Agenda Item 13

Public Workshop 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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Outline

- Background
- Current Approach
- Potential Alternatives
- Challenges
- Project Schedule
- Public Forum and Q&A

Why are we here?

Consistent - Transparent – Streamlined

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

Inappropriate application resulting in undue restrictions

- POTW discharges
- Agricultural operations

Background

- Incorporation of the "*Sources of Drinking Water Policy*" 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

Background

- Resolution 88-63 contains exceptions
  - *Exception 2b - "The water is in systems designed or modified for the primary purpose of conveying or holding agricultural drainage waters"*
- Issues
  - Exceptions require a Basin Plan Amendment
  - Does not address other agriculturally dominated water bodies

History Related to Ag Dominated Water Bodies

- Inland Surface Water Plan (ISWP)
- Ag Water Task Force




Inland Surface Water Plan

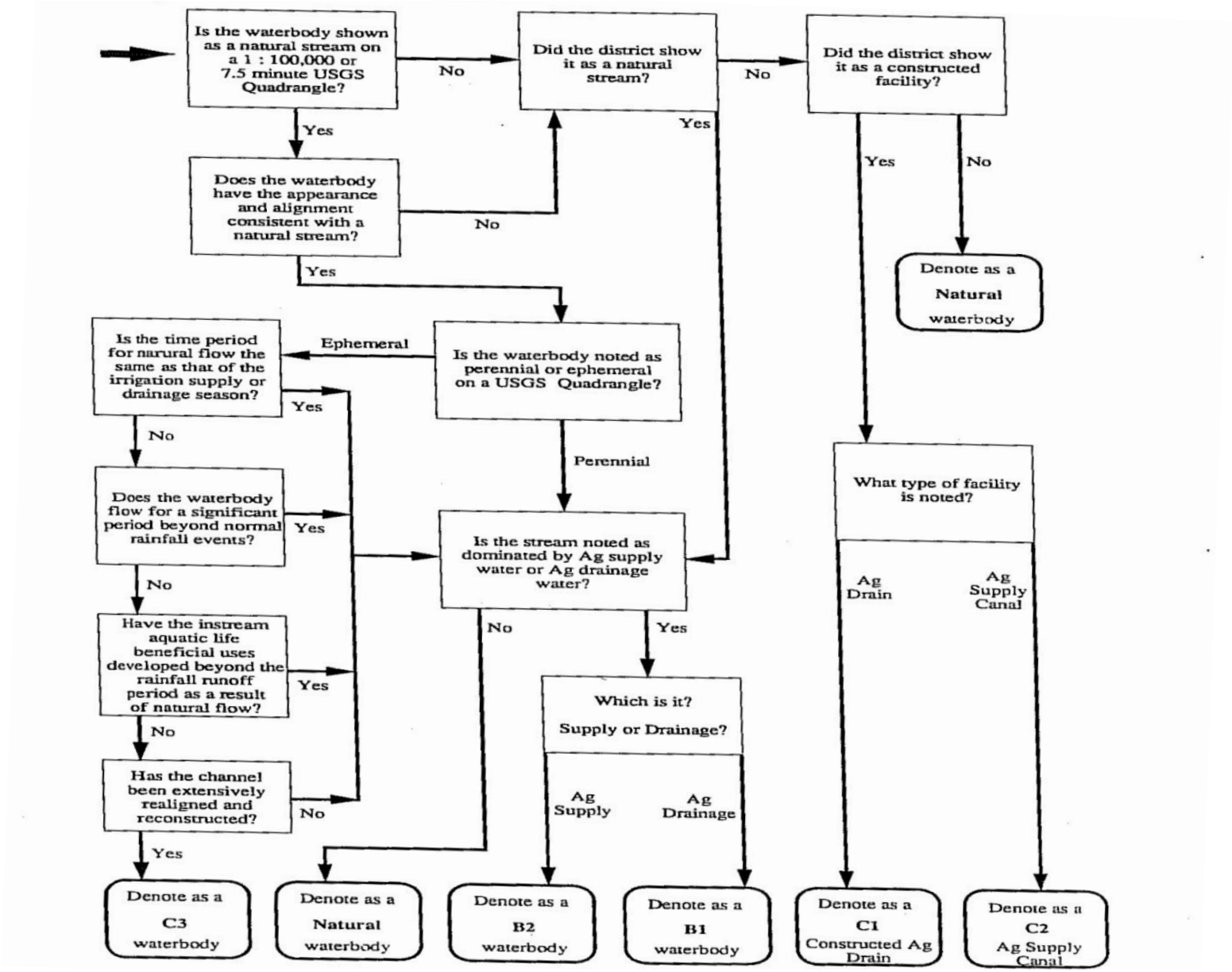
- Statewide plan adopted in 1991
  - Water quality objectives for ALL surface water bodies
  - Specific program of implementation for agriculture
    - Natural water bodies dominated by agricultural return flows
    - Constructed agricultural drains
    - Six year schedule based on water body type

