Agricultural Order 4.0 Discussion

Item 3

March 20-21, 2019

Chris Rose
Elaine Sahl
Arwen Wyatt-Mair
Paula Richter

CALIFORNIA Water Boards

Outline

Wednesday

1. Staff presentation
   - Framework review
   - Tables 1-5
   - WDR/Waiver
   - Outreach and timeline
2. Public comment

Thursday

3. Public comment continued
   - Ag Organization Alternative
   - Environmental Alternative
4. Discussion and review
   - WDR/Waiver
   - Framework

→ Staff incorporates comments and direction into draft Ag Order 4.0, to be published in August 2019

Framework Review

Governing Law, Regulation, and Guidance

- Nonpoint Source Policy
  - 5 key elements
- Court cases
  - Appellate Court Decision on Ag Order 2.0
- Precedential Components of the Eastern San Joaquin Order (ESJ)
- Basin Plan
  - Beneficial uses, water quality objectives, adopted TMDLs
- Antidegradation Policy
- Other related permits

Elements of an Order

- Findings, conditions, provisions
- Method for prioritization
* Numeric limits to achieve water quality objectives
* Time schedule
- Requirement to implement treatment and control measures to achieve numeric limits
* Monitoring and Reporting
- Incentives

Phasing or Prioritization					
Quantifiable Milestones* *(Numeric Limits)*					
Time Schedule*					
Monitoring and Reporting*					
Incentives					

Water Quality Impacts related to Agricultural Discharges

- Review and discussion of water quality data
  - Surface water (March 2018 board meeting)
  - Groundwater (May 2018 board meeting)
- Primary discharges and impacts
  - Nitrogen
  - Nutrients and salinity
  - Pesticides and toxicity
  - Sediment and erosion
  - Riparian habitat

Framing Questions
September 2018 Board Workshop

1. What can growers and the regional board do to demonstrate quantifiable progress to minimize nitrate discharge to groundwater to achieve water quality objectives?
2. What can growers and the regional board do to demonstrate quantifiable progress to minimize nutrient discharge to surface waters to achieve water quality objectives?
3. What can growers and the regional board do to demonstrate quantifiable progress to minimize toxicity in surface waters from pesticide discharges to achieve water quality objectives?
4. What can growers and the regional board do to ensure that riparian and wetland habitat is protected due to agricultural activities and discharges?
5. What can growers and the regional board do to demonstrate quantifiable progress to minimize sediment discharge to achieve water quality objectives?
6. How can the regional board use discharge permit requirements to ensure current and future affordable, safe, and clean water for drinking and environmental uses?

Conceptual Options Tables
November 2018 Board Meeting

1. Irrigation and Nutrient Management – Groundwater
2. Irrigation and Nutrient Management – Surface Water
3. Pesticide Management
4. Sediment and Erosion Management
5. Riparian Habitat Management

	COMPONENT TABLES				
	TABLE 1: INMP GROUNDWATER	**TABLE 2: INMP SURFACE WATER**	**TABLE 3: PESTICIDES**	**TABLE 4: SEDIMENT & EROSION**	**TABLE 5: RIPARIAN HABITAT**
Phasing or Prioritization					
Quantifiable Milestones* *(Numeric Limits)*					
Time Schedule*					
Monitoring and Reporting*					
Incentives					

Legend
* NPS Policy required elements
☆ ESJ precedent
➡ Consequences (NPS Key Element 5)
3P Opportunity for third-party assistance

Updating the Options Tables

- November 2018 tables included
  - Existing requirements in Ag Order 3.0
  - Conceptual Options 1 and 2
- Public comment period November 2018 to January 2019
  - Written public comments
  - Additional stakeholder meetings to clarify comments
- March 2019: Updated Options Tables
  - Added column for Updated Option

Updated Options Tables

1. Irrigation and Nutrient Management – Groundwater
2. Irrigation and Nutrient Management – Surface Water
3. Pesticide Management – Surface Water, Groundwater
4. Sediment and Erosion Management – Surface Water
5. Riparian Habitat Management – Water Quality

QUESTIONS:

What can growers and the regional board do to demonstrate quantifiable progress to minimize nitrate discharge to groundwater to achieve water quality objectives?

