Attachment

RECOMMENDED

LONG-TERM IRRIGATED LANDS REGULATORY PROGRAM FRAMEWORK

Central Valley Water Board
March 2011

ATTACHMENT – RECOMMENDED LONG-TERM IRRIGATED LANDS REGULATORY PROGRAM FRAMEWORK

The following describes the general programmatic framework that the Central Valley Water Board will use to establish its long-term irrigated lands regulatory program (ILRP). In considering the long-term ILRP, the Central Valley Water Board certified a Final Program Environmental Impact Report (Final PEIR or PEIR) on {{insert date of certification}} to comply with the California Environmental Quality Act (CEQA). In adopting Orders to implement this framework, the Board intends that such Orders be consistent with the regulatory approach outlined below. However, the Board may deviate from the general programmatic framework in adopting any such Orders, provided any additional analysis (e.g., under CEQA, State Water Board Resolution 68-16) has been conducted and appropriate findings made, if required.

1. SCOPE

The scope of the irrigated lands regulatory program will include all waste discharges from irrigated lands that could affect the quality of waters of the State in the Central Valley region.

Irrigated lands include land irrigated to produce crops for commercial purposes; nurseries; private and public managed wetlands; and irrigated pasture.

Waste discharges (hereinafter, “discharges”) from irrigated lands include discharges to surface water, including, but not limited to irrigation return flows, tailwater, drainage water, subsurface drainage generated by irrigating crop land or by installing and operating systems to lower the water table below irrigated lands (tile drains), stormwater runoff flowing from irrigated lands, and non-runoff discharges (e.g., aerial drift or overspray of pesticides).Waste discharges from irrigated lands also include discharge to groundwater, including but not limited to leaching of waste to groundwater, waste discharge to groundwater as a result of backflow of waste into wells (e.g., backflow during chemigation), and irrigated agricultural waste discharged into unprotected wells and dry wells.

Irrigated lands that are regulated under another Water Board Order (e.g., waste discharge requirements [WDRs], including National Pollutant Discharge Elimination System [NPDES] permits) would not be regulated under the ILRP. However, if the other Water Board Order governs only some of the waste discharge activities (e.g., application of treated wastewater to crop land), the owner/operator of the irrigated lands must obtain regulatory coverage for any discharges of waste that are not regulated by the other Order(s). Such regulatory coverage may be sought through the ILRP or by obtaining appropriate changes in the owner/operator’s existing WDRs.

2. GOALS AND OBJECTIVES

2.1. Goals

The overall goals of the ILRP are to:

1. Restore and/or maintain the highest reasonable quality of State waters[1] considering all the demands being placed on the water.

2. Minimize waste discharge from irrigated agricultural lands that could degrade the quality of State waters.

3. Maintain the economic viability of agriculture in California's Central Valley.

4. Ensure that irrigated agricultural discharges do not impair Central Valley communities' and residents' access to safe and reliable drinking water.

In accordance with these goals, the objectives of the ILRP are listed below.

2.2. Objectives

1. Restore and/or maintain applicable beneficial uses established in Central Valley Water Board Water Quality Control Plans by ensuring that all State waters within the Central Valley meet applicable water quality objectives.

2. Encourage implementation of management practices that improve water quality in keeping with the first objective without jeopardizing the economic viability for all sizes of irrigated agricultural operations in the Central Valley or placing an undue burden on rural communities to provide safe drinking water.

3. Provide incentives for agricultural operations to minimize waste discharge to State waters from their operations.

4. Coordinate with other Central Valley Water Board programs, such as the Grassland Bypass Project waste discharge requirements for agricultural lands, total maximum daily load (TMDL) development, Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS), and WDRs for dairies.

5. Promote coordination with other regulatory and non-regulatory programs associated with agricultural operations (e.g., the California Department of

[1] California Water Code § 13050 defines "State waters" as "any surface water or groundwater, including saline waters, within the boundaries of the state."

Pesticide Regulation [DPR], the California Department of Public Health [DPH] Drinking Water Program, the California Air Resources Board, the California Department of Food and Agriculture, Resource Conservation Districts, the University of California Extension, Natural Resource Conservation Service, National Organic Program, California Agricultural Commissioners, State Water Resources Control Board Groundwater Ambient Monitoring and Assessment program, U.S. Geological Survey (USGS), and local groundwater programs such as Senate Bill [SB] 1938, Assembly Bill [AB] 3030, and Integrated Regional Water Management Plans]) to minimize duplicative regulatory oversight while ensuring program effectiveness.

3. TIMEFRAME FOR IMPLEMENTATION

Table 1. Timeframe for Implementation of the Long-Term Irrigated Lands Regulatory Program

Phase/Action	Completion Date (from Approval of Long-Term ILRP Framework)[a]	Responsible Party
Identification of geographic areas/commodities to receive Orders[b] and associated third-party representative groups	3 months	Central Valley Water Board/ third parties
Board issuance of geographic-/ commodity-specific Orders[c]	12 months	Central Valley Water Board
Enrollment of new participants/ irrigated lands	30 months	Operations/ Central Valley Water Board
New program fully in effect	3 years	Central Valley Water Board/ third parties/operations

[a] Date of Central Valley Water Board approval of the long-term Irrigated Lands Regulatory Program (ILRP) Framework.
[b] Waste discharge requirements (WDRs) and conditional waivers of WDRs.
[c] The Board intends to extend the existing irrigated lands coalition group waiver until the new Orders are issued. Compliance with the existing conditional waiver will be required in the interim.

Current ILRP participants would be enrolled automatically (i.e., grandfathered into new program; reapplication would not be required) as the Orders implementing the long-term program are issued. However, within 3 months of the applicable Order's issuance, the third-party groups will be required to inform their participants of the new requirements and within 12 months receive confirmation from each participant that they intend to remain associated with the third-party group and comply with the requirements.

The Board intends to develop information management systems that will facilitate the transmittal of information electronically from individual growers to the Board. Should such a system be available for purposes of tracking enrolled growers, the

Board may require both current and new ILRP participants to enroll directly with the Board.

4. IMPLEMENTATION MECHANISMS

The requirements that will apply to discharges from irrigated agriculture will be based on an assessment of the relative threat to water quality in a given area and data availability. For a given area, an assessment will be performed for each constituent that could be in the waste discharge from irrigated lands. The assessment will be performed for discharge pathways to both groundwater and surface water.

4.1. Threat to Water Quality

A "threat" to water quality means the potential for a constituent discharged from irrigated lands to cause or contribute to an exceedance of water quality objectives, or to degrade water quality as defined by applicable antidegradation requirements.

A "low threat" means that there is a low threat to water quality for a constituent potentially discharged from irrigated lands in an area has been well characterized[2]. The discharge of that constituent is not likely to cause or contribute to an exceedance of water quality objectives, or to degrade water quality as defined by applicable antidegradation requirements. A low threat determination can be made where there are infrequent or only localized (associated with one or a few farms) threats to ground or surface water quality.

An "unknown threat" means that either (1) data are not available for a constituent or parameter to determine the relative threat or (2) there is a known water quality threat, but it is unknown as to whether irrigated agriculture is causing or contributing to that water quality problem. Unless otherwise determined by the Board or Executive Officer based on available information, the following surface water quality parameters are considered to have an "unknown" irrigated agricultural contribution until source identification studies have been conducted: pH, dissolved oxygen, electrical conductivity, E. coli, fecal coliform, total coliform, metals (except selenium and copper), and water column toxicity.

A "high threat" means that the constituent discharged from irrigated lands in an area has been sufficiently characterized and assessed to conclude that the

[2] The State Water Board's "Water Quality Control Policy for Developing California's Clean Water Act 303(d) List" and the State Water Board's staff report "2010 Integrated Report Clean Water Act Sections 303(d) and 305(b)," April 19, 2010, provide a general approach for determining whether water quality objectives and beneficial uses are attained in surface waters. As described in these documents, fewer samples are required to make a determination that objectives are exceeded than are required to conclude that objectives are met.

constituent discharged from irrigated agriculture poses a high threat to water quality. The discharge of that constituent does or is likely to cause or contribute to an exceedance of water quality objectives, or to degrade water quality as defined by applicable antidegradation requirements.

