

**PROPOSITION 84 AGRICULTURAL WATER QUALITY
GRANT PROGRAM
REQUEST FOR QUALIFICATIONS NOTICE
OCTOBER 17, 2008**

**APPLICATIONS ARE DUE BY 5:00 P.M.
MONDAY, NOVEMBER 17, 2008**

I. INTRODUCTION

The State Water Resources Control Board (State Water Board) is administering a nonpoint source grant program to improve agricultural water quality. The Central Coast Regional Water Board (Regional Water Board) received \$3 million of Proposition 84 bond funds, which provides grant funds to public agencies and nonprofit organizations, to aid Central Coast farmers to implement irrigation and nutrient management practices to reduce the discharge of pollutants from agricultural operations into surface waters.

II. APPLICATION INSTRUCTIONS

This section provides instructions for preparing and submitting an application for the attached Request for Qualifications (RFQ). The section consists of two subsections: How to Submit and What to Submit. It is important that the applicant follow the Application Instructions to ensure their application will address all of the required elements. Applicants are reminded that once the application has been submitted to the State Water Board, any privacy rights as well as other confidentiality protections afforded by law with respect to the application package will be waived.

Applicants will be evaluated and scored based on the information provided in the RFQ and the expertise of the reviewers.

A. HOW TO SUBMIT

Applicants must submit a complete application on-line using the State Water Board Financial Assistance Application Submittal Tool (FAAST). The on-line FAAST application for the Proposition 84 Agricultural Water Quality Grants Program will be made available the week of November 1, 2008. The application can be accessed at the following secure link:
<https://faast.waterboards.ca.gov>

Applicants will enter information on the following three (3) application sections: General Information, Qualifications, and Application Attachments.

Submit the RFQ application only when the applicant has gathered and entered all required information. At the time the RFQ application is submitted, an automated confirmation e-mail will be sent to the applicant confirming the date and time of submission.

- If an applicant has a question or problem with FAAST, please contact FAAST staff by phone at 1-866-434-1083, Monday through Friday, 8:00 A.M. – 5:00 P.M., or by e-mail at

faast_admin@waterboards.ca.gov.

- If an applicant has a question as to the content or information requested in the RFQ Notice, please see the Contact Persons included at the end of this RFQ Notice.
- The RFQ application in FFAST consists of pull down menus or text boxes that will be used to submit answers to the questions.

FFAST USER HINTS:

- **Applicants should use a PC. Use of a Macintosh Computer will impede your ability to save your work to FFAST.**
- **Applicants should use Internet Explorer, version 6.0, or above. Use of any other internet browsers will impede your ability to save your work to FFAST.**
- **The character limit is indicated for each text box. Text box answers can range from 500, 1000, 1500, or 2000 characters (includes spaces and characters).**

B. WHAT TO SUBMIT

The RFQ application consists of a general information section, qualifications, and supporting attachments. The remainder of the proposal content will be provided in response to questions directly entered into FFAST.

FFAST tracks attachments by an **attachment title, not file name**. When uploading an attachment in FFAST the Attachment Title naming convention is as follows:

AttX_AttachmentName_#ofTotal#

Where "AttX" is the attachment letter; "AttachmentName" is the name for the attachment as specified below in the RFQ Notice; and "#ofTotal#" allows the reviewer to know how many files make up an attachment, where "#" is the number of a file and "Total#" is the total number of files submitted in the attachment. For example, Attachment A – Statement of Support is made up of 2 files, the second file in the attachment submittal would be named: AttA_StmtSup_2of2.

The file name section in FFAST requires a computer path to the file location on the applicant's computer. While there is no specific naming convention given here for the file name, applicants should consider using a similar name to the attachment title to simplify personal file management. **Do not use special characters such as dashes, asterisks, symbols, spaces, percentage signs, etc. Underscores are acceptable, as shown above.**

REQUEST FOR QUALIFICATIONS

The California Regional Water Quality Control Board, Central Coast Region (Regional Water Board) is issuing a Request for Qualifications (RFQ) for public agencies and non-profit organizations qualified under Section 501(c)(3) of the Internal Revenue Code for the project listed below. Further information on the Agricultural Water Quality Grants Program (AWQGP) under Proposition 84 can be found at:

http://www.waterboards.ca.gov/water_issues/programs/grants_loans/awqgp/index.shtml

CENTRAL COAST IRRIGATION AND NUTRIENT MANAGEMENT PROGRAM (CCINMP)

Schedule:

Deadline to submit qualifications using FFAST: **17 November 2008**

Tentative date for applicant interviews/presentations: 8 December 2008

Tentative deadline to select Grantee: 15 December 2008

Expected project start date: 2 January 2009

Expected project end date: 31 March 2012

Available funds: \$3,000,000 for both Santa Maria and Salinas Valley Watersheds
 or
 \$1,500,000 for the Santa Maria Watershed
 \$1,500,000 for the Salinas Valley Watershed

