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March 6, 2017

Agricultural Water Use Efficiency
Department of Water Resources
Statewide Integrated Water Management
Water Use and Efficiency Branch
P.O. Box 942836
Sacramento, CA 94236-0001

Subject: Maine Prairie Water District
2015 Agricultural Water Management Plan

To Whom It May Concern:

The Maine Prairie Water District (Maine Prairie) has complied with the requirements of the April 1, 2015 Governor's Executive Order B-29-15 and SBx7-7, Water Code Section 10826 by completing and submitting a hard copy and an electronic copy of the following documents:

- Maine Prairie Resolution 2017-03
- Maine Prairie 5-Year Water Management Plan Revision, February 2010
- U.S. Bureau of Reclamation approved 2011-2014 Annual Updates to Maine Prairie's Water Management Plan
- Maine Prairie Drought Management Plan
- Maine Prairie Water Measurement Program
- 2013-2015 Maine Prairie Water Balances

Maine Prairie has also notified the applicable parties. We would appreciate receiving your letter of acceptance for compliance with the Agricultural Water Management Plan at your earliest convenience.

Please contact either Gary Kienlen or me if you have any questions.

Sincerely,
MBK ENGINEERS

Anne Kwedar

Anne Marie Kwedar, P.E.

AK/jp
R:/3425/MAINE PRAIRIE AG WATER USE EFFICIENTY AWMP 2017-03-06

Enclosures

cc: Meda Benefield
The California State Library
Solano County Water Agency
Solano Local Agency Formation Commission
Rebecca Smith, Downey Brand

Maine Prairie Water District

2015 Agricultural Water Management Plan

MAINE PRAIRIE WATER DISTRICT
P.O. Box 73
Dixon, Ca 95620

February 2017

Prepared by

MBK ENGINEERS

455 University Avenue, Suite 100
Sacramento, CA 95825

Maine Prairie Water District
2015 Agricultural Water Management Plan

Tab No.	Document Title
I.	*Resolution 2017-03 and Notice of Public Hearing*
II.	*Maine Prairie 5-Year Water Management Plan Revision February 2010; and Errata to 5-Year Water Management Plan Revision*
III.	*U.S. Bureau of Reclamation Approved 2011-2014 Annual Updates to Maine Prairie's Water Management Plan*
IV.	*Maine Prairie Drought Management Plan*
V.	*Maine Prairie Water Measurement Program*
VI.	*2013-2015 Maine Prairie Water Balances*

Maine Prairie Water District
2015 Agricultural Water Management Plan

Resolution 2017-03

Notice of Public Hearing

ADOPTION OF THE AGRICULTURAL
WATER MANAGEMENT PLAN

RESOLUTION 2017-03

WHEREAS, the California Legislature enacted SB X7-7, the Conservation Act of 2009 (Water Code Section 10820 et seq.), part 2.8 of which is known as the Agricultural Water Management Planning Act and which mandates that every agricultural water supplier providing water for more than 25,000 irrigated acres prepare an Agricultural Water Management Plan (the "Plan"); and

WHEREAS, for those agricultural water suppliers with at least 10,000 but less than 25,000 irrigated acres, such as the Maine Prairie Water District (the "District"), a Plan is require4d only if sufficient funding has been provided specifically for that purpose (CCR subsection 597.1 (e); and

WHEREAS, Governor Edmund G. Brown, by Executive Order B-37-16 dated May 9, 2016, directed the California Department of Water Resources (the "Department") to require a Plan for all water suppliers with over 10,000 irrigated acres of land; and

WHEREAS, the District supplies water to more than 10,000 but less than 25,000 irrigated acres; and

WHEREAS, California Water Code sections 10841 and 10843 require the Plan be adopted after public review and hearing, and filed with the Department within 30 days of adoption; and

WHEREAS, the District properly notices a public hearing regarding its Plan and the public hearing was held by the District's Board of Directors on February 21, 2017; and

WHEREAS, the District did prepare and shall file its Plan with the Department by March 23, 2017.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the District that:

(1) The District's Plan is hereby adopted and ordered filed with the District;
(2) District Staff is hereby authorized and directed to file the District's Plan with the Department within 30 days after this date;
(3) The General Manager is hereby authorized and directed to implement the District's Plan which includes elements of water use efficiency;

PASSED AND ADOPTED by the Board of Directors of the District at a meeting duly called and held within the District on the 21st day of February, 2017 by the following vote:

AYES: GENE ROBBEN; LEON ROBBEN; SEAN FAVERO
NOES: NONE
ABSTAIN: NONE
ABSENT: MORT TRIPLETT; RYAN MAHONEY

Harold E Robben

HAROLD E. ROBBEN, President of the Board of Directors

Certification

I, **Meda Benefield**, hereby certify that I am and al all times mentions herein was duly elected, qualified and acting Assistant Secretary Treasurer of Maine Prairie Water District, organized and existing under and by virtue of the laws of the State of California, that the foregoing is a full, true and correct copy of a Resolution duly and regularly adopted at a meeting of the Board of Directors of said District duly held on February 21, 2017, a majority and quorum of the members of said Board of Directors being present and voting in favor of said Resolution; and that said Resolution has not been modified, rescinded, altered or amended and is now in full force and effect.

Meda Benefield

Assistant Secretary Treasurer to the
Board of Directors

Notice of Public Hearing

PUBLIC NOTICE

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the Maine Prairie Water District (the "District") will hold a public hearing on February 21, 2017 commencing at 2:00 pm at the District's office at 6595 Pitt School Rd, Dixon, California 95620, to determine whether the District will adopt an Agricultural Water Management Plan (the "Plan").

The District is required to adopt an Agricultural Water Management Plan pursuant to Senate Bill x7-7 (SBx7-7), also known as the Water Conservation Act of 2009, which modifies Division 6 of the California Water Code, adding Part 2.55 (commencing with Sec. 10800) and Governor Edmund G. Brown's Executive Order B-37-16 dated May 9, 2016, which directed the California Department of Water Resources (the "Department") to require an Agricultural Water Management Plan for all water suppliers with over 10,000 irrigated acres of land.

Copies of the Plan are available for review at the District office, located at 6595 Pitt School Rd, Dixon, California, 95620, during regular business hours of 9:00 a.m. to 12:00 p.m. and from 1:00 p.m. to 3:30 p.m. Monday through Friday. Written comments should be submitted to the District to the attention of Don Holdener, General Manager, by 3:30 p.m. on February 20, 2017. Please contact Don Holdener at the above address or at (707) 678-5332 with questions or comments.

fb12,19

Maine Prairie Water District
2015 Agricultural Water Management Plan

5-Year Water Management Plan Revision,

February 2010

MAINE PRAIRIE WATER DISTRICT

5-YEAR WATER MANAGEMENT PLAN REVISION

FEBRUARY 2010

MAINE PRAIRIE WATER DISTRICT

5-YEAR WATER MANAGEMENT PLAN REVISION

FEBRUARY 2010

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D. Water Rates
E. Typical Water Bill
F. City of Vacaville Easterly Wastewater Treatment Plant
    1. Treated Effluent Flow
    2. Water Quality
G. The Irrigator
H. Daily Solano County Weather Forecast
I. Groundwater Management Plan
J. 2007 Water Management Plan Annual Update
K. Resolution 2010-03
L. Water Quality Report, Sacramento Valley Water Quality Coalition

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.

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

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

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

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.

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

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.

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 with weir stick	95%	5%	317
Norton Weir	Haas Slough	117,017	Open Channel with weir stick	95%	80%	7437
Dam 3	Maine Prairie Road	22,817	Open Channel with weir stick	95%	15%	3053
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

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

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

*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

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

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

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.

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 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.1. 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.

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 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 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 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

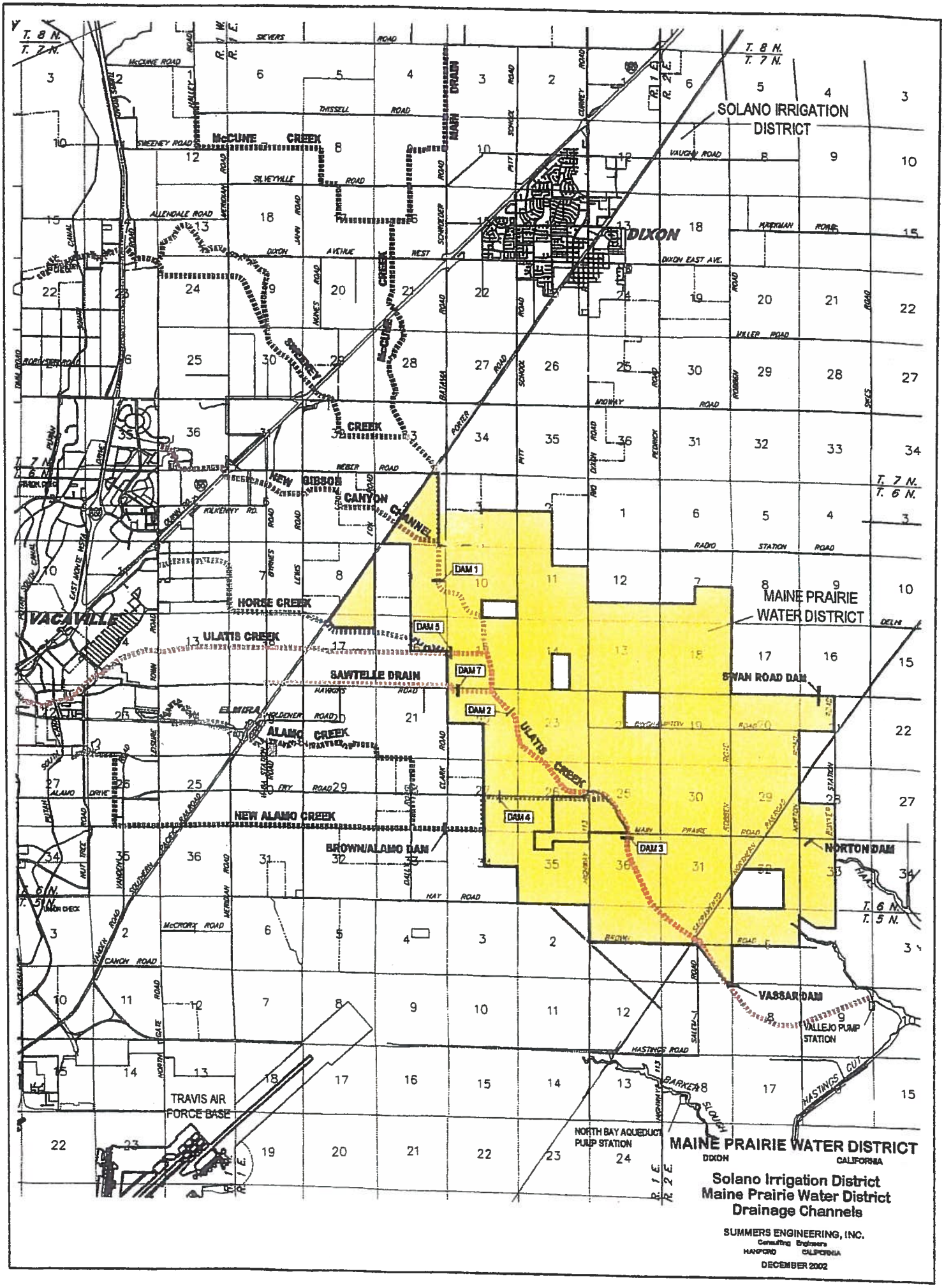
Table 8

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.

