MAINE PRAIRIE WATER DISTRICT

5-YEAR WATER MANAGEMENT PLAN REVISION

FEBRUARY 2010

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Section 1. Description of the District

Maine Prairie Water District
Don Holdener, Manager
(707) 678-5332
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A. History

Date District formed: *December 12, 1958* Original Size: *6,100 acres*

The Maine Prairie Water District (District) was formed on December 12, 1958 to deliver water for agricultural irrigation. The first dams and ditches utilized to serve users in the District were constructed in the early sixties. Initially, the District served its customers with water diverted from the natural sloughs and drainage channels crossing the District. It was soon realized this was not a reliable supply to meet the needs of the growers within the District. On July 9, 1963, the District entered into a contract for Solano Project water with the Solano County Flood Control and Water Conservation District. This contract would provide a reliable irrigation supply to the District. Prior to the formation of the District, the Solano County Flood Control and Water Conservation District, now the Solano County Water Agency (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. The contract between the District and SCWA provides project water from Lake Berryessa in an amount not to exceed 15,000 acre-feet (AF) to an original contract area of 6,100 acres. Realizing there was a need for additional water supplies, on January 21, 1963 the District entered into a contract with the Solano Irrigation District (SID) to utilize SID drain water and return flows. Since its formation, the District has since grown to 15,158 gross acres, with an irrigated acreage of approximately 13,400 acres.

Size, Population & Irrigated Acres

	1955	**1997**	**2007**
size (sq. miles)	9.53	23.68	23.68
irrigated acres	6,100	13,405	13,405

Water Supplies Received

Current Water Use	**2007 AF**
Federal Urban Water	0
Federal Agricultural Water	12,069
Water Rights Licenses	13,568
Local / Other/Re-Use	4,125
Local Surface Water	N/A
Upslope Drain Water	13,567
District Ground Water	N/A
Transferred Water	N/A
Reclaimed Water	N/A
Other	N/A
TOTAL	43,328

For the purpose of the table above, "Local/Other/Re-use" is defined as water that drains from customer's fields as tail-water and discharges back into the distribution system, to be re-used by the next customer on the system. "Water Rights Licenses" refers to the (7) licenses that MPWD hold with the State Water Resources Control Board (see below). And, in 2007 the District purchased an additional 7069 acre-feet of Solano Project water from Solano Irrigation District because SID's drainage water supplies were not sufficient to meet the demands of the District.

Annual entitlement under each right and/or contract

Water Rights — The MPWD holds post-1914 appropriative rights with the State Water Resources Control Board, as well as contracts with SID and the Solano County Water Agency, and is a member of the North Delta Water Agency (NDWA). NDWA water supplies are currently not being used by the District. These post-1914 water supplies in the Delta channels act as an insurance policy to their appropriative water rights. The following table summarizes the post-1914 water rights held by the MPWD to appropriate water from channels flowing within its boundaries and water rights the District has with the SCWA and the Solano Irrigation District.

	Source	Contract #	Contract restrictions
Agric. AF/Y	Unnamed Drainage Channel tributary to Hass Slough thence Cache Slough, Sweeney Creek, Ulatis Creek, Alamo Creek.	SWRCB License 9002	2 cfs Seasonal- May 1-November 30
Agric. AF/Y	Unnamed Drainage Channel tributary to Hass Slough thence Cache Slough, Sweeney Creek, Ulatis Creek, Alamo Creek.	SWRCB License 9001	2 cfs Seasonal- April 1-November 30
Agric. AF/Y	Ulatis Creek, Sweeney Creek, Alamo Creek, Unnamed Drain	SWRCB License 8991	2.11 cfs Seasonal- May 1-November 1
Agric. AF/Y	Unnamed Drainage Canal tributary to Hass Slough thence Cache Slough, Hass Slough, channels of the drainage system of the Dixon Soil Conservation District	SWRCB License 10048	2 cfs, not to exceed 531 AF per year Seasonal- April 15-November 15
Agric. AF/Y	Unnamed Drainage Canal tributary to Hass Slough thence Cache Slough, Hass Slough, channels of the drainage system of the Dixon Soil Conservation District	SWRCB License 8990	2 cfs Seasonal- April 1-October 31
Agric. AF/Y	Unnamed Drainage Canal tributary to Hass Slough thence Cache Slough, Hass Slough, channels of the drainage system of the Dixon Soil Conservation District	SWRCB License 9043	2 cfs Seasonal- April 1-October 31
Agric. AF/Y	Sweeney Creek, Ulatis Creek, Alamo Creek, Unnamed Drain (AKA Sawtelle Drain)	SWRCB License 11093	96 cfs, not to exceed 27,771 AF per year Seasonal- March 1 to July 1 and September 1 to November 1
Other AF/Y	Solano Project	SCWA	15,000 AF - USER Water Storage Restrictions
	Drainage Flow	SID Agreement	Up to 20,000 AF per year

Anticipated land use changes (i.e., agricultural to municipal, etc.)

There are no anticipated land use changes for the District. No cities are located within the District boundaries.

Cropping Patterns

Crops with 5% or more of total acreage

1997 (Original Plan)	Acres	2000 (Previous Plan)	Acres	2007 (Current Plan)	Acres
ALFALFA	2,885	**ALFALFA**	5,763	**ALFALFA**	4,832
PASTURE	2,254	**PASTURE**	1,956	**PASTURE**	4,676
SUDAN	0	**SUDAN**	1,274	**SUDAN**	1,126
CORN	1,091	**CORN**	2,007	**CORN**	1,067
WHEAT	2,070	**WHEAT**	776	**SUNFLOWER**	695
SUGAR BEETS	944				
SUNFLOWER	1,335				
Misc. (<5%)	1,122	Misc. (<5%)	1,580	Misc. (<10%)	960
TOTAL	11,701		13,356		13,356

Five major irrigation methods (by acreage)

1997 (Original Plan)	Acres	2000 (Previous Plan)	Acres	2007 (Current Plan)	Acres
Flood/Furrow	5,971	Flood/Furrow	7,819	Flood / Furrow	9,508
Furrow	3,289	Furrow	4,127	Furrow	2,888
Furrow / Dry	1,848	Furrow / Dry	776	Furrow / Dry	960
All other	361	All other	634		
TOTAL	11,469	**TOTAL**	13,356	**TOTAL**	13,356

B. Location and Facilities

2007 agricultural conveyance system

Attached in Appendix A are three maps of the District. The first map is a Location Map showing the District's service area. The third map is entitled Maine Prairie Water District Water Supply Facilities shows the District conveyance system. The District's conveyance system utilizes the existing drainage channels within the District to convey water during the irrigation season. Although the District does not own, or control these drainage channels, they do maintain the channels. Please note inflow points as the creeks, channels and drains that flow into the District. The District does not have wells. The re-use system is field

drainage picked by up by the next users on the system. There are three re-use systems:_System 1 fed by Dam 1, System 2 fed by Dam 2, System 3 fed by Dam 3, There are four inflow points: Dam 1, Dam 4, Dam 5, and Dam 7. Inflow is measured daily by stage recorder or open-channel flow rate measurement with a weir stick. Measurement accuracy is 95%. Please refer to the Water Supply Facilities Map. Outflow points are measured at Swan Road Weir, Norton Weir/Haas Slough, Dam 3, and Vassar Weir, where water leaves the District. Please refer to the second map titled Solano Irrigation District/Maine Prairie Water District Drainage Channels. This map shows the various drainage channels draining from Solano Irrigation District into the Maine Prairie Water District. The following table summarizes the District conveyance system:

Miles unlined - canal	Miles lined - canal	Miles piped	Miles - other
24.09	0	0	0

Storage

The District does not operate any storage facilities. The District maintains 10 dams throughout its conveyance system that act as check structures that regulate deliveries and store water for reuse within the District.

Spill Recovery System

The existing conveyance system channels receive drainage and tail-water return flows from upslope farmers. The water is blended with the existing water supply and is reused downstream. Operational spills at the end of the conveyance system canals spill into drainage channels flowing out of the District and back into Ulatis Creek or into drainage channels flowing easterly where they become a source of supply for landowners outside the District or by Reclamation District No. 2068.

Delivery System Operation

The District currently implements an on-demand based system for water deliveries to its farmers. The District requires a twenty-four (24) hour advance notice before water is delivered. Customers must also give a twenty-four (24) hour notice before water is turned off. Notice can be given to the water tender or to the District by telephone during regular business hours.

Restrictions on the Contractor's water source(s.

Restriction	Cause of restriction	Effect on District operations
Reduction of Solano Project	Lake Berryessa falls below 800,000 acre feet	Reduction in annual allocation

Proposed changes or Additions to District's Facilities and Operations for the next five years

The District will continue its on-going annual maintenance program for its facilities.

C Topography and Soils

The Maine Prairie Water District is located to the east of the Vaca Mountains and south of Interstate 80. The District lies approximately 4 miles to the east of Vacaville and 3 miles south of the City of Dixon. Included in Appendix A, is a Location Map showing the Maine Prairie Water District boundaries in relation to nearby cities and landmarks. The District is typical of Delta agricultural lands with a gently sloping plain of old alluvial material at a southeasterly gradient of approximately six feet (6') per mile. The elevation of the District ranges from approximately 45 to 5 feet.

Soils

Provide a Soil Association map (from NRCS) locating the elements described below.

Attached in Appendix B are two (2) soils classification maps prepared for this study, with the soil types listed. The 1977 report, "Soil Survey of Solano County", is on file at the office of the Maine Prairie Water District. The land classification is as follows:

District soil associations

Land Classification	Est. acres	Effect on water operations and management
Class 1	534	None
Class 2	6,727	Slight to Moderate
Class 3	7,508	Moderate to Severe

Describe District soil associations.

The U.S. Bureau of Reclamation land classifications are generally described as follows: Class I lands which are confined to the recent alluvial fans, are deep permeable soils highly suitable in all respects for irrigated cropping with a minimum preparation. Class 2 lands, because of slight to moderate limitations in soil, topography, or drainage are adapted to fewer crops than Class I lands or are more difficult or more costly to manage than Class 1 land. Class 3 lands, because of heavy clay soils, shallow clay-pan, or rough topography, are adapted to a restricted number of crops and require costly measures in development and irrigation.

D. Climate

General climate of the District

A mild spring and fall, hot dry summers, and cool wet winters typically characterize the District's climate. The following precipitation and temperature data for the Vacaville Station located approximately 10 miles to the west and for the Davis Station located approximately 15 miles to the north of the District were obtained.

National Weather Service

City	Vacaville #049200												
Period	(1948 – 2005)												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Avg Precip (in)	5.70	4.51	3.21	1.41	0.55	0.11	0.03	0.05	0.33	1.21	3.18	5.13	25.43
Mean Temp (°F)	45.8	50.7	54.5	59.0	65.5	71.8	76.0	74.9	71.8	64.2	53.5	46.4	61.2
Avg Max (°F)	54.7	61.5	66.7	73.3	81.3	89.0	95.2	93.9	89.7	79.8	65.1	55.3	75.5
Avg Min (°F)	36.9	39.9	42.3	44.7	49.8	54.5	56.9	55.9	53.9	48.6	41.9	37.4	46.9
ETo	0.73	2.36	4.13	5.82	7.62	8.00	8.36	7.11	5.82	3.86	1.25	1.14	56.22

City	Davis #042294												
Period	(1917 – 2005)												
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Avg Precip (in)	3.50	3.33	2.37	1.19	0.45	0.15	0.01	0.03	0.23	0.87	2.04	3.23	17.41
Mean Temp	45.0	49.7	53.4	58.3	64.8	71.2	74.7	73.40	70.5	63.2	52.8	45.7	60.2
Avg Max (°F)	53.5	59.8	65.2	72.2	80.6	88.6	94.1	92.8	88.5	78.9	64.9	54.4	74.5
Avg Min (°F)	36.6	39.6	41.7	44.3	49.1	53.8	55.3	54.1	52.5	47.5	40.7	36.9	46.0
ETo	0.73	2.36	4.13	5.82	7.62	8.00	8.36	7.11	5.82	3.86	1.25	1.14	56.22

average wind velocity: 5.7 mph

pre-dominant wind direction: Westerly

average annual frost free days: Davis-288 days; Vacaville-316 days

Impact of any microclimates on water management within the District

There are no microclimates that would affect water management within the District.

E. Natural and Cultural Resources

Natural Resources within the District

There are no man-made environmental or recreational resources within the District. Existing creeks and District conveyance channels do provide an environmental habitat for wildlife and any water use for these habitats is incidental to the irrigation needs of the District. It is estimated there are approximately 160 acres of creek and channel habitat within the District.

Management of these resources in the past or present by the District

The District does not provide any management of these resources.

Recreational and/or Cultural Resources

There are no recreational or cultural resources located within the District boundaries.

F. Operating Rules and Regulations

Contractor 's agricultural water allocation policy

Attached in Appendix C is a copy of the Maine Prairie Water District Rules and Regulations which govern the distribution of water. In February of each year, farmers submit an application for water needs during the upcoming year. The District Board of Directors factors in the availability of water from various sources and establishes an annual water budget to allocate to farmers for the year. As summarized in Item 21 of the Rules and Regulations, the District will attempt to obtain reasonable water supplies for irrigation of District lands. However, it does not guarantee that any specific amount of water will be available in a given year.

Official and actual lead times necessary for water orders and shut-off

As outlined in the Rules and Regulations, the District requires a twenty-four advance notice before water is delivered. Customers must also give a twenty-four (24) hour notice before water is turned off. A notice to terminate water usage must be submitted to the District by 2:00 P.M. on the day prier to termination of water use. All notices to begin or terminate water usage should be given during normal working hours. The notice

may be given to the water tender or to the District by telephone. An answering machine is available at the District office to take water orders after hours.

Contractor's policies regarding surface and subsurface drainage from farms

Policies regarding surface and subsurface drainage are outlined in the Rules and Regulations, Appendix C, Item 13 and 20. Any tail-water drainage considered abnormal will cause immediate termination of water service. The District also holds that return flows and drainage resulting from irrigation become the property of the District when the water returns to the ditches or streams maintained by the District or has left the boundaries of the parcel to which the water was delivered.

Contractor's policies on water transfers by the Contractor and its customers

The District's customers are not allowed to transfer water, as the water is owned by the District, which iss bound by its contracts with Solano Irrigation District and Solano County Water Agency (see Section 2.E.4). In addition, the District Manager is restricted from supplying water to lands outside of the District without the prior consent of Solano Irrigation District, Solano County Water Agency, and the District's Board of Directors.

G. Water Measurement, Pricing and Billing

Agricultural Customers

total # of customers: 38 *total # of 100% measured customers:* 38

total # of customer turnouts: 100 _____ total # of measured turnouts: 100

Percentage of water delivered in 2007 that was measured at customer turnouts: 100%

The District gained ten additional customers since 2003 although the number of turnouts has not changed. The number of farmers change each year, depending on changes in crop prices, land ownership, and retirements. Water charges are all volumetric, as there are no fixed charges.

Volumetric Charges 2007					
Charges	Charge units		Units billed		$ collected
$6.00	per acre-ft		5,742.75 a-ft.		$51,684.75
$9.00	per acre-ft		49,505.03 a-ft.		$297,030.18

Measurement Type	Number	Accuracy (frequency)	Reading frequency (days)	Calibration frequency (months)	Maintenance frequency (months)
Orifices	0	N/A	N/A	_	N/A
Propeller	100	Within 6%	Daily	1-2 years +	1-2 years ±
Weirs	0	N/A	N/A	N/A	N/A
Flumes	0	N/A	N/A	N/A	N/A
Venturi	0	N/A	N/A	N/A	N/A
Metered gates	0	N/A	N/A	N/A	N/A
TOTAL	100				

Urban Customers

total # of customers: *0* total # of measured customers: 0

Percentage of water treated in 2000 that was measured when delivered to a customer: 0

Contractor's current year agriculture water charges

An annual operations and maintenance budget is developed at the beginning of each water year from which water rate schedules are developed. The water rates are set according to the quantity of water available and allocated for the irrigation season. The water charge is based on a tiered water rate structure. If water use exceeds the allotment for the year, the price per acre-foot is increased. Attached in Appendix D are the Water Rates for 2007.

District's current year urban water charges

The District does not have any urban customers.

Contractor's water-use data accounting procedures

The District ditch tenders read the meters daily. The readings are recorded and filed at the District office for monthly billing. All flow meter information is manually recorded and billed. Included in Appendix E is a copy of a typical District invoice provided to a water user at the end of each month for payment. Records are available for review by District water users upon request.

H. Water Shortage Allocation Policies

Contractor's current year water shortage policies

Agricultural:

Water allocations are made each year by the District Board of Directors in February. The allocation is made based on the availability of water under the District's contract with the Solano Irrigation District and Solano County Water Agency for a given year. The District does not guarantee water deliveries, but makes every effort to meet the needs of the water users within the District. The water allocation policies are outlined in Item 21 of the District Rules and Regulations, Appendix C.

Urban: The District does not allocate any urban water.

Contractor's current year policies that address wasteful use of water

The Rules and Regulations, Appendix C, Item 13 addresses wasteful use of water. If tail-water is considered to be excessive, the District Manager has the right to terminate water service. The landowner is responsible for the disposition of drainage water from the property and is responsible for any resulting damages.

Section 2. Inventory of Water Resources

A. Surface Water Supply

Acre-foot amounts of surface water delivered to the Contractor by each of the Contractor's sources

Source	Amount (AFY)	Contract
Solano Project	15,000	SCWA
Drainage	20,000 ±	SID
Water Rights Licenses	34,120	SWRCB

For Amount of water received under each right and/or contract for the last 10 years, see Table 8

The amount of surface water received for the last (10) years from various sources is tabulated in Table 8.

B. Ground Water Supply

Acre-foot amounts of ground water pumped and delivered by the Contractor

The District does not currently own or operate any groundwater wells. There are only two known landowner agricultural wells in the District and they are not being operated.

Ground water basin(s) that underlie the District

Name	Size (sq. mi.)	Usable capacity (AF)	Safe Yield (AFY)
Sacramento	5,000	22,000,000	40,000

The Maine Prairie Water District is located in the southwest corner of the Sacramento Basin, as described in the Department of Water Resources Bulletin 118-80. The actual size and capacity of the basin is listed in the table above. The actual safe yield of the Solano County portion of the Sacramento Basin, as estimated by the U.S.G.S. in Water Supply Paper 1964 and the Department of Water Resources in their 1955 publication, "Putah Creek Cone Investigation", is estimated at 40,000 acre feet per year based on the assumptions and conditions present at that time.

The Putah Creek Fan in Solano County represents the primary groundwater basin utilized for agricultural purposes in Solano County. The alluvial fan was formed by the historic swing of Putah Creek which in the geologic past deposited layers of sands, gravels, and silts throughout the Davis, Dixon, and Winters area. The thickness of the alluvial fan varies from approximately 60 to 130 feet. These deposits are the most permeable and productive aquifers in Solano County. The District is located in the extreme reaches of the

Putah Creek alluvial fan. The specific capacity of wells in the Putah Creek alluvial fan varies from a range of 30 to 100 gallons per minute per foot of drawdown. Although many of the wells in Solano County extend into the upper permeable aquifers of the older alluvium, some wells protrude further into the upper portion of the Tehama formation. The sand and gravel deposits found within the Tehama formation are typically less permeable than the sand and gravel formations found in the older alluvium. Large capacity wells have been drilled in the Putah Creek Fan with depths from 300 to over 1,000 feet to provide water supplies.

Contractor operated wells, and managed ground water recharge areas

The District does not currently own or operate any wells or recharge areas within the District Boundaries.

C. Other Water Supplies

Acre-foot amounts of "Other" water used as part of the Contractor's water supply

The City of Vacaville's Easterly Wastewater Treatment Plant is located southeasterly of the City of Elmira. The disinfected secondary effluent from the treatment plant is discharged to Alamo Creek on the northerly side of the treatment plant. The effluent then flows into New Alamo Creek and over the Brown/Alamo Dam into Ulatis Creek, which flows through the District as indicated on the Drainage Channels map in Appendix A. The effluent flow is insignificant relative to the total water supplies for the District, although it supplements the Solano Irrigation District tail-water and drainage flows that are utilized by the District.