Required matching funds:

\$750,000 (25 % of \$3,000,000)

or

\$375,000 (25% of \$1,500,000)

Grant Distribution:

- The grant project scope of work focuses on two (2) watersheds: Santa Maria and Salinas Valley. The total grant amount available is \$3 Million. Applicants may submit an application to implement the scope of work in both watersheds, or they may submit an application to implement the scope of work in a single watershed for up to \$1,500,000. Applicants may also request funding to implement in an alternative watershed. In this case, the applicant must submit additional water quality data and justification.
- Grant funds cannot be used for work performed prior to award and approval of the executed grant agreement.
- All costs associated with this project are incurred by the Grantee prior to being invoiced to the Regional Water Board. No Advance Payment is allowed. Only work specified in the grant agreement will be reimbursed.

GENERAL STATEMENT OF WORK

The scope of work is included as Attachment A and is based upon the input from many technical agencies, representatives of the agricultural community and other stakeholders. The focus of this grant is water quality improvement in the Salinas Valley and Santa Maria watersheds through the effective implementation of irrigation and nutrient management practices. The program goals are: 1) to reduce irrigation water agricultural runoff (tailwater), which transports nutrients, sediments and pesticides from farmland into surface water, and 2) to prevent excessive fertilizer application and off-site movement, which contributes to current high levels of nutrients in surface water and groundwater, within the Central Coast region. An additional benefit of this grant project is water conservation and energy savings, consistent with the directives of the Governor and the California Global Warming Solutions Act of 2006. The program will achieve the program goals by providing technical assistance and working with growers to effectively implement efficient irrigation and nutrient management practices on a broad watershed and regional scale, using a consistent, well-coordinated technical approach and appropriate performance monitoring. The Grantee will coordinate with Regional Water Board staff and a technical advisory committee (TAC) to ensure that a proper and effective level of technical assistance is provided to growers, resulting in on-farm irrigation and nutrient management practice implementation and water quality improvement.

BOND ACCOUNTABILITY

On January 4, 2007, the Governor issued Executive Order S-02-07 to establish guidelines and procedures for spending Strategic Growth Plan bond funds efficiently, effectively and in the best interests of Californians. Consistent with the Governor's executive order, the Central Coast Water Board has made grant project performance and accountability a high priority to ensure that projects and activities use funds appropriately and achieve their intended purposes. For more information on bond accountability, please visit the California Bond Accountability website at <http://www.bondaccountability.ca.gov>.

FUNDING MATCH REQUIREMENTS

The Grantee is required to provide a funding match of 25%. "Funding match" means funds made available by the applicant from non-State sources. The funding match may include, but is not limited to, federal funds, local funding, individual growers' and various agencies' time spent on the TAC and other program meetings, or donated and volunteer services from non-state sources. For all programs the funding match is calculated based on total project cost for which funding is requested. The State Water Resources Control Board (State Water Board) reserves the discretion to review and approve funding match expenditures. For matching funds, additional documentation to support the amount claimed as match for each invoice must be submitted.

MINIMUM SUBMITTAL REQUIREMENTS

Public agencies and non-profit organizations interested in providing services for this grant opportunity shall complete an application questionnaire through the Financial Application Assistance Submittal Tool (FAAST) located online at <https://faast.waterboards.ca.gov>.

Submittals will be scored only upon receipt of the following minimum criteria, which are mandatory and posted at the FFAST website for Proposition 84 AWQGP Applicants:

- Submitting organization
- Legal Name on file with the Secretary of State and Federal Identification Number of the agency or organization.
- An indication of which watershed(s) for which the application applies (Santa Maria, Salinas Valley, or both).

Additional information required for a complete application must be submitted as a Word document attachment.

- Attachment A – Budget
 - A general task-based budget per the attached scope of work, including an estimate of personnel time and costs (labor rates on hourly basis), materials and supplies, and operating expenses for the Grantee to perform the project management, administrative support, and oversight requirements of this grant.
- Attachment B – Statements of Support and Commitment
 - Written statements of support or commitment from partnering and cooperating entities, such as a coalition group, watershed group, agricultural organization, environmental organization, or local water agency. At a minimum, written statements should be included for entities involved in the implementation of the grant project. Statements must include contact name, address, and phone number. Written statements are limited to one page for each cooperating entity, minimum 11 point font.
- Attachment C -- Statement of Qualifications (SOQ) limited to four pages, minimum 11 point font.
 - The applicant's professional experience in performing the specific tasks within the scope of work, with a description of professional experience and background of the agency/organization in relation to water quality, implementation of irrigation and nutrient management practices, outreach to the agricultural community, grower participation, technical assistance, and project management and coordination.
 - A list of proposed personnel to be assigned to and involved with the project. The list should identify each person's professional experience and qualifications. The list should also include the description of professional experience and background of any sub-consultants. The percentage of time each person will spend on the project must be estimated and stated, and the proposed tasks in the scope of work under their responsibility should be identified.
 - A statement for how the applicant plans to recruit and hire necessary personnel (such as technical advisors) not currently available to the agency/organization.
 - A description of any other background, training, skill, or experience relevant to the firm/organization and/or personnel assigned to the project.
 - Examples of completed or on-going work that illustrate effective implementation of agricultural best management practices, tangible water quality improvement, technical assistance, grower participation, and project management and coordination.

