Long-term Irrigated Lands Program Framework

Agenda Item 7

Central Valley Water Board Meeting
7 April 2011

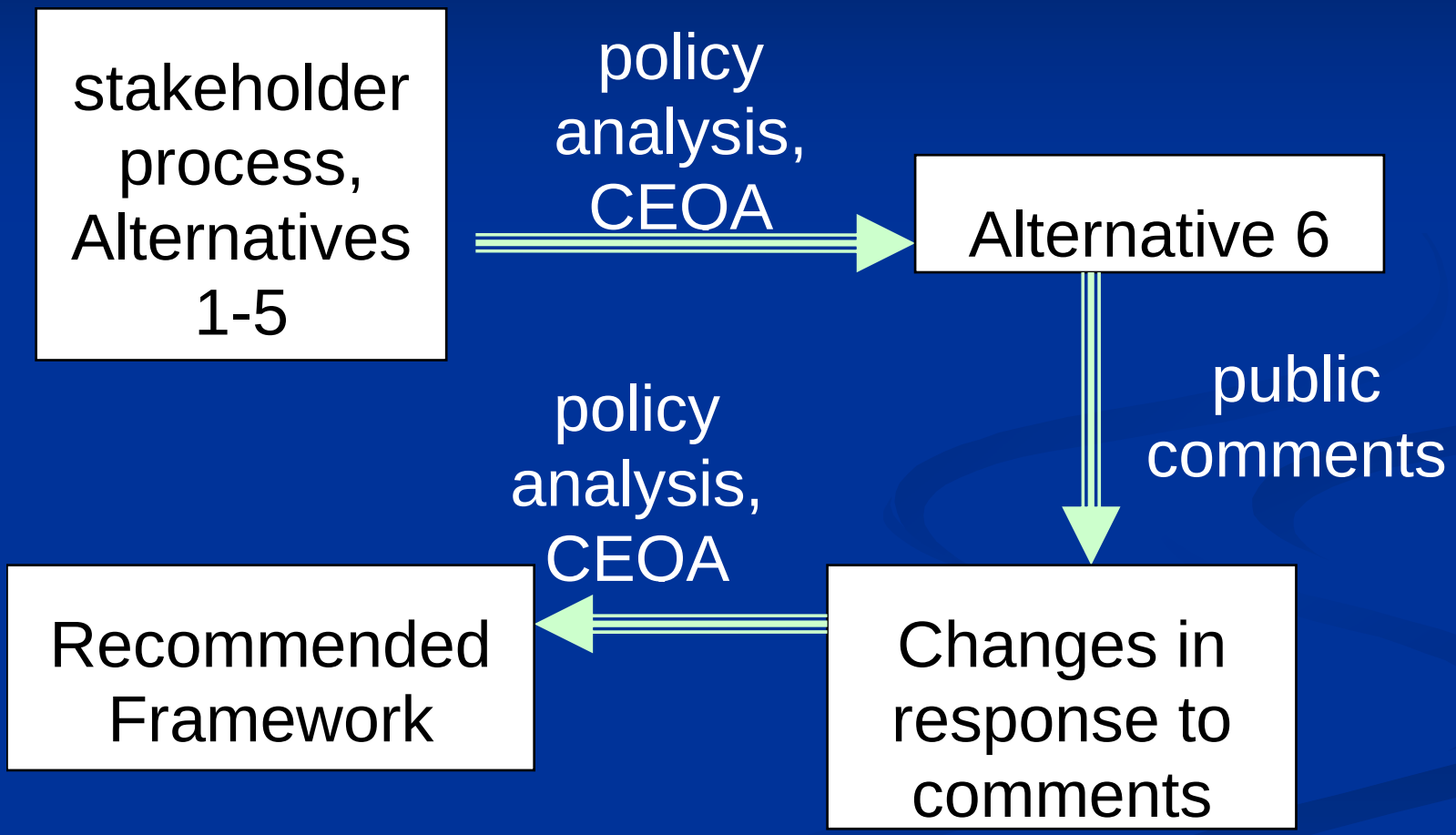
Recommended Irrigated Lands Regulatory Program Framework

- Why a Framework?
- How was the Framework developed?
- Framework description
- Economic Analysis / Cost Estimates
- CEQA compliance
- Compliance with State Board policies
- Comment summary
- Late revisions
- Board Options

Why a Framework?