For groundwater aquifers, the following areas will be considered in identifying "high threat" areas: 1) aquifers identified as vulnerable to groundwater pollution by State or federal agencies(e.g., the Department of Pesticide Regulation Ground Water Protection Areas; the State Water Board's groundwater vulnerability areas), or peer reviewed scientific studies; 2) any areas that contain drinking water wells (municipal or domestic) that have been closed or contain drinking water wells with pollutants greater than the maximum contaminant level with irrigated agriculture as a potential source; or 3)aquifers with a drinking water use that contain elevated nitrate concentrations (i.e., above natural background or the MCL). The Board or Executive Officer may reclassify a high threat groundwater area by concurring with aquifer specific studies that conclude that irrigated agriculture is not contributing to the elevated concentrations.

4.2. Tiering of Constituents

A "tier" designation will be assigned to each constituent in a given area.

"Tier 1" – means that the discharge of the constituent from irrigated agriculture poses a low or limited threat in that area.

"Tier 2" – means that it is unknown whether the discharge of the constituent from irrigated agriculture poses a high or low threat in that area.

"Tier 3" – means that the discharge of the constituent from irrigated agriculture poses a high threat in that area.

The Board may designate the tier based on an assessment of general categories of constituents (e.g., sediment, nutrients, pathogens, pesticides, and salts) or based on an assessment of specific constituents or parameters (e.g., nitrate, chlorpyrifos, sediment toxicity). The Board will make the final determination of the spatial resolution for designating tier categories as part of the development of the Orders described below. Subsequent to adoption of the Order, changes in the tier category may be made by the Board or Executive Officer.

4.3. Tiering of Areas

An area will be designated as Tier 1, if the Board's assessment concludes that all constituents that could be discharged from irrigated agriculture to ground or surface water pose a low or limited threat. An area would not be designated as Tier 1, if Tier 2 or Tier 3 constituents were in the area.

An area will be designated as Tier 2, if the Board's assessment concludes that there are any constituents discharged from irrigated agriculture for which the

threat is unknown. Tier 2 areas can include constituents that meet the Tier 2 definition and the Tier 1 definition. Tier 2 requirements will only apply to Tier 2 constituents. An area would not be designated Tier 2, if Tier 3 constituents were in the area.

An area will be designated as Tier 3, if the Board's assessment concludes that there are any constituents discharged from irrigated agriculture for which the threat is high. Tier 3 areas can include constituents that meet the Tier 3 definition, the Tier 2 definition and the Tier 1 definition. Tier 3 requirements will apply only to Tier 3 constituents.

4.4. Best Practical Treatment or Control and Best Efforts

"BPTC" or "best practical treatment or control" applies to irrigated agricultural discharge of constituents that may degrade waters that are high quality with respect to that constituent. BPTC will be achieved through the iterative implementation of management practices to reduce or eliminate the irrigated agricultural discharge of that constituent to prevent or minimize degradation and to ensure any irrigated agricultural contribution to any allowed degradation does not result in a condition of pollution or nuisance.

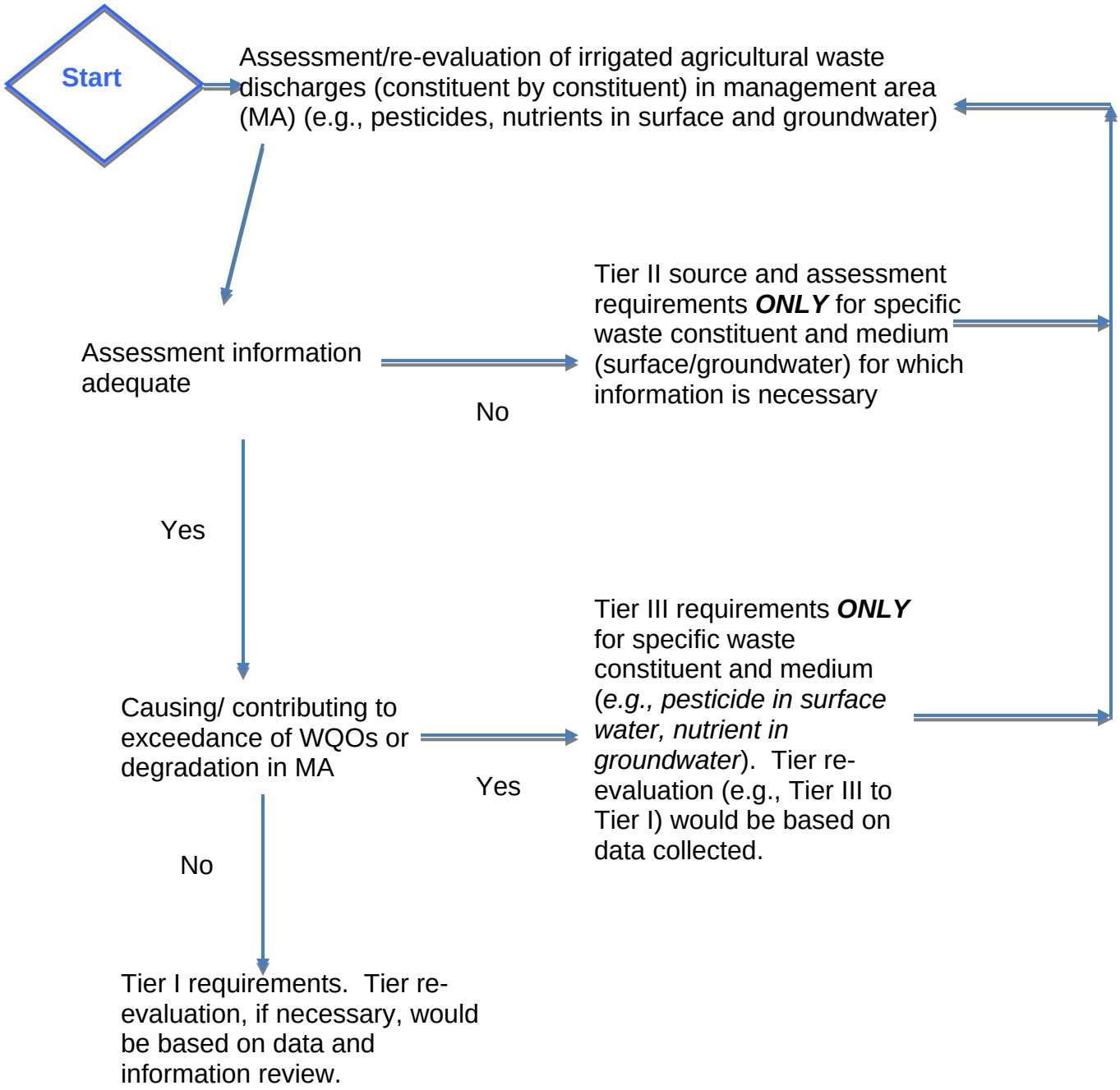
"Best efforts" applies to irrigated agricultural discharge of constituents to waters which are at or exceeding water quality objectives for that constituent. "Best efforts" will be achieved through the iterative implementation of management practices to reduce or eliminate the irrigated agricultural discharge of that constituent so that the irrigated agricultural discharge is no longer causing or contributing to the condition of pollution or nuisance.[3]

The Central Valley Water Board will use existing information to determine the appropriate threat designation and associated tier designation as part of the development of specific Orders. However, there will be the flexibility for third-party groups and other interested stakeholders to provide additional information during the process.

The threat designation for an area may be re-classified by the Central Valley Water Board based on review of new information collected during program implementation (see feedback loop in Figure 1). The Central Valley Water Board intends to review such information periodically (at least once every 5 years for areas covered by a waiver of waste discharge requirements).

[3] The types of management practices employed to meet the "BPTC" or "best efforts" will be similar, although the goals associated with the two practice standards are different – achieving compliance with antidegradation for BPTC and compliance with water quality objectives for "best efforts".

Figure 1. Flowchart Showing the Three-Tier Prioritization System



Note: Tiering requirements are constituent and surface water/ groundwater specific. For example, an area could have Tier III requirements in surface water for chlorpyrifos, and Tier I requirements for all other constituents in surface water and groundwater.

