



Linda S. Adams
Secretary for
Environmental
Protection

California Regional Water Quality Control Board Central Valley Region

Karl E. Longley, ScD, P.E., Chair



Arnold
Schwarzenegger
Governor

Sacramento Main Office
11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • FAX (916) 464-4645
<http://www.waterboards.ca.gov/centralvalley>

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Ms. Tam M. Dudoc, Chair
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812

YEARLY REPORT FOR MEMORANDUM OF UNDERSTANDING (MOU) PILOT PROGRAM

The 29 June 2005 Memorandum of Understanding (MOU) among the Central Valley Regional Water Quality Control Board (Regional Water Board), the State Water Resources Control Board, the California Department of Pesticide Regulation, and the Agricultural Commissioners of Glenn County and Butte County specifies activities that will take place in support of the Regional Water Board's Irrigated Lands Regulatory Program. These support activities constitute the MOU Pilot Program.

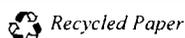
On 29 June 2007, all parties renewed the MOU for four years. As required by the MOU, the staff liaisons from the Regional Water Board and the Agricultural Commissioners of Glenn County and Butte County submit Quarterly Reports of the activities performed under the contract and any recommendations to improve the MOU Pilot Program.

The attached annual reports are summaries of the MOU Pilot Program activities for 2007. If you have questions regarding this Report or the MOU Pilot Program, please contact Ms. Margaret Wong at (916) 464-4857, or by e-mail at mawong@waterboards.ca.gov.


PAMELA C. CREEDON
Executive Officer

cc: Ms. Dorothy Rice, Executive Director, State Water Resources Control Board
Ms. Mary-Ann Warmerdam, Director, Department of Pesticide Regulation
Mr. Mark Rentz, Deputy Director, Department of Pesticide Regulation
Mr. Mark Black, Agricultural Commissioner, Glenn County
Mr. Richard Price, Agricultural Commissioner, Butte County
Mr. Johnny Gonzales, Program Manager, State Water Resources Control Board

California Environmental Protection Agency



ATTACHMENT A

MOU Pilot Program Central Valley Regional Water Board Year 2007 Report

Background

On 29 June 2005, a Memorandum of Understanding (MOU) was signed between the Central Valley Regional Water Quality Control Board (Regional Water Board), the State Water Resources Control Board (State Water Board), the California Department of Pesticide Regulation (DPR), and the Agricultural Commissioners of Glenn County and Butte County that pertains solely to activities related to the Regional Water Board's Irrigated Lands Regulatory Program (ILRP). At the end of two years, the MOU was to be reviewed by the signatories and either renewed, revised, or terminated.

Review of the program concluded that continued coordination between the Regional Water Board and Agricultural Commissioners was productive. On 29 June 2007, the same parties amended the MOU to include minor revisions to the original agreement. The 2007 MOU is effective for four years, at which time the MOU will be reviewed by all parties to assess its effectiveness in addressing water quality impacts as described in the ILRP. Upon completion of the review, the MOU may be renewed, revised, or terminated.

The Agricultural Commissioners work under contracts with the Regional Water Board that specifies tasks to be performed. The activities for these tasks comprise the MOU Pilot Program. The current contracts between the Regional Water Board and each of the Agricultural Commissioners were executed on 27 December 2005 and were extended to 31 March 2008. The 2007 MOU specifies a new contract to provide funding of 0.5 PY to each of the Agricultural Commissioners for the first two years of the MOU, with the provision that the contract may be extended for additional years if agreed to by all parties.

Under both the 2005 and 2007 MOUs, the Agricultural Commissioners and Regional Water Board appoint a staff liaison for this Pilot Program. Quarterly reports from the liaisons are required to update the status of the MOU Pilot Program. For this reporting period, the staff liaisons have summarized the 2007 activities. Attachment A contains the Regional Water Board staff's 2007 annual report. Attachments B and C contain the 2007 annual reports from the Butte County and Glenn County Agricultural Commissioners' staff, respectively.

