

SAN JOAQUIN VALLEY DRAINAGE AUTHORITY

Westside San Joaquin River Watershed Coalition

**Focused Watershed Management Plan IV
Blewett Drain and Marshall Road Drain**

December 20, 2013

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Section 1: Background and Need

In accordance with the Westside San Joaquin River Watershed Coalition (Westside Coalition or Coalition) Management Plan-General Approach dated October 23, 2008, a focused water quality improvement plan has been developed within specific subwatersheds. This focused effort will address Tier 1 Management Plan Priorities (aquatic toxicity, pesticides, sediment toxicity and sediment discharge) within the Blewett Drain and Marshall Road Drain Subwatersheds based on monitoring results from samples collected at Blewett Drain at Highway 132 and Marshall Road Drain at River Road. **Figure 1** shows the location of these two subwatersheds within the Coalition. The focused effort will address the specific details for eight requirements listed below for Management Plans identified in the Monitoring and Reporting Program (MRP) Order No. R5-2008-0831. These requirements are addressed generally, in the Management Plan – General Approach, and are being addressed in a more specific and complete way for the Focused Watershed Management Plan IV (Focused Plan IV) described here.

1. Identify irrigated agriculture source -- general practice or specific location that may be the cause of the water quality problem, or a study design to determine the source.
2. Identify management practices to be implemented to address the exceedances.
3. Develop a management practice implementation schedule. Implementation may occur through another Regional Water Board (Regional Board or Board) regulatory program designed to address the specific exceedances.
4. Develop management practice performance goals with a schedule.
5. Develop a constituent-specific monitoring schedule.
6. Develop a process and schedule for evaluating management practice effectiveness.
7. Identify the participants and Coalition Group(s) that will implement the Management Plan.
8. Identify a routine schedule of reporting to the Regional Water Board.

The focused effort includes (1) a detailed watershed map of the subwatersheds, (2) determinations of pesticide use, (3) determination of management practice (MP) implementation, (4) intensified outreach to growers, (5) approach to implement additional MPs to address exceedances, and (6) monitoring to determine MP effectiveness.

The Blewett Drain Subwatershed: The Blewett Drain subwatershed is located within the Patterson subarea of the Westside Coalition and is the northern most subwatershed within the Coalition. The Blewett Drain is monitored at its discharge point to the San Joaquin River, adjacent to and south of the Highway 132 Bridge (VH132). The Blewett Drain subwatershed includes approximately 1,100 acres that drain through the monitoring point and an additional 970 acres of similar crop land that drain through a separate and unnamed drain. Both of these areas are considered to be represented by the monitoring data collected at the Blewett Drain monitoring site. Crops within the Blewett Drain Subwatershed are a mix of alfalfa, field crops, and almonds. **Figure 2** shows the Blewett Drain subwatershed boundary, including the represented area. With the exception of a small number of farm shops and rural residences, all of the Blewett Drain Subwatershed is actively farmed.

Based on the subwatershed boundary, portions of Del Puerto Water District, El Solyo Water District, West Stanislaus Irrigation District and several individual growers likely discharge to Blewett Drain or the represented drain.

The Marshall Road Drain Subwatershed: The Marshall Road Drain subwatershed is located within the Patterson subarea of the Westside Coalition, approximately five miles south of the City of Patterson. The Marshall Road Drain is an underground piped drain that runs parallel to Marshall Road and discharges directly to the San Joaquin River at the end of Marshall Road. The drain was installed to transmit both agricultural surface flows and stormwater runoff. The Westside Coalition monitors this drain (MRDRR) at a flow control vault on the West flood levee of the San Joaquin River. Based on current available information, the subwatershed includes an estimated 10,000 acres. Crops within the subwatershed are a mix of alfalfa, field crops, and almonds. In addition to the irrigated agriculture, there are a number of non-farmed properties, including rural

residences, farm shops and yards, the Crows Landing Airfield (owned by NASA but generally not used), and the Southside Reservoir¹.

The Marshall Road Drain monitoring site is considered to be a representative site for the Spanish Land Grant Drain (Spanish Drain), which is adjacent to and southerly of the Marshall Road Drain subwatershed. Like the Marshall Road Drain, the Spanish Drain is a buried pipe drain that captures both tailwater and stormwater runoff and serves approximately 4,300 acres. Many of the growers within the Spanish Drain subwatershed also farm within the Marshall Road Drain subwatershed and cropping patterns and cultural practices are generally the same across both. Growers within this region are a combination of individual coalition members, and district members through Central California Irrigation District, Patterson Irrigation District, Twin Oaks Irrigation District and Del Puerto Water District.

