

Monitoring Program for 2007:

Sacramento Valley Water Quality Coalition

In January 2005, the Sacramento Valley Water Quality Coalition commenced monitoring under its Monitoring and Reporting Program Plan (MRPP) and Quality Assurance Project Plan (QAPP) submitted to the Regional Water Quality Control Board, Central Valley Region (Regional Board) on April 1, 2004 and December 22, 2004 respectively. The Regional Board issued a Conditional Approval of the Coalition's MRPP on December 2, 2004.

The following document is the Coalition monitoring plan for 2007 and is provided as an attachment to the Coalition's amended MRRP. The monitoring plan for 2007 is a more aggressive approach to completing the monitoring requirements in the R5-2005-0833 MRP for monitoring intermediate drainages. This more aggressive approach is based on replacing previously monitored sites with high priority sites in intermediate size drainages, and conducting concurrent monitoring of Phase 1 and Phase 2 parameters at most new locations.

MONITORING IN 2006

Monitoring conducted in 2005 and 2006 under the Coalition's MRPP provides the basis for the monitoring proposed for 2007. This monitoring is briefly summarized in the following sections, along with the basis for changes implemented for the 2006 storm and irrigation season monitoring.

Core Monitoring Sites

The Coalition collected samples and performed analyses at 24 primary sites throughout the watershed (Table 1). Consistent with the conditionally approved MRPP and QAPP, monitoring was generally conducted twice during the storm season (December – March), and monthly during the 2006 irrigation season (May – September).

Exceptions to the planned monitoring frequencies documented in the MRPP and QAPP in 2006 were as follows:

Burch Creek at Woodson Avenue Bridge: This site was sampled for two storm events in 2006. This site was replaced with *Burch Creek West of Rawson Road* at the beginning of irrigation season. There was inadequate flow to sample this site in July, and the site was found to be dry for the remainder of the irrigation season.

Pine Creek at Nord-Gianella Road: This site was sampled for two storm events and two irrigation events. There was inadequate flow to sample this site in July, and the site was found to be dry for the remainder of the irrigation season.

Cosumnes River at Twin Cities Road: This site was sampled for two storm events and four irrigation events. There was inadequate flow to sample this site in September, and the site was found to be dry for the remainder of the irrigation season.

Table 1. SVWQC monitoring sites, 2005-2006

Site Index	Subwatersheds	Site Location
12	ButteYubaSutter	Butte Slough at Pass Road
13	ButteYubaSutter	Wadsworth Canal at South Butte Rd
14	ButteYubaSutter	Pine Creek at Nord Gianella Road
33	ButteYubaSutter	Gilsizer Slough at George Washington Road
5	ColusaBasin	Stony Creek on Hwy 45 near Rd 24
6	ColusaBasin	Colusa Drain near Maxwell Road
7	ColusaBasin	Stone Corral Creek near Maxwell Road
8	ColusaBasin	Rough and Ready Pumping Plant (RD 108)
10	ColusaBasin	Butte Creek at Gridley Rd Bridge
25	EIDorado	North Canyon Creek
22	LakeNapa	McGaugh Slough at Finley Road East
11	PlacerNevadaSSutterNSacramento	Coon Creek at Striplin Road
26	SacramentoAmador	Cosumnes River at Twin Cities Rd
27	SacramentoAmador	Dry Creek at Alta Mesa Road
4	ShastaTehama	Burch Creek at Woodson Ave Bridge
30	ShastaTehama	Anderson Creek at Ash Creek Road
34	ShastaTehama	Burch Creek west of Rawson Rd
16	SolanoYolo	Z Drain – Dixon RCD
18	SolanoYolo	Tule Canal at I-80
29	SolanoYolo	Shag Slough at Liberty Island Bridge
32	SolanoYolo	Ulati Creek at Brown Road
19	UpperFeatherRiver	Spanish Creek above Greenhorn Creek
20	UpperFeatherRiver	Middle Fork Feather River at County Rd A-23
21	UpperFeatherRiver	Indian Creek d/s from Indian Valley

Coordinated Monitoring

The Coalition also coordinated efforts with five other programs collecting samples in priority drainage areas throughout the Sacramento Valley. Samples were collected at the sites listed in Table 2 at the frequencies specified.