Regional Water Board Staff Activities under the MOU Pilot Program

In 2007, the Regional Water Board staff liaison met periodically with the Agricultural Commissioners' staff to discuss how the MOU Pilot Program can help achieve the ILRP objectives. The primary objective is to show that implementation of management practice(s) can be effective in protecting water quality.

The management practices survey for Pine Creek and Walker Creek in Butte County and Glenn County, respectively, continued through 2007. During the year, the Regional Water Board staff liaison worked with the Sacramento Valley Water Quality Coalition (Coalition) to facilitate timely transfer of Coalition monitoring data to the Agricultural Commissioners' staff for those two subwatersheds. The Coalition was informed that the Butte and Glenn Agricultural Commissioners' staffs were available to support additional monitoring for field parameters and to provide additional information, such as crop and pesticide use, under the MOU Pilot Program.

The Regional Water Board staff liaison met with other stakeholders, such as the resource conservation districts, to inform them of the role the Agricultural Commissioners under the MOU Pilot Program and to act as a contact for questions on the ILRP. Regional Water Board staff also sent information to the Agricultural Commissioners to forward to parties interested in funding for grants to help comply with the ILRP requirements.

Program Support from Agricultural Commissioners and Their Staff

The MOU Pilot Program is now supporting the ILRP by demonstrating how to document baseline and implemented management practices within a subwatershed. The Butte and Glenn Agricultural Commissioners' staff used two different means of documentation and demonstration, based on capabilities and resources within the county, to survey management practices in place within a subwatershed. Monitoring by the Coalition will determine the effectiveness of those management practices, or the areas to examine if water quality exceedances are found.

The MOU Pilot Program is integrating itself into the Coalition monitoring and outreach programs by offering support services and information. The Agricultural Commissioners have direct contact with growers and can provide information and updates on the ILRP. The management practice surveys for Walker Creek and Pine Creek have interested several subwatersheds that will be attempting to perform the same type of work as required in Management Plans.

Program Status

The Regional Water Board staff liaison submitted new contracts for the MOU Pilot Program to start 1 April 2008. The Glenn County contract was approved by the Agricultural Commissioner who has authority to sign for contracts under a certain amount. The Butte County Board of Supervisors needs to approve the contract and authorize acceptance for the Butte Agricultural Commissioner. To allow more time for the 2007 contract to be executed, a no-cost time extension was processed for the 2005 MOU contract.

The staff liaisons are continuing their efforts on the ILRP objective of documenting management practices and their effectiveness in protecting water quality. The

Agricultural Commissioners' staff liaisons are coordinating with the Coalition, subwatersheds, resource conservation districts, and growers to distribute information on management practices and findings within their subwatersheds.

Regional Water Board staff will continue to work closely with the Agricultural Commissioners and their staff to further the goals of the MOU Pilot Program.

ATTACHMENT B

MOU Pilot Program Butte County Department of Agriculture Year 2007 Report

As required by contract # 05-183-150-3, the Butte County Department of Agriculture (Butte County) is to provide the Regional Water Quality Control Board (Regional Water Board) with a quarterly report of activities as it relates to the scope of work for the Irrigated Lands Regulatory Program (ILRP) contract.

This 4th quarter report will be a summary of all the significant achievements for the calendar year.

Task 1) *Provide information/maps and perform pesticide application inspections and investigate sites and exceedances for the ILRP as authorized by the Regional Water Board.*

Butte County continues to update the GIS map data and gather hydrological information relevant to the ILRP. The locations for UC Davis and the Department of Pesticide Regulation (DPR) monitoring activities were added to the ILRP digital map. This sub-task is complete and ongoing.

County staff performed one ILRP discharge investigation in the Pine Creek watershed and provided support for field sampling to Regional Water Board staff.

County staff provided follow-up support activities to Regional Water Board staff for pesticide application permits and activities for the Red-legged Frog habitat core area in the upper Feather River.

Task 2) *Inspect, assess and document management practices used in agricultural operations to protect water quality.*

Butte County staff performed 11 ILRP agricultural "Management Practices/Pesticide" evaluation inspections this calendar year. This sub-task is complete.