How can the regional board use discharge permit requirements to ensure current and future affordable, safe, and clean water for drinking and environmental uses?

Water Quality Conditions

- The average nitrate concentration of on-farm domestic wells exceeds the nitrate drinking water standard

- Nitrate concentrations are increasing in many basins

Definitions

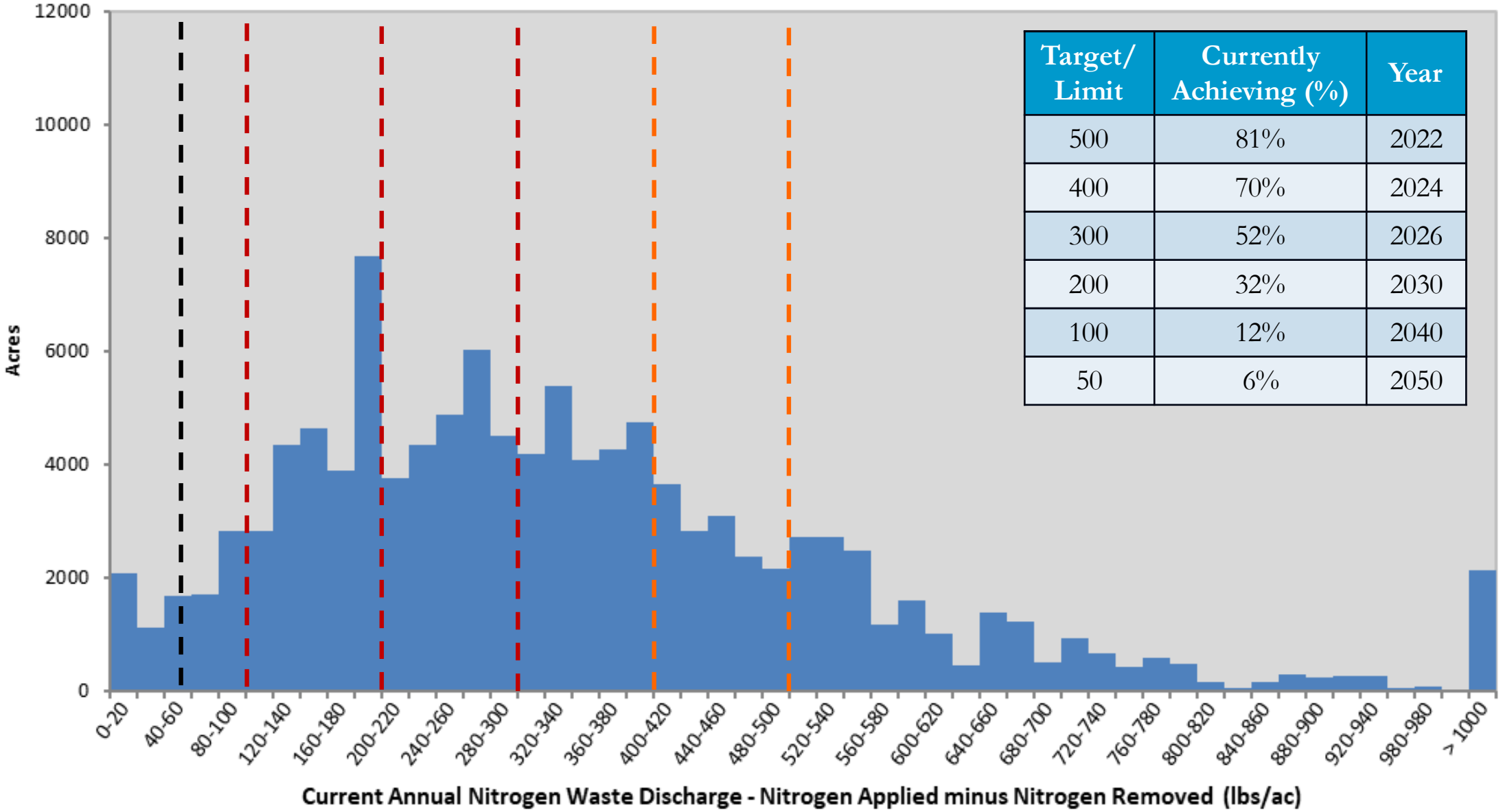
- **A_{FER}** is the amount of nitrogen applied in fertilizers, compost, and other amendments
- **A_{IRR}** is the amount of nitrogen applied through the irrigation water based on the groundwater nitrate concentration
- **$A_{FER} + A_{IRR}$** = the total amount of nitrogen applied
- **R** is the amount of nitrogen removed through harvest, pruning, or other methods, plus the nitrogen sequestered in perennial crop permanent wood
- **$A_{FER} + A_{IRR} - R$** = nitrogen waste discharge, or nitrogen loading to groundwater

