

# SAN JOAQUIN VALLEY DRAINAGE AUTHORITY

P O Box 2157 Los Banos, CA 93635  
209 826 9696 Phone 209 826 9698 Fax

June 30, 2012

Pamela Creedon, Executive Officer  
Central Valley Regional Water Quality Control Board  
11020 Sun Center Drive #200  
Rancho Cordova, CA. 95670-6114

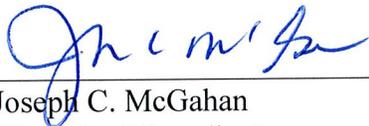
Subject: Westside San Joaquin River Watershed Coalition  
Focused Plan 3 Performance Goals

Dear Pamela,

Attached are the Performance Goals for Focused Plan 3, covering the Salt Slough subwatershed.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment for violations.

If you should have any questions on the information submitted in this report, please give me a call directly at 559-582-9237.



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Joseph C. McGahan  
Watershed Coordinator  
Westside San Joaquin River Watershed Coalition

# **San Joaquin Valley Drainage Authority**

## **Westside San Joaquin River Watershed Coalition**

### **Management Practice Report**

#### **Performance Goals**

Salt Slough Watershed including Salt Slough at Lander Avenue, Salt Slough at Sand Dam, and  
Poso Slough

**June 30, 2012**

Prepared by:  
Summers Engineering, Inc.  
Consulting Engineers  
Hanford California

In September 2011, the San Joaquin Valley Drainage Authority (SJVDA) submitted a Focused Watershed Management Plan (Plan or FP3) for Salt Slough Subwatershed upstream of Lander Avenue for the Westside San Joaquin River Watershed Coalition (Westside Coalition). This watershed includes flows monitored at Salt Slough at Lander Avenue, Salt Slough at Sand Dam, and Poso Slough at Indiana Avenue. As a component of the Plan, management practice performance goals (milestones) are described here, along with a schedule.

The general goals addressed in Section 5 of the Focused Plan for Salt Slough subwatershed are listed below. The Westside Coalition believes these actions will directly and indirectly result in improvements of water quality.

- Install high-efficiency irrigation systems such as sprinkler or drip irrigation, tailwater recirculation, gated pipes, shorter runs, etc, where warranted by the crops that are grown.
- Construct tailwater ponds to intercept and hold direct tailwater discharges.
- Address potential aerial overspray by identifying the sensitive regions for all aerial applicators.
- Reduce use of pesticides, or incorporate use of pesticides that are less likely to be transported to the waters of the State, or which breakdown quickly and are less likely to impact water quality.
- Calibrate spray rigs utilized on farmed acres to address possible overspray.

As a mechanism to track implementation of general goals, Long-term Goals and associated milestones have been developed. The Long-term Goals represent the ultimate goal as outlined in the Management Plan – General Approach. Milestones function as the steps by which progress towards the Long-term Goals are tracked. These are described below and summarized in **Table 1: FP III Performance Goals**.

**Long Term Goal: Implement Focuses Plan III for eliminating toxicity and pesticide detections by increasing grower participation and implementing additional management practices.**

The Westside Coalition will target outreach efforts within the Focused Plan III area for the purpose of increasing grower awareness of the water quality issues within the targeted water bodies. The desired outcome of this Long Term Goal is to (1) Address potential overspray by identifying the sensitive regions for all applicators; (2) Submit survey form to growers that inquires about management practices relevant to Tier 1 parameters; (3) Conduct grower outreach in the form of group meetings, tailgate meetings; (4) Determine effective management practices and develop next steps (Performance Goals).

- **Milestone 1: Address potential overspray by identifying the sensitive regions for all applicators.** The Westside Coalition shall produce maps of the Salt Slough watershed and each of the subwatersheds showing the estimated subwatershed boundary, primary tributary, and major drains. For each subwatershed, the Coalition will report the number of applicators contacted and the number of miles of sensitive regions. These maps will be provided to at least 5 ground and aerial application companies that are known to operate in the individual subwatersheds, with the intention of increasing awareness of water quality issues to all applicators.