DESIRABLE QUALIFICATIONS AND EXPERTISE

- Knowledge of the Central Coast Region
 - The Grantee shall demonstrate knowledge of and expertise in the Central Coast Region, its environment, water quality issues, specific local watershed grower's barriers for implementation, and the relevant concerns of the agricultural community and regulatory agencies, including knowledge of the regulatory requirements of the Central Coast Water Board's Ag Waiver Program.
- Water Quality Improvement and Successful Implementation of Agricultural Best Management Practices.
 - The Grantee shall demonstrate knowledge of and expertise in agricultural best management practice implementation that results in tangible water quality improvement, including performance and verification monitoring.
- Public Outreach and Grower Participation

The Grantee shall have expertise and demonstrate an understanding of conducting public and grower outreach and the skills necessary for facilitation and cooperative agreement. The Grantee should have experience in establishing public involvement and grower participation.
- Availability, Schedule, and Project Management
 - The availability of the Grantee and its team will be an important selection factor. The SOQ must clearly identify the person that will be responsible for directing the team (Project Director). Describe the Project Director's relevant experience in such a role, the expertise that the person brings to the role, and the percentage of time that will be devoted to the grant.
 - The SOQ must also describe the technical personnel's relevant experience, the expertise that the person brings to the role, and the percentage of time that will be devoted to the grant. The preference is for technical personnel to be dedicated to the technical aspects of this grant project and not also responsible for non-technical project management or administrative tasks.
- Any additional information related to selection criteria.

SELECTION AND ADMINISTRATIVE PROCESS

Selection of the Grantee will be based on the following criteria:

1. The applicant's demonstrated commitment to water quality improvement and the goals of the program;
2. The applicant's demonstrated commitment and ability to promote the program to the agricultural community and growers, and maximize program participation;
3. The applicant's professional experience in water quality improvement projects, agricultural best management practice implementation, grower outreach and participation, project management, cooperative work, and outreach to the agricultural community and watershed groups.
4. Quality and relevance of completed or ongoing work
5. Reliability
 - Demonstrated availability, reliability, and continuity of firm/organization's proposed staff and sub-consultants.
 - Description of workload and demonstrated ability to meet grant requirements, tasks included in the scope of work and associated schedule.

- Past performance on Water Board funded grant projects.

The Grantee will be selected on the basis of written responses to this RFQ and an oral interview. Submittals will be evaluated and scored based upon the stated selection criteria for those agencies/organizations who have complied with the minimum qualifications requirements. The information provided in the section labeled "Desirable Qualifications and Expertise" will also be used to evaluate and score each SOQ.

Three agencies/organizations with the highest scores will be selected for the "short list." These applicants will be invited for an interview and asked to make an oral presentation regarding their agency/organization's qualifications, experience, and ability to implement the scope of work.

Upon completion of all interviews, the agencies/organizations will be ranked in order of preference. The number one applicant will be asked to submit a detailed final line item budget for the work noted in this RFQ. If acceptable, further documentation including the Project Director Certification Form, the CEQA Environmental Information Form, and the required elements of the grant agreement will be negotiated with Regional Water Board and State Water Board staff before execution and project implementation.

For more information, please contact Monica Barricarte at (805) 549-3881 or mbarricarte@waterboards.ca.gov, or Angela Schroeter at (805) 542-4644 or aschroeter@waterboards.ca.gov.

ATTACHMENT A. SCOPE OF WORK - CENTRAL COAST IRRIGATION AND NUTRIENT MANAGEMENT PROGRAM

Project Summary

The Central Coast Irrigation and Nutrient Management Program (CCINMP) is a program that directly implements the most important pollution prevention and reduction strategy, irrigation and nutrient management, to address discharges from irrigated lands on a regional, watershed-based scale. The goals of the CCINMP are to 1) reduce the amount of pollutants (such as nutrients, pesticides and sediment) that enter surface water by reducing the amount of irrigation runoff that drains to surface water, and 2) reduce the amount of nutrients that enter surface water by optimizing the amount and timing of nutrients and fertilizers applied to farmland.

