# State Water Resources Control Board

**Division of Water Quality**
901 P Street • Sacramento, California 95814 • (916) 657-0756
Mailing Address: P.O. Box 944213 • Sacramento, California • 94244-2130
FAX (916) 657-2388 • Internet Address: http://www.swrcb.ca.gov

**Winston H. Hickox**
*Secretary for Environmental Protection*

**Gray Davis**
*Governor*


February 28, 2000

Members and Alternates:

PROPOSAL TO PUBLIC ADVISORY GROUP: SETTING PRIORITIES FOR DEVELOPING MONITORING OBJECTIVES

On February 22, 2000, I sent the announcement for the AB 982 Public Advisory Group (PAG) March 3, 2000 meeting. The sixth item on the agenda is discussion of the Legislative Report titled: Plan for Implementing a Comprehensive Program for Monitoring Ambient Surface and Groundwater Quality. This item is part education (discussing the role of monitoring and where it fits in the regulatory process) and part recommending priorities for where to start in the development of the monitoring proposal required by AB 982.

This letter presents a brief background to the agenda item, a brief discussion of our regulatory process, and a proposal to the PAG for helping us set priorities on which specific monitoring objectives to develop first.

**Introduction**

AB 982 requires in part, that the State Water Resources Control Board (SWRCB) assess and report to the Legislature on the SWRCB's and the Regional Water Quality Control Boards' (RWQCB) current surface water quality monitoring programs and subsequently design a proposal for a comprehensive surface water quality monitoring program. The Legislative Report distributed to you provides the SWRCB's plan for the Surface Water Ambient Monitoring Plan (SWAMP). This document includes among other considerations a discussion of the elements of a comprehensive monitoring program plus a plan that will lead to its implementation. Monitoring is a key component of environmental protection and it provides the tool to help measure the success of environmental programs.

**Regulatory Background**

The Porter-Cologne Water Quality Control Act and the federal Clean Water Act (CWA) are broad-based laws implemented through regulatory programs designed to protect water quality by protecting the State's designated beneficial uses of water. The relationship of the water quality regulatory programs is presented in Figure 3 (Page 6 of the Legislative Report).

Each RWQCB has a Water Quality Control Plan (Basin Plan) containing designated beneficial uses for the waters in each Region, as well as numeric and narrative water quality objectives to ensure the reasonable protection of those beneficial uses. The SWRCB adopts policies and

statewide water quality control plans containing principles, water quality objectives, and guidelines for long range resource planning including surface water management. Both the Basin Plans as well as the statewide policies and plans are implemented through the issuance of Waste Discharge Requirements (WDR) and National Pollutant Discharge Elimination System (NPDES) permits. Water quality certifications, cleanup and abatement orders (CAO), cease and desist orders (CDO), and administrative civil liability (ACL) orders are also used to impose remedial actions. Furthermore, nonpoint source discharges are regulated primarily through the application of Best Management Practices (BMPs) through the implementation of the Nonpoint Source Management Plan (NPS Plan).

If beneficial uses are not being protected, then all of the applicable plans and policies and any remedial action applied are not having the intended effects. In such cases those water bodies not meeting or not expected to meet water quality standards after existing required remedial actions have been implemented must, under CWA section 303(d), be listed and ranked. Those water bodies determined to be high priority must therefore be targeted for TMDL development. A coherent and comprehensive understanding of the state's waters is therefore necessary to adequately assess impacts on the beneficial uses, locate polluted sites, the areal extent of pollution, and the trends in water quality.

**SWAMP Monitoring Objectives**

One of the most important elements in designing a comprehensive monitoring program is the establishment of clearly defined monitoring objectives. Without clear monitoring objectives, monitoring becomes costly and the resulting information generated may not be of any use. The overall objective of SWAMP is to assess whether the beneficial uses are being protected? This general question is broken further into the eight more specific questions (Figure 4, page 20 of the Legislative Report) each one relating to a beneficial use. With increasing specificity monitoring objectives help design monitoring programs that will meet the specific needs of decision makers. This helps in describing specific strategies, indicators, and amounts of change necessary to answer environmental management questions which could result in further focusing of monitoring objectives.

It is difficult to establish focused and specific monitoring objectives that will provide the information needed to make the most educated environmental management decisions. Each beneficial use protection question can generate a large variety of more questions and an even larger number of parameters to measure. Some of the parameters measured may not yield and provide the information to answer the appropriate question. It is therefore, important to devise a strategy to narrow the focus of the monitoring from a large number of possible questions and parameters to produce the specific information needed. A model to achieve this focus has been distributed to you.

**Proposal**

Before the proposed model for developing specific surface water monitoring objectives is discussed, it is useful to determine from the PAG's standpoint which beneficial use protection question would be most appropriate to address first (the questions are presented in Figure 4, page 20 of the Legislative Report). We propose that each question be ranked in the order of its relative importance and then by the type of question.

The eight questions can be categorized into three major groups as follows:

- Human health-related beneficial uses would include the following: Drinking water, contact and non-contact recreation, and consumption of fish and shellfish.

- Aquatic life protection beneficial uses would include the following: All habitat protection uses including all designations promoting the preservation and enhancement of fish, wildlife and other aquatic resources and reserves, fresh water habitat, warm water habitat, and cold water habitat.

- Other Human Uses such as industrial supply, agricultural supply, navigation, and power generation.

Each type of beneficial use related question could be further categorized by the type of question as follows:

- Location: What are the specific locations with problems? Monitoring related to this question is directly applicable to the Section 303(d) listing.

- Area: What percentage of area has problems? Monitoring related to this question may provide information that is applicable to the Section 303(d) listing and may provide information on waterbodies with little or no information.

- Trends: Are conditions getting worse or better? Monitoring related to this question may provide information that would confirm existing Section 303(d) listings.

I hope to have a very productive discussion of these monitoring issues at the March 3, 2000 meeting. Please call me at (916) 657-1108 if you have any questions about this subject.

Sincerely,

Original signed by CJWilson

Craig J. Wilson, Chief
Bays and Estuaries Unit
Division of Water Quality

cc: Interested Parties
Walt Pettit, Executive Director
Mary Jan Forster, Board Member
Art Baggett, Board Member
Stan Martinson, DWQ