4.5. Water Quality Threat Factors

The factors that the Central Valley Water Board will use to determine the water quality threat and the associated requirements for a given area include, but are not limited to:

1. The type and extent of irrigated agricultural operations and an evaluation of waste constituents that may cause or contribute to a water quality problem for surface water and/or groundwater (e.g., potential effect on beneficial uses, exceedance of water quality objectives, or degradation of water quality);

2. The environmental conditions in the geographic area (e.g., groundwater vulnerability area, intensity of operations,[4] geology, topography, proximity to surface water bodies, or in an area of shallow groundwater);

3. The documented management practices in place to protect water quality and an evaluation of the available data on the efficacy of those practices; and

4. The spatial and temporal extent of available water quality data to assess potential water quality impacts and potential contributions from irrigated agriculture.

Through the implementation mechanisms described below, the Central Valley Water Board intends to focus on those areas in which irrigated agriculture is known or likely to be contributing to a water quality problem (Tier 3) or where data are insufficient to characterize the potential effect of irrigated agriculture on water quality (Tier 2). By focusing the Board's and irrigated agriculture's resources in this manner, the goal is to move areas in Tier 2 or Tier 3 into Tier 1 (well characterized, no / low threat from irrigated agriculture) as expeditiously as possible.

Growers following an individual farm water quality management plan that has been certified by a Central Valley Water Board approved entity (see Section 9) are considered to be in a Tier 1 area for monitoring and reporting purposes.

The requirements established in any given area will be applied separately to surface water and groundwater depending on the above factors. However, the decision on the type of implementation mechanism will be based on whether the geographic area to which the Order applies contains any Tier 3 areas for surface water or groundwater.

[4] Consideration of intensity of operations would include information such as estimations of amount of waste discharge, relative amount of irrigated agricultural use compared to other land uses in the geographic area, and pesticide use.

Waste discharge requirements will be issued for those geographic areas that include any groundwater basins or watersheds that are considered Tier 3. Tier 3 requirements will only apply to those basins or watersheds and for those constituents within the larger geographic area covered by the Order that are considered high threat. Tier 2 and Tier 1 requirements would apply to those low and unknown threat areas and constituents, as described above.

Either conditional waivers of waste discharge requirements or waste discharge requirements will be issued for those geographic areas in which all groundwater basins and watersheds fall into Tier 1 or Tier 2.

Based on the preliminary assessment of Tier 1/Tier 2 and Tier 3 areas and commodities and the potential third-party representatives, the Central Valley Water Board will consider issuing the following Orders[5]:

1. General WDR applicable to individual growers who are not enrolled under a third-party administered Order or who have had their enrollment under such an Order revoked.

2. General WDRs for the following geographic areas: (1) Sacramento Valley; (2) San Joaquin County and Delta; (3) Westside San Joaquin River Watershed; (4) Eastside San Joaquin River Watershed; (5) Westlands Water District (including the Pleasant Valley Water District); and (6) Tulare Lake Basin (excluding the Tulare Lake Bottom [see under conditional waiver of WDRs] and the Westlands Water District).

3. General WDRs for the following commodity: (1) rice in the Sacramento Valley.

4. Conditional waivers of WDRs for the following geographic areas: (1) foothills of the Central Valley; and (2) the Tulare Lake Bottom.

5. Conditional waivers of WDRs for the following commodities: (1) irrigated pasture[6]; and (2) certified organic farmers[7].

No regulatory program—Where evidence has been provided to the Central Valley Water Board and the Board has concurred that an irrigated land operation will not generate a discharge of waste that could affect the quality of the State's waters, that operation will not be regulated by the Board. This determination

[5] This is a tentative list and may be modified based on the Board's evaluation of whether a third-party is able to administer the respective geographic/commodity based Orders and based on whether information available to the Board would require the issuance of a waiver of WDRs or WDRs. The precise delineation of the geographic areas will be incorporated into the applicable Order.

[6] Conditions will include minimizing tailwater/stormwater runoff; keeping cattle from watercourses with designated contact recreational or drinking water uses.

[7] Conditions will include minimizing erosion/sediment runoff and preparation and implementation of a nutrient management plan.

would include a thorough review of site-specific information that would be used to characterize and determine whether the operation's irrigated land waste discharges could affect the quality of the State's groundwater and/or surface water.[8]

5. LEAD ENTITY

This section describes the lead entity categories and their roles and responsibilities.

5.1. Third Party

A coalition or other third-party group would be responsible for fulfilling the regional requirements and conditions (e.g., regional monitoring, regional management plan development and tracking) of the Orders issued by the Central Valley Water Board. By joining a third-party group, discharger participants are agreeing to be represented by the third party. Any requirements or conditions not fulfilled by the third party are the responsibility of the individual discharger participant to fulfill. To be eligible for administration of this alternative, third-party groups would need to assume the following responsibilities.

1. Provide members and the Central Valley Water Board an organizational or management structure identifying persons responsible for ensuring that program requirements are fulfilled.

2. Provide or make readily available to group members the annual summaries of expenditures of fees and revenue used to comply with the ILRP.[9] The third party must make the summary of expenditures and revenue available to its members in the timeframe established in the applicable Order. Should there be any subwatershed groups associated with the third party that charge members fees, a summary of those fees and expenditures must also be provided or made readily available to members of the third party.

3. Notify potentially affected third-party group members each time the third party has received a notice of violation from the Central Valley Water Board and provide information regarding the reason(s) for the violation. The notification must be provided to those members within the area affected by the notice of

[8] This option is identified because the Central Valley Water Board can have a regulatory program only if the discharge of waste could affect the quality of waters of the State. The Central Valley Water Board currently does not have information identifying any irrigated agricultural areas in which such an option could apply. Given the potential discharge pathways to ground and surface waters from irrigated agriculture, the Board expects that this option may not be applicable or may apply in only limited, site-specific circumstances.

[9] It is not the intent of this provision for the Central Valley Water Board to review and approve these reports. The intent is to promote accountability and transparency on the part of the third-party entities.

violation. A summary of all notices of violation must be provided to all third-party group members annually.

4. Develop and implement plans to track and evaluate the effectiveness of management practices and provide timely and complete submittal of any plans or reports required by the Board.

5. Conduct required water quality monitoring and assessments and provide timely and complete submittal of any reports required by the Board.

6. Within 3 months of adoption of the Board Order applicable to the third party's geographic area or commodity inform enrolled growers of program requirements. Within 12 months of adoption of the applicable Board Order submit confirmation that the enrolled growers have acknowledged those requirements[10].

7. Conduct education and outreach activities to inform growers of program requirements; maintain attendance lists for outreach events; provide growers with information on management practices that will address identified water quality issues and minimize the discharge of wastes from irrigated lands; and provide informational materials on potential environmental impacts of water quality management practices. The third party must provide copies to the Central Valley Water Board of the information provided to growers. An annual summary of education and outreach activities must be provided to the Central Valley Water Board.[11]

8. Work cooperatively with the Central Valley Water Board to ensure all third-party group members are providing any required information and taking necessary steps to address any identified water quality issues. Provide an annual summary to the Central Valley Water Board of members whose membership has been revoked or is pending revocation due to: (1) failure to implement improved management practices within the timeframe specified by any applicable management plan, where compliance with water quality objectives has not been achieved; (2) failure to respond to an information request associated with any applicable management plan; (3) failure to participate in any site-specific or representative monitoring studies required

[10] The Food and Agriculture Code restricts the ability of the California Rice Commission (CRC) to identify the names and addresses of the members of the CRC. Should the CRC serve as a third-party, an appropriate means of affirming CRC grower knowledge of any new rice specific Order will be described in that Order.

[11] The third-party would be required to inform irrigated agricultural operations of potential environmental impacts of water quality management practices. However, it is the individual grower's responsibility to assess the potential for impacts on the grower's farm and to avoid or mitigate those impacts.

by the Central Valley Water Board for which the third party is the lead; or (4) failure to submit required fees.[12]

9. If a monitoring well is proposed by the third party that may affect a sensitive resource (e.g., endangered species habitat, sensitive plant communities), the third party must (1) select a different monitoring well location that meets water quality goals, but does not involve impacts on the resource; (2) implement the mitigation measures described in the implementation mechanism (e.g., WDRs/ waiver) for the potentially affected resource; or (3) work with the Central Valley Water Board to obtain a site-specific CEQA analysis.[13]

10. Ensure that any activities conducted on behalf of the third party by a subsidiary group (e.g., subwatershed group) meet Board requirements. The third party must assume responsibility for any activities conducted on the third party's behalf.