- Framework
  - Provides direction to staff
  - Provides Board flexibility in future decision-making
  - NOT a regulation or policy that the Board must follow
- Rulemaking (Basin Plan Amendment)
  - Would provide direction / limit flexibility

How was Framework Developed?



Framework Description

- Scope
  - Irrigated lands, including managed wetlands
  - Discharge to surface and groundwater from run-off or non-runoff process (e.g., drift)
  - Irrigated lands under existing Orders (e.g., NPDES) must address all waste discharges

Framework Description

- Goals and Objectives
  - Protect beneficial uses / meet objectives
  - Minimize waste discharge
  - Maintain economic viability of agriculture
  - Ensure discharge does not impair access to safe/reliable drinking water
  - Promote coordination to minimize duplicative efforts

Framework Description

- Promote Coordination
  - Internal – Central Valley Salinity Alternatives for Long-term Sustainability (CV-SALTS), Total Maximum Daily Load (TMDL), Dairy program, SWAMP, GAMA
  - External – Dept of Pesticide Regulation, Food and Agriculture, County Ag Commissioners, UC Cooperative Extension, Natural Resources Conservation Service, Integrated Regional Water Management planning efforts

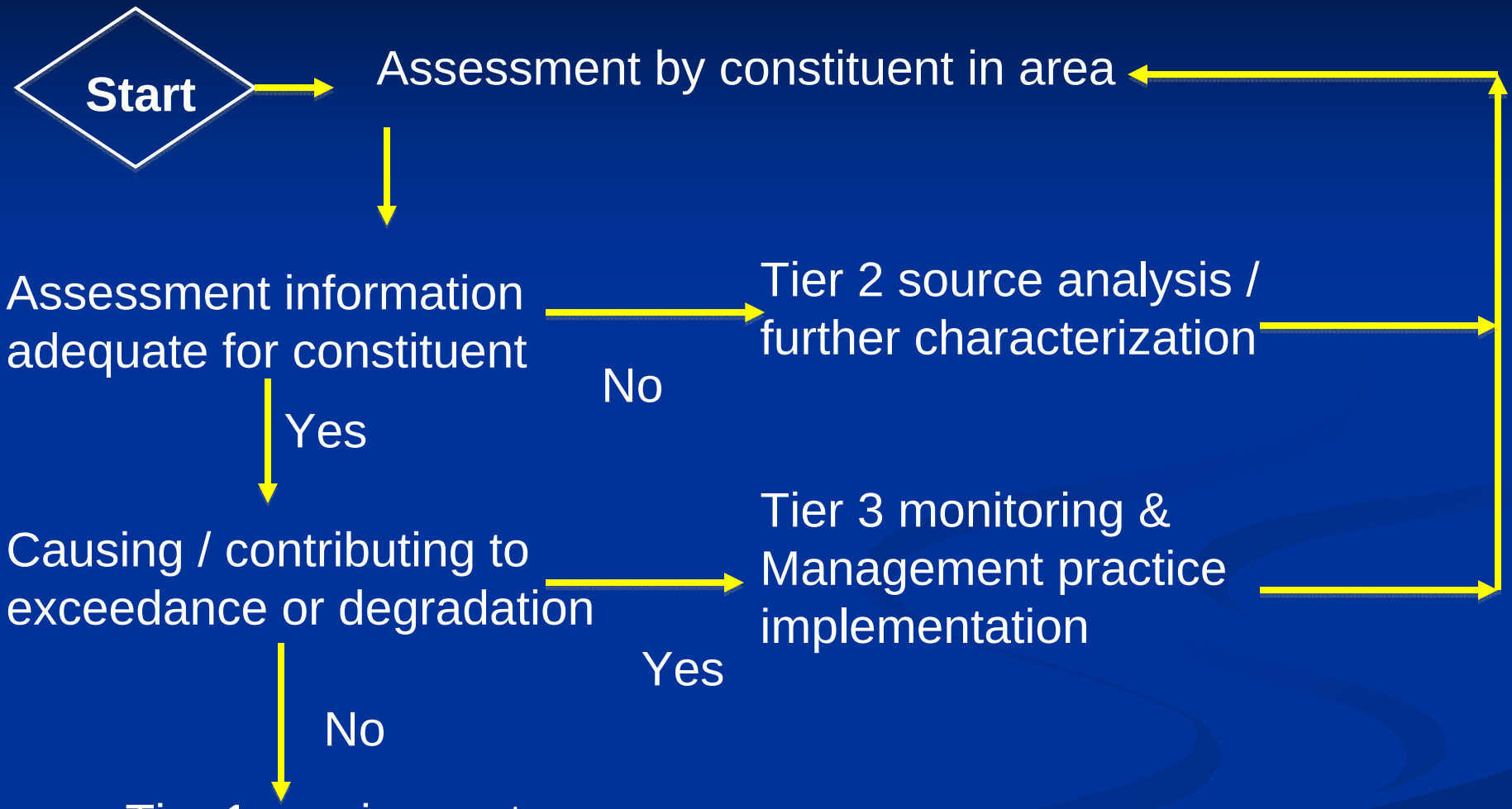
Framework Description

- Timeframe for Implementation
  - 3 months – identify 3rd Party groups & Orders to develop
  - 12 months – Board issues Orders
  - 18 months from issuance of Orders – enroll new growers
  - 24 months from issuance of Orders – new requirements fully in effect

Framework Description

- Threat to water quality from irrigated ag
  - Threat evaluation by constituent in a given area
