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Consideration of a Water Quality Control Plan for the San Francisco Bay/Sacramento San Joaquin Delta Estuary by the State Water Resources Control Board

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The San Francisco Estuary Institute (SFEI) is an independent non-profit organization created for the purpose of providing the scientific information needed to manage the complex and biologically rich San Francisco Estuary. The Institute is governed by a Board of Directors representing management and regulatory agencies, users of the Estuary, and the public interest in environmental protection, and employs a small staff of scientists, data analysts, and educators. The Institute is charged by the Comprehensive Conservation and Management Program of the San Francisco Estuary Project with monitoring the physical, chemical and biological health of the Estuary. Under the framework of a Comprehensive Regional Monitoring Strategy, SFEI conducts extensive trace substance monitoring and is developing a wetlands monitoring program in the estuary. It works with other monitoring groups such as the IEP to insure that together, their programs comprise a coordinated comprehensive regional approach to providing information needed for sound management.

The Institute is directed to participate in the development and implementation of the monitoring program for the Water Quality Control Plan together with the Interagency Ecological Program (IEP) and the Central Valley Project Improvement Program.

This statement comprises comments of the SFEI staff, based upon their experience in designing and implementing monitoring programs, and their current participation in the effort to develop a monitoring program for the Principles of Agreement and the Water Quality Control Plan. This statement has not been reviewed or approved by our Board of Directors. The Institute is barred by its by-laws from advocating water quality policy, and therefore this statement only addresses our role in the development and implementation of the monitoring program.

We are pleased that the need for monitoring is addressed in the Plan. Monitoring is absolutely essential if we are ever to know whether the implementation of the Plan is having its desired effects on the health of the ecosystem.

The Monitoring Plan presented to you by the coordinators of the IEP represents a good start in the process of developing the necessary elements of the long term monitoring program. We recognize the need to get this effort underway--based upon adaptation of existing programs--as quickly as possible. But the monitoring plan before you needs a great deal of work before it actually provides a blueprint for the monitoring that needs to be done.

Any monitoring plan must address such issues of design, power, and replication if we are to have any confidence in its results. We strongly recommend that the current draft plan--and subsequent iterations that add the details of when, where, and what is monitored--be subject to extensive external review, and call upon the expertise available to us through members of both the IEP and SFEI science advisory groups, and other recognized experts.

The issue of synoptic sampling also must be addressed. In addition to the control of flow and diversion, other "Category III" activities are to be addressed. Such activities include reduction in pollutant loads, increasing wetlands habitat availability, and controlling exotic species. If we are ever to understand the relationship between these other factors and the control of flow and diversion, and if we are ever to know whether any of the management activities required by the Water Quality Plan are working, we must monitor all of these parameters in a synoptic fashion. Monitoring of Category III activities will not be effective if done on a piecemeal case-by-case basis, unconnected to the long term program designed to determine compliance with flow and salinity requirements. Many agencies and organizations outside of the current Interagency Ecological Program structure will need to be involved in developing this comprehensive, synoptic approach to monitoring. As an example, in trace substances monitoring, programs of the SFEI, the Regional Water Quality Control Boards 2 and 5, the Sacramento Comprehensive Monitoring Program, the U.S. Geological Survey's Water Quality Assessments of the Sacramento and San-Joaquin River basins will all need to be coordinated. We are willing to help provide the needed coordination.

The Board also needs to be aware that few of the answers that all of us desire concerning the effectiveness of the control measures now being put into place will be available within three years. Given the extreme variability in natural conditions, and the complicated ways in which human activities affect it, teasing out the cause and effect relationships will be a challenging job, and one which requires a long-term view. Thus while there is a need to move as quickly as possible, monitoring must be viewed as a long-term effort, one that will need to continue well beyond the initial three year term of the agreement. After the initial rush to get started, thoughtful and deliberative evaluation and re-evaluation of program efficacy is, and will continue to be required.

The Institute will cooperate fully with the Board, the Interagency Ecological Program, water users and public interest groups to try to ensure that the monitoring program that is put into place to address the Water Quality Plan is the best that it can be. We will continue to work through the IEP, but we are willing and able to play a larger role in monitoring program design, in implementation of monitoring elements addressing pollutant effects and wetlands and riparian habitat conditions, in data management, in the analysis and interpretation of data, in coordinating research, and in education and outreach to the public concerning the findings of the monitoring program.