11. Additional third-party requirements are included below in the regulatory requirements section.

<u>Factors to be Considered in Central Valley Water Board Approval of Third Parties</u>

The third party must submit to the Executive Officer for approval a notice of intent to carry out the third-party responsibilities. The Executive Officer will consider the following factors in determining whether to approve or deny any request to serve as a third party under the ILRP.

1. Ability of the third party to carry out the identified third-party responsibilities.

2. Determination that the organization that will represent the geographic area (or commodity) is a legally defined entity (i.e., non-profit corporation; local or State government; Joint Powers Authority) or has a binding agreement among multiple entities that clearly describes the mechanisms in place to ensure accountability to its members and the capacity to meet the third-party eligibility requirements of the ILRP.

3. Determination that the necessary agreements are in place between the third party and any subsidiary group (e.g., subwatershed group) to ensure any third-party responsibilities carried out by the subsidiary group, including the collection of fees, are carried out in a transparent manner and are accountable to the third party.

[12] The Central Valley Water Board expects that the third-party will have the information required to identify such members, as part of the normal course of carrying out its third-party responsibilities.

[13] This requirement is considered to ensure that any installed monitoring wells do not cause unintended environmental impacts on sensitive resources (see Final PEIR).

4. Determination that the third party has a governance structure that includes a governing board with members of the third party, or otherwise provides members with a mechanism to direct or influence the governance of the third party.

5.2. General Central Valley Water Board Role and Responsibilities

1. Require 100 percent ILRP participation for applicable dischargers. In implementing this requirement, the Central Valley Water Board would work with third-party groups to identify non-participants. The Board would be responsible for any necessary enforcement action (e.g., using CWC § 13260 or § 13267) to achieve the 100 percent participation goal. Third-party groups would be required to assist the Board by providing non-participant information.

2. Review and determine whether to approve the application of an entity wishing to serve as a third-party representative. Periodically (at least biennially) review the performance of approved third-party entities in meeting ILRP requirements. Based on the review, determine whether to continue or revoke the third-party's approval to represent their grower participants. Criteria to be used to determine adequacy of performance will include, but not be limited to:
(a) an assessment of fulfilling the roles and responsibilities described above;
(b) timeliness and completeness of submittal of any required reports;
(c) progress in addressing identified water quality issues relative to any established compliance schedules or performance milestones; (d) timeliness and completeness of response to any notice of violation; and
(e) demonstrated ability to influence member growers to implement management practices to address identified water quality problems.

3. Enroll irrigated agricultural operations in the ILRP and provide them with approval to join a third-party group.

4. Review and approve monitoring plans and Quality Assurance Project Plans.

5. Review and approve surface water quality management plans (SQMPs).

6. Review and approve groundwater quality management plans (GQMPs) (and, where applicable, local groundwater management plans requested to substitute for GQMPs).

7. Review monitoring and technical reports provided by third parties and individuals.

8. Review overall program performance with regard to achieving ILRP objectives.

9. Respond to individual problems and complaints dealing with discharge from irrigated lands and informing/coordinating with the responsible third-party group.

10. In an iterative process, require additional monitoring, information, and/or management measures where applicable water quality objectives are not being met or degradation is occurring.

11. Enforce ILRP requirements. Enforcement on individuals will be for their action or inaction that results in non-compliance with any applicable Board Order, or for failure to obtain appropriate regulatory coverage for irrigated lands discharges.

12. Promote coordination with third-party groups; other Central Valley Water Board programs; water quality related efforts of local and State agencies; and watershed and regional stakeholder efforts. Coordination will include, but not be limited to, the following areas: (a) development of Orders; (b) preparation and review of monitoring programs and management plans; (c) review and assessment of data; (d) policy development; and (e) funding.

The Central Valley Water Board will be the lead entity working directly with operators (1) who have chosen not to enroll with a third-party entity, (2) where a third-party entity is unavailable or has demonstrated noncompliance with ILRP requirements, or (3) who, through their action or inaction, demonstrate that direct Central Valley Water Board oversight is required to ensure compliance with the ILRP.

6. REGULATORY REQUIREMENTS FOR IRRIGATED AGRICULTURAL OPERATIONS

To enhance the administrative efficiency of the program and enhance program transparency, the Central Valley Water Board intends to maximize the use of electronic data submittals from individual dischargers to the Board. Prior to the availability of the required information technology infrastructure to achieve this goal, the Board may allow the individual discharger to retain documents on-site and be made available for Board inspection or allow the discharger to submit information to the third party for compilation, as long as the information is available to the Board upon request. The Board Orders to be issued under this Program will provide the specific reporting requirements.

Regulatory requirements for dischargers that fall within the scope of this program (irrigated agricultural operations) will include the following:

1. Submit an application to the Central Valley Water Board to enroll in the program (if not already enrolled in the current program) or confirm with the third party or Central Valley Water Board continued participation with the third-party group. Where required, join a third-party group and pay applicable

program fees. Irrigated agricultural operations would not be required to submit a formal report of waste discharge unless applying for individual WDRs, or in cases of enforcement.

2. Participate in third-party outreach events and review outreach materials to become informed of any water quality issues that the grower must address and the practices that are available to address those issues. Documented participation in outreach events for members of third-party groups or regulated individuals must occur at least annually for those in Tier 3 areas and at least every 5 years for those in Tier 1/2 areas.

3. Implement water quality management practices in accordance with any water quality management plans approved by the Central Valley Water Board. Water quality management practices could be instituted on an individual basis, or be installed to serve a group of growers discharging to a single location.

4. Prevent nuisance conditions and/or exceedance of water quality objectives in State waters associated with waste discharge from their irrigated agricultural lands.

5. Provide the third-party group with information requested for compliance with the ILRP.

6. Provide the Central Valley Water Board with any information required pursuant to an applicable Order.

7. Provide any required fees to the third party to conduct any regional monitoring, representative monitoring, special studies, or field studies required by the Central Valley Water Board.

8. Conduct any site-specific monitoring required by the Central Valley Water Board in conformance with any quality assurance/quality control requirements.

9. Where a management practice is considered, in order to comply with the ILRP, and the irrigated agricultural operation determines that it may affect a sensitive resource(e.g., endangered species habitat, sensitive plant communities), the irrigated agricultural operation must (a) select a different management practice that meets water quality goals, but does not involve impacts on a sensitive resource; (b) locate the management practice outside of sensitive resource areas; (c) implement the mitigation measures described in the implementation mechanism (e.g., WDRs/ waiver) for the potentially affected resource and report to the third party on the implementation of those measures; or (d) obtain individual waste discharge requirements from the

Central Valley Water Board and conduct any required site-specific CEQA analysis.[14]

10. If located within a Tier 3 groundwater basin for which nitrate is the identified constituent of concern, prepare a farm-specific nutrient management plan certified by a certified crop advisor and provide any required nutrient information for submittal to the third party or Central Valley Water Board.

11. If located within a Tier 3 groundwater basin or watershed, prepare an individual farm water quality management plan certified by a certified crop advisor, if the Central Valley Water Board determines that adequate progress in the implementation of the regional GQMP or SQMP has not been made.

Irrigated agricultural operations that do not meet the above requirements as members of a third-party group would be required to obtain WDRs or an individual waiver of WDRs from the Central Valley Water Board.

7. MANAGEMENT PLAN AND PRACTICES REQUIREMENTS

1. Management objectives plan – Third-party groups must prepare a management objectives plan for their Tier 1 and Tier 2 groundwater and surface water areas. The management objectives plan must include objectives to continue to protect water quality and prevent degradation associated with sediment, salt, nutrients, pathogens, and pesticides. The management objectives plan would describe the ground and surface water quality protection objectives for the growers in the Tier 1 or 2 area. The plan must also identify the types of practices being used to meet the management objectives.

