

Review of Proposed Groundwater Regulations

*Parry Klassen, Executive Director
Coalition for Urban/Rural Environmental Stewardship
pklassen@unwiredbb.com*

This paper takes a close look at the alternatives being considered for the new proposed Long Term Irrigated Lands Regulatory Program. With the existing ILRP set to expire in 2011, the Regional Water Board is working with a broad range of stakeholders to develop a new program. While final adoption is almost two years away, now is the time to examine closely the options being considered and combine efforts with others to urge changes in aspects that are unworkable for Central Valley agriculture. The outcome will undoubtedly impact the future of irrigated agriculture in the Central Valley.

EIR To Examine Alternatives for Regulating Water Quality

Agricultural groups and watershed coalition managers got their first look this summer at what may be the future of groundwater regulations for irrigated agriculture in the Central Valley.

In mid-September, five alternative approaches for regulating ground and surface water began a six to eight month environmental review process that will put a price tag – for farmers and state regulators alike – on each of the programs. The five alternatives being examined range from slightly more than status quo to comprehensive farm nutrient management plans and extensive groundwater monitoring.

The review process is part of the long overdue Environmental Impact Report (EIR) on the Irrigated Lands Regulatory Program. The EIR process was stalled when the original ILRP was passed in 2003 then restarted in 2008, this time with a groundwater component added to the mix. The EIR is required under California Environmental Quality Act (CEQA) and examines the economics, policy ramifications and environmental impacts of new programs.

When an EIR examines a new regulatory program, it must provide regulators, in this case the Central Valley Regional Water Quality Control Board, a review of a range of program alternatives or approaches to regulate. Each alternative is examined separately on its own merits then summarized for the Regional Water Board members in the final EIR. Meanwhile, the Water Board staff, using information from the EIR, is expected to construct its own program, picking and choosing different aspects from each of the five alternatives to build its “ideal” surface and groundwater program. When the final EIR is presented to the Regional Water Board members, expected in fall 2010, it will be accompanied by a Regional Water Board “staff recommended” program that will have been vetted through a lengthy public process. The nine-member Regional Water Board

can chose any of the five alternatives from the EIR but the staff recommended program is the most likely alternative to be passed.

Exactly what will be in the staff recommended program won't be known until spring 2010. But the five alternatives now being examined give an idea of the range of approaches being considered by Regional Water Board staff. The five alternatives were developed by a multi interest "workgroup" made up of local government, industry, agricultural and environmental coalitions from the Central Valley. The workgroup met four times in 2009 to advise and provide comment to Regional Water Board staff as it compiled the ILRP alternatives. Agricultural interests combined efforts to develop and deliver critical comments on the last draft of alternatives in late September. Regional Water Board staff has said they would work with agricultural and environmental stakeholders to adjust the alternatives based on their respective comments.

Regional Water Board staff committed to updating stakeholders on the EIR progress throughout the winter 2009-10 and also to seek input on environmental, economic and policy aspects of each alternative. At its October 8th Regional Water Board meeting, staff will update the Board members on the workgroup process, proposed ILRP alternatives and next steps in the EIR process.

Farm Threat to Water Quality: A Tiered Approach

Alternative 4 uses a tiered approach to regulating ground and surface water. Each field in the Central Valley would be classified, through coordination with the Department of Pesticide Regulation, into one of three tiers based on the field's threat to water quality. The tiers represent fields with minimal (Tier 1), low (Tier 2), and high (Tier 3) potential threat to water quality. This would allow for less regulatory oversight for low threat operations while establishing necessary requirements to protect water quality from higher-threat discharges.

Factors that would impact classification would be site specific and include:

- existing water quality;
- hydrogeologic conditions;
- nitrogen loading;
- crop types;
- irrigation practices;
- pesticides used;
- distance to surface water bodies; and
- whether the field is in a DPR Groundwater Protection Area
http://www.cdpr.ca.gov/docs/emon/grndwtr/gwp_regs.htm.

Tier 1 fields would be those where discharge is so minimal that it will not result in any detectable change in water quality.

Tier 2 fields would have a low potential to affect water quality and meet the following conditions:

- Have low-threat pesticide and fertilizer use including *not* using pesticides that have been found in or have the potential to move to groundwater based on DPR's Groundwater Protection Program (Title 3, California Code of Regulations section 6800);
- For surface water, do not use pesticides that have the potential to cause exceedance of applicable surface water quality objectives as defined using monitoring data;
- Have fertilizer application rates that are not expected to result in nitrogen exceedances in groundwater; or
- Are not located in a vulnerable hydrologic environment (groundwater) which is a square-mile section of land where monitoring data from one well confirms any one of the following: (i) nitrate concentrations are greater than the maximum contaminant level (elevated nitrate levels), (ii) have measurable levels of agriculturally used pesticides, or (iii) salts, pathogens (where manure is used), or other agricultural constituents of concern are above an applicable water quality objective. DPR Groundwater Protection Areas would also be considered vulnerable hydrologic environments. For surface water, vulnerable area is subwatersheds where monitoring data confirms two or more exceedances of water quality objective in 3-year period where agriculture is a contributing source.