Figure 3 shows the Marshall Road Drain and Spanish Drain subwatersheds.

Historic Data. Marshall Road Drain has been monitored by the Westside Coalition since the beginning of the Coalition's monitoring program (July 2004) and has been monitored for pesticides, aquatic toxicity, and general chemistry constituents. Blewett Drain was added to the Westside Coalition's monitoring program in 2008. **Table 1** lists the exceedances within both Subwatersheds that require Management Plan action under the MRP Order.

¹ The Southside Reservoir was installed by Patterson Irrigation District in 2002 to capture and recirculate drainage flows from the Marshall Road Drain.

Table 1: Blewett Drain and Marshall Road Drain Subwatersheds 2004 through 2012 Exceedances Requiring Management Plan Action.

Constituent	Blewett Drain Count of Exceedances	Marshall Road Drain Count of Exceedances
Water Flea Toxicity	1*	3
Algae Toxicity	0	6
Sediment Toxicity	3	NA**
Chlordane	0	3
Chlorpyrifos	8	18
Malathion	0*	3
Diazinon	0	2
Dimethoate	0	3
Diuron	2	6
DDE/DDT	2/1*	8/7
E. Coli	11	26
Ammonia (as N)	2	4
EC/TDS	16/10	36/42
D.O.	22	30
pH	6	9
Lead (Total)	6	7
Nickel (Total)	2	2
Zinc (Total)	2	2

* Does not require Management Plan Action.

** Piped drains are not tested for sediment toxicity because it is unsafe to sample.

Section 2: Source Identification

- Aquatic Toxicity and Pesticides: Although significant aquatic toxicity is not common to either site (one exceedance of water flea toxicity at each site in the last three years), there have been some frequency of pesticide exceedances at both sites including chlorpyrifos, diuron, and malathion, as well as legacy

insecticides (DDE and DDT), which are expected to have been carried off in agricultural tailwater discharges from ground or aerial applications.

- **Sediment Toxicity:** Marshall Road Drain is a buried pipeline and any sediment contained within cannot be safely sampled. Because of this, sediment toxicity is not tested at Marshall Road Drain. Blewett Drain has exhibited significant sediment toxicity with fairly regular frequency. In all cases, follow-up analyses indicates that sediment toxicity was caused by a combination of pesticides including pyrethroids and chlorpyrifos, attached to the sediment and transported by agricultural runoff.
- **EC/TDS:** EC and TDS are both measurements of dissolved salts in water. Although salinity exceedances are often measured, it should be noted that exceedances are also often measured in the source water used by growers for irrigation. Surface water supplies from both the San Joaquin River and Delta-Mendota Canal often contain dissolved salts in excess of the water quality criteria. In addition, groundwater pumping is often used to supplement surface supplies (particularly in dry years). Groundwater quality in the region is generally fair to poor in terms of water quality and would contribute to an increase in salinity in tailwater.
- **E. coli:** E. coli are bacteria that are present in fecal discharges from warm blooded animals and is found throughout the Westside Coalition. The source for these detections could include wildlife, managed animals (including goats, sheep, cattle, and others), rural residence septic systems, manure applications, as well as self-sustaining cultures in the waterways alone.
- **Dissolved Oxygen (DO) and pH:** Neither the source nor cause of DO and pH exceedances are known at this time.

The activities contained within this Focused Plan will target activities related to reducing pesticides exceedances, sediment discharge and the related toxicity. Other constituents are lower tier priorities as identified in the Management Plan General Approach.

In the fall of 2013, a management practice survey was circulated throughout the subwatersheds and representative subwatersheds for the purpose of identifying existing grower management practices as they relate to crops, irrigation practices, and pest management practices.