2. Summary and assessment of management practices – Third-party groups must prepare a base line summary and assessment of management practices being implemented to meet the management objectives incorporated into the management objectives plan for Tier 1 and Tier 2 areas. The summary and assessment of management practices must be updated every 5 years.

3. Farm Evaluation – All irrigated agricultural operations (in Tier 1, Tier 2, or Tier 3 areas) must complete a farm-specific evaluation and identification of their management practices and have the evaluation available for Board inspection. Per the Board-issued Order for their geographic area, the irrigated agricultural operation must submit the management practice information to its representative third party (or Board) to provide the necessary information for the management practices summary and assessment for the geographic area or commodity.

[14] This requirement is considered to ensure that implemented water quality management practices do not cause unintended environmental impacts on sensitive resources (see Final PEIR).

a. Evaluation template/checklist – A commodity-specific, third-party, or Central Valley Water Board-provided template or checklist may be used to complete the farm-specific evaluation.

b. Evaluation submittal – The farm-specific evaluation will not be submitted to the Central Valley Water Board, unless required by the Water Board. The evaluation must be produced, if requested, should Board staff conduct an inspection of the irrigated lands operation.

4. Nutrient management plan (Tier 3 groundwater areas for which nitrate is the identified constituent of concern) – For potential dischargers of nutrients in Tier 3 groundwater areas, a farm-specific nutrient management plan must be prepared and certified by a certified crop advisor. The nutrient management plan must include a system to track nutrient inputs and outputs to allow an estimate of nitrate loading below the crop root zone to be made. The Board issued Order for the geographic area will establish reporting and plan submittal requirements. At a minimum, individual irrigated land operations must provide confirmation to its representative third party that they have completed and are implementing a properly certified nutrient management plan.

5. Surface water quality management plan (SQMP) – The representative third party must develop and submit for approval an SQMP for any parameter that exceeds water quality objectives two or more times in a 3-year period[15]or for any parameter for which there is degradation of high quality waters. This requirement only applies to those parameters for which irrigated agriculture is causing or contributing to the exceedance or degradation. Surface water quality management plans developed and approved under the existing ILRP must continue to be implemented under the long-term ILRP. Existing management plans for those parameters for which the irrigated agricultural contribution has not been determined may include completion of source identification studies (as identified under Tier 2 requirements). Based on the results of such studies, the Executive Officer will determine whether the implementation of management practices is required to address any irrigated agricultural contribution to the water quality problem. Under SQMPs, irrigated agricultural operations are required to implement management practices to achieve BPTC or best efforts, as applicable, for the constituent of concern. Monitoring and other collected information will be used to assess the effectiveness of management practices and whether the BPTC or best efforts standard has

[15] Exceedances will be determined based on available data and application of the appropriate averaging period. The averaging period will either be defined in the Basin Plan; as part of the water quality standard established by the U.S. EPA; or as part of the criteria being used to interpret narrative objectives. If averaging periods are not defined in the Basin Plan; U.S. EPA standard; or criteria, the Central Valley Water Board will use the best available information to determine an appropriate averaging period.

been achieved. Additional practices/monitoring may be necessary, in an iterative process, to address water quality concerns. Required elements of SQMPs are given in Section 13.1.

6. Groundwater quality management plan (GQMP) – The representative third-party group must develop and submit for approval a GQMP within 18 months of issuance of the geographic/commodity specific WDRs by the Central Valley Water Board [except in areas where a local groundwater management plan has been developed and approved (by the Central Valley Water Board) for substitution].[16] The GQMP must be developed for any parameter that exceeds water quality objectives or causes degradation of high quality waters, for which irrigated agricultural could be a source. Under GQMPs or local groundwater management plans, irrigated agricultural operations would be required to implement management practices to achieve BPTC or best efforts, as applicable, for the constituent of concern.[17] Monitoring and other collected information would be used to assess the effectiveness of management practices and whether the BPTC or best efforts standard has been achieved. Additional practices/monitoring may be necessary, in an iterative process, to address water quality concerns.

   As part of GQMP development, the third party would collect and evaluate available groundwater data, identify groundwater quality management areas (GMAs) of concern, identify constituents of concern in the GMAs, prioritize the GMAs and constituents of concern, identify agricultural practices that may be causing or contributing to the problem, and identify agricultural management practices that should be employed by local growers to address the constituents of concern.

7. Water quality management plan approval – Based on information provided by the representative third party and other interested stakeholders, the Central Valley Water Board's Executive Officer will: (a) approve the SQMP or GQMP; (b) conditionally approve the SQMP or GQMP and require revisions to address other surface waters or constituents of concern; (c) conditionally approve the SQMP or GQMP and require other revisions necessary to meet program requirements and goals; or (d) disapprove the

[16] Where local agencies have developed local groundwater management plans (e.g., AB 3030, SB 1938, Integrated Regional Water Management plans) that meet the requirements of GQMPs, the Central Valley Water Board may approve the local groundwater management plan to be substituted for the GQMP. However, irrigated agricultural operations still would be required to enroll with an approved third-party group. The third-party group would be the responsible lead entity for ILRP administration, monitoring and reporting.

[17] For example, where the constituent of concern is nitrate, and the discharge pathway of concern is leaching to groundwater, the GQMP would need to include nutrient budgeting and efficient irrigation. In such cases, plan implementation would be tracked, and groundwater monitoring data and/or other information would be reviewed to determine whether program objectives are being met. Plan requirements may need to be iteratively adjusted based on program tracking/monitoring feedback.

SQMP or GQMP or portions of the SQMP or GQMP. Review of the SQMP or GQMP and the associated action by the Executive Officer will be based on findings as to whether the SQMP or GQMP meets program requirements and goals and contains the information required for a SQMP or GQMP (see Section 13). Failure by a third party to submit a SQMP or GQMP that receives Executive Officer approval will result in the issuance of 13267 Orders requiring the irrigated agricultural operators in the affected areas to submit the required reports and information.

8. Public input on water quality management plans – Interested stakeholders will be provided an opportunity to provide input on water quality management plans submitted to the Board's Executive Officer for approval; requests for changes in water quality management plans requiring Board or Executive Officer approval; and periodic reviews of water quality management plans conducted by the Board or Executive Officer.

9. Periodic review of water quality management plans – At least every 3 years for SQMPs and every 5 years for GQMPs, the Central Valley Water Board intends to review available data to determine whether the approved SQMP or GQMP is resulting in improvements in water quality. The Central Valley Water Board will meet with third-party groups and other interested parties to evaluate the sufficiency of SQMPs and GQMPs. Based on input from all parties, the Board or Executive Officer will determine whether and how the SQMP or GQMP should be updated based on new information and progress in achieving compliance with water quality objectives. The Board or Executive Officer also may require revision of the SQMP or GQMP based on available information indicating that exceedances of water quality objectives or degradation of water call for the inclusion of additional waters or constituents of concern(s) in the SQMP or GQMP.

    a. Adequate progress – The Executive Officer or Board will make a determination of adequate progress in implementing the plan if water quality improvement milestones and compliance time schedules have been met or water quality objectives have been attained.

    b. Inadequate progress – The Executive Officer or Board will make a determination of inadequate progress in implementing the plan if recurring exceedances of objectives or degradation have occurred with no demonstrated improvement in water quality or water quality improvement milestones and if compliance time schedules in the approved management plan have not been met.

    c. Additional requirements for inadequate progress – The actions taken by the Executive Officer or Board upon a determination of

inadequate progress include, but are not limited to, one or more of the following for the area in which inadequate progress has been made:

i. BMP field monitoring studies – The representative third party (or individual dischargers) will be required to develop and implement a field monitoring study plan to characterize the commodity-specific discharge of the constituent of concern and evaluate the pollutant reduction efficacy of specific management practices. Based on the study and evaluation, the Executive Officer will require the SQMP or GQMP to be revised to include improved practices to achieve water quality objectives or prevent degradation.

ii. Individual farm water quality management plans (FWQMPs) – Individual irrigated agricultural operations will be required to develop and implement a FWQMP certified by a certified crop advisor. FWQMP requirements are summarized in Section 13.3.

iii. Individual WDRs or waiver of WDRs – The Board or Executive Officer may revoke the third-party coverage for individual irrigated agricultural operations and require submittal of a report of waste discharge.