Table 2. Coordinating program monitoring sites in 2006

Subwatersheds	Site Location	Frequency	Agency
Pit River	Pit River at Pittville	Monthly, April through September	Northeastern California Water Association (NECWA)
	Fall River at Fall River Ranch Bridge		
	Pit River at Canby Bridge		
Lake/Napa	Pope Creek upstream from Lake Berryessa	Three events (2 Storm, 1 Irrigation)	Putah Creek Watershed Group
	Capell Creek upstream from Lake Berryessa		
Colusa Basin	Colusa Basin Drain above KL	Monthly beginning irrigation season 2006	Sacramento River Watershed Program
Butte/Yuba/Sutter	Sacramento Slough		

LONG-TERM MONITORING STRATEGY

The Coalition's overall monitoring strategy as outlined in the Coalition's MRPP has been to select monitoring sites that represent the maximum percentage of high priority irrigated acreage. This strategy has resulted in rapid characterization of a large percentage of the overall irrigated acreage in the Coalition's watershed. The R5-2005-0833 MRP includes a requirement for monitoring "20% additional intermediate drainages per year", although the R5-2005-0833 MRP does not provide a definition of an intermediate drainage, or any guidance for classifying drainages by size. It was considered that implementing the Coalition's strategy would satisfy the intent of the 20% requirement, but how this would be accomplished was not explicitly addressed in the Coalition's initial MRPP. Consequently, Regional Board staff requested a list of Coalition drainages and classifications, and a long term strategy to meet the 20% requirement in the R5-2005-0833 MRP. A complete list of drainages without classifications has been provided previously to the Regional Board in response to this request. The Coalition's long term monitoring strategy is proposed herein. This monitoring plan for 2007 presents the Coalition's drainage classification method, provides the classifications for each drainage, and evaluates the progress toward the R5-2005-0833 MRP monitoring requirement.

Long-Term Strategy Overview

The Coalition's long term monitoring strategy is designed to achieve overall characterization of high and medium priority drainages in 5 years. The Coalition's strategy also somewhat anticipates changes in monitoring requirements in the revised MRP that will be released by the Regional Board late in 2006. These changes are expected to include an end to the phased monitoring approach of the current MRP, and replacement of the poorly defined requirement for 20% additional intermediate drainages per year with a more general requirement for a long term monitoring strategy to characterize agricultural drainages. Revisions to the Regional Board MRP are also expected to include numerous technical changes in monitoring requirements.

The elements that are key to achieving the Coalition's goal and satisfying the intent of the requirements of the R5-2005-0833 MRP are the Coalition's prioritization process for selecting drainages and monitoring sites, and an efficient strategy for implementing monitoring in intermediate drainages. The overall strategy for efficiently completing the required monitoring is to focus selectively on unmonitored intermediate drainages that are rated *high* or *medium* priority based on their irrigated acreage, cropping patterns, pesticide use, and their potential for contributing to cumulative impacts on receiving waters. Generally, this will be achieved by replacing sites with completed monitoring with new sites in intermediate drainages. Additionally, the Coalition will continue to monitor several integrator sites that characterize multiple smaller drainages and provide an assessment of the overall or cumulative quality of irrigated agriculture runoff. Examples of these integrator sites are Colusa Basin Drain near Knights Landing, and Shag Slough at Liberty Island Bridge.

The other aspect of efficiently completing the required monitoring is to concurrently analyze all parameters required for Phase 1 and Phase 2 of the current R5-2005-0833 MRP. This allows drainages to be characterized in a single year instead in the two years of requiring under the phased approach. All new sites will include the full suite of

parameters required for the MRP, as appropriate for cropping and pesticide use patterns in each drainage. For continuing sites, a reduced set of parameters may be monitored based on previous monitoring results, with the goal of completing the Phase 2 monitoring for these sites in 2007. In cases where continued monitoring is required to evaluate effectiveness of management plans, the frequency and locations of monitoring will be established in the specific management plan and will be focused on the parameters of concern.

Updated Prioritization Method

The Coalition's initial method for prioritizing monitoring sites is described in the Coalition's MRPP. This method prioritized drainages within each subwatershed based on total irrigated acres, crop types, and pesticide use. These initial subwatershed priorities were re-evaluated for 2007 and were adjusted based on the potential for cumulative agricultural impacts downstream from each drainage. This was accomplished by calculating the cumulative percent of irrigated acreage in waters directly downstream from each drainage, and assigning a category of *Low*, *Medium*, or *High* based on equal percentiles in each category. The Coalition's initial subwatershed-based priorities (also *Low*, *Medium*, or *High*) were elevated if the potential for cumulative agricultural impacts downstream of the drainage was higher than the initial subwatershed priority, or reduced if it was lower than the subwatershed priority. As a consequence of this reevaluation, 41 drainages were elevated from *Low* to *Medium* priority, and 16 drainages were elevated from *Medium* to *High* priority. Priorities were not reduced for any *Medium* or *High* priority drainages. Drainages with less than 640 irrigated acres and previously classified as *Low* priority were considered not critical to adequately characterize irrigated agricultural lands and were excluded from further classification. Final monitoring priority adjustments are summarized in Table 3.