A. PLANS AND COMPLIANCE REQUIREMENTS

1. Complete Project Assessment and Evaluation Plan

The Grantee shall prepare and implement a Project Assessment and Evaluation Plan (PAEP) to detail the methods of measuring project benefits and reporting them in accordance with the PAEP. The PAEP will be designed to document and assess water conservation, reduction in irrigation runoff, and load reductions for nutrients. The Grantee will coordinate with the Grant Manager to identify specific targets, objectives, and milestones related to irrigation runoff reduction and nutrient load and/or concentration reductions. The PAEP shall be approved by the Grant Manager prior to project implementation.

2. CEQA/NEPA Compliance

All projects are required to comply with the California Environmental Quality Act (CEQA). Work cannot begin until the State Water Board has reviewed the CEQA documentation submitted by the Grantee and given environmental clearance. If the work is conducted on federal land, the Grantee must also comply with the National Environmental Policy Act (NEPA). In particular, the Grantee will address the potential environmental consequences related to the potential reduction in stream flow, as well as the potential increase in nutrient concentration, resulting from reduced volume of irrigation runoff.

3. Monitoring Plan

The Grantee shall prepare, maintain, and implement a Monitoring Plan (MP). The MP shall include, but is not limited to a description of the monitoring objectives, types of constituents to be monitored, and the sampling location frequency/schedule for the monitoring activities. The MP will include the schedule for submittal of monitoring reports. The Grantee shall be prohibited from implementing any sampling or monitoring activities prior to approval of the MP by the Grant Manager. No monitoring may occur prior to MP approval. Any changes to the MP must be submitted to the Grant Manager for review and a decision regarding approval prior to implementation.

4. Quality Assurance Project Plan

The Grantee shall prepare, maintain, and implement a Quality Assurance Project Plan (QAPP) in accordance with the State Water Board's Surface Water Ambient Monitoring Program's (SWAMP) QAPP and data reporting requirements, and the US EPA QAPP, EPA AQ/R5, 3/01. Water quality monitoring data includes physical, chemical, and biological monitoring of any surface water. The QAPP shall be submitted to the State or Regional Water Board's Quality Assurance (QA) Officer for review and a decision regarding approval

prior to the Grantee implementing any sampling or monitoring activities. No monitoring may occur prior to QAPP approval. Any costs related to monitoring data collected prior to and not supported by the approved QAPP will not be reimbursed. Guidance for preparing the QAPP is available at <http://waterboards.ca.gov/swamp/qapp.html>.

B. WORK TO BE PERFORMED BY GRANTEE

Task 1. Creation and Execution of Technical Advisory Committee (TAC)

1.1 Assemble a TAC for each watershed.

Assemble a TAC and include members knowledgeable in water quality and irrigation and fertilizer management issues (e.g. Regional Water Quality Control Board (Water Board), City or County, local water agency, Natural Resources Conservation Service(NRCS), Resource Conservation District (RCD), University of California Cooperative Extension (UCCE), farm bureau, and local irrigation and fertilizer specialists and retailers). The TAC may also seek the advice of individual or groups of growers to optimize practice implementation based on local conditions.

1.1.1 Submit list of TAC members to the Grant Manager;

1.2 Convene local and inter-watershed TAC meetings;

Organize a minimum of two local (2) watershed TAC meetings each year for each watershed, and a minimum of one (1) inter-watershed TAC meeting per year. The TAC will advise the Grantee to maximize program effectiveness emphasizing the following items:

- a. Criteria to identify the most critical areas of each watershed where program implementation will yield maximum water quality improvement. (e.g. areas resulting in significant water quality impairment, irrigation system type - targeting furrow and sprinkler);
- b. Success towards program objectives related to grower participation and practice implementation;
- c. Incentives and strategies to effectively maximize grower participation (including financial incentives for implementation);
- d. Existing and new local crop specific management practices that will result in the maximum reduction of irrigation runoff and off-site movement of nutrient fertilizers.
- e. Program success stories and methods to recognize participating growers and specific growers successfully implementing practices and reducing irrigation runoff and off-site movement of nutrients and fertilizers (peer leaders);
- f. Program challenges and potential solutions;
- g. Review of internal and external program recommendations (e.g. program auditor) and associated program modifications;
- h. Provide feedback and technical support to local irrigation and nutrient advisors;

1.2.1 Submit TAC meeting agendas and minutes to Grant Manager;

Task 2. Program Coordination, Assessment, Evaluation, and Performance

2.1 Coordinate program tasks, including program staffing, reconnaissance, grower outreach and recruitment, practice identification, practice implementation, and necessary follow-up to ensure program timing, consistency, and effectiveness; Coordinate with related efforts implementing similar irrigation and nutrient management strategies within each watershed and in other watersheds.