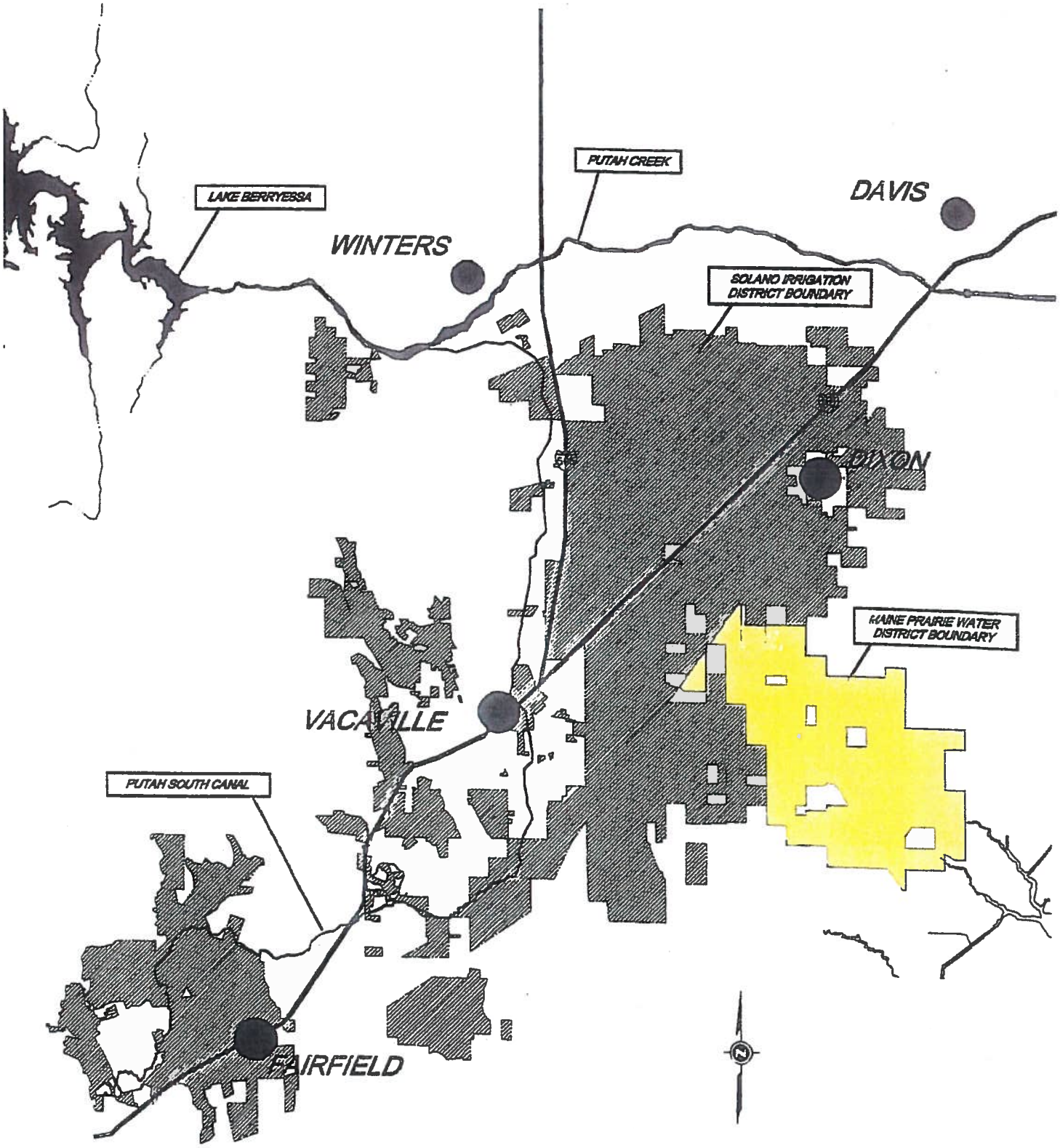
** Additional acre-feet purchased from Solano Irrigation District for agricultural irrigation



Solano Irrigation District
Maine Prairie Water District
Drainage Channels

SUMMERS ENGINEERING, INC.
Consulting Engineers
HANFORD CALIFORNIA

DECEMBER 2002



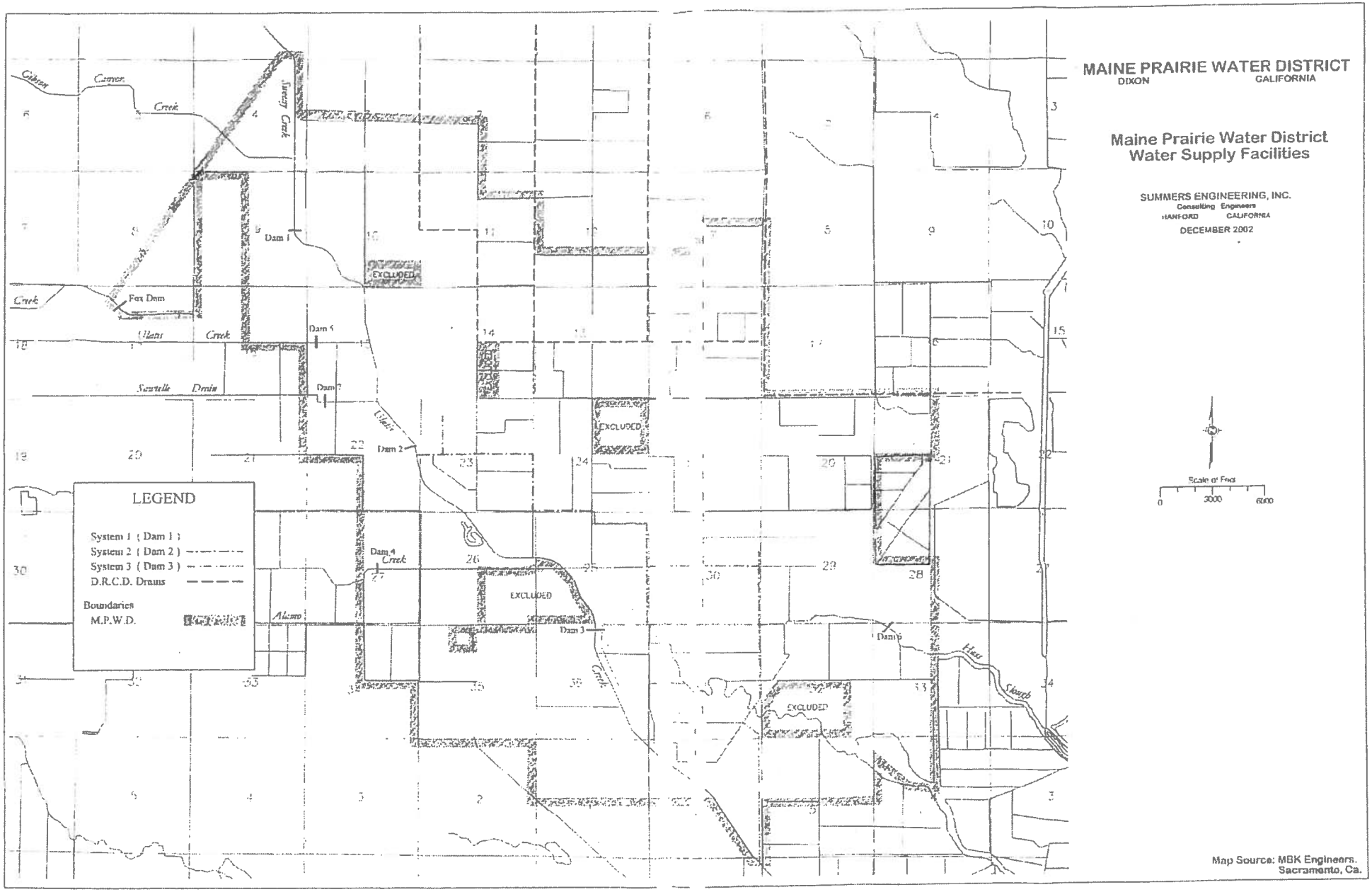
MAINE PRAIRIE WATER DISTRICT

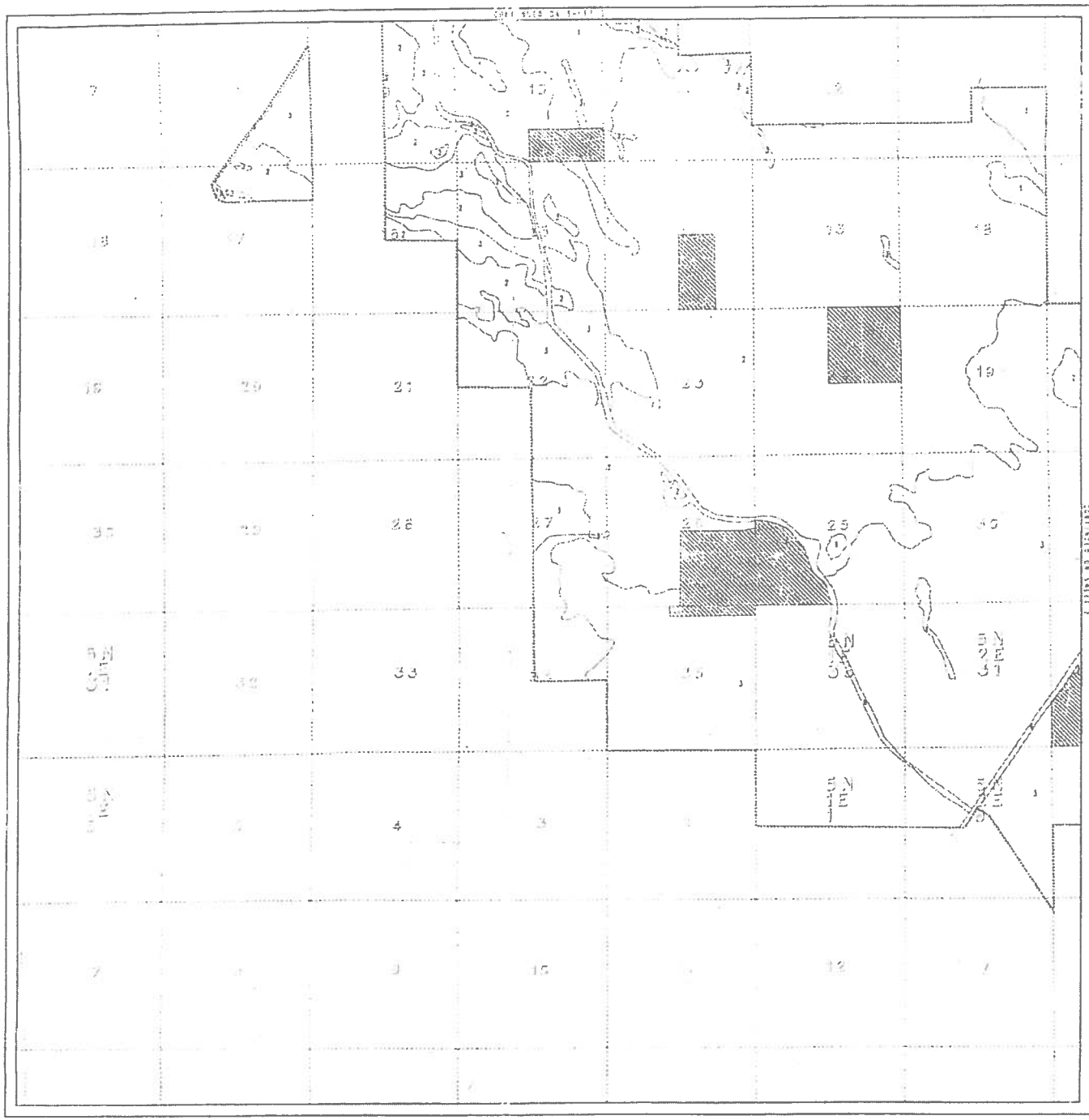
DIXON CALIFORNIA

LOCATION MAP

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
LEGEND
System 1 (Dam 1)
System 2 (Dam 2)
System 3 (Dam 3)
D.R.C.D. Drains
Boundaries
M.P.W.D.
Dam 1
Dam 2
Dam 3
Dam 4
Dam 5
Dam 6
Dam 7
Fox Dam
EXCLUDED
Scale of Feet
0
3000
6000
Map Source: MBK Engineers.
Sacramento, Ca.



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

ACREAGE TOTALS

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

SCALE 1" : 24000'

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

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
Es	Egbert silty clay loam, occasionally flooded
GcG2	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

SYMBOL	NAME
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
Ya	Yolo loam
Yc	Yolo loam, clay substratum
Ys	Yolo silty clay loam

SOIL CONSERVATION SURVEY
SOIL LEGEND

SUMMERS ENGINEERING INC.
Consulting Engineers
HANFORD CALIFORNIA

DECEMBER 2002

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

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

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

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

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

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	3.8	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	5.8	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

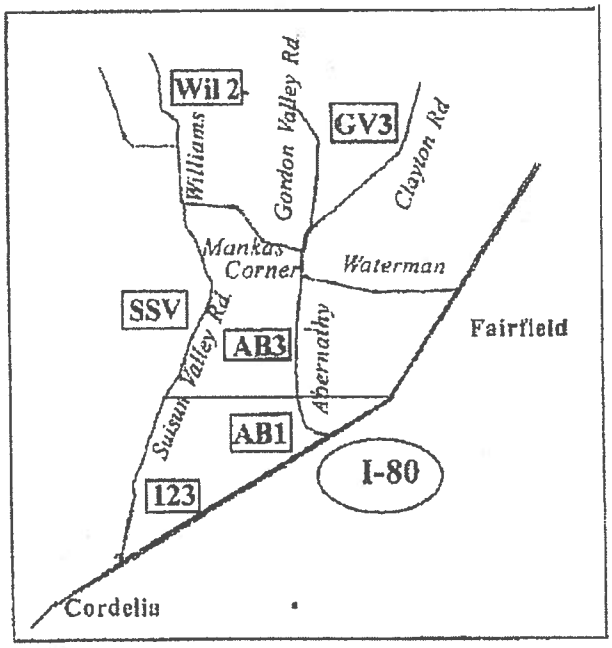
Note: Shaded cells in this report are values reported on EPA DMR Form 3320-1 for most recent calendar month
These cells are shaded to reduce transcription errors

APPENDIX G

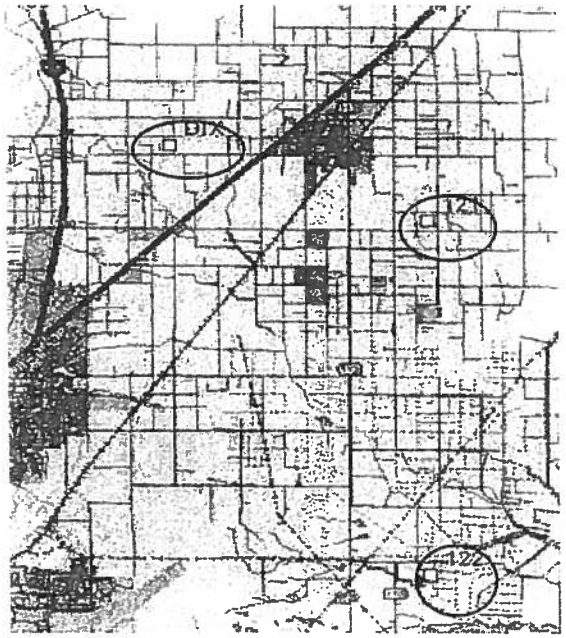
The Irrigator

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

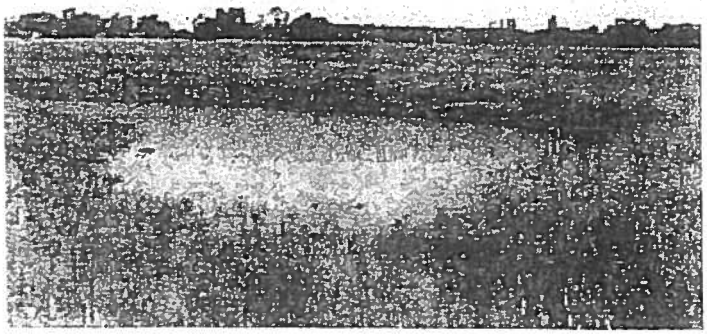
Last Call for 2008 Irrigation Evaluations

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

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.