Central Valley Water Board Actions to Comply

Report for Submittal to State Water Board (1992)

- Process to Categorize Agriculturally Dominated Water Bodies
- List of named:
  - Ag dominated natural water bodies
  - Constructed facilities
  - Natural channels modified for Ag operations

Flowchart for the Categorization of Water Bodies According to the Guidelines of the California Inland Surface Water Plan



ISWP Summary Table

Drainage Area	# Agency Reports	Category (b)		Category (c)	
		#	Miles	#	Miles
Sacramento	93	68	541	2485	5160
San Joaquin	63	46	538	1715	4689
Delta	70	13	126	789	1548
Tulare Lake	109	28	268	1068	6460
Foothills	24	5	39	234	661
Area Subtotal:	359	160	1512	6291	18519
Major Waterways	5	0	0	28	1293
Total:	**364**	**160**	**1512**	**6319**	**19812**

- Coordinated information from water agencies
- Defined Drainage Basins & Identified Categories of Water bodies
- Over 350 Reports covering 90% of Central Valley irrigated agriculture

What Happened?

- Central Valley Water Board Report submitted to State Water Board (1992)
- ISWP rescinded in 1994
- State Water Board convened Public Advisory Task Forces 1994

Ag Water Task Force (AgWTF)

- Representatives
  1. Publicly owned treatment works
  2. Stormwater
  3. Industry
  4. Agriculture
  5. Water Supply
  6. Environmental
  7. Public health
  8. USEPA
  9. Fish and Wildlife
  10. Regional Water Boards
  11. State Water Board

Special Additions:

- CA Department of Food and Agriculture
- CA Department of Pesticide Regulation

AgWTF: Dec. 1994 – Dec. 1995

Overall agreement throughout process

- *"Agricultural water bodies are unique and they may not support full beneficial uses traditionally associated with perennial, natural streams."*

AgWTF: Dec. 1994 – Dec. 1995

Chapter 4 of Final Report

- Definitions
- Categorization of Water Bodies
  - Flow Charts
- Beneficial Use Designations
- Water Quality Objectives
- Implementation
- Other Policy Issues

What Happened?

- Public Advisory Task Forces Provided Final Report at State Water Resources Control Board Workshop in December 1995
- Revised Statewide ISWP Not Developed
- USEPA Promulgated California Toxics Rule (CTR) in May 2000

Identified Issues Continue

Late 2011

- Adopted Triennial Review Workplan Identified Two Related Issues
  1. Evaluate MUN designation in constructed Ag drains
  2. Determine appropriate beneficial uses and level of protection for agriculturally dominated water bodies
- CV-SALTS identified need for appropriate beneficial uses and protection in Ag dominated water bodies as related to salt and nitrate

Opportunity

- Combine Efforts to Address Unresolved Issues
  - Build off of previous work of ISWP and AgWTF
  - Update to address additional constraints from lawsuits since 1995
  - Develop recommendation for a Basin Plan Amendment that designates appropriate beneficial uses and level of protection for agriculturally dominated water bodies in the Central Valley

Current Approach

Phased Approach

Phase 1

Categorize Water Body Types for Agricultural water bodies

Evaluate appropriate designation and level of protection for **Municipal and Domestic Supply** (MUN)

Phase 2

Evaluate appropriate designation and level of protection for **other beneficial uses** in Agricultural water body categories

Other beneficial uses include **Aquatic Life** (WARM, COLD) and **Recreation** (REC-1, REC-2)

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, Sept. 2014, Jan. 2015

Website/Lyris List (432 subscribers)