Tier 3 (high threat) fields would have a high potential to affect surface water and/or groundwater quality and would include fields that have low-threat fertilizer or pesticide use but are located in a vulnerable hydrologic environment. Tier 3 would also include fields that are not located in a vulnerable hydrologic environment, but have high-threat fertilizer and/or pesticide use. A field may move from Tier 3 to Tier 2 or vice versa depending upon changes in fertilizer or pesticide use or available information on groundwater vulnerability.

Growers could be in different tiers for surface water or groundwater discharge. For example, a field may be in a vulnerable environment for groundwater (Tier 3), but minimal threat to surface water (Tier 1) if all applied water immediately percolates, and does not run off.

Growers who do not meet these requirements would work directly with the Central Valley Water Board and obtain waste discharge requirements or an individual waiver of waste discharge requirements.

Farm Water Quality Management Plans

Alternatives 3, 4, and 5 would require that irrigated agricultural operations develop individual farm water quality management plans (FWQMPs). The Water Board would develop a standard FWQMP template, but at a minimum, plans would describe those practices needed or currently in use to achieve 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 when developing FWQMPs. In addition to name and contact information, each plan would include:

- Operation description i.e. irrigated acres, crops and chemical/fertilizer application rates and practices;
- Maps of irrigated production areas, discharge points and named water bodies;
- List of water quality management practices used to achieve farm management objectives and reduce or eliminate discharge of waste to ground and surface waters;
- Wellhead protection measures for pesticide and fertilizer use; and
- Identify potential conduits to groundwater aquifers (e.g. active, inactive, or abandoned wells; dry wells, recharge basins, or ponds) and steps taken, or to be taken, to ensure conduits do not carry contamination to groundwater.

Reporting Pesticide and Fertilizer Use

In Alternative 4, all growers would be required to report use of pesticide and fertilizers annually to the Regional Water Board or an approved third-party monitoring group.

Nutrient reporting includes:

- All nutrients applied (commercial fertilizers, manure, irrigation water, etc.).
- Ratio of nutrients applied to the needs of the crop(s) (as recommended by the University of California Western Fertilizer Handbook [9th Edition] or from historic crop removal rates).

Long-Term Irrigated Lands Regulatory Program

Summary of Alternatives Proposed for Environmental Impact Report (as of 9-23-09)

Alternatives Being Examined in EIR

The Environmental Impact Report being developed for the Long Term Irrigated Lands Regulatory Program will examine five alternative approaches for regulating surface and groundwater. In the final EIR, each will be weighed for its economic impact to farmers and state regulators, policy ramifications and environmental impacts of the new program. The alternatives were developed using input from a voluntary “workgroup” made up of local government, industry, agricultural and environmental coalitions from the Central Valley. The alternatives are summarized here with the full text available online at www.waterboards.gov/ILRP.

Overview Description	Lead Entity and Responsibilities	Water Board Responsibilities	Grower Requirements	Surface Water Monitoring	Groundwater Monitoring
<p>Alternative 1 No change; continue existing program; coalitions function as leads; where monitoring indicates problems, growers implement management practices.</p>	<p>Coalitions/commodity groups: must enroll members; conduct monitoring; implement Management Plan when two or more exceedances of standards; conduct member outreach. Individuals not participating in coalition or commodity organization required to obtain individual coverage from the Regional Water Board.</p>	<p>Require 100% participation; review and approve coalition plans and reports; respond to complaints; enforce ILRP; ensure individuals not participating in Coalition and/or commodity organization obtain individual coverage with the Water Board.</p>	<p>Submit application and pay fees to coalition; implement water quality management practices; prevent nuisance conditions or exceedances of standards; respond to coalition information requests. Or, obtain individual coverage from Water Board.</p>	<p>Watershed based, same as current program</p>	<p>None</p>
<p>Alternative 2 Third- party lead entity (coalitions, commodity group, others); similar surface water requirements of existing program; reduced surface water monitoring in low threat areas/where management plans in place; requires groundwater management plans to minimize waste discharge to groundwater. Option to use local groundwater management plans prepared pursuant to AB 3030/1938 that meet specified requirements.</p>	<p>Third-party i.e. coalitions,/commodity group/other: must enroll members; develop and conduct monitoring, management practice tracking plans; implement surface water Management Plan when two or more exceedances of standards; develop Groundwater Quality Management Plans within 4 years adoption of new ILRP; inform, coordinate programs with members. Option to have local groundwater management plans prepared pursuant to AB 3030/1938 that meet specified requirements.</p>	<p>Require 100% participation; review and approve coalition surface and groundwater plans and reports; require additional monitoring and management practices where standards are not met; respond to complaints; enforce ILRP.</p>	<p>Submit application and pay fees to third party entity; implement water quality management practices; prevent nuisance conditions and exceedances of standards; respond to third-party information requests.</p>	<p>Watershed based with option for reduced monitoring where watershed/area management plan is developed. Also management practice tracking.</p>	<p>Regional monitoring for nitrates/salts or tracking use of required management practices. Local requirements associated with AB 3030/1938 plans</p>
<p>Alternative 3 Individual Farm Water Quality Management Plans: growers work directly with Water Board or lead implementing agency.</p>	<p>Water Board (see next column)</p>	<p>Enroll growers; require 100% participation; work with Technical Service Providers (TSP); conduct site inspections; certify growers are implementing practices to protect water</p>	<p>Submit application and pay fees to Water Board; within two years develop and implement farm water quality management plan; submit plan to Water Board for approval; update</p>	<p>Monitoring of management practices (e.g. visual monitoring, inspection of proper operation.) Also</p>	<p>Monitoring of management practices (e.g. visual monitoring, inspection of proper</p>

