



California Regional Water Quality Control Board

Central Coast Region



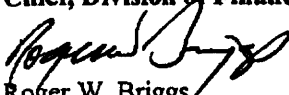
Alan C. Lloyd, Ph.D.
Agency Secretary

Internet Address: <http://www.waterboards.ca.gov/centralcoast>
895 Aerovista Place, Suite 101, San Luis Obispo, California 93401-7906
Phone (805) 549-3147 • FAX (805) 543-0397

Arnold Schwarzenegger
Governor

MEMORANDUM

TO: Barbara Evoy
Chief, Division of Financial Assistance

FROM: 
Roger W. Briggs
Executive Officer

CC: Celeste Cantu, Executive Director
Daniel Merkley, State Water Board Agricultural Coordinator

DATE: October 5, 2005

SUBJECT: LOCATION REPORTING REQUIREMENTS FOR PROPOSITION 40 AND 50 AGRICULTURAL WATER QUALITY GRANTS

Summary: Proposition 40 and 50 grant funds currently require reporting of project location through global position satellite (GPS) data. While this requirement is appropriate for management measure implementation and ambient water quality monitoring site locations, we believe it is inappropriate and counter-productive for field trials of management practice effectiveness. We are concerned that the new grant language greatly curtails our ability to acquire scientifically sound data about management practice effectiveness, and does not provide us with assurances that we do not already have with the Quality Assurance Project Plan (QAPP), Monitoring Plan and final project reports. The ultimate goal is to ensure projects are implemented that reduce water pollution, and we rely on the technical experts outside the State and Regional Boards to perform this important work. If we create conditions that curtail their ability to work, we are ultimately limiting our agencies' goals for water quality improvement. In this memo, we will show all requirements for data disclosure and project accountability, specifically associated with monitoring management practice effectiveness, can be met with subwatershed level reporting.

Background: New grant agreements under the Proposition 40 and 50 agricultural grants are now requiring that all projects report site locations using GPS coordinates to within 50 feet. We believe this requirement is appropriate for ambient water quality monitoring site locations and in-ground management practices. However, we believe this requirement is not necessary for projects that are designed to test management practice effectiveness, and will hinder our ability to acquire good technical information by discouraging such projects. The end result will be less effective water quality protection by growers.

1) Our knowledge of "best management practice" effectiveness is limited. We do not know the degree to which practices implemented will be effective at reducing water pollution, without evaluating those practices on a local level. Many agricultural management practices were designed and tested for pollution prevention in other regions that are very different from the Central Coast. The dominant factors influencing run-off on farms have to do with the properties of soil and rainfall. Within the Central Coast, soil infiltration varies over six orders of magnitude and erodability over two orders of magnitude. Although we understand some management practices can reduce polluted run-off, we cannot predict within any meaningful confidence intervals the expected amount of pollution prevention or load reduction. This is particularly a problem in areas with TMDLs, where knowledge of load reductions is important. This puts the Central Coast Region in the position of requiring project implementation, without knowing the degree to which projects will result in water quality improvement.

2) Requiring project location to within 50 feet will greatly limit grower participation in practice effectiveness studies. We understand that all agriculture waivers, here and in other regions, require water quality monitoring on a watershed scale. However, under the new grant requirements, individual property water quality monitoring would be required.. This creates a situation where

California Environmental Protection Agency



Recycled Paper

Item No. 8 Attachment 2
December 1-2, 2005 Meeting
On-Farm Management Practice
Implementation

the most cooperative growers are under greater scrutiny from grant requirements than from the regulations. Most growers are worried that data collected from their property will be used for private litigation or enforcement. As a result, growers are reluctant to allow research projects on their lands. This creates a major obstacle for our grant recipients, since they must rely on growers' voluntary participation in these studies. The result is we lose the opportunity to gain scientifically defensible data about the effectiveness of practices, the very practices that we recommend to growers in our nonpoint source and agricultural waiver programs.

3) This new policy limits the number and type of farms willing to participate in these studies, which inadvertently creates biased data results. This is because the farms willing to participate are "model" farms (e.g., university field trial farms, organic farms etc.) that are confident data will not show significant pollution. This creates data results that represent farms without significant water quality problems, and therefore, data is not applicable to the farms most in need of implementing management practices.

4) The State's Surface Water Ambient Monitoring Program and the Central Coast Water Board's Central Coast Ambient Monitoring Program are not designed to house data associated with management practice effectiveness studies. These databases are for housing ambient water quality data. What is important in practice effectiveness studies is the statistical interpretation of data in the context of the experiment. For example, under the new site requirement, a project could have 30 data points, all with the same location. As housed in our databases, the implications of this data are essentially meaningless, unless other factors such as time, practice type, and change in management measures are also incorporated. It is impossible to create a database to accommodate all project types, given the specificity of project designs. This is why emphasis is placed on a final report, where data analysis and interpretations are presented.

5) It is already a requirement that all water quality data collected with public funds must be reported in public documents. Regional Board staff is dedicated to ensuring funds result in high-quality scientific data, with all data results available to the public. All monitoring projects are required to submit a QAPP, a Monitoring Plan, and a final report. The QAPP is a detailed document requiring all information regarding parameters measured, sample collection dates and frequency, detection limits and Quality Assurance/Quality Control measures. The Monitoring Plan describes the statistical design, and data analysis techniques. A final report is created, which analyzes the data and provides data interpretation. The QAPP, Monitoring Plan and final report are reviewed and approved by Regional Board staff to ensure scientific data collection and analysis. These plans do not allow for water quality data to be eliminated, and all documents are part of a file available for public review. In addition to a final report, UC researchers commonly publish their studies in peer-reviewed journals, where other researchers provide commentary. One advantage to granting funds to UC researchers is their inherent dedication to objective and accurate studies.

6) Site location to 50 feet for practice effectiveness monitoring does not add scientific or technical merit to the study, nor is it necessary to ensure accountability. The purpose of monitoring practices is to understand its ability to reduce pollution, and to determine the applicability of that practice to other localities. Statistical analysis shows the pollution reduction potential, and this information is contained within the aforementioned final report. Soil, crop and irrigation type determine a practice's applicability to other localities. Therefore, adding location information to 50 feet does not provide necessary information that we do not already have, nor does it help us determine a practice's usefulness in other localities.

Conclusion and suggested solution: Central Coast Regional Water Board staff recommends that the requirement for GPS coordinates be modified to subwatershed level reporting for projects that are specifically designed to provide data on management practice effectiveness. All other requirements for monitoring plans, QAPPs, reporting and accessibility should remain the same. We believe this will improve our ability to obtain information on management practices and at the same time meet the State's need for accountability and high quality data.

T:\NPS\Grants + Mitigation Funds\GPS requirement memo FINAL