D. Source Water Quality Monitoring Practices

Water quality problems

The District's surface water supplies are of good quality for irrigation purposes, and the District does not have concerns regarding water quality.

Current water quality monitoring programs for surface water

The City of Vacaville monitors the quality of the water discharged into Alamo Creek. A copy of the water quality analyses for 2007-2008 is attached in Appendix F.

Agricultural Districts - current year TDS range for surface water and ground water

Surface water: *400 – 600 ppm* *Ground water:* *not sampled*

E. Water Uses within the District

1. *Agricultural*

The crops grown in 2007, their annual evapotranspiration rates, leaching requirements, and estimated effective precipitation are listed in Table 5.

crop name:	ALFALFA	
irrigation methods	Flood/Furrow	acreage
		4,832

crop name:	PASTURE	
irrigation methods	Flood	acreage
		4,676

crop name:	SUDAN GRASS	
irrigation methods	Furrow	acreage
		1,126

crop name:	CORN	
irrigation methods	Furrow	acreage
		1,067

crop name:	SUNFLOWERS	
irrigation methods	Furrow	acreage
		695

crop name:	MISC, WHEAT, FALLOW	
irrigation methods	Furrow/Dry	acreage
		960

2. *Urban:* There are no urban customers located within the District.

Urban wastewater Collection & Treatment Systems serving the entire Contractor service area

There are no urban areas requiring wastewater collection and treatment systems within the District.

Urban Recycled Wastewater

There are no urban customers within the service area, but the District does get recycled wastewater from the City of Vacaville Easterly Wastewater Treatment Plant. A description of this supply is included in Section 2. C. "Other Water Supplies."

3. Ground Water Recharge

The District does not currently own or operate any designated groundwater recharge areas. Subsurface flows from Yolo County, seepage from unlined canals and stream channels, and deep percolation of applied irrigation water provide recharge to the groundwater basin. In 2008 the District began installation of a multi-level deep aquifer monitoring well, planned for depths of 2,000 ft. – 2,500 ft., with the cooperation of the Solano County Water Agency (SCWA). In an effort towards long range planning, SCWA's Integrated Regional Water Management Plan identifies groundwater programs within the County, including those that may be performed by member agencies such as Maine Prairie Water District, that overly groundwater basins. The project is expected to better understand the groundwater basins which could allow for more efficient use of groundwater resources, and develop conjunctive use projects to optimize water supplies. In addition, the District's 1996 "Groundwater Conditions Report," prepared in partnership with Reclamation District No. 2068, summarizes groundwater conditions in the area from available groundwater data.

4. Transfers and Exchanges

In 1983 Maine Prairie Water District (District) entered into an agreement with the Solano Irrigation District (SID). SID agreed to sell the District up to 20,000 acre feet annually of drainage and return flow water flowing in the drainage channels and creeks through SID and into the District. By exchange the District agreed to assign to SID up to 10,000 acre feet per year of its Solano Project entitlement of 15,000 acre feet. This agreement provided both SID and the District the opportunity to more efficiently manage and utilize their existing surface water supplies. In 2007, the District purchased 13,567 acre-feet of upslope drainage water from SID.

Transfers into or out of the District

Other than the SID agreement, the District has not participated in any transfers into or out of the District Boundaries.

Trades, wheeling or other transactions

Other than as mentioned above, the District has not participated in any trades, wheeling

or other transactions.

5. Other

Any other uses of water

The District has no other uses of water other than reported above.

F. Irrigation Drainage from the District

Outflow Point	Location	AF 2007	Type of Measurement	Accuracy	% of Total Outflow	Acres Drained
Swan Rd.Weir	Swan Rd.	78	Open Channel	95%	5%	317
			with weir stick			
Norton Weir	Haas Slough	117,017	Open Channel	95%	80%	7437
			with weir stick			
Dam 3	Maine Prairie Road	22,817	Open Channel	95%	15%	3053
			with weir stick			
Vassar Weir	Ulatis Channel below Dam 3	n/a	n/a	n/a	n/a	n/a

The District operates their delivery system to minimize spill flows and maximize the reuse of water. Water that is not used by the original water user drains back and returns into the District conveyance channels which becomes the property of the District. The water then becomes available for downstream water users within District boundaries. Spill or drain water not used by District farmers either flows back into the District re-use systems, or utilized by landowners outside of the District on private lands, or by Reclamation District No. 2068. Unrecovered flows leave the District at Norton Weir, and continues downstream to the Sacramento River. Outflow is measured at Swan Rd, Weir, Norton Weir, and Dam 3. Outfall is not measured at Vassar Weir because there is minimal outflow. All of the outflow points serve as winter storm drains, and the weirs are removed each October or November to allow for storm flows. During March of each year the weirs are re-installed to allow for irrigation purposes. The facilities do not belong to the District, as they belong to the Solano County Water Agency or the Dixon Resource Conservation District for flood control purposes. Due to the ownership by local agencies, and the use of the weirs and dams for flood control, the District is

restricted from implementing major conservation projects, such as tail-water return systems at the dams and weirs.

Location of reuse	Type of Reuse	2007 (AF)
Within Maine Prairie Water District	Irrigation Supply	Undetermined
Reclamation District No. 2068	Irrigation Supply	Undetermined
	TOTAL	Undetermined

Total # outflow locations: 4

Total # subsurface outflow points: 0

Total # measured outflow points: 3

Percentage of outflow measured during report year: 99%

Outflow point location: Swan Rd. Weir , Norton Weir, Vassar Weir, and Dam 3 (please refer to the second map).

Quantity: 3, Type: weir and check structure, Accuracy: 95%, Percent of total: 99%, Acres drained: 10,809.

Outflow point within District use: Numerous points because farm field drainage is discharged back into the system.

Where flows to: Flows discharge back into the District system. Unrecovered flows ultimately leave the District at Norton Weir.

Drainage water quality-testing program

The District's landowners are members of the Sacramento Valley Water Quality Coalition (Coalition) which was formed in 2003 to develop a water quality testing program as required to meet the California Central Valley Regional Water Quality Board's regulatory programs, and to improve drainage water quality. Drainage water is sampled within the southern portion of the District by the Coalition at Ulatis Creek. A copy of the water quality report is attached in Appendix L. In addition, the City of Vacaville regularly tests discharges from the Vacaville Easterly Wastewater Water Treatment Plant, of which a portion of treated flows are discharged into Alamo Creek, commingled with Solano Irrigation District (SID) drainage flows and utilized downstream by the District. A copy of the irrigation water analysis report is attached in Appendix

F.

Contractor's role in the current year drainage testing program

The District cooperates with the City of Vacaville and SID with the drainage testing program.

Any usage limitation resulting from the drainage water quality

The analyses indicate the drainage water is acceptable for irrigation purposes. None of the sources are utilized as a potable drinking water supply.

G. Water Accounting (Inventory)

1. Contractor Water Supplies Quantified (See Tables attached at end of Report)

1. Surface water supplies, imported and originating within the District, by month. Table 1
2. Ground water extracted by the District, by month. Table 2
3. Effective precipitation by crop. Table 5
4. Estimated annual ground water extracted by non-District parties. Table 2
5. Commingled urban wastewater with upstream drainage. Table 3

2. Water Used Quantified

1. Conveyance losses, including seepage, evaporation, and operational spills. Table 4
2. Consumptive use by riparian vegetation. Table 6
3. Applied irrigation water, crop evapotranspiration, water used for leaching and cultural practices (e.g., soil reclamation, etc.). Table 5
4. Ground water recharge. Table 6
5. Water exchanges and transfers. Table 6
6. Estimated deep percolation within the District. Table 7
7. Flows to perched water table or saline sink. Table 7
8. Irrigation spill or drain water leaving the District. Table 6
9. Other. Table 6

Section 3. Best Management Practices for Agricultural Contractors

A. Critical Best Management Practices for Agricultural Contractors

*1. **Measure the volume of water** delivered by the Contractor to each customer with devices that are operated and maintained to a reasonable degree of accuracy, under most conditions, to +/- 6 percent.*

The District currently measures all surface water diverted by growers to their fields. Measuring devices are installed on all turnouts throughout the District. Flow meters are maintained by the District on a yearly basis to ensure accurate operation. Listed below is a summary of the District's measurement device status:

Total # of customer turnouts that are unmeasured or do not meet the standards listed above: 0

number of measurement devices installed last year: 0

number of measurement devices installed this year: 0

number of measurement devices to be installed next year: 0

Types of measurement devices installed	Accuracy
all propeller meters	+/- 6%

The District does not own any electronic meters.

*2. **Designate a water conservation coordinator** to develop and implement the Plan and develop progress reports.*

Name Meda Benefield Title Assistant Secretary-Treasurer
Address P.O. Box 73, 6595 Pitt School Rd., Dixon, CA 95620
Telephone (916) 678-5332 Fax (916) 678-0834 E-mail mpwd@cal.net

*3. **Provide or support the availability of water management services to water users***

Maine Prairie Water District is a participating member of the Solano County Agricultural Water Conservation Committee (AWCC), which provides on-farm irrigation management services for farmers in Solano County, in an effort to increase farm water use efficiency and farm water conservation.

The committee was formed in 1992 and consists of MPWD, Solano Irrigation District, Solano County Water Agency, Reclamation District 2068, Dixon Resource Conservation District, Solano Resource Conservation District, Natural Resources Conservation Service, and U.C. Cooperative Extension. The

Committee employs an Irrigation Specialist who serves as the Committee Chairman and provides technical assistance to growers. Services provided include irrigation scheduling utilizing evapotranspiration and soil moisture readings, Irrigation Evaluations with Mobile Lab services, management of the Committee's weather station network and weather website, pump testing, assistance with drainage problems, conducting annual irrigation workshops and field days, and publishing a quarterly newsletter, "The Irrigator." which is sent to 500 growers and landowners, county-wide. Copies are included in Appendix G. In addition, the Committee manages "The Irrigation Hotline,' a local telephone number which can be called 24 hours a day to receive current ET data on the major crops grown in Solano County.

a. On farm evaluations

1. On farm irrigation and Drainage system evaluations using a mobile lab type assessment

As a cooperating member of the Solano County Agricultural Water Conservation Committee, the District has access to the Committee's Mobile Lab for conducting irrigation evaluations, which are performed annually in and adjacent to the District. Other assistance that the AWCC provides are soil sensor installations, pump efficiency testing, irrigation scheduling, and assistance with drainage problems.

	Total in District	# surveyed last year	# surveyed current year	# projected for next year	# projected 2nd yr in future
Irrigated acres	13,356	100	120	240	240
Number of farms	28	2	3	4	4

2. Timely field and crop specific water use information to the water user

The Irrigation Specialist manages the AWCC's weather website and weather station network, which provides evapotranspiration rates for use in irrigation scheduling. The free website also provides daily, weekly, and historical weather data from eight weather stations located in Solano County, a link to the CIMIS website, and a crop irrigation report. A weather forecast is available to growers at a cost of $10/month. The forecast targets Solano County, and includes pest models such as degree days, chilling hours, powdery mildew pressure, peach twig borer/codling moth pressure, and two-spotted spider mite pressure. The web address is www.westernwx.com/sid.

The AWCC's weather station network include two CIMIS stations near the MPWD service area, an SID owned station west of Dixon with a telephone hotline, and six stations in the south-west

portion of the county. For MPWD growers, the hotline provides evapotranspiration rates and 10 minute updates of current weather conditions from the West Dixon weather station.

The District staff collects also collects flow meter readings each day and compiles the measurements monthly. The information is accessible to water users on a daily basis as well as on their monthly billing statements.

b. Normal year and real-time irrigation scheduling and crop ET information (i.e., CIMIS)

A daily email of weather and weather forecast information including ETc data is provided to the District under the AWCC program. This information is available to any grower at the District office, or by direct website access. A weather forecast is also available on a daily basis by email, website access, or fax at a cost of $10/month. The forecast includes a description of the predicted weather for the day, 3-5 day outlook, extended outlook, temperatures, dew points, probability of precipitation, wind conditions, and and ETo. Attached in Appendix H is a copy of the daily weather e-mail received by the District, and the free Solano weather page, which is accessible from the internet. Irrigation scheduling information is also available from the telephone Hotline installed at the AWCC's weather station, west of Dixon.

c. *Surface, ground and drainage water quantity and quality data*

The District conducts water quality measurements for drainage water that is commingled with treated urban wastewater. Samples are taken and reported by the City of Vacaville. The District does not conduct any wastewater quality measurements for surface water or groundwater. Drainage water that is no longer utilized by a landowner re-enters the District conveyance facilities and is made available to downstream water users. Monitoring of discharges into the Maine Prairie Water District is performed by the City of Vacaville, and supported by Maine Prairie Water District.

*d. **Agricultural water management educational programs and materials for farmers, staff, and public.***

Program	Contributers	Yearly targets
The Irrigator Newsletter	Solano Irrigation District, Reclamation District 2068, Solano County Water Agency, Natural Resources Conservation Service, Solano Resource RCD, Dixon RCD, & U.C. Cooperative Extension	500 growers
Daily Staff Meeting		20 irrigators
Workshops		Two (2) per year through AWCC

In cooperation with the AWCC, the District provides water management information and training to the growers in the area, along with district staff. The District participates with the AWCC in producing and distributing *The Irrigator* Newsletter. This newsletter is sent out to over 500 farmers in the area on a quarterly basis with articles on various water topics regarding on-farm water efficiency and management.

During the irrigation season, the District staff meets daily with irrigators to take water orders, shutoffs, and discuss water operations and how best to deliver water to its customers, including new and creative ways to manage the delivery of water. This has also been an effective way to educate new water tenders, growers, and irrigators with ways to improve water delivery.

In addition, the District conducts two irrigation management workshops per year with farmers and irrigators.

3. ***Pricing structure** - Adopt a water pricing structure for Contractor water users based at least in part on quantity delivered.*

The water pricing structure of the District is discussed under Section 1. G. All water use is measured and the pricing structure is based on volumetric water delivery.

4. ***Evaluate the need for changes in policies** of the institutions to which the Contractor is subject.*

The District reviews comments and concerns related to implementation of its existing Rules and Regulations and recommends changes to the Board of Directors when needed.

5. Evaluate and improve efficiencies of Contractor's pumps.

District pumps are maintained regularly and repaired as needed. For privately owned pumps the

District coordinates efficiency testing, sends pump test reports to landowners, and advises on repairs. MPWD pumps are also tested annually for efficiency. The test program is part of the District's participation with the AWCC's county-wide pump efficiency testing program. The Committee's Irrigation Specialist performs the tests and is certified by the California Agricultural Pump Efficiency Program as a Pump Efficiency Evaluator.

B. Exemptible Best Management Practices for Agricultural Contractors

1. Facilitate alternative land use

The District does not have any lands which are experiencing unmanageable drainage problems, and therefore is not considering any programs to facilitate alternative uses.

*2. **Facilitate use of available recycled urban wastewater** that otherwise would not be used beneficially, meets all health and safety criteria, and does not cause harm to crops or soils*

The City of Vacaville's Easterly Wastewater Treatment Plant is located in Elmira near the southeast corner of the Solano Irrigation District. The treated effluent is discharged into Alamo	**AFY available**	
City of Vacaville Wastewater Treatment Plant	Insignificant and not measured	

3. Facilitate the financing of capital improvements for on farm irrigation systems

The District does not have a capital improvement program for financing on-farm irrigation systems. In order to assist farmers in improving their irrigation practices, the District participates with the Solano County Agricultural Water Conservation Committee (AWCC), which provides growers with information on the availability of financial assistance from the Natural Resources Conservation Service, Solano Resource Conservation Service, and others. The AWCC publishes "*The Irrigator*", a quarterly crop water use newsletter for growers in Solano County.

4. Incentive pricing

The District's current pricing structure is described in Section 1. G. A copy of the rate schedule is attached in Appendix D. Annually a budget is developed recommending water rates to meet the expenses. This is reviewed and approved by the Board. A tiered water rate schedule is in place and will continue to be reviewed, as necessary, to further encourage improvements in on-farm water management.

5. *a)* ***Line or pipe ditches and canals*** *- Line or pipe distribution systems to increase distribution system flexibility and capacity, decrease maintenance and reduce seepage.*

Canals and ditches located in the district are owned by landowners, and not the District. The conveyances are unlined and un-piped. If operational restrictions or limitations occur, the District will consider investigating programs that allow owners to line or pipe sections of canals or ditches. However, seepage losses are considered valuable to the District as a source of groundwater recharge.

Canal/Ditch (reach)	Unlined/ Lined	# of miles in reach	Est. Seepage (AFY)
System 1	Unlined	13.18	1,830
System 2	Unlined	6.82	470
System 3	Unlined	4.09	650
		Total Estimated	2,950

b) ***Regulatory reservoirs*** *- Construct regulatory reservoirs to improve distribution system delivery flexibility.*

The District does not own or operate any reservoirs within their system. The District utilizes 10 different check structures (Dams) throughout its conveyance system to regulate the flows into each of its laterals. The check structures and water supplies are managed to provide efficient delivery and flood control to growers and minimize operational spills. Each of the check structures is located on the Ulatis Flood Control Project, therefore construction and lining projects are not feasible. The major check structures are removable, installed in the spring and removed each year at the conclusion of the irrigation season to allow passage of storm flows. As discussed above, drainage flows and operational spills from the Solano Irrigation District provide a major portion of the surface water flows to the District. Ongoing management and oversight of the existing flows is required to maximize the reuse of the existing drainage flows and minimize spills.

Reservoir Name	Annual spill in section (AFY)	Est. spill recovery (AFY)
N/A	N/A	N/A

6. ***Increase flexibility in water ordering by, and delivery to, water users.***

The District has improved the water ordering process to increase flexibility in water ordering. Irrigators have the option of calling or visiting the District to place water orders and shut-offs, or by calling the water tenders directly by phone or radio. In addition, orders can be left on the District answering machine on Saturdays. As a result there is increased efficiency and flexibility with

irrigations and scheduling.

The District continues to review opportunities to increase the flexibility of delivery operations. As discussed above, the District utilizes 10 different check structures throughout its conveyance system to regulate the flows into each of its laterals. The check structures and water supplies are managed to provide efficient delivery to growers and minimize operational spills. The District, however, is dependent on the drainage flows and operational spills from the Solano Irrigation District which provide a major portion of the surface water flows to the District. Ongoing management and oversight of the existing flows is required to maximize the reuse of the existing drainage flows and minimize spills.

7. Construct and operate District spill and tail-water recovery systems.

Acres where tail-water drains into distribution system: 10,809 +
Annual tail-water collected (AFY): 4125
Acres where tail-water is currently lost to the District: 2596
Estimated potential additional tail-water recovery (AFY): N/A

The District is dependent on the drainage flows and operational spills from the Solano Irrigation District which provide a major portion of the surface water flows to the District. The drainage flows fluctuate and therefore District coordinates its water demand daily with existing drainage flows to minimize its need to order additional Solano Project water. Unused drainage flows continue downstream in Ulatis Creek spilling over Dam #3 and leaving the District. The District completed a study suggesting the possibility of constructing a pump back system to minimize the spills continuing down Ulatis Creek. Also under consideration is the construction of a pump and pipeline system from below Dam #2 to Dam #1. It is estimated the project could potentially reuse approximately 4,800 acre feet per year. Budget constraints limit the ability of the District to proceed with a pump back system or construction of a pipeline system. In addition, the canals and ditches belong to landowners, and not by the District. As a result, the District is prevented at many sites from installing tail-water return systems. Region-wide conservation is achieved by the ability for Reclamation District 2068 and landowners outside of the District to recover spill flows and tail-water. Due to costs, there are no plans with timeframes or milestones to implement additional tail-water recovery systems. However, the District budgets funds for the ditch-tender's wages for measuring flows daily.