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

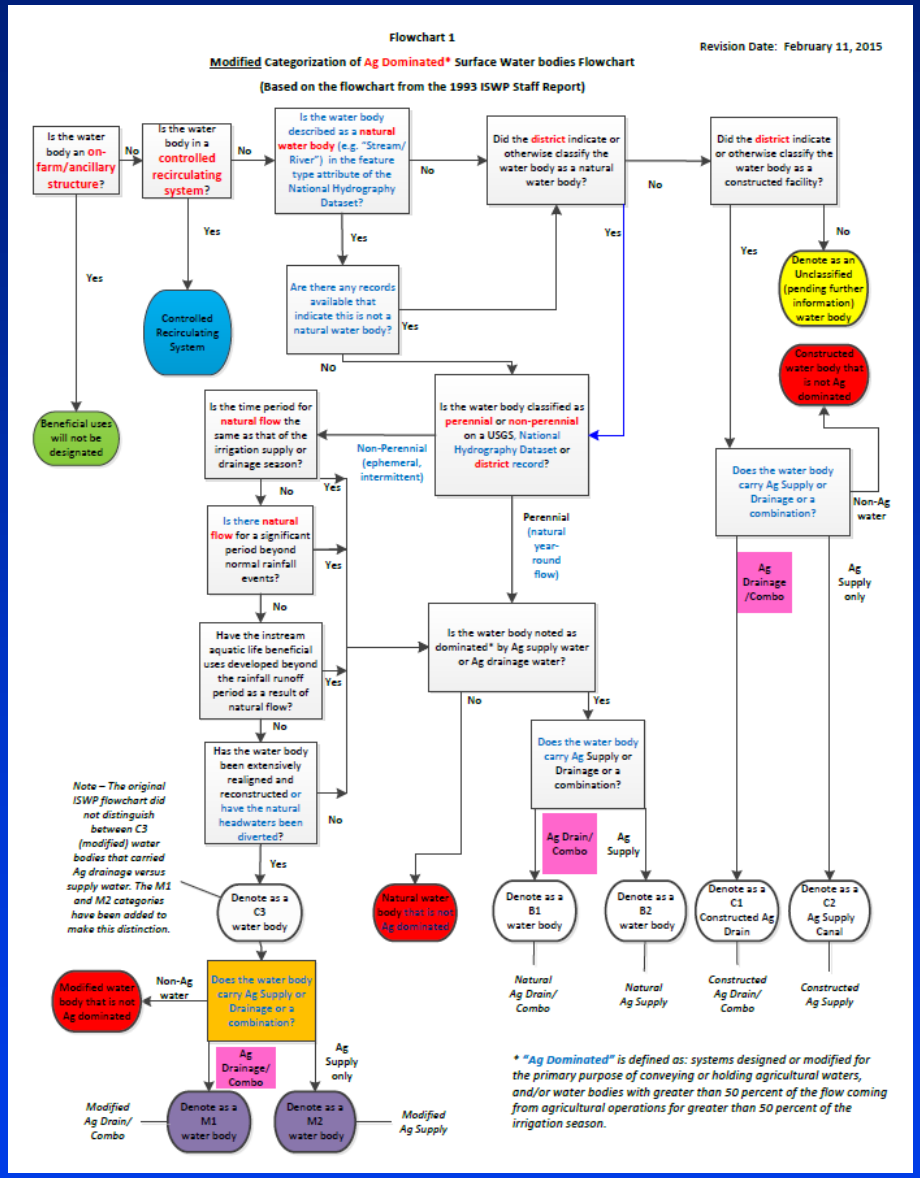
Process

- Agreement to build off of previous work
- Review previous consensus recommendations AgWTF
  - Identify where continuing consensus
  - Identify items needing further discussion
- Review Categories of water bodies
  - Flowcharts
- Utilized case studies to test alternatives

Phase I: MUN

- Prioritize Sacramento Case Study
  - 12 Ag drains receiving POTW discharges
- Utilize results to further develop and expand MUN evaluation process to apply region-wide
  - San Joaquin Case study – San Luis Canal Co.
  - Tulare Lake Basin – Controlled Recirculating System