	TABLE 1: IRRIGATION & NUTRIENT MANAGEMENT FOR GROUNDWATER PROTECTION
	Ag Order 4.0 – Updated Option
Phasing or Prioritization	Phases are based on groundwater quality impairment and groundwater recharge areas. Requirements begin based on ranch phase.
Quantifiable Milestones* (Numeric Limits)	**Discharge Limit** $A_{FER} + A_{IRR} - R = 50$ lbs/ac/ranch/year *See time schedule* **Application Limits** A_{FER} cannot exceed 500 lbs/ac/crop or a crop-specific value, whichever is less *Ranches that repeatedly exceed the numeric discharge target or limit per the time schedule may be limited from applying A_{FER} or may be required to perform additional monitoring and reporting.*

	TABLE 1: IRRIGATION & NUTRIENT MANAGEMENT FOR GROUNDWATER PROTECTION
	Ag Order 4.0 – Updated Option
Time Schedule*	*The following years apply to Phase 1 ranches.* *For Phase 2 ranches, add 2 years to Phase 1.* *For Phase 3 ranches, add 4 years to Phase 1.* **Discharge Target** (lbs/ac/ranch/year) $A_{FER} + A_{IRR} - R = 500$ for 2022 $A_{FER} + A_{IRR} - R = 400$ for 2024 **Discharge Limit** (lbs/ac/ranch/year) $A_{FER} + A_{IRR} - R = 300$ for 2026 $A_{FER} + A_{IRR} - R = 200$ for 2030 $A_{FER} + A_{IRR} - R = 100$ for 2040 $A_{FER} + A_{IRR} - R = 50$ for 2050 ***OR**, for ranches with high A_{IRR}* $A_{FER} = R$ for 2022 **Application Limit** Application limits begin for all ranches in 2021.

Current Annual Nitrogen Waste Discharge

Nitrogen Applied minus Nitrogen Removed



Target/ Limit	Currently Achieving (%)	Year
500	81%	2022
400	70%	2024
300	52%	2026
200	32%	2030
100	12%	2040
50	6%	2050

TABLE 1: IRRIGATION & NUTRIENT MANAGEMENT FOR GROUNDWATER PROTECTION

Ag Order 4.0 – Updated Option

Monitoring and Reporting*

Irrigation & Nutrient Management Plan 3P

★***Total Nitrogen Applied (TNA)***

All ranches begin tracking in 2020 and begin reporting in 2021.

a. Nitrogen applied from all sources (A_{FER}, A_{IRR})

b. Nitrogen present in the soil

c. Irrigation well concentration

d. Irrigation volume applied

-Ranch estimate

★***Removal***

Phase 1 ranches begin tracking in 2020 and begin reporting in 2021. Add 2 years for Phase 2 ranches and add 4 years for Phase 3 ranches.

e. Nitrogen removed (R)

-Report total pounds of crop removed until conversion coefficients are established

-Report pounds of nitrogen removed after conversion coefficients are established

★***Irrigation***

Phase 1 ranches begin tracking in 2020, begin reporting in 2021. Add 2 years for Phase 2 ranches and add 4 years for Phase 3 ranches.