The Swan Road Weir, Norton Weir, and Vassar Weir are located at the end of the District

conveyance systems. Dam 3 is located on Maine Prairie Road. Flow measurements are taken daily. Spill flows and tail-water continue downstream and is utilized by landowners outside of the District, or recovered by Reclamation District 2068. Regional water conservation is accomplished by the utilization of SID drainage and spill flows, re-use by landowners outside of the District, and the recovery of flows at Reclamation District 2068.

8. Plan to Measure Outflow.

The District plans to continue to measure outflow by open-channel flow rate measurement. Outflow is measured at the three major outfall points: Swan Rd. Weir, Norton Weir, and Dam 3. Outflow at Vassar Weir is not measured due to the insignificant amount of outflow at the site. 100% of the outflow is available during the irrigation season for re-use by landowners outside of District, or by Reclamation District 2068.

Cost table: 2009: $22,770
2010: $23,909
2011: $25,104
2012: $26,359
2013: $27,677

The District budget provides funding to compensate for water-tender wages related to daily outflow measurement. Due to budget constraints, the District does not have the ability to fund the installation of electronic measurement. There are no plans, timetables or milestones at this time to add additional measurement capability.

Optimize conjunctive use.

The District is investigating opportunities for conjunctive use. The District does not currently own or operate any agricultural wells. In 2008 the District began installation of a multi-level deep aquifer monitoring well, at a depth of 2,000 ft. – 2,500 ft., with the cooperation of the Solano County Water Agency (SCWA). In an effort towards long range planning, SCWA's Integrated Regional Water Management Plan identifies groundwater programs within the County, including those that may be performed by member agencies such as Maine Prairie Water District that overlie groundwater basins. The project will help the District better understand the groundwater basins which could allow for more efficient use of groundwater resources. In addition, the District's 1996 "Groundwater Conditions Report," prepared in partnership with Reclamation District No. 2068, summarizes groundwater conditions in the area from available groundwater data. On January 21, 1997 the Maine Prairie Water District adopted a

Groundwater Management Plan. This plan is attached in Appendix I.

9. Automate canal structures

The District conveyance system does not easily lend itself to automation due to dual purposes of the conveyance system: water deliveries during the agricultural season and flood control during the winter months. To prepare for winter runoff and flooding, District staff must remove the dams after the irrigation season in all ten of the check structures, which is a major modification of facilities that renders the system not practical for automation. However, the District is always considering ways to automate facilities.

10. Facilitate or promote water customer pump testing and evaluation

The District works in cooperation with the Solano County Agricultural Water Conservation Committee (AWCC) to implement an active pump efficiency testing program. The AWCC's Irrigation Specialist is trained and certified as a Pump Test Evaluator by the Agricultural Pump Efficiency Program. Customer pumps are tested by the request of either the owner or the District. Pump reports with pump data and recommendations for efficiency improvements are distributed to landowners and the District to allow for pump performance and flow output monitoring by the District.

11. Mapping

The District requests an exemption. Although there no legal or environmental constraints to BMP implementation, the BMP is not economically cost-effective or feasible due to the District's size and budget. The following are justifications for an exemption:

1. The cost to the District to implement a basic GIS program would be at least $50,000. The quantified benefit to the District would be approximately $2,500 per year. Only four employees work for the District, and only one staff person would utilize the system. Due to the small size in acreage and limited number of staff, the cost would significantly exceed the benefit.

2. Funding to implement the BMP would require at least $50,000. The District does not have the funds in the budget to finance the BMP, and does not anticipate any funding to finance the BMP in the future.

3. The majority of the District's customers grow alfalfa, sudan grass, and corn. There is a minor amount of tomatoes and sunflowers. The predominantly clay soil types in the District limit the farmer's ability to grow a more diverse rotation of crops, or grow permanent crops. Due to the current farm economy, it would not be feasible for the District's customers to pay increased rates through rate adjustments or assessments. The District does not anticipate a significant increase in rates in the near future.

4. The District does not anticipate securing funding from other entities, lending institutions, or bonding authorities. The cost-benefit would continue to be unfeasible even if funding were secured.

5. The District does not anticipate securing grant or subsidy assistance needed to feasibly implement the BMP. The cost-benefit would continue to be unfeasible.

The District supports Geographic Information System development efforts by Solano County and the Solano County Water Agency to incorporate aerial photography and boundary establishment into a regional GIS program that would include the District. Due to budget constraints the District does not have a five year budget for mapping, or a milestone schedule to implement its own GIS system. However, the District to supports regional mapping and GIS efforts by providing local agencies with boundary information and data related to the District.

C. Provide a 3-Year Budget for BMP's

Year 2008

BMP #		Budgeted Expenditure	Staff Hours
A1	Measurement	$21,735	900
2	Conservation Staff	2,589	80
3	On-farm evaluations	15,708	327
	Irrigation scheduling	15,708	327
	Water quality	4,200	20
	Ag education programs	15,708	327
4	Quantity pricing	11,550	310
5	Policy changes	0	0
6	Contractor pumps	8,000	80
B1	Alternative land use	n/a	n/a
2	Urban recycled water use	0	0
3	Financing of farm improvements	310	10
4	Incentive Pricing	11,823	310
5	Line or pipe canals	n/a	n/a
6	Increase delivery flexibility	7,455	400
7	District spill/tailwater systems	10,868	450
8	Measure outflow	18,000	600
9	Optimize conjunctive use	n/a	n/a
10	Automate Canal Structures	n/a	n/a
11	Customer pump testing	2,520	60
12	Mapping	0	0

Year 2009

BMP #	BMP Name	Budgeted Expenditure	Staff Hours
A1	Measurement	$22,822	900
2	Conservation Staff	2,714	80
3	On-farm evaluations	16,493	327
	Irrigation scheduling	16,493	327
	Water quality	4,410	20
	Ag education programs	16,493	327
4	Quantity pricing	12,100	310
5	Policy changes	0	0
6	Contractor pumps	8,000	80
B1	Alternative land use	n/a	n/a
2	Urban recycled water use	0	0
3	Financing of farm improvements	320	10
4	Incentive Pricing	12,386	310
5	Line or pipe canals	n/a	n/a
6	Increase delivery flexibility	7,800	400
7	District spill/tailwater systems	11,411	450

8	Measure outflow	18,900	600
9	Optimize conjunctive use	n/a	n/a
10	Automate Canal Structures	n/a	n/a
11	Customer pump testing	2,640	60
12	Mapping	0	

Year 2010

BMP #	BMP Name	Budgeted Expenditure	Staff Hours
A1	Measurement	$22,963	900
2	Conservation Staff	2,850	80
3	On-farm evaluations	17,318	327
	Irrigation scheduling	17,318	327
	Water quality	4,631	20
	Ag education programs	17,318	327
4	Quantity pricing	12,705	310
5	Policy changes	0	0
6	Contractor pumps	8,000	80
B1	Alternative land use	n/a	n/a
2	Urban recycled water use	0	0
3	Financing of farm improvements	336	10
4	Incentive Pricing	13,005	310
5	Line or pipe canals	n/a	n/a
6	Increase delivery flexibility	8,190	400
7	District spill/tailwater systems	11,982	450
8	Measure outflow	19,845	600
9	Optimize conjunctive use	n/a	n/a
10	Automate Canal Structures	n/a	n/a
11	Customer pump testing	2,640	60
12	Mapping	0	0

D. Quantifiable Objectives

There are no Quantifiable Objectives listed for the District.

Section 4. Best Management Practices for Urban Contractors

Not applicable. The District does not deliver any Municipal or Industrial water supplies.

Section 5. Plan Implementation

The District is committed to implementing the Best Management Practices (BMPs) outlined above. The Implementation Plan for each Practice is summarized below:

Practice A.l. Measure the volume of water delivered by the District to each customer with devices that are operated and maintained to a reasonable degree of accuracy.

The District is implementing this BMP as outlined in Section 3. A.1.

Practice A. 2. Designate a Water Conservation Coordinator

The District has implemented this BMP. See Section 3. A.2.

Practice A. 3. Provide or support the availability of water management services to the water users.

The District will continue implementing and supporting this BMP as outlined in Section 3. A.3.

Practice A.4. Pricing Structure

The District has implemented a water pricing structure based on quantity of water delivered.

Practice A. 5. Evaluate the need for changes in policies

See information provided under Section 3. A.4.

Practice A. 6. Evaluate and improve efficiencies of District pumps

This BMP is being implemented. See information provided under Section 3. A. 5.

Practice B. 1. Facilitate Alternative Land Use

This District does not have any lands with unmanageable drainage problems. This BMP is not applicable.

Practice B. 2. Facilitate use of available recycled water that otherwise would not be used beneficially, meets all health and safety criteria, and does not cause harm to crops or soils.

This BMP is being implemented. See information provided under Section 3. B. 2.

Practice B. 3. Facilitate the financing of capital improvements for on-farm irrigation systems.

This BMP is being implemented. See information provided under Section 3. B. 3.

Practice B. 4. Incentive pricing

This BMP is being implemented. See information provided under Section 3. B. 4.

Practice B. 5. A) Line or pipe ditches and canals or b) regulatory reservoirs

It is not feasible to line or pipe the ditches in the District. See information provided under Section 3. B. 5.

Practice B. 6. Increase flexibility (within operational limits) in ordering by, and delivery to , water users.

The District continues to review opportunities to increase operational flexibility. See information provided under Section 3. B. 6.

Practice B. 7. Construct and operate District spill and tail-water recovery systems.

Issues related to the construction and operation of spill and tail-water recovery systems are discussed in Section 3. B. 7. The District is reviewing the possibility of constructing a pump-back system which would allow the reuse of some of the drainage spills occurring down Ulatis Creek.

Practice B. 8. Optimize conjunctive use of surface and groundwater.

This BMP is being implemented. The District does not operate any wells, but recognizes the future importance of a conjunctive use program, and is supportive of the current program with the Solano County Water Agency to install a monitoring well to measure groundwater levels within the District. See information provided in Section 3. B. 8.

Practice B. 9. Automate canal structures.

Issues related to the automation of canal facilities are discussed in Section 3. B. 9. The District will review opportunities to automate conveyance system facilities to improve operations.

Practice B. 10 Facilitate or promote water user pump testing and evaluation.

This BMP is being implemented in conjunction with **Practice A. 6** ***"Evaluate and improve efficiencies."***. The AWCC is testing approximately 75 pumps per year throughout the County.

Section 6. Exemption Process

Issues related to the Best Management Practices are discussed under Section 4 and Section 5.

Section 7. Regional Criteria

The Maine Prairie Water District does not wish to request Regional Criteria.

Section 8. Five-Year Plan Revision Procedure

This Five-Year Plan Revision has been prepared using the 2008 Conservation and Efficiency Criteria for Evaluating Water Management Plans. The 2008 Agricultural Water Management Plan Annual Update is included in Appendix J. Attached in Appendix K is the Maine Prairie Water District Resolution adopting the 2008 5-Year Water Management Plan Revision.

Table 1

2007 Surface Water Supply

Month	Solano Project Water*(a-ft)	Federal Non-Ag (a-ft)	Water Rights Licenses (a-ft)	Local Water	Ag Drainage Re-Use (a-ft)	Upslope Drain Water*	Total
January	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0
March	0	0	0	0	0	0	0
April	1,981	0	1,014	0	445	1,014	4,454
May	2,022	0	1,552	0	313	1,552	5,439
June	2,092	0	2,517	0	997	2,517	8,123
July	1,489	0	3,663	0	886	3,663	9,701
August	2,213	0	2,539	0	937	2,539	8,228
September	1,767	0	1551	0	511	1,551	5,380
October	505	0	731	0	36	731	2,003
November	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0
TOTAL	**12,069**	**0**	**13,567**	**0**	**4,125**	**13,567**	**43,328**

*Commingled Water

Table 2

2007 Ground Water Supply

Month	District Groundwater (acre-feet)	Private Groundwater (acre-feet)
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
TOTAL	**0**	**0**

Table 3

2007 Water Supply

Month	Surface (acre-feet)	Groundwater (acre-feet)	Recycled Urban* (acre-feet)	Total Water Supply (acre-feet)
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	4,454	0	0	4,454
May	5,439	0	0	5,439
June	8,123	0	0	8,123
July	9,701	0	0	9,701
August	8,228	0	0	8,228
September	5,380	0	0	5,380
October	2,003	0	0	2,003
November	0	0	0	0
December	0	0	0	0
TOTAL	**43,328**	**0**	**0**	**43,328**

* Recycled water is an insignificant amount & not measured.

Table 4

2007 Distribution System

Canal, Lateral Reach	Length (feet)	Width (feet)	Seepage* (a-ft)	Precipitation**	Evaporation (a-ft)	Spillage (a-ft)	Total (a-ft)
System 1	69,590	83	1,830		55	1,764	3,649
System 2	36,010	89	470		30	4,252	4,752
System 3	21,595	119	650		20	511	1,181
TOTAL	127,195		2,950		105	6,527	9,582

* estimate

**n/a - distribution system dams are removed during the fall-winter months

Table 5

2007 Crop Water Needs

Crop	Area (crop acres)	Crop ET (AF/Ac)	Leaching Requirement (AF/Ac)	Cultural Practices (AF/Ac)	Effective Precipitation (AF/Ac)	Applied Crop Water Use (acre-feet)
Alfalfa	4,832	3.65	0.11	0.00	0.30	16,719
Corn	1,067	2.50	0.11	0.00	0.00	2,785
Pasture	4,676	3.73	0.11	0.00	0.30	16,553
Sudan Grass	1,126	3.00	0.11	0.00	0.00	3,502
Wheat	776	1.88	0.11	0.00	0.90	846
Sunflower	695	1.74	0.11	0.00	0.00	1,286
Other crops	960	2.80	0.11	0.00	0.90	1,930
Total	**14,132**					**43,620**

Total Irrigated Acreage: 14,132 (The total is larger than available acreage due to double-cropping)

Table 6 - 2007 Water Inventory

2007 Overall Water Budget

Source	Reference		Acre-feet	
2007 Water Supply	Table 3		52,960	*
Riparian ET	(distribution and drain)	minus	50	
Groundwater Recharge		minus	0	
Seepage**	Table 4	minus	2,950	
Evaporation	Table 4	minus	105	
Spillage (portion re-used)	Table 4		6,527	**
Non-Ag Deliveries	Federal and Non-Federal	minus	0	
	Water Available for Sale to Ag Customers		**43,328**	***
2007 Agricultural Water Sales			43,328	
Private Groundwater	Table 2	plus	0	
Crop Water Needs	Table 5	minus	43,209	
Drain-water outflow	(tail-water, portion re-used)		6,527	
Deep Percolation	(calculated)		**119**	

*total of water supply sources
** estimate
*** Water sales include drainage water re-used by MPWD farmers downstream

Table 7

2007 Deep Percolation and Saline Sink

	Flows or Acres (AF)
Deep Percolation (from water inventory)	119
Conveyance Seepage (from Table 4)	2,950
Total Deep Percolation/Conveyance Seepage/Groundwater Recharge	13,170
Irrigated Acres (from Table 5)	14,132
Irrigated acres over a perched water table	0
Irrigated acres draining to a saline sink	0
Portion of Deep Percolation flowing to as perched water table	0
Portion of Deep Percolation flowing to a saline sink	0
Portion of On-Farm Drain/Tail Water that flows to a saline sink	0
Portion of District seepage/leaks/spills to perched water table/saline sink	0
Total (AF) flowing to a perched water table and saline sink (including ocean)	0

Table 8

Annual Water Quantities Delivered Under Each Right or Contract*

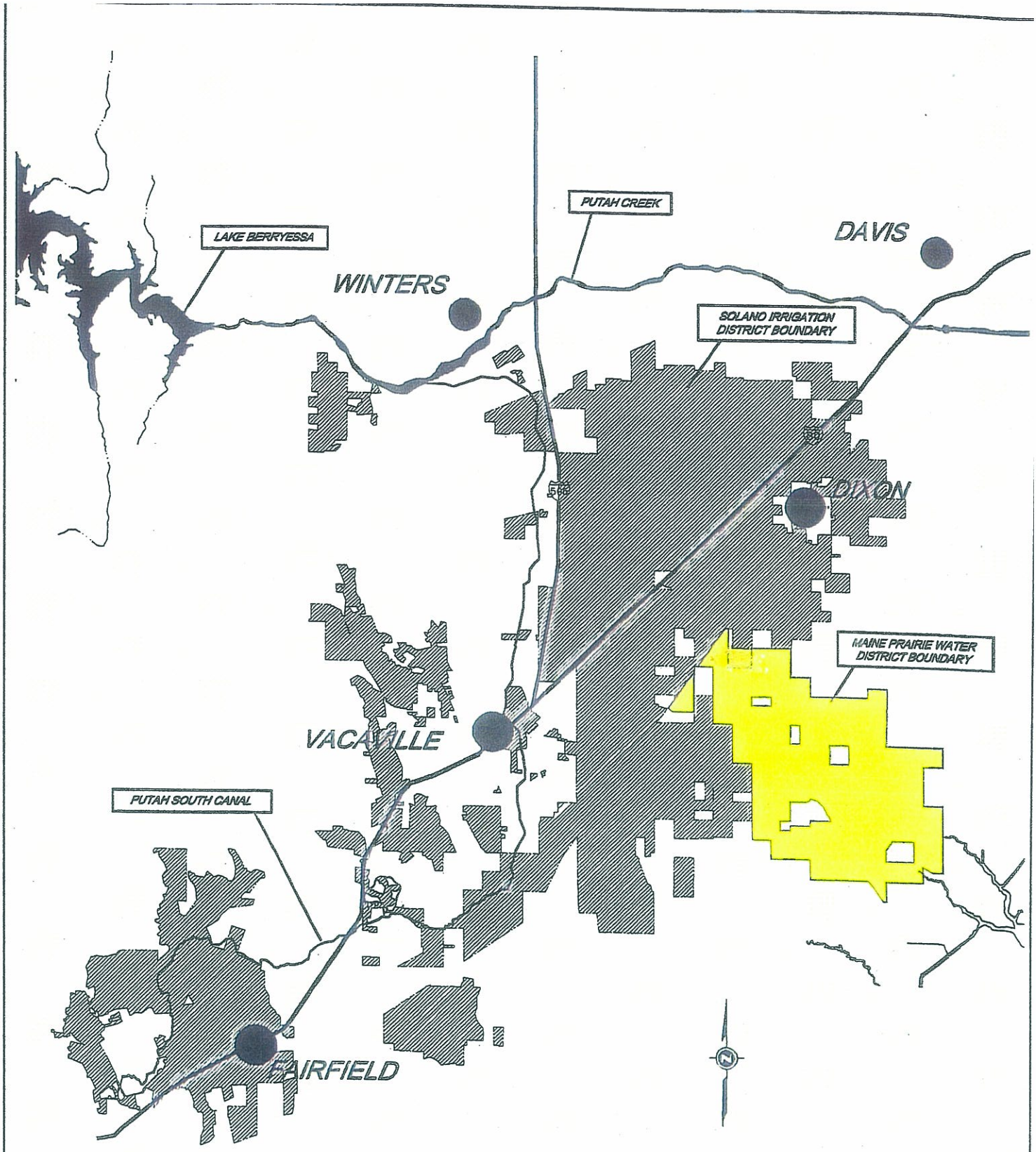
Year	Federal Ag Water (a-ft)	Federal Non-Ag (a-ft)	State Water (a-ft)	Local Water (a-ft)	Upslope Drainage** (a-ft)	Total
1998	3,080	0	22,584	0	22,578	48,242
1999	4,752	0	28,499	0	28,503	61,754
2000	7,479	0	22,590	0	22,602	52,671
2001	5,230	0	18,945	0	18,950	43,125
2002	4,907	0	18,982	0	18,985	42,874
2003	8,135	0	13,688	0	13,690	35,513
2004	6,819	0	19,852	0	19,856	46,527
2005	6,366	0	15,596	0	15,598	37,560
2006	6,022	0	13,799	0	13,800	33,621
2007	12,069	0	13,567	0	13,567	39,203
Total	64,859	0	188,102	0	188,129	441,091
Average	6,486	0	18,810	0	18,813	41,109

* Commingled with Federal Ag Water and State Water. Ten year records not available.