Section 3: Identification of Management Practices to be Implemented

- **Pesticide Use:** Pesticide use, including metal-based pesticides or fungicides (such as copper salts), within the watershed will be obtained from the Stanislaus County Agriculture Commissioner and/or the Department of Pesticide Regulation. The primary and highest-priority pesticides for evaluation will be those which have exceeded water quality triggers in the watersheds (chlorpyrifos, diuron, and malathion). Generally this data is available approximately six to twelve months in arrears and may not be complete. Growers will also be asked about their pesticide use and application methods through management practice surveys. Because pesticide use practices vary from year to year based on pest pressures, cropping patterns, and economics, coupled with the delay in data availability, use of this data will be limited to trend analysis. As with other pesticide use data, this will be summarized in the Semi-annual Reports submitted by the Westside Coalition.
- **Baseline Management Practice Inventory:** A grower survey will be distributed to all agricultural growers in the priority subwatersheds. The surveys will be mailed to their residences, or delivered to them on site. The survey results will be used to develop a management practice (MP) inventory. This inventory will document current applicable MPs implemented within the focused subwatersheds. Data will be collected from water districts, government agencies as well as individual growers. The goal will be to characterize as accurately as possible the current level of MP implementation within the subwatershed areas but not necessarily to document the specific locations of every MP implemented. A description of the

completeness or overall response of the survey to date, with summary information, will be included in the semi-annual reports. Completion of the MP survey shall be considered a condition of membership with the Coalition. The Coalition sets the goal of 100% completeness for the survey returns, and failure to meet this completeness goal will be discussed with the Regional Board staff. Surveys will be compiled as they are received. The Westside Coalition sets a target to receive the surveys as described in the Performance Goals (**Attachment 2**). The target time-frames for returning the surveys back to the Westside Coalition are: 50% of the surveys to be returned by 3 January 2014, 75% by 15 June 2014, and 100% by 30 September 2014. The MP survey is included in **Attachment 1**. This information will be used to determine what practices are currently in place, so that identification of additional MPs necessary to improve water quality can be clarified and implemented. Delinquent surveys will be prioritized based on crop type and number of acres.

Section 4: Management Practice Implementation

A key goal of this Focused Plan is to encourage growers to implement management practices that will reduce or eliminate water quality impacts from agricultural discharges. Although the management practice inventory will provide detailed information about existing management practices, the Coalition will use on-going outreach efforts to inform growers about appropriate management practices. The semi-annual reports will summarize results of the management practice inventory, as well as key outreach efforts. The summary will include an ongoing and updated, detailed description or table documenting known or anticipated new management practices, historical practices, and changes to the previous update, including a summary of affected acres, and may include other pertinent information such as crop type, irrigation type or other details.

- Outreach to Growers: The Westside Coalition will work through the member districts to outreach to the growers on an on-going basis. Member districts within the Marshall Road subwatershed include Patterson Irrigation District, Twin Oaks Irrigation District, Central California Irrigation Districts, Del Puerto Water District,

as well as several individual members. Member districts within the Blewett Drain subwatershed are Del Puerto Water District, El Solyo Water District, West Stanislaus Irrigation District and several individual members. Because of the large number of individual (non-district) members, outreach has (and will) include individual field meetings, drive-through reconnaissance surveys, stakeholder group meetings and district organized workshops. The Coalition will maintain records of attendance through sign in sheets and meeting notes. This information will be included in the appropriate section of the SAMR. The Coalition will prioritize contact with individual growers that are likely or potential contributors to exceedances (such as growers that routinely discharge tail water or aerial applicators) as the highest priority.

At least five workshops and individual meetings will occur each year, most of which will occur in the winter and spring. The discussions will focus on the circumstances specific to each audience. For example, discussions with alfalfa growers will focus on chlorpyrifos exceedances, irrigation timing, and tailwater control. Tailgate/individual discussions will also focus on the water quality issues specific to that individual grower's subwatershed and a review of management practices that may result in improvements. Appropriate outreach topics and the correct audience list for the information will be ongoing as baseline survey information is incrementally finalized according to the Performance Goal Schedule. This survey collection process is expected to be completed by September 30, 2014, and progress will be communicated to the Regional Board staff and included in semi-annual monitoring reports.

- **Implementation Strategy:** Based on the known water quality issues and supported by the findings from the surveys and other outreach, the Westside Coalition will determine which management practices will be appropriate for specific locations within the priority watersheds, and will develop an approach to ensure that the best MPs are implemented. Part of this approach will include the pursuit of funding sources to assist growers and districts with the capital

resources that may be necessary for specific constructed management practices (like irrigation system improvement). These funding sources may be specific to sub-watersheds or generally applicable to the entire coalition. This approach will be described and communicated to the appropriate Coalition members and reported to the Regional Board in the semi-annual monitoring report.

