

Monitoring and Surveillance - Regulation

Requirement of the Sources of Drinking Water Policy Resolution 88-63 (State Water Resources Control Board, 1988)

Exception 2b:

The water is in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters, **provided that the discharge from such systems is monitored to assure compliance with all relevant water quality objectives as required by the Regional Boards.**

State Regulations and Guidance (Porter-Cologne Water Quality Control Act, amended 2013)

Pursuant to Water Code Section 13050, subdivision (j)(3), a basin plan amendment must include an implementation program to achieve water quality objectives. Water Code section 13242 prescribes the program of implementation for achieving water quality objectives, which include the following:

- description of the actions necessary to achieve the water quality objectives;
- time schedule; and
- **a monitoring and surveillance program**

Monitoring and Surveillance – Potential Alternatives

Alternative 1 – Do not include a requirement in the Basin Plan for a new monitoring program. Monitoring requirements will be met by existing programs like Irrigated Lands Regulatory Program (ILRP), National Pollutant Discharge Elimination System (NPDES) and Surface Water Ambient Monitoring Program (SWAMP).

Alternative 2 – Add a requirement into the Basin Plan stating that each water body de-designated from the MUN beneficial use through this process be monitored downstream.

Alternative 3 – Add a requirement into the Basin Plan stating that relevant entities must participate in a regional monitoring program to ensure downstream water bodies are protected.

DRAFT

Monitoring and Surveillance – Alternative 1

Objectives of ILRP, NPDES and SWAMP Monitoring Programs

Irrigated Lands Regulatory Program (ILRP)

The Irrigated Lands Regulatory Program (ILRP) was initiated in 2003 to prevent agricultural runoff from impairing surface waters. The six key Program questions (Central Valley Regional Water Quality Control Board, 2012) intended to structure both monitoring and management activities related to the potential impacts of agricultural discharges are:

1. Are receiving waters to which irrigated lands discharge meeting applicable water quality objectives and Basin Plan provisions?
2. Are irrigated agricultural operations causing or contributing to identified water quality problems? If so, what are the specific factors or practices causing or contributing to the identified problems?
3. Are water quality conditions changing over time (e.g., degrading or improving as new management practices are implemented)?
4. Are irrigated agricultural operations of Members in compliance with the provisions of the Order?
5. Are implemented management practices effective in meeting applicable receiving water limitations?
6. Are the applicable surface water quality management plans effective in addressing identified water quality problems?

The Conditional Waiver requires that Coalition Groups under and Individual Dischargers prepare and implement Monitoring and Reporting Program (MRP) Plans and submit them to the Central Valley Water Board for approval. Coalition-specific MRP Orders have been adopted for the California Rice Commission, the Sacramento Valley Water Quality Coalition, and the Westside San Joaquin River Watershed Coalition. Waste Discharge Requirements have been adopted for the Eastern San Joaquin River Watershed.

Three types of monitoring (Assessment, Core, and Special Projects) are needed to answer the five Program questions. In general, Assessment monitoring is intended to describe condition and contribute to a description of long-term trends, Core monitoring focuses on describing trends, and Special Projects on targeted, site-specific studies such as source identification.

National Pollutant Discharge Elimination System (NPDES) (United States Environmental Protection Agency, 2013)

NPDES permits ensure that point source discharges do not hurt water quality or people's health and that the state's mandatory standards for clean water and the federal minimums are being met. A reasonable potential analysis (RPA) is conducted to determine which constituents have the potential to cause or contribute to an in-stream excursion above a narrative or numeric criteria. Effluent limits are set in the permit for those pollutants exceeding or having a "reasonable potential" to exceed water quality objectives.

Purpose of Monitoring:

- Determine compliance with permit conditions
- Establish a basis for enforcement actions

Monitoring consists of: 1) Self-Monitoring, where the permittee performs the required sampling and analysis and submits the results to the permitting authority and; 2) Compliance Monitoring, where the permitting authority monitors effluent (usually during a compliance inspection). Monitoring requirements may include testing the influent, effluent, source water and receiving water bodies. Frequency, constituents and locations will vary depending on the size and design of facility, type of treatment, location of discharge, frequency of discharge, compliance history, nature of pollutants and beneficial uses that need protection.