d. Irrigation volume applied

-Ranch measurement, crop estimate

f. Crop evapotranspiration

g. Irrigation discharge to surface water volume

-Ranch estimate

h. Irrigation discharge to groundwater volume

-Ranch calculation

★***Management Practices***

All ranches begin tracking in 2020 and begin reporting in 2021

i. Irrigation, nutrient, and salinity management practices

	TABLE 1: IRRIGATION & NUTRIENT MANAGEMENT FOR GROUNDWATER PROTECTION
	Ag Order 4.0 – Updated Option
Monitoring and Reporting*	**Individual Discharge to Groundwater** 3P *Ranches that exceed the numeric discharge limit per the time schedule may be assigned individual groundwater discharge monitoring.* a. Irrigation discharge to groundwater nitrate concentration b. Irrigation discharge to groundwater volume **Drinking Water Supply Well** 3P *All ranches* must monitor all drinking water supply wells present on enrolled parcels, either individually or through a cooperative program. **Groundwater Quality Trends** 3P *All ranches* must conduct groundwater quality trend monitoring, either individually or through a cooperative program.
Incentives	-Pump & fertilize (see numeric limits section) -Compost nitrogen: factor may be applied in A-R calculations -A-R calculation incentivizes increased nitrogen removal, rather than only decreasing application -Third-party sustainability certification may result in reduced reporting

	COMPONENT TABLES				
	TABLE 1: INMP GROUNDWATER	**TABLE 2: INMP SURFACE WATER**	**TABLE 3: PESTICIDES**	**TABLE 4: SEDIMENT & EROSION**	**TABLE 5: RIPARIAN HABITAT**
Phasing or Prioritization	-Location-specific phasing				
Quantifiable Milestones* *(Numeric Limits)*	☆$A_{FER} + A_{IRR} - R$ -App. Limit (by crop) ➡App. Limit (consequence)				
Time Schedule*	-Discharge Targets/Limits -Final limit by 2050-2054 -High A_{IRR} incentive -App. Limit (by crop) 2022				
Monitoring and Reporting* 3P	☆INMP ☆TNA, R, Irrigation ☆Mgmt Practices ➡Individual Discharge to GW ☆Domestic Wells ☆Groundwater Trends				
Incentives 3P	-High A_{IRR} incentive -Compost -Increase removal -Third party programs				

Legend
* NPS Policy required elements ☆ ESJ precedent
➡ Consequences (NPS Key Element 5) 3P Opportunity for third-party assistance

Updated Options Tables

1. Irrigation and Nutrient Management – Groundwater
2. Irrigation and Nutrient Management – Surface Water
3. Pesticide Management – Surface Water, Groundwater
4. Sediment and Erosion Management – Surface Water
5. Riparian Habitat Management – Water Quality

QUESTIONS:

What can growers and the regional board do to demonstrate quantifiable progress to minimize nutrient discharge to surface waters to achieve water quality objectives?

How can the regional board use discharge permit requirements to ensure current and future affordable, safe, and clean water for drinking and environmental uses?

Water Quality Conditions
Nutrients in Surface Water

- Sixty-five (65) waterbodies are impaired due to elevated nitrate concentrations
  - Clean Water Act Section 303(d) List of Impaired Waters

	TABLE 2: IRRIGATION & NUTRIENT MANAGEMENT FOR SURFACE WATER PROTECTION
	Ag Order 4.0 – Updated Option
Phasing or Prioritization	Prioritization based on location-specific nutrient water quality impairment, high quality surface water, and risk to surface water areas, and TMDL projects.
Quantifiable Milestones* (Numeric Limits)	**Receiving Water Limit and Discharge Limit** Nitrate, as N = 1.8 to 10 mg/L Ammonia (Un-ionized), as N = 0.025 mg/L Orthophosphate, as P = 0.07 to 0.4 mg/L *Consistent with Total Maximum Daily Load (TMDL) load allocations and/or water quality objectives.* *If the receiving water is higher quality water than these limits, the higher quality receiving water shall be maintained, unless degradation is allowed through appropriate findings.* ➡ **Application Limit** *Ranches that repeatedly exceed* the nitrate, ammonia and/or orthophosphate discharge limit per the time schedule may be limited from applying nitrogen and/or phosphorous from fertilizers, compost and/or other amendments.