		quality; require additional monitoring and management practices where standards are not met; respond to complaints; enforce ILRP.	plan as needed; prevent nuisance conditions and exceedances of standards; allow inspections by Water Board or its representatives.	management practice tracking. Additional monitoring to be determined on a individual farm water quality management plan basis.	operation.) Also management practice tracking. Additional monitoring to be determined on a case-by-case basis.
<p>Alternative 4 Direct Water Board oversight with regional monitoring: individual growers or “responsible entities” that assume responsibility for waste discharge will work directly with Water Board. If optional third party, they perform monitoring/reporting; requirements would be scaled using tiered, threat-based criteria. All growers must have individual farm water quality management plans. Fields classified under tiered approach (Tier 1-3)</p>	<p>Water Board or Responsible Entity. If RE, it must enroll growers; develop monitoring and tracking plans; and conduct monitoring. Responsible entity must be a Joint Powers Authority or some other formal legal entity that accepts responsibility for discharges for its enrollees.</p>	<p>Enroll growers (if no Responsible Entity); require 100% participation; review and approve surface and groundwater plans and reports; assign growers to appropriate threat tier; coordinate with growers to ensure plans/practices are addressing water quality problems; conduct site inspections; require additional monitoring and management practices where standards are not met; respond to complaints; enforce ILRP.</p>	<p>Submit application and pay fees to Water Board; within two years develop and implement farm water quality management plan; submit plan to Water Board upon request; update plan as needed; prevent nuisance conditions and exceedances of standards; allow inspections by Water Board or its representatives; complete 15 hrs of farm water quality education within 2 years; submit annual certified statement to Water Board regarding appropriate tier application. Tier 1 only: submit site specific evaluation to Water Board demonstrating minimal potential impact of waste discharge to SW or GW; Tier 3 only: develop a nutrient management plan and/or implement additional pesticide</p>	<p>Tier 2 and 3 would conduct individual monitoring or participate in regional monitoring with tier 2 operations having reduced monitoring requirements. Also tracking and reporting nutrient and pesticide applications and management practices.</p>	<p>Tier 3 operations would conduct individual monitoring and participate in regional monitoring. Tier 2 operations would chose between individual or regional monitoring. Also tracking and reporting nutrient and pesticide applications and management practices.</p>

			management practices. Maintain records of each field's nutrient budget.		
Alternative 5 Direct Oversight with Farm Monitoring	Water Board (see next column)	Enroll growers; require 100% participation; review individual monitoring reports; develop prioritization scheme for installation of monitoring wells; coordinate with growers to ensure plans/practices are addressing water quality problems; conduct site inspections; require additional monitoring and management practices where standards are not met; respond to complaints; enforce ILRP.	Submit application and pay fees to Water Board; within two years develop and implement farm water quality management plan; plan to be submitted to Water Board upon request and kept on site; update plan as needed; develop and implement a nutrient management plan if commercial fertilizer or manure is used; allow inspections by Water Board or its representatives; maintain records of each field's nutrient budget.	Individual farm monitoring for constituents of concern in tailwater, storm water and tile drainage. Also tracking and reporting of nutrient and pesticide applications and management practices.	Individual supply well monitoring; installation and sampling of monitoring wells where Water Board requires based on vulnerability factors. Also tracking and reporting nutrient and pesticide applications and management practices.

Groundwater Quality Strategy is Goal of New Effort

It's not a new groundwater regulation and it won't set state policy. The Regional Water Board calls it a "Groundwater Quality Strategy." A resolution by the Regional Water Board in 2008 called on staff and the regulated community to work on a broad strategy to identify issues and concerns, including priorities on how the Board will move forward to address groundwater quality in the Central Valley.

Industry and the public had opportunity for input at a round of workshops in August 2009. The final strategy (first draft set for October/November), will serve as the Water Board's road map for developing new regulations and help in coordinating with other agencies with regulatory authority over groundwater (Department of Pesticide Regulation and Department of Food and Agriculture). The strategy will contain:

- Summary of current conditions and state of groundwater quality throughout the Central Valley;
- Summary of current groundwater regulatory programs being implemented by the Regional Water Board and other local and state agencies; and
- Roadmap for future regulatory and control activities that will be implemented by the Regional Water Board to assure comprehensive, consistent, and coordinated groundwater protection program is being implemented throughout the Central Valley Region.

Another round of workshops for public input on the draft strategy are expected in October or November 2009. A final version could be ready for a Regional Board vote by January or February 2010.

Note: the Water Board emphasized that the strategy would not address groundwater rights or quantity of groundwater use.