Surface Water Ambient Monitoring Program (SWAMP) (State Water Resources Control Board, 2013)

The California Surface Water Ambient Monitoring Program (SWAMP) was created to fulfill the State Legislature's mandate for a unifying program that would coordinate all water quality monitoring conducted by the State and Regional Water Boards. In addition, SWAMP is uniquely positioned to promote collaboration with other entities by proposing conventions related to monitoring design, measurement indicators, data management, quality assurance, and assessment strategies, so that data from many programs can be used in integrated assessments that answer critical management questions.

The SWAMP mission is to provide resource managers, decision makers, and the public with timely, high-quality information to evaluate the condition of all waters throughout California.

SWAMP Assessment Questions

- Status: What is the overall quality of California's surface waters?
- Trends: What is the pace and direction of change in surface water quality over time?

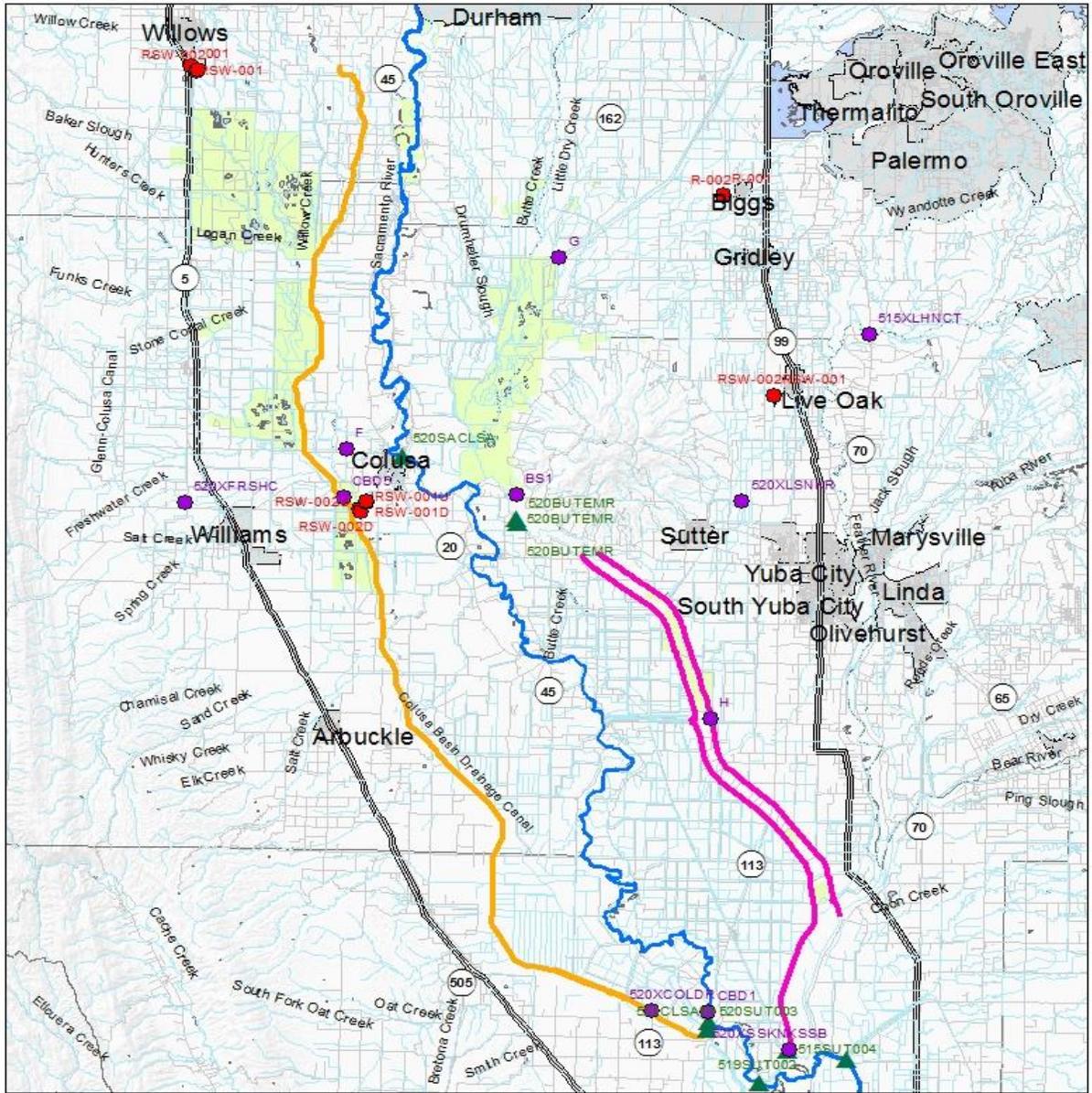
- Problem Identification: Which water bodies have water quality problems and which areas are at risk?
- Diagnostic: What are the causes of water quality problems and where are the sources of those stressors?
- Evaluation: How effective are clean water projects and programs?