	TABLE 2: IRRIGATION & NUTRIENT MANAGEMENT FOR SURFACE WATER PROTECTION
	Ag Order 4.0 – Updated Option
Time Schedule*	**<u>Receiving Water Limit and Discharge Limit</u>** <u>TMDL Areas *(TMDL Load Allocations)*</u> -Receiving water limits consistent with TMDL time schedules ➡ -Discharge limits triggered if receiving water limits not achieved per TMDL time schedule <u>Other Areas (*Water Quality Objectives*)</u> *Example schedule for prioritized watershed:* -Receiving water limit achieved by 2027 ➡ -Discharge limit triggered in 2027 if receiving water limit not achieved
Monitoring and Reporting*	★ **<u>Irrigation Nutrient Management Plan & Report</u>** **3P** *<u>All ranches</u> must monitor and report:* a. Irrigation, stormwater, and tile drain discharge characteristics b. Irrigation and nutrient management practices

	TABLE 2: IRRIGATION & NUTRIENT MANAGEMENT FOR SURFACE WATER PROTECTION
	Ag Order 4.0 – Updated Option
Monitoring and Reporting*	**Surface Water Quality Trends** 3P *All ranches* must conduct surface receiving water quality monitoring, either individually or through a cooperative program. ➡ **Follow-Up Receiving Water Monitoring** 3P *A subset of ranches* in areas that repeatedly exceed water quality objectives may be assigned follow-up surface receiving water quality monitoring, performed either individually or through a cooperative program. ➡ **Individual Discharge to Surface Water** 3P *A subset of ranches in areas that repeatedly exceed water quality objectives may be assigned individual discharge monitoring.* a. Discharge flow rate and volume b. Discharge nutrient concentrations
Incentives	-Third-party sustainability certification may result in reduced monitoring and reporting -Third-party implementation program may result in reduced monitoring and reporting

	COMPONENT TABLES				
	TABLE 1: INMP GROUNDWATER	**TABLE 2: INMP SURFACE WATER**	**TABLE 3: PESTICIDES**	**TABLE 4: SEDIMENT & EROSION**	**TABLE 5: RIPARIAN HABITAT**
Phasing or Prioritization	-Location-specific phasing	-Watershed prioritization			
Quantifiable Milestones* *(Numeric Limits)*	☆$A_{FER} + A_{IRR} - R$ -App. Limit (by crop) ➡App. Limit (consequence)	-Rec. Water/Discharge Limit -TMDLs or WQOs ➡App. Limit (consequence)			
Time Schedule*	-Discharge Targets/Limits -Final limit by 2050-2054 -High A_{IRR} incentive -App. Limit (by crop) 2022	-TMDL time schedules -Non-TMDL areas TBD			
Monitoring and Reporting* 3P	☆INMP ☆TNA, R, Irrigation ☆Mgmt Practices ➡Individual Discharge to GW ☆Domestic Wells ☆Groundwater Trends	☆INMP ☆Mgmt Practices -Receiving Water Trends ➡Follow-Up Receiving Water ➡Individual Discharge to SW			
Incentives 3P	-High A_{IRR} incentive -Compost -Increase removal -Third party programs	-Third party programs			

Legend
* NPS Policy required elements ☆ ESJ precedent
➡ Consequences (NPS Key Element 5) 3P Opportunity for third-party assistance

Updated Options Tables

1. Irrigation and Nutrient Management – Groundwater
2. Irrigation and Nutrient Management – Surface Water
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5. Riparian Habitat Management – Water Quality

QUESTIONS:

What can growers and the regional board do to demonstrate quantifiable progress to minimize toxicity in surface waters from pesticide discharges to achieve water quality objectives?

How can the regional board use discharge permit requirements to ensure current and future affordable, safe, and clean water for drinking and environmental uses?