10. Individual FWQMPs – In addition to the circumstances identified above, individual FWQMPs will be required where irrigated agricultural operations are not implementing requirements in SQMPs/GQMPs. Should an irrigated lands discharger fail to provide requested information to the representative third party or fail to implement practices to address a constituent of concern, the Executive Officer will require development and implementation of a FWQMP certified by a certified crop advisor. FWQMP requirements are summarized in Section 13.3.

8. WATER QUALITY MONITORING AND ASSESSMENT REQUIREMENTS

1. General goals of the surface and groundwater quality monitoring and assessment efforts – The general goals of monitoring and assessment efforts associated with the constituents and areas in the ILRP are to determine:

   a. whether the receiving waters to which waste from irrigated lands discharge are in compliance with applicable water quality objectives, TMDLs, and implementation plans in the Basin Plans (Tiers 1, 2, and 3);

b. whether irrigated agricultural operations are causing or contributing to identified water quality problems (Tier 2);
c. the appropriate threat level (high or low – Tier 3/Tier 1) for areas with insufficient information to determine the relative threat (Tier 2);
d. whether water quality conditions have changed to the extent that the relative water quality threat has changed (Tier 1, Tier 2, Tier 3);
e. compliance with the requirements or conditions of applicable WDRs or waivers of WDRs (Tier 1, Tier 2, Tier 3).
f. the extent of management practice implementation (Tier 1, Tier 2, Tier 3);
g. the effectiveness of implemented management practices and whether those practices achieve BPTC/ best efforts (Tier 3); and
h. the effectiveness of any applicable regional GQMP or SQMP (Tier 3).

2. General data requirements – Data and information used to meet the requirements of the program must:
    a. Have been collected and analyzed in a manner that assures the quality of the data.
    b. Be collected in a manner[18] and at a location that reflects the timing, frequency, and the conditions and pollutant pathways that are relevant to the pollutant of concern and under conditions that are most likely to reflect the greatest potential impact of the pollutant on the most sensitive beneficial uses.
        i. The timing of the data collection must be when beneficial use impact could occur (if there is a temporal component to the beneficial use); and when the pollutant is most likely to be present.
        ii. The location of data collection must be representative of irrigated lands discharging the pollutant.
3. The frequency of data collection must be sufficient to allow determination of compliance with the relevant numeric water quality objective or criteria being applied to interpret compliance with narrative objectives.
4. General considerations – Monitoring requirements will be tailored to address the concerns specific to the areas or commodities for which they would apply. The monitoring requirements, including time schedule, frequency, locations, and parameters will be developed during the

[18] For groundwater quality monitoring, alternative technologies (e.g., well point or direct push method) may be utilized with approval by the Executive Officer.

development of the geographic or commodity specific Orders. The Central Valley Water Board intends that regional monitoring programs would be coordinated with DPR's surface water and groundwater monitoring, local groundwater management plans, the Central Valley Water Board Dairy Program, and other existing programs. The primary goal of this coordination is to prevent duplicative monitoring programs. For example, existing water quality data (e.g., the Surface Water Ambient Monitoring Program, SWAMP data, and DPR groundwater data) could be used, and the monitoring parameters would be tailored to the farm inputs and water quality issues in the watershed or groundwater basin. However, the Central Valley Water Board does not intend to monitor every surface water body or aquifer in the Central Valley as part of the long-term ILRP. Therefore, "representative" monitoring and other information will be considered.

5. Assessment monitoring –
   a. General assessment monitoring for surface waters (Tier 3 areas) - every 3 years, the third party must monitor parameters in its watersheds that have been determined by the Central Valley Water Board or Executive Officer to represent or potentially represent the effect of waste discharges from irrigated agriculture on receiving waters.

   b. General assessment and trend monitoring for groundwater (Tier 3 areas) – the third party must conduct regional monitoring for constituents of concern to provide baseline groundwater quality information and track trends in groundwater quality. In their proposed monitoring design, the third party may rely on existing groundwater quality monitoring networks in whole or part, provided the Executive Officer determines that reliance on such networks will provide adequate baseline and trend information. Nutrient/pesticide application tracking and associated modeling may be used to evaluate discharges to groundwater in place of monitoring, where technically feasible and appropriate.

   c. Tier reassessment (Tier 1, Tier 2, Tier 3) – The Water Board will periodically assess available groundwater and surface water quality data to determine whether the tier classification for specific areas and parameters require modification.

6. Source identification / data gaps – Where additional data collection is needed to determine the relative threat to water quality and to determine sources of identified threats, the Central Valley Water Board will prioritize data collection efforts. The purpose of the source identification studies and addressing data gaps is to resolve uncertainty and place those areas/parameters in Tier 1 or Tier 3.

a. Source identification for surface waters (Tier 2 parameters) – Areas with surface water quality problems (e.g., exceedance of water quality objectives, degradation of water quality), where irrigated agricultural operations have not been identified as a source but may be a potential contributor, would be required to conduct monitoring and applicable source studies. A component of the assessment of the potential contribution of irrigated lands discharges to the surface water body may include an evaluation of the intensity and type of irrigated land use in the watershed; and the relevant geologic, chemical, and hydrologic characteristics of the watershed. In submitting source identification studies for Executive Officer approval, the discharger (or third party) must provide the justification for their proposed study design, specifically identifying how the study design will resolve any uncertainty regarding the potential irrigated agricultural contribution to the water quality problem. The proposed study must include an evaluation of the feasibility of conducting commodity specific field studies for those commodities that could potentially be associated with the pollutant of concern.

b. Data gaps (Tier 2 areas/parameters) – The third party must monitor any parameter in a watershed that has been determined by the Central Valley Water Board or Executive Officer to be insufficiently monitored (i.e., a data gap exists). Should the Central Valley Water Board determine that potentially vulnerable groundwater aquifers[19] are inadequately characterized; the Water Board may require the third party (or individual dischargers) to collect samples from existing wells and characterize groundwater quality in the vulnerable aquifer.

7. Special project / site specific monitoring

a. Special project monitoring for surface waters (Tier 3 parameters) – The third party must conduct receiving water trend monitoring and site-specific studies that are representative of the effects of changes in management practices for the parameters of concern. In submitting special project monitoring proposals, the discharger (or third party) must provide the justification for their proposed study design, specifically identifying how the study design will quantify irrigated agricultural contribution to the water quality problem; identify sources; and evaluate management practice effectiveness. The proposed study must include an evaluation of the feasibility of conducting commodity and management practice specific field studies for those commodities

[19] For purposes of this assessment and monitoring requirement, a potentially vulnerable groundwater aquifer is one in which one or more domestic wells exist and data are not available to determine whether degradation of water quality or exceedances of objectives are occurring with respect to pollutants of concern.

and practices that could potentially be associated with the pollutant of concern.

b. Special project monitoring for groundwater (Tier 3 parameters) – The third party must conduct site-specific studies that are representative of the effects of changes in management practices on groundwater quality (this would occur only at a selected number of sites).

c. Local or site-specific monitoring – The Board may require individuals or third parties to conduct local or site-specific monitoring where assessment monitoring identifies a localized water quality problem.

9. OPTIONAL CERTIFIED FARM WATER QUALITY MANAGEMENT PLAN

This is an ***optional*** program component, unless the Board or Executive Officer has specifically required a certified individual farm water quality management plan. This program component would not apply geographically, but at the individual farm level. In this option, the operation would implement a certified FWQMP. Certification includes Central Valley Water Board approved Certification Entity review and certification of the plan. As part of certification program, the Certification Entity would conduct an initial certification inspection and a minimum annual inspection frequency of 5% of operations with approved plans. Certification entities would report results to the Central Valley Water Board. It is envisioned that these plans would be developed by commodity groups or other third parties for operations with similar waste discharges; however, individual operations would be required to implement practices in the certified plan. Individual operations also could develop and implement their own certified FWQMP. The certified FWQMP must address discharges to both ground and surface water. Irrigated agricultural operations implementing certified plans would be considered lower priority because there has been on-farm verification (by an approved certifier) of practices implemented to control waste discharge to surface water and groundwater. The approved certifier(s) would be the lead entity for this option.