** Additional acre-feet purchased from Solano Irrigation District for agricultural irrigation

APPENDIX A

District Maps



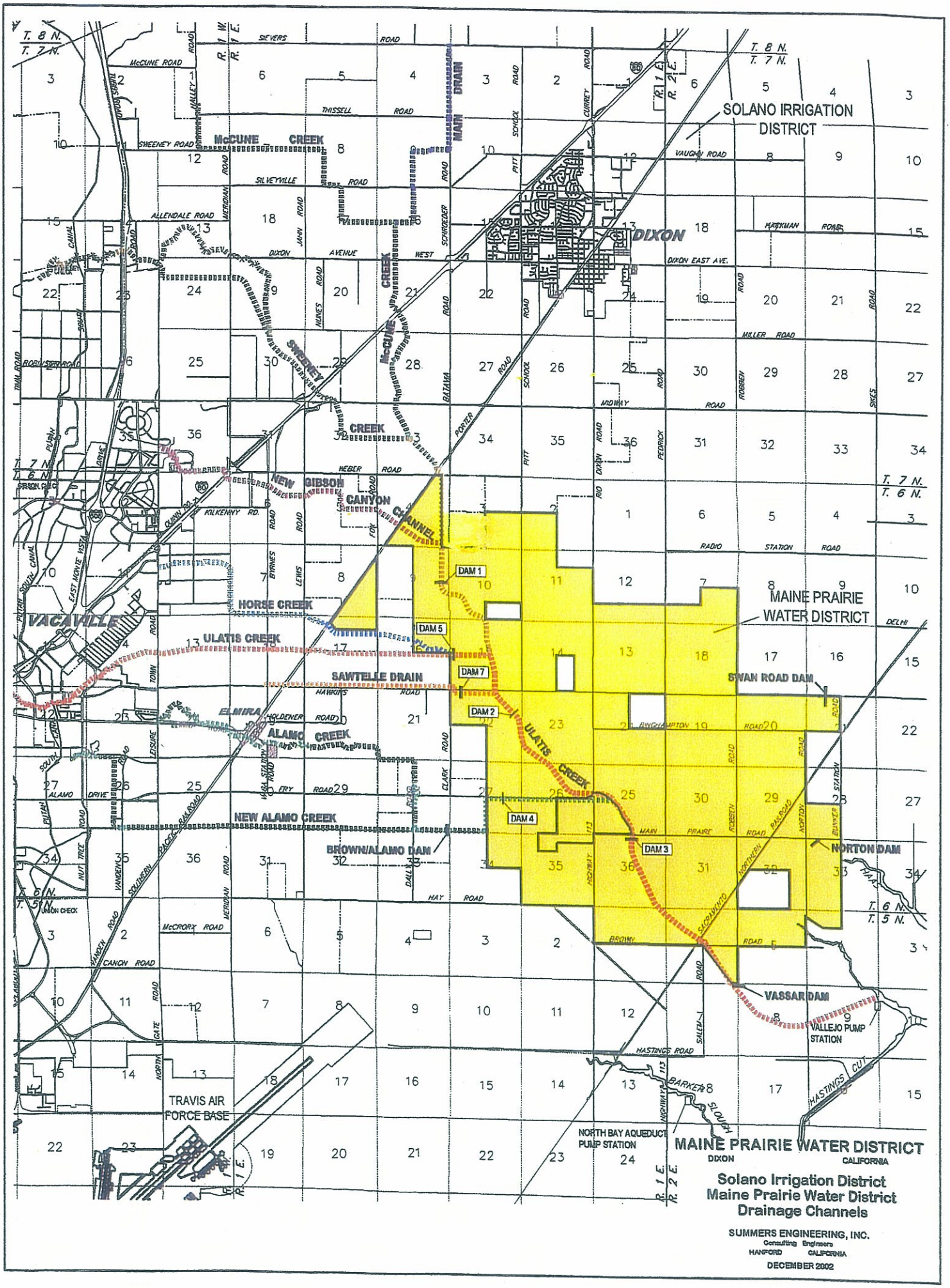
MAINE PRAIRIE WATER DISTRICT

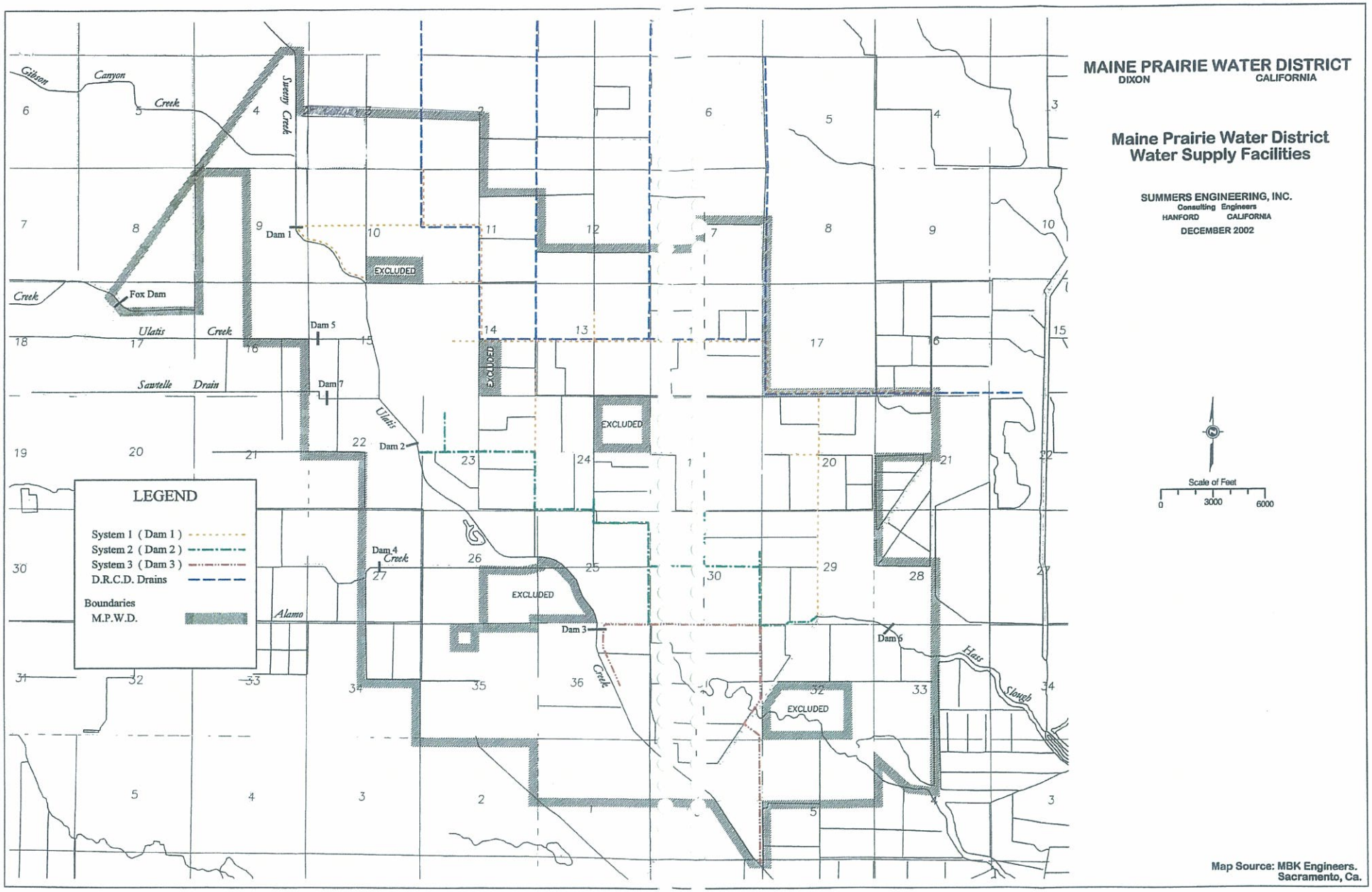
DIXON CALIFORNIA

LOCATION MAP

SUMMERS ENGINEERING, INC.
Consulting Engineers
HANFORD CALIFORNIA

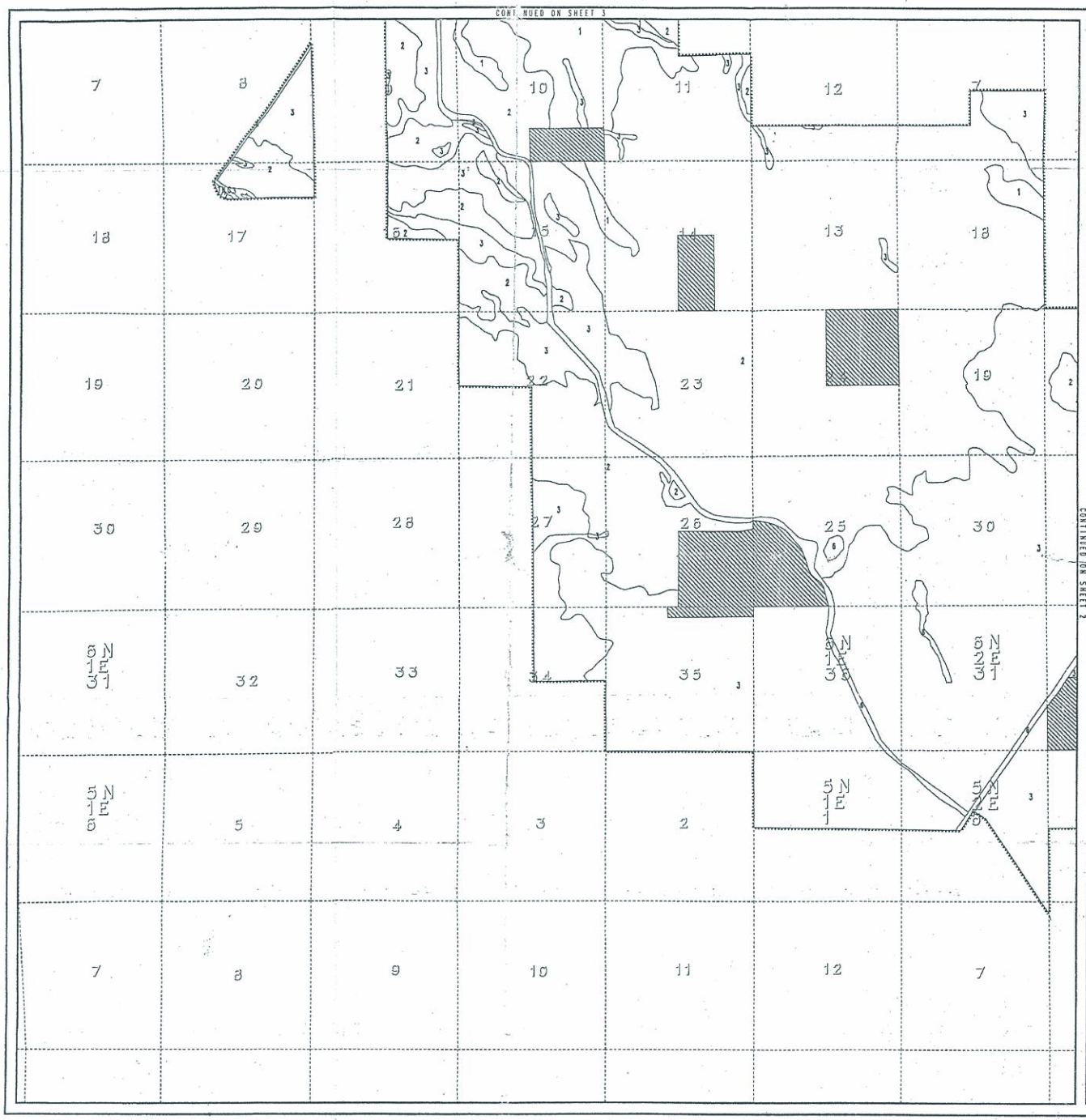
DECEMBER 2002

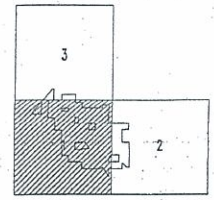

SOLANO IRRIGATION DISTRICT
MAINE PRAIRIE WATER DISTRICT
DIXON
VACAVILLE
ELMIRA
McCUNE CREEK
MAIN DRAIN
SWEENEY CREEK
NEW GIBSON CANYON CHANNEL
HORSE CREEK
ULATIS CREEK
SAWTELLE DRAIN
ALAMO CREEK
NEW ALAMO CREEK
BROWN/ALAMO DAM
DAM 1
DAM 2
DAM 3
DAM 4
DAM 5
DAM 7
SWAN ROAD DAM
NORTON DAM
VASSAR DAM
VALLEJO PUMP STATION
TRAVIS AIR FORCE BASE
NORTH BAY AQUEDUCT PUMP STATION
BARKER SLOUGH
HASTINGS CUT
T. 8 N.
T. 7 N.
T. 6 N.
T. 5 N.
R. 1 W.
R. 1 E.
R. 2 E.
MAINE PRAIRIE WATER DISTRICT
DIXON
CALIFORNIA
Solano Irrigation District
Maine Prairie Water District
Drainage Channels
SUMMERS ENGINEERING, INC.
Consulting Engineers
HANFORD CALIFORNIA
DECEMBER 2002


MAINE PRAIRIE WATER DISTRICT
DIXON
CALIFORNIA
Maine Prairie Water District
Water Supply Facilities
SUMMERS ENGINEERING, INC.
Consulting Engineers
HANFORD CALIFORNIA
DECEMBER 2002
Scale of Feet
0
3000
6000
LEGEND
System 1 (Dam 1)
System 2 (Dam 2)
System 3 (Dam 3)
D.R.C.D. Drains
Boundaries
M.P.W.D.
Gibson
Canyon
Creek
Sweeny Creek
Fox Dam
Ulatis
Creek
Sawtelle
Drain
Alamo
Creek
Hass
Slough
Dam 1
Dam 2
Dam 3
Dam 4
Dam 5
Dam 6
Dam 7
EXCLUDED
EXCLUDED
EXCLUDED
EXCLUDED
EXCLUDED
Map Source: MBK Engineers.
Sacramento, Ca.

APPENDIX B

Land Classification Maps & Soil Conservation Service Index & Map





YELLOW	CLASS 1
GREEN	CLASS 2
BLUE	CLASS 3
BROWN	CLASS 4
	CLASS 6 NOT IRRIGABLE
	LANDS NOT IN DISTRICT
	DISTRICT BOUNDARY

F,R,P,V,S = SPECIAL USE DESIGNATION

N

MILES

KILOMETERS

SCALE 1 : 24000

ACREAGE TOTALS

GROSS ACRES	15152
ARABLE ACRES	14769
IRRIGABLE ACRES	14030
PRODUCTIVE ACRES	13329
DATE REQUESTED	_____

LAND CLASS TOTALS

CLASS 1	534
CLASS 2	6727
CLASS 3	7508
CLASS 4	0
CLASS 6	380
ROW, ETC	3

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

CENTRAL VALLEY PROJECT

SOLANO PROJECT - CALIFORNIA

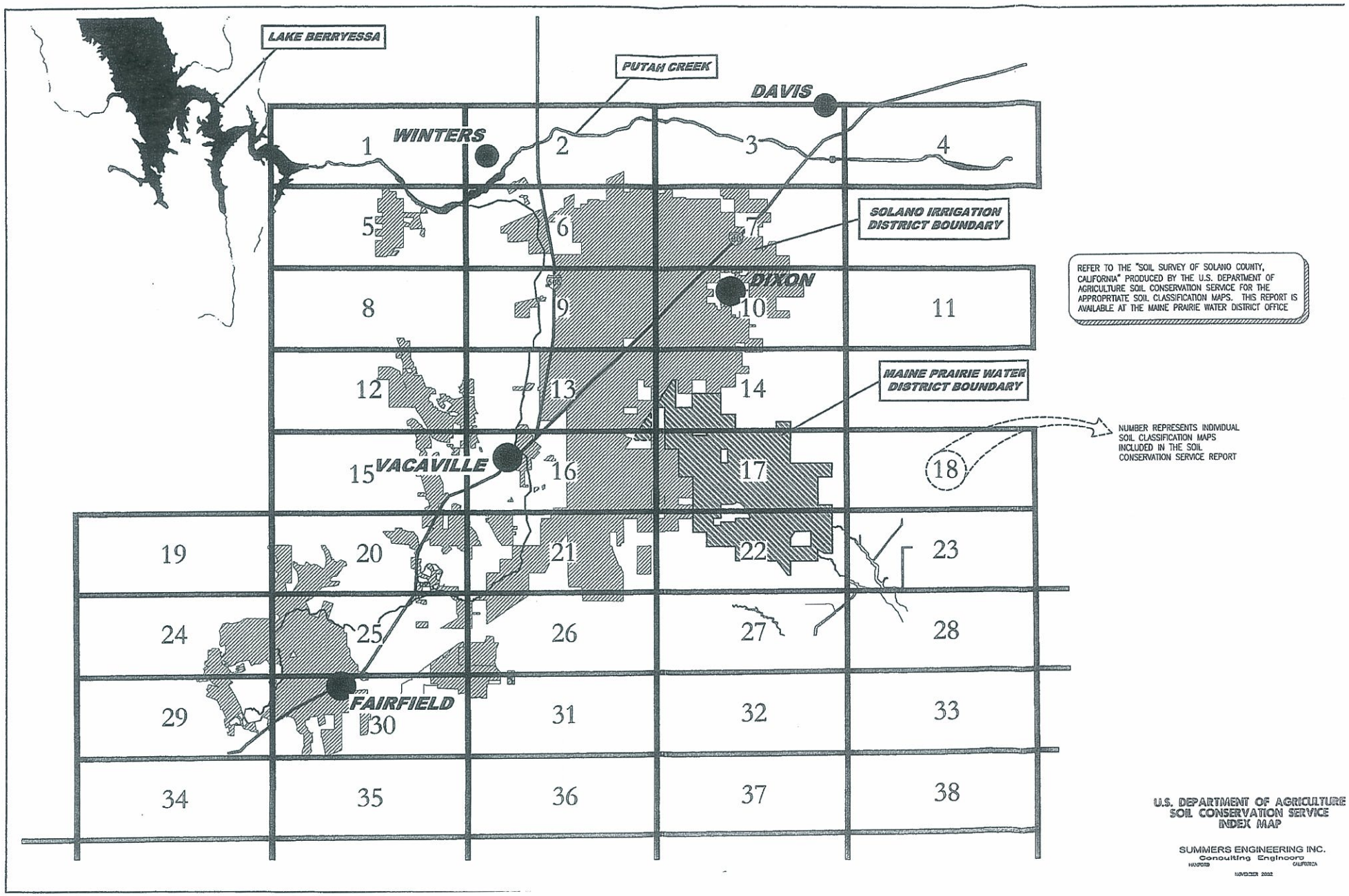
MAINE PRAIRIE WATER DISTRICT

IRRIGATION SUITABILITY
LAND CLASSIFICATION

SHEET 1 OF 3

FEBRUARY 13, 1995

413-208-1068


LAKE BERRYESSA
PUTAH CREEK
DAVIS
WINTERS
SOLANO IRRIGATION DISTRICT BOUNDARY
DIXON
MAINE PRAIRIE WATER DISTRICT BOUNDARY
VACAVILLE
FAIRFIELD
1
2
3
4
5
6
7
8
9
10
11
12
13
14
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38
REFER TO THE "SOIL SURVEY OF SOLANO COUNTY, CALIFORNIA" PRODUCED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE APPROPRTIATE SOIL CLASSIFICATION MAPS. THIS REPORT IS AVAILABLE AT THE MAINE PRAIRIE WATER DISTRICT OFFICE
NUMBER REPRESENTS INDIVIDUAL SOIL CLASSIFICATION MAPS INCLUDED IN THE SOIL CONSERVATION SERVICE REPORT
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
INDEX MAP
SUMMERS ENGINEERING INC.
Consulting Engineers
HANFORD
CALIFORNIA
NOVEMBER 2002

SOIL LEGEND

Each symbol consists of letters or a combination of letters and numbers. The first capital letter is the initial one of the soil name. A second capital letter, if used, shows the class of slope. Symbols without a slope letter are for nearly level soils. A final number, 2 or 3, in a symbol shows that the soil is named as eroded or severely eroded.