Water Quality Conditions
Pesticides in Surface Water

- Forty-five (45) waterbodies are impaired due to pesticide(s)
  - Clean Water Act Section 303(d) List of Impaired Waters

- Fifty-seven (57) waterbodies are impaired due to toxicity
  - Clean Water Act Section 303(d) List of Impaired Waters

	TABLE 3: PESTICIDE MANAGEMENT FOR SURFACE WATER AND GROUNDWATER PROTECTION	
	Ag Order 4.0 – Updated Option	
Phasing or Prioritization	Prioritization based on location-specific pesticide or toxicity water quality impairment, high quality surface water, and risk to surface water areas, and TMDL projects.	
Quantifiable Milestones* (Numeric Limits)	**Receiving Water Limit and Discharge Limit** Pesticide Concentration: TMDL load allocations, EPA Aquatic Life Benchmark(s), or LC50, whichever is lower, and narrative water quality objectives. Toxicity Test: Chronic sediment toxicity will result in at least 80% survival rate in appropriate test species. Toxicity Test: Chronic water column toxicity will result in at least 80% survival and reproduction rates in appropriate test species. Toxic Unit (Sum) < 1.0 TU *If the receiving water is higher quality water than these limits, the higher quality receiving water shall be maintained, unless degradation is allowed through appropriate findings.*	Basin Plan narrative objectives: *All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in, human, plant, animal, or aquatic life.* *No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.*

	TABLE 3: PESTICIDE MANAGEMENT FOR SURFACE WATER AND GROUNDWATER PROTECTION
	Ag Order 4.0 – Updated Option
Time Schedule*	**Receiving Water Limit and Discharge Limit** TMDL Areas (*TMDL Load Allocations*) -Receiving water limits consistent with TMDL time schedule ➡ -Discharge limits triggered if receiving water limits not achieved per TMDL time schedule Other Areas (*Benchmarks, LC50 and/or Water Quality Objectives*) *Example schedule for prioritized watershed:* -*Concentration*: No more than three (3) consecutive samples exceed the EPA Aquatic Life Benchmark or LC50, whichever is lower, for 2023 -*Concentration*: No more than two (2) consecutive samples exceed the EPA Aquatic Life Benchmark or LC50, whichever is lower, for 2025 -*Toxic Unit*: Median of 4 consecutive samples < 1.0 TU for 2023 -*Toxic Unit*: Median of 3 consecutive samples < 1.0 TU for 2025 -Receiving water limit achieved for 2027 ➡ -Discharge Limit(s) triggered in 2027 if receiving water limit not achieved
Monitoring and Reporting*	**Pesticide Management Plan & Report** 3P *All ranches must monitor and report:* a. Application characteristics b. Irrigation, stormwater, and tile drain discharge characteristics ★ c. Pesticide management practices

	TABLE 3: PESTICIDE MANAGEMENT FOR SURFACE WATER AND GROUNDWATER PROTECTION
	Ag Order 4.0 – Updated Option
Monitoring and Reporting*	**Surface Water Quality Trends** 3P *All ranches* must conduct surface receiving water quality monitoring, either individually or through a cooperative program. ➡ **Follow-Up Receiving Water Monitoring** 3P *Ranches in prioritized watershed areas that exceed* receiving water objectives may be assigned follow-up surface receiving water quality monitoring, performed either individually or through a cooperative program. ➡ **Individual Discharge to Surface Water** 3P *Ranches in prioritized watershed areas that exceed* the numeric limits per the time schedule may be assigned individual discharge monitoring. a. Discharge flow rate and volume b. Discharge pesticide concentration(s) c. Discharge toxicity **Drinking Water Supply Well** 3P *A subset of wells* must be monitored for pesticides, either individually or through a cooperative program.
Incentives	-Third-party sustainability certification may result in reduced monitoring and reporting -Third-party implementation program may result in reduced monitoring and reporting