  - Low threat – not likely to cause / contribute to water quality problem
  - Unknown threat – unknown ag contribution or data are not sufficient to determine threat
  - High threat – ag contribution does or likely to cause /contribute to water quality problem

Tier Determination for Constituents in Irrigated Agricultural Discharges



Framework Description

- "Tiering" – method for classifying threats and identifying associated requirements
  - Tier 1 areas – all constituents in an area are "low threat"
  - Tier 2 areas – one or more constituents in an area are "unknown threat" – no "high threat" constituents
  - Tier 3 areas – one or more constituents in an area are "high threat"

Framework Description

- Requirements based on area classification
  - All areas (Tier 1,2,3) – Farm evaluation
  - Tier 1,2 areas – management objectives plan
  - Tier 1,2 areas – summarize management practices / update every 5 years
  - Tier 1 areas – Board will periodically assess available monitoring data
  - Tier 2 areas – must address data gaps / conduct source identification (surface water)

Framework Description

- Requirements based on area classification
  - Tier 3 areas – assessment monitoring of surface waters every 3 years
  - Tier 3 areas – regional groundwater monitoring – establish baseline & track trends
  - Tier 3 areas – under WDRs
  - Tier 1, 2 areas – under WDRs or waivers of WDRs

Framework Description

- Requirements based on parameter classification
  - Tier 3 GW / SW parameters
    - Implementation of practices to address constituent of concern
    - Groundwater / surface water quality management plan
    - Special studies to evaluate effectiveness of practices
  - Tier 2 SW parameters – source identification studies