Solano County Forecast

Western Weather Group
www.westernwx.com/sid
phone: 530-342-1700
email: forecaster@westernwx.com
by Forecaster Tom Cushman

Wednesday October 1, 2008 issued 5:30am

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	--	--

APPENDIX I

Groundwater Management Plan

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

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.

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

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

- **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

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

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

APPENDIX K

Resolution 2010 - 03

APPENDIX L

Sacramento Valley Water Quality Coalition
Water Quality Test Sample

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	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

Maine Prairie Water District
2015 Agricultural Water Management Plan

Errata to

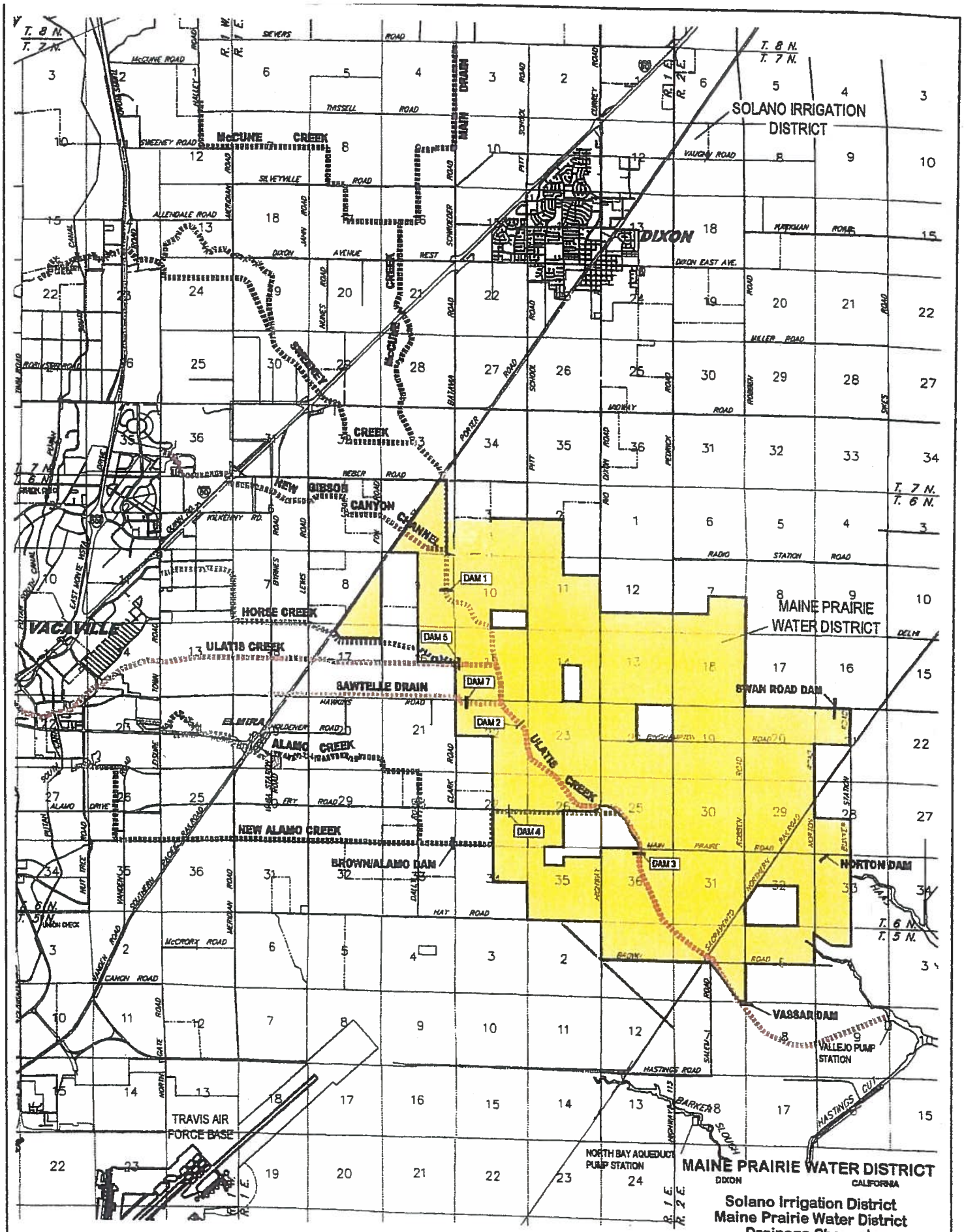
5-Year Water Management Plan Revision,

February 2010

Maine Prairie Water District

Errata to Maine Prairie Water District 5-Year Water Management Plan Revision, February 2010

Page	Line	Change
14	10	Delete "iss" and replace with "is"
14	17	Update total # of customers from "38" to "31" for 2015
14	17	Update total # of 100% measured customers from "38" to "31" for 2015
14	15	Update total # of customer turnouts from "100" to "110" for 2015
14	15	Update total # of 100% measured turnouts from "100" to "110" for 2015
24	21	Update e-mail from "mpwd@cal.net" to "mpwd@cwns.net"
26	3	Delete "also collects"
30	22	Delete "Dam #1" and replace with "Dam #3"
33	16	Delete "to"
Appendix A	T6NR1E	Delete portions of Maine Prairie Water District shaded area within Sections 25, 26, and 35 within map of Solano Irrigation District Maine Prairie Water District Drainage Channels and replace with attached map



Solano Irrigation District
Maine Prairie Water District
Drainage Channels

SUMMERS ENGINEERING, INC.
Consulting Engineers
HANFORD CALIFORNIA
DECEMBER 2002

Revised by
MBK Engineers
January 2017

Maine Prairie Water District
2015 Agricultural Water Management Plan

U.S. Bureau of Reclamation Approved
2011-2014 Annual Updates to
Maine Prairie's Water Management Plan

USBR Reporting Tool

Logged in successfully

Listing Annual Updates

Filters

Company Name:
Report Name:
Year:
Status:

Start Date:
End Date:

FILTER CLEAR

District Name	Company	For Year	Start Date	End Date	Status	Area Office	Submitted To Area	Area Approval	Submitted Regional	Regional Approval
Maine Prairie Water District	Maine Prairie Water District	2010	01/01/2010	12/31/2010	Started	CCAO				
Maine Prairie Water District	Maine Prairie Water District	2010	01/01/2010	12/31/2010	Approved	CCAO	04/28/2011	05/13/2011	05/13/2011	05/25/2011
Maine Prairie Water District	Maine Prairie Water District	2011	01/01/2011	12/31/2011	Completed	CCAO				
Maine Prairie Water District	Maine Prairie Water District	2012	01/01/2012	12/31/2012	Approved	CCAO	04/17/2014	07/09/2014	07/09/2014	05/01/2015
Maine Prairie Water District	Maine Prairie Water District	2013	01/01/2013	12/31/2013	Approved	CCAO	04/17/2014	07/09/2014	07/09/2014	08/18/2014
Maine Prairie Water District	Maine Prairie Water District	2014	01/01/2014	12/31/2015	Approved	CCAO	10/23/2015	11/03/2015	11/03/2015	12/08/2015

New annual update

Agricultural Water Management CouncilLoading

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Title: Water Conservation Coordinator
Address: P.O. Box 73 Dixon, CA 95620
Phone: (707) 678-5332
Fax: (707) 678-0834
Cell Phone: _
2011 Expenditures: 1915
2011 Staff Hours: 80

Summary of Year 2012 Projected Actions

2012 Projected Expenditures: 1972
2012 Projected Staff Hours: 80

A3A: Water Management Service: On-Farm Evaluations

Summary of Actions Year 2011

Number of acres surveyed: 200
Comments: On-farm surveys include mobile lab services,evaluations,irrigation scheduling, and soil moisture monitoring. MPWD participates in a collaborative county-wide program as part of the Solano Ag water Conservation Committee (AWCC).

Actual Benefits Year 2011

Identified efficiency losses: Yes
Reduced tailwater: Yes
Number of acre-feet reduced by: 70
Other: A summer intern was hired to asist with irrigation evaluations and soil moisture monitoring.
2011 Expenditures: 2250
2011 Staff Hours: 75

Summary of Year 2012 Projected Actions

Number of acres to be surveyed: 350
Comments: _

Anticipated Year 2012 Benefits

Identify efficiency improvements: Yes
Reduced tailwater: Yes
Number of acre-feet reduced by: 150
2012 Projected Expenditures: 2813
2012 Projected Staff Hours: 94

A3B: Water Management Services: Real-Time ET Information

Actual Benefits Year 2011

Number of customers provided information: 29
Method of data distribution:
Newspaper: No
Bills: No
Newsletter: Yes

A4: Pricing Structure

Summary of Actions Year 2011

One of the two selections below is required: District currently prices water at least partly by volume.
Steps taken to prepare for conversion: _
Comments: _
2011 Expenditures: 17129
2011 Staff Hours: 310

Summary of Year 2012 Projected Actions

If not already billing in part by volume, enter the year the district plans to convert to billing by volume: 0
Comments: _
2012 Projected Expenditures: 17643
2012 Projected Staff Hours: 310

A5: Policy Evaluation

Summary of Actions Year 2011

List any policy changes or suggestions concerning water conservation/management (internal or external) recommended during the year:
The Board of Directors reviewed MPWD rules, regulations and policy. The board met monthly to address any concerns and comments related to policy.

Actual Benefits Year 2011

List any benefits received as a result of policy changes. Quantify the benefits if possible in terms of volume of water saved or affected, or dollars:
_
2011 Expenditures: 0
2011 Staff Hours: 0

Summary of Year 2012 Projected Actions

List any policies identified for review: _
2012 Projected Expenditures: 0
2012 Projected Staff Hours: 0

A6: Contractor Pump Efficiency

Summary of Actions Year 2011

Number of contractor pumps tested for efficiency during the year: 8
Quantify the benefits, if possible, in terms of volume of water saved or affected, or dollars in energy savings: _
Comments: A summer intern was hired to assist with pump testing. The majority of pumps within the District are owned by landowners.
2011 Expenditures: 2000
2011 Staff Hours: 24

Summary of Year 2012 Projected Actions

Summary of Actions Year 2011

One of the two selections below is required District distributes information on programs offered by others

Listing of programs offered As a member of the AWCC, MPWD published articles regarding financial assistance available from NRCS and RCD's in the Irrigator newsletter, local newspapers, and gave presentations at grower workshops.

Comments _

Actual Benefits Year 2011

Estimate the dollar value of on farm improvements facilitated by the district 0

2011 expenditures on facilitation of farm improvements 0

2011 staff hours on facilitation of farm improvements 0

Summary of Year 2012 Projected Actions

District is expecting to facilitate a funding program Accepted

List program(s) expected to be available _

2012 Projected Expenditures 0

2012 Projected Staff Hours 0

B4: Incentive Pricing

Summary of Actions Year 2011

District has an incentive price program Yes

District is developing an incentive priced program No

Water savings from incentive priced program Yes

Comments The District billed growers based on volumetric pricing, with a tiered pricing program. The board reviews the program annually.

Actual Benefits Year 2011

Describe the objectives/benefits of the incentive pricing program. Quantify where possible the effect of the incentive pricing program in terms of water dollars:

Water conservation was the result of volumetric pricing and the tiered pricing program. Growers avoided unnecessary irrigations or over-irrigating. However, quantifying savings is difficult due to seasonal changes in crop patterns and weather conditions.

2011 Expenditures 17129

2011 Staff Hours 310

Summary of Year 2012 Projected Actions

List any changes expected in the incentive pricing program _

Number of years until district will have an incentive pricing program, if none exists currently (put "unknown" if applicable) 0

2012 Projected Expenditures 17642

2012 Projected Staff Hours 310

B5A: Line or Pipe Ditches and Canals

Summary of Actions Year 2011

District has all ditches lined or piped No

District is investigating in lining or piping canals No

B6: Flexible Water Ordering

Summary of Actions Year 2011

District has an on-demand delivery system* No

District has reached the maximum flexibility currently feasible without major physical improvements to the delivery system* Yes

District is investigating improving delivery flexibility* Yes

Describe any improvements in delivery flexibility completed or under investigation* The District continued to review opportunities to increase the flexibilty of operations. The check structures and water supplies were managed to provide efficient delivery and minimize operational spills.

