

**MEMORANDUM OF UNDERSTANDING BETWEEN  
THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE AND  
THE STATE WATER RESOURCES CONTROL BOARD**

**I. Purpose of this Memorandum of Understanding**

This Memorandum of Understanding (MOU) is by and between the California Department of Food and Agriculture (CDFA) and the State Water Resources Control Board (State Water Board).

CDFA and the State Water Board, referred to herein as the “Parties,” share a common goal to improve water quality and ensure safe drinking water to California residents in rural areas by promoting sustainable agricultural practices. This common goal can be more readily achieved with an efficient and integrated utilization of available programs and expertise.

This MOU will establish a formal, unified, and cooperative interagency relationship to promote the balancing of nitrogen use and agricultural productivity with water quality protection and will provide a framework for the parties to enhance interagency coordination and to cultivate greater cooperation in carrying out their authorized state government responsibilities.

**II. The Parties**

CDFA’s mission is to serve the citizens of California by promoting and protecting a safe, healthy food supply, enhancing local and global agricultural trade through efficient management, innovation, and sound science, and maintaining a commitment to environmental stewardship. To accomplish this mission, CDFA has developed several programs, including the CDFA’s Fertilizer Research and Education Program (FREP). FREP funds and facilitates research to advance the environmentally safe and agronomically sound use and handling of fertilizing materials. Since its establishment in 1990, FREP has funded research on many of California’s important and environmentally sensitive cropping systems.

The State Water Board’s mission is to preserve, enhance and restore the quality of California’s water resources and ensure their proper allocation and efficient use for the benefit of present and future generations. The State Water Board shares responsibility for water quality in the State with nine regional water quality control boards (Regional Water Boards). The Regional Water Boards’ develop and enforce water quality objectives and implementation plans that will best protect the State’s waters, recognizing local differences in climate, topography, geology, and hydrology. The State Water Board will act jointly with the Regional Water Boards in carrying out the MOU, as specified herein.

**III. Background**

In 1988, CDFA convened the “Nitrogen Working Group” to address the issue of nitrates in groundwater and develop appropriate guidelines to reduce the potential introduction of nitrate into groundwater. The working group’s report identified three major sources of nitrate found in ground water: leaching from crop production, urban sewage, and concentrated animal waste. The report also identified nitrate sensitive areas in the state with elevated levels of nitrate in groundwater and made a set of recommendations to address this issue, including the establishment of FREP. Accordingly, FREP manages a competitive grant program to facilitate research to advance the environmentally safe and agronomically sound use and handling of fertilizing materials.

Chapter 1 of the Second Extraordinary Session of 2008 (SBX2 1) mandated the State Water Board to develop pilot projects focusing on nitrate in groundwater in the Tulare Lake Basin and Salinas Valley and to submit a Report to the Legislature on the scope and findings of the pilot projects, including recommendations. As a first step in the development of the pilot projects, the State Water Board contracted with the University of California, Davis (UC Davis) to conduct an independent study on groundwater contamination by nitrate in the Tulare Lake Basin and the Salinas Valley (The UC Davis Nitrate Report or Report). The UC Davis Nitrate Report was delivered to the State Water Board in March 2012 and the State Water Board held a workshop to receive public input. The UC Davis Nitrate Report identified agricultural fertilizer and animal waste applied to cropland as the largest regional sources of nitrate in groundwater. The Report found that nitrate problems in groundwater are likely to worsen for decades and that traditional pump and treat remediation to remove nitrate from groundwater is extremely costly and technically not feasible. Furthermore, the Report found that many small communities cannot afford safe drinking water treatment and supply actions. The report also identified numerous promising opportunities, such as the “pump and fertilize” method, for remediating groundwater with elevated levels of nitrates.

Several of the recommendations in the Report to the Legislature require cooperation between CDFA and the State and Regional Water Boards. This MOU memorializes the intent of the Parties to engage in, and expand, such cooperative efforts as established below.

#### **IV. Roles and Responsibilities**

The Parties mutually agree as follows:

1. To maintain the structures and procedures necessary to enhance the efficient leveraging of funds on state and local levels.
2. To consult with each other and with other relevant state agencies on the development of proposals that will establish potential new, stable funding sources to ensure that all Californians have access to safe drinking water.
3. The State Water Board will identify and define nitrate high-risk areas, using the hydrogeologically vulnerable areas identified by the State Water Board, current DPR Groundwater Protection Areas, and other relevant information.
  - a. The State Water Board will re-evaluate the nitrate high-risk area boundaries every five years.
  - b. The State Water Board will develop maps of nitrate high-risk areas and will coordinate with CDFA for review and comment prior to finalizing them for public release. CDFA will provide comments within 30 days of receipt so that the normal processes for releasing the maps are not delayed.
4. CDFA, in coordination with the State Water Board, will convene a Task Force to identify intended outcomes and expected benefits of a nitrogen mass balance tracking system in the nitrate high-risk areas identified by the Water Boards.
  - a. The Task Force will include appropriate state and local agencies as well as stakeholder groups.