Table 3. Final 2007 Monitoring Priorities for drainages, adjusted for cumulative downstream irrigated acres

Cumulative % Irrigated Acres Downstream of Drainage	Irrigated acres <640	Initial Subwatershed Drainage Priority			Totals
		Low	Med	High	
Low (0 - 33.3 percentile) <0.4% Irrigated Acres	Excluded n = 79	Low n = 0	Low n = 0	Med n = 0	n = 79
Medium (33.4 - 66.6 percentile) 0.4 - 12.15% Irrigated Acres	Excluded n = 23	Low n = 47	Med n = 10	High n = 0	n = 80
High (66.7 - 100 percentile) >12.15% Irrigated Acres	Excluded n = 1	Med n = 41	High n = 16	High n = 20	n = 78
Totals	103	88	26	20	237

Classification of Drainages

To evaluate progress toward the R5-2005-0833 MRP requirements for monitoring intermediate drainages, all individual drainages with greater than 640 irrigated acres were classified as *Large*, *Intermediate*, and *Small*. Drainages with less than 640 irrigated acres were excluded from this drainage size classification, as described above. The size classification of the remaining drainages was based on a simple percentile breakdown of the total acreage in each individual drainage: 20% *Large* drainages, 50% *Intermediate* drainages, and 30% *Small* drainages. The limits for each drainage size category are provided in Table 4. Tables of excluded drainages and classified drainages are provided in Appendix A.

Table 4. Drainage size category definitions.

	DRAINAGE SIZE CATEGORY		
	1 (SMALL)	2 (INT)	3 (LARGE)
Minimum Size, Acres	3,150	29,690	131,824
Maximum Size, Acres	29,072	131,356	1,186,577
Percent of all drainages w/ >640 irrigated acres	30%	50%	20%

Evaluation of Progress Toward Completion of Monitoring Requirements

The Coalition's current progress toward meeting the monitoring requirements of the R5-2005-0833 MRP was evaluated based on the percentage of drainages and acres monitored through 2006. The same evaluations were used to determine whether the Coalition monitoring strategy is on track to complete the required monitoring. The monitored drainages included in these assessments include all Coalition sites monitored through 2006, sites monitored by coordinating partners (SRWP, UFRW, NECWA, and PCWG), and Regional Board monitoring in Coalition watershed drainages. The evaluations of current monitoring progress through 2006 are summarized in Table 5 for all drainages and in Table 6 for *High* and *Medium* priority drainages, which are the focus of the Coalition strategy. The evaluations of projected monitoring progress through 2007 are similarly summarized in Table 7 and Table 8.

The results of these evaluations validate the effectiveness of the original Coalition monitoring strategy. The Coalition's prioritization process and monitoring strategy through 2006 has resulted in characterization of 50% of *High* and *Medium* priority drainages and 68% of *High* and *Medium* priority acreage for large and medium sized drainages with significant irrigated acreage (Table 6). This total breaks down to 44% of intermediate drainages, and 73% of large drainages in the *High* and *Medium* priorities. Although the original focus of the Coalition has been to characterize the largest percentage of irrigated acreage first, this strategy also successfully characterized a large proportion of intermediate drainages. These results demonstrate substantial progress towards completing the monitoring requirements of the R5-2005-0833 MRP.

The same analysis was applied to the projected monitoring progress at the end of 2007. After completion of this proposed monitoring plan, the Coalition and coordinating partners will have characterized 72% of *High* and *Medium* priority drainages and 81% of *High* and *Medium* priority acreage for large and medium sized drainages with significant irrigated acreage. This total breaks down to 72% of intermediate drainages, and 73% of large drainages in the *High* and *Medium* priorities. After 2007, there will remain 11 unmonitored *High* or *Medium* priority intermediate drainages and 4 *High* or *Medium* priority large drainages. It is expected that monitoring for at least two or more of these will be completed by the Regional Board's ILP monitoring effort in the next several years. That leaves approximately 8 or 9 different unmonitored intermediate drainages to monitor in 2008 and 2009 to complete the characterization of all *High* or *Medium* priority intermediate drainages. This clearly indicates that the Coalition monitoring strategy is on track to meet the stated monitoring requirements of the R5-2005-0833 MRP, and that no drastic changes in long-term strategy are required to meet these goals.