	COMPONENT TABLES				
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Phasing or Prioritization	-Location-specific phasing	-Watershed prioritization	-Watershed prioritization		
Quantifiable Milestones* *(Numeric Limits)*	☆$A_{FER} + A_{IRR} - R$ -App. Limit (by crop) ➡App. Limit (consequence)	-Rec. Water/Discharge Limit -TMDLs or WQOs ➡App. Limit (consequence)	-Rec. Water/Discharge Limit -TMDLs or WQOs		
Time Schedule*	-Discharge Targets/Limits -Final limit by 2050-2054 -High A_{IRR} incentive -App. Limit (by crop) 2022	-TMDL time schedules -Non-TMDL areas TBD	-TMDL time schedules -Non-TMDL areas TBD		
Monitoring and Reporting* 3P	☆INMP ☆TNA, R, Irrigation ☆Mgmt Practices ➡Individual Discharge to GW ☆Domestic Wells ☆Groundwater Trends	☆INMP ☆Mgmt Practices -Receiving Water Trends ➡Follow-Up Receiving Water ➡Individual Discharge to SW	-PMP ☆Mgmt Practices -Receiving Water Trends ➡Follow-Up Receiving Water ➡Individual Discharge to SW -Pesticides (subset of wells)		
Incentives 3P	-High A_{IRR} incentive -Compost -Increase removal -Third party programs	-Third party programs	-Third party programs		

Legend
* NPS Policy required elements
☆ ESJ precedent
➡ Consequences (NPS Key Element 5)
3P Opportunity for third-party assistance

Updated Options Tables

1. Irrigation and Nutrient Management – Groundwater
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5. Riparian Habitat Management – Water Quality

QUESTIONS:

What can growers and the regional board do to demonstrate quantifiable progress to minimize sediment discharge to achieve water quality objectives?

How can the regional board use discharge permit requirements to ensure current and future affordable, safe, and clean water for drinking and environmental uses?

Water Quality Conditions
Sediments in Surface Water

- Fifty-five (55) waterbodies are impaired due to turbidity
  - Clean Water Act Section 303(d) List of Impaired Waters

- Thirty-one (31) waterbodies are impaired due to sedimentation / siltation
  - Clean Water Act Section 303(d) List of Impaired Waters

	TABLE 4: SEDIMENT AND EROSION MANAGEMENT FOR SURFACE WATER PROTECTION
	Ag Order 4.0 – Updated Option
Phasing or Prioritization	Prioritization based on location-specific conditions related to nutrients (Table 2) and pesticide toxicity (Table 3). Additional requirements apply based on site conditions including impermeable surfaces during the rainy season and slope.
Quantifiable Milestones* (Numeric Limits)	**Receiving Water Limits and Discharge Limits** Turbidity = 25 NTU (COLD) Turbidity = 40 NTU (WARM) If cultivation occurs on ranches with impermeable surfaces during the winter months on slopes greater than 10% then the site must have a sediment and erosion control plan designed and approved by a qualified professional. No discharge of sediment due to slope failure events may occur at a rate or volume that may cause or contribute to exceedance of water quality objectives. No discharge may cause or contribute to altering the receiving water channel through scour, bank failure, downcutting, or sediment accumulation. Stormwater discharge intensity and/or volume from ranches with impermeable surfaces may not exceed discharge intensity and/or volume from equivalent non-impermeable area for any storm up to and including the design storm. *Design storm:* -Volume: 95th percentile, 24-hour storm -Intensity: 10-year storm *If the receiving water is higher quality water than these limits, the higher quality receiving water shall be maintained, unless degradation is allowed through appropriate findings.*

	TABLE 4: SEDIMENT AND EROSION MANAGEMENT FOR SURFACE WATER PROTECTION
	Ag Order 4.0 – Updated Option
Time Schedule*	**Receiving Water Limit and Discharge Limit** *Example schedule for prioritized watershed:* -100 NTU for 2023 (COLD & WARM) -40 NTU for 2025 (COLD & WARM) -25 NTU for 2027 (COLD) -Receiving water limit achieved for 2027 ➡ -Discharge limit triggered in 2027 if receiving water limit not achieved
Monitoring and Reporting*	☆ **Sediment & Erosion Management Plan** 3P *All ranches must monitor and report:* a. Irrigation, stormwater, and tile drain discharge characteristics b. Sediment and erosion management practices c. Irrigation management practices d. Stormwater management practices e. Proper sizing, design, and maintenance of sediment and erosion control measures, e.g. sediment retention basins f. Ranches with impermeable surfaces during winter on slope greater than 10% must have sediment & erosion management plan created by qualified professional.