Actual Benefits Year 2011

Estimate the number of acres benefited by increased flexibility (acres)* 14000

2011 Expenditures* 39061

2011 Staff Hours* 1782

Summary of Year 2012 Projected Actions

One of the three selections below is required* No action taken at this time.

Comments* The District will continue to review opportunities to increase the flexibility of operations.

Anticipated Year 2012 Benefits:

Improved service to customers* Yes

2012 Projected Expenditures* 41842

2012 Projected Staff Hours* 1782

B7: Spill and Tailwater Recovery

Summary of Actions Year 2011

District has spills or tailwater leaving the district* Yes

District is investigating development of a spill/tailwater recovery system* No

District implemented a spill/tailwater recovery program* Yes

Comments* The District recovers flows within its boundaries, and is also part of a county-wide tailwater recovery systm. MPWD is dependent upon drainage flows from Solano Irrigation District for the majority of its water supplies. MPWD also recovers flows from the Dixon RCD drain. In addition, Reclamation District 2068 recovers drainage from both MPWD and Dixon RCD for further re-use.

Calculated Actual Benefits Year 2011:

Acre-feet, estimated water conserved by implementing a spill/tailwater recovery program* 3120

2011 Expenditures* 0

2011 Staff Hours* 0

Summary of Year 2012 Projected Actions

District will investigate implementation of a spill/tailwater recovery program* Yes

District will implement or continue a spill/tailwater recovery system* Yes

Comments* Continue 2011 program.

Anticipated Year 2012 Benefits:

Acre-feet, estimated water conserved from the proposed or continued project* 3120

District implemented an automation project: No

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

Calculated Actual Benefits Year 2011:

Implementation of project reduced spills or increased flexibility: No

Acre-feet, estimated amount of water that would have spilled without the project: 0

Implementation of project improved service to customers: No

Acres, estimated acres provided with improved service: 0

2011 Expenditures: 0

2011 Staff Hours: 0

Summary of Year 2012 Projected Actions

District will investigate automation for distribution system: No

District will implement an automation project: No

Comments: See comment above.

Anticipated Year 2012 Benefits:

Acre-feet, estimate of water spill which could be eliminated by proposed automation project: 0

Acres, estimate of acres provided with improved service by proposed automation project: 0

2012 Projected Expenditures: 0

2012 Projected Staff Hours: 0

B11: Water User Pumping

Summary of Actions Year 2011

District promotes a local utility companies pump testing program: Yes

List method(s) of promotion: Newsletters, field days, and websites

District promotes its own pump testing program for its customers: Yes

List method(s) of promotion: Newsletters, field days, and website

Number of customer pumps tested: 8

2011 Expenditures: 2400

2011 Staff Hours: 24

Summary of Year 2012 Projected Actions

District will promote pump testing program: Yes

Estimated number of customer pumps to be tested: 10

Comments: Continue 2011 program.

2012 Projected Expenditures: 2500

2012 Projected Staff Hours: 30

Facilitate or promote water customer pump testing and evaluation.

File Attachment: No Answer

B12: GIS Mapping

Has the District implemented this BMP?: No

USBR Reporting Tool

Current Date:	10/11/2016
District Name:	Maine Prairie Water District
Company Name:	Maine Prairie Water District
Start Date:	01/01/2012
End Date:	12/31/2012
Current Status:	Approved
Annual Update Year:	2012

A1: Measurement

Summary of Actions 2012

Total number of customers: 31
Total number of customers with measured deliveries: 31
Number of measurement devices installed this year: 0
Number of measurement devices upgraded: 0
Comments: Expenditures were for Operations & Maintenance, including daily water meter reading, and water level adjustments required for reliable delivery to customers.

Calculated Actual Benefits Year 2012

Revenue increased after improved measurement: No
Water savings from improve measurement: No
Est. Ac. Ft. Saved: 0
2012 Expenditures: 40635
2012 Staff Hours: 1780

Summary of Year 2013 Projected Actions

Number of measurement devices planned to install next year: 0
Number of measurement devices planned to be upgraded next year: 0
Comments: _

Anticipated Year 2013 Budget

2013 Projected Expenditures: 41000
2013 Projected Staff Hours: 1780

A2: Conservation Coordinator

Actual Benefits Year 2012

Number of customers provided information: 31
Method of data distribution:
Newspaper: No
Bills: No
Newsletter: Yes
Internet: Yes
Other: ET information is available daily from (2) nearby CIMIS stations and (2) local websites, www.westernwx.com/sid and www.westernweather.com
2012 Expenditures: 1096
2012 Staff Hours: 27

Summary of Year 2013 Projected Actions

List any projected changes _
2013 Projected Expenditures: 1100
2013 Projected Staff Hours: 25

A3C: Water Management Services: Water Quality Data

Summary of Actions Year 2012

Water quality issue: No
Ground water analyzed: No
Surface water analyzed: Yes
Comments: Water quality is monitored in compliance with the Talent Decision and for the Regional Water Quality Control Board compliance. MPWD cooperates with the Dixon Resource Conservation District's efforts to form a local Watershed Working Group to perform testing. Partners include the Solano County Water Agency (SCWA), Reclamation District 2068, and local landowners.

Actual Benefits Year 2012

List any decisions based on analysis of water: See comments above. Expenditures are shared with SCWA, Reclamation District 2068, & Dixon Resource Conservation District.
2012 Expenditures: 9349
2012 Staff Hours: 6

Summary of Year 2013 Projected Actions

List any changes planned concerning water analysis: Continue 2012 program
2013 Projected Expenditures: 9450
2013 Projected Staff Hours: 6

A3D: Water Management: Educational Programs

Summary of Actions Year 2012

List educational programs the district supported or participated in:

A6: Contractor Pump Efficiency

Summary of Actions Year 2012

Number of contractor pumps tested for efficiency during the year: 2
Quantify the benefits, if possible, in terms of volume of water saved or affected, or dollars in energy savings: _
Comments: The majority of pumps within the District are owned by landowners.
2012 Expenditures: 180.54
2012 Staff Hours: 3

Summary of Year 2013 Projected Actions

Number of pumps expected to be tested: 4
Comments: _
2013 Projected Expenditures: $350
2013 Projected Staff Hours: 12

B1: Facilitate Alternative Land Use

Summary of Actions Year 2012

One of the two selections below is required District has no land identified for alternative land use (dryland conversions, retirement from agriculture, or conversion to wildlife/non-irrigated or other).
The district in cooperation with the land owners have converted the following number of acres this year. 0
The district in cooperation with landowers have converted the following number of acres total this year and all past years. 0
Comments: _
2012 Expenditures: 0
2012 Staff Hours: 0

Summary of Year 2013 Projected Actions

Areas expected to be converted: 0
Comments: _
2013 Projected Expenditures: 0
2013 Projected Staff Hours: 0

B2: Use of Recycled Water

Summary of Actions Year 2012

One of the four selections below is required District is receiving recycled water.
Number of acre-feet of recycled water received (put 0 if not applicable): 0
Number of years until projected project start: _
Comments: Recycled water is from the Vacaville Easterly Wastewater Treatment Plant, which is commingled and not possible to measure. The recycled water is not a reliable water source.

Actual Benefits Year 2012

Water conservation was the result of volumetric pricing and the tiered pricing program. Growers avoided unnecessary irrigations or over-irrigating. However, quantifying savings is difficult due to seasonal changes in crop patterns and weather conditions.

2012 Expenditures: 17301

2012 Staff Hours: 313

Summary of Year 2013 Projected Actions

List any changes expected in the incentive pricing program: _

Number of years until district will have an incentive pricing program, if none exists currently (put "unknown" if applicable): 0

2013 Projected Expenditures: 17700

2013 Projected Staff Hours: 322

B5A: Line or Pipe Ditches and Canals

Summary of Actions Year 2012

District has all ditches lined or piped: No

District is investigating in lining or piping canals: No

Miles of pipeline installed this year: 0

Miles of canal lined this year: 0

Comments: The canal and ditches are owned by the canals and not the District. The conveyances are un-lined and un-piped. If operational limitations occur, there may be consideration to allow owners to line or pipe sections of canals or ditches. However, the distribution system serves a flood purpose in the winter.

Calculated Actual Benefits Year 2012:

Acre-feet, estimated water saved from lining or piping canal: 0

2012 Expenditures: 0

2012 Staff Hours: 0

Summary of Year 2013 Projected Actions

Proposed miles of canal to be piped or lined: 0

Comments: _

Anticipated Year 2013 Benefits:

Acre-feet of water savings from proposed projects: 0

2013 Projected Expenditures: 0

2013 Projected Staff Hours: 0

B5B: Regulatory Reservoirs

Summary of Actions Year 2012

District has regulatory reservoirs: No

District is investigating regulatory reservoirs: No

District plans to add regulatory reservoirs: No

2013 Projected Staff Hours: 25

B7: Spill and Tailwater Recovery

Summary of Actions Year 2012

District has spills or tailwater leaving the district: Yes
District is investigating development of a spill/tailwater recovery system: No
District implemented a spill/tailwater recovery program: Yes
Comments: The District recovers flows within its boundaries, and is also part of a county-wide tailwater recovery system. MPWD is dependent on drainage flows from Solano Irrigation District for the majority of its water supplies.MPWD also recovers flows from the Dixon RCD drain. In addition, Reclamation District 2068 recovers drainage from both MPWD and Dixon RCS for further re-use.

Calculated Actual Benefits Year 2012:

Acre-feet, estimated water conserved by implementing a spill/tailwater recovery program: 3200
2012 Expenditures: 0
2012 Staff Hours: 0

Summary of Year 2013 Projected Actions

District will investigate implementation of a spill/tailwater recovery program: Yes
District will implement or continue a spill/tailwater recovery system: Yes
Comments: Continue 2012 program.

Anticipated Year 2013 Benefits:

Acre-feet, estimated water conserved from the proposed or continued project: 3200
2013 Projected Expenditures: 0
2013 Projected Staff Hours: 0

B8: Plan to measure outflow

Total # of outflow (surface) locations/points 2
Total # of outflow (subsurface) locations/points 0
Total # of outflow points 2
Percentage of total outflow (volume) measured during report year 100
Identify locations, piroritize, determine best measurement method/cost, submit funding proposal
Estimated cost in $1000's
Location & Priority 2012 2013 2014 2015 2016

B9: Conjunctive Use

Summary of Actions Year 2012

District has conjunctive use options: Yes

Anticipated Year 2013 Benefits:

Acre-feet, estimate of water spill which could be eliminated by proposed automation project: 0
Acres, estimate of acres provided with improved service by proposed automation project: 0
2013 Projected Expenditures: 0
2013 Projected Staff Hours: 0

B11: Water User Pumping

Summary of Actions Year 2012

District promotes a local utility companies pump testing program: Yes
List method(s) of promotion: Newsletters, field days, & website
District promotes its own pump testing program for its customers: Yes
List method(s) of promotion: Newsletters, field days, & website
Number of customer pumps tested: 12
2012 Expenditures: 2931
2012 Staff Hours: 34

Summary of Year 2013 Projected Actions

District will promote pump testing program: Yes
Estimated number of customer pumps to be tested: 12
Comments: Continue 2012 program
2013 Projected Expenditures: 3000
2013 Projected Staff Hours: 35

Facilitate or promote water customer pump testing and evaluation.

File Attachment Irrigator_article_p._tests_March_2011.doc

B12: GIS Mapping

Has the District implemented this BMP? No
Estimate Cost in $1000's

Planning Stages	2012	2013	2014	2015
Continue to support the collaborative efforts with Solano County & SCWA to develop GIS mapping.	0	0	0	0

Mapping Processes 2012 2013 2014 2015

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Summary of Actions Year 2013

Name of Coordinator: Meda Benefield
E-Mail: mpwd@cwns.net
Title: Water Conservation Coordinator
Address: P.O. Box 73 Dixon, CA 95620
Phone: (707) 678-5332
Fax: (707) 678-0834
Cell Phone: _
2013 Expenditures: 1934
2013 Staff Hours: 80

Summary of Year 2014 Projected Actions

2014 Projected Expenditures: 2000
2014 Projected Staff Hours: 80

A3A: Water Management Service: On-Farm Evaluations

Summary of Actions Year 2013

Number of acres surveyed: 220
Comments: On-farm surveys include mobile lab services, evaluations, irrigation scheduling and soil moisture monitoring. MPWD participates in a collaborative county-wide program as part of the Solano Ag Water Conservation Committee.

Actual Benefits Year 2013

Identified efficiency losses: Yes
Reduced tailwater: Yes
Number of acre-feet reduced by: 55
Other: _
2013 Expenditures: 4180
2013 Staff Hours: 83

Summary of Year 2014 Projected Actions

Number of acres to be surveyed: 300
Comments: _

Anticipated Year 2014 Benefits

Identify efficiency improvements: Yes
Reduced tailwater: Yes
Number of acre-feet reduced by: 75
2014 Projected Expenditures: 4000
2014 Projected Staff Hours: 80

A3B: Water Management Services: Real-Time ET Information

As a member of the AWCC, MPWD participated in the annual newsletter, "The Irrigator", the website www.solanosaveswater.org, and an annual irrigation management workshop.