Table 5. Monitoring in drainages with >640 irrigated acres through 2006

	DRAINAGE SIZE CATEGORY			<i>Totals for drainages with >640 Irrigated Acres</i>
	1 (SMALL)	2 (INT)	3 (LARGE)	
Sum of Individual Drainages, Acres	594,042	4,543,921	7,352,028	12,489,992
Total Number of Drainages	40	67	27	134
Percent of Drainages	30%	50%	20%	100%
Number of Drainages Monitored	3	20	12	35
Sum of Acres Monitored	41,374	1,417,649	4,164,093	5,623,116
<i>Percent of Drainages Monitored</i>	8%	30%	44%	26%
<i>Percent of Acres Monitored</i>	7%	31%	57%	45%

Table 6. Monitoring in High and Medium priority drainages through 2006

	DRAINAGE SIZE CATEGORY			Total for All High and Medium Priority Drainages	Total for Lg and Int, High and Med Priority Drainages
	1 (SMALL)	2 (INT)	3 (LARGE)		
Total Number of High or Medium Priority Drainages	34	39	15	88	54
Sum of Individual Drainages, Acres	451,328	2,633,096	4,867,618	7,952,041	7,500,713
Number of Drainages Monitored	3	16	11	30	27
Sum of Acres Monitored	41,374	1,151,564	3,950,319	5,143,257	5,101,883
Percent of Drainages Monitored	9%	41%	73%	34%	50%
Percent of Acres Monitored	9%	44%	81%	65%	68%

Table 7. Monitoring in drainages with >640 irrigated acres, estimated for 2007

	DRAINAGE SIZE CATEGORY			Totals for all drainages with >640 Irrigated Acres
	1 (SMALL)	2 (INT)	3 (LARGE)	
Sum of Individual Drainages, Acres	594,042	4,543,921	7,352,028	12,489,992
Total Number of Drainages	40	67	27	134
Percent of Drainages	30%	50%	20%	100%
Number of Drainages Monitored	3	34	12	49
Sum of Acres Monitored ¹	41,374	2,551,649	4,164,093	6,757,116
Percent of Drainages Monitored	8%	51%	44%	37%
Percent of Acres Monitored	7%	56%	57%	54%

(1) Based on average intermediate drainage of 81,000 acres

Table 8. Monitoring in High and Medium priority drainages, estimated for 2007

	DRAINAGE SIZE CATEGORY			Total for High and Medium Priority Drainages	Total for Lg and Int, High and Med Priority
	1 (SMALL)	2 (INT)	3 (LARGE)		

Drainages

Total Number of High or Medium Priority Drainages	34	39	15	88	54
Sum of Individual Drainages, Acres	451,328	2,633,096	4,867,618	7,952,041	7,500,713
Number of Drainages Monitored	3	28	11	42	39
Est'd Sum of Acres Monitored ⁽¹⁾	41,374	2,123,564	3,950,319	6,115,257	6,073,883
Percent of Drainages Monitored	9%	72%	73%	48%	72%
Est'd Percent of Acres Monitored	9%	81%	81%	77%	81%

(1) Based on average intermediate drainage of 81,000 acres

RECOMMENDED MONITORING FOR 2007

The Coalition is submitting the following MRPP proposal for 2007. Thirteen new monitoring locations in unmonitored drainages will replace sites monitored in 2006 with completed Phase 2 monitoring. Candidate drainages for new monitoring locations were selected based on overall monitoring priorities and an increased focus on maximizing the number of *Intermediate* size drainages in 2007 to meet the requirements of the R5-2005-0833 MRP. The basis for making these monitoring recommendations for sites monitored in 2006 are provided in Table 9.