	TABLE 4: SEDIMENT AND EROSION MANAGEMENT FOR SURFACE WATER PROTECTION
	Ag Order 4.0 – Updated Option
Monitoring and Reporting*	**Surface Water Quality Trends** 3P *All ranches* must conduct surface receiving water quality monitoring, either individually or through a cooperative program. ➡ **Follow-Up Receiving Water Monitoring** 3P *Ranches in a subset of watershed areas that repeatedly exceed water quality objectives may be assigned follow-up surface receiving water quality monitoring, performed either individually or through a cooperative program.* ➡ **Individual Discharge to Surface Water** 3P *A subset of ranches in areas that repeatedly exceed water quality objectives may be assigned individual discharge monitoring.* a. Discharge flow rate and volume b. Discharge turbidity
Incentives	-Third-party sustainability certification may result in reduced monitoring and reporting -Third-party implementation program may result in reduced monitoring and reporting

	COMPONENT TABLES				
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Phasing or Prioritization	-Location-specific phasing	-Watershed prioritization	-Watershed prioritization	-Watershed prioritization	
Quantifiable Milestones* *(Numeric Limits)*	☆$A_{FER} + A_{IRR} - R$ -App. Limit (by crop) ➡App. Limit (consequence)	-Rec. Water/Discharge Limit -TMDLs or WQOs ➡App. Limit (consequence)	-Rec. Water/Discharge Limit -TMDLs or WQOs	-Rec. Water/Discharge Limit -Impermeable, slope, winter -Sediment discharge -Rec. Water alteration -Design storm (impermeable)	
Time Schedule*	-Discharge Targets/Limits -Final limit by 2050-2054 -High A_{IRR} incentive -App. Limit (by crop) 2022	-TMDL time schedules -Non-TMDL areas TBD	-TMDL time schedules -Non-TMDL areas TBD	-Table 2, 3 time schedules	
Monitoring and Reporting* 3P	☆INMP ☆TNA, R, Irrigation ☆Mgmt Practices ➡Individual Discharge to GW ☆Domestic Wells ☆Groundwater Trends	☆INMP ☆Mgmt Practices -Receiving Water Trends ➡Follow-Up Receiving Water ➡Individual Discharge to SW	-PMP ☆Mgmt Practices -Receiving Water Trends ➡Follow-Up Receiving Water ➡Individual Discharge to SW -Pesticides (subset of wells)	☆SEMP ☆Mgmt Practices -Receiving Water Trends ➡Follow-Up Receiving Water ➡Individual Discharge to SW	
Incentives 3P	-High A_{IRR} incentive -Compost -Increase removal -Third party programs	-Third party programs	-Third party programs	-Third party programs	

Legend
* NPS Policy required elements
☆ ESJ precedent
➡ Consequences (NPS Key Element 5)
3P Opportunity for third-party assistance

Incorporation of Public Comment in Framework

- Table-1: Nutrient Management for Groundwater Protection
  - Targets
  - Estimates
  - High A_{IRR} incentive
  - Compost nitrogen
- Table-2: Nutrient Management for Surface Water Protection
  - Prioritization
  - Start with receiving water limits
  - Management practice reporting
  - Certification programs and other third party programs

Incorporation of Public Comment in Framework

- Table-3: Pesticide Management for Ground and Surface Water
  - Prioritization
  - Pesticide application limit removed
  - Start with receiving water limits
  - Management practice reporting
  - Certification programs and other third party programs
- Table-4: Sediment and Erosion Management
  - Prioritization with other surface water issues
  - No exclusion for impermeable surface coverage in WDR
  - Incorporated “winter months” in planning requirement

Incorporation of Public Comment in Framework

- Table-5: Riparian Habitat Management
  - Prioritization of high quality and impaired areas only
  - Cooperative alternative approach

WDR or Waiver

WDR (§13263)

- More appropriate for larger-scale, longer-term water quality issues
- No maximum lifespan
  - More certainty for regulated community
  - No potential gaps in regulatory coverage
  - Board must revisit periodically

- Staff recommends Ag Order 4.0 be drafted as a WDR

Waiver (§13269)

- Typically used for lower-risk, smaller-scale discharges
- 5 year maximum lifespan
  - Less certainty for regulated community
  - Potential gaps in regulatory coverage