SYMBOL	NAME
AcC	Altamont clay, 2 to 9 percent slopes
AcE	Altamont clay, 9 to 30 percent slopes
AcF2	Altamont clay, 30 to 50 percent slopes, eroded
AlC	Altamont-San Ysidro-San Benito complex, 2 to 9 percent slopes
AlE	Altamont-San Ysidro-San Benito complex, 9 to 30 percent slopes
AmC	Altamont-Diablo clays, 2 to 9 percent slopes
AmE2	Altamont-Diablo clays, 9 to 30 percent slopes, eroded
An	Alviso silty clay loam
AoA	Antioch-San Ysidro complex, 0 to 2 percent slopes
AoC	Antioch-San Ysidro complex, 2 to 9 percent slopes
AsA	Antioch-San Ysidro complex, thick surface, 0 to 2 percent slopes
AsC	Antioch-San Ysidro complex, thick surface, 2 to 9 percent slopes
BrA	Brentwood clay loam, 0 to 2 percent slopes
BrC	Brentwood clay loam, 2 to 9 percent slopes
Ca	Capay silty clay loam
Cc	Capay clay
CeA	Clear Lake clay, 0 to 2 percent slopes
CeB	Clear Lake clay, 2 to 5 percent slopes
ClA	Clear Lake clay, saline, 0 to 2 percent slopes
Cm	Columbia fine sandy loam
Cn	Conejo loam
Co	Conejo gravelly loam
Cr	Conejo clay loam
Cs	Conejo soils, wet
CvD2	Corning gravelly loam, 2 to 15 percent slopes, eroded
CvE2	Corning gravelly loam, 15 to 30 percent slopes, eroded
DcC	Diablo-Ayar clays, 2 to 9 percent slopes
DcE2	Diablo-Ayar clays, 9 to 30 percent slopes, eroded
DtC	Dibble-Los Osos loams, 2 to 9 percent slopes
DtE	Dibble-Los Osos loams, 9 to 30 percent slopes
DtF2	Dibble-Los Osos loams, 30 to 50 percent slopes, eroded
DlC	Dibble-Los Osos clay loams, 2 to 9 percent slopes
DlE	Dibble-Los Osos clay loams, 9 to 30 percent slopes
DlF2	Dibble-Los Osos clay loams, 30 to 50 percent slopes, eroded
Eb	Egbert silty clay loam
Ec	Egbert silty clay loam, occasionally flooded
GaG2	Gaviota sandy loam, 30 to 75 percent slopes, eroded
GlE	Gilroy loam, 9 to 30 percent slopes
HaF	Hambright loam, 15 to 40 percent slopes
HtE	Hambright-Toomes stony loams, 9 to 30 percent slopes
Ja	Joice muck
Jb	Joice muck, clay subsoil variant
Ma	Made land
MeG3	Maymen-Los Gatos loams, 15 to 75 percent slopes, severely eroded
MkA	Millsap sandy loam, 0 to 2 percent slopes
MlC	Millsap-Los Osos complex, 2 to 9 percent slopes
MmE	Millsholm loam, 15 to 30 percent slopes
MmG2	Millsholm loam, 30 to 75 percent slopes, eroded
MnC	Millsholm loam, moderately deep variant, 2 to 9 percent slopes
MnE	Millsholm loam, moderately deep variant, 9 to 30 percent slopes
Om	Omni clay loam
On	Omni silty clay
Pc	Pescadero clay loam
Pe	Pescadero clay
Ra	Reiff fine sandy loam
Rd	Reyes silty clay loam, drained
Re	Reyes silty clay
RnC	Rincon loam, 2 to 9 percent slopes
RoA	Rincon clay loam, 0 to 2 percent slopes
RoC	Rincon clay loam, 2 to 9 percent slopes
Rw	Riverwash
Ry	Ryde clay loam
Sa	Sacramento silty clay loam
Sc	Sacramento silty clay loam, occasionally flooded
Sd	Sacramento clay
SeA	San Ysidro sandy loam, 0 to 2 percent slopes
SeB	San Ysidro sandy loam, 2 to 5 percent slopes
SfA	San Ysidro sandy loam, thick surface, 0 to 2 percent slopes
Sh	Solano loam
Sk	Solano-Pescadero complex
Sm	Solano loam, dark surface variant
Sp	Suisun peaty muck
Sr	Sycamore silty clay loam
Ss	Sycamore silty clay loam, drained
St	Sycamore silty clay loam, saline
Su	Sycamore complex, occasionally flooded
Ta	Tamba mucky clay
Td	Tidal marsh
ToG2	Toomes stony loam, 30 to 75 percent slopes, eroded
TrE	Trimmer loam, 9 to 30 percent slopes
TsF2	Trimmer cobbly clay loam, shallow variant, 15 to 50 percent slopes, eroded
Tu	Tujunga fine sand
Va	Valdez silt loam, drained
Vc	Valdez silty clay loam
Vd	Valdez silty clay loam, wet
Ve	Valdez silty clay loam, clay substratum
Wc	Willows clay
Yo	Yolo loam
Yr	Yolo loam, clay substratum
Ys	Yolo silty clay loam

SOIL CONSERVATION SURVEY
SOIL LEGEND

SUMMERS ENGINEERING INC.
Consulting Engineers
HANFORD CALIFORNIA

DECEMBER 2002

APPENDIX C

Rules and Regulations

MAINE PRAIRIE WATER DISTRICT
RULES AND REGULATIONS
2007

1. All new drains must have drop pipes, these are to be installed by landowners. Installation of new drop pipes must have flash board risers and/or flap gates where deemed necessary by the District Manager, and shall be installed at a specific location and elevation approved by MPWD before installation, If not so installed the District will clean silt deposits caused and install new drop pipes. The landowners will be charged the cost of pipe and labor to install same.

2. No pipe shall be installed without notifying and submitting designs to the District prior to construction of installation, and water service will be refused until this design has been approved by the MAINE PRAIRIE WATER DISTRICT Board of Directors. All fences crossing District ditches shall be of a floating design or approved by the Board of Directors.

3. Each water user shall designate a responsible employee, prior to first delivery of the water season, who shall be available on call from the District on a twenty-four hour basis while irrigation is in progress. No one is permitted to touch or adjust any water facilities in the MAINE PRAIRIE WATER DISTRICT ditches. Penalty for such action shall be to terminate usage of water until violation is brought before a regular meeting of the Board of Directors.

4. No water service to any land will be commenced until all water tolls, assessments, penalties and interest remaining due at the time of such commencement have been paid in full. Service will be stopped if water bills are not paid within one month after due date, as marked on each billing. After sixty days, bills will go to the landowner. Interest will be charged at one and one-half percent (1 ½%) per month on all accounts beginning thirty days after date of original billing.

5. If any water user, including landowner water user, is delinquent in payment of water bills twice during a single calendar year, no water will be delivered for the subsequent irrigation season until an advance payment is made equal to one-third (1/3) of the estimated cost for water to that user during the season as computed by the District. This deposit will be credited against the last water bills payable by the user during that season.

6. The Reclamation Reform Act of 1982 introduces an obligation of water users (but not landowners) to pay an additional charge for project water used on lands irrigated in access of 960 acres in any one year. This additional charge must be collected by the District from the water user and paid to the U. S. Bureau of Reclamation. Accordingly, any water user farming more than 960 acres, including lands in other districts served with project water by the U.S. Bureau of Reclamation, must file with the District prior to the first irrigation each year designation of lands on which *"non full cost"* water will be used pursuant to the

Reclamation Reform Act of 1982. If this designation does not include all lands on which water will be served to the user within this District, the District may require a payment, in advance, equivalent to the *"full cost"* of water to be served to the user, and the landowner shall not be responsible for that portion of the water charges. If the District is required to incur any cost collecting the *"full cost"* including attorney fees, the water user shall be responsible for all such costs for fees in addition to the *"full cost"* due.

7. The irrigation seasons shall begin on April 15th and terminate on October 24th of each year. For any service outside of this season, seven days prior written notice must be filed with the Manager before water will be furnished, and all cost incurred in making such service including charges for installing facilities and purchasing water will be charged to the party requesting such service plus ten percent (10%) to cover overhead.

8. During the irrigation season, as defined in #7 above, notice of water use must be given as follows:
   1. A twenty-four (24) hour notice must be given before water will be furnished. When water use has begun, the user must continue use on a twenty-four (24) hour basis until the irrigation is finished. When water use has been terminated, a new notice for water service must be given.
   2. ***Notice for terminating the use of water must be received prior to 2:00 PM on the previous day.***
   3. All notices must be given during regular office hours. Notice may be given to the water tender or by telephone by calling 707-678-5332. The District office will be open Monday through Friday, 8:00 AM to noon and 1:00 PM to 5:00 PM during the irrigation season.

9. The District will take meter tests on production of all pumps. Each electrical installation must have a separate meter for same. All new pump installations must have a MAINE PRAIRIE WATER DISTRICT approved meter installed. These meters are to be purchased by the landowner and may be installed by the district personnel.

10. Other types of pumps, not electrical, must have a test made of their production. All tests must be approved by the District Manager.

11. In the event of dissatisfaction with tests and operations of water levels, the Board of Directors may require the installation of a water meter at the expense of the user and all expenses incurred with the maintenance of this meter will be paid by the water user.

12. All pumps on electrical meters will be charged at full head rate. No by-pass of water back into the ditch will be considered in monthly billings.

13. Spillage of tail water considered by the Manager to be abnormal will cause

immediate termination of water service. The landowner will be responsible for disposition of drainage water resulting from the service of irrigation water by this District and shall hold the District harmless from any loss, claim, or liability resulting therefrom.

14. The District Manager is instructed by the Board of Directors not to supply water to any lands outside the District boundary without its prior direction.

15. Water tenders, while on duty, are not permitted to assist or to partly assist in the irrigation of lands, except for the turning on or off of pumping plants, when arrangements therefore have been made with the District satisfactory to the District Manager.

16. The landowner is ultimately responsible for all accounts and will be furnished a copy of bills at his request.

17. During the irrigation season every landowner must provide adequate roads for inspection of weirs and pumps, free of gates. The District operates with minimum help in order to keep water charges down; if water tenders are required to open gates, there will be a charge of one dollar ($1.00) per gate, per irrigation day.

18. Any new facilities required to serve the land not previously served by MPWD such as, service ditches, dams, water measuring devices, drainage facilities, etc. shall be installed under the supervision of MAINE PRAIRIE WATER DISTRICT at the location and to the specifications prescribed by the District and the cost shall be paid by the landowners requesting such service. Detailed plans and specifications shall be submitted to the Board of Directors for approval prior to the commencement of construction.

19. Installation of pumps by individual landowners within the 566-drainage canal shall be by permission of Solano County Water Agency and the operation and maintenance of such pumps shall be subject to rules and regulations of the District. MAINE PRAIRIE WATER DISTRICT shall not be responsible for the installation, maintenance or removal of such pumps.

20. All deliveries of water by MPWD are made upon the conditions that return flows and drainage water resulting therefrom become the property of the District when the return flows and drainage water have returned to the ditches maintained by the District or stream beds from which the District diverts water or have left the boundaries of the parcel to which water is delivered and remains District property until such water leaves the service area of the District.

21. The District will attempt to obtain such water supplies as may be reasonably available to the District for irrigation of lands within the District, provided however, the District does not guarantee that any specific amount of water will be available in any particular year, and it shall be the responsibility of the landowner

and any tenant to satisfy themselves prior to the planting of any crop as to allow such crop to be grown and matured, the risk of unavailability or shortage of water supply to be borne by the landowner and tenant once the crop has been planted and landowner and tenant shall satisfy themselves as to the reliability of any assumption or representation made by any member of the District staff. The District shall not be responsible for any damage resulting from shortages in water supply available to the district for service to lands within the District, including any loss of crops planted.

22. Laterals leading from the District ditch to serve an individual landowner shall be maintained by the affected landowner and will not be the responsibility of the District. Laterals will be maintained by the District only if:
    A. The lateral serves more than one property owner;
    B. The ditch is brought up to standards approved by the District Manager;
    C. The District Board of Directors deems such maintenance to be in the best interest of the District;
    D. An easement is dedicated to and accepted by the District.

    If ownership of land is divided, it is the responsibility of the Grantor and/or Grantee to provide for the continued maintenance of the lateral required for service to the property served.

23. Violations of these regulations will result in withholding of further water service until the next regular meeting of the MAINE PRAIRIE WATER DISTRICT Board of Directors. At that meeting the Board of Directors will determine the extent of damage caused by such violations and may demand payment for such violations before ordering the restoration of water service to users.

24. When the District Manager determines that debris from a field entering a ditch utilized for irrigation purpose by the district is such that a screen is required to control debris in order to avoid interference with the operations of intake pumps downstream of such ditch, the district will install and maintain such screens over drainage outlet on the field side as the Manager shall deem appropriate, provided that the landowners shall assume the risk of clogging of such screens between the regular rounds of the ditch tender, and the landowners and tenants shall enter into an appropriate agreement with the District to hold the District harmless of any injury as a result of such installations. Should the landowner or tenant refuse to permit such installation of screens or to sign such agreement, the District Manager is authorized to terminate water service to the lands affected and shall report such refusal to the District Board of Directors at its next meeting for such action as may be deemed appropriate.

25. All pasture ground must be fenced along ditches which are maintained by Maine Prairie Water District keeping the animals away from the service ditches. An area along the edge of the ditch must be left open for a road adequate enough to allow District personnel and equipment access to the ditches for monitoring, servicing, and maintenance. If fences are not installed and repairs or maintenance to the

District ditches is needed, the costs of such repairs and/or maintenance will be borne by the landowner. If gates are installed obstructing access to District personnel rule #17 will apply.

26. Any landowner within the District proposing to sell a portion of his or her property in a manner which could create a parcel not contiguous to the District irrigation facilities (island), must make appropriate provision, through a County recorded easement with the purchaser of such parcel, for water from the District to be made available to that otherwise severed parcel. If arrangement for such access to an otherwise severed parcel is not made, the seller of that parcel, whose property remains adjacent to the District facility, may be delined service of water by the District until such recorded easement is made. The parcel otherwise severed must be able to continue using the District's water supply. The District has no obligation to extend its facilities to any severed parcel. This is the obligation of the parties involved. (added August, 2005).

APPROVED: January 16, 2007
AYES: M. RAYN, G. ROBBEN, L. ROBBEN, M. TRIPLETT, W. HOLDENER
NOES: NONE
ABSENT: NONE

CERTIFIED TRUE AND COMPLETE

William Holdener, Secretary Treasurer
of the Board of Directors

APPENDIX D

Water Rates

MAINE PRAIRIE WATER DISTRICT
WATER RATES – 2006 WATER SEASON
(Revised April 18, 2006)

WATER SOLD TO A WATER USER'S PUMP.....$6.00 per ACRE FOOT

WATER SOLD THROUGH GRAVITY FLOWS.....$9.00 per ACRE FOOT

WATER SOLD IN EXCESS OF **6.O** ACRE-FEET WILL BE CHARGED AN ADDITIONAL **$1.00** PER ACRE-FOOT

It is the policy of the MAINE PRAIRIE WATER DISTRICT to serve water for agricultural purposes ONLY.

Water rates are subject to modification during the irrigation season in the event that expenditures by the District are incurred substantially in excess of those budgeted.

APPROVED: At the regular scheduled board meeting of the Board of Directors of MAINE PRAIRIE WATER DISTRICT, April 18, 2006.

AYES: L. ROBBEN, M. RAYN, W. HOLDENER, G. ROBBEN, M. TRIPLETT
NOES: NONE
ABSENT: NONE

Milton Rayn
MILTON RAYN, President

William Holdener
WILLIAM HOLDENER, Secretary
Treasurer of the Board

ATTEST: April 18, 2006

Meda Benefield
Meda Benefield, Assistant Secretary
Treasurer to the Board of Directors

APPENDIX E

Typical Water Bill

MAINE PRAIRIE WATER DISTRICT

P.O. BOX 73
6595 PITT SCHOOL ROAD
DIXON, CA 95620

Invoice

DATE	INVOICE #
8/31/2007	2007-217

PAID

BILL TO

MORT L TRIPLETT
7588 PITT SCHOOL ROAD
DIXON, CA 95620

P.O. NO.	TERMS	PROJECT
	PRIOR TO 09-30	

QUANTITY	DESCRIPTION	RATE	AMOUNT
170.69	PUMP 77A	6.00	1,024.14
101.82	PUMP 78A	6.00	610.92
36.49	PUMP 82A	6.00	218.94
86.52	PUMP 83A	6.00	519.12
66.77	PUMP 98A	6.00	400.62
151.01	PUMP 100A	6.00	906.06
137.59	PUMP 101A	6.00	825.54
44.06	PUMP 103A	6.00	264.36
		Total	$4,769.70

APPENDIX F

City of Vacaville Easterly Wastewater Treatment Plant

CITY OF VACAVILLE
Easterly Wastewater Treatment Plant
12-Month Running Averages Report