- **Management Practices:** A management practice “toolbox” has been developed for growers within the subwatersheds. The tools included focus on tailwater management and specific pesticides (including chlorpyrifos). Information regarding pesticide application methods, equipment calibration and communications with aerial applicators will also be described to the appropriate growers and landowners. Since the primary constituents of concern are dissolved within the tailwater or adsorbed to soil particles, management practices are expected to focus on tailwater management and reduction which could include improved irrigation systems, tailwater ponds, tailwater return systems, and regional drainage return systems. The Coalition is in the processes of mapping the location of tailwater ponds and irrigation methods within the focused subwatershed and will update this information in the appropriate section of the next June 2014 SAMR.

Section 5: Management Practice Performance Goals and Schedule

The performance goals for this management plan are both water quality based and MP implementation based. The MP implementation performance goal will hinge on the information that is derived incrementally according to the Performance Goal schedule. Information on management practice implementation will be provided to the Regional Board and included in the following semi-annual monitoring reports. Additional MPs to be implemented will be identified, and this information will be continuously updated, and periodically reported to the Regional Board in the ongoing semi-annual reports. Generally speaking these goals will be as follows.

- 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.
- Address potential aerial overspray by identifying the sensitive regions for all aerial applicators.
- Construct tailwater ponds to intercept and hold direct tailwater discharges.
- Construct regional drainage return systems that reduce the volume of drain water discharged to the San Joaquin River.

It must be noted that these are long term goals where the management practices will be implemented annually. Implementation is expected to continue through 2016 for the more expensive MPs such as sedimentation ponds and tailwater return systems. The most appropriate measures will be incrementally finalized during and subsequent to the initial management practice survey findings. The Focused Plan will be a living document that will be re-evaluated in conjunction with the Regional Board staff, and re-prioritized as effectiveness of the activities are re-evaluated.

The water quality goals for Project Goal 1 of the Focused Plan Performance Goals in subwatersheds are as follows.

- Eliminate aquatic toxicity.
- Eliminate sediment toxicity (Blewett Drain subwatershed)
- Eliminate detection of pesticides.

Progress toward meeting performance goals will be evaluated by the Coalition and Regional Board staff at meetings held quarterly and reported in the SAMR. Any necessary changes to the strategy, activities or goals of the Focused Watershed Management Plan will be identified at these meetings. The notes of the meetings will be recorded and archived.

Performance goals for the Focused Plan will be based on implementation of management practices and information collected from the surveys. More details will be

developed for MP implementation during the incremental completion of the survey and survey assessment which will describe the baseline MP information. Focused Plan Performance Goals are presented in **Attachment 2**.

Section 6: Constituent Specific Monitoring

The Westside Coalition has implemented a Monitoring and Reporting Program for the purpose of complying with the Irrigated Lands Regulatory Program and to support the activities of the Management Plan, including the focused plan. This monitoring and reporting plan includes flexible provisions for Special Project Monitoring that will allow the Coalition to adapt to changing field conditions, by submitting revisions to the Management Plan (which must be approved by the Executive Officer) that can document changes in the frequency, locations, or constituents related to Special Project Monitoring. These results will provide input on the impact of specific management activities. The monitoring schedule for the Focused Plan will be monthly in accordance with the Westside Coalition MRP Order routine monitoring.

Section 7: Process for Evaluating Management Practice Effectiveness

The effectiveness of management practices implementation will be conducted through the Performance Goal measures identified in **Attachment 2** and progress will be reported in the Semi-annual reports. The ultimate goal of this Focused Plan is to meet the water quality goals identified for the Irrigated Lands Regulatory Program, which will be reflected in the water quality results and management practice implementation reported in the Semi-annual Monitoring Report.

Section 8: Identification of Implementing Participants

The Westside Coalition will work through the member districts and contact individual members directly for grower outreach. Member districts in these subwatersheds include Patterson Irrigation District, West Stanislaus Irrigation District, Central California Irrigation Districts, Del Puerto Water District, and El Solyo Water District. Individual growers will be expected to cooperate with the MP recommendations that will be

provided to them. Cooperation by growers in the efforts to achieve water quality goals is a condition of Coalition membership.