SWAMP monitoring evaluates the physical, chemical, and biological integrity of the State's waters. SWAMP Monitoring efforts are prioritized and conducted at both statewide and regional levels as necessary to protect water quality in California. Monitoring is designed to support a network of information users that include state and local agencies, the regulated community, the interested public, and their elected representatives. SWAMP seeks to make the most efficient use of data collected by all Water Board programs, as well as the large amount of data collected by local agencies and the regulated community.

Monitoring and Surveillance – Alternative 1

Map of Current Monitoring Locations

Sacramento Study Area



- Legend**
- POTW Sampling Site
 - ILRP Sampling Site
 - ▲ SWAMP Sampling Site
 - Sutter bypass
 - Colusa Basin Drainage Canal
 - Sacramento River
 - Streams and other waterways
 - National Wildlife Refuge

Monitoring and Surveillance – Alternatives 2 & 3

Questions/Issues

Who will be in charge of the monitoring program implementation?

Who will do the monitoring?

How will it be funded?

Sample locations - How far downstream from discharge(s)? Where will the compliance points be?

Which constituents?

Monitoring frequency?

Who will be responsible for data analysis and review?

What type of follow-up action will be conducted by the Regional Board when objectives are not met?

Will there be stakeholder review and input?

How will program adapt to changes in regulations or agricultural practices in the future?

REFERENCES

- Central Valley Regional Water Quality Control Board. (2012, December 7). *ORDER R5-2012-0116 Waste Discharge Requirements General Order for Growers Within the Eastern San Joaquin River Watershed that are Members of the Third-party Group*. Retrieved July 30, 2013, from Central Valley Regional Water Quality Control Board Website:
http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2012-0116.pdf
- Porter-Cologne Water Quality Control Act. (amended 2013, January 1). *California Water Code*. Retrieved August 14, 2013, from State Water Resources Control Board:
http://www.waterboards.ca.gov/laws_regulations/docs/portercologne.pdf
- State Water Resources Control Board. (1988, May 19). *Resolution No. 88-63*. Retrieved August 14, 2013, from State Water Resources Control Board:
http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2006/rs2006_0008_rev_rs88_63.pdf
- State Water Resources Control Board. (2013, August 2). *SWAMP*. Retrieved August 14, 2013, from State Water Resources Control Board:
http://www.waterboards.ca.gov/water_issues/programs/swamp/
- United States Environmental Protection Agency. (2013, January 24). *National Pollutant Discharge Elimination System (NPDES)*. Retrieved August 14, 2013, from United States Environmental Protection Agency: http://cfpub.epa.gov/npdes/faqs.cfm?program_id=45