

Agenda Item 8

Public Hearing on Proposed Amendment to Establish a Region-wide Process for Evaluating the Municipal and Domestic Supply (MUN) Beneficial Use in Agriculturally Dominated Surface Water Bodies



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Why Are We Here?

- Incorporation of the “*Sources of Drinking Water Policy*” into Basin Plans
 - Overly-conservative restrictions
 - Limits water reuse and conservation

Goal

Consistent - Transparent – Streamlined

Process for appropriate application and level of protection of MUN in Ag dominated surface water bodies

Agenda

- Project Issue/Background
- Key Components
- Overview of Proposed Amendment
- Next Steps/Timeline
- Questions and Public Comments
 - Sacramento River Source Water Protection Program
 - Central Valley Clean Water Association

Past Board Meetings

April 2015 Board Meeting

- Adoption of Sacramento MUN BPA
- Overview of Region-wide MUN Evaluation BPA

July 2015 Board Workshop

- Limited MUN (LMUN) Beneficial Use

August 2016 Board Workshop

- Implementation and Key Issues

Today's Board Hearing

- Discussion of Proposed Amendments

June 2017—Consideration of Adoption

Project Issue

- Incorporation of the “*Sources of Drinking Water Policy (Resolution 88-63)*” into Basin Plans
 - All water bodies are designated with Municipal and Domestic Supply (MUN) beneficial use unless they are specifically listed in the Basin Plans as NOT designated with the MUN beneficial use
- Primary and Secondary MCL identified as appropriate water quality objectives for protection





Project Issue

Sources of Drinking Water Policy contains exceptions

- *Exception 2b - “The water is in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters”*
 - *Monitoring to assure compliance*

Application

- Exceptions require a Basin Plan Amendment
- Does not address other agriculturally dominated water bodies

Need for Basin Plan Amendment

- Application resulting in overly-conservative restrictions
 - POTW discharges
 - Agricultural operations



- Triennial Review directives
- CV-SALTS goals

Stakeholder Participation

Project Participants

- ✓ CV Water Board
- ✓ CV-SALTS
- ✓ Four POTWs
- ✓ California DFW
- ✓ CDFA
- ✓ Delta Stewardship Council
- ✓ US EPA
- ✓ State Board Basin Planning
- ✓ Division of Drinking Water
- ✓ Agriculture
- ✓ Water Supply
- ✓ Urban Water Users

Stakeholder Meetings

- ✓ Quarterly 2012 – 2013; 2015
- ✓ Sept. 2014

CEQA Scoping Meetings

- ✓ Oct. & Nov. 2012

Website/Lyris List (551 subscribers)

http://www.waterboards.ca.gov/centralvalley/water_issues/salinity/mun_beneficial_use/index.shtml

Building Off Historic Efforts

1992 Inland Surface Water Plan

- Categorized over 6500 Ag dominated water bodies

1995 Agricultural Waters Task Force

- Evaluated appropriate beneficial uses and water quality objectives for Ag dominated water bodies

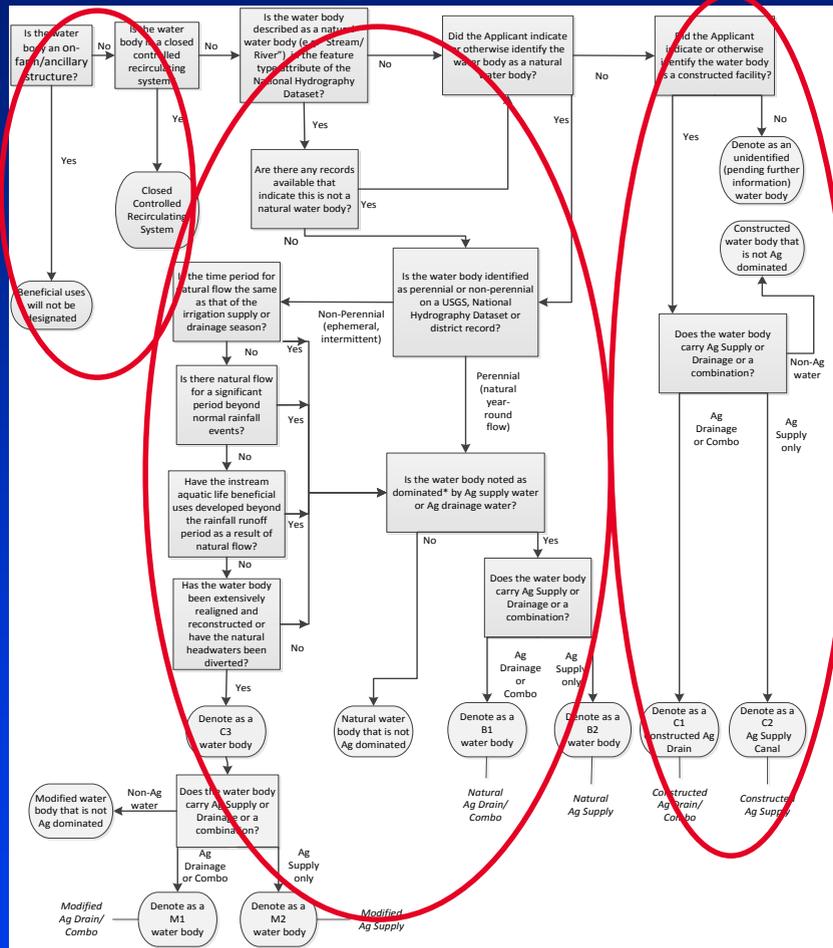
Consensus to move forward on key recommendations:

- Agricultural water bodies are unique
- Water body categorization
- Special consideration to ancillary structures and closed recirculating systems

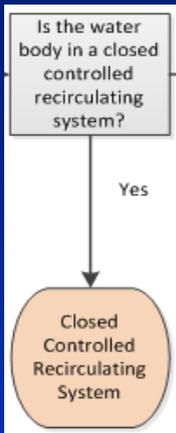
Project Alternatives

Project Alternatives	Potential Changes to:			
	Beneficial Use Designation	Water Quality Objectives	Implementation Program	Monitoring & Surveillance Program
1. No Action				
2. Region-wide Water Body Categorization Framework	X	X	X	X
3. Basin-by-Basin Water Body Categorization Framework	X	X	X	X
4. Site-Specific Objectives		X		