10. TIME SCHEDULE FOR COMPLIANCE

Surface and groundwater quality issues that will be the primary focus of initial regional board and discharger efforts are identified below and would be subject to the compliance time schedules described. It is likely that the practices to address the issues that receive initial focused attention will also lead to improvement or achievement of objectives for other water quality issues. In issuing the Orders implementing the ILRP Framework, the Central Valley Water Board will establish any other necessary compliance time schedules to address other identified water quality issues.

The following general time schedules apply when irrigated lands are causing or contributing to a discharge that results in exceedance of a water quality objective. The Executive Officer or Water Board may modify these schedules based on evidence that meeting the compliance date is technically or economically infeasible (e.g., where irrigated agriculture demonstrates reduction in contributions, but cannot influence complete compliance because of other sources; where irrigated agriculture has implemented best efforts and water quality objectives are not achieved).

Management plan time schedules developed under the current ILRP would continue to apply in the long-term ILRP. Any other applicable time schedule for compliance established in the Central Valley Water Board's Basin Plans would take precedence over the schedules below.

10.1. Surface Water Quality Issues: Primary Focus

1. Which water bodies are considered the primary focus?—specific water bodies with beneficial uses identified in the Basin Plans, streams tributary to water bodies in the Basin Plan with aquatic life uses based on the "tributary rule,"[20] tributary streams with identified municipal or domestic drinking water intakes, and water bodies with specific compliance time schedules established in the Basin Plans.

2. Which beneficial uses are considered the primary focus?—aquatic life, drinking water, and human consumption uses[21] in the above water bodies.

3. Which pollutants are considered the primary focus?—those pollutants that cause or contribute to a violation of water quality objectives or degradation of surface water quality associated with the priority beneficial uses and water bodies.

Compliance time schedule—5 to 10 years. For watershed areas with multiple water body/pollutant issues to address, compliance schedules may be staggered between 5 and 10 years, but cannot exceed 10 years.

10.2. Groundwater Quality Issues: Primary Focus

1. Which groundwater aquifers are considered the primary focus?—aquifers with identified municipal or domestic drinking water wells; aquifers in which

[20] Resolution R5-2005-0137 describes the application of the tributary rule. Constructed supply and drainage conveyances (with the exception of those identified in the Basin Plans) would not be considered part of the initial focused efforts.

[21] In the Basin Plans, the specific beneficial uses within these general categories include Warm Freshwater Habitat, Cold Freshwater Habitat, Estuarine Habitat, Preservation of Biological of Special Significance; Rare, Threatened, or Endangered Species; Migration of Aquatic Organisms; Spawning, Reproduction, and/or Early Development; Municipal and Domestic Supply; Commercial and Sport Fishing; Shellfish Harvesting; and Water Contact Recreation.

drinking wells were closed because of exceedance of a water quality objective.

2. Which beneficial uses are considered the primary focus?—drinking water uses (i.e., municipal and domestic supply).

3. Which pollutants are considered the primary focus?—those pollutants that cause or contribute to a violation of water quality objectives or degradation of groundwater quality associated with drinking water uses.

Compliance time schedule—5 to 10 years. For areas with multiple aquifer/pollutant issues to address, compliance schedules may be staggered between 5 and 10 years, but cannot exceed 10 years.

Compliance is considered to be demonstrated improvement in water quality or reduction in discharge based on evaluation of available data of first encountered groundwater.

With Central Valley Water Board approval, compliance can be demonstrated through documented implementation of management practices (e.g., nutrient budgeting with estimated associated changes in nitrate loading), assessment of water quality data, and/or groundwater quality modeling.

11. STATE FEES AND THIRD-PARTY COSTS

Fees charged will be dependent on the amount of State funding allocated through legislative appropriation and the State Water Board's analysis of the level of staff effort required to implement the ILRP. The Central Valley Water Board will recommend that the fee structure reflect the differing levels of effort for the different tiers and oversight of irrigated agricultural operations as individuals versus those that are part of a third-party group.

To comply with the requirements of the ILRP, third-party groups charge their grower members fees to cover the costs of compliance. The Central Valley Water Board recognizes that these marginal costs can have a disproportionate impact on the economic viability of certain farming operations (e.g., producers of lower value crops and small agricultural operations). In establishing their fee structure, the third party should take into account these potential economic impacts (e.g., by adjusting the fee structure to take into consideration potential economic impact or potential contribution to identified water quality issues). To ensure growers understand how the fee structure is established, third-party groups will provide their members and the Central Valley Water Board with a description and explanation of the fee structure, including any fees charged by subwatershed groups. The Board will not take any action regarding the appropriateness or adequacy of the fee structure established by the third-party group.

12. MITIGATION MEASURES AND MITIGATION MONITORING AND REPORTING PROGRAM

The Final PEIR identifies various potentially significant environmental impacts and cumulatively considerable impacts associated with implementation of a long-term irrigated lands regulatory program. As described in the CEQA findings associated with this Framework, those mitigation measures will be incorporated into the Orders that implement this Framework. Any necessary mitigation monitoring and reporting program (MMRP) will be incorporated into the monitoring and reporting requirements that accompany the WDRs or conditional waivers of WDRs issued to implement this Framework.

13. REQUIREMENTS FOR SURFACE WATER QUALITY, GROUNDWATER QUALITY, AND INDIVIDUAL FARM WATER QUALITY MANAGEMENT PLANS

13.1. Surface Water Quality Management Plan Requirements

The surface water quality management plan (SQMP) prepared by third-party groups must include the following elements.

1. Identification of the watershed areas and associated parameters addressed by the management plan. For exceedances in a water body that is representative of other water bodies/watersheds, those areas represented by the water body monitored must be identified in the management plan.

2. A summary and assessment of the available water quality data for surface waters and parameters addressed by the management plan.

3. Identification of irrigated agriculture source(s), general practice(s) or specific location(s) that may be the cause of the water quality problem. If the potential sources are not known, a study design must be included to determine the source(s) or to eliminate agriculture as a potential source. Source identification can include more intensive sampling in the watershed or field studies to quantify the relevant waste discharge from irrigated lands. In lieu of conducting additional source analysis, the management plan can focus on ensuring that all growers are implementing practices that achieve BPTC/ best efforts for the parameter(s) of concern.

4. Identification of practices to address the constituents of concern. The practices that growers will implement must be identified, along with an estimate of their effectiveness or any limitations on the effectiveness of the

practice. Practices identified may include those that are required by local, State, or federal law[22].

5. Evaluation of management practice effectiveness. The approach for determining the effectiveness of the management practices implemented must be described. Acceptable approaches include field studies of management practices at representative sites and modeling or assessment to associate the degree of management practice implementation to changes in water quality.

6. Description of outreach to growers. The strategy for informing growers of the water quality issues that need to be addressed and relevant management practices must be described. The outreach strategy must describe the methods that will be used to inform growers and how the effectiveness of the outreach efforts will be evaluated. The third party may conduct outreach efforts or work with the assistance of the County Agricultural Commissioners, U.C. Cooperative Extension, Natural Resources Conservation Service, Resource Conservation District, or other appropriate groups or agencies.

7. Tracking of management practice implementation. The process for tracking implementation of management practices must be described. The process must include a description of how the information will be collected from growers; the type of information being collected; how the information will be verified[23]; and how the information will be reported.

8. Monitoring plan to track changes in water quality. A monitoring plan for the constituent(s) of concern must be prepared to determine whether the management plan is improving water quality. The monitoring plan may need to include other sites or different timing or frequency of sample collection to adequately assess the effectiveness of the management plan. The monitoring plan must include an associated Quality Assurance Project Plan, and the data must be submitted electronically in a format required by the Central Valley Water Board.

9. Schedules and milestones. Milestones and schedules must be described for the actions to be taken (e.g., outreach, management practice implementation), as well as for the anticipated improvements in water quality (e.g., milestones for reduced frequency of exceedance; anticipated date for achieving water quality objectives). The schedule for achieving compliance with water quality objectives must be consistent with any compliance dates established in the relevant water quality control plan.