EFFLUENT MONITORING

November 2008

STATION DESCRIPTION		EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT	EFFLUENT
CONSTITUENT NAME		FLOW	AVG CL2 RES	MAX CL2 RES	BISULFITE AVG	BISULFITE MIN	BISULFITE MAX	pH AVG	pH MIN	pH MAX	TEMP AVG	TEMP MIN	TEMP MAX
UNITS		MGD	MG/L	MG/L	MG/L	MG/L	MG/L	UNITS	UNITS	UNITS	°F	°F	°F
SAMPLE TYPE		METER	4-D RUN AVG	1-HR AVG	METER	METER	METER	METER	METER	METER	METER	METER	METER
FREQUENCY		CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS	CONTINUOUS
MONTH													
December 2007	AVG	8.2	0.0	0.0					6.9	7.1			
	HIGH	10.0	0.0	0.0					7.0	7.6			
	LOW	7.4	0.0	0.0					6.8	6.9			
	# SAMPLES	31	31	31	0	0	0	0	31	31	0	0	0
January 2008	AVG	10.2	0.0	0.0000					6.9	7.0			
	HIGH	15.2	0.0	0.000					7.03	8.19			
	LOW	7.6	0.0	0.0					6.6	6.9			
	# SAMPLES	31	31	31	0	0	0	0	31	31	0	0	0
February 2008	AVG	10.4	0.0	0.0					6.9	7.1			
	HIGH	15.4	0.0	0.0					7.0	7.2			
	LOW	8.5	0.0	0.0					6.8	7.0			
	# SAMPLES	29	29	29	0	0	0	0	29	29	0	0	0
March 2008	AVG	8.7	0.0	0.0					6.9	7.0			
	HIGH	9.7	0.0	0.0					7.1	7.4			
	LOW	7.5	0.0	0.0					6.6	6.9			
	# SAMPLES	31	31	31	0	0	0	0	31	31	0	0	0
April 2008	AVG	8.1	0.0	0.0					6.8	7.0			
	HIGH	9.1	0.0	0.0					6.9	7.6			
	LOW	7.5	0.0	0.0					6.8	6.9			
	# SAMPLES	30	30	30	0	0	0	0	30	30	0	0	0
May 2008	AVG	8.0	0.0	0.0					6.8	7.2			
	HIGH	9.4	0.0	0.0					7.0	7.7			
	LOW	7.1	0.0	0.0					6.6	6.9			
	# SAMPLES	31	31	31	0	0	0	0	31	31	0	0	0
June 2008	AVG	8.0	0.0	0.0					6.8	7.0			
	HIGH	8.9	0.0	0.0					6.9	7.4			
	LOW	6.8	0.0	0.0					6.6	6.8			
	# SAMPLES	30	30	30	0	0	0	0	30	30	0	0	0
July 2008	AVG	7.9	0.0	0.0	5.7	3.4	8.5	6.9	6.8	7.1	77.8	76.4	79.0
	HIGH	8.3	0.0	0.0	7.6	5.1	11.6	7.1	7.0	7.8	80.3	79.3	81.5
	LOW	6.7	0.0	0.0	3.7	1.1	5.4	6.7	6.6	6.8	75.9	69.2	77.1
	# SAMPLES	31	31	31	31	31	31	31	31	31	31	31	31
August 2008	AVG	7.7	0.0	0.0	4.8	3.3	7.7	7.0	6.9	7.1	75.4	77.5	78.9
	HIGH	8.2	0.0	0.0	6.2	4.4	12.0	7.2	7.1	7.3	79.3	79.8	80.7
	LOW	6.5	0.0	0.0	3.6	1.8	6.5	6.8	6.7	6.9	60.5	73.9	77.2
	# SAMPLES	31	31	31	31	31	31	31	31	31	31	31	31
September 2008	AVG	7.6	0.0	0.0	4.5	2.7	7.2	7.0	6.9	7.2	75.4	71.9	77.2
	HIGH	8.3	0.0	0.0	6.6	3.9	10.4	7.1	7.0	7.8	78.5	77.7	79.7
	LOW	7.0	0.0	0.0	2.9	1.5	3.9	6.9	6.6	6.9	68.6	51.1	73.9
	# SAMPLES	30	30	30	30	30	30	30	30	30	30	30	30
October 2008	AVG	7.4	0.0	0.0	5.0	3.1	8.6	7.0	6.9	7.2	73.8	71.3	74.8
	HIGH	8.2	0.0	0.6	6.8	5.2	20.0	7.1	7.1	7.8	76.7	75.8	77.7
	LOW	6.7	0.0	0.0	3.7	0.0	5.2	6.8	6.6	6.9	70.6	58.1	71.3
	# SAMPLES	31	31	31	31	31	31	31	31	31	31	31	31
November 2008	AVG	7.8	0.0	0.0	4.7	2.6	6.9	6.9	6.9	7.1	73.1	72.6	73.7
	HIGH	9.9	0.0	0.0	6.1	4.4	9.3	7.1	7.0	7.7	75.3	75.0	75.5
	LOW	5.2	0.0	0.0	3.3	0.0	4.9	6.8	6.7	6.9	71.6	71.0	72.1
	# SAMPLES	30	30	30	30	30	30	30	30	30	30	30	30
Running Average		8.3	0.0	0.0	4.9	3.0	7.8	7.0	6.9	7.1	75.1	73.9	76.7
Running Maximum		15.4	0.0	0.6	7.6	5.2	20.0	7.2	7.1	8.2	80.3	79.8	81.5
Running Minimum		5.2	0.0	0.0	2.9	0.0	3.9	6.7	6.6	6.8	60.5	51.1	71.3
Total Number of Samples		366	366	366	153	153	153	153	366	366	153	153	153

* Excess bisulfite (reductant) residual measured, therefore chlorine (oxidant) residual is zero.

Note: Shaded cells in this report are values reported on EPA DMR Form 3320-1 for most recent calendar month.
These cells are shaded to reduce transcription errors.

STATION DESCRIPTION		RSW-001	STUDY	RSW-002	RSW-003	STUDY	RSW-004	STUDY
LOCATION		OLD ALAMO @ LEISURE TOWN	EFF OUTFALL	OLD ALAMO @ LEWIS RD	NEW ALAMO @ LEWIS RD	R-7 OAC-NAC CONFLU	NEW ALAMO @ BROWN-ALAMO DAM	NEW ALAMO @ FRY RD - 1.1 MI DOWN RSW-004
CONSTITUENT NAME		TDS	TDS	TDS	TDS	TDS	TDS	TDS
UNITS		MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
SAMPLE TYPE		GRAB	GRAB	GRAB	GRAB	GRAB	GRAB	GRAB
FREQUENCY		MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY	MONTHLY
December 2007	AVG							
	HIGH							
	LOW							
	# SAMPLES	0		0	0		0	
January 2008	AVG							
	HIGH							
	LOW							
	# SAMPLES	0		0	0		0	
February 2008	AVG							
	HIGH							
	LOW							
	# SAMPLES	0		0	0		0	
March 2008	AVG							
	HIGH							
	LOW							
	# SAMPLES	0		0	0		0	
April 2008	AVG							
	HIGH							
	LOW							
	# SAMPLES	0		0	0		0	
May 2008	AVG							
	HIGH							
	LOW							
	# SAMPLES	0		0	0		0	
June 2008	AVG							
	HIGH							
	LOW							
	# SAMPLES	0		0	0		0	
July 2008	AVG	(1)		686	322		410	410
	HIGH	(1)		686	322		410	410
	LOW	(1)		686	322		410	410
	# SAMPLES	0	0	1	1	0	1	1
August 2008	AVG	(1)		626	380		422	
	HIGH	(1)		626	380		422	
	LOW	(1)		626	380		422	
	# SAMPLES	0	0	1	1	0	1	0
September 2008	AVG	(1)	548	668	678	530	400	474
	HIGH	(1)	548	668	678	530	400	474
	LOW	(1)	548	668	678	530	400	474
	# SAMPLES	0	1	1	1	1	1	1
October 2008	AVG	(1)	626	564	350	416	434	464
	HIGH	(1)	626	564	350	416	434	464
	LOW	(1)	626	564	350	416	434	464
	# SAMPLES	0	1	1	1	1	1	1
November 2008	AVG	(1)	550	614	612	564	336	600
	HIGH	(1)	550	614	612	564	336	600
	LOW	(1)	550	614	612	564	336	600
	# SAMPLES	0	1	1	1	1	1	1
Running Average		(1)	575	632	468	503	400	487
Running Maximum		(1)	626	686	678	564	434	600
Running Minimum		(1)	548	564	322	416	336	410
Total Number of Samples		0	3	5	5	3	5	4

(1) No Flow At RSW-001 Sample Station

APPENDIX G

The Irrigator

The Irrigator

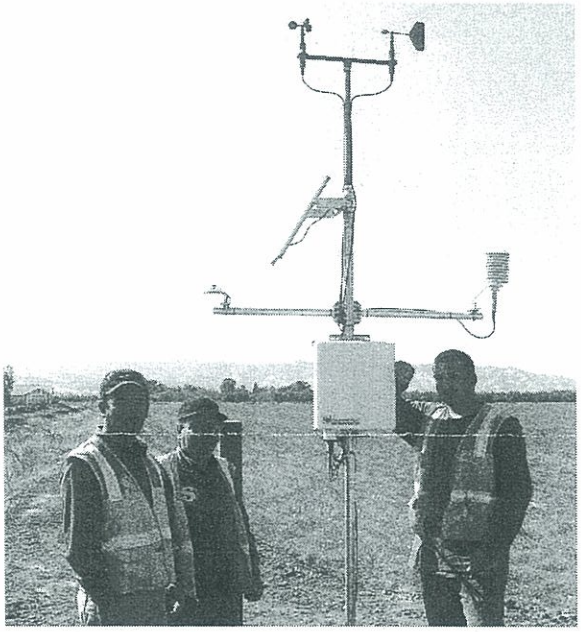
A crop water use information project of Solano Irrigation District, Reclamation District 2068, Maine Prairie Water District, U.C. Cooperative Extension, Solano County Water Agency and Natural Resources Conservation Service

508 Elmira Road
Vacaville, CA 95687

Telephone: (707) 455-4024
October 2008

New Weather Station Installed

The Solano Agricultural Water Conservation Committee (AWCC) recently completed installation of a new weather station , "Dixon-West." Located on Jahn Road, the station provides weather-based irrigation management data in a region previously not covered. Mike Barrett, Dixon grower, says, "Having the station in this area is really helpful, since it is warmer here, and less windy than the east side of Dixon. I use the ET numbers to help me manage the trees, and the new station will help me become more accurate with irrigations." Tavo Lizarraga, Solano Irrigation District Ag Operations Supervisor says, "This is a major agricultural area with prime soils, diverse crops, and many growers. We are looking forward to providing real-time weather information for our farmers; some of whom live outside of the area. We are encouraging those growers to use the phone feature to check current wind and rain condititons as well as irrigation conditions."



West Dixon Weather Station with Solano Irrigation District watertenders Ramon Lemus, Robert Chavez & Kris Aguilera

The AWCC now manages nine weather stations in Solano County; three of which are co-owned with the Californa Irrigation Management Information System (CIMIS), and six of which are fully owned by the AWCC. All of the stations provide website access, and six of the stations provide phone access with 10 minute updates for current temperatures, dew points, wind speeds, and precipitation. Weather data such as degree-days and evaportranspiration rates are posted, and all of the data is collected for historical records.

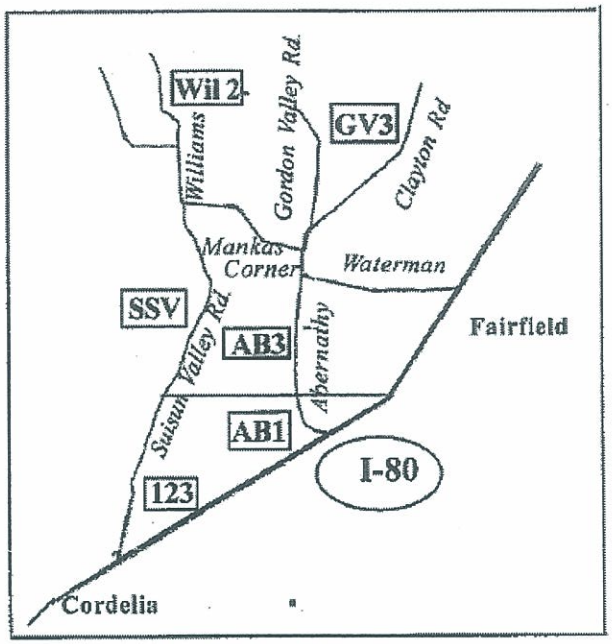
To access our network of weather stations, see the table below. For help with utilizing local weather data towards efficient irrigation scheduling, call Paul Lum, Irrigation Specialist, at (707) 455-4024. The AWCC thanks the Bureau of Reclamation for providing partial grant funding.

Weather Station Access

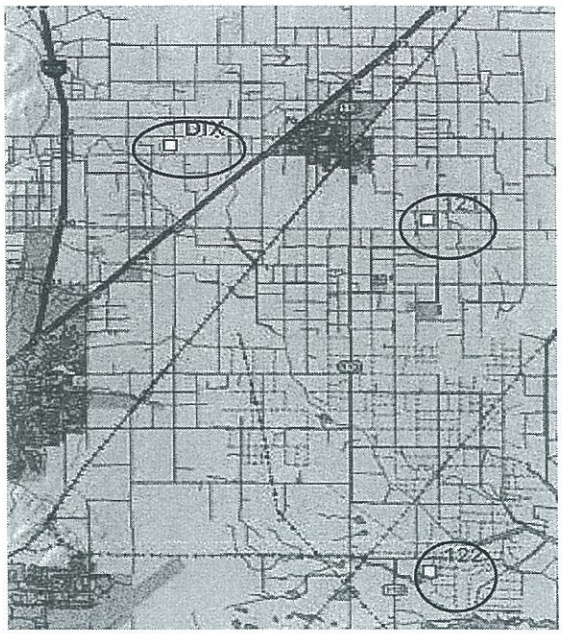
Station	Access	Location
Dixon-West	**(707) 693-1077 & website :*www.westernwx.com/sid***	**Jahn Rd., Dixon**
Dixon CIMIS #121	website	Midway Rd. & Robben Rd., Dixon
Hastings Tract CIMIS #122	website	Hastings Tract, Dixon
Suisun CIMIS #123	website	Solano Coummunity College
Suisun Valley (Wooden Valley Winery)	(707) 863-8978 & website	4756 Suisun Valley Rd., Suisun
Abernathy 1 (Green Valley Tractor)	(707) 426-4896 & website	4135 Abernathy Rd., Suisun
Abernathy 3 (JT Ranch)	(707) 426-4097 & website	4423 Abernathy Rd., Suisun
Williams 2 (Upper Suisun Valley)	(707) 426-4063 & website	5272 Williams Rd., Suisun
Gordon Valley 3 (Gordon Valley Rd.)	(707) 426-4971 & website	5134 Gordon Valley Rd., Suisun
Winters CIMIS #139	website	Winters
Davis CIMIS #6	website	U.C. Davis

Available Weather Forecast Includes the West Dixon Station

Weather data from our new weather station, Dixon-West, is now incorporated into our weather forecast program. (See the insert for a copy of the October 1st, 2008 forecast). Rick Wehman of Ledgewood Creek Winery & Vineyards says, "We look at the forecast every morning and appreciate the fact that it uses the nearby stations and focuses on farming. The forecast helps us plan our harvesting, spraying, and irrigations." Agicultural features include listings of evaportranspiration rates (ET), degee day reports, mildew levels, chilling hours, an ET forecast, and pest control models for Peach Twig Borer, Codling Moth, and Two-spotted Spider Mite. The forecast is available to growers via email, fax,or website password. The cost is only **$10/month**, thanks to cost-share funding provided by the Solano Agricultural Water Conservation Committee. Call Paul Lum at (707) 455-4024 for information or a subscription.



Map of Suisun Valley Stations



Map of Dixon Area Weather Station Locations

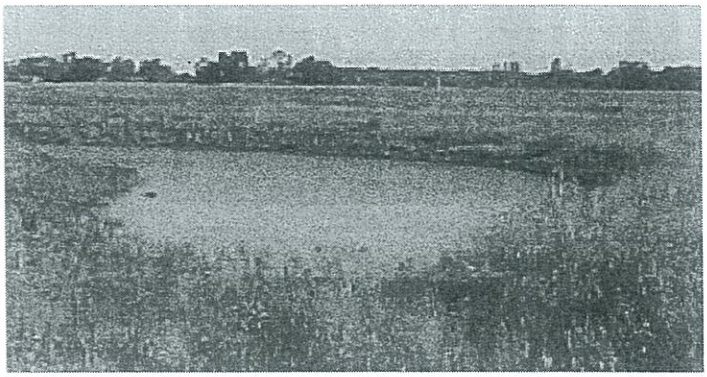
Last Call for 2008 Irrigation Evaluations

Irrigation Evaluations are still available until the irrigation season ends this fall. The Solano Agricultural Conservation Committee encourages growers county-wide to take advantage of the service, free of charge, that is designed to help growers increase their water use efficieny, and in turn, increase crop yields.

Irrigation evaluations are a "check up" of your irrigation sets and primrily measure "Distribution Uniformity," or "DU." Evaluations can be performed for all types of irrigatiuons: furrow, flood, sprinkler, micro-spray, and drip, and for all types of crops. Recommendations are given to growers with suggestions to increase irrigation efficiency, distribution uniformity, and hopefully crop yields - ultimately our goal is to help increase your bottom line. For an Evaluation, call Paul Lum at (707) 455-4024.

Farm Pond and Drainage Habitat Program

Funding and assistance is available from the Solano Resource Conservation District (SRCD) to help landowners install native plants and vegetation around existing ponds and farm drains. Farms in the western portion of Solano County qualify. SRCD can help landowners determind the types of native plants would be compatible with their farm or ranch operations while also providing ecological benefits. For information, please call Andrea Mummert at (707) 678-1655 ext. 115.



Tailwater Pond with Vegetated Banks

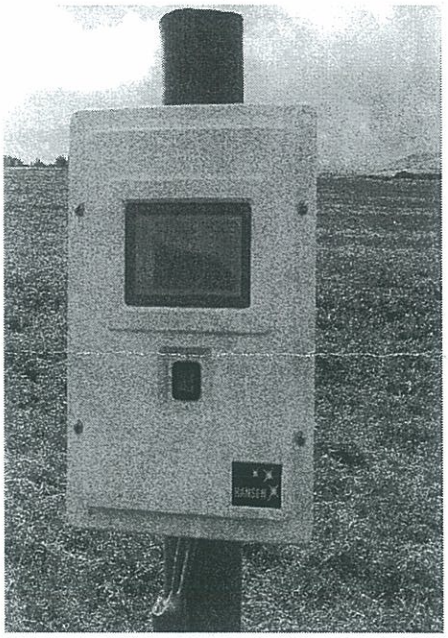
Update on the 2008 Soil Moisture Monitoring Program

The Ag Water Conservation Committee assisted a growing number of farmers and ranchers with monitoring soil moisture levels on their farms this season. Watermark soil sensors and the AM400 Datalogger were installed in fields county-wide, in all of the major crops. Our aim is to provide growers with the most practical tools available to assist with efficient irrigation scheduling, and the soil monitoring program has been a success.

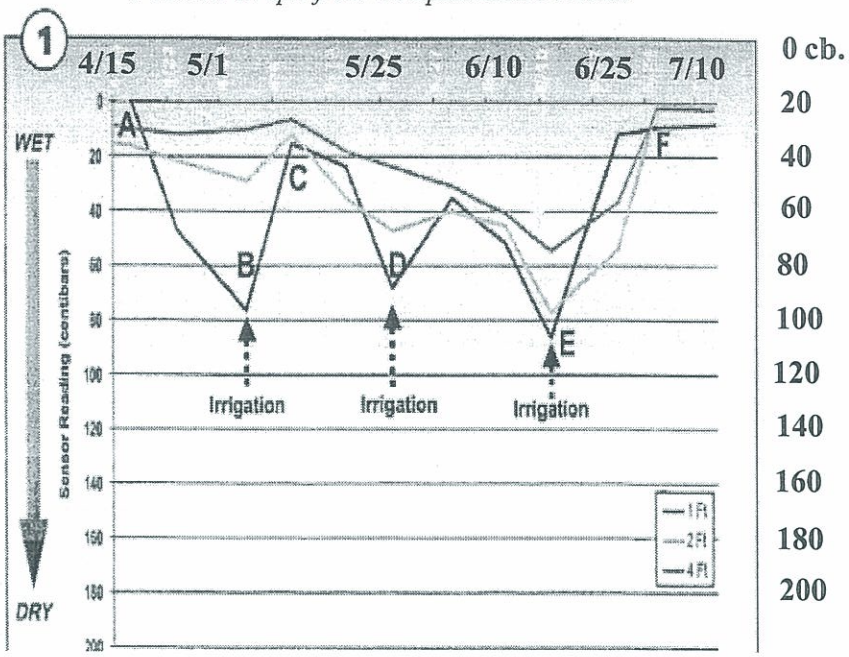
Call the Irrigation Specialist at (707) 455-4024 for information. Our inventory of free soil sensors and dataloggers are limited, and on a first come, come first served basis. Attendance at our annual irrigation management workshop is required to get on the sign up list for the sensors, and to gain practical knowledge regarding their use in scheduling irrigations. A combination of soil and leaf monitoring and recording crop evapotranspiration losses are the major tools we recommend for irrigation scheduling.

How Do I Read My Datalogger?

35 Day Graph from AM400 Soil Meter



3 Month Graph from Computerized Printout



A common question among growers is "How Do I Read the Graph?" The following are excerpts from UC Cooperative Extension's pamphlet, "Soil Moisture Monitoring - A Simple Method to Improve Alfalfa and Pasture Irrigation Management."

Figure 1. Proper Irrigation Management

The areas between 60 - 90 centbars (cb) indicate where irrigations should occur. In this example of an alfalfa field, the soil is moist from winter rainfall, and readings measure less than 20 cb. on April 15th (**A**). Gradually the soil dries and the readings increase, beginning with the sensor located at the one foot depth followed by the deeper depths. When the soil moisture reading dropped to near 80 in early May (**B**), irrigation water was applied and the soil moisture profile was restored, as shown by the graph lines reaching just below 20 cb (**C**). The drying cycle resumed until a partial irrigation occurred in late May (**D**). A partial irrigation was needed to replenish enough soil moisture to carry the crop through harvest without excessive moisture depletion and crop stress. The first cutting occurred in early June (**E**). Following cutting and baling, irrigation resumed until soil moisture content at all three depths was restored and readings measured below 20 cb (**F**).