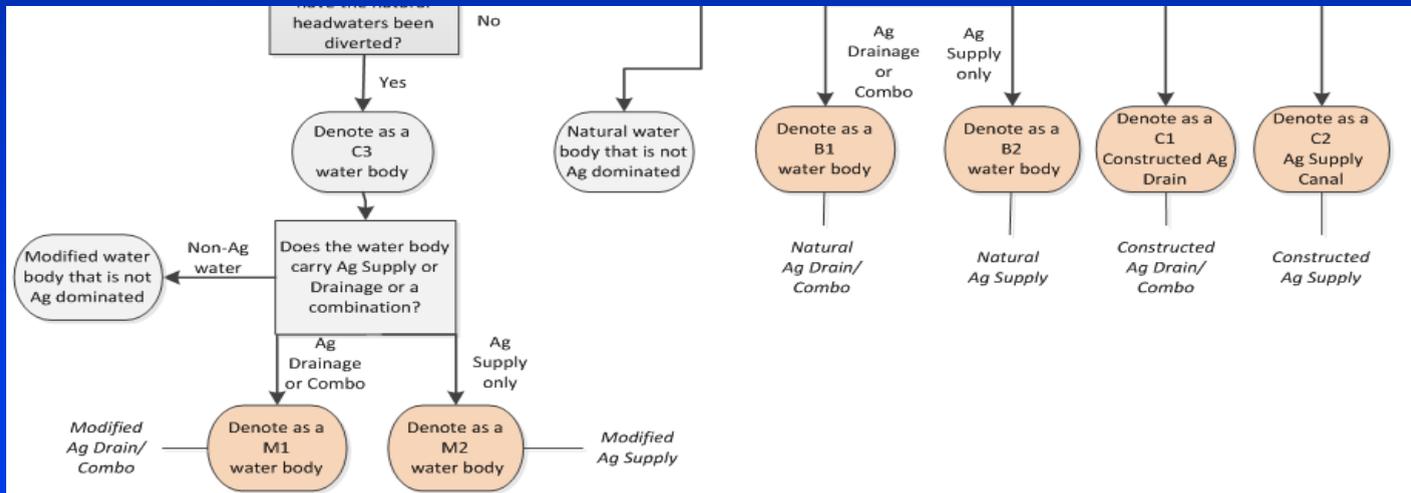
Water Body Categorization Flow Chart



Water Body Categorization Flow Chart



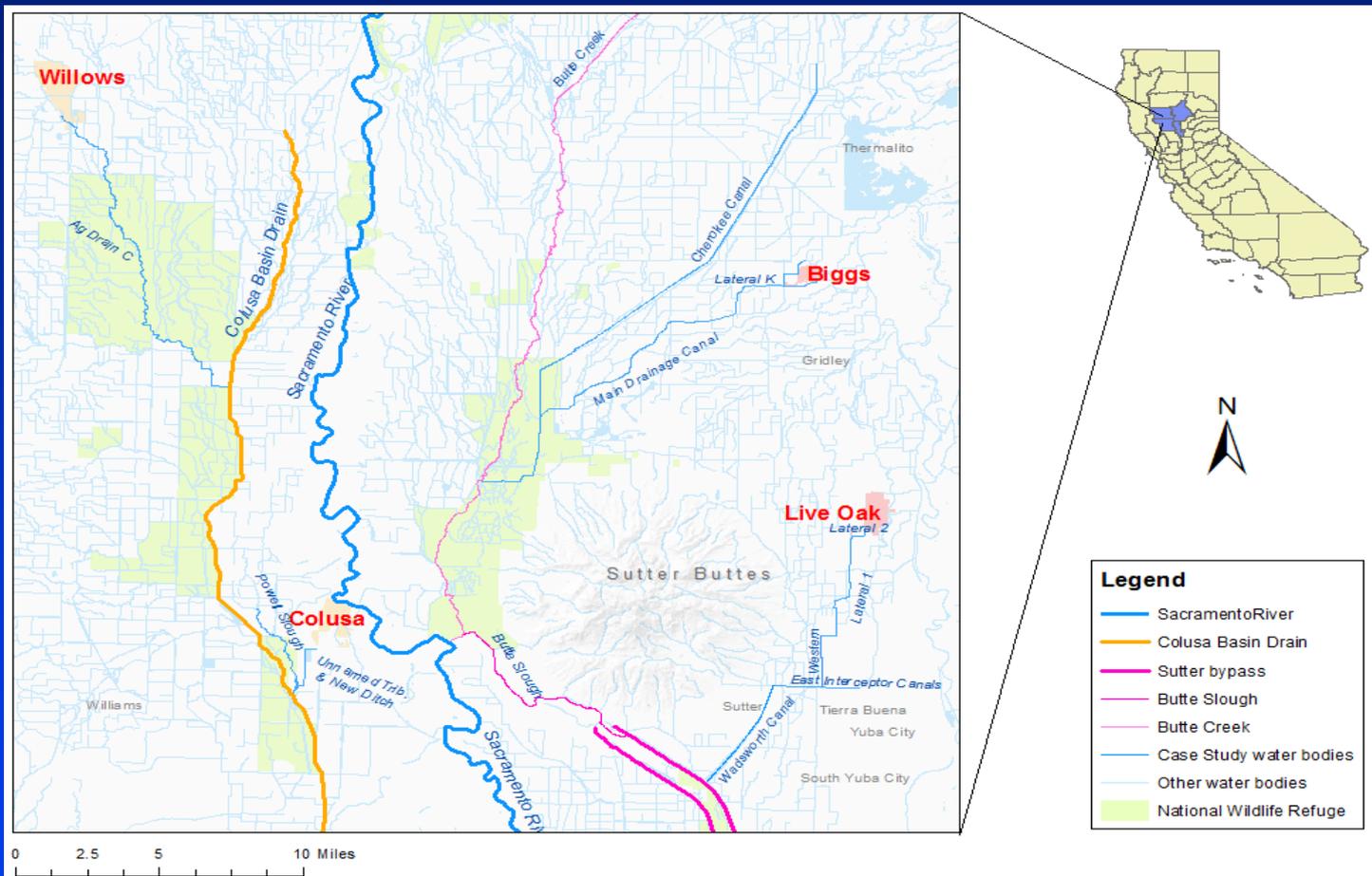
Water Body Category
C1 (Constructed Ag Drain/Combo)
C2 (Constructed Ag Supply)
M1 (Modified Ag Drain/Combo)
M2 (Modified Ag Supply)
B1 (Natural Ag Drain/Combo)
B2 (Natural Ag Supply)
Closed Controlled Recirculating Systems



Case Studies/Examples

- Can the water body categorization process be used to determine appropriate MUN use?
 - Information needs?
 - Review Steps?
- Can the process work for different basins?

Sacramento River Basin

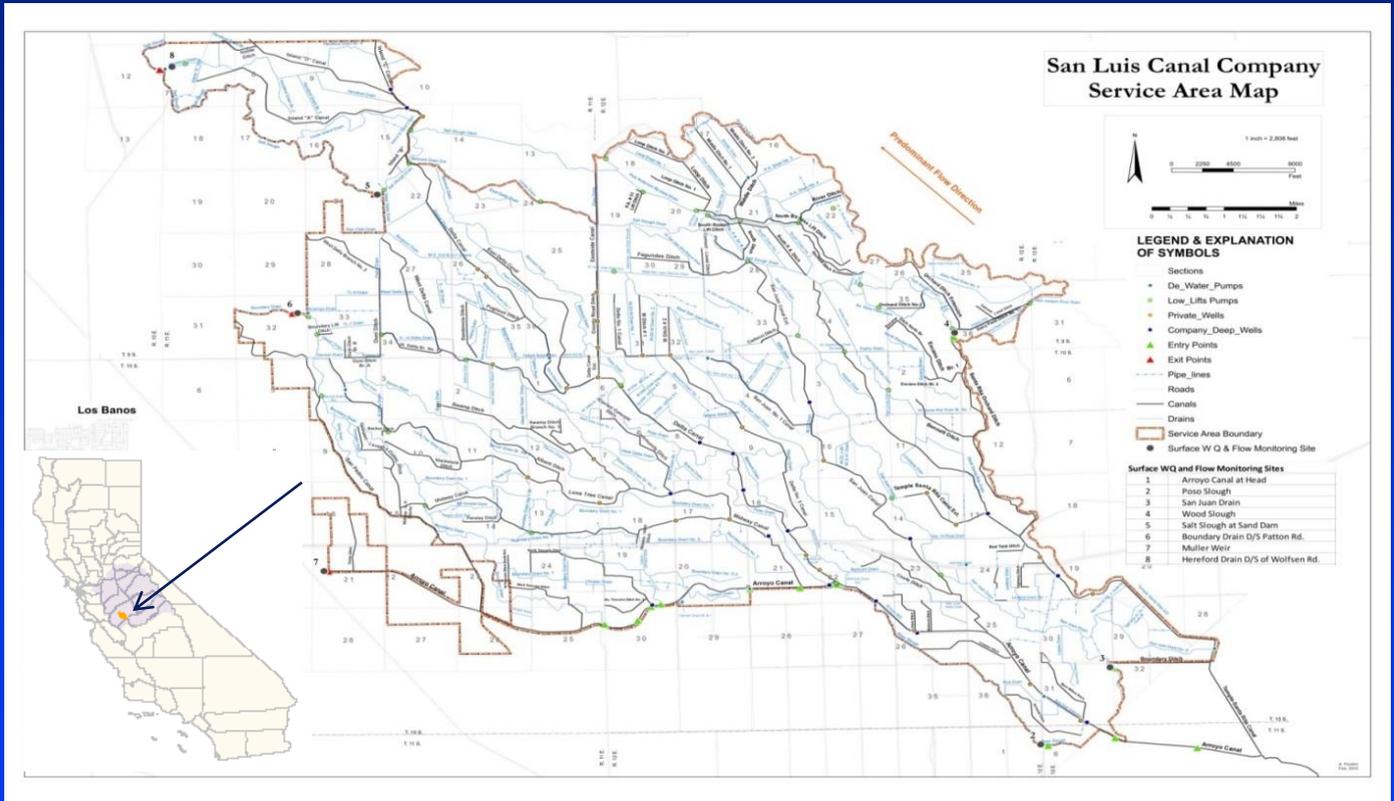


Outcomes of Sacramento Case Study

- Effective Application of Water Body Categorization Flow Chart
- Development of Water Body Categorization Report Template
- Development of comprehensive monitoring guide
- De-designation of MUN from twelve water bodies with adoption by Central Valley Water Board, State Water Board, and USEPA.