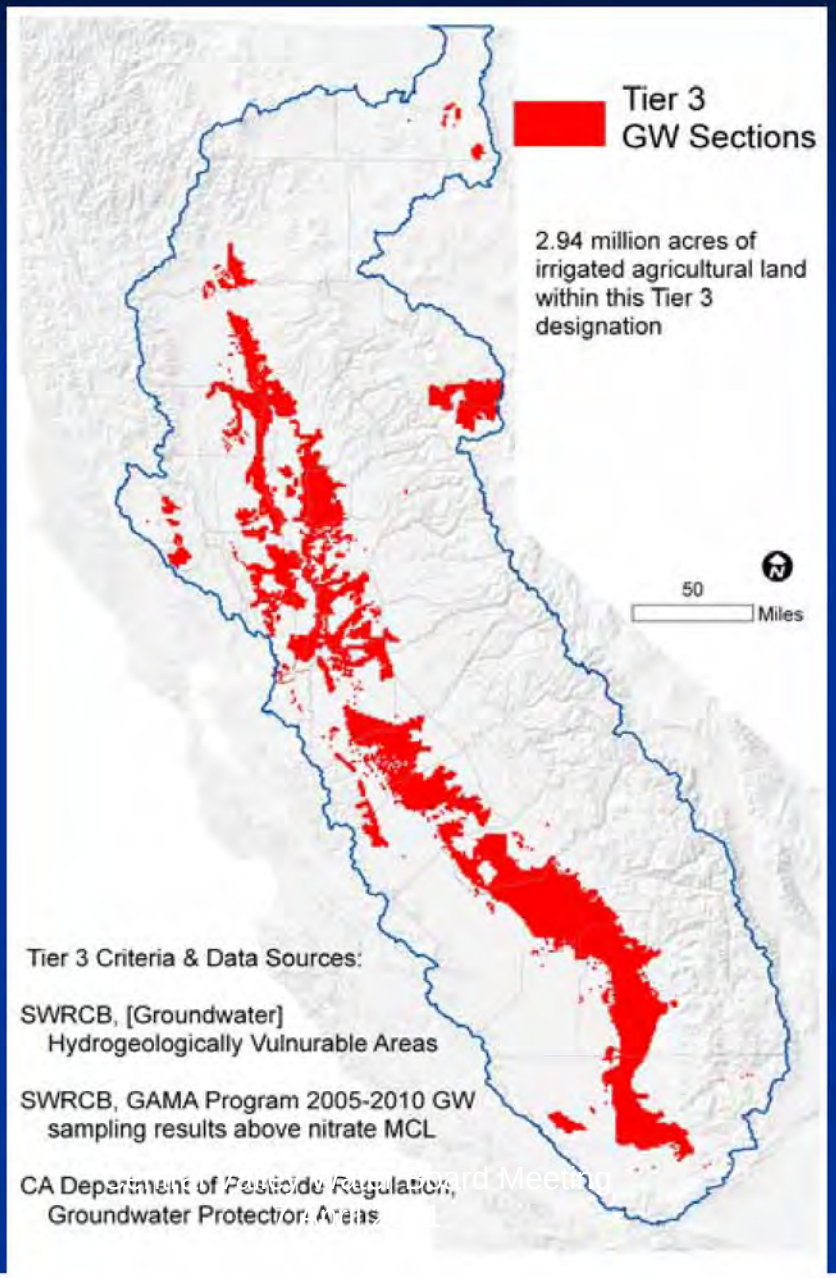
Framework Description

- Requirements based on parameter classification
  - Tier 3 nitrate in GW – certified farm-specific nutrient management plan
  - Tier 3 all parameters – individual farm water quality management plans
    - Inadequate progress of regional efforts
    - Grower failure to provide information or implement practices to address constituent of concern