Table 9. Monitoring Recommendations for Sites Monitored by SVWQC in 2006

Subwatershed	Site	2007 Action and Rationale
ButteYubaSutter	Butte Slough at Pass Road	Exchange for new site in <i>HIGH</i> or <i>MED</i> priority intermediate drainage. Two years of monitoring completed. No exceedances of objectives in 2006.
ButteYubaSutter	Gilsizer Slough at George Washington Road	Continue Phase 2 monitoring. Discontinue aquatic toxicity (no toxicity in 2006).
ButteYubaSutter	Pine Creek at Nord Gianella Road	Continue with selected analytes to support documentation of management practice effectiveness. 2 years of monitoring completed. No exceedances of objectives for Phase 2 parameters in 2006. <i>E. coli</i> exceedances addressed through regional Mgt Plan.
ButteYubaSutter	Wadsworth Canal at South Butte Rd	Exchange for new site in <i>HIGH</i> or <i>MED</i> priority intermediate drainage. 2 years of monitoring completed. No exceedances of objectives for Phase 2 parameters in 2006. <i>E. coli</i> exceedances addressed by regional Mgt Plan.
ColusaBasin	Butte Creek at Gridley Rd Bridge	Exchange for new site in <i>HIGH</i> or <i>MED</i> priority intermediate drainage. 2 years of monitoring completed. No toxicity or exceedances of Phase 2 parameters. <i>E. coli</i> exceedances addressed by regional Mgt Plan.
ColusaBasin	Colusa Drain near Maxwell Road	Exchange for new site in <i>HIGH</i> or <i>MED</i> priority intermediate drainage. 2 years of monitoring completed. No toxicity or exceedances of Phase 2 parameters. <i>E. coli</i> exceedances addressed by regional Mgt Plan.
ColusaBasin	Rough and Ready Pumping Plant (RD 108)	Exchange for new site in <i>HIGH</i> or <i>MED</i> priority intermediate drainage. 2 years of monitoring completed. No toxicity or exceedances of Phase 2 parameters except DDE (n=2) in 2006. <i>E. coli</i> , TDS, and EC exceedances addressed by regional Mgt Plans.
ColusaBasin	Stone Corral Creek near Maxwell Road	Exchange for new site in <i>HIGH</i> or <i>MED</i> priority intermediate drainage. 2 years of monitoring completed. No toxicity or exceedances of Phase 2 parameters in 2006. <i>E. coli</i> exceedances addressed by regional Mgt Plan. Single EC/TDS exceedance.
ColusaBasin	Stony Creek on Hwy 45 near Rd 24	Continue Aquatic toxicity, OP and triazine pesticides through 2007 Storm Season to address single simazine and diazinon exceedances observed in 2006. <i>E. coli</i> exceedances addressed by regional Mgt Plan. 2 years of monitoring completed.
EIDorado	North Canyon Creek	Continue monitoring for selected parameters at the North Canyon site for up to four sample events. No toxicity in 2006. Single DDE exceedance in 2006. No other Phase 2 exceedances in 2006. Add new site in <i>LOW</i> priority intermediate drainage (no other <i>HIGH</i> or <i>MED</i> priority drainages in subwatershed).

Subwatershed	Site	2007 Action and Rationale
LakeNapa	McGaugh Slough at Finley Road East	Exchange for new site at same frequency. 2 years of monitoring completed. No exceedances of Phase 2 parameters in 2006. <i>E. coli</i> exceedance(s) addressed through regional Mgt Plan.
Pit River	Pit River at Pittville Pit River Canby Fall River at River Ranch Bridge	Continue all three sites in 2007;
Placer-Nevada- SSutter-NSacramento	Coon Creek at Striplin Road	Exchange for new site in <i>MED</i> priority intermediate drainage. There are no other unmonitored <i>HIGH</i> priority drainages in subwatershed. 2 years of monitoring completed. No exceedances of Phase 2 parameters in 2006. <i>E. coli</i> exceedance(s) addressed through regional Mgt Plan. Minor DO exceedance in 2006.
Sacramento-Amador	Cosumnes River at Twin Cities Rd	Exchange for new site in <i>HIGH</i> or <i>MED</i> priority intermediate drainage. 2 years of monitoring completed. No exceedances or toxicity in 2006.
Sacramento-Amador	Dry Creek at Alta Mesa Road	Implement Phase 2 monitoring. Continue Ceriodaphnia through storm season only (toxicity observed in 2006 Storm season). Discontinue Ceriodaphnia beginning irrigation season (no toxicity observed in 2006 Irr.Season).
Shasta-Tehama	Anderson Creek at Ash Creek Road	Continue Phase 2 monitoring. Discontinue toxicity testing (no significant toxicity observed in 2006). No exceedances of Phase 2 parameters in 2006. <i>E. coli</i> exceedance(s) addressed through regional Mgt Plan.
Shasta-Tehama	Burch Creek at Rawson Road	Exchange for new site in <i>HIGH</i> or <i>MED</i> priority intermediate drainage. 2 years of monitoring completed. No toxicity or chemical exceedances observed at Rawson Road location.
SolanoYolo	Shag Slough at Liberty Island Bridge	Continue monitoring as long-term integrator site. Include aquatic and sediment toxicity, 303d parameters for Delta (OP pesticides in water, OC and pyrethroids in sediment) and trace metals with exceedances or active management plan (boron only).
SolanoYolo	Tule Canal at I-80	Exchange for new site in <i>HIGH</i> or <i>MED</i> priority intermediate drainage. >2 years of monitoring completed. No exceedances of objectives for Phase 2 parameters except boron. Exceedances of <i>E. coli</i> , EC, TDS, and boron addressed through regional Mgt Plan.
SolanoYolo	Ulatis Creek at Brown Road	Continue with Phase 2 monitoring. Continue detected pesticides and add remaining Phase 2 parameters. Continue Ceriodaphnia through Storm Season to address chlorpyrifos and diazinon exceedances. Continue Selenastrum through storm season to address Selenastrum toxicity observed in Storm Season 2006.
SolanoYolo	Z Drain - Dixon RCD	Exchange for new site in <i>HIGH</i> or <i>MED</i> priority intermediate drainage. 2 years of monitoring completed. No toxicity in 2006. No exceedances of objectives for Phase 2 parameters except selenium (1 exceedance, no downstream or regional selenium problems) and boron. Exceedances of <i>E. coli</i> , EC, TDS, and boron addressed through regional Mgt Plan.
UpperFeatherRiver	Indian Creek at Arlington Bridge	Continued Phase 2 monitoring by UFRW. No toxicity observed in 2006, no pesticides monitored unless toxicity observed. Implement sediment toxicity testing in 2007.
UpperFeatherRiver	Middle Fork Feather River at County Rd A-23	Continued Phase 2 monitoring by UFRW. No toxicity observed in 2006, no pesticides monitored unless toxicity observed. Implement sediment toxicity testing in 2007.
UpperFeatherRiver	Spanish Creek below confluence with Greenhorn Creek	Continued Phase 2 monitoring by UFRW. No toxicity observed in 2006, no pesticides monitored unless toxicity observed. Implement sediment toxicity testing in 2007.