San Joaquin River Basin Case Study

San Luis Canal Company



Findings

- Total of 232 water bodies
 - ✓ 230 Constructed (**C1**) water bodies
 - ✓ 2 Modified (**M1**) water bodies
 - Poso Slough
 - Salt Slough (already in Basin Plan with NO MUN)
- All constructed or modified to convey Ag drainage (no Supply Only channels)
- Irrigated Lands Regulatory Program (ILRP) and district water quality monitoring

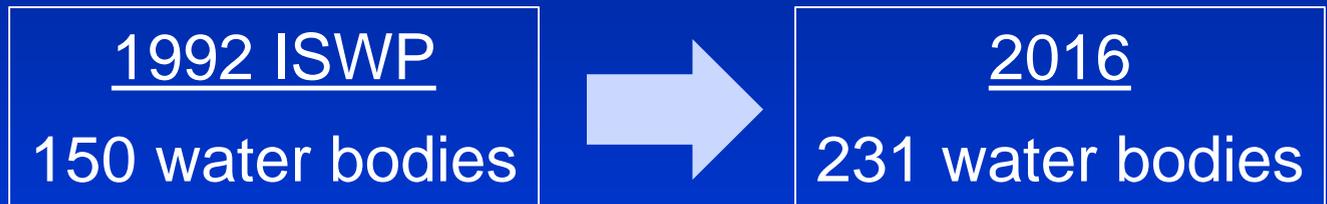


Outcomes of San Joaquin Case Study

- Confirmed Suitability of Water Body Categorization Process
- Established a Review and Verification Process
 - Categories of water body
 - Monitoring and surveillance
- **Staff proposal: Remove the MUN use from SLCC water bodies**

Outcomes of San Joaquin Case Study

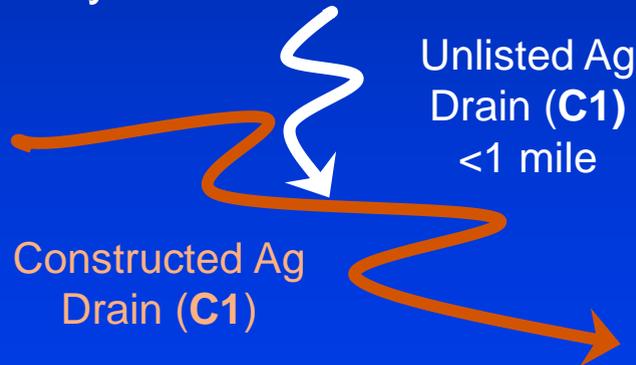
- Reasonable accounting for “small” or newly constructed water bodies



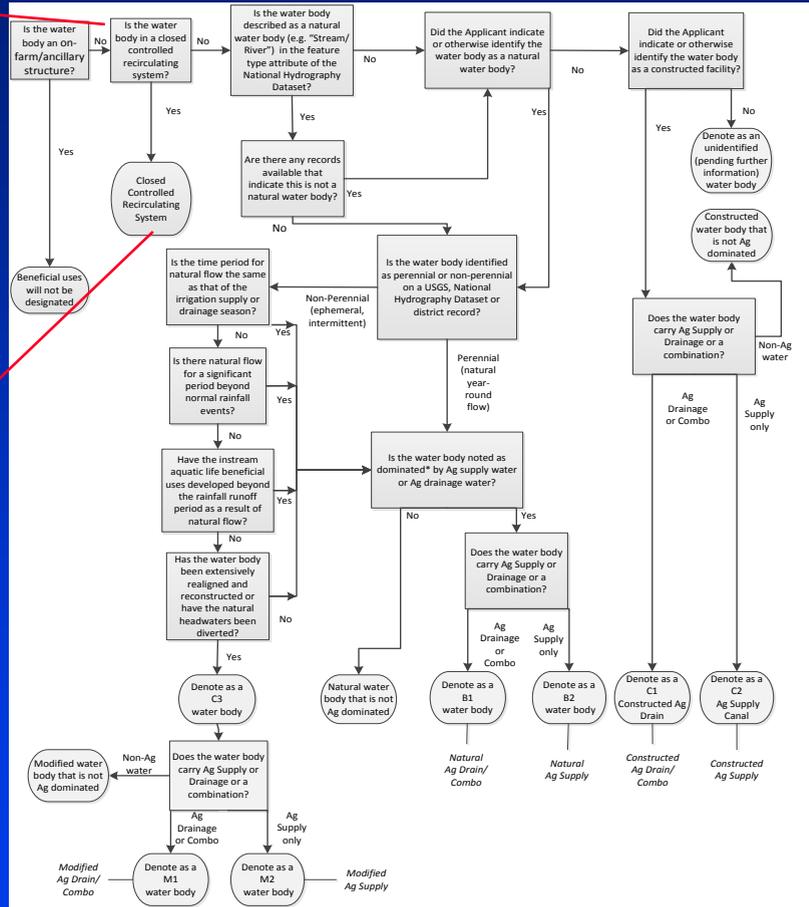
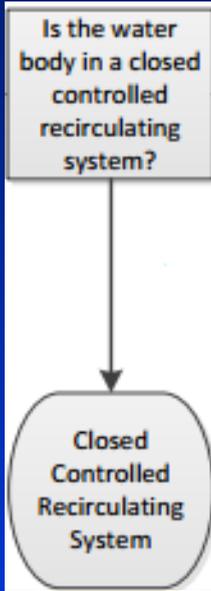
New GIS capabilities allow
identification to 1/10 of a mile

Distributary Rule

Any non-listed constructed water body that is **less than 1 mile and/or serving less than 640 acres** from a study area that has gone through the MUN Evaluation Process shall be regulated in the same way as the listed water body that provides flow to or receives flow from the unlisted water body.



Controlled Recirculating System

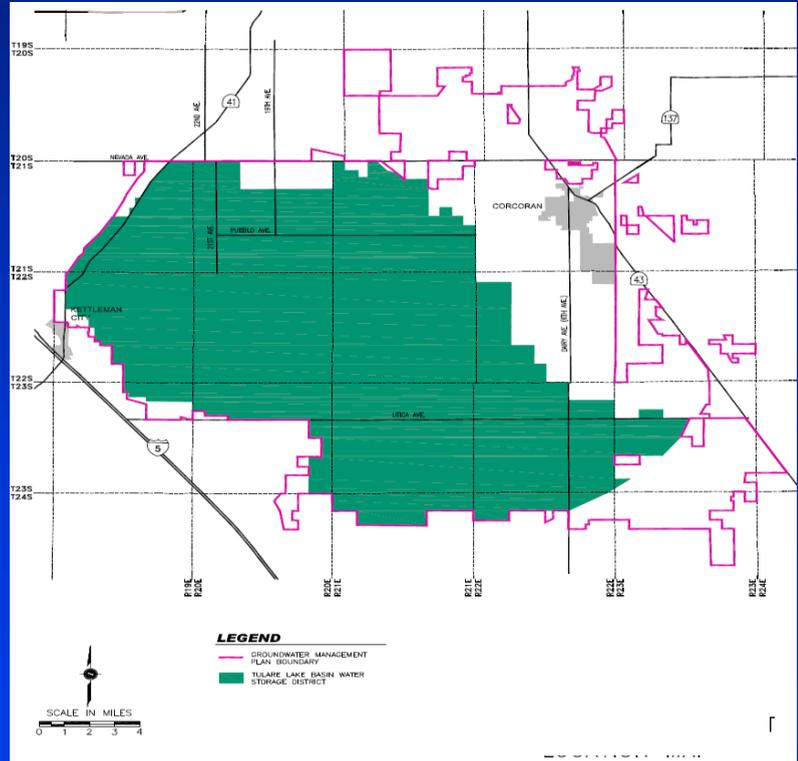


- Unique characteristics
- Year-Round and Seasonally Closed Controlled Recirculating Systems

Year-Round Closed Recirculating System

Tulare Lake Basin Case Example

- Surface water does not leave the system
- Maximize water reuse, energy savings and/or chemical management



Seasonally-Closed Recirculating System

Historic Rice Operation (Sacramento River Basin) Case Example



- In the past, shift from conventional flow-through irrigation systems to seasonally-closed recirculating system.
 - Used for managing Pesticide application
 - Had set notifications when discharges occurred
- Present day, few seasonally-closed controlled recirculating systems
- Future, growing interest to use seasonally-closed systems to maximize water reuse.