- **Milestone 2: Submit survey form to growers that inquires about management practices relevant to Tier 1 parameters.** The Westside Coalition will collect management practice surveys from all of the member growers within the Salt Slough watershed (Lander Ave, Sand Dam, Indiana Ave.), estimated at 867 farmed parcels. The target of this milestone is to collect 100% of the surveys and summarize the acquired data by the target dates listed in the Performance Goal Table. A summary of the survey data acquired as of June 30, 2012 is included in **Table 2**. This summary table will be updated for each subwatershed once all of the surveys have been received and processed.
- **Milestone 3: Conduct grower outreach in the form of group meetings and tailgate meetings.** The Westside Coalition will use the information provided in Milestones 2 and 3 as talking points in group meetings (workshops, etc.) and one-on-one tailgate meetings in the Focused Plan area. Group meetings will generally include landowners and operators with common interests either based on commodity or location. Tailgate meetings will be held with the individual growers and key personnel at the grower's farm. The coalition will provide the number for group meetings and the number of individual meetings held during the reporting period. The target is to conduct at least 5 outreach meeting per year (including both group and tailgate meetings).
- **Milestone 4: Determine effective management practices and develop next steps (Performance Goals).** Data provided through the management practice inventory will indicate what management practices are prevalent and where implementation of additional or expansion of existing practices will improve water quality. The specific management practice goals are listed in **Table 2** (partial data). Although the data is partially complete, the Regional Board staff and Coalition believe that is sufficient to complete the development of the Performance Goals.

**Long Term Goal: Evaluate management practices effectiveness.** The Westside Coalition will encourage growers to adopt management practices that will reduce or eliminate the discharge of agricultural drain water and other constituents of concern. The desired outcome of this Long Term Goal is to (1) Calibrate spray rigs; (2) increase the number of tailwater ponds; (3) Increase the use of high-efficiency irrigation systems; (4) Secure funding sources to implement management practices; (5) Collect and report monitoring data results.

- **Milestone 1: Calibrate spray rigs utilized on farmed acres to address possible overspray.** The Coalition will provide the number of spray rigs calibrated and the number and percentage of acres affected. As a means to reduce over-spray, the Westside Coalition offers spray rig calibration services to member growers. This is an on-going service with a goal of performing 5 calibrations each year.
- **Milestone 2: Construct tailwater ponds to intercept and hold direct tailwater discharges.** The Westside Coalition will encourage growers to install sediment basins to intercept tailwater and reduce the load of sediment and associated constituents of concern discharged from the field. The number and acreage served by sediment basins will be specific to each subwatershed, determined by data collected through management practice surveys and other information. Specific to the Salt Slough watershed, sediment toxicity and high levels of suspended solids are not a chronic problem, with the exception of Poso Slough, which has had periodically high total suspended solid measurements and some sediment toxicity. Based on the available survey results, sediment basins are virtually non-existent in the watershed. For the Salt Slough watershed, the Westside

Coalition has set a goal of tailwater ponds affecting 10% (affecting approximately 5,400 acres) of the surface irrigated acreage within each subwatershed by March 2013. The Westside Coalition Tailwater Pond grant funds will be targeted towards this region. The Coalition will map the tailwater ponds and provide them in the SAMR.

- **Milestone 3: Install high-efficiency irrigation systems such as sprinkler or drip irrigation, tailwater recirculation, gated pipes, shorter runs, etc., where warranted by the crops that are grown.** The Westside Coalition will encourage growers to adopt efficient irrigation practices to reduce the volume of tailwater produced. Irrigation practices are dependant on the specific crops grown and the grower's typical crop rotation. The long term goal is to have high-efficiency irrigation systems installed on 50% of the watershed acreage (approximately 13,000 acres) of appropriate crops by March 2014 throughout the Coalition. The Westside Coalition, through the two districts that share the Salt Slough watershed (San Luis Canal Company and Central California Irrigation District) will help connect growers with funding assistance programs and encourage improvements. Note that installation of these systems will be implemented by the growers and is driven by economic factors (such as market conditions and available funding) and water supply conditions. The number of growers that installed systems through these programs and the number of acres affected, including percentages, will be tracked and reported. Estimated acreages of new high-efficiency irrigation systems will be reported annually in the November SAMR.
- **Milestone 4: Secure funding sources to implement MPs.** The Coalition will incorporate existing grant programs and pursue new programs to financially assist growers with implementing management practices. Grant funds will come from a variety of programs including Coalition and District funded programs, state funded programs (such as Proposition 84) and federal programs (such as the EQUIP program). The Coalition will track the number of projects funded from each program as well as the acres affected and report these results in the SAMR. The Coalition will target its internal grant funds to the region with the intention of expending 50% of those funds within this region. Grant funds from other sources will be used to implement at least 5 projects within this region.
- **Milestone 5: Collect and report monitoring data results.** Track and report annual pesticide usage and measured exceedances in SAMRs. The number of tests, detections and exceedances, including percentages, will be reported in the SAMR and updated during the quarterly meetings with the Regional Board. This milestone will be incorporated with other outreach efforts. The target is to report a decrease in the number of detections.