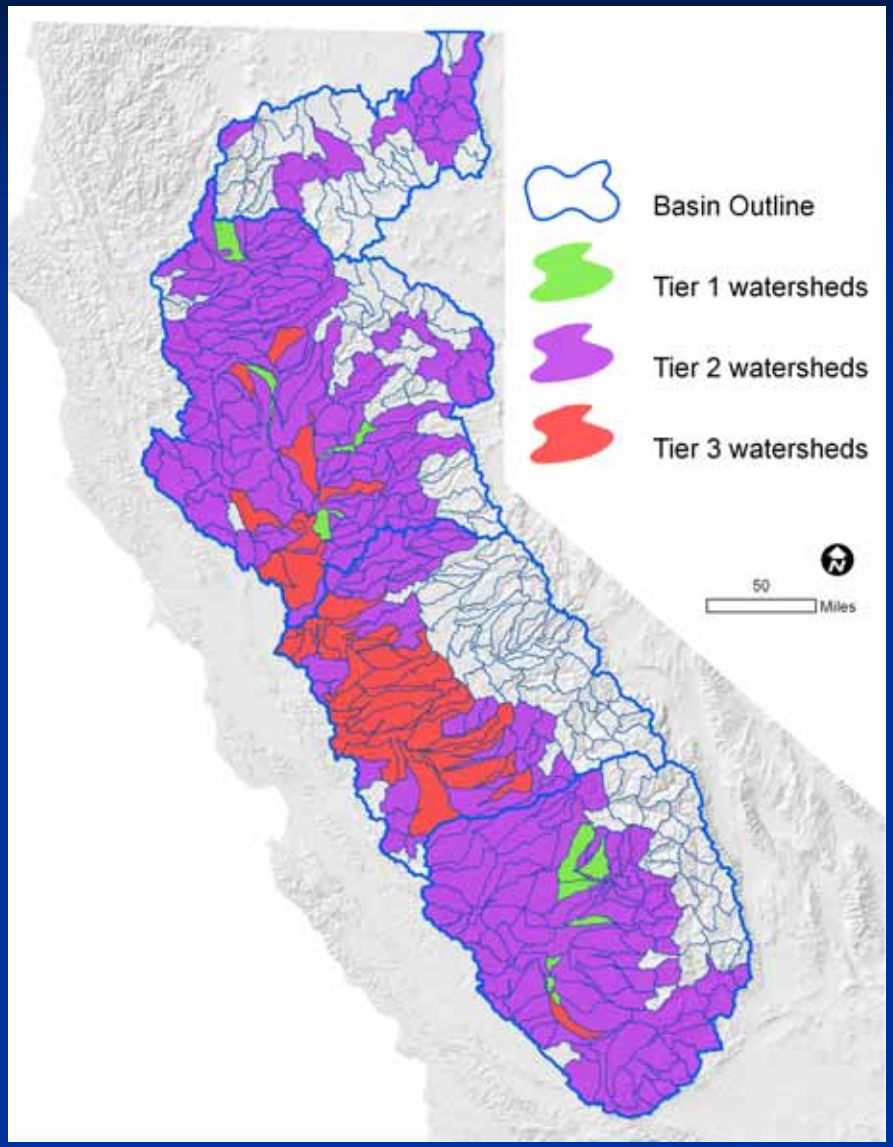
Framework Description

- Framework Implementation will benefit other Board Programs
  - Practices will reduce pesticide discharges; nitrate / salinity loading
  - Important steps for meeting ultimate goals of CV-SALTS efforts / TMDLs
  - Important information on practices and water quality will be gathered

Preliminary Assessment of Tier 3 Groundwater



Preliminary Assessment of Surface Water Tiers



Surface Water Tier	Irrigated Agricultural Acres
1	340,000
2	4,950,000
3	2,210,000

Framework Description

- Third-party Responsibilities
  - Transparent organizational structure and finances
  - Track & evaluate effectiveness of management practices
  - Conduct monitoring / assessment
  - Conduct education / outreach
  - Identify members whose membership is revoked

Framework Description

- Responsibilities of Irrigated Ag Operations
  - Obtain appropriate regulatory coverage
  - Participate in outreach events
  - Implement practices to protect water quality and prevent nuisance conditions
  - Provide information requested to the third-party or Board
  - Avoid impacts to sensitive resources or mitigate those impacts

Framework Description

- Time Schedule for Compliance
  - Identifies uses & parameters that will be the primary focus in the next 5-10 years
  - All compliance time schedules will be established in Orders
  - Ultimately achieve / maintain objectives for all parameters

ILRP Framework Cost Considerations

- Costs estimated considering results of the Draft Economic Analysis
- Consideration of costs and sources of financing required by the Water Code
- Goal #3 –maintain economic viability of agriculture
- Goal #4 – access to safe/reliable drinking water

Background on Economic Analysis

- Components of analysis:
  - Cost estimate
  - Impacts of cost on production
  - Effects on regional economy
- Small community costs
- Sources of Financing

Economic Analysis Limitations

- Water code prohibits the Board from specifying practices
- Assumed 100% of all potential agricultural sources would need to implement practices in watersheds with identified water quality problems
- Iterative approach to management practices implementation
- Time and budget constraints