The Pine Creek watershed survey for existing management practices used by agricultural operations adjacent to the creek is complete. The results were presented to Regional Water Board staff on September 21, 2007.

Sub Task B. The "Management Practices Report" first draft is complete.

Task 3) *Assist the Regional Water Board in evaluating sample monitoring points for agricultural wastewater discharges and a list of pesticides used within Butte County.*

Butte County staff continues to update the pesticide list. This sub-task is ongoing.

County staff performed one monitoring site investigation at Pine Creek, Sacramento Valley Water Quality Coalition (Coalition) location # 14, on November 16, 2007.

Task 4) *Coordinate and conduct outreach to growers on management practices that protect water quality.*

Handouts and brochures that explain the Ag Waiver, MOU Pilot Program, and Coalition efforts and activities within sub-watersheds continue to be provided at pesticide permit appointments.

Butte County staff provided outreach activities and support to irrigators/growers at the February 1, 2007 "Walnut Day and Almond Institute" and December 6, 2007 "Butte County Annual Growers Meeting". Over 300 participants attended.

A Power Point presentation of the Pine Creek BMP survey was given at the Butte-Yuba-Sutter Watershed Coalition meeting on October 10, 2007

Procedures and documents templates were provided.

Task 5) *Assist Regional Water Board staff by coordinating with other agencies and providing information and input that will further the implementation of the ILRP.*

Butte County has coordinated with the Agricultural Commissioners of Glenn, Tehama, Yuba and Sutter and with members of the Butte-Yuba-Sutter watershed and Resource Conservation Districts (RCDs), Natural Resources Conservation Service (NRCS) and many other agencies, regarding various aspects of the ILRP and activities that address and explore issues, and promulgate knowledge concerning water quality in the agricultural industry.

Butte County staff attended the Nielsen Water Sampling Field Course on October 15 thru 18, 2007. Knowledge and experience gained in this training directly supported the activities in Tasks 2 and 3.

Butte County staff attended; participated and organized ILRP-related functions and meetings throughout the contract year. A total of 47 such activities are documented:

- 12 ILRP/RWB meetings
- 10 watershed and Coalition meetings
- 8 RCD and NRCS meetings
- 1 County National Pollutant Discharge Elimination System (NPDES) meeting

- 5 grower ILRP out-reach functions
- 6 other ILRP affiliated meetings

An additional five meetings were attended related to the negotiation, development and signing of the MOU.

Recommendations:

Invoicing flexibility for services and supplies required for investigative activities is still not available in the contract and really, really needs to be considered. Funds to cover mailing costs for ILRP outreach and related issues are presently being covered through other programs and will likely not be available in the future.

Robert C. Hill
Deputy Agricultural Commissioner
Phone: 530-538-7381
Fax: 530-538-7594

ATTACHMENT C

MOU Pilot Program Glenn County Department of Agriculture Year 2007 Report

As required by contract #05-182-150-3, the Glenn County Department of Agriculture (Glenn County) provides the Regional Water Quality Control Board (Regional Water Board) with a quarterly report of activities as it relates to the scope of work for the Irrigated Lands Regulatory Program (ILRP) contract. The fourth quarter report will be combined as a 2007 Annual Report summarizing significant achievements for the 2007 calendar year.

Glenn County staff is proactive in providing outreach to growers and assisting other agencies with technical information needed to conduct their own outreach. Glenn County staff also provides outreach by attending meetings for other agencies that have a role in water quality issues and promoting programs that may be beneficial to water quality. In addition to attending meetings, staff participates with numerous agencies managing water quality issues. Staff has initiated coordination with the following organizations:

- Sacramento Valley Water Quality Coalition (Coalition)
- Coalition sampling team
- Colusa Glenn Sub-watershed
- Glenn County and Colusa County Resource Conservation Districts (RCD)
- Glenn County Farm Bureau
- Northern California Water Association (NCWA)
- Sacramento Valley Agricultural Commissioners Association
- California Agricultural Commissioners and Sealers Association (CACASA)
- UC Cooperative Extension
- Coalition for Urban/Rural Environmental Stewardship (CURES)
- Local irrigation districts
- Local Pesticide Dealers, Advisors, and Applicators

Noteworthy Activities During 2007

Glenn County initiated outreach efforts between the Glenn County RCD and the Colusa Glenn Sub-watershed group for administrative and outreach services. The efforts to bring the RCD and the Sub-watershed together were successful. The Agricultural Commissioners of Glenn and Butte counties have also reviewed and provided input for the four year MOU signed on June 29, 2007.