**Long Term Goal: Reduce use of pesticides, or incorporate use of pesticides that are less likely to be transported to the waters of the State, or which breakdown quickly and are less likely to impact water quality.** The Westside Coalition will encourage responsible use of pesticides by informing growers of pesticide exceedance through grower outreach. Annual pesticide use through pesticide use reports (PUR data) will be tracked and reported in the SAMRs. It should be noted that PUR data is often several months delayed (sometimes more than 6 months) and has limited usefulness in detailed evaluations. In addition, evaluation of the most recent 2011/2012 data shows large quantities of duplicate records and incorrect data entry

which may significantly undermine the data usefulness. The Westside Coalition will continue to review PUR data with these limitations in mind.

- **Milestone 1: Collect pesticide use data.** Incorporate pesticide use and exceedance data with outreach meetings to inform growers, applicators, and pesticide control advisors of current water quality issues related to pesticides each year. The Coalition will present the number of acres treated by each material in each subwatershed, the change in acres treated (including percent change), and the name of alternative pesticides used to the extent that information is available.

**Table 1: Focused Plan III Performance Goals**

Long Term Goals	Milestones	Output Indicators	Outcome Indicators	Targets
<p>1 Increasing grower participation and implementing additional management practices.</p>	<p>Address potential overspray by identifying the sensitive regions for all applicators.</p>	<p>1. No. of applicators contacted. 2. No. of miles of sensitive regions</p>	<p>1. Provide a detailed watershed map of the subwatersheds.</p>	<p>1. Contact 5 applicators.</p>
	<p>Submit survey form to growers that inquires about management practices relevant to Tier 1 parameters</p>	<p>1. Develop survey document. 2. No. of growers to survey. 3. No. of growers surveyed.</p>	<p>1. Percent of surveys submitted to growers. 2. Percent of survey responses back from growers.</p>	<p>1. Submit survey form to Regional Board by 9/30/11. 2. Submit surveys to 100% of growers within site subwatershed by 12/21/11. 3. Receive 100% of survey responses back from growers by 7/31/12. 4. Finalize survey findings and report on management practice baseline and provide a summary of available by 6/15/12, and complete data by 8/31/12. 5. SAMR Report on management practice baseline and provide a summary of existing management practices by 11/30 and 6/15. Summary to include: historical &amp; known MPs, changes from previous update, summary of affected acres, may include crop/irrigation type.</p>
	<p>Conduct grower outreach in the form of group meetings, tailgate meetings.</p>	<p>1. Growers to have broad understanding of better management practices and its effect on water quality.</p>	<p>1. No. of group meetings. 2. No. of individual meetings.</p>	<p>1. Report grower outreach in SAMR. 2. Conduct 5 outreach meetings annually.</p>
	<p>Determine effective management practices and develop next steps (Performance Goals)</p>	<p>1. Develop management practices that can be implemented. 2. Detailed plan for next steps and communicate to Regional Board.</p>	<p>1. Prepare Performance Goals with Regional Board staff</p>	<p>1. Submit/finalize Performance Goals by 6/30/12</p>
<p>2 Evaluate management practices effectiveness</p>	<p>Calibrate spray rigs utilized on farmed acres to address possible overspray.</p>	<p>1. No. of spray rigs calibrated. 2. No. of acres affected</p>	<p>1. Percent of acres affected.</p>	<p>1. Calibrate 5 spray rigs.</p>
	<p>Construct tailwater ponds to intercept and hold direct tailwater discharges.</p>	<p>1. No. of tailwater ponds constructed.</p>	<p>1. Map tailwater ponds and irrigation methods</p>	<p>1. Construct tailwater ponds affecting 10% of the watershed surface irrigated acreage.</p>
	<p>Install high-efficiency irrigation systems such as sprinkler or drip irrigation, tailwater recirculation, gated pipes, shorter runs, etc., where warranted by the crops that are grown.</p>	<p>1. No. of growers that will install high-efficiency irrigation systems such as sprinkler or drip irrigation, tailwater recirculation, gated pipes, shorter runs, etc. 2. No. of acres affected.</p>	<p>1. Percent of growers installing new/additional management practices. 2. Percent of acres affected.</p>	<p>1. Affect 50% of acres March 2014.</p>
	<p>Secure funding sources to implement MPs</p>	<p>1. Distribute grant funds annually to implement management practices.</p>	<p>1. \$ amount of grant funds distributed. 2. # projects funded</p>	<p>1. Attempt to distribute 50% of internal tailwater grant funds annually to growers. 2. Fund at least 5 projects annually.</p>
	<p>Collect and report monitoring data results</p>	<p>1. No. of tests conducted. 2. No. of detections observed. 3. No. of exceedances observed.</p>	<p>1. Percent decrease in detections. 2. Percent decrease in exceedances.</p>	<p>1. SAMR report twice annually - 6/15 and 11/30 2. Show a decrease in detections.</p>
<p>3 Reduce use of pesticides, or incorporate use of pesticides that are less likely to be transported to the waters of the State, or which breakdown quickly and are less likely to impact water quality.</p>	<p>Collect pesticide use data</p>	<p>1. No. of acres treated with pesticide in each subwatershed. 2. Reduction in acres treated. 3. Name of alternative pesticides used.</p>	<p>1. Reduction in acreage and percent treated.</p>	<p>1. SAMR report twice annually - 6/15 and 11/30</p>