Outcomes of Closed Controlled Recirculating System Case Examples

- Development of closed controlled recirculating system application templates
- Additional information requirements due to the unique nature of systems
 - Flood control/emergency measures and notification process
 - Open/Closure Plans

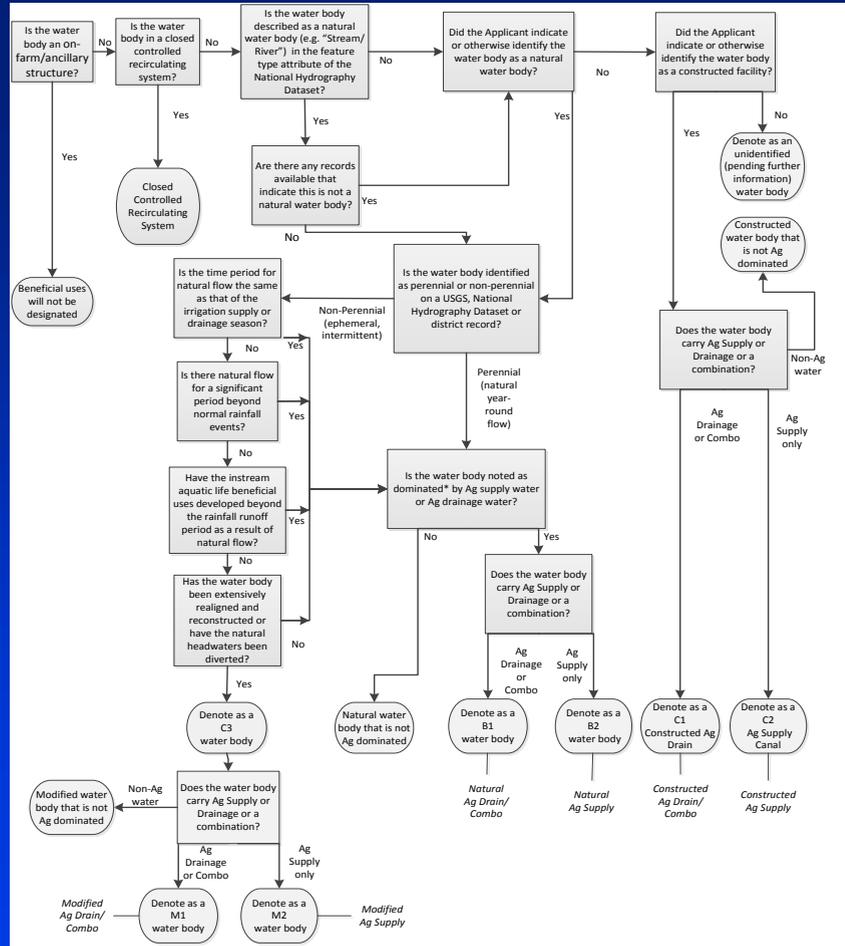
FINDINGS

Validated
Basin-wide Process

- Categorization
- Report Template
- Verification

Next

- Beneficial Uses?
- Water Quality Objectives?
- Implementation?



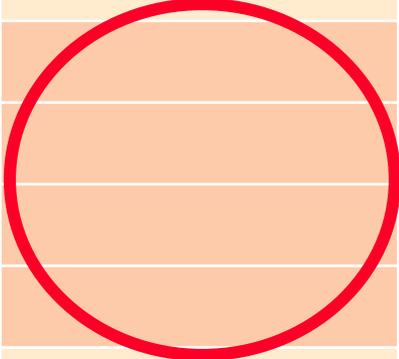
Beneficial Use, Water Quality Objectives and Implementation

MUN Beneficial Use Designation

Water Body Category	Beneficial Use	MUN WQOs
C1 (Constructed Ag Drain/Combo)		
M1 (Modified Ag Drain/Combo)		
C2 (Constructed Ag Supply)		
M2 (Modified Ag Supply)		
B1 (Natural Ag Drain/Combo)		
B2 (Natural Ag Supply)		
Closed Controlled Recirculating Systems		

MUN Beneficial Use Designation

Water Body Category	Beneficial Use	MUN WQOs
C1 (Constructed Ag Drain/Combo)	No MUN	
M1 (Modified Ag Drain/Combo)	No MUN	
C2 (Constructed Ag Supply)		
M2 (Modified Ag Supply)		
B1 (Natural Ag Drain/Combo)		
B2 (Natural Ag Supply)		
Closed Controlled Recirculating Systems	No MUN	



Recommended Definition for Limited MUN (LMUN)

Uses of water for municipal and domestic supply in Ag dominated water bodies where the use is limited by water body characteristics such as intermittent flow, management to maintain intended Ag use and/or constituent concentrations in the water body.



MUN Beneficial Use Designation

Water Body Category	Beneficial Use	MUN WQOs
C1 (Constructed Ag Drain/Combo)	No MUN	
M1 (Modified Ag Drain/Combo)	No MUN	
C2 (Constructed Ag Supply)	LMUN	
M2 (Modified Ag Supply)	LMUN	
B1 (Natural Ag Drain/Combo)	LMUN	
B2 (Natural Ag Supply)	LMUN	
Closed Controlled Recirculating Systems	No MUN	

MUN Beneficial Use Designation

Water Body Category	Beneficial Use	MUN WQOs
C1 (Constructed Ag Drain/Combo)	No MUN	N/A
M1 (Modified Ag Drain/Combo)	No MUN	N/A
C2 (Constructed Ag Supply)	LMUN	
M2 (Modified Ag Supply)	LMUN	
B1 (Natural Ag Drain/Combo)	LMUN	
B2 (Natural Ag Supply)	LMUN	
Closed Controlled Recirculating Systems	No MUN	N/A

MUN Beneficial Use Designation

Water Body Category	Beneficial Use	MUN WQOs
C1 (Constructed Ag Drain/Combo)	No MUN	N/A
M1 (Modified Ag Drain/Combo)	No MUN	N/A
C2 (Constructed Ag Supply)	LMUN	Narrative and/or Numeric?
M2 (Modified Ag Supply)	LMUN	
B1 (Natural Ag Drain/Combo)	LMUN	
B2 (Natural Ag Supply)	LMUN	
Closed Controlled Recirculating Systems	No MUN	N/A

Limited MUN WQO Numeric Options

1. Must meet primary MCLs, but not secondary MCLs (Narrative for nuisance objective will still apply).
2. Must meet primary and secondary MCLs with the exception of trihalomethanes (short half-life).
3. Must meet primary and secondary MCLs, but dissolved fractions can be used in place of total fractions.