The Irrigator

Solano County Agricultural
Water Conservation Committee
508 Elmira Road
Vacaville, CA 95687

Vacancy on Flood Control Advisory Committee

The Solano County Water Agency (SCWA) is looking for a farmer or landowner to fill an open position on the Flood Control Advisory Committee. The Committee meets monthly to advise SCWA on flood control projects and policy. For further information please contact Alex Rabidoux at (707) 455-6090.

Upcoming Events

October 18	Solano RCD Fall Plant Sale	6390 Lewis Rd., Vacaville	9 am - noon
October 25	Solano Irrigation District 60th Anniversary	508 Elmira Rd., Vacaville	10 am - 2:00 pm
October 26	Suisun Valley Fun Family Farms Days	Suisun Valley	10 am - 5:00 pm

If you have further input or suggestions for the Solano County Agricultural Water Conservation Committee or would like previous publications or information, please contact Paul Lum (707) 455-4024 or by e-mail at lump@sidwater.org.

Sincerely,

Paul Lum
Chairman, Solano County
Agricultural Water Conservation Committee

Published by the Solano County Ag Water Conservation Committee: Reclamation District 2068, Solano Irrigation District, Maine Prairie Water District, Solano County Water Agency, Natural Resources Conservation Service and U.C. Cooperative Extension.

APPENDIX H

Daily Solano County Weather Forecast

Western Weather Group

Solano County Forecast

www.westernwx.com/sid
phone: 530-342-1700
email: forecaster@westernwx.com

Wednesday October 1, 2008 issued 5:30am

by Forecaster Tom Cushman

HIGHLIGHTS: Increasing cloudiness, not as warm today. Partly cloudy but dry tonight into Thursday morning. Much cooler Friday into Saturday as overnight rain gives way to scattered showers.

Short Term Weather Discussion: A weakening offshore weather system made good progress toward the West Coast overnight as the westerlies reasserted their influence over this disturbance. Thus while today will begin mostly sunny across the North State, leading clouds from this disturbance will spread inland over the region during the day as this system begins to advance onshore. This will leave Solano County cooler today as interference from this increase in cloudiness limits temperatures to the lower to middle 80s. Clouds will continue to increase across the North State, especially north of Solano County, overnight to bring a modest chance of sprinkles to the northern Sacramento Valley after midnight. This north valley precipitation threat is expected to peak shortly after dawn tomorrow, after which clouds will be on the decrease across the county the rest of the day. Still regional temperatures will be hard pressed to even reach 80F tomorrow as increasing sunshine will be insufficient to overcome the cooling of the air mass aloft.

SHORT TERM FORECAST SPECIFICS:

		Weather	Max/Min	Dew Pts	POP	Amounts	Winds
TODAY	(am)	Mostly Sunny	82-87	50-55	0%	none	S-SW 5-10 → 10-15
	(pm)	Partly Cloudy	80-85				S-SW 5-15 → 10-20
TONIGHT		Partly Cloudy	55-60	50-55	0%	none	S-SW 5-15
THURSDAY	(am)	Partly Cloudy	75-80	52-57	0%	none	SW-W 5-10 → 10-20
	(pm)	Mostly Sunny					SW-W 10-15 → 15-25

SV = Suisun Valley, D/H = Dixon/Hastings Tract

Extended Forecast Discussion: Weak ridging in advance of a fast approaching North Pacific storm system, will minimize cloudiness across Solano County Thursday night into Friday morning. However this will quickly change Friday afternoon as this well supported disturbance returns frontal clouds to the region. Models are significantly stronger with this weather system than yesterday, and now project a decent soaking for Solano County with this system's cold frontal passage Friday evening into the predawn hours of Saturday with amounts likely to range from 1/4-3/4". The current projection of the supporting trough moving across California (instead of Oregon) will leave the county cool and showery in the front's wake on Saturday. Dry weather will return Sunday as rebuilding high pressure leaves the valley sunny, breezy as north winds bring good drying to the region. North winds should extend through next Monday before the approach and passage of a secondary disturbance mainly north of California leaves Solano County a little cloudy and somewhat cooler on Tuesday. Further down the road, model solutions become more muddled.

EXTENDED RANGE OUTLOOK

	Fri 10/3	Sat 10/4	Sun 10/5	Mon 10/6	Tue 10/7
Weather	Mostly Cldy	Rain→Shwrs	M Sunny	Sunny	Partly Cldy
Max T	72-77	**62-67**	75-80	80-85	80-85
Min T	45-55	55-60	45-55	45-50	45-50
POP	40% eve	**60%**	0%	0%	0%
Amounts	Tr -.25	**.25 -.50**	none	none	none
Winds	S-SW 5-20	S → W 15-25	NW-N 5-25	NW-N 5-15	S-SW 5-15
ETo	.08 -.12	.02 -.06	.15 -.20	.15 -.20	.12 -.17

Trends Wed 10/8 - Fri 10/10

Max Temps:	Near to Above Normal
Min Temps:	Near normal
Precipitation:	None to Below normal
Wx Pattern:	Ridge emerges along West Coast after Tue system clips North State

SOLANO COUNTY CLIMATE SUMMARY

30 September 2008	Max/Min	Rainfall 24hr	Rainfall Seas	Rainfall % normal	Daily ETo	Past week ETo	Normals mx/mn	Record Max & Min
Winters (139)	90/53	0.00	0.00	--	--	--	--	--
Davis (006)	88/55	0.00	0.00	--	0.16	1.22	--	--
Dixon (121)	85/54	0.00	0.00	--	0.16	1.19	--	--
Vacaville	92/61	0.00	0.00	0%	--	--	85/52	105 (2001), 37 (1950)
Hastings Tract (122)	87/58	0.00	0.00	--	0.18	1.34	--	--
Travis AFB	88/58	0.00	0.00	0%	--	--	83/53	104 (1952), 41 (1954)
Suisun (123)	88/58	0.00	0.00	--	0.16	1.19	--	--
Suisun Valley	90/49	0.00	0.00	--	0.14	1.07	--	--

Solano County Weather Station Network
Daily Meteorological Summary
Tuesday, September 30, 2008

	Temperature					Avg	Avg	WIND			Precipitation		Min
	Max	time	Min	time	Avg	DewPt	RH	Avg	Gust	Gust	24hr	7/1 to date	Battery
	°F	occur	°F	occur	°F	°F	%	mph	mph	Dir	in.	in.	volts
Upper Suisun Valley	92.0	1601	51.2	613	69.4	46.3	50.2	1.4	9.3	SSE	0.00	0.00	12.36
Gordon Valley	88.1	1348	49.0	604	66.4	46.7	56.4	2.3	10.3	SSW	0.00	0.00	12.21
Suisun Valley	89.9	1402	49.4	537	67.8	45.7	51.6	1.9	10.3	SSW	0.00	0.00	12.57
Abernathy North	88.9	1527	48.7	516	66.6	47.7	57.4	2.9	12.5	SW	0.00	0.00	12.36
Abernathy South	86.4	1354	57.6	549	69.7	49.2	52.2	5.5	16.3	WSW	0.00	0.00	12.36
Dixon-West	91.0	1522	51.9	601	70.6	48.9	52.2	2.2	13.0	SSW	0.00	0.00	12.20

Solano County Weather Station Network
Daily Biometeorological Summary
Tuesday, September 30, 2008

	Grape GGD T>50°F		continuous hours		Mildew Stress	Chill Hours hrs < 45°F		Solar Rad	ETo	
	ytd	since 4/1	70-85	T>95°F	pts	ytd	11/1 on	cal/cm²	daily in.	weekly in.
Upper Suisun Valley	19.4	3554	4.0	0.0	30	0.0	-----	444	0.15	1.13
Gordon Valley	16.4	3301	4.5	0.0	0	0.0	-----	455	0.15	1.15
Suisun Valley	17.8	3232	2.8	0.0	0	0.0	1248	412	0.14	1.07
Abernathy North	16.7	3102	4.3	0.0	30	0.0	-----	449	0.16	1.14
Abernathy South	19.7	3079	4.4	0.0	40	0.0	-----	438	0.16	1.15
Dixon-West	20.6	278	3.4	0.0	20	0.0	-----	467	0.17	1.26

Solano County Weather Station Network
Suisun Valley Weather Station Degree-Day Report
Tuesday, September 30, 2008

	Peach Twig Borer/Codling Moth		Two-spotted Spider Mite	
	yesterday	season*	yesterday	season*
Suisun Valley	17.74	3332.0	15.12	2880.0

* season began February 29, 2008

Sacramento Valley ETo forecast	7 day outlook 10/1 - 10/7		Past week (9/24 - 9/30) summary				
			Daily		7 day	period	percent
	normal	forecast	max	min	total	normal	normal
Orland	1.00	0.90	0.19	0.15	1.18	1.08	109%
Durham	0.95	0.86	0.16	0.13	1.03	1.05	98%
Nicolaus	0.91	0.86	0.17	0.10	1.02	1.02	100%
Esparto	1.09	0.93	0.20	0.13	1.22	1.02	120%
Suisun Valley	0.99	0.94	0.19	0.14	1.19	1.08	110%
Davis	1.09	0.98	0.20	0.16	1.22	1.19	103%

APPENDIX I

Groundwater Management Plan

MAINE PRAIRIE WATER DISTRICT

GROUNDWATER MANAGEMENT PLAN

INTRODUCTION

On February 21, 1995, Maine Prairie Water District (District) adopted a resolution of intention to draft a Ground Water Management Plan (Plan) pursuant to Water Code Section 10753. Subsequent to adopting this resolution, the District, together with Reclamation District 2068, has directed the preparation of a report on groundwater conditions within the District and surrounding area. this report, dated December 1996, has been received by the District. It covers the period from approximately the mid-1960s to 1992.

The District is now in a position to consider all of the components set forth in Water Code Section 10753.7 and select those components which are appropriate for inclusion in the District's Plan. The primary goal in developing this Plan is to work cooperatively with landowners within the District to most efficiently manage and monitor the groundwater resources within the District.

PLAN AREA

The Plan area includes all District lands which are located in both Solano and Yolo counties.

PLAN COMPONENTS

The following are components identified in Water Code Section 10753.7 which are included in the District's Plan.

A. MONITORING

1. WATER LEVELS

The Department of Water Resources (DWR) currently monitors the water level in numerous wells located within the Plan area. it is the desire of the District to have DWR continue to monitor these numerous wells in order to maintain a database to evaluate ground water conditions. The District intends to select approximately four wells within the Plan area to monitor the ground water level on a semi-annual basis which includes spring and fall measurements. The District will perform this groundwater level monitoring program on selected wells in order to readily monitor and evaluate water levels. The ground water level measurement will be done at a time and using methods to obtain consistent information. Plots of the key monitoring wells will be maintained in an accessible locations at the District office to assure continuous monitoring of ground water levels.

2. QUALITY

DWR has monitored ground water quality in the area for many years. The District intends to work with DWR in continuing the ground water quality monitoring program. The results of this monitoring have not

identified any ground water quality problems. The District intends to investigate with DWR its intentions on continuing the water quality monitoring program. If the data is readily available for review by the District, no further actin will be taken. if DWR does not propose to publish the results in a timely manner or no longer intends to perform the program, the District intends to obtain water quality samples at various times and locations throughout the District to identify any potential ground water problems.

B. CONJUNCTIVE USE PROGRAM AND MITIGATION OVERDRAFT

The ground water conditions report demonstrates that the ground water levels have risen within the Plan area over recent history. It would appear this ground water incline has occurred as the result of the construction and use of greater surface water facilities. Although the District does not have a specific conjunctive use program, it would appear the use of surface water in the surrounding areas has resulted in a benefit to the ground water conditions. At this time the District has no plans to implement a specific conjunctive use project but desires to maintain a reliable ground water supply for potential future emergency water supply needs. A conjunctive use program may be implemented at some future date if water supply needs dictate.

C. RELATIONS WITH STATE AND FEDERAL REGULATORY AGENCIES

The District intends to work with and cooperate with State and Federal regulatory agencies when appropriate to protect the ground water basin.

D. WELL CONSTRUCTION POLICIES AND ADMINISTRATION OF WELL ABANDONMENT AND DESTRUCTION PROGRAM

The District has not identified any problems within the basin requiring special well construction, abandonment or destruction policies. The District, therefore, accepts the minimum standards set forth in Water Code Sections 13700 through 13806. These standards will continue to be administered by the State.

EXCLUDED COMPONENTS

Control of saline water intrusion, regulation of contaminated ground water, land use planning to limit possible ground water contamination, and establishment of wellhead protection areas are identified as Plan components in Water Code Section 10753.7 but are excluded from the Plan at this time.

These components have been excluded from the Plan because the ground water quality monitoring program has not identified existing conditions within the Plan area requiring District action in these areas. If monitoring identifies any saline intrusion or contamination problems, the Plan will be modified to address the problem identified.

PLAN UPDATING

The District intends to periodically update this Plan as data and conditions warrant. Information obtained through the ground water monitoring program or availability of additional surface water are factors which may require modification of this Plan. Pursuant to Water Code Section 10755.3, the District will meet, at least annually, with representatives of Reclamation District No. 2068 and Solano Irrigation District, agencies conducting ground water management programs within the same basin, in order to coordinate those programs.

MAINE PRAIRIE WATER DISTRICT

RESOLUTION 97 - 03

RESOLUTION APPROVING GROUND WATER MANAGEMENT PLAN

WHEREAS, on February 21, 1995, this District adopted a resolution of intention to draft a Ground Water Management Plan, and subsequent to the adoption of that resolution arranged for a preparation of a report on ground water conditions within the District and surrounding area; and

WHEREAS, the District engineers have prepared and submitted for approval a proposed Ground Water Management Plan and appropriate notice has been given of the public hearing to be held by this Board regarding the adoption of the proposed Ground Water Management Plan pursuant to Water Code sections 10750 and following; and

WHEREAS, the public hearing having been duly noticed and held and no one having appeared in opposition to the adoption of the proposed Ground Water Management Plan;

NOW THEREFORE BE IT RESOLVED that the Board of Directors of Maine Prairie Water District hereby adopt the Ground Water Management Plan in the form attached to this Resolution and that the Secretary advise the State Department of Water Resources that such a plan has been adopted.

CERTIFICATION

I, Meda Benefield, Assistant Secretary of MAINE PRAIRIE WATER DISTRICT, hereby certify that the foregoing Resolution was duly adopted on motion made, seconded, and unanimously carried, by the Board of Directors of MAINE PRAIRIE WATER DISTRICT at a meeting on January 21, 1997.

Meda Benefield

Meda Benefield, Assistant
Secretary-Treasurer to
the Board of Directors

APPENDIX J

2007 Water Management Plan
Annual Update

Maine Prairie Water District
Water Management Plan
Annual Update

2007

A. Critical Best Management Practices for Agricultural Contractors

5.A.1. Measure with a minimum accuracy of ± six percent, the volume of water delivered by the District to customers.

Completed in 2007
Expenditures: $20,700 Includes expenditures for daily water measurement.
Staff Hours: 900 Includes staff hours for daily water measurement.

- Meters read daily during the delivery season.
- Meter maintenance performed.
- Water measured by field.
- Removed and repaired (10) meters.
- Flow measurements at meters were verified by pump efficiency tests performed by the Pump Tester as part of the District's pump test program.

Planned for 2009
Expenditures: $22,770
Staff Hours: 900

- **Continue measuring water daily at each field turnout.**
- **Continue meter maintenance and replacement program on behalf of landowners. Replace meters as needed to maintain accurate measurement.**
- **Continue Pump Test program, including flow measurement.**

5.A.2. Designate a Water Conservation Coordinator

Completed in 2007
Expenditures: $2,466
Staff Hours: 80

- Meda Benefield served as the Water Conservation Coordinator.

Planned for 2009
Expenditures: $2,714
Staff Hours: 80

- **Meda Benefield will continue to serve as the Water Conservation Coordinator.**

A.3a, A3b, A3d Provide or support the availability of water management services to water users: On-Farm Evaluations, Real-Time ET information, Educational Programs

Completed in 2007
Expenditures: $44,880
Staff Hours: 980

As a member of the Solano Agricultural Water Conservation Committee (AWCC):

- Conducted (2) irrigation management workshops for growers and irrigators, "Save Money and Increase Yields." Demonstrated irrigation scheduling utilizing a combination of ETc rates from local CIMIS stations and soil moisture sensor readings.
- Provided energy efficiency and pump efficiency testing information to growers in partnership with PG&E, as part of the March 2007 Irrigation Management workshop.
- The Irrigation Specialist performed (7) On-farm Irrigation Evaluations for growers, surveying 420 acres.
- Assisted growers with irrigation scheduling based on real-time ETc rates and soil moisture monitoring. Promoted and demonstrated the Western Weather agricultural website including real-time ETc information. Published crop ET data in two local newspapers.
- Made presentations describing the AWCC's services at a Dixon Grower/Landowner's meeting and a Solano County Grower's Meeting.
- Assisted Solano Resource Conservation District with outreach and implementation of the Agricultural Water Quality BMP programs.
- Published (3) editions of the Irrigator, distributed to (450) farmers and landowners.
- Installed (21) sets of Watermark soil sensors with AM400 data-loggers on county farms, and provided training and support for growers.
- Hired a summer intern to assist with AWCC programs.
- Advised growers on cost-sharing programs available through NRCS and RCDs, and participated with local Farm Bureau, and U.C. Cooperative Extension (UCCE) programs.
- Investigate options for installing a new weather station for the West Dixon region, planned for 2008, to provide local growers with weather data for irrigation scheduling.

Planned for 2009
Expenditures: $49,368
Staff Hours: 1320

- **The Irrigation Specialist to perform at least (10) twelve On-Farm Irrigation Evaluations, county-wide.**
- **Conduct an irrigation scheduling workshop in Spanish in partnership with U.C. Cooperative Extension.**
- **Conduct two furrow irrigation workshops in Spanish.**
- **Provide and promote crop weather information services through the AWCC's weather website. Assist growers with irrigation scheduling.**
- **Maintain weather station network consisting of (8) local weather stations with website and telephone access.**
- **Maintain daily weather station and weather forecast website.**
- **Publish three editions of the Irrigator Newsletter, distributed to (450) farmers and landowners to promote AWCC services and provide irrigation education.**
- **Publish crop ET rates in (2) local newspapers.**
- **Contribute articles to Solano Irrigation News and other local farm newsletters.**
- **Participate with RCD/NRCS, Farm Bureau, UCCE, and Solano County programs and workshops that pertain to irrigation management.**
- **Provide irrigation management assistance to growers.**
- **Install (20) sets of Watermark sensors in farm fields. Provide training and support.**
- **Assist Solano RCD with regional cooperative efforts to assist growers with water quality compliance. Assist growers with implementing BMP's to improve water quality in drainage.**
- **Hire a summer intern to assist the Irrigation Specialist with AWCC programs.**
- **Offer to pay or cost share tuition for growers to attend irrigation management classes at Cal Poly's ITRC.**

5.A.3.c Surface, ground and drainage water quantity and quality data.

Completed in 2007
Expenditures: $4,200
Staff Hours: 20

- The Regional Water Monitoring Partnership monitored and sampled irrigation water throughout the District for water quality in compliance with the Talent Decision.
- MPWD cooperated with the Dixon Resource Conservation District's (DRCD) efforts to form a local Watershed Working Group among

farmers and landowners to comply with the Regional Water Quality Control Board's agricultural discharge waiver.

Planned for 2009
Expenditures: $4,620
Staff Hours: 20

- **Continue to participate with the Regional Water Monitoring Partnership.**
- **Continue cooperating with the DRCD in forming the Watershed Working Group and begin sampling irrigation drainage for water quality.**
-

5.A.4. Pricing Structure – Adopt a water pricing structure for Contractor water users based at least in part on quantity delivered.