**Table 2 - Management Practice Survey Summary (Partial Data)**

	Salt Slough at Lander Avenue*		Salt Slough at Sand Dam*		Poso Slough at Indiana Ave.*		Entire Salt Slough Watershed**	
	Acres	%	Acres	%	Acres	%	Acres	%
Survey Area	10,245		43,313		11,243		64,800	
Area Returned	8,404	82%	35,972	83%	9,485	84%	53,861	83%
Surveys Sent	99		611		157		867	
Surveys Returned	71	72%	480	79%	125	80%	676	78%
Irrigated	8,344	99%	35,783	99%	9,434	99%	53,561	99%
Furrow/Flood (% Irrig. Ac.)	6,711	80%	27,758	78%	5,981	63%	40,450	76%
Drip/Micro/Sprinkler (% Irrig. Ac.)	1,574	19%	7,836	22%	3,402	36%	12,811	24%
Fallow/Non Irrigated (% Irrig. Ac.)	60	0.7%	189	0.5%	51	0.5%	300	0.6%
Mix of Irrigation Methods (% Irrig. Ac.)	-	0.0%	-	0.0%	-	0.0%	-	0.0%
Tree Crops (% Irrig. Ac.)	350	4.2%	398	1.1%	196	2.1%	944	1.8%
Field Crops (% Irrig. Ac.)	7,935	95%	35,316	99%	9,182	97%	52,432	98%
Open / Other (% Irrig. Ac.)	60	0.7%	70	0.2%	56	0.6%	186	0.3%
Sedimentation Ponds (% Field Crops)	-	0.0%	14	0.0%	-	0.0%	14	0.0%
Tile System (% Irrig. Ac.)	216	2.6%	3,025	8.5%	-	0.0%	3,241	6.1%
Septic Tank (% Irrig. Ac.)	951	11%	2,859	8%	451	5%	4,261	8%
Use of PAM (% Irrig. Ac.)	-	0.0%	671	1.9%	38	0.4%	709	1.3%
Tailwater Leaves Property (% Irrig. Ac.)	7,721	93%	33,206	93%	7,272	77%	48,199	90%
Stormwater Leaves Property (% Irrig. Ac.)	7,864	94%	33,359	93%	8,341	88%	49,564	93%
Berm Spray Usage (% Irrig. Ac.)	1,109	13%	1,174	3%	526	6%	2,809	5%
Manure Usage (% Irrig. Ac.)	4,025	48%	16,788	47%	3,536	37%	24,349	45%

\* Geographically, the Salt Slough at Lander Avenue subwatershed is inclusive of the Salt Slough at Sand Dam subwatershed, which is inclusive of the Poso Slough subwatershed. Data presented is exclusive to each subwatershed without regional overlap. The Salt Slough at Sand Dam data does not include data from lands in the Poso Slough subwatershed and the Salt Slough at Lander Avenue data does not include data from lands within the Salt Slough at Sand Dam subwatershed.

\*\* Reflects management practices on lands upstream of Salt Slough at Lander Avenue inclusive of Salt Slough at Sand Dam and Poso Slough.