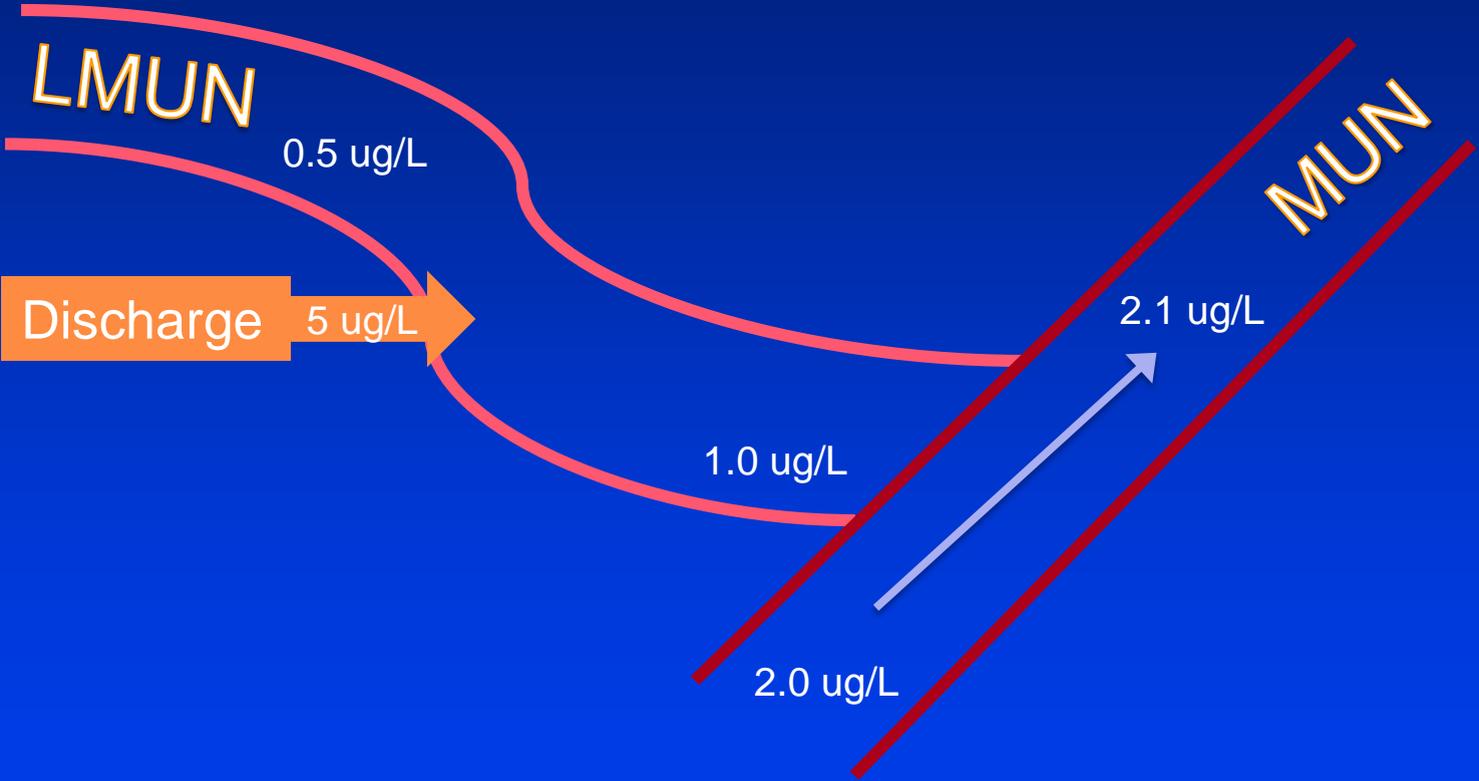
Limited MUN WQO Narrative Options

- Ten options considered
- Complex terms/ definitions
 - non-potable, natural background concentrations, accumulation
- Antidegradation policies

Recommended Water Quality Objective for Limited MUN

Water quality and downstream beneficial uses will be protected consistent with the state antidegradation policy.

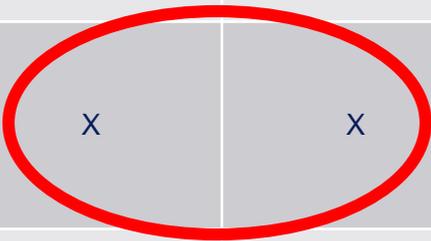
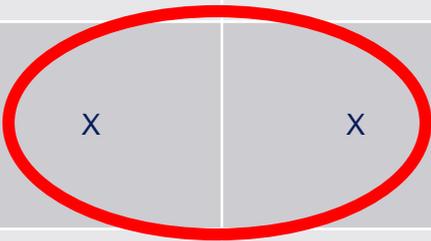
Limited MUN Example



MUN Beneficial Use Designation

Water Body Category	Beneficial Use	MUN WQOs
C1 (Constructed Ag Drain/Combo)	No MUN	N/A
M1 (Modified Ag Drain/Combo)	No MUN	N/A
C2 (Constructed Ag Supply)	LMUN	Narrative
M2 (Modified Ag Supply)	LMUN	
B1 (Natural Ag Drain/Combo)	LMUN	
B2 (Natural Ag Supply)	LMUN	
Closed Controlled Recirculating System	No MUN	N/A

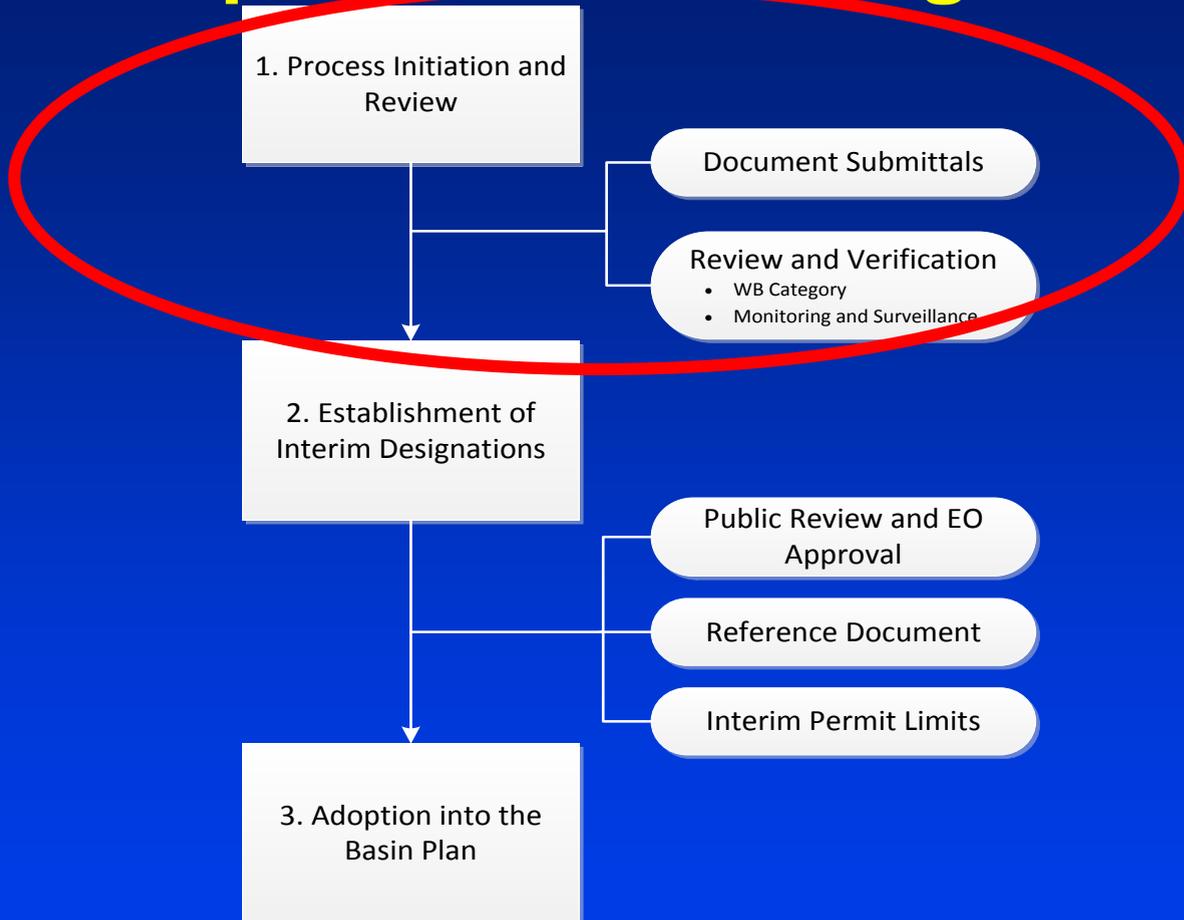
Project Alternatives

Project Alternatives	Potential Changes to:			
	Beneficial Use Designation	Water Quality Objectives	Implementation Program	Monitoring & Surveillance Program
1. No Action 				
2. Region-wide Water Body Categorization Framework 	X	X	X 	X 
3. Basin-by-Basin Water Body Categorization Framework 	X	X	X	X
4. Site-Specific Objectives 		X		

