

The district does not participate in long range planning. The District has an inventory list of assets and infrastructure. Vehicles are replaced every five to six years, depending on expenses and available revenue. Building maintenance and repairs are completed as needed. Equipment replacement is on an as needed basis. District staff performs all basic equipment and vehicle maintenance. A capital improvement plan would allow the district to provide for a budgeted replacement plan or reserves for replacing equipment and facilities in the district, as well as long range planning.

MPWD has a staff of four full-time employees: one executive/management position, one secretary treasurer (clerical), one water tender/maintenance person, and one maintenance/relief water tender. The MPWD allocates \$2,000 annually towards education programs provided by SID for MPWD and neighboring Reclamation District 2068. These programs are held twice a year, and focus on subjects pertaining to water conservation, pesticide and herbicide use, best management practices for irrigation and water, and other subjects pertinent to the districts.

- Determination 4.6.1:** The District works cooperatively with neighboring entities and special districts to share facilities and water resources, and coordinates with other agencies on multiple plans and reporting programs. The MPWD participates in studies and projects with other local agencies including: countywide conservation programs, an agricultural water conservation plan. The District works with SCWA on a county-wide Groundwater Management Plan and Pesticide Discharge Management Reporting. The MPWD uses recycled water from the Vacaville wastewater treatment plant, coordinates with the SID in an Agriculture Management Plan, and in drought years, SID and MPWD will share water allotments with cities covered by the SP agreement.
- Determination 4.6.2:** MPWD has a full-time staff of four employees who are capable of managing the District.
- Determination 4.6.3:** The District contracts with SID to provide education programs for agricultural water users of MPWD and neighboring RD 2068.

4.7: Government Structure and Accountability

MPWD's Board of Directors consists of five members who are elected at large. Board elections are held in the odd years according to the California Water Code. Each director serves a four year staggered terms. If no candidates file for seats, the Board of Supervisors fills vacancies through appointment. If someone is unable to complete a term, the District seeks interested land owners/representative of a land owner and a replacement is chosen at an open board meeting (special meeting if necessary) and the Board of Supervisors appoints that person to compete the term. According to California Water Code, board members must be landowners or represent a landowner.

Over the past few years, the MPWD has not held elections as their Board Members have all remained in their positions. However, recently two seats were vacated and did not receive any candidates that filed to run, so the Board of Supervisors filled the vacancies through appointment.

Board members receive no monetary compensation but do receive a credit towards health insurance from the MPWD. The district communicates with its customers through newsletter. The Board holds regularly scheduled meetings on the third Tuesday of each month at 2:00 p.m. at the District Office, located at 6595 Pitt School Road in Dixon, California. Agendas are posted 72 hours prior to the meeting time in compliance with the Brown Act.

- Determination 4.7.1:** MPWD is governed by an elected five-member Board of Directors who serve 4-year terms. Board members receive no monetary compensation but do receive a credit towards health insurance from the MPWD. The MPWD complies with the Brown Act.

4.8: LAFCO Policies Affecting Service Delivery

The MPWD does not receive requests for water outside of the service area. The water belongs to the District, and individual land owners cannot sell their allotments. There are no LAFCO policies that directly affect efficient service delivery of MPWD.

Determination 4.8.1: There are no LAFCO policies that directly affect efficient service delivery of MPWD.

4.9: Determinations Summary

Determination 4.2.1: The MPWD lies in the rural unincorporated area of Solano County and consists entirely of agricultural land and rural homes. As of 2010, the MPWD had a population of 250 people.

Determination 4.2.2: With the County's City-Centered-Growth Policy, and land uses consisting entirely of agricultural land and minimal rural homes within the MPWD, no major growth in MPWD boundaries is anticipated.

Determination 4.3.1: There are no unincorporated communities that meet the definition of a DUC in Solano County, therefore there are no DUC's adjacent to, or within, MPWD boundaries or in the SOI.

Determination 4.4.1: The main sources of water for the MPWD are Solano Project water up to 15,000 AF, SID drain water and local surface water rights. By agreement with SID the District can trade up to 10,000 AF of Solano Project water for 20,000 AF of SID tail water. Surface water rights, when available amounts to approximately 28,000 AF. The MPWD has the ability to purchase additional water from SID and SP to meet customer demands.

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Determination 4.4.3: The MPWD anticipates little to no growth within the district. With current sources plus the ability to purchase additional water from SID and SP is able to meet customer demands at present and in the future.

Determination 4.5.1: The MPWD's primary revenue sources include standby charges and irrigation water sales. The District operates on a budget for approximately \$700,000. The MPWD raised its rates in 2013 to match raised rates from SID. The current financing levels for the MPWD are adequate for providing services within the district.

Determination 4.5.2: The MPWD has no reserve policy and no capital improvement plan. Net reserves are rolled over and allocated to the general fund for the upcoming year. The District maintains an inventory list of assets and infrastructure, and equipment is replaced on an as needed basis.

Determination 4.5.3: MPWD does not have any outstanding debts and all District assets are owned outright.

- Determination 4.6.1:** The District works cooperatively with neighboring entities and special districts to share facilities and water resources, and coordinates with other agencies on multiple plans and reporting programs. The MPWD participates in studies and projects with other local agencies including: countywide conservation programs an agricultural water conservation plan. The District works with SCWA on a county-wide Groundwater Management Plan and Pesticide Discharge Management Reporting. The MPWD uses recycled water from the Vacaville wastewater treatment plant, coordinates with the SID in an Agriculture Management Plan, and in drought years, SID and MPWD will share water allotments with cities covered by the SP agreement.
- Determination 4.6.2:** MPWD has a full-time staff of four employees who are capable of managing the District.
- Determination 4.6.3:** The District contracts with SID to provide education programs for agricultural water users of MPWD and neighboring RD 2068.
- Determination 4.7.1:** MPWD is governed by an elected five-member Board of Directors who serve 4-year terms. Board members receive no monetary compensation but do receive a credit towards health insurance from the MPWD. The MPWD complies with the Brown Act.
- Determination 4.8.1:** There are no LAFCO policies that directly affect efficient service delivery of MPWD.

4.10: Issues with Recommendations

Capital Improvement Plan - develop a Capital Improvement Plan to provide for a replacement plan or reserves for water facilities in the district.

A capital improvement plan (CIP) is recommended as it is a widely used and valuable planning and fiscal management tool used to coordinate capital improvement purchases, timing and financing over a multi-year period. Capital improvements are physical expenditures such as land, buildings, infrastructure and equipment. The CIP typically includes prioritized capital improvement projects, in a multi-year schedule, tied to expected project funding, supported by project cost estimates and financing sources. While CIP are for multi-year periods, they should be reviewed and updated annually to reflect changing community needs, priorities and funding opportunities.

CIPs are useful in capital budgeting, plan implementation and management review. For small special districts, there is technical assistance available for CIP preparation, including through contract services. For example the RNVWD CIP is being prepared by the Solano Irrigation District as part of their contract services agreement.

In addition, the District should develop a reserve policy documenting how funds are rolled over each year.

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