Glenn County staff arranged for and accompanied the Contract Manager (the Regional Water Board staff liaison) to visit a rice and high-density olive farming operation to observe typical management practices utilized by growers in this area. The Contract

Manager also had the opportunity to become familiar with crop specific pesticides, timing of applications, and common problems that growers may encounter. Allowing the Contract Manager the time to meet with growers allows for a better knowledge of field conditions and understanding of terms used in the agricultural sector.

Glenn County staff has performed numerous queries regarding pesticide use and cropping patterns to assist in identifying water quality concerns. These requests have come from the Contract Manager and from the Colusa Glenn Sub-watershed. Glenn County staff has been proactive in providing all information that could be relevant to the concern. In addition to performing queries, Glenn County staff has been prepared to assist the Regional Water Board in outreach when requested.

In January 2007, Glenn County staff queried all available pesticide use reports for the months of November and December 2006 to identify the predominant pesticide use during that time. The results were to be used to assist in determining if pesticides may have contributed to aquatic toxicity observed from sampling events in the Sacramento River.

During the first storm event sampling, performed by the Coalition in February 2007, aquatic toxicity was observed at the Stony Creek location. Glenn County staff compiled and reviewed all reported pesticide use data available that may have had an effect on sampling results. At the request of the Contract Manager, staff prepared a map of parcels near Stony Creek with a list of growers falling within the area of concern to assist in the determination of the aquatic toxicity. There was no conclusive result. Based upon this information, staff assisted in selecting an alternate site for the second storm season event.

Glenn County staff evaluated all available pesticide use data in the Walker Creek area of the county to assist in determining pesticides that may have contributed to an aquatic toxicity event in the third quarter. Staff also reviewed available pesticide use data to determine the most prevalent rice herbicides applied early in the rice growing season.

During the July and August irrigation sampling events, the Walker Creek sampling location experienced exceedances for chlorpyrifos. Glenn County staff has been proactively working with the Sub-watershed group and the RCD by providing information about available pesticide use data, grower information, and site information. A grower meeting was scheduled January 16 by the Sub-watershed in which growers, pest control operators and advisors were invited. Glenn County staff presented the pesticide use information contained within this office. In addition, staff presented the watershed evaluation that was conducted in the Walker Creek watershed.

Best Management Practices Evaluation

Glenn County staff completed the large-scale watershed evaluation within the Walker Creek watershed. Staff identified the agricultural parcels within the watershed and evaluated each site. The field surveys include crop type, irrigation methods, and visual evidence of best management practices. Crop type and irrigation methods were added to a wall map for visual comparison. A database was created in Microsoft Access to enter all field survey information. This makes it possible to query for specific field attributes. An Arc View map has also been created and linked to the database to allow staff to visualize trends in the watershed. The evaluation assessed 376 irrigated agricultural sites totaling 27,422 acres.

During the course of the project, 31 fields identified as irrigated agriculture were not evaluated due to size. Growers that have less than 10 acres were considered home and garden or ranchette operations and were not included in the evaluation. Many ranchette operations are members of the Coalition, but they do not necessarily employ management practices on a scale that would have a beneficial effect on water quality, or use materials that could have a detrimental effect on water quality. In addition to ranchette operations, 12 fields are not accessible and were not evaluated with a field survey.

One hundred and sixteen (116) grower operations have been identified within the Walker Creek Watershed. To assist in outreach efforts, growers have completed a Site Self Assessment Survey created by CURES. Sixteen thousand (16,000) acres of the watershed area have completed surveys documenting management practices employed but not always visible at the time of the evaluation.