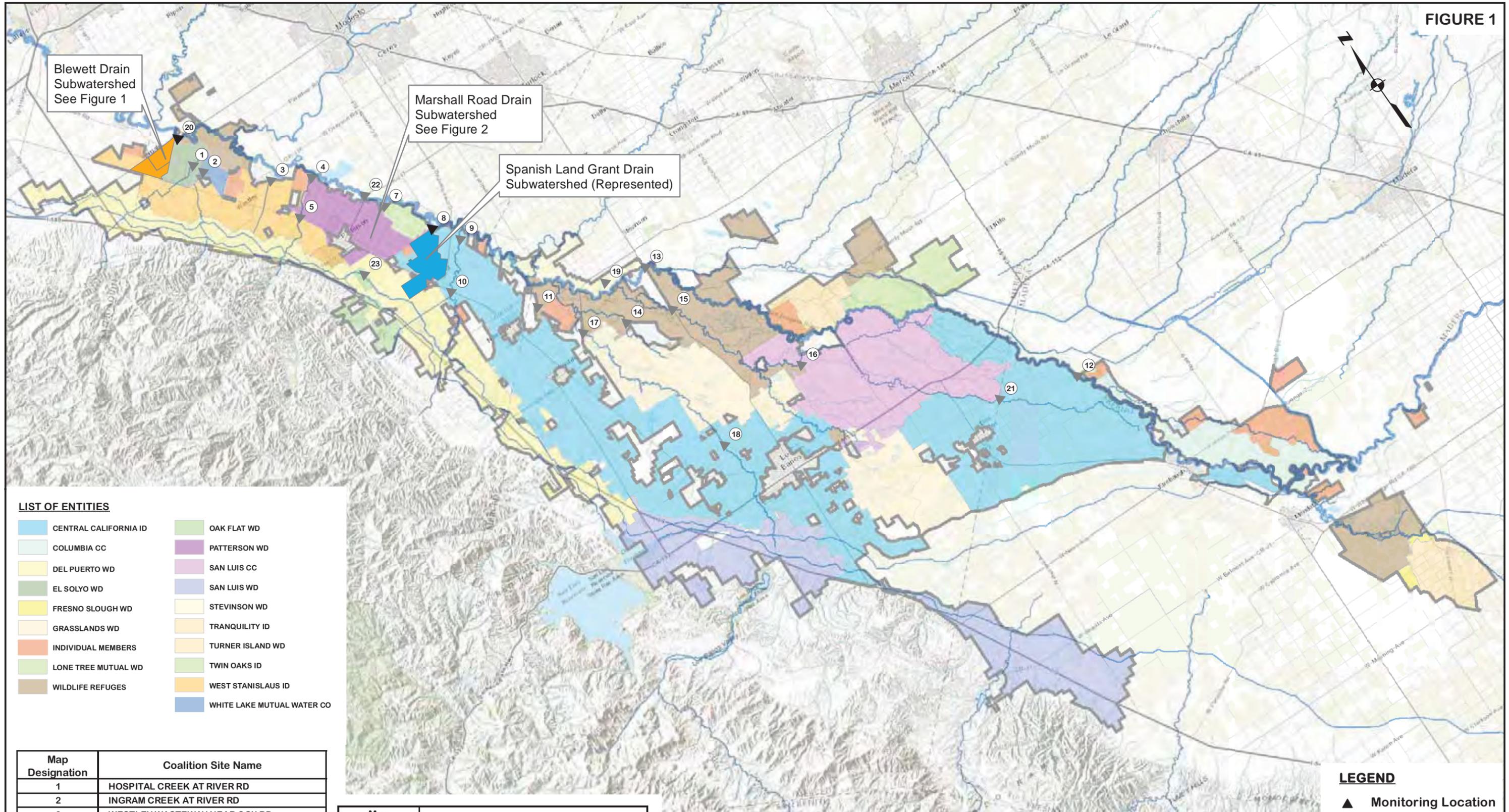
Section 9: Schedule for Reporting

All reports to the Management Plan and Focused Watershed Plan will be included within the Westside Coalition's semi-annual monitoring reports. Quarterly meetings will be held with Regional Board staff to discuss ongoing activities and to make decisions regarding necessary changes to the Management Plan approach. The Semi-annual Monitoring Reports will include a discussion of the Focused Watershed Plan activities, including:

- A discussion of monitoring results
- Performance Goal status
- A summary of the Management Practice Survey Results
- Updated subwatershed maps
- Activities related to the CVSALTS, Dissolved Oxygen Study, the San Joaquin River Chlorpyrifos and Diazinon TMDL program, and other related Basin Plan programs.