- b. The Task Force will evaluate the necessity of implementing nitrogen tracking and reporting systems, identify the intended outcomes and expected benefits of such systems, and potential alternatives that would provide meaningful and high quality data to inform potential new management practices and regulatory approaches to help better protect groundwater quality.
5. CDFA, in consultation with the State Water Board and the Regional Water Boards, and in cooperation with local, state and federal non-governmental organizations and institutions of higher learning, will establish nutrient management demonstration projects to develop cost effective and scientifically evaluated decision-support tools to aid in nutrient management approaches and increase the environmental performance of agriculture.
6. The State Water Board and Regional Water Boards will continue to provide regulatory technical assistance for CDFA's ongoing work with the University of California Cooperative Extension and other experts in establishing a nitrogen management training and certification program that recognizes the importance of water quality protection. A major goal of the training and certification program will be to assist farmers in managing agricultural uses of nitrogen in a manner that will ultimately reduce nitrate loading to groundwater.
7. CDFA will continue to provide agronomic technical assistance to the State Water Board and Regional Water Boards to support emerging regulatory activities in agricultural communities across the state. The purpose of the agricultural technical assistance is to jointly develop decision support tools to enhance the management of agricultural water quality.
8. CDFA will include the State Water Board in the annual FREP research priority development process to establish an adequate balance of priorities from the regulatory, basic, applied and transformative research areas.
9. CDFA will maintain the mill fee on fertilizing materials at a level necessary to support and develop agronomically sound uses of fertilizing materials that minimize environmental impacts, including, but not limited to, nitrates in groundwater.
10. CDFA will maintain and update the existing online searchable FREP research database and enhance outreach to promote use of this resource by growers and crop consultants. CDFA will provide web page links to the Irrigated Lands Regulatory Program from the CDFA FREP website.
11. The State Water Board, in coordination with CDFA, will convene a panel of experts to, among other mandates, assess existing agricultural nitrate control programs and develop recommendations to ensure that ongoing control efforts are protective of groundwater quality. CDFA and the State Water Board will evaluate the panel's findings and recommendations to inform ongoing regulatory and non-regulatory efforts.
12. The State Water Board and CDFA will convene interagency staff meetings at least semi-annually to discuss mutual progress on the provisions of this MOU and to consult each other in adjustments to ongoing regulatory and non-regulatory efforts. The State Water Board and CDFA will bring together in-house technical experts within their programs, as part of these interagency staff meetings, to explore new information technologies (e.g., GIS) that can help illuminate nitrogen-related efforts and identify information gaps.

13. The State Water Board will continue to include CDFA at regular Irrigated Lands Regulatory Program Roundtable meetings with the Regional Water Boards so that CDFA is informed of irrigated lands issues around the State. CDFA will staff the round-table meetings and provide regular updates of CDFA efforts on these issues. The State Water Board will provide an internet link on its Irrigated Lands Regulatory Program webpages referencing the CDFA FREP research database and crop fertilization guidelines.
14. The State Water Board and CDFA will consult with each other, prior to public release, on potential future regulations, policies, and reports that may impact agricultural fertilizer application and nitrate contamination in groundwater. Both agencies will provide either verbal or written comments in a timely manner so that the normal processes of such documents are not delayed.
15. The State Water Board and CDFA recognize that, in carrying out the cooperative efforts listed in this MOU, they must avoid communications that would constitute prohibited ex parte communications or that would lead to pre-judgment of an issue in any pending petitions.

**V. General Provisions**

Nothing in this MOU is intended to delegate, limit, or expand CDFA's, the State Water Board's, or the Regional Water Board's responsibilities, statutory and other authorities, or discretion.

This MOU is not a contract, but defines a cooperative process between CDFA and the State Water Board for addressing nitrate contamination in groundwater.

Based upon an annual review of the MOU implementation by CDFA and the State Water Board, the MOU will be reviewed and amended if necessary.

This MOU shall become effective on the date of the final signatures and shall remain in effect unless terminated by a party.

**VI. Signed and Dated**

CALIFORNIA DEPARTMENT OF  
FOOD AND AGRICULTURE

Date: \_\_\_\_\_

\_\_\_\_\_  
Karen Ross, Secretary

STATE WATER RESOURCES  
CONTROL BOARD

Date: \_\_\_\_\_

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Tom Howard, Executive Director