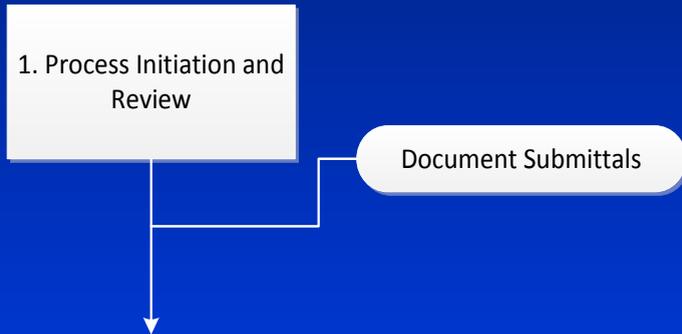
Implementation Program

- Development of a streamlined implementation:
 1. Reporting information to Water Board
 2. Assigning appropriate beneficial use and water quality objectives
 3. Ensuring protection of downstream beneficial uses
- Options
 - “As Needed Basis”
 - Time Schedule

Implementation Program



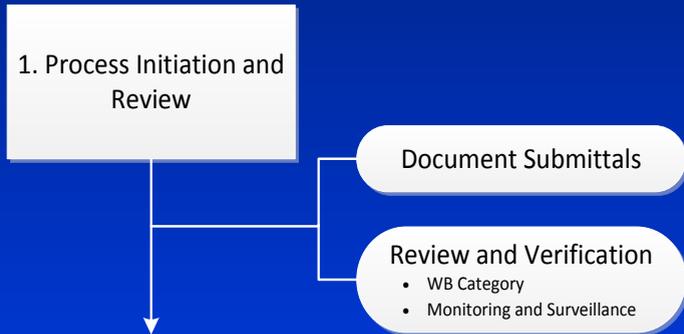
Step 1 - Process Initiation



Submittal of:

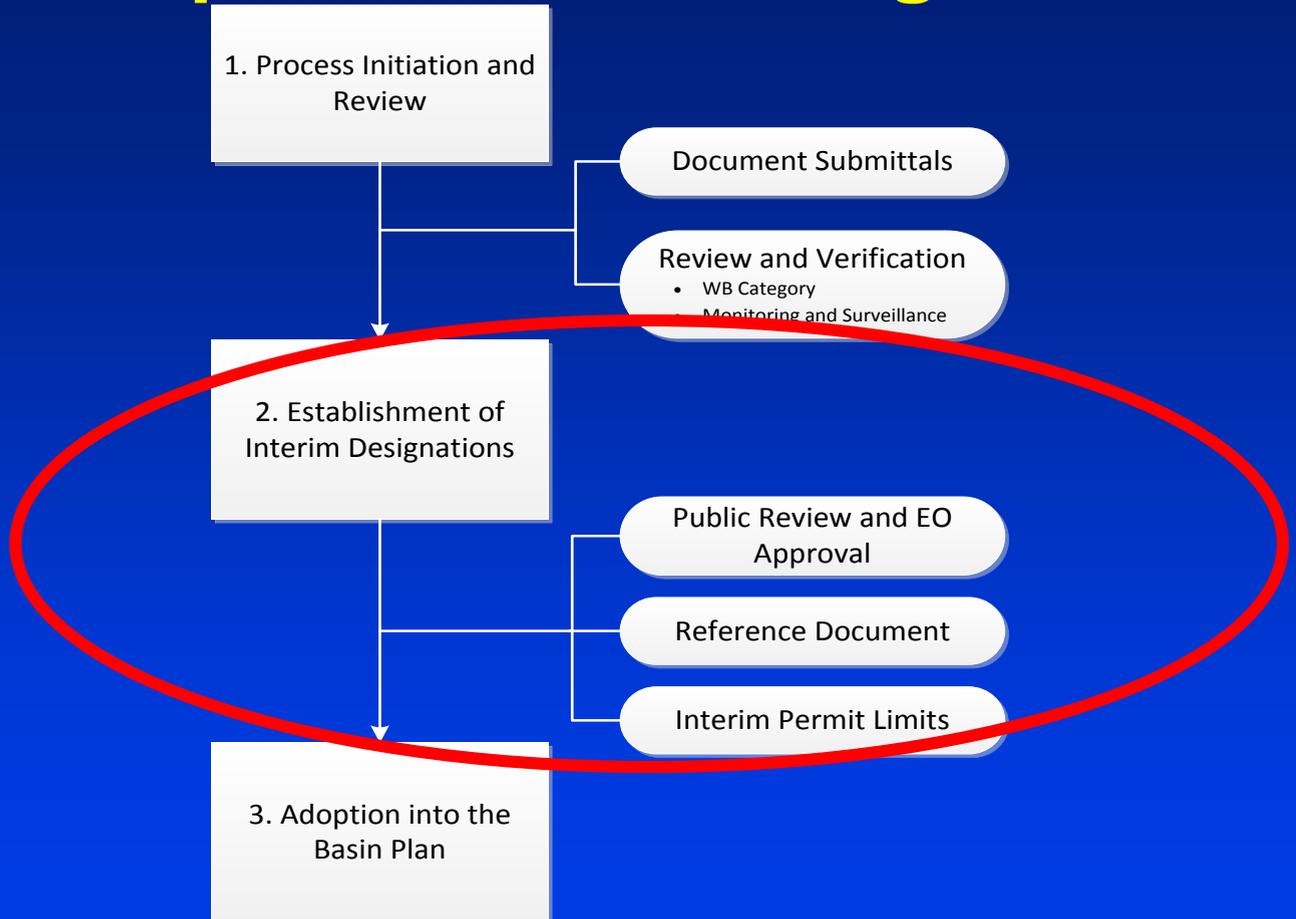
- Notice of Intent (NOI)
- Water Body Categorization Report and/or Closed Recirculating System Applications

Step 1 - Staff Review



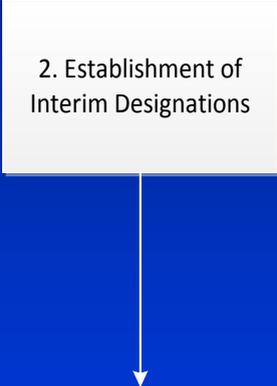
1. Water Body Categories
2. MUN use
3. Constituents of Concern
4. Monitoring

Implementation Program



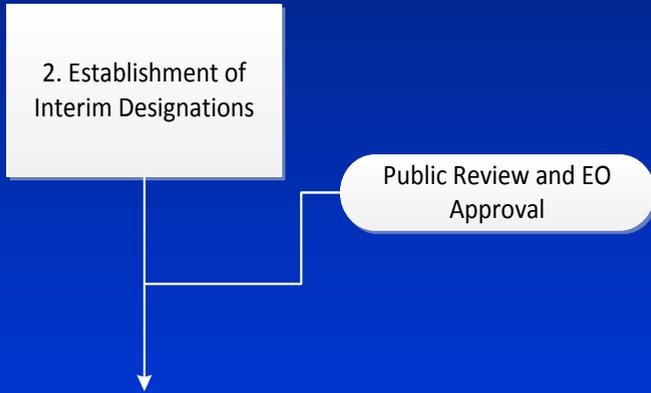
Step 2: Staff Recommendations for Interim Designations

2. Establishment of Interim Designations



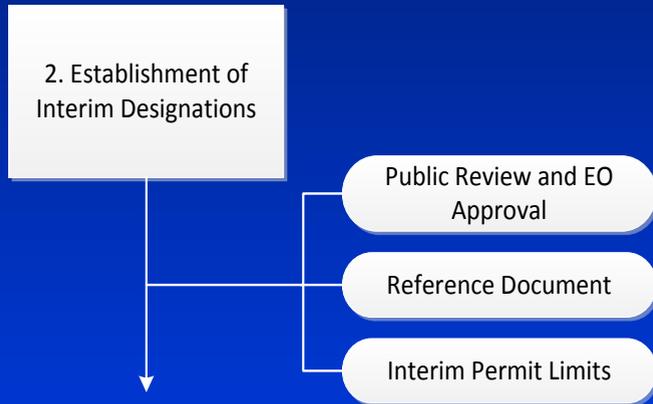
- Water body/system category designations
- MUN beneficial use designations
- Monitoring requirements to protect downstream beneficial uses