Figures

FIGURE 1



LIST OF ENTITIES

- | | |
|-----------------------|----------------------------|
| CENTRAL CALIFORNIA ID | OAK FLAT WD |
| COLUMBIA CC | PATTERSON WD |
| DEL PUERTO WD | SAN LUIS CC |
| EL SOLYO WD | SAN LUIS WD |
| FRESNO SLOUGH WD | STEVINSON WD |
| GRASSLANDS WD | TRANQUILITY ID |
| INDIVIDUAL MEMBERS | TURNER ISLAND WD |
| LONE TREE MUTUAL WD | TWIN OAKS ID |
| WILDLIFE REFUGES | WEST STANISLAUS ID |
| | WHITE LAKE MUTUAL WATER CO |

Map Designation	Coalition Site Name
1	HOSPITAL CREEK AT RIVER RD
2	INGRAM CREEK AT RIVER RD
3	WESTLEY WASTEWAY NEAR COX RD
4	DEL PUERTO CREEK NEAR COX RD
5	DEL PUERTO CREEK NEAR HWY 33
7	ROMONA LAKE NEAR FIG AVE
8	MARSHALL RD DRAIN NEAR RIVER RD
9	ORESTIMBA CREEK AT RIVER RD
10	ORESTIMBA CREEK AT HWY 33
11	NEWMAN WASTEWAY NEAR HILLS FERRY RD
12	SJR AT SAC DAM
13	SJR AT LANDER AVE
14	MUD SLOUGH U/S OF SAN LUIS DRAIN

Map Designation	Coalition Site Name
15	SALT SLOUGH AT LANDER AVE
16	SALT SLOUGH AT SAND DAM
17	LOS BANOS CREEK AT HWY 140
18	LOS BANOS CREEK AT CHINA CAMP RD
19	TURNER SLOUGH NEAR EDMINSTER RD
20	BLEWETT DRAIN NEAR HWY 132
21	POSO SLOUGH AT INDIANA AVE
22	SJR AT PID PUMPS
23	DMC AT DEL PUERTO WD

LIST OF ABBREVIATIONS

- | | |
|----|---------------------|
| CC | CANAL COMPANY |
| CO | COMPANY |
| ID | IRRIGATION DISTRICT |
| WD | WATER DISTRICT |

ACKNOWLEDGEMENTS

Basemap courtesy of Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, and the GIS User Community



LEGEND

Monitoring Location

SAN JOAQUIN VALLEY DRAINAGE AUTHORITY

WESTSIDE SAN JOAQUIN RIVER WATERSHED COALITION

FOCUS PLAN IV LOCATION MAP

SUMMERS ENGINEERING INC.
Consulting Engineers
HANFORD CALIFORNIA
JULY 2013

FIGURE 2



LEGEND

- | | |
|--|--|
|  Blewett Drain Subwatershed |  BANTA-CARBONA I.D. |
|  Blewett-Represented Subwatershed |  DEL PUERTO W. D. |
|  COALITION BOUNDARY |  WEST STANISLAUS I.D. |
|  MONITORING SITES |  EL SOLYO WD |