Completed in 2007
Expenditures: $11,000
Staff Hours: 310

- Continued billing based on volume of use.
- Continued tiered pricing program. Raised water rates $1.00 per AF for usage over 6.0 AF per acre.
- The District Board reviewed the feasibility of adding an ETc comparison.

Planned for 2009
Expenditures: $12,100
Staff Hours: 310

- **Continue billing based on volume of use.**
- **Continue tiered pricing program.**

5.A.5. Evaluate the Need for Changes in Policies

Completed in 2007

- The Board of Directors reviewed MPWD rules, regulations, and policy.
- The Board met monthly to address any concerns and comments related to policy.

Planned for 2009

- The Board of Directors will review Policy annually, and continue to meet monthly to address any concerns and comments.

A6: Contractor Pump Efficiency

Completed in 2007

Expenditures: $8000
Staff Hours: 80

- Maine Prairie Water District tested (14) pumps for efficiency. District pumps were maintained regularly and repaired as needed. For privately owned pumps the District coordinated efficiency testing, sent pump reports to landowners and advised on repairs. The testing program is part of the District's partnership with the Solano Agricultural Water Conservation Committee (AWCC), which has a county-wide pump test program in place. The Committee's Pump Tester performed the tests and in 2007 the Committee qualified for testing and repair rebates from the statewide Agricultural Pump Efficiency Program (APEP).

Planned for 2009
Expenditures: $8,000
Staff Hours: 80

- **MPWD plans to continue its pump test program through its partnership with the AWCC. (20) pumps are planned for testing. Regular preventative maintenance is planned and repairs will be made as necessary.**

Exemptible Best Management Practices for Agricultural Contractors

5.B.1. Facilitate Alternative Land Use
Not Applicable. The District does not have any lands with unmanageable drainage problems, and therefore has not considered any programs to facilitate alternative uses.

5.B.2 Facilitate Use of Available Recycled Urban Wastewater

Completed in 2006 and Planned for 2007

- Treated effluent from Vacaville's Easterly Wastewater Treatment Plant is discharged into Alamo Creek and flows into Ulatis Creek where it is used to directly irrigate approximately 1000 acres. The unused flows are then commingled downstream and used to irrigate another 3000 acres. The treated effluent is sampled 3X per week by the City of Vacaville.

5.B.3 Facilitate or Provide Financial Initiatives and Assistance for On-Farm Water Management Improvements

Completed in 2007
Expenditures: $300
Staff Hours: 10

- Published articles and press releases regarding available financial assistance from NRCS and RCD's in the Irrigator Newsletter, and gave presentations at grower workshops.
- As a member of the AWCC, participated in the Yolo/Solano Agricultural Water Quality Program, and informed growers on the availability of financial assistance for irrigation improvements.

Planned for 2009
Expenditures: $320
Staff Hours: 10

- **Continue notifying growers through newsletters, press releases, and workshops.**
- **Continue participation in the Yolo/Solano Agricultural Water Quality Program.**

5.B.4 Incentive Pricing
Completed in 2007
Expenditures: $11,260
Staff Hours: 310

- Continued billing based on volume of use.
- Continued tiered pricing program.
- The District Board reviewed the feasibility of adding an ETc comparison.

Planned for 2007
Expenditures: $12,386
Staff Hours: 310

- **Continue billing based on volume of use.**
- **Continue tiered pricing program.**

5.B.5a. Line Ditches and Canals, or Use Pipes

- Exempt.
- The canals and ditches in the District are owned by landowners, and not the District.

5.B.5b. Construct or Line Regulatory Reservoirs

- Exempt.
- The District does not own any reservoirs. The District uses flood control channels or natural streams to dam and divert their water from, which stipulate that dams should be removed each year.

5.B.6 Increase Flexibility in Water ordering by, and Delivery to, Water Users

Completed in 2007
Expenditures: $7,100
Staff Hours: 400

- Continued the 16-24 hour notice (orders due by 2PM) of water order requests from farmers. In order to maintain the farmer's flexibility and efficiency with their irrigations, and to minimize tail-water losses, the District did not increase its notice period. Water tenders are trained to assist farmers with unanticipated shut-off orders and to communicate with with the District office to determine if the water can be transferred from one farmer to another.

- The District continued to review opportunities to increase the flexibility of operations. The check structures and water supplies were managed to provide efficient delivery and minimize operational spills.

Planned for 2009
Expenditures $7,800
Staff Hours: 400

- **Maintain District policy of 16-24 hour notices for water orders.**
- **Continue to manage water supplies to provide efficient delivery, and continue to review ways to increase flexibility or increase water supply.**

5.B.7 Construct and Operate District Spill and Tailwater Recovery Systems

The District lands are a component of an area-wide tail-water recovery system, as the District is dependent upon drainage flows from Solano Irrigation District for the majority of its water supplies. The District recovers flows from the Dixon RCD drain as well. In addition, Reclamation District 2068 recovers drainage from both MPWD and Dixon RCD for further re-use.

5.B.8 Optimize Conjunctive Use of Surface and Ground Water.

Completed in 2007
Expenditures: $0
Staff Hours: 0

- The District maintained its Conjunctive Use Plan to utilize landowner wells to supplement water supplies in case of drought. In 2006 there was no need to utilize landowner wells.

Planned for 2009
Expenditures: $0
Staff Hours: 0

- Continue plan to utilize existing landowner deep wells during drought situations.

5.B.9 Automate Canal Structures

The District conveyance system does not lend itself to automation as the main canal, the Ulatis Flood Control Project Channel, serves as flood control during the winter months. The check structures must be removed before the flood season, and re-installed in the spring.

5.B.10 Facilitate or Promote Water Customer Pump Testing and Evaluation

Completed in 2007
Expenditures: $2,400
Staff Hours: 60

- The Pump Test Evaluator performed (11) landowner pump tests. Pump data distributed to both landowners and the District, to enable the District to monitor pump performance and flow output.
- The AWCC participated in the Agricultural Pump Efficiency Program, which provided incentives for pump testing and repairs.

Planned for 2009
Expenditures: $2,640
Staff Hours: 50

- **The AWCC will continue to offer free pump tests to landowners in Solano County.**
- **Continue to participate in the Agricultural Pump Efficiency Program.**

APPENDIX K

Resolution 2010 - 03

RESOLUTION 2010-03
ADOPTION OF A WATER CONSERVATION PLAN FOR
MAINE PRAIRIE WATER DISTRICT

WHEREAS, Section No. 3405 (e) of the Central Valley Project Improvement Act of 1992 (Title XXXIV, Public Law 102-575, 106 Stat. 4713) requires the Secretary of the Interior to establish an office to develop criteria for evaluating water conservation plans developed by CVP contractors, and to evaluate the adequacy of plans submitted by project contractors by May 1, 1997; and

WHEREAS, Section 210 of the Reclamation Reform Act of 1982 (Public Law 97-293; 43 U.S. s390jj) requires districts with repayment or water supply contracts to develop and maintain water conservation plans containing definite goals, appropriate water conservation measures, and time schedules for meeting conservation objectives; and

WHEREAS, Maine Prairie Water District has such a water supply contract and has therefore prepared a 5-Year Water Management Plan Revision.

NOW THEREFORE, BE IT RESOLVED, that the 5-Year Water Management Plan Revision be adopted by Maine Prairie Water District.

PASSED AND ADOPTED THIS 16TH day of February, 2010, by the following vote:

AYES: M. RAYN, G. ROBBEN, L. ROBBEN, M. TRIPLETT, W. HOLDENER

NOES: NONE

ABSTAIN: NONE

ABSENT: NONE

APPROVED:

William Holdener

William Holdener, Secretary Treasurer of the Board

ATTEST:

Meda Benefield

Meda Benefield, Assistant Secretary Treasurer to
The Board of Directors

APPENDIX L

Sacramento Valley Water Quality Coalition
Water Quality Test Sample

SVWQC EVENT SUMMARY REPORT: SolanoYolo Subwatershed

Ulatis Creek at Brown Road

Date	Category	Analyte	Fraction	Units	Result[1]	Water Quality Limit	Exceedance Status[2]	LimitSource
09/15/2008								
	Physical	Hardness	Total	mg/L	280	NA	NO	NA
	Physical	Conductivity	NA	uS/cm	885	700	Advisory	Ayers and Westcott
	Physical	Discharge	NA	CFS	25.06	NA	NO	NA
	Physical	DO	NA	mg/L	5.74	5 (WARM); 7 (COLD)	NO	Basin Plan
	Physical	PH	NA	-log[H+]	7.76	6.5-8.5	NO	Basin Plan
	Physical	Temperature	NA	Celsius	18.8	narrative	NO	Basin Plan
	Physical	Total Dissolved Solids	Dissolved	mg/L	520	450	Advisory	Ayers and Westcott
	Physical	Total Suspended Solids	Total	mg/L	ND -2	narrative	NO	Basin Plan
	Physical	Turbidity	Total	NTU	3.4	narrative	NO	Basin Plan
	Physical	Total Organic Carbon	Total	mg/L	9.7	NA	NO	NA
	Microbiological	E. Coli	Total	MPN/100m	26	235	NO	Basin Plan Amendment
	Trace Metals	Arsenic	Total	ug/L	3	10	NO	CA 1° MCL
	Trace Metals	Boron	Total	ug/L	300	700	NO	Ayers and Westcott
	Trace Metals	Cadmium	Total	ug/L	ND -.06	(as dissolved)	NO	CTR
	Trace Metals	Copper	Total	ug/L	4	(as dissolved)	NO	CTR
	Trace Metals	Lead	Total	ug/L	DNQ .2	(as dissolved)	NO	CTR
	Trace Metals	Nickel	Total	ug/L	6	(as dissolved)	NO	CTR
	Trace Metals	Selenium	Total	ug/L	DNQ .75	5	NO	CTR
	Trace Metals	Zinc	Total	ug/L	9	(as dissolved)	NO	CA 2° MCL
	Trace Metals	Arsenic	Dissolved	ug/L	2.8	(10 as total)	NO	CTR
	Trace Metals	Boron	Dissolved	ug/L	290	(700 as total)	NO	Ayers and Westcott
	Trace Metals	Cadmium	Dissolved	ug/L	ND -.06	hardness dependent	NO	Basin Plan
	Trace Metals	Copper	Dissolved	ug/L	3.2	hardness dependent	NO	CTR
	Trace Metals	Lead	Dissolved	ug/L	DNQ .05	hardness dependent	NO	CTR
	Trace Metals	Nickel	Dissolved	ug/L	4.9	hardness dependent	NO	CTR
	Trace Metals	Selenium	Dissolved	ug/L	DNQ .96	(5 as total)	NO	CTR
	Trace Metals	Zinc	Dissolved	ug/L	7	hardness dependent	NO	CTR
	Nutrients	Nitrate as N	Total	mg/L	2.3	10	NO	CA 1° MCL
	Nutrients	Ammonia, Total as N	Total	mg/L	.27	narrative	NO	Basin Plan
	Nutrients	Total Kjeldahl Nitrogen	Total	mg/L	1.4	NA	NO	NA
	Nutrients	Nitrite as N	Total	mg/L	.14	1	NO	CA 1° MCL
	Nutrients	Phosphorus as P, Total	Total	mg/L	.59	NA	NO	NA
	Nutrients	Orthophosphate, as P	Dissolved	mg/L	.46	NA	NO	NA
	Pesticide	Glyphosate	Total	ug/L	ND -4	700	NO	CA 1° MCL
	Pesticide	Paraquat	Total	ug/L	ND -.21	3.2	NO	
	Pesticide	Aldrin	Total	ug/L	ND -.001	.00013	NO	CTR
	Pesticide	Ametryn	Total	ug/L	ND -.005		NO	

SVWQC EVENT SUMMARY REPORT: SolanoYolo Subwatershed

Pesticide	Atraton	Total	ug/L	ND -.005	NA	NO	NA
Pesticide	Atrazine	Total	ug/L	ND -.005	1	NO	CA 1° MCL
Pesticide	Azinphos methyl	Total	ug/L	ND -.01	.01	NO	USEPA NRC
Pesticide	Chlordane, cis	Total	ug/L	ND -.001	.00057	NO	
Pesticide	Chlordane, trans	Total	ug/L	ND -.001	.00057	NO	
Pesticide	Chlorpyrifos	Total	ug/L	ND -.001	.015	NO	Basin Plan Amendment
Pesticide	Cyanazine	Total	ug/L	ND -.005	1	NO	
Pesticide	Dacthal	Total	ug/L	ND -.005		NO	
Pesticide	DDD(o,p')	Total	ug/L	ND -.001	.00083	NO	CTR
Pesticide	DDD(p,p')	Total	ug/L	ND -.001	.00083	NO	CTR
Pesticide	DDE(o,p')	Total	ug/L	ND -.001	.00059	NO	CTR
Pesticide	DDE(p,p')	Total	ug/L	ND -.001	.00059	NO	CTR
Pesticide	DDT(o,p')	Total	ug/L	ND -.001	.00059	NO	CTR
Pesticide	DDT(p,p')	Total	ug/L	ND -.001	.00059	NO	CTR
Pesticide	Demeton-s	Total	ug/L	ND -.001		NO	
Pesticide	Diazinon	Total	ug/L	ND -.002	0.1	NO	Basin Plan Amendment
Pesticide	Dichlorvos	Total	ug/L	ND -.003	0.085	NO	
Pesticide	Dicofol	Total	ug/L	ND -.05		NO	
Pesticide	Dieldrin	Total	ug/L	ND -.001	.00014	NO	CTR
Pesticide	Dimethoate	Total	ug/L	ND -.003	1.0	NO	CDPH
Pesticide	Disulfoton	Total	ug/L	ND -.001	.05	NO	
Pesticide	Endosulfan I	Total	ug/L	ND -.001	110	NO	
Pesticide	Endosulfan II	Total	ug/L	ND -.001	110	NO	
Pesticide	Endosulfan sulfate	Total	ug/L	ND -.001		NO	
Pesticide	Endrin	Total	ug/L	ND -.001	.036	NO	CTR
Pesticide	Endrin Aldehyde	Total	ug/L	ND -.001		NO	
Pesticide	Endrin Ketone	Total	ug/L	ND -.001	NA	NO	NA
Pesticide	Ethoprop	Total	ug/L	ND -.001		NO	
Pesticide	Fenchlorphos	Total	ug/L	ND -.002		NO	
Pesticide	Fenitrothion	Total	ug/L	ND -.01	NA	NO	NA
Pesticide	Fensulfothion	Total	ug/L	ND -.001		NO	
Pesticide	Fenthion	Total	ug/L	ND -.002		NO	
Pesticide	HCH, alpha	Total	ug/L	ND -.001	.0039	NO	
Pesticide	HCH, beta	Total	ug/L	ND -.001	.0039	NO	
Pesticide	HCH, delta	Total	ug/L	ND -.001	.0039	NO	
Pesticide	HCH, gamma	Total	ug/L	ND -.001	.0039	NO	
Pesticide	Heptachlor	Total	ug/L	ND -.001	.00021	NO	
Pesticide	Heptachlor epoxide	Total	ug/L	ND -.001	.0001	NO	
Pesticide	Malathion	Total	ug/L	ND -.003	.1	NO	Basin Plan
Pesticide	Merphos	Total	ug/L	ND -.001		NO	
Pesticide	Methamidophos	Total	ug/L	ND -.05	NA	NO	NA

Pesticide	Methidathion	Total	ug/L	ND -.01	0.7	NO	
Pesticide	Methoxychlor	Total	ug/L	ND -.001	30	NO	
Pesticide	Mevinphos	Total	ug/L	ND -.008		NO	
Pesticide	Mirex	Total	ug/L	ND -.001		NO	
Pesticide	Nonachlor, cis	Total	ug/L	ND -.001		NO	
Pesticide	Nonachlor, trans	Total	ug/L	ND -.001		NO	
Pesticide	Oxychlordane	Total	ug/L	ND -.001		NO	
Pesticide	Parathion, Ethyl	Total	ug/L	ND -.01		NO	
Pesticide	Parathion, Methyl	Total	ug/L	ND -.001	.13	NO	Basin Plan
Pesticide	Perthane	Total	ug/L	ND -.005		NO	
Pesticide	Phorate	Total	ug/L	ND -.006	0.7	NO	
Pesticide	Phosmet	Total	ug/L	ND -.05	140	NO	
Pesticide	Prometon	Total	ug/L	ND -.005	NA	NO	NA
Pesticide	Prometryn	Total	ug/L	ND -.005		NO	
Pesticide	Propazine	Total	ug/L	ND -.005		NO	
Pesticide	Secbumeton	Total	ug/L	ND -.005		NO	
Pesticide	Simazine	Total	ug/L	.0114	4	NO	CA 1° MCL
Pesticide	Simetryn	Total	ug/L	ND -.005		NO	
Pesticide	Sulprofos	Total	ug/L	ND -.002	NA	NO	NA
Pesticide	Terbuthylazine	Total	ug/L	ND -.005		NO	
Pesticide	Terbutryn	Total	ug/L	ND -.005		NO	
Pesticide	Tetrachlorvinphos	Total	ug/L	ND -.002		NO	
Pesticide	Tokuthion	Total	ug/L	ND -.003		NO	
Pesticide	Trichloronate	Total	ug/L	ND -.001		NO	
Pesticide	Aldicarb	Total	ug/L	ND -.2	3	NO	USEPA 1° MCL
Pesticide	Aminocarb	Total	ug/L	ND -.2		NO	
Pesticide	Barban	Total	ug/L	ND -1.75		NO	
Pesticide	Benomyl/Carbendazim	Total	ug/L	ND -.2	NA	NO	NA
Pesticide	Bromacil	Total	ug/L	ND -.2	NA	NO	NA
Pesticide	Carbaryl	Total	ug/L	ND -.05	2.53	NO	
Pesticide	Carbofuran	Total	ug/L	ND -.05	0.4	NO	Basin Plan
Pesticide	Chloroxuron	Total	ug/L	ND -.2	NA	NO	NA
Pesticide	Chlorpropham	Total	ug/L	ND -.4		NO	
Pesticide	Diuron	Total	ug/L	ND -.2	NA	NO	NA
Pesticide	Fenuron	Total	ug/L	ND -.2		NO	
Pesticide	Fluometuron	Total	ug/L	ND -.2		NO	
Pesticide	Linuron	Total	ug/L	ND -.2	1.4	NO	
Pesticide	Methiocarb	Total	ug/L	ND -.2	3	NO	
Pesticide	Methomyl	Total	ug/L	ND -.05	NA	NO	NA
Pesticide	Mexacarbate	Total	ug/L	ND -.4		NO	
Pesticide	Monuron	Total	ug/L	ND -.2		NO	

Pesticide	Neburon	Total	ug/L	ND -.2		NO	
Pesticide	Oryzalin	Total	ug/L	ND -.2	NA	NO	NA
Pesticide	Oxamyl	Total	ug/L	ND -.2	50	NO	CA 1° MCL
Pesticide	Propachlor	Total	ug/L	ND -.2		NO	
Pesticide	Propham	Total	ug/L	ND -.4		NO	
Pesticide	Propoxur	Total	ug/L	ND -.2		NO	
Pesticide	Siduron	Total	ug/L	ND -.2		NO	
Pesticide	Tebuthiuron	Total	ug/L	ND -.2	NA	NO	NA

SVWQC EVENT SUMMARY REPORT: SolanoYolo Subwatershed

Data Table Notes:
(1) *R* indicates measurement was *Rejected* based on QA results; *NM* indicates *Not Measured* due to access or flow conditions;
J indicates measurement is below the limit of quantitation; *EST* indicates result is qualified as *estimated* based on QA data

(2) **Exceedance Status**: *OBJECTIVE* indicates an exceedance of an adopted Basin Plan Objective or California Toxics Rule criterion;
ADVISORY indicates an exceedance of an unadopted limit used by the Regional Board to interpret narrative objectives;
None indicates there is no exceedance or No applicable limit for this analyte;
Note: Under the Irrigated Lands Conditional Waiver, follow-up actions or monitoring can be triggered by exceedance of adopted or unadopted objectives.