2.2 Ensure sufficient credentials and availability of irrigation and nutrient advisors;

- 2.2.1 Utilize a minimum of one full-time irrigation and one full-time nutrient advisor (or the equivalent) for each watershed; At a minimum, advisors must demonstrate their proficiency in improving irrigation water and nutrient on-farm management, knowledge in local water quality issues and experience in successfully reducing irrigation runoff, reducing off-site movement of nutrients from fertilizers and improving water quality, using irrigation and nutrient management practices.
- 2.2.2 Submit advisor resume(s) and a summary of their relevant background and experience to the Grant Manager;
- 2.3 External evaluation of technical approach;
 - 2.3.1 Select auditor to provide early feedback and advice regarding technical approach, verify practice implementation, and evaluate and review program effectiveness. The external technical auditor is an irrigation and nutrient management expert not involved in program implementation and affiliated with the following or similar organizations: Center for Irrigation Technology (CIT) or the Irrigation Training and Research Center (ITRC).
 - 2.3.2 Submit external auditor qualifications and agreement for Grant Manager approval;
 - 2.3.3 Auditor will review and evaluate field work, advisor recommendations, practice identification, practice implementation, and performance monitoring (including field measurements);
 - 2.3.4 Audit field work performed by irrigation and nutrient advisors and technical field team by auditing a minimum of two (2) site visits with irrigation and nutrient advisors per watershed, per year; Assess progress achieved towards practice implementation and reductions in runoff and off-site movement of nutrients; Audit practice implementation to assist in the standardization of monitoring methods, procedures, protocols, and techniques utilized by the growers and recommended by the advisors.
 - 2.3.5 Perform verification monitoring on practices reported as completed (or randomly selected subset, if appropriate).
 - 2.3.6 Document findings and recommendations in an annual technical audit report and submit to Grant Manager. Distribute copies to program coordinator, TAC, irrigation and nutrient management advisors and technical field team.
- 2.4 Maintain grower name and field location confidentiality by assigning individual growers with a specific program identification number. Coordinate with NRCS (or RCD if similar grower confidentiality requirements apply per Section 2004 of the Farm Security and Rural Investment Act of 2002) for data coding and data management so that NRCS (or RCD) acts as the storage facility for sensitive grower information (names, locations, addresses), and “blind” that data by assigning individual grower code numbers and compiling that data by sub-watershed. Blinded data could then be shared with advisors and the Grant Manager. Grant project deliverables will NOT contain an specific information identifying any grower name or field location.
- 2.5 Track progress of individual grower participation through all aspects of the program (recruitment, practice identification and recommendation, practice implementation, performance monitoring and any necessary follow-up); Track progress achieved on each participating field towards practice implementation and reductions in runoff and off-site movement of nutrients; Track number of advisor and technical field team hours spent with each grower and on each field;
- 2.6 Identify and employ strategies to maximize consistent program implementation between CCINMP implementing watersheds;

- 2.7 In consultation with the Grant Manager, determine the appropriate level or maximum amount of outreach or technical assistance to provide to growers prior to implementation. The intent is to avoid the significant expenditure of grant funds on individual growers not likely to follow-through on implementing the advisor recommended practices. In some cases, it may be necessary to exceed the determined maximum amount of outreach and technical assistance. In such cases, the Grantee must consult the Grant Manager.
- 2.8 Coordinate with the agricultural community and industry;
- 2.8.1 Develop a program website, poster, fact sheet, and newsletter for informational, recruitment, and retention purposes (information should be accessible in English and Spanish, as appropriate); Website, poster, fact sheet, and newsletter should effectively convey program objectives, activities, performance measures, and success stories; Submit program poster, fact sheets, and newsletters to Grant Manager prior to publication;
 - 2.8.2 Conduct a minimum of two (2) public service announcements annually in English and/or Spanish on local radio stations for grower outreach;
 - 2.8.3 Identify local irrigation and fertilizer sales and agricultural service providers and inform them of local water quality issues and provide them with information about the program objectives, elements and activities;
 - 2.8.4 Identify and prepare a list of individuals or organizations not affiliated with program implementation that are capable of providing similar services and provide list to growers who choose to seek technical assistance on their own;
 - 2.8.5 Distribute program information broadly throughout the agricultural community and industry; Encourage industry representatives to refer growers to the program coordinator, as appropriate;

Task 3. Implementation - Achieve implementation of advisor recommended practices with a minimum of 40 growers in the most critical areas of each watershed, where program implementation will yield maximum water quality improvement. Implementation must result in a measurable reduction in irrigation runoff and off-site movement of nutrient fertilizers at the field level.