Step 2 – Recommendation Approval Process



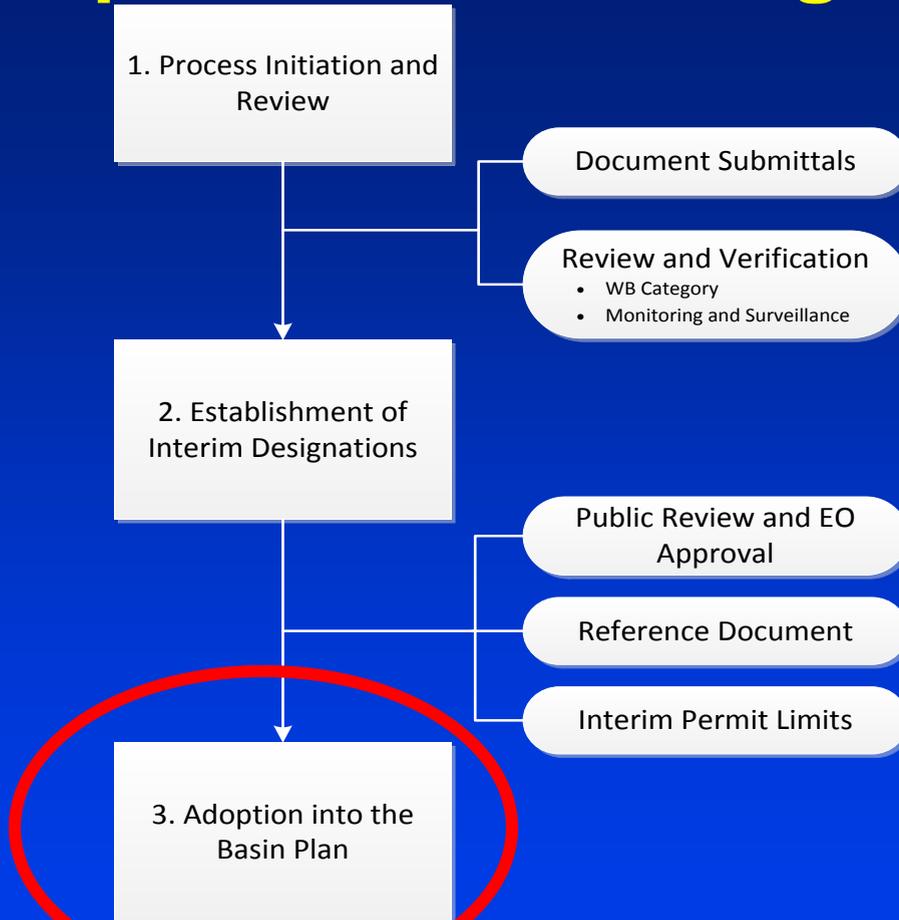
- Executive Officer approval
- Notice of Tentative Approval (NOTA)
- Public Comments
- Notice of Approval (NOA)

Step 2: Reference Document



- Document outside the Basin Plan
- Stores interim designations
- Finite timeframe
 - 5 years, 3 years extension
- Allows interim permit limits

Implementation Program



Step 3: Adoption into the Basin Plan

3. Adoption into the Basin Plan

Bundle updates to Reference Document ~3 years

- Board Consideration during Triennial Review or other Public Hearing process
- State Board and OAL Approval
- US EPA as appropriate

Estimated Implementation Timeline

Region-wide Process Basin Plan Amendment	
Submittal of Documents	3 months—1 year
Staff Review/Recommendations	2 months
NOTA for Public Comments	45 days
Staff Review Comments and Revise	45 days
NOA/Reference Document	8 months—1 ½ years
Regional Board Adoption	3 years
State Board/OAL/USEPA Approval	1 year

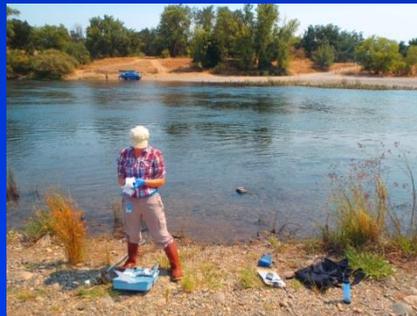
Individual Basin Plan Amendment	
Regional Board/State Board/OAL/USEPA Approval	3 years—5 years

Monitoring and Surveillance

Monitoring and Surveillance

Assessments must:

- Meet Monitoring Requirements of Exception 2b
- Ensure No Unreasonable Impacts to Downstream Water Bodies



Comprehensive Monitoring Guides

SITE INFORMATION					FIELD							
Site Name			Site ID	Project Term	Flow (cfs)	EC	DO	pH	Temp	Turbidity	Alkalinity	UV (ABS 254 NM)
Agency	Program	Monitoring Plan										
SJR at Bowman Rd., 8.0 miles S of Discharge Point 001												
City of Stockton Regional WwCF	NPDES	NPDES SMP	RSW-001	Ongoing	BM	W/BM	W	W/BM	W/BM	W		
SJR at Brandt Bridge												
DWR	Continuous Recording Station	Continuous Recording Station	BDT	Ongoing	C	C	C	C	C	C		
SJR at Hwy 4, 0.5 miles S of Discharge Point 001												
City of Stockton Regional WwCF	NPDES	NPDES SMP	RSW-002	Ongoing		W	W	W	W	W		
SJR at Garwood Bridge												
USGS	Delta Flows Network	Delta Flows Network	11304810		C							
DWR	Continuous Recording Station	Continuous Recording Station	SJG	Ongoing	C	C			C	C		
SJR, US of the East Complex retention basin discharge, and S of the Santa Fe Railroad Bridge												
Stockton Port District Facility	NPDES	NPDES SMP	R-1	Ongoing		O	O	O	O	O		
SJR, Flow Monitoring Station location approx. 500 ft. S of Discharge Point 001												
City of Stockton Regional WwCF	NPDES	NPDES SMP	RSW-001A	Ongoing	C							
SJR at Burns Cutoff, 0.5 miles N of Discharge Point 001												
City of Stockton Regional WwCF	NPDES	NPDES SMP	RSW-002A	Ongoing		W	W	W	W	W		
SJR at Deep Water Channel, 1.5 miles N of Discharge Point 001												
City of Stockton Regional WwCF	NPDES	NPDES SMP	RSW-003	Ongoing		W	W	W	W	W		
SJR at Rough and Ready Island												
DWR	IEP	EMP: Real Time Monitoring	P8A	Ongoing	C	C	C	C	C	C		

Proposed Case-by-Case Monitoring Program Options

1. No additional monitoring required
 - Existing data show no impacts to water quality downstream
 - Existing regulatory monitoring needs to be continued
 2. Additional monitoring required
 - Fill in data gaps
- Results evaluated as part of Basin Plan Amendment Process

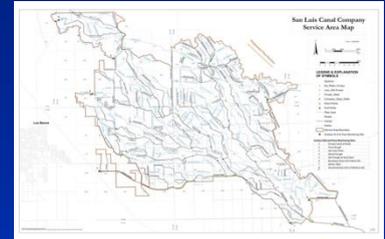
Evaluation of Downstream Impacts

- Monitoring Duration
 - Data must demonstrate no unreasonable impacts downstream
 - May be changed or reduced
- Discharger responsible for:
 - New discharges
 - Changes to discharges – character, location or volume
- Water Board will:
 - Coordinate regular Title 22 constituent evaluations in MUN watersheds as resources permit