New Monitoring Drainages and Sites

The Coalition is proposing to move to thirteen new monitoring sites in unmonitored drainages at which concurrent Phase 1 and Phase 2 testing (water column and sediment toxicity, drinking water constituents, pesticides, nutrients, trace metals, and general physical parameters) will commence in Storm Season 2007 and continue throughout the 2007 irrigation season. Sites in these new drainages will be selected in coordination with the Coalition's subwatershed representatives in October, 2006. New drainages were initially selected from the list of highest priority drainages in each subwatershed that have not yet been monitored by the Coalition (Table 10). Additional sites were also considered based on coordination with planned management practice studies. Specific monitoring sites selected for 2007 monitoring are listed in Table 11. A summary of monitoring planned by the Coalition and coordinating partners is provided in Table 12.

Table 10. Candidate Drainages for New Monitoring Sites in 2007

Subwatershed	# of Replacement Sites	Candidate Drainages	Monitoring Priority	Drainage Size Category
Butte-Sutter-Yuba	3	Cherokee Canal	1 HIGH	Large
		Grasshopper Slough	1 HIGH	Intermediate
		Jack Slough	1 HIGH	Intermediate
		Lower Honcut Creek	2 MED	Intermediate
		Lower Oroville	2 MED	Intermediate
		Lower Snake	1 HIGH	Small
		RD 1500	1 HIGH	Intermediate
Colusa Basin	4	Buckeye Creek	2 MED	Intermediate
		Freshwater Creek	2 MED	Intermediate
		Logan Creek	1 HIGH	Intermediate
		Lurline Creek	2 MED	Intermediate
		Orland Area	1 HIGH	Intermediate
		Sand Creek - Colusa	1 HIGH	Intermediate
		Willow Creek	1 HIGH	Large
El Dorado	1	Middle Fork Cosumnes River	3 LOW	Intermediate
Lake-Napa	1	Lower Lake	3 LOW	Intermediate
		Upper Lake	3 LOW	Intermediate
Placer N Sac	1	Coon Creek - Auburn	2 MED	Intermediate
		Middle Coon Creek	2 MED	Intermediate
		Pleasant Grove Creek	2 MED	Intermediate
Sac-Amador	1	Elder Creek - Sacramento	1 HIGH	Large
		Middle Cosumnes	1 HIGH	Intermediate
		Sacramento Delta	1 HIGH	Intermediate
Shasta-Tehama	1	Cow Creek	2 MED	Large
		Coyote Creek	2 MED	Intermediate
		Elder Creek	2 MED	Intermediate
		Salt Creek	1 HIGH	Intermediate
Solano-Yolo	2	Cache Creek	1 HIGH	Intermediate
		Putah Creek South	2 MED	Intermediate
		Willow Slough	1 HIGH	Intermediate
Total	14			