3.1 Pre-Implementation Reconnaissance

- 3.1.1 Evaluate Central Coast Ambient Monitoring Program (CCAMP) and Cooperative Monitoring Program (CMP) data to identify monitoring sites with water quality impairment associated with irrigation runoff and off-site movement of fertilizer, such as high flows in the summer, high nutrients, recurring toxicity, etc;
- 3.1.2 Identify growers already successfully implementing relevant practices that reduce irrigation runoff and the off-site movement of nutrients and fertilizers; Coordinate with these “peer leaders” to share success stories, lessons learned, and benefits with other growers;
- 3.1.3 Develop specific watershed and participant based strategies to maximize grower participation and practice implementation;

3.2 Pre-Implementation Recruitment

- 3.2.1 Develop and implement a program outreach strategy for each watershed to maximize program participation of growers whose implementation of irrigation and nutrient management practices will yield a significant, measurable contribution to water quality improvement in areas of each watershed with significant water quality impairment; Outreach strategy should include strategies to coordinate with broad

spectrum of the agricultural community and industry (e.g. strawberry commission, buyers, vegetable coolers, vegetable grower shippers and strawberry coolers, California lettuce research, farm bureau, agricultural commissioners, the greenhouse industry, irrigation and fertilizer retailers, DPR, local agricultural commissioner); Efforts should be directed toward growers in the most critical areas of each watershed, where program implementation will yield maximum water quality improvement.

3.2.2 Submit Outreach Strategy to the Grant Manager;

3.2.3 Organize at least two outreach meetings/events in each watershed, including a Kick-off Meeting in coordination with the Grant Manager and other Water Board staff to present the program to growers as a long term approach for water quality protection, water conservation, and “more crop for the drop” in an effort to sustain local water resources, their availability, usage and quality; Explain program objectives, activities, expectations, benefits, and tracking and reporting methods; Encourage growers to sign up for the program and start receiving services.

3.2.4 Submit meeting agendas, meeting notices, number of attendees, and presentation materials to the Grant Manager.

3.3 Practice Identification and Implementation

3.3.1 Irrigation advisor will direct the technical field team to collect field measurements to identify irrigation management practices to be implemented to improve irrigation distribution uniformity (DU), scheduling, and other practices that will result in the greatest improvement to water quality.

3.3.1a- Evaluate well water quality, including, but not limited to, nutrient concentration using certified analytical methodology (analytes will include: Zn (meq/L), pH, Cu (meq/L), Fe (meq/L), Mn (meq/L), Carbonate (CO₃, meq/L), Bicarbonate (HCO₃, meq/L), Cl (meq/L), EC (dS/m), Mg (meq/L), Na (meq/L), Ca (meq/L), Phosphorus (ppm), Potassium (ppm), Nitrate (NO₃, ppm), Sulfate (ppm), Boron (ppm), Total Dissolved Solids (ppm), and Adjusted S.A.R.);

3.3.1b- Evaluate the irrigation system, measuring at least the following:

For furrow irrigated fields: furrow length, GPM per furrow, advance time ratio and opportunity time, total gallons irrigated per field, irrigation frequency and set duration, over-pumping condition, and water releases at the pump station or from standing pipes;

For sprinkler systems: system average pressure, pressure differences, sprinkler and nozzle types, sprinkler spacing, sprinkler average diameter of throw, sprinkler overall performance (rotation, plugging and positioning- upright or tilted), field leaks (high, medium, low), runoff occurrence at the end of the irrigation set (high, medium, low), irrigation frequency and set duration, over-pumping condition, and water releases at the pump station or from standing pipes;

3.3.1c- Calculate the irrigation system Distribution Uniformity (DU); Utilize the following irrigation system DU improvement targets: 0.70 for furrow, 0.75 for hand-move sprinkler, 0.80 for solid sprinkler systems;

3.3.1d- Obtain information about the regimen of irrigation scheduling (e.g. irrigation sets duration and frequency); Calculate the most appropriate irrigation set duration and frequency (scheduling) and develop a table, with basic guidelines, based on crop type, stage of growth (Kc), irrigation system application rate, CIMIS station weather data information (Eto), soil type and available water holding capacity information; re-evaluate the irrigation system DU after improvements have been