2013 Expenditures: 8000

2013 Staff Hours: 80

Summary of Year 2014 Projected Actions

List educational programs the district plans to support or participate in: Continue 2013 program.

2014 Projected Expenditures: 8000

2014 Projected Staff Hours: 80

A4: Pricing Structure

Summary of Actions Year 2013

One of the two selections below is required District currently prices water at least partly by volume.

Steps taken to prepare for conversion: _

Comments: _

2013 Expenditures: 17300

2013 Staff Hours: 300

Summary of Year 2014 Projected Actions

If not already billing in part by volume, enter the year the district plans to convert to billing by volume: 0

Comments: _

2014 Projected Expenditures: 29480

2014 Projected Staff Hours: 450

A5: Policy Evaluation

Summary of Actions Year 2013

List any policy changes or suggestions concerning water conservation/management (internal or external) recommended during the year:

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

Actual Benefits Year 2013

List any benefits received as a result of policy changes. Quantify the benefits if possible in terms of volume of water saved or affected, or dollars:

_

2013 Expenditures: 360

2013 Staff Hours: 6

Summary of Year 2014 Projected Actions

List any policies identified for review: _

2014 Projected Expenditures: 360

2014 Projected Staff Hours: 6

Quantify the benefits, if possible, in terms of volume of water saved or affected, or dollars: See comments above.
2013 Expenditures: 0
2013 Staff Hours: 0

Summary of Year 2014 Projected Actions

One of the two selections below is required District will investigate recycled water opportunities.
Estimated acre feet of water that may be available for recycling in the future: 0
Comments: The amount of recycled water available in the future is unknown at this time. However, there may be expansion of the treatment plant in the future.
2014 Projected Expenditures: 0
2014 Projected Staff Hours: 0

B3: Capital Improvements of On-Farm Irrigation

Summary of Actions Year 2013

One of the two selections below is required District distributes information on programs offered by others.
Listing of programs offered: NRCS offered the Environmental Quality Initiative Program, which assisted growers with irrigation system improvements.
Comments: The AWCC's annual irrigation workshop featured presentations by NRCS staff, who described it's programs related to irrigation system upgrades.

Actual Benefits Year 2013

Estimate the dollar value of on farm improvements facilitated by the district: 0
2013 expenditures on facilitation of farm improvements: 0
2013 staff hours on facilitation of farm improvements: 0

Summary of Year 2014 Projected Actions

District is expecting to facilitate a funding program. Accepted
List program(s) expected to be available: _
2014 Projected Expenditures: 0
2014 Projected Staff Hours: 0

B4: Incentive Pricing

Summary of Actions Year 2013

District has an incentive price program: Yes
District is developing an incentive priced program: No
Water savings from incentive priced program: Yes
Comments: MPWD billed growers based on volumetric pricing, with a tiered pricing program. The Board reviews the program annually.

Actual Benefits Year 2013

District plans to add regulatory reservoirs: No
District regulatory reservoirs constructed: No
Comments: MPWD does not own any reservoirs. The District uses channels or natural streams to dam and divert its water. The dams must be removed in the fall to provide for flood control.

Calculated Actual Benefits Year 2013:

Current total capacity of regulatory reservoirs (acre-feet): 0
Estimated water savings from spills or operational improvements related to regulatory reservoirs (acre-feet): 0
Improved water management with regulatory reservoirs: No
Comments: _
2013 Expenditures: 0
2013 Staff Hours: 0

Summary of Year 2014 Projected Actions

District will install or investigate development of regulatory reservoirs: No
Comments: _

Anticipated Year 2014 Benefits:

Estimate additional capacity to be added in 2014 (acre-feet): 0
Estimate additional capacity needed for optimum operation (acre-feet): 0
2014 Projected Expenditures: 0
2014 Projected Staff Hours: 0

B6: Flexible Water Ordering

Summary of Actions Year 2013

District has an on-demand delivery system: No
District has reached the maximum flexibility currently feasible without major physical improvements to the delivery system: Yes
District is investigating improving delivery flexibility: Yes
Describe any improvements in delivery flexibility completed or under investigation: MPWD 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. Daily meetings with farmers enhance flexiblity and improve service.

Actual Benefits Year 2013

Estimate the number of acres benefited by increased flexibility (acres): 14000
2013 Expenditures: 1500
2013 Staff Hours: 25

Summary of Year 2014 Projected Actions

One of the three selections below is required No action taken at this time.
Comments: The District will continue to review opportunities to increase the flexibility of operations.

Anticipated Year 2014 Benefits:

Improved service to customers: Yes

District has conjunctive use options: Yes
District is investigating a conjunctive use program: No
District implemented a conjunctive use program: Yes
Comments: MPWD does not own any wells. However, in the event of drought the District has plans in place to utilize landowner wells, and the District considers this plan as its conjunctive use program.

Calculated Actual Benefits Year 2013:

Acre-feet, water charged to ground water or otherwise stored: 0
Acre-feet of water pumped from wells or otherwise retreived: 0
2013 Expenditures: 0
2013 Staff Hours: 0

Summary of Year 2014 Projected Actions

District will investigate a conjunctive use program: No
District will implement a conjunctive use program: Yes
Comments: _

Anticipated Year 2014 Benefits:

Acre-feet, water expected to be charged to ground water or otherwise stored: 0
Acre-feet of water expected to be pumped from wells or otherwise retreived: 0
2014 Projected Expenditures: 0
2014 Projected Staff Hours: 0

B10: Automate Canal Structures

Summary of Actions Year 2013

District's distribution system is completely automated: No
District is investigating system automation: No
District implemented an automation project: No
Comments: The conveyance system does not lend itself to automation since the main canal, the Ulatis Flood Control Project Channel,serves as flood control in the winter. The check structures must be removed before the flood season, and re-installed in the Spring.

Calculated Actual Benefits Year 2013:

Implementation of project reduced spills or increased flexibility: No
Acre-feet, estimated amount of water that would have spilled without the project: 0
Implementation of project improved service to customers: No
Acres, estimated acres provided with improved service: 0
2013 Expenditures: 0
2013 Staff Hours: 0

Summary of Year 2014 Projected Actions

District will investigate automation for distribution system: No
District will implement an automation project: No
Comments: _

USBR Reporting Tool

Current Date:	10/11/2016
District Name:	Maine Prairie Water District
Company Name:	Maine Prairie Water District
Start Date:	01/01/2014
End Date:	12/31/2015
Current Status:	Approved
Annual Update Year:	2014

A1: Measurement

Summary of Actions 2014

Total number of customers: 31
Total number of customers with measured deliveries: 31
Number of measurement devices installed this year: 0
Number of measurement devices upgraded: 5
Comments: Expenditures were for O & M costs for daily meter reading, and for water level adjustments required for reliable delivery to customers.

Calculated Actual Benefits Year 2014

Revenue increased after improved measurement: No
Water savings from improve measurement: No
Est. Ac. Ft. Saved: 0
2014 Expenditures: 46934
2014 Staff Hours: 1780

Summary of Year 2015 Projected Actions

Number of measurement devices planned to install next year: 0
Number of measurement devices planned to be upgraded next year: 4
Comments: _

Anticipated Year 2015 Budget

2015 Projected Expenditures: 46934
2015 Projected Staff Hours: 1780

A2: Conservation Coordinator

Actual Benefits Year 2014

Number of customers provided information: 31
Method of data distribution:
Newspaper: No
Bills: No
Newsletter: No
Internet: Yes
Other: A CIMIS station is located near the District. ET information is available from the CIMIS website, and (2) local websites, www.westernweather.com/sid, and westernweathergroup.com
2014 Expenditures: 10,800
2014 Staff Hours: 40

Summary of Year 2015 Projected Actions

List any projected changes _
2015 Projected Expenditures: 10,800
2015 Projected Staff Hours: 40

A3C: Water Management Services: Water Quality Data

Summary of Actions Year 2014

Water quality issue: No
Ground water analyzed: No
Surface water analyzed: Yes
Comments: Water quality is monitored in compliance with the Talent Decision and for the Regional Water Quality Control Board compliance. MPWD cooperates with the Dixon Resource Conservation District's efforts to form a local Watershed Working Group to perform testing. Partners include the Solano County Water Agency (SCWA),Reclamation District 2068, and local landowners.

Actual Benefits Year 2014

List any decisions based on analysis of water: See comments above. Expenditures are shared with SCWA, Reclamation District 2068,and Dixon Resource Conservation District.
2014 Expenditures: 10284
2014 Staff Hours: 36

Summary of Year 2015 Projected Actions

List any changes planned concerning water analysis: Continue 2014 program.
2015 Projected Expenditures: 10798
2015 Projected Staff Hours: 36

A3D: Water Management: Educational Programs

Summary of Actions Year 2014

2015 Projected Staff Hours: 6

A6: Contractor Pump Efficiency

Summary of Actions Year 2014

Number of contractor pumps tested for efficiency during the year: 3

Quantify the benefits, if possible, in terms of volume of water saved or affected, or dollars in energy savings: None

Comments: The District owns very few pumps. The majority of pumps are owned by the growers. The District's pump efficiency tests verified the pump's operating efficiency and flow meter accuracy. Since the efficiency and meter accuracy was satisfactory, it was not necessary to retrofit the pumps to save energy.

2014 Expenditures: 600

2014 Staff Hours: 6

Summary of Year 2015 Projected Actions

Number of pumps expected to be tested: 3

Comments: The District plans to test it's pumps annually to track operating efficiency and meter accuracy, and plan for future repairs if needed.

2015 Projected Expenditures: 630

2015 Projected Staff Hours: 6

B1: Facilitate Alternative Land Use

Summary of Actions Year 2014

One of the two selections below is required District has no land identified for alternative land use (dryland conversions, retirement from agriculture, or conversion to wildlife/non-irrigated or other).

The district in cooperation with the land owners have converted the following number of acres this year. 0

The district in cooperation with landowers have converted the following number of acres total this year and all past years. 0

Comments: _

2014 Expenditures: 0

2014 Staff Hours: 0

Summary of Year 2015 Projected Actions

Areas expected to be converted: 0

Comments: _

2015 Projected Expenditures: 0

2015 Projected Staff Hours: 0

B2: Use of Recycled Water

Summary of Actions Year 2014

One of the four selections below is required District is receiving recycled water.

Number of acre-feet of recycled water received (put 0 if not applicable): 0

Comments: MPWD billed growers based on volumetric pricing, with a tiered pricing program. The Board reviews the program annually.

Actual Benefits Year 2014

Describe the objectives/benefits of the incentive pricing program. Quantify where possible the effect of the incentive pricing program in terms of water dollars:
Water conservation was the result of the volumetric pricing and the tiered pricing program. Growers avoided unnecessary irrigation or over-watering. However, quantifying savings is difficult due to seasonal changes in crop patterns and weather conditions.

2014 Expenditures: 19031

2014 Staff Hours: 313

Summary of Year 2015 Projected Actions

List any changes expected in the incentive pricing program: None

Number of years until district will have an incentive pricing program, if none exists currently (put "unknown" if applicable): already exists

2015 Projected Expenditures: 19031

2015 Projected Staff Hours: 313

B5A: Line or Pipe Ditches and Canals

Summary of Actions Year 2014

District has all ditches lined or piped: No

District is investigating in lining or piping canals: No

Miles of pipeline installed this year: 0

Miles of canal lined this year: 0

Comments: The ditches and canals are owned by the landowners. If operational limitations occur, there may be consideration to allow owners to line or pipe sections of ditches. However, the distribution system provides flood control benefits in the winter.

Calculated Actual Benefits Year 2014:

Acre-feet, estimated water saved from lining or piping canal: 0

2014 Expenditures: 0

2014 Staff Hours: 0

Summary of Year 2015 Projected Actions

Proposed miles of canal to be piped or lined: 0

Comments: _

Anticipated Year 2015 Benefits:

Acre-feet of water savings from proposed projects: 0

2015 Projected Expenditures: 0

2015 Projected Staff Hours: 0

B5B: Regulatory Reservoirs

One of the three selections below is required No action taken at this time.
Comments: The District will continue to review opportunities to increase the flexibility of operations.

Anticipated Year 2015 Benefits:

Improved service to customers: Yes
2015 Projected Expenditures: 1575
2015 Projected Staff Hours: 25

B7: Spill and Tailwater Recovery

Summary of Actions Year 2014

District has spills or tailwater leaving the district: Yes
District is investigating development of a spill/tailwater recovery system: No
District implemented a spill/tailwater recovery program: Yes
Comments: The District recovers flow within its boundaries, and is also part of a county-wide tail-water recovery system. MPWD is dependent on drainage flows from Solano Irrigation district for the majority of its water supplies. MPWD also recovers flows from the Dixon RCD drain. In addition Reclamation District 2068 recovers drainage from MPWD and Dixon RCD for further re-use.