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[22] For example, practices required to be implemented under Department of Pesticide Regulation or County Agricultural Commissioner regulations or permit requirements may be referenced.
[23] The intent of data verification is to provide confidence that the information being reported is accurate. This may include field visits to a subset of growers reporting their data or other methods to confirm data validity.

If the SQMP addresses multiple exceedances of different types of wastes at multiple locations, a prioritization of the water quality problems to be addressed may be developed. The prioritization may include considerations such as extent, magnitude, and duration or be based on a design that assumes that resolution of one type of contaminant (such as sedimentation) may help resolve other types of measured exceedances (such as pesticides, toxicity, dissolved oxygen, and pH). The assumptions and prioritizations will be developed in coordination with the Central Valley Water Board and must be included as part of the management plan to be approved by the Executive Officer.

At least annually, the third party must prepare a report that summarizes the progress in implementing the management plan. At a minimum, the report must include (1) a summary of the grower outreach conducted; (2) results from evaluation of management practice effectiveness; (3) a summary of the degree of implementation of management practices; (4) an assessment of the monitoring data collected; and (5) a summary of progress in meeting milestones and schedules and any recommendations for changes to the management plan.

The Executive Officer or the Central Valley Water Board must approve the management plan. Changes to the management plan may be implemented by the third party only after approval by the Executive Officer.

At the request of the third party or upon recommendation by the Central Valley Water Board, the Executive Officer may exempt a third party from the development of a management plan. Such an exemption may be issued only if sufficient evidence is provided indicating that the implementation of management practices by growers will not result in water quality improvements. The Executive Officer also may require the third party or its members to develop a management plan or to take additional actions if monitoring data or other information indicates that water quality may be jeopardized. The Executive Officer also may increase the monitoring requirements where monitoring results, pesticide use patterns, or other indicators suggest that the increase is warranted.

13.2. Groundwater Quality Management Plan Requirements

The groundwater quality management plan (GWMP) prepared by third-party groups must include the following elements.

1. Identification of the groundwater quality management areas (GMAs) and constituents of concern addressed by the management plan. For exceedances in a groundwater basin or aquifer that is representative of other basins/aquifers, those areas represented by the aquifer monitored must be identified in the management plan.

2. A summary and assessment of the available water quality data for the aquifers and parameters addressed by the management plan. Available data from existing groundwater quality programs can be used, including but not

limited to the State Water Board's Groundwater Ambient Monitoring and Assessment, USGS, DPH, DPR, DWR, and local groundwater management programs.

3. Identification of irrigated agriculture source(s), general practice(s) or specific location(s) that may be the cause of the water quality problem. If the potential sources are not known, a study design must be included to determine the source(s) or to eliminate agriculture as a potential source. Source identification can include more intensive sampling in the relevant aquifer or field studies to quantify the relevant waste discharge from irrigated lands. In lieu of conducting additional source analysis, the management plan can focus on ensuring that all growers are implementing practices that achieve BPTC/ best efforts for the constituent(s) of concern.

4. Identification of practices to address the constituents of concern. The practices that growers will implement must be identified, along with an estimate of their effectiveness or any limitations on the effectiveness of the practice. Practices identified may include those that are required by local, State, or federal law. Where an identified constituent of concern is a pesticide that is subject to DPR's groundwater protection program, the GQMP may refer to DPR's regulatory program for that pesticide and any requirements associated with the use of that pesticide.

5. Evaluation of management practice effectiveness. The approach for determining the effectiveness of the management practices implemented must be described. Acceptable approaches include field studies of management practices at representative sites and modeling or assessment to associate the degree of management practice implementation to changes in water quality.

6. Description of outreach to growers. The strategy for informing growers of the water quality issues that need to be addressed and relevant management practices must be described. The outreach strategy must describe the methods that will be used to inform growers and how the effectiveness of the outreach efforts will be evaluated. The third party may conduct outreach efforts or work with the assistance of the County Agricultural Commissioners, U.C. Cooperative Extension, Natural Resources Conservation Service, Resource Conservation District, California Department of Food and Agriculture, or other appropriate groups or agencies.

7. Tracking of management practice implementation. The process for tracking implementation of management practices must be described. The process must include a description of how the information will be collected from

growers, the type of information being collected, how the information will be verified[24], and how the information will be reported.

8. Monitoring plan to track changes in water quality. A monitoring plan for the constituent(s) of concern must be prepared to determine whether the management plan is improving water quality. The monitoring plan may need to include other sites or a different depth to groundwater (e.g., monitor first encountered groundwater versus supply wells) or frequency of sample collection to adequately assess the effectiveness of the management plan. Monitoring may include focused studies of selected agricultural management practices, constituents, or physical settings to inform refinement of GMA and constituent prioritization, or of practices that provide needed groundwater protection from degradation by constituents of concern. The monitoring plan must include an associated Quality Assurance Project Plan, and the data must be submitted electronically in a format required by the Central Valley Water Board.

9. Schedules and milestones. Milestones and schedules must be described for the actions to be taken (e.g., outreach, management practice implementation), as well as for the anticipated improvements in water quality (e.g., milestones for declining trends in concentrations of constituents of concern). The schedule for achieving compliance with water quality objectives must be consistent with any compliance dates established in the relevant water quality control plan.

The GQMP would not include or address issues related to groundwater supply, including issues regarding the volume of groundwater pumped or used by growers within a GMA.

If the GQMP addresses exceedances in multiple aquifers or for multiple constituents of concern, a prioritization of the water quality problems to be addressed may be developed. The prioritization may include considerations such as the threat to drinking water supply wells, aquifer condition, risk of contamination because of soil type, known agricultural practices/crops grown, and likelihood of irrigated agricultural contribution to the water quality problem. The assumptions and prioritizations will be developed in coordination with the Central Valley Water Board and must be included as part of the management plan to be approved by the Executive Officer.

At least annually, the third party must prepare a report that summarizes the progress in implementing the management plan. At a minimum, the report must include (1) a summary of the grower outreach conducted; (2) results from evaluation of management practice effectiveness; (3) a summary of the degree of implementation of management practices; (4) an assessment of the monitoring

[24] The intent of data verification is to provide confidence that the information being reported is accurate. This may include field visits to a subset of growers reporting their data or other methods to confirm data validity.

data collected; and (5) a summary of progress in meeting milestones and schedules and any recommendations for changes to the management plan.

The GQMP may rely wholly or in part on a local groundwater plan to the extent that plan includes the required elements described above. The Executive Officer of the Central Valley Water Board must approve the GQMP, including any elements of the plan that rely on an existing local groundwater plan. Changes to the management plan may be implemented by the third party only after approval by the Executive Officer.

At the request of the third party or upon recommendation by the Central Valley Water Board, the Executive Officer may exempt a third party from the development of a management plan. Such an exemption may be issued only if sufficient evidence is provided indicating that the implementation of management practices by growers will not result in water quality improvements. The Executive Officer also may require the third party or its members to develop a management plan or to take additional actions if monitoring data or other information indicates that water quality may be jeopardized. The Executive Officer also may increase the monitoring requirements where monitoring results, pesticide use patterns, or other indicators suggest that the increase is warranted.

13.3. Individual Farm Water Quality Management Plan Requirements

At a minimum, farm water quality management plans (FWQMPs) would describe those practices needed or currently in use to achieve groundwater and surface water quality protection. Growers would be encouraged to work with technical service organizations such as resource conservation districts and the University of California Cooperative Extension in the development of FWQMPs.

FWQMP content at a minimum would include (1) name and contact information of owner/operator; (2) description of operations, including number of irrigated acres, crop types, and chemical/fertilizer application rates and practices; (3) maps showing the location of irrigated production areas, discharge points and named water bodies; (4) applicable information on water quality management practices used to achieve general ranch/farm management objectives and reduce or eliminate discharge of waste to groundwater and surface waters; (5)measures instituted to ensure wellhead protection from fertilizer use; and (6) identification of any potential conduits to groundwater aquifers on the property (e.g., active, inactive, or abandoned wells; dry wells; recharge basins; ponds) and steps taken, or to be taken, to ensure all identified potential conduits do not carry contamination to groundwater.

In addition to the minimum elements described above, the Executive Officer may require groundwater or surface water quality monitoring to evaluate the effectiveness of the practices implemented by the grower.