SLCC Example

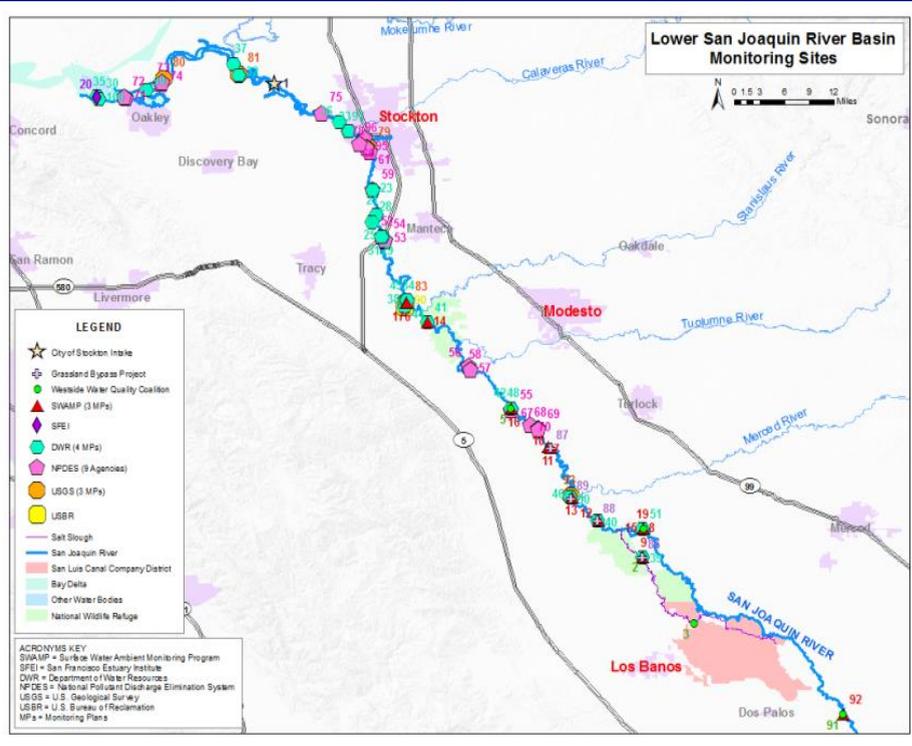
- SLCC Water Body Categorization Report
- Staff Review and Verification
- Designations:
 - Water Body Categories:
231 constructed/modified drains
 - Beneficial Use:
NO MUN



W. San Juan Drain

Monitoring?

SLCC Example



Developed Comprehensive Monitoring Guide for the Lower San Joaquin River

- Identified Constituents of Concern
- 15 Monitoring Programs
- ~ 65 Different Monitoring Sites

SLCC Example

- Extensive monitoring by many agencies downstream to the Delta
 - ✓ ILRP
 - ✓ NPDES
 - ✓ SWAMP
 - ✓ Municipal Water Quality Investigations (MWQI)
 - ✓ USGS
 - ✓ State Water Board Division of Drinking Water Source Water Monitoring
- Regular monitoring of a wide variety of constituents
- **Recommended Monitoring Option:
Existing Regulatory Programs are Sufficient**

Irrigated Lands Regulatory Program

- Regulates agriculture coalitions and individuals through WDRs
- Representative monitoring locations for watersheds with agricultural operations
- Triggers are incorporated to protect beneficial uses of water bodies



Point-Source and Municipal Storm Discharges

NPDES dischargers will:

- Conduct Reasonable Potential Analysis (RPA)
- Still have to ensure antidegradation requirements are met



Municipal Storm Water dischargers will:

- Use BMPs
- Monitor to address 303(d) listed constituents and other constituents of concerns



Limited-MUN Water Bodies

Permitting a Discharge to a LMUN Water Body

When permitting a discharge to a LMUN-designated water body, the Board must ensure that “***water quality and downstream beneficial uses will be protected consistent with the state antidegradation policy.***”

Permitting a Discharge to a LMUN Water Body

The *Antidegradation Policy* prohibits degradation of high-quality waters unless:

- The degradation will not result in violations of applicable quality objectives;
- The degradation will not unreasonably affect beneficial uses;
- BPTC to minimize degradation; and
- Degradation is consistent with the maximum benefit to the people of the state.

Permitting a Discharge to a LMUN Water Body

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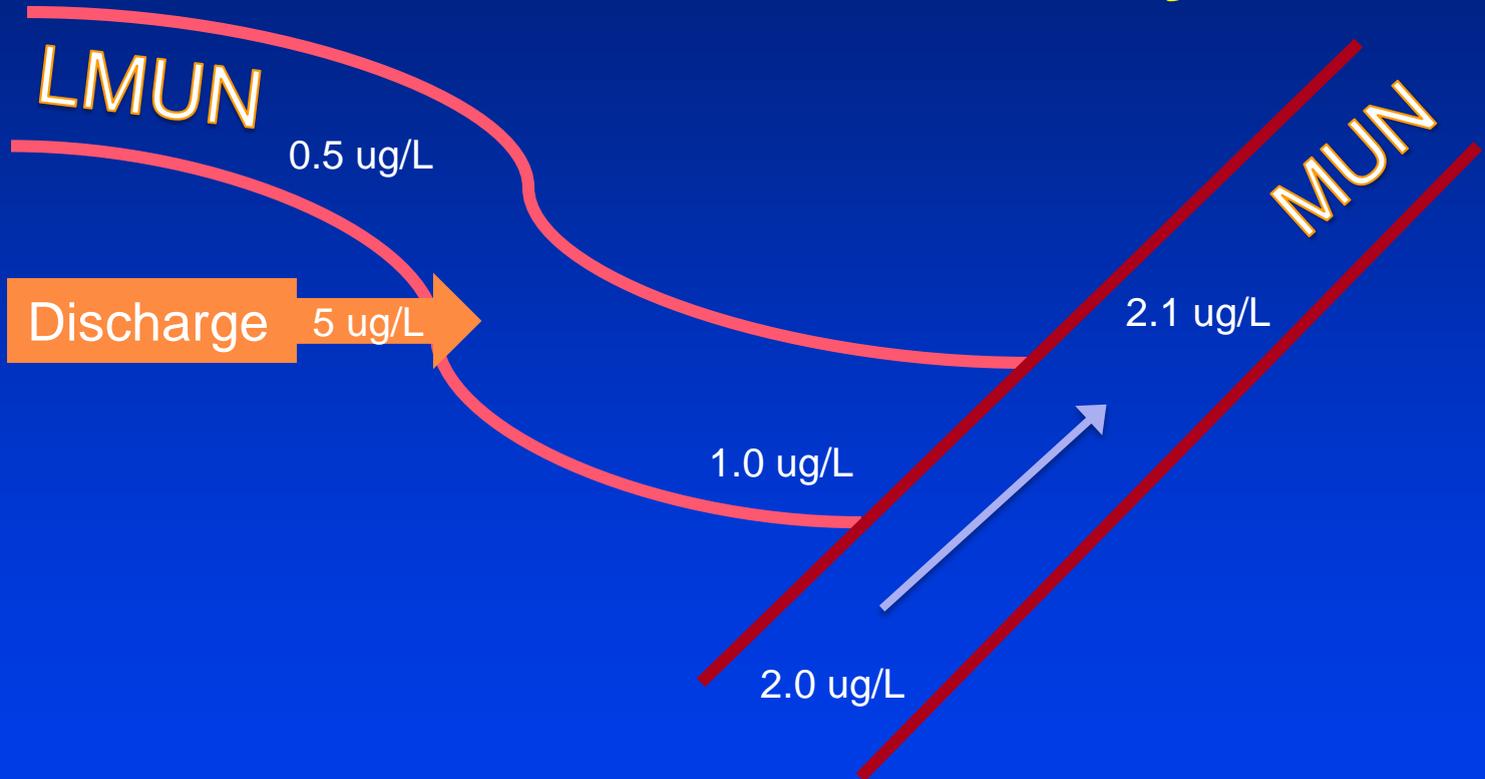
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Permitting a Discharge to a LMUN Water Body



Overview of Proposed Amendments

- Establish a Standardized Region-wide Evaluation Process
 - Appropriate MUN and associated WQOs
 - Implementation
 - Monitoring/Surveillance
- Establish a LIMITED-MUN Beneficial Use
- Utilize a Reference Document for interim designations
- Establishes Appendices for Limited-MUN and MUN de-designated water bodies

Next Steps and Timeline

Public Review	January 23 – March 17 2017
Response to Public Comments	May 2017
Regional Board Hearing to consider Adoption	June 2017
State Board Hearing to consider Adoption	TBD (December 2017)
OAL & US EPA Approval	TBD (June 2018)

Discussion

Questions/Comments?