- made or measure the system average application rate to determine irrigation scheduling; If appropriate, perform intensive soil moisture monitoring with a minimum of 3 growers in each watershed per year to maximize water quality improvement using appropriate irrigation scheduling strategies;
- 3.3.1e- Evaluate the potential for irrigation runoff (timing, location and quantities);
- 3.3.2 Nutrient advisor will direct the technical field team into collecting field measurements to identify nutrient management practices to be implemented.
- 3.3.2a- Obtain information about grower fertilizer field application timing and quantities;
- 3.3.2b- Calculate the Nitrate Pollution Hazard Index, for each field and crop;
- 3.3.2c- Conduct soil sample analyses using certified analytical methodology. Lab analysis will include at least the following: pH, EC_e (salinity), NO₃-N (nitrates, ppm), % organic matter, Weak Bray and NaHCO₃-P (Phosphorus, ppm), and K, Mg, Ca, Na, SO₄-S, Mn, Fe, B, (all in ppm);
- 3.3.2d- Evaluate well water nutrient content, if it has not been measured by the irrigation advisor;
- 3.3.2e- Evaluate nutrient fertilizer residuals available in the root zone profile at the beginning (for budgeting) and at the end of a crop growing season and
- 3.3.2f- Identify practices to capture residual soil fertilizer at the end of the crop growing season and practices to prevent leaching during the rainy season (example: use cover crops, bacteriological living products, and natural vegetation).
- 3.3.2g- Evaluate nutrient content available in compost and organic materials;
- 3.3.2h- Determine crop nutrient requirements (to be used for nutrient budgeting, along with all sources supplying nutrients to the crop) and optimal timing for nutrient and fertilizer application by utilizing soil nitrate and phosphorus quick tests, tissue analyses, or other methods;
- 3.3.2i- Calculate slow release and liquid fertilizer applications considering all sources of nutrients available and crop nutrient requirements, as part of nutrient budgeting.
- 3.3.2j- Evaluate potential for off-site movement of nutrient fertilizers and other fertilizer losses (timing and location);
- 3.3.2k- Identify any related field issues that contribute to the potential for discharging nutrients and fertilizer to surface water (e.g. lack of impermeable layers in fertilizer storage facilities, lack of appropriate back-flow prevention devices);
- 3.3.3 Submit technical field measurement notes to the Grant the Manager (grower name and field location confidentiality maintained by use of grower ID number);
- 3.3.4 Identify irrigation and nutrient management practices to be recommended and implemented; At a minimum, consider those practices identified as having high potential for water quality protection and improvement in each one of the following categories: 1) irrigation system distribution uniformity optimization, 2) irrigation scheduling optimization (sets duration, frequency and use of automated pump timers), 3) matching application to soil infiltration rate, 4) reducing unnecessary groundwater pumping that contributes to surface runoff, 5) furrow tailwater reduction, 6) soil and well water nutrient content analysis to be considered for nutrient budgeting, 7) crop nutrient determination, 8) nutrient application optimization based on nutrient budgeting, 9) end of growing season nutrient management, and 10) installation of back-flow prevention devices;
- 3.3.5 Develop an Irrigation and Nutrient Management Practice Identification and Recommendations Report for each grower (grower name and field location confidentiality

maintained by use of grower ID number) and include summary of potential cost savings estimates and benefits to implementing recommendations; Provide report to grower, program coordinator, and Grant Manager;

3.3.6 Achieve implementation of advisor recommended practices with a minimum of 40 growers whose implementation of irrigation and nutrient management practices will yield a significant, measurable contribution to water quality improvement in areas of each watershed with significant water quality impairment; Practice implementation must result in a measurable reduction in irrigation runoff and off-site movement of fertilizers at the field level;

3.3.6a- Provide financial assistance and/or incentives to growers to aid in implementation;

3.3.6b- Discuss field conditions and best approaches to successfully implement management practices with the grower;

3.3.6c- Train grower and all field and operation managers, irrigators and staff responsible for the farm irrigation system maintenance, execution, scheduling and fertilizer application to effectively implement practices;

3.3.6d- Provide Spanish translation, when necessary;

3.3.6e- Work with growers to achieve implementation of recommended practices (in the 10 categories identified above) with a minimum of 40 growers of growers whose implementation of irrigation and nutrient management practices will yield a significant, measurable contribution to water quality improvement in areas of each watershed with significant water quality impairment; Practice implementation must result in a measurable reduction in irrigation runoff and off-site movement of fertilizers at the field level;

3.3.6f- As a milestone to demonstrate progress towards implementation, by the end of Year 1 - a minimum of 8 growers must have implemented or are committed to implementing changes in the irrigation system to improve the distribution uniformity and soil and well water nutrient content analysis to be considered for nutrient budgeting resulting in a reduction in fertilizer application. By the end of Year 2, a minimum additional 20 growers must demonstrate progress towards implementation resulting in a measurable reduction in irrigation runoff and off-site movement of fertilizers at the field level;

3.3.7 Develop an Irrigation and a Nutrient Management Practice Implementation Summary Table for each watershed, every 3 months, that includes a summary and report of individual growers (grower name and field location confidentiality maintained by use of grower ID number), associated acreage, participating fields, irrigation system type (furrow or sprinkler), practices implemented under each category – including conversions to drip, identification of the closest downstream CMP and CCAMP monitoring sites by field; and number of hours of technical assistance received per grower. Provide report quarterly to Grant Manager; Report should clearly communicate number of individual growers implementing practices, as well as growers outreached to and actively working towards implementation.

