State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES

WATER RESOURCES ENGINEERING MEMORANDUM NO. 60

TO: WREM Distribution List
FROM: John J. Silveira
       Carroll M. Hamon
       Robert G. Potter

DATE: September 18, 1992
SUBJECT: Quality Assurance/Control Policy for Water-Related Monitoring Programs

PURPOSE

This memorandum establishes Department policy and procedure to assure that quality assurance is used in the Department's chemical and physical measurements, data collection, and data measurement and management activities. This policy forms the basis for the conduct of the Quality Assurance/Quality Control Program. All of the Departments, Divisions, Districts, Field Divisions, contractors and agency cooperators performing measurement activities are subject to the provisions of this policy. Initially, this policy focuses on water-related programs and will evolve to other measurement activities.

Each year, the Department invests about $20 million and about 150 person-years of effort in the collection of water-related data. The majority of this data is of undocumented quality. Water data of unknown and uncontrolled quality are considered to be below acceptable standards by agencies such as the U.S. Environmental Protection Agency, the U.S. Geological Survey, the U.S. Bureau of Reclamation, the State Water Resources Control Board, and the State Water Contractors. In addition, data of undocumented quality may be considered questionable for submission as court evidence. Accordingly, it has become necessary for the Department to implement standardized quality control procedures.

POLICY

The Department shall:

1. Integrate quality control procedures into water-related monitoring activities, including collection, analysis, validation, reporting, storage (retention), and dissemination of data. This will occur through implementation of standardized procedures, adequate documentation, and training of departmental employees.
2. Develop a Quality Assurance Program Plan, approved by the Director, which describes how the Department, through its management organization, intends to consistently produce water-related data of a quality which is known and quantifiable. This document will identify goals, organizational structure, individual responsibilities, and management procedures as they relate to implementation and administration of the Quality Assurance/Control Program.

3. Assign a Control Quality Assurance Officer responsible for administering the Department’s Quality Assurance Control Program in compliance with the approved Quality Assurance Program Plan.

4. Develop Quality Assurance Project Plans for individual water-related projects. Data quality objectives will be defined in the Quality Assurance Project Plans.

5. Require all in-house and contract laboratories to follow the U.S. Environmental Protection Agency approved analytical procedures or equivalent, which contain quality control requirements for laboratory operation.

6. Implement quality control procedures in the most cost effective manner without compromising data quality objectives.

PROCEDURES

Technical documents in support of the Quality Assurance Program Plan provide specific guidance for implementation. The Quality Assurance/Control Program staff will be responsible for developing these technical documents. These include:

1. Guidelines for Preparing Quality Assurance Project Plans

   This document will provide guidance to Program Managers to develop specific quality control procedures and to prepare a written plan for water-related monitoring projects.

2. Sampling Manual for Water Related Monitoring Projects

   This document will generically describe most of the Department’s standard operating procedures and quality control components for water-related sampling.
3. Quality Assurance Guidelines for Analytical Laboratories

This document will establish guidelines to help assure the quality of data produced, evaluate the performance of, and specify data reporting requirements of analytical laboratories.


This document will describe standard operating procedures to control the quality of data produced by the Department's laboratories.

5. Quality Assurance for Electronic Management of Water-Related Measurement Data

This document will provide quality control guidelines for entry, storage, security, and retrieval of water-related measurement data.

TRAINING COURSES

The Quality Assurance/Control Program staff will be responsible for developing the necessary training to implement quality control practices within the Department. Courses will include: Introduction to Quality Assurance/Control, Developing Data Quality Objectives, Preparation of Quality Assurance Project Plans, Quality Assurance of Field Sampling and Laboratory Analysis, and Data Evaluation Methods. Appropriate departmental Staff shall attend these courses.

COORDINATION GROUP

The establishment of a Quality Control Committee was approved by the Director in March 1988. This Committee presently comprises representatives from the Division of Local Assistance, Division of Operations and Maintenance, Division of Planning, and the Environmental Services Office. The Committee membership shall be expanded to include participants from the Divisions of Land and Right of Way, Design and Construction, Safety of Dams, and Flood Management. The purpose of this Committee is to help guide the Department's quality control implementation and lend support to the Quality Assurance/Control Program. The Committee shall be chaired by the Department's Quality Assurance Officer.
IMPLEMENTATION

The Quality Assurance Officer shall prepare memorandum reports to the Director documenting progress in implementing the Quality Assurance/Control Program, and recommend further management actions, as necessary, to fully implement this policy.

This policy is effective immediately.

Signatures on file with MAO

Carroll M. Hamon  
Deputy Director  
Date__________________________

John J. Silveira  
Deputy Director  
Date__________________________

Robert G. Potter  
Deputy Director  
Date__________________________