On September 21, 2007, Glenn County staff provided Regional Board staff with a power point presentation of the applicability of the BMP evaluation and how it may assist the Regional Board in program implementation. At the same time, the BMP evaluation can provide additional information to the Coalition and local Sub-watersheds to perform outreach to growers and to evaluate management practices in place. When requested, Glenn County staff is prepared to provide additional demonstrations to interested parties. A final report on the BMP evaluation, associated Arc View shape files, and Access Data Base information will be submitted to the Contract Manager in March 2008.

Glenn County staff believes that watershed evaluations are an effective way to gather information about best management practices currently in place that will assist both the Regional Water Board and the local Sub-watershed in collaborative outreach efforts. With this in mind, a similar evaluation in the Logan Creek watershed was initiated. The Logan Creek watershed has a Coalition sampling location that will remain active for the 2008 sampling season. The watershed also reaches into Colusa County providing for additional outreach opportunities. An agreement has been developed between the

Glenn and Colusa County Departments of Agriculture to work cooperatively in this evaluation process. Colusa County staff has completed the field surveys for the sites located within Colusa County. Glenn County staff will begin field surveys beginning in the spring of 2008 when crops and management practices are more readily visible.

Outreach Efforts

Staff provides one-on-one outreach to growers during pre-pesticide application site inspections. During these inspections, growers are given handouts created by CURES specific to the crop being inspected. Glenn County staff is utilizing the pre-pesticide application site inspection process that provides a better opportunity for grower outreach prior to the application. In this manner, growers are given the opportunity to ask any questions that might be relevant to the ILRP and their Sub-watershed activities. This type of inspection is initiated through the Tri-County Bee Notification program located at our Department. This provides information necessary to locate pesticide applications (48 hour prior notice) that have water quality concerns. This is a convenient method since most pesticides that are toxic to bees are also toxic to aquatic life. Periodically this information can be provided to Butte County so they can also take advantage of this process. Glenn County staff performed four inspections in 2007.

These types of interaction with other agencies and with growers are essential to the successful implementation of the ILRP. It gives each agency a better working knowledge of information available to them and what water quality issues are being discussed. In addition, agencies must work collaboratively and share information to investigate any activities that may be requested by Regional Water Board staff.

In addition to providing outreach, Glenn County staff has also attended training seminars including:

- 2007 California Plant and Soil Conference, containing an afternoon session titled "Agriculture and Water Quality"
- Environmental Issues on the Farm course sponsored by UC Davis Extension
- The Complete Ground-water Sampling Field Course sponsored by The Nielsen Environmental Field School, containing valuable sampling techniques, chain of custody, and other information that can be used not only for ground-water, but also surface water sampling.
- Microsoft Access Training to enhance databases for Arc View BMP watershed evaluations more effectively and efficiently.

Training for staff allows for a more complete knowledge of water quality concerns, sampling techniques, and mitigation measures. It also provides more efficient use of time when learning about techniques specific to sampling and computer work.

Glenn County staff received training from Department of Pesticide Regulation's Environmental Monitoring Branch sampling team. Staff learned about appropriate

mitigation measures to ensure sampling materials are not contaminated and proper sampling techniques.

Glenn County staff accompanied Pacific EcoRisk to four Coalition monitoring sites during April 2007. Staff has also performed numerous follow-up field data collections during the 2007 sampling season. Additional follow-up was necessary for toxicity on Walker Creek and field parameter measurements on both Walker Creek and Lurline Creek. Glenn County staff is prepared to continue performing follow-up field data when requested by the Coalition sampling crews or the Contract Manager.

Based upon continued low dissolved oxygen readings from the current Walker Creek sampling location, Glenn County staff has recommended to the Colusa Glenn Sub-watershed that it may be beneficial to move the sampling location upstream where flows are not restricted by beaver dams. Although it may be beneficial to move the sampling site, it may be necessary to conduct further sampling at the current location due to two aquatic toxicities. This will be determined after additional outreach efforts are assessed and a management plan is in place.