3.3.8 The Grantee may present an alternative to the technical methodologies detailed above, if an alternative is warranted based on local conditions, and implementation of the alternative will result in similar benefits to water quality. Alternative methodologies must be discussed and approved by the Grant Manager.

Task 4. Provide appropriate follow-up to growers to maximize long-term implementation

4.1 Follow-up with growers who installed or adopted new management practices to verify their successful implementation. Provide additional technical assistance or refer them to a local technical service provider, as appropriate;

4.2 Provide technical assistance to growers utilizing furrow or sprinkler irrigation management, as well as growers planning to convert to drip irrigation;

4.3 Refer growers to local agencies and technical service providers who could advise them on a utilizing a comprehensive approach to farm water management and provide guidance in developing a more holistic natural resources conservation plan;

4.4 Refer growers to PG&E pump energy conservation testing services, if necessary;

4.5 Provide growers with information on available funding (e.g. implementation incentives, grant funds, Ag. drain loans, cost share programs);

4.6 Organize a minimum of two grower – advisor meetings per year. Meetings will be open to all growers and the private industry, with emphasis on participating and non-participating growers located in the most critical areas of each watershed, where program implementation will yield maximum water quality improvement

4.6.1- Provide English and Spanish translation when necessary;

4.6.2- Share information about successfully implemented management practices and associated costs and benefits; Provide opportunities for participating growers to share their program experience; The advisors may:

- Identify practices implemented successfully and which ones are not and why;
- Compare water and fertilizer usage with yields before and after practice implementation;
- Show crop yield comparisons from fields with implemented management practices;
- Show data of irrigation and fertilizers standards and compare those numbers with results from participating growers;
- Rank participating growers (grower name and field location confidentiality maintained by use of grower ID number) based on amounts or percentages of water and fertilizer usage and crop yields. The purpose is for growers to learn successful methods from other growers in the same area and realize their own field operation efficiencies;

4.6.3- Discuss program objectives and performance;

4.6.4- Recognize and award growers who have successfully adopted and implemented practices;

4.6.5- Encourage non-participating growers to enroll in the program;

4.6.6- Provide meeting agendas, sign-in sheet, and meeting summaries;

4.7 Identify number of growers who adopted new irrigation and management practices as a result of the CCINMP and get feedback on the grower's experience participating in the CCINMP (e.g. surveys or questionnaires before and after implementation);

4.8. Submit summary of questionnaires or surveys to Grant Manager at the end of each year.

4.9 The Grantee may present an alternative to the technical methodologies detailed above, if an alternative is warranted based on local conditions, and implementation of the alternative will result in similar benefits to water quality. Alternative methodologies must be discussed and approved by the Grant Manager.

Task 5. Program Performance and Monitoring

5.1 In coordination with the Grant Manager and consistent with the PAEP, select appropriate methods and devices to assess specific program objectives and overall program performance on a field specific and sub-watershed and watershed basis, to address at least the following:

- Level of program participation of growers in the most critical areas of each watershed, where program implementation will yield maximum water quality improvement;
- Implementation of advisor recommended irrigation and nutrient management practices by a minimum of 40 growers whose implementation of irrigation and nutrient management practices yield a significant, measurable contribution to water quality improvement in areas of each watershed with significant water quality impairment;
- Reduction in irrigation runoff and reduction in the off-site movement of nutrients from each participating field over the course of the grant project, in relation to targets, objectives, and milestones identified in the PAEP.
- Trends and comparisons of flows and nitrate concentration values for relevant CMP and CCAMP sites downstream of the participating fields; Identify challenges associated with relating practice implementation and water quality improvements at the farm scale with CMP and CCAMP monitoring in the receiving water.
- Potential for continuing practice implementation in the long-term.

5.2 Prior to implementation, proposed program monitoring methods and devices must be submitted to Grant Manager; the Grantee may propose alternative methods for program monitoring customized by type of crop and local watershed conditions;

Task 6. Program Accountability

6.1 Consistent with the Governor's 2007 executive order on California Bond Accountability, the Grantee will submit invoice supporting documentation per the grant budget items and report expenditures by task and specific to technical assistance received by individual growers; Grant project deliverables and submitted applications are public records and the State and Internal Revenue Service must be able to inspect records and the Grant Manager must be able to inspect implementation sites for verification to ensure bond accountability.

6.2 The Grantee will communicate with the Grant Manager routinely to assess the proper and appropriate expenditure of grant funds;