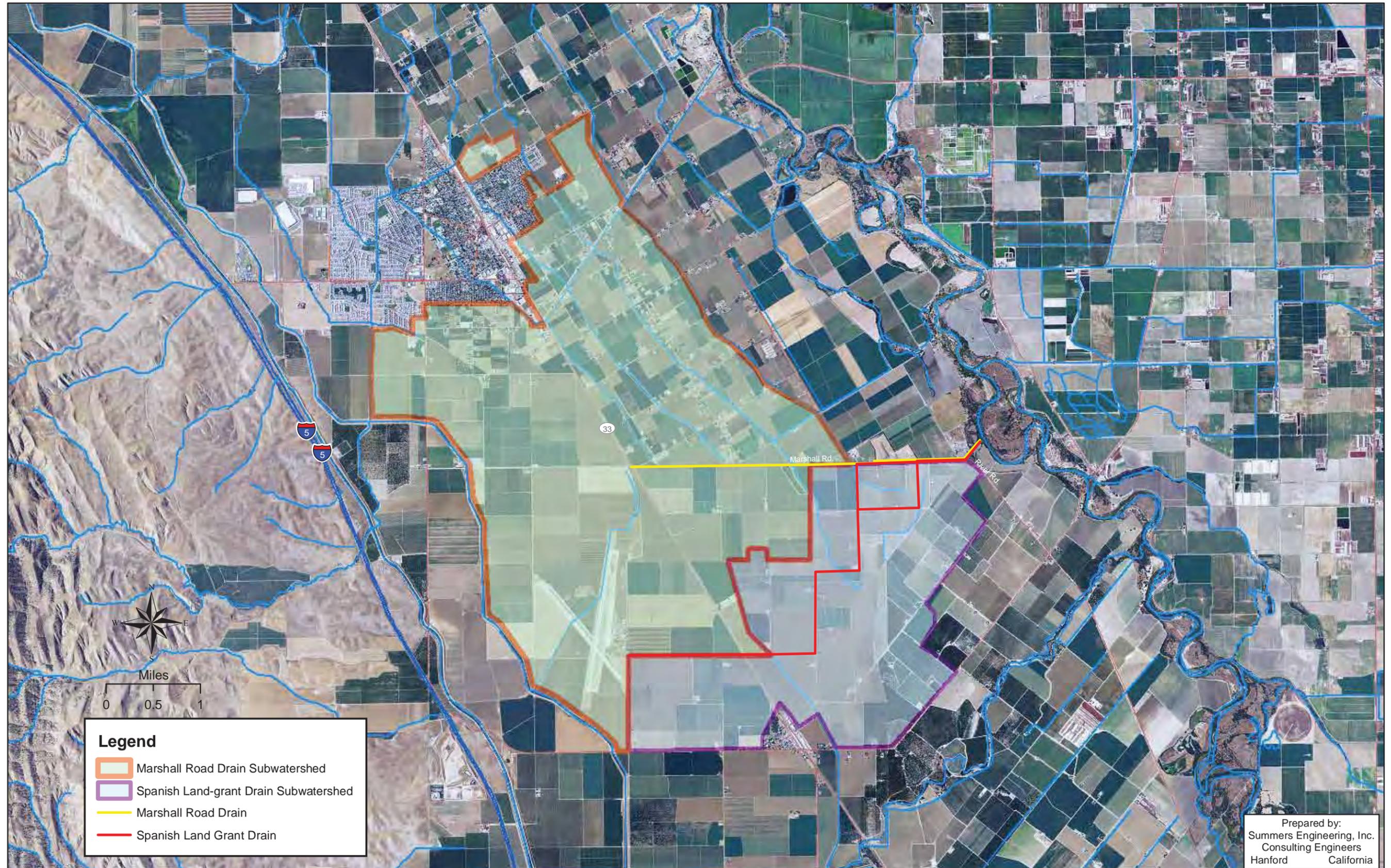
**WESTSIDE WATERSHED COALITION
BLEWETT DRAIN SUBWATERSHED**

SUMMERS ENGINEERING INC.
Consulting Engineers
HANFORD CALIFORNIA
AUGUST 2013

MAPS\Wside coalition\Subwatershed Maps\Blewett Drain_photo.mxd

Marshall Road Drain and Spanish Land Grant Drain

FIGURE 3



Attachments

Westside San Joaquin River Watershed Coalition

Management Practice Survey

Please use 1 page per Parcel

Parcel Number (APN): _____

Acreage: _____

Owner/Operator Information

Company Name: _____ Contact Name: _____

Phone Number: _____ Fax: _____

Mailing Address: _____ Email: _____

Watershed/ Receiving Waterbody: _____ District: _____

Management Practices Information

Irrigation Practices:

Crop: _____ Acreage: _____ Irrig Method: _____

Crop: _____ Acreage: _____ Irrig Method: _____

Crop: _____ Acreage: _____ Irrig Method: _____

Please circle any of these materials that you expect to use in the next 12 months:

- Dimethoate (Cygon 400, Dimet) Diuron (Direx, Karmex) Diazinon Malathion
Cholrpyrifos (Lorsban, Lock-on, NuPhos, Govern, Scout, Empire, Dursban) Deltamethrin (Decis)
Bifenthrin (Brigade, Capture, Leverage) Cyfluthrin (Baythroid) Cypermethrin (Ammo, Cymbush)
Lambda-cyhalothrin (Karate, Warrior or Warrior II w/ zeon) Permethrin (Ambush, Pounce)
Esfenvalerate (Asana XL) Fenvalerate (Pydrin)
Resmethrin (Crossfire)

Other: _____

Do you have a Sedimentation Pond? Yes No If Yes, How many acres does the pond drain: _____
Does the pond have a return system: Yes No
How frequently is the pond cleand out: _____

Does the property include a tile (subsurface) drainage system? Yes No

Does the property include a septic tank/system? Yes No

Do you use PAM: Yes No If Yes, How many acres: _____

Do you apply a dormant spray: Yes No If Yes, How many acres: _____
If Yes, do you apply a pesticide every year: _____
If Yes, do you apply a horticultural oil: _____

Do you apply a berm spray: Yes No If Yes, What material do you use: _____

Do you apply Manure? Yes No If Yes, How many acres: _____
If Yes, What kind: _____

What other practices do you implement to manage your tail water:

Does tailwater leave your porperty? Yes No

Does stormwater leave your property? Yes No

Completed by: _____

Questions: Contact Joe McGahan or Chris Linneman at 559-582-9237

version 2013.1

Attachment 2 - Focus Plan IV Performance Goals

	Project Goals	Desired Outcomes	Output Indicators	Outcome Indicators	Targets
1	Implement Focuses Plan IV for eliminating toxicity and pesticide detections by increasing grower participation and implementing additional management practices.	Address potential overspray by identifying the sensitive regions for all applicators.	1. No. of applicators contacted. 2. No. of miles of sensitive regions.	1. Provide a detailed watershed map of the subwatersheds.	1. Contact 5 identified applicators.
		Submit survey form to growers that inquires about management practices relevant to Tier 1 parameters	1. Develop survey document. complete 2. No. of growers to survey. 510 3. No. of growers surveyed.	1. Percent of surveys submitted to growers. 2. Percent of survey responses back from growers.	1. Submit survey form to Regional Board by 7/31/13 . 2. Submit surveys to 100% of growers within site subwatershed by 11/15/13 . 3. Receive 50% of Surveys: 1/31/14 . Received 75% of Surveys: 6/15/14 . Receive 100% of Surveys: 9/30/14 . 4. Finalize survey findings and report on management practice baseline and provide a summary of existing management activities by 11/30/14 . 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 & known MPs, changes from previous update, summary of affected acres, may include crop/irrigation type.
		Conduct grower outreach in the form of group meetings, individual meetings.	1. Growers to have broad understanding of better management practices and its effect on water quality.	1. No. of group meetings. 2. No. of individual meetings.	1. Report grower outreach in SAMR. 2. Conduct at least 5 outreach meetings annually.
		Determine effective management practices and develop next steps (Performance Goals)	1. Develop management practices that can be implemented. 2. Detailed plan for next steps and communicate to Regional Board .	1. Prepare Performance Goals with Regional Board staff.	1. Submit/finalize Performance Goals by 10/30/13 .
2	Evaluate management practices effectiveness	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. Implement annually continuing through 2016.	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.	1. Percent of growers installing new/additional management practices. 2. Percent of acres affected.	1. Affect TBD% of acres for the long term.
		Construct tailwater ponds to intercept and hold direct tailwater discharges. Annually and through 2016.	1. No. of tailwater ponds constructed.	1. Map tailwater ponds and irrigation methods	1. Provide map for each subwatershed in SAMRs.
		Construct Regional Return Systems. Annually and through 2016.	1. No. of regional systems constructed.	1. Map of regional systems. 2. Evaluation of system capacity and estimated % of average discharge.	1. Provide Map of regional system and affected area. 2. Summarize system potential return volume and fraction of average watershed discharge.
		Collect and report monitoring data results	1. No. of tests conducted. 2. No. of detections observed. 3. No. of exceedances observed.	1. Percent decrease in detections. 2. Percent decrease in exceedances.	1. SAMR report twice annually - 6/15 and 11/30 2. Show a decrease in detections.