Table 11. Coalition Monitoring Sites, 2007

Subwatershed	Site Name	Latitude	Longitude	Implementing Agency	Map Index
ButteYubaSutter	Pine Creek at Nord Gianella Road	39.7811	-121.9877	SVWQC	14
	Sacramento Slough	38.7833	-121.6338	SRWP	15
	Gilsizer Slough at George Washington Road	39.0090	-121.6716	SVWQC	33
	Grasshopper Slough at Forty Mile Road	38.9938	-121.4898	SVWQC	39
	Lower Snake R. at Nuestro Rd	39.1853	-121.7036	SVWQC	40
ColusaBasin	Stony Creek on Hwy 45 near Rd 24	39.7101	-122.0040	SVWQC	5
	Colusa Basin Drain above KL	38.8121	-121.7741	SRWP	9
	Freshwater Creek at Gibson Rd	39.1766	-122.1892	SVWQC	41
	Logan Creek at 4 Mile-Excelsior Rd	39.3653	-122.1161	SVWQC	42
	Lurline Creek at 99W	39.2122	-122.1833	SVWQC	43
	Walker Creek at Co Rd 48	39.5388	-122.1762	SVWQC	44
ElDorado	North Canyon Creek	38.7604	-120.7102	SVWQC	25
	Coon Hollow Creek	38.7534	-120.7240	SVWQC	45
LakeNapa	Pope Creek upstream from Lake Berryessa	38.6464	-122.3642	PCWG	23
	Capell Creek u/s from Lake Berryessa	38.4825	-122.2411	PCWG	24
	Middle Creek u/s from Highway 20	39.1635	-122.9161	SVWQC	38
PitRiver	Pit River at Pittville	41.0454	-121.3317	NECWA	1
	Fall River at Fall River Ranch Bridge ²	41.0351	-121.4864	NECWA	2
	Pit River at Canby Bridge ²	41.4017	-120.9310	NECWA	3
Placer-Nevada- SSutter-NSac.	Coon Creek at Brewer Road	38.9340	-121.4518	SVWQC	46
SacramentoAmador	Dry Creek at Alta Mesa Road	38.2480	-121.2260	SVWQC	27
	Laguna Creek at Alta Mesa Road	38.3110	-121.2263	SVWQC	47
ShastaTehama	Anderson Creek at Ash Creek Road	40.4180	-122.2136	SVWQC	30
	Coyote Creek at Tyler Road	40.0926	-122.1590	SVWQC	48
SolanoYolo	Willow Slough Bypass at SP	38.5994	-121.7528	SVWQC	49
	Cache Cr. at Diversion Dam	38.7137	-122.0851	SVWQC	50
	Shag Slough at Liberty Island Bridge	38.3068	-121.6934	SVWQC	29
	Ulatis Creek at Brown Road	38.3070	-121.7940	SVWQC	32
UpperFeatherRiver	Middle Fork Feather River at County Rd A-23	39.8189	-120.3918	UFRW	20
	Indian Creek at Arlington Bridge	40.0846	-120.9161	UFRW	36
	Spanish Creek below Greenhorn Creek	39.9735	-120.9103	UFRW	37