Calculated Actual Benefits Year 2014:

Acre-feet, estimated water conserved by implementing a spill/tailwater recovery program: 3200
2014 Expenditures: 0
2014 Staff Hours: 0

Summary of Year 2015 Projected Actions

District will investigate implementation of a spill/tailwater recovery program: No
District will implement or continue a spill/tailwater recovery system: Yes
Comments: _

Anticipated Year 2015 Benefits:

Acre-feet, estimated water conserved from the proposed or continued project: 3200
2015 Projected Expenditures: 0
2015 Projected Staff Hours: 0

B8: Plan to measure outflow

Total # of outflow (surface) locations/points 2
Total # of outflow (subsurface) locations/points 0
Total # of outflow points 2
Percentage of total outflow (volume) measured during report year 100
Identify locations, piroritize, determine best measurement method/cost, submit funding proposal
Estimated cost in $1000's
Location & Priority 2014 2015 2016 2017 2018

Summary of Year 2015 Projected Actions

District will investigate automation for distribution system: No
District will implement an automation project: No
Comments: _

Anticipated Year 2015 Benefits:

Acre-feet, estimate of water spill which could be eliminated by proposed automation project: 0
Acres, estimate of acres provided with improved service by proposed automation project: 0
2015 Projected Expenditures: 0
2015 Projected Staff Hours: 0

B11: Water User Pumping

Summary of Actions Year 2014

District promotes a local utility companies pump testing program: Yes
List method(s) of promotion: Newsletter, workshop, website, and grower meetings
District promotes its own pump testing program for its customers: Yes
List method(s) of promotion: Newsletter, workshop, website, and grower meetings
Number of customer pumps tested: 15
2014 Expenditures: 4500
2014 Staff Hours: 45

Summary of Year 2015 Projected Actions

District will promote pump testing program: Yes
Estimated number of customer pumps to be tested: 15
Comments: _
2015 Projected Expenditures: 4500
2015 Projected Staff Hours: 45

Facilitate or promote water customer pump testing and evaluation.

File Attachment No Answer

B12: GIS Mapping

Has the District implemented this BMP? No
Estimate Cost in $1000's
Planning Stages 2014 2015 2016 2017
Mapping Processes 2014 2015 2016 2017

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Maine Prairie Water District
2015 Agricultural Water Management Plan

Maine Prairie Drought Management Plan

Maine Prairie Water District

Drought Management Plan

Governor Brown issued Executive Order B-29-15 on April 1, 2015, directing agricultural water suppliers (supplier) to include a detailed drought management plan that describes the actions and measures the supplier will take to manage water demand during drought. The Maine Prairie Water District (District) allocates water in all years based on the availability of water under the District's various supplies. Typically, in January/February the District provides its customers with an allocation of water for the year and a rate for the water cost. In drought years, the District may provide a lower allocation and/or an increased water rate to its customers, depending on its projected water supply.

The District has a contract for water supply from the Solano Project. In drought years, the Solano Project Members' Agreement as to Drought Measures and Water Allocation (Agreement), may be implemented to allocate limited available Solano Project supplies. Members of the Agreement include the District, the Solano County Water Agency, and the cities of Fairfield, Vacaville, Suisun City, and Vallejo. This coordination and collaboration amongst the local districts and water agencies is used to facilitate drought response. Certain storage conditions in Lake Berryessa trigger the Agreement and call for the parties to prepare a Drought Contingency Plan. The Agreement requires that the Drought Contingency Plan include water conservation measures and investigation of potential emergency supplies. The Agreement is included as Attachment 1.

The District's 5-Year Water Management Plan Revision, dated February 2010 (2010 Plan), describes the District's Water Shortage Allocation Policies in Section 1, Part H, which are implemented during drought conditions. Additional details are outlined in the attached 2016 District Rules and Regulations, item 20.

Maine Prairie Water District
2015 Agricultural Water Management Plan

Maine Prairie Drought Management Plan

Attachment 1

Solano Project Member' Agreement
Measures and Water Allocation

SOLANO PROJECT MEMBERS'
AGREEMENT AS TO DROUGHT MEASURES
AND WATER ALLOCATION

THIS AGREEMENT, dated as of March 1 _____, 1999, by and among the Solano Irrigation District, a California Irrigation District (hereinafter referred to as "SID"), Maine Prairie Water District, (hereinafter referred to as "MPWD"), the City of Fairfield, a California municipal corporation (hereinafter referred to as "Fairfield"), the City of Vacaville, a California municipal corporation (hereinafter referred to as "Vacaville"), the City of Suisun City (hereinafter referred to as "Suisun"), and the City of Vallejo, a California municipal corporation (hereinafter referred to as "Vallejo"), individually referred to or collectively referred to in this Agreement as "Party" or "Parties," respectively, is made and entered into and the Parties do, for full and adequate consideration, receipt of which is hereby acknowledged, agree as follows:

Section 1.0: Background Facts

1.1 The Parties are all, through contracts with the Solano County Water Agency ("SCWA"), Participating Agencies of the Solano Project, entitled to annual deliveries of water from the Solano Project in the following amounts:

Name of Party	Annual Entitlement (Acre-Feet ("AF")/Water Year)
Solano Irrigation District	141,000
Fairfield	9,200
Vacaville	5,600
Suisun City	1,600
Maine Prairie	15,000
Vallejo	14,750
Total:	187,150

The present contract between the United States and SCWA for Solano Project water supply ("Solano Project Master Contract") expires in 1999, and negotiations between the United States and SCWA for Solano Project Master Contract renewal and extension are underway, and the Member Unit Parties' contracts with SCWA for the annual entitlements will be extended or renewed.

(Final 1/25/99)

Contract with SCWA for the purchase of water from the Solano Project annually on the basis of the annual amounts set forth in Paragraph 1.1 above.

3.2 It shall be a precondition to the enforceability of this Agreement that each of the Parties shall have received and accepted a renewal contract for Solano Project Water in the above amounts from SCWA ("Renewal Participating Agency Contract") and that the terms of those agreements have been accepted by each Party and approved by the United States Department of Interior, Bureau of Reclamation, if such approval is required by the Solano Project Master Contract, and the Renewal Participating Agency Contracts have each been validated in accordance with the provisions of California Code of Civil Procedure section 860, *et seq.* It shall be a further precondition of the enforceability of this Agreement that no material change has been made in the terms and provisions of each Renewal Participating Agency Contract including, without excluding other material changes, that:

3.2.1 The term of all of the Renewal Participating Agency Contracts shall be equivalent to the term of the renewed Solano Project Master Contract; and

3.2.2 The proportions of payment amounts per AF of water available under the Renewal Participating Agency Contracts shall be the same as the existing Contracts of $15.00 per AF for municipal and industrial ("M&I") water use and $2.65 per AF for irrigation use or a ratio of 5.66 to 1, depending on the respective purpose of use; and

3.2.3 There shall be included within all Renewal Participating Agency Contracts provisions permitting each Party to voluntarily retain carryover storage in Lake Berryessa for any unutilized portion of that Party's annual water entitlement under its Renewal Participating Agency Contract under the following conditions:

(a) The amount so voluntarily unutilized on the last day of February shall be added on that date to a carryover account ("Voluntary Carryover Account") for the Party that did not order delivery of the amount of water, but the Party shall pay SCWA for the undelivered water as if the water was delivered to the Party in that year in accordance with the Renewal Participating Agency Contract terms. No additional payment will be required for subsequent use of that water if there is no change in type of use.

Section 4.0: Preparation of Drought Contingency Plans:

4.1 When Storage in Lake Berryessa falls below 800,000 AF as measured on December 1, the Parties will participate with SCWA staff in preparation of a Drought Contingency Plan which shall include reasonable water conservation measures, investigation of potential emergency supplies which could be imported without construction of new conveyance facilities, and other reasonable measures which could reduce the depletion of Storage in Lake Berryessa. Implementation of any of these measures by the Parties and SCWA will only be with the consent of the individual Parties electing to participate, and SCWA will not suspend or supersede provisions of the Participating Agency Renewal Contracts with SCWA. The Drought Contingency Plan shall also address terms and conditions for water sales pursuant to Paragraph 5.6(b). If Storage in Lake Berryessa exceeds 1.1 million AF on the following April 1, development of the Drought Contingency Plan shall be suspended.

Section 5.0 Mandatory Additions to Storage and Carryover Accounts by Parties ("Restricted Carryover Account"):

5.1 When Storage in Lake Berryessa is between 550,000 AF and 800,000 AF as measured on April 1 of any water year, then each of the Parties agrees to forego taking delivery of at least 5% of the Party's annual entitlement. If the Storage in Lake Berryessa is between 450,000 AF and 550,000 AF as measured on April 1, the Parties agree that they will forego taking delivery of at least 10% of their annual entitlements. On the first day of the next water year, a 5% (if Storage in Lake Berryessa had been between 550,000 AF and 800,000 AF the previous April 1) or 10% (if Storage in Lake Berryessa had been between 450,000 AF and 550,000 AF the previous April 1) portion of each Party's annual entitlement shall be credited to what will be called the Party's "Restricted Carryover Account."

5.2 Restricted Carryover shall be classified as either irrigation or M&I. For a Party that delivers only one class of water, 100% of its Restricted Carryover shall be designated of that class. For a Party that delivers both irrigation water and M&I water, the Restricted Carryover shall be segregated into irrigation ("irrigation Restricted Carryover") and M&I ("M&I Restricted Carryover") classes based on the amounts of each class of water acquired by that Party from SCWA during the water year in which the Restricted Carryover was generated.

below. If the April 1 Storage in Lake Berryessa is any other amount (between 450,000 AF and 800,000 AF), the foregone amount remains in Party A's Restricted Carryover Account and is not available for use.

5.5 After successive water years in which Storage in Lake Berryessa is between 450,000 AF and 800,000 AF on April 1, water will tend to accumulate in the Restricted Carryover Accounts. The above provisions notwithstanding, however, accumulated water in a Party's Restricted Carryover Account (combined M&I and irrigation Restricted Carryover) shall not exceed 50% of that Party's annual entitlement.

Example: Same as last example (Section 5.4) except Party A starts with a Restricted Carryover Account balance of 48% of its annual entitlement. Party A would be required to deposit only 2% of its annual entitlement into its Restricted Carryover Account to bring the Restricted Carryover Account up to the maximum 50% of annual entitlement. Party A may take delivery and use up to 98% of its annual entitlement that water year, excluding any Voluntary Carryover.

5.6 When Storage in Lake Berryessa falls to less than 450,000 AF on April 1, the Parties will not be required to deposit additional water into Restricted Carryover attributable to that water year and water from the Restricted Carryover Accounts will be released to the Parties as follows:

a. The Parties shall have access to their M&I Restricted Carryover Account balances for M&I uses; and

b. The Parties shall have access to their irrigation Restricted Carryover balances for voluntary sale to other Parties for M&I uses based on terms and conditions established through the drought contingency planning process of Section 4.0.

Example: In 2006, Storage in Lake Berryessa is between 550,000 AF and 800,000 AF on April 1 after being above 800,000 AF the previous year. A 5% Restricted Carryover amount is required of all Parties for that water year. Since water orders are submitted to SCWA prior to March 1, the order for that year will be amended to reflect the reduction in available water supply for each of the Parties and the foregone amount will be credited to the Restricted Carryover Accounts on March 1, 2007. On April 1 in each of years 2007 and 2008,

5.9 If the Solano Irrigation District Drought Impact Reduction Program shall have been implemented for two or more successive years in the previous three years, and a total of more than 35,000 AF of water are subscribed during the three years to meet M&I water needs of Parties, and on the following April 1 Storage in Lake Berryessa is less than 400,000 AF, the amounts of water to be made available under the Program in that year shall be reduced by SID to a maximum of 5,000 AF.

Example A: Same as last example (Section 5.6), with the additional facts that Storage in Lake Berryessa drops below 400,000 AF on April 1 in years 2010 through 2012, and in year 2009 and 2010, the Program provides for the subscription of 20,000 AF annually for M&I use. Because in the successive years 2009 and 2010 the Program is utilized to provide 35,000 AF or more to M&I users, each Party would have the additional right to participate in the Program in year 2011, but only to the extent of the Party's share of a total Program amount not to exceed 5,000 AF. In year 2012, because more than 35,000 AF were subscribed to under the Program over the past three years and the program was in effect in at least two successive years within the previous three years, the Program shall be reduced again to a maximum of 5,000 AF. If Storage in Lake Berryessa continues below 400,000 AF on April 1, 2013, the 5,000 AF restriction would not be in effect because the Program did not provide 35,000 AF or more to M&I users over the past three years.

Example B: Same as last example, except Storage in Lake Berryessa is above 400,000 AF on April 1, 2010, and therefore the Program is not in effect that year. In year 2011 the program provides for the subscription of 20,000 AF for M&I use. In year 2012, the 5,000 AF restriction would not be in effect because, although the Program provided over 35,000 AF to M&I users over the past three years, the Program was not in effect in at least two successive years during that period. If Storage in Lake Berryessa continues below 400,000 AF on April 1, 2013, the 5,000 AF restriction would be in effect if the 2012 subscription was 15,000 AF or more (so that the combined 2011 and 2012 subscription was 35,000 AF or more).

5.10 Except as provided otherwise by this Section, Restricted Carryover will be treated the same as Voluntary Carryover.

EXHIBIT "A"

SOLANO IRRIGATION DISTRICT
DROUGHT IMPACT REDUCTION PROGRAM ELEMENTS

The Program will include the following elements:

1.0 The District's Contract with the Parties requesting Municipal and Industrial Water:

1.1 Proportions in Program: On or about April 1 when it is determined that the amount of water in Storage in Lake Berryessa is less than 400,000 AF, excluding water which is in dead storage and water which is in the voluntary carryover accounts of the Parties to the Agreement, the Parties, including SID, delivering municipal and industrial water in proportion to the average annual amounts of municipal and industrial water ordered and paid for from the Solano Project by those Parties during the preceding five (5) full water years, shall be entitled to participate in the SID Drought Impact Reduction Program ("The Program").