ILRP Framework Cost Considerations

- Costs will be on the low end, if
  - 3rd Party lead entity successful
  - Existing groundwater monitoring adequate
  - Irrigated pasture will not require “hardware” management practices
  - Use of improved practices is greater than assumed in Program EIR
  - Tier 2 constituents (“unknown”) will generally not have irrigated agricultural contribution

ILRP Framework Cost Considerations

- Costs will be on the high end, if
  - 3rd Party Framework not successful
  - Individual monitoring required
  - Irrigated pasture will require “hardware” management practices
  - Use of improved practices as assumed in Program EIR
  - Tier 2 constituents (“unknown”) will generally have irrigated agricultural contribution

Summary of Average Estimated Annualized Costs ($000,000) by Alternative

	1	2	3	4	5	Framework
Admin	5.4	6.5	70	20	67	6.5-67
Monitoring	6.8	10.6	35	23	302	10.6-302
Management practices	466	468	468	468	952	199*-952
Total	**478**	**485**	**574**	**511**	**1,321**	216*-1,321
% Change from Alt 1	**0%**	**1.4%**	**20%**	**7%**	**176%**	**1.4%-176%**

Source: Irrigated Lands Regulatory Program Economics Report

Totals may not exactly equal the sum of individual cost categories as a result of rounding.

*Different assumptions were made regarding extent of practice implementation required.

Economic Impacts: Current Program (Alternative 1)

- Alternative 1 – full implementation of current program
- Estimated costs – effects on production and economies

Economic Impacts: Current Program (Alternative 1)

- Current program estimate:
  - Annual loss of $336 million in total value of production – 2.5 percent
  - Loss of 2,299 agriculture related jobs

Summary of Changes in Total Value of Production ($000,000) from Alternative 1

	2	3	4	5	Framework
Total	-7.4	-40.9	-14.9	-268.7	
Percent Change	**-0.1%**	**-0.3%**	**-0.1%**	**-2.1%**	**-0.1% to -2.1%**

Source: Irrigated Lands Regulatory Program Economics Report
Totals may not sum as a result of rounding.

Summary of Changes in Agricultural-related Jobs from Alternative 1

	2	3	4	5	Framework
Total	-58	-199	9	-1628	9 to -1628

Source: Irrigated Lands Regulatory Program Economics Report
Represents net impacts on jobs (full- and part-time) in agricultural sectors resulting from changes in agricultural production and compliance-related spending.

Small Community Costs

- High nitrate levels in groundwater
- Costs estimated $20.5 – $47.5 million
  - Disproportional effect on small communities
- Data limitations
  - Only small communities considered
  - Only exceedances of MCLs considered
- Exact sources of nitrates unknown
  - Fertilizer use is potential source
  - Dairies, septic systems, food processors - also potential sources

Comments on Economic Analysis

- Received extensive comments critiquing the analysis
  - Agricultural estimates and economic impacts were exaggerated
  - Agricultural estimates and economic impacts were understated / did not fully capture secondary effects
  - Drinking water costs were underestimated

Comments on Economic Analysis

- Analysis provides good relative comparison between options
- Cost estimates and analysis reflect the best available information
- Only required to provide cost estimate
- No requirement for additional analysis on production losses and regional impacts

ILRP Framework
California Environmental Quality Act (CEQA)

- Board actions will not have impact – reaction to Board action may cause impact
- How do we know how growers will react?
  - We don't exactly
  - Reasonable to expect increased implementation of practices to protect water quality

ILRP Framework
California Environmental Quality Act (CEQA)

- What types of practices will be implemented?
  - Same type as evaluated in the Program Environmental Impact Report
- What types of impacts might there be?
  - Same impacts as identified in the Program Environmental Impact Report

ILRP Framework
California Environmental Quality Act (CEQA)

- Analysis of Framework
  - Indicates the provisions are within the range evaluated in the Program EIR
  - Does not reveal any new or unique impacts specific to the Framework provisions
  - Should mitigate some of the ag resource impacts associated with other alternatives