Table 12. Coalition Monitoring Summary: Planned Samples in 2007

Subwatershed	Location	Physical, Chemical, and Microbiological														Toxicity			Implementation	
		Water Column Sample Events		Sediment Sample Events		pH, conductivity, DO, temperature, Q	Color, Turbidity, TDS, TSS, TOC	Nutrients	Trace metals	Organophosphate pesticides	Triazines	Organochlorines	Pyrethroids in toxic sediments	Glyphosate, Paraquat	Carbamate and Urea Pesticides	Pathogen Indicators: <i>E. Coli</i>	Ceriodaphnia, 96-h acute	Selenastrum, 96-h short-term chronic		Hyaella, 10-day short-term chronic
Butte-Sutter-Yuba	Grasshopper Sl. at Forty Mile Rd	8	2	8	8	8	8	8	8	8	8	2	8	8	8	8	8	8	2	SVWQC
	Lower Snake R. at Nuestro Rd	8	2	8	8	8	8	8	8	8	8	2	8	8	8	8	8	8	2	SVWQC
	Pine Creek at Nord Gianelli Rd	8	2	8	8	8	ns	8	ns	ns	2	ns	ns	ns	8	ns	ns	2	SVWQC	
	Gilsizer Sl. at G. Washington Rd	8	ns	8	8	8	8	8	8	8	ns	8	8	8	ns	ns	ns	SVWQC		
	Sacramento Slough	7	ns	7	7	7	ns	7	7	ns	ns	ns	5	7	7	7	ns	SRWP		
Colusa Basin	Freshwater Creek at Gibson Rd	8	2	8	8	8	8	8	8	8	2	8	8	8	8	8	8	2	SVWQC	
	Logan Cr. at 4 Mile-Excelsior Rd	8	2	8	8	8	8	8	8	8	2	8	8	8	8	8	8	2	SVWQC	
	Lurline Creek at 99W	8	2	8	8	8	8	8	8	8	2	8	8	8	8	8	8	2	SVWQC	
	Walker Creek at Co Rd 48	8	2	8	8	8	8	8	8	8	2	8	8	8	8	8	8	2	SVWQC	
	Stony Cr. on Hwy 45 near Rd 24	2	ns	2	ns	ns	ns	2	2	ns	ns	ns	ns	ns	2	2	ns	SVWQC		
	Colusa Drain above KL	7	ns	7	7	7	ns	7	5	ns	ns	ns	5	7	7	7	ns	SRWP		
El Dorado	North Canyon Creek	4	ns	4	4	ns	ns	4	ns	4	ns	ns	4	ns	ns	ns	SVWQC			
	Coon Hollow Creek	8	2	8	8	8	8	8	ns	8	2	ns	ns	8	8	8	2	SVWQC		
Lake-Napa	Middle Creek u/s Hwy 20	3	2	3	3	3	3	3	3	3	2	ns	ns	3	3	3	2	SVWQC		
	Pope Cr u/s from L. Berryessa	3	ns	3	3	ns	ns	ns	ns	ns	ns	ns	ns	3	ns	ns	ns	PCWG		
	Capell Cr u/s from L. Berryessa	3	ns	3	3	ns	ns	ns	ns	ns	ns	ns	ns	3	ns	ns	ns	PCWG		
Pit River	Pit River at Pittville	8	ns	8	8	8	ns	ns	ns	ns	ns	ns	ns	8	ns	ns	ns	NECWA		
	Fall R. at Fall R. Ranch Bridge	8	ns	8	8	8	ns	ns	ns	ns	ns	ns	ns	8	ns	ns	ns	NECWA		
	Pit River at Canby Bridge	8	ns	8	8	8	ns	ns	ns	ns	ns	ns	ns	8	ns	ns	ns	NECWA		
Placer-NSac-Nev-SSutter	Coon Creek at Brewer Rd	8	2	8	8	8	8	8	8	8	2	8	8	8	8	8	2	SVWQC		
Sac-Amador	Laguna Creek at Alta Mesa Rd	8	2	8	8	8	8	8	8	8	2	8	8	8	8	8	2	SVWQC		
	Dry Creek at Alta Mesa Road	8	ns	8	8	8	8	8	8	8	ns	8	8	8	2	ns	ns	SVWQC		
Shasta-Tehama	Coyote Creek at Tyler Rd	8	2	8	8	8	8	8	ns	ns	2	ns	8	8	8	8	2	SVWQC		
	Anderson Cr. at Ash Creek Rd	8	ns	8	8	ns	8	ns	ns	ns	ns	ns	ns	2	ns	ns	ns	SVWQC		
Solano-Yolo	Willow Sl. Bypass at SP	8	2	8	8	8	8	8	8	8	2	8	8	8	8	8	2	SVWQC		
	Cache Cr. at Diversion Dam	8	2	8	8	8	8	8	8	8	2	8	8	8	8	8	2	SVWQC		
	Ulatis Creek at Brown Road	8	ns	8	8	8	8	8	8	8	ns	8	8	8	2	2	ns	SVWQC		
	Shag Sl. at Liberty Island Bridge	8	2	8	8	8	8	8	8	2	2	8	8	8	8	8	2	SVWQC		
Upper Feather	Spanish Cr. below Greenhorn Cr	7	2	7	7	7	ns	ns	ns	ns	ns	ns	ns	7	3	3	1	UFRW		
	Indian Creek at Arlington Bridge	7	2	7	7	7	ns	ns	ns	ns	ns	ns	ns	7	3	3	1	UFRW		
	Middle Fk Feather R. at Rd A-23	7	2	7	7	7	ns	ns	ns	ns	ns	ns	ns	7	3	3	1	UFRW		

Notes: Tabled values indicate number of regular samples planned for 2007. "ns" indicates parameters are not sampled. Implementation indicates whether monitoring is conducted by the Coalition (SVWQC), Northeastern California Water Association (NECWA), Lake County, Putah Creek Watershed Group (PCWG), Upper Feather River Watershed Prop 50 Project Team (UFRW) or Sacramento River Watershed Program (SRWP).