1.2 No Assignment of Proportion of Program Water: All Parties seeking water under the Program for municipal and industrial use shall be entitled to their proportional share of the water made available by the Program. If a Party desires less than their proportional share of the Drought Impact Reduction Program water, they may not assign their relinquished portion of the Program water to any other Party, and the relinquished portion of the water will be divided in accordance with the percentage of the Program water requested by Parties, if any Party requests less than their proportional share.

1.3 District Target Price: On or before May 1, SID will establish and announce a target price per AF for the amount of water which will be deemed relinquished by a Landowner and/or Tenant within SID for the Program in the following water year.

1.4 Additional Costs: In addition to the target price payable to the Landowner and/or Tenant for each acre foot, SID shall establish the additional amounts payable to SID for its operation and maintenance costs, lost water revenues and other reasonable costs to be incurred in implementing the Program. SID will establish the amounts of water which will be allocated to each acre of land under the rules and regulations in the following water year in which the Program is to be implemented and to which the target price and charges of SID would apply if the Landowner and/or Tenant elect to participate in the Program.

If the participating landowners and/or tenants offer amounts of water in excess of subscriptions of the Parties, the amounts tendered by each participant will be reduced by a factor representing the excess amount as a percent of the subscribed amount.

Final contracts with participants and the subscribing Parties shall be delivered to SID for approval on or before October 15.

1.9 Payment to District: The monies due to SID from the Parties shall be paid on or before October 15, and shall be obtained by SID and distributed by SID in accordance with its contractual terms with the Landowners and Tenants. Interest earned upon the payments prior to disbursement shall be credited to the Parties participating in the Program. The participating Parties shall pay to SCWA the municipal and industrial rate for the water so assigned by SID to the Parties prior to the Parties participating in the Program ordering and delivery of the water in the following water year.

1.10 No Upset Price: The provisions of the Parties' agreement with SID and the Landowner/Tenant agreement with SID will not provide for an upset price, and thus if the following water year is a plentiful water year, nevertheless the water to be transferred by SID to the Parties will be transferred on the first day of the subsequent water year and will be added to the account of the participating Parties in the Program on that day. Participating Parties should recognize that it is possible that spills of Lake Berryessa may occur after March 1, and thus it is theoretically possible to obtain water pursuant to the Program and to lose it forthwith without the ability to use it or hold it in a carryover account. Water transferred by SID to participating Parties will be treated as voluntarily added to the Party's carryover account if not utilized in the water year.

1.11 No Waiver or Transfer of Water Outside Solano Project Service Areas: As a condition of participating in the Program, no Party participating in the receipt of water from the Program shall directly or indirectly in the water year that deliveries are made under the Program (i) waive the ability to receive water from other sources available to it, or (ii) transfer directly or indirectly the amounts held by the Party in their Solano Project account or held by them pursuant to their State Water Project contracts or held as other water rights to any non-Party, or (iii) allow amounts to be received by the Party pursuant to the Solano Irrigation District Drought

Maine Prairie Water District
2015 Agricultural Water Management Plan

Maine Prairie Drought Management Plan

Attachment 2

2016 Rules and Regulations

MAINE PRAIRIE WATER DISTRICT
RULES AND REGULATIONS
2016

1. All new drains must have drop-pipes; these are to be installed by landowners. Installations 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 the 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 irrigation season 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 costs 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.
7. During the irrigation season, as defined in #6 above, notice of water use must be given as follows:
   A. A twenty-four (24) hour notice must be given **prior to 2:00 PM the day before,** 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.

19. All deliveries of water by MPWD are made upon the conditions that return flows and drainage water resulting there from 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.
20. 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 natured, the risk of unavailability or shortage of water supply to be borne by the landowner and/or tenant once the crop has been planted and landowner and/or 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.
21. 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.
22. 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 violation before ordering the restoration of water service to users.
23. 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/or 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 and/or tenant refuse to permit such installation of screens or to sign such agreement, the District Manager is authorized to terminate water service to

Maine Prairie Water District
2015 Agricultural Water Management Plan

Maine Prairie Measurement Program

Maine Prairie Water District

Measurement Program

As described in the 2010 Plan in Section 1, Part G, the Maine Prairie Water District (District) measures all water deliveries to fields using propeller meters. The flow meters are maintained by the District to ensure accuracy and are believed to be within +/- 6%. District staff read and record the totalizer volume for each meter once a day and customers are charged based on the volume of water they divert, based on a tiered rate structure. Therefore, Efficient Water Management Practices No. 1: Water Measurement and No. 2: Volumetric Pricing are fully implemented.

Maine Prairie Water District
2015 Agricultural Water Management Plan

2013-2015 Maine Prairie Water Balances

Maine Prairie Water District

Water Balance Summary

Water balance summaries were developed for Maine Prairie Water District (Maine Prairie or District) based on the Agricultural Water Inventory Tables (Standard Tables) in the Water Management Planner (Bureau of Reclamation [Reclamation], 2014) to meet the 2014 Standard Criteria for Agricultural and Urban Water Management Plans. The tables were modified to display and identify information applicable to Maine Prairie. Very little or no water is delivered by the District outside of the months of March through October; therefore, the water balance summaries are limited to the irrigation season of each year.

Surface water supplies are based on Maine Prairie records of summations from calibrated measuring devices. No District groundwater pumping occurs; and, based on historical information, private groundwater pumping within the District does not occur.

Precipitation data are based on the average monthly precipitation reported by the California Irrigation Management Information System (CIMIS) at the Dixon station.

Crop evapotranspiration (ET) tables were prepared based on (1) crop coefficients (Kc values) developed by the Irrigation Training and Research Center at California Polytechnic State University for district water balances for dry year surface irrigation and (2) monthly reference ET (ETo) from CIMIS. Kc values for use within Maine Prairie were developed using the Zone 14 data from the Irrigation Training and Research Center (ITRC) Report (2003) and monthly ETo data reported for the Dixon CIMIS station for 2013–2015.

Evaporation for use in estimating distribution system evaporation losses is estimated as 1.1 times the monthly ETo. Seepage is estimated based on historical observation by the District. Effective precipitation is estimated at 60 percent of the irrigation season precipitation.

Leaching requirements were developed using the methods and equations described by R.S. Ayers and D.W. Westcot in Water Quality for Agriculture (Food and Agricultural Association of the United Nations, 1985) (also known as FAO Irrigation and Drain Paper 29, Rev. 1).

These source data were considered the most accurate and current information available at the District level for the 2013–2015 irrigation seasons.

Table 6 of the water balances summarizes the inflows and outflows, including estimates of available soil moisture, inflow from precipitation, and ET precipitation by crops. The District outflows have been estimated based on observation and historical information. The subtotal without recirculation, Percolation from Agricultural Lands is the closure term in the mass water balance and does not include the Internal Recirculation and Reuse shown in the table. As such, in addition to percolation to the groundwater basin, the volume shown includes unaccounted for drain water outflow; errors in assumptions used in calculations or estimated uses such as crop water use (ET); and other factors such as effective precipitation, and evaporation. Positive values may indicate unaccounted for losses such as additional percolation to groundwater. Negative values may indicate seepage into the water balance boundaries from high water tables. Table 6 of the water balances also shows the quantities of water recaptured and recirculated for reuse within the District service area.

Maine Prairie Water District
2015 Agricultural Water Management Plan
2013 Water Balance

TABLE 1

Maine Prairie Water District – 2013 Surface Water Supply
(March through October Period Only)

Month	Federal Ag Water Supply[a] (acre-feet)	Non-Federal Ag Water Supply[b] (acre-feet)	Total (acre-feet)
Method	M-1	M-1	
March	572	0	572
April	2,159	6,747	8,906
May	2,123	6,514	8,638
June	1,502	7,851	9,352
July	1,778	8,578	10,356
August	2,167	6,618	8,785
September	192	5,436	5,627
October	947	2,291	3,238
TOTAL	10,867	44,034	54,902

[a]Solano Project Federal Ag Water Supply from District Records.

[b]Non-Federal Ag Water Supply from District Records includes diversions under the District's water rights and contract with Solano Irrigation District.

TABLE 2

Maine Prairie Water District – 2013 Groundwater Supply
(March through October Period Only)

Month	District Groundwater (acre-feet)	Private Groundwater[a] (acre-feet)
Method	M-2	E-2
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
TOTAL	0	0

[a]Estimated by District based on observation and historical information.

Maine Prairie Water District
2015 Agricultural Water Management Plan
2013 Water Balance

TABLE 4

Maine Prairie Water District – 2013 Distribution System Evaporation and Seepage (March through October Period Only)

Canal, Pipeline, Lateral, Reservoir	Length[a] (feet)	Width[b] (feet)	Surface Area (acres)	Precipitation[c] (acre-feet)	Evaporation[d] (acre-feet)	Seepage[e] (acre-feet)	Total (acre-feet)
System 1	69,590	83	133	26	(635)	(1,830)	(2,439)
System 2	36,010	89	74	15	(353)	(470)	(808)
System 3	21,595	119	59	12	(283)	(650)	(921)
TOTAL			265	53	(1,271)	(2,950)	(4,168)

[a]From District statistics.

[b]Average width of the conveyance facilities.

[c]Estimated inflow resulting from precipitation on canals, laterals, and drains during the irrigation season (March-October).

[d]Estimated evaporation from canals, laterals, and drains during the irrigation season.

[e]Estimated seepage from canals, laterals, and drains during the irrigation season.

TABLE 5

Maine Prairie Water District – 2013 Crop Consumptive Use Water Needs (March through October Period Only)

Crop Name	Acres (crop acres)	Crop Et[a] (AF/Ac)	Effective Precipitation[b] (AF/Ac)	Effective Precipitation[b] (acre-feet)	ETAW (acre-feet)	Leaching Requirement (AF/Ac)	Leaching Requirement (acre-feet)
Alfalfa	4,827	3.73	0.03	157	17,858	0.11	531
Corn	1,612	2.04	0.01	11	3,274	0.14	226
Grasses	156	3.94	0.03	5	607	0.03	5
Olives	100	3.11	0.01	1	309	0.09	9
Pasture	5,798	3.94	0.03	188	22,633	0.03	174
Sudan	805	3.61	0.01	11	2,893	0.07	56
Sunflower	399	1.95	0.01	3	774	0.06	24
Wheat	398	0.93	0.01	3	369	0.03	12
Crop Acres	14,094			380	48,719		1,037
Total Acres	14,960						

[a]Crop ET (ETc) was calculated as ETo for CIMIS Station at Dixon (#121) x Kc based on ITRC Dry Year ETc for Zone 14 surface irrigation for water balances. Water Needs do not include

[b]Effective Precipitation is estimated as 60% of monthly precipitation greater than 0.5 inch during crop growing season.

Maine Prairie Water District
2015 Agricultural Water Management Plan
2014 Water Balance

TABLE 1
Maine Prairie Water District – 2014 Surface Water Supply
(April through October Period Only)

Month	Federal Ag Water Supply[a] (acre-feet)	Non-Federal Ag Water Supply[b] (acre-feet)	Total (acre-feet)
Method	M-1	M-1	
April	1,179	1,498	2,677
May	3,814	4,509	8,322
June	2,777	6,124	8,901
July	2,376	7,184	9,560
August	2,824	5,165	7,989
September	2,644	3,521	6,165
October	748	2,204	2,952
TOTAL	16,362	30,204	46,567

[a]Solano Project Federal Ag Water Supply from District Records.

[b]Non-Federal Ag Water Supply from District Records includes diversions under the District's water rights and contract with Solano Irrigation District.

TABLE 2
Maine Prairie Water District – 2014 Groundwater Supply
(April through October Period Only)

Month	District Groundwater (acre-feet)	Private Groundwater[a] (acre-feet)
Method	M-2	E-2
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
TOTAL	0	0

[a]Estimated by District based on observation and historical information.

Maine Prairie Water District
2015 Agricultural Water Management Plan
2014 Water Balance

TABLE 4

Maine Prairie Water District – 2014 Distribution System Evaporation and Seepage (April through October Period Only)

Canal, Pipeline, Lateral, Reservoir	Length[a] (feet)	Width[b] (feet)	Surface Area (acres)	Precipitation[c] (acre-feet)	Evaporation[d] (acre-feet)	Seepage[e] (acre-feet)	Total (acre-feet)
System 1	69,590	83	133	30	(564)	(1,830)	(2,365)
System 2	36,010	89	74	16	(313)	(470)	(767)
System 3	21,595	119	59	13	(251)	(650)	(888)
TOTAL			265	59	(1,129)	(2,950)	(4,020)

[a]From District statistics.

[b]Average width of the conveyance facilities.

[c]Estimated inflow resulting from precipitation on canals, laterals, and drains during the irrigation season (April-October).

[d]Estimated evaporation from canals, laterals, and drains during the irrigation season.

[e]Estimated seepage from canals, laterals, and drains during the irrigation season.