ILRP Framework
California Environmental Quality Act (CEQA)

- Findings are consistent with Program EIR
- Mitigation measures incorporated into Orders for:
  - Cultural Resources, Vegetation and Wildlife, Fisheries
- Mitigation measures within jurisdiction of other Agencies:
  - Noise, Air Quality

ILRP Framework
California Environmental Quality Act (CEQA)

- Statement of Overriding Considerations
- Impacts not to be avoided or mitigated to a less-than-significant level
  - Agriculture resources – both indirect and cumulative
  - Cumulative climate change and cumulative vegetation and wildlife impacts

ILRP Framework
California Environmental Quality Act (CEQA)

- Reasons for approval despite impacts
  - Program's environmental benefits outweigh adverse environmental impacts
  - Law and State policies direct us to protect groundwater and surface water from the discharge of wastes, including irrigated agricultural discharges
  - Pollution reduction should reduce drinking water costs
- Mitigation Monitoring and Reporting Plan

State Water Board Policies
Nonpoint Source Policy

- Nonpoint Source Policy - Five Key Elements
- Element 1: Purpose – goals/objectives include meeting objectives & anti-degradation requirements

State Water Board Policies
Nonpoint Source Policy

- Element 2: Practices –identified in management plans, along with approach for evaluating effectiveness
- Element 3: Time Schedule –outlined in Framework – all time schedules in Orders

State Water Board Policies
Nonpoint Source Policy

- Element 4: Feedback –water quality monitoring and tracking of management practice implementation & effectiveness
- Element 5: Consequences – failure of third party approach in an area will lead to individual regulation by Board

State Water Board Policies
High Quality Waters/ Antidegradation

- Degradation identified as a water quality "threat"
- Management plan required
- Practices implemented must achieve "best practical treatment or control" (BPTC) and uses must be protected

ILRP Framework Comments

- Clear compliance standard for groundwater
  - Late revision - compliance discussion clarified
- Mitigation funding for drinking water impacts
  - No clear, effective mechanism
- Report fertilizer application
  - Requiring analysis of nitrate discharge to groundwater, may include fertilizer reporting

ILRP Framework Comments

- Antidegradation analysis not adequate
  - Appropriate for programmatic / non-binding nature of Framework
- Public involvement & access to information (comments to both increase & limit access & public involvement)
  - Degree of involvement / access will depend on available tools, resources, and established schedules

ILRP Framework Comments

- Require/don't require Electronic Data Submittal by Growers
  - Direct grower electronic submittal of information to Board should facilitate compliance efforts, assessment, and ensure grower awareness
  - Late revision -Public Records Act provisions would be followed, including disclosure exemptions

ILRP Framework Comments

- Abandon Coalition approach – directly regulate growers
  - Coalition approach can be effective & minimize cost
  - Lack of water quality improvement will result in direct regulation
- Do not require Farm Evaluation for Tier 1,2
  - Minimal requirement for growers to ensure practices protect water quality

ILRP Framework Comments

- Requests for clarification / how Framework would be applied
  - Staff will develop Q&A document
  - Framework will be applied to Orders – issues will be addressed based on information available for specific Orders
- Multiple Orders under a single 3rd Party will be difficult to administer
  - 1st Step in implementation to identify Orders to develop

ILRP Late Revisions

- Change to Footnotes 6 & 7
- Additional discussion regarding electronic data submittal (Section 6)
- Clarification in Section 10 – compliance is achieving and maintaining water quality objectives and beneficial uses and reducing degradation

Summary

- Framework will provide clear direction
- Subsequent Orders will include the binding requirements
- Framework elements are clearly reflected in CEQA analysis
- Framework complies with State Board policies

Summary

- Framework provides flexibility
- Important initial steps at reducing groundwater impacts from irrigated agricultural discharges
- Continues surface water quality protection efforts

Board Options

- Approve Recommended Framework
- Approve Recommended Framework w/Board Changes
- Provide direction to Staff to bring back a different Framework or Alternative for consideration

Staff Recommendation

- Adopt Resolution Approving the Recommended Framework with Late Revisions