TABLE 5

Maine Prairie Water District – 2014 Crop Consumptive Use Water Needs (April through October Period Only)

Crop Name	Acres (crop acres)	Crop Et[a] (AF/Ac)	Effective Precipitation[b]		ETAW (acre-feet)	Leaching Requirement	
			(AF/Ac)	(acre-feet)		(AF/Ac)	(acre-feet)
Alfalfa	4,501	3.24	0.07	295	14,310	0.11	495
Almonds	160	3.10	0.07	11	487	0.18	29
Corn	156	2.05	0.06	9	311	0.14	22
Grasses	0	3.49	0.07	0	0	0.03	0
Olives	100	3.04	0.07	7	297	0.09	9
Pasture	5,536	3.49	0.07	363	18,969	0.03	166
Tomatoes	607	1.77	0.06	34	1,039	0.08	49
Sudan	776	3.49	0.07	51	2,660	0.07	54
Sunflower	262	1.88	0.06	15	476	0.06	16
Wheat	1,293	0.80	0.06	72	957	0.03	39
Crop Acres	13,392			854	39,507		879
Total Acres	14,620						

[a]Crop ET (ETc) was calculated as ETo for CIMIS Station at Dixon (#121) x Kc based on ITRC Dry Year ETc for Zone 14 surface irrigation for water balances. Water Needs do not include

[b]Effective Precipitation is estimated as 60% of monthly precipitation greater than 0.5 inch during crop growing season.

Maine Prairie Water District
2015 Agricultural Water Management Plan
2015 Water Balance

TABLE 1
Maine Prairie Water District – 2015 Surface Water Supply
(April through October Period Only)

Month	Federal Ag Water Supply[a] (acre-feet)	Non-Federal Ag Water Supply[b] (acre-feet)	Total (acre-feet)
Method	M-1	M-1	
April	2,413	4,024	6,437
May	2,415	5,301	7,716
June	2,125	6,017	8,142
July	2,931	6,369	9,300
August	2,299	5,260	7,559
September	2,784	4,390	7,174
October	1,190	2,081	3,271
TOTAL	16,157	33,442	49,599

[a]Solano Project Federal Ag Water Supply from District Records.

[b]Non-Federal Ag Water Supply from District Records includes diversions under the District's water rights and contract with Solano Irrigation District.

TABLE 2
Maine Prairie Water District – 2015 Groundwater Supply
(April through October Period Only)

Month	District Groundwater (acre-feet)	Private Groundwater[a] (acre-feet)
Method	M-2	E-2
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
TOTAL	0	0

[a]Estimated by District based on observation and historical information.

Maine Prairie Water District
2015 Agricultural Water Management Plan
2015 Water Balance

TABLE 4

Maine Prairie Water District – 2015 Distribution System Evaporation and Seepage (April through October Period Only)

Canal, Pipeline, Lateral, Reservoir	Length[a] (feet)	Width[b] (feet)	Surface Area (acres)	Precipitation[c] (acre-feet)	Evaporation[d] (acre-feet)	Seepage[e] (acre-feet)	Total (acre-feet)
System 1	69,590	83	133	12	(558)	(1,830)	(2,376)
System 2	36,010	89	74	6	(309)	(470)	(773)
System 3	21,595	119	59	5	(248)	(650)	(893)
TOTAL			265	23	(1,115)	(2,950)	(4,042)

[a]From District statistics.

[b]Average width of the conveyance facilities.

[c]Estimated inflow resulting from precipitation on canals, laterals, and drains during the irrigation season (April-October).

[d]Estimated evaporation from canals, laterals, and drains during the irrigation season.

[e]Estimated seepage from canals, laterals, and drains during the irrigation season.

TABLE 5

Maine Prairie Water District – 2015 Crop Consumptive Use Water Needs (April through October Period Only)

Crop Name	Acres (crop acres)	Crop Et[a] (AF/Ac)	Effective Precipitation[b] (AF/Ac)	Effective Precipitation[b] (acre-feet)	ETAW (acre-feet)	Leaching Requirement (AF/Ac)	Leaching Requirement (acre-feet)
Alfalfa	4,518	3.21	0.02	90	14,429	0.11	497
Almonds	1,296	3.05	0.02	26	3,926	0.18	233
Grasses	79	3.44	0.02	2	271	0.03	2
Olives	100	2.98	0.02	2	296	0.09	9
Pasture	5,567	3.44	0.02	111	19,065	0.03	167
Sudan	395	3.44	0.02	8	1,352	0.07	28
Sunflower	1,019	1.81	0.02	20	1,822	0.06	61
Wheat	243	0.82	0.02	5	194	0.03	7
Crop Acres	13,216			264	41,355		1,004
Total Acres	14,021						

[a]Crop ET (ETc) was calculated as ETo for CIMIS Station at Dixon (#121) x Kc based on ITRC Dry Year ETc for Zone 14 surface irrigation for water balances. Water Needs do not include

[b]Effective Precipitation is estimated as 60% of monthly precipitation greater than 0.5 inch during crop growing season.

Maine Prairie Water District 2013 Water Balance
Evapotranspiration and Effective Precipitation

	2013	March	April	May	June	July	August	September	October	Total Growing Season	March	April	May	June	July	August	September	October	Total Growing Season
	Precipitation	0.87	0.64	0.08	0.14	0.00	0.00	0.64	0.01		0.87	0.64	0.08	0.14	0.00	0.00	0.64	0.01	
	Grass Reference ETo	4.11	7.03	7.81	7.83	8.32	7.06	5.51	4.60	Etc	4.11	7.03	7.81	7.83	8.32	7.06	5.51	4.60	Etc
Crop	*ITRC Representative Crop*	inches	inches	inches	inches	inches	inches	inches	inches	AF	inches	inches	inches	inches	inches	inches	inches	inches	FT
Alfalfa	Alfalfa Hay and Clover	4.35	7.30	6.59	6.75	6.94	6.15	4.68	2.03	3.73	0.22	0.08	0.00	0.00	0.00	0.00	0.08	0.00	0.03
Olives	Avocado	0.00	3.97	6.12	6.71	7.23	6.00	4.51	2.77	3.11	0.00	0.08	0.00	0.00	0.00	0.00	0.08	0.00	0.01
Corn	Corn and Grain Sorghum	0.00	2.21	2.66	6.74	7.92	4.93	0.00	0.00	2.04	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Wheat	Grain and Grain Hay	0.00	7.25	3.96	0.00	0.00	0.00	0.00	0.00	0.93	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Pasture	Pasture and Misc. Grasses	3.92	6.08	7.12	7.29	7.67	6.47	5.00	3.70	3.94	0.22	0.08	0.00	0.00	0.00	0.00	0.08	0.00	0.03
Grasses	Pasture and Misc. Grasses	3.92	6.08	7.12	7.29	7.67	6.47	5.00	3.70	3.94	0.22	0.08	0.00	0.00	0.00	0.00	0.08	0.00	0.03
Sudan	Pasture and Misc. Grasses	0.00	6.08	7.12	7.29	7.67	6.47	5.00	3.70	3.61	0.00	0.08	0.00	0.00	0.00	0.00	0.08	0.00	0.01
Sunflower	Safflower and Sunflower	0.00	6.77	8.29	7.19	1.14	0.00	0.00	0.00	1.95	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Walnuts	Walnuts	0.00	3.25	5.95	8.15	8.56	7.28	4.99	3.11	3.44	0.00	0.08	0.00	0.00	0.00	0.00	0.08	0.00	0.01

Source: Kc values from California Crop and Soil Evapotranspiration, ITRC Report 03-001, January 2003
Notes:

Crop ET (ETc) was calculated as ETo for CIMIS Station at Dixon (#121) x Kc based on ITRC Dry Year ETc for Zone 14 surface irrigation for water balances. Water Needs do not include water required for cultural practices.
Precipitation is the 2013 monthly precipitation reported for the CIMIS Station at Dixon (#121).
Effective precipitation was estimated as 60% of rainfall greater than 0.5 inch per month occurring during the growing season.

Maine Prairie Water District 2014 Water Balance
Evapotranspiration and Effective Precipitation

	2014	April	May	June	July	August	September	October	Total Growing Season	April	May	June	July	August	September	October	Total Growing Season
	Precipitation	1.61	0.00	0.00	0.00	0.00	0.36	0.70		1.61	0.00	0.00	0.00	0.00	0.36	0.70	
	Grass Reference ETo	5.42	7.80	8.55	8.44	6.89	5.39	3.94	Etc	5.42	7.80	8.55	8.44	6.89	5.39	3.94	Etc
Crop	*ITRC Representative Crop*	inches	inches	inches	inches	inches	inches	inches	AF	inches	inches	inches	inches	inches	inches	inches	FT
Alfalfa	Alfalfa Hay and Clover	5.63	6.58	7.37	7.04	6.01	4.57	1.74	3.24	0.67	0.00	0.00	0.00	0.00	0.00	0.12	0.07
Almonds	Almonds	3.59	6.46	7.33	7.21	5.90	4.31	2.41	3.10	0.67	0.00	0.00	0.00	0.00	0.00	0.12	0.07
Olives	Avocado	3.06	6.11	7.32	7.34	5.85	4.41	2.37	3.04	0.67	0.00	0.00	0.00	0.00	0.00	0.12	0.07
Corn	Corn and Grain Sorghum	1.70	2.66	7.36	8.04	4.81	0.00	0.00	2.05	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.06
Wheat	Grain and Grain Hay	5.59	3.96	0.00	0.00	0.00	0.00	0.00	0.80	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.06
Pasture	Pasture and Misc. Grasses	4.68	7.11	7.96	7.78	6.31	4.89	3.17	3.49	0.67	0.00	0.00	0.00	0.00	0.00	0.12	0.07
Grasses	Pasture and Misc. Grasses	4.68	7.11	7.96	7.78	6.31	4.89	3.17	3.49	0.67	0.00	0.00	0.00	0.00	0.00	0.12	0.07
Sudan	Pasture and Misc. Grasses	4.68	7.11	7.96	7.78	6.31	4.89	3.17	3.49	0.67	0.00	0.00	0.00	0.00	0.00	0.12	0.07
Sunflower	Safflower and Sunflower	5.22	8.28	7.85	1.16	0.00	0.00	0.00	1.88	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.06
Tomatoes	Tomatoes and Peppers	1.51	4.01	8.52	6.68	0.48	0.00	0.00	1.77	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.06
Walnuts	Walnuts	2.50	5.94	8.90	8.69	7.10	4.88	2.66	3.39	0.67	0.00	0.00	0.00	0.00	0.00	0.12	0.07

Source: Kc values from California Crop and Soil Evapotranspiration, ITRC Report 03-001, January 2003
Notes:

Crop ET (ETc) was calculated as ETo for CIMIS Station at Dixon (#121) x Kc based on ITRC Dry Year ETc for Zone 14 surface irrigation for water balances. Water Needs do not include water required for cultural practices.
Precipitation is the 2014 monthly precipitation reported for the CIMIS Station at Dixon (#121).
Effective precipitation was estimated as 60% of rainfall greater than 0.5 inch per month occurring during the growing season.

Maine Prairie Water District 2015 Water Balance
Evapotranspiration and Effective Precipitation

	2015	April	May	June	July	August	September	October	Total Growing Season	April	May	June	July	August	September	October	Total Growing Season
	Precipitation	0.90	0.00	0.07	0.00	0.00	0.06	0.03		0.90	0.00	0.07	0.00	0.00	0.06	0.03	
	Grass Reference ETo	6.17	6.86	7.99	8.26	7.16	5.38	4.05	Etc	6.17	6.86	7.99	8.26	7.16	5.38	4.05	Etc
Crop	*ITRC Representative Crop*	inches	inches	inches	inches	inches	inches	inches	AF	inches	inches	inches	inches	inches	inches	inches	FT
Alfalfa	Alfalfa Hay and Clover	6.41	5.79	6.88	6.89	6.24	4.56	1.79	3.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Almonds	Almonds	4.09	5.68	6.85	7.06	6.14	4.31	2.48	3.10	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Olives	Avocado	3.48	5.38	6.84	7.18	6.08	4.40	2.44	3.04	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Corn	Corn and Grain Sorghum	1.94	2.34	6.87	7.87	5.00	0.00	0.00	2.05	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Wheat	Grain and Grain Hay	6.37	3.48	0.00	0.00	0.00	0.00	0.00	0.80	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Pasture	Pasture and Misc. Grasses	5.33	6.25	7.44	7.61	6.56	4.88	3.26	3.49	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Grasses	Pasture and Misc. Grasses	5.33	6.25	7.44	7.61	6.56	4.88	3.26	3.49	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Sudan	Pasture and Misc. Grasses	5.33	6.25	7.44	7.61	6.56	4.88	3.26	3.49	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Sunflower	Safflower and Sunflower	5.94	7.28	7.34	1.13	0.00	0.00	0.00	1.88	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Tomatoes	Tomatoes and Peppers	1.72	3.53	7.96	6.53	0.50	0.00	0.00	1.77	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Walnuts	Walnuts	2.85	5.23	8.32	8.50	7.38	4.87	2.74	3.39	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.02

Source: Kc values from California Crop and Soil Evapotranspiration, ITRC Report 03-001, January 2003
Notes:

Crop ET (ETc) was calculated as ETo for CIMIS Station at Dixon (#121) x Kc based on ITRC Dry Year ETc for Zone 14 surface irrigation for water balances. Water Needs do not include water required for cultural practices.
Precipitation is the 2015 monthly precipitation reported for the CIMIS Station at Dixon (#121).
Effective precipitation was estimated as 60% of rainfall greater than 0.5 inch per month occurring during the growing season.