Water Body Categorization



Water Body Categorization

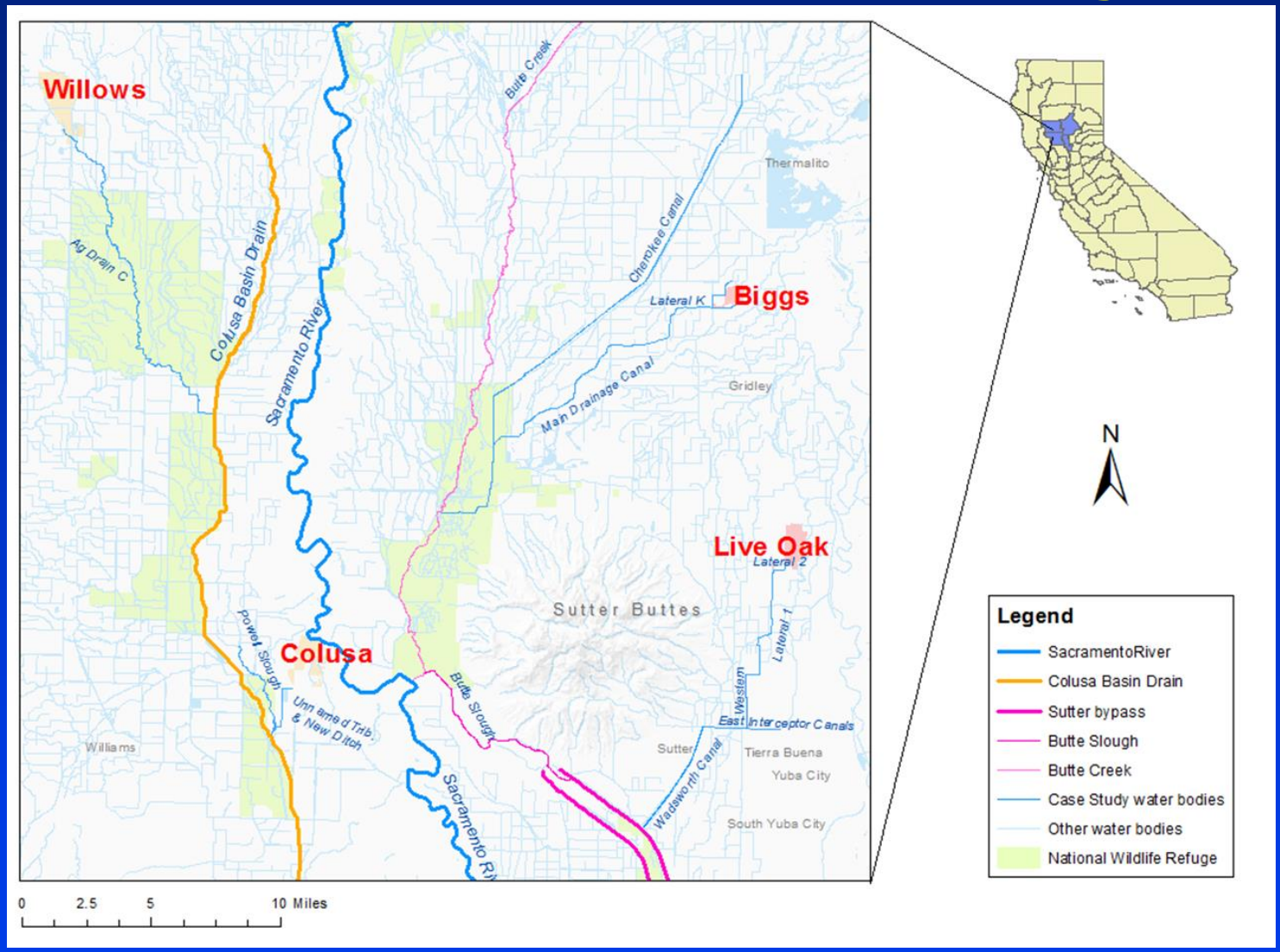
Key Considerations

- Is it a constructed, modified or natural water body?
- Is the natural flow perennial (year-round flow) or ephemeral/intermittent (rain event/seasonal flows)?
- Is there natural flow during irrigation season?
- Has the water body been extensively modified (realigned, hydromodifications, headwaters diverted etc.)?
- Does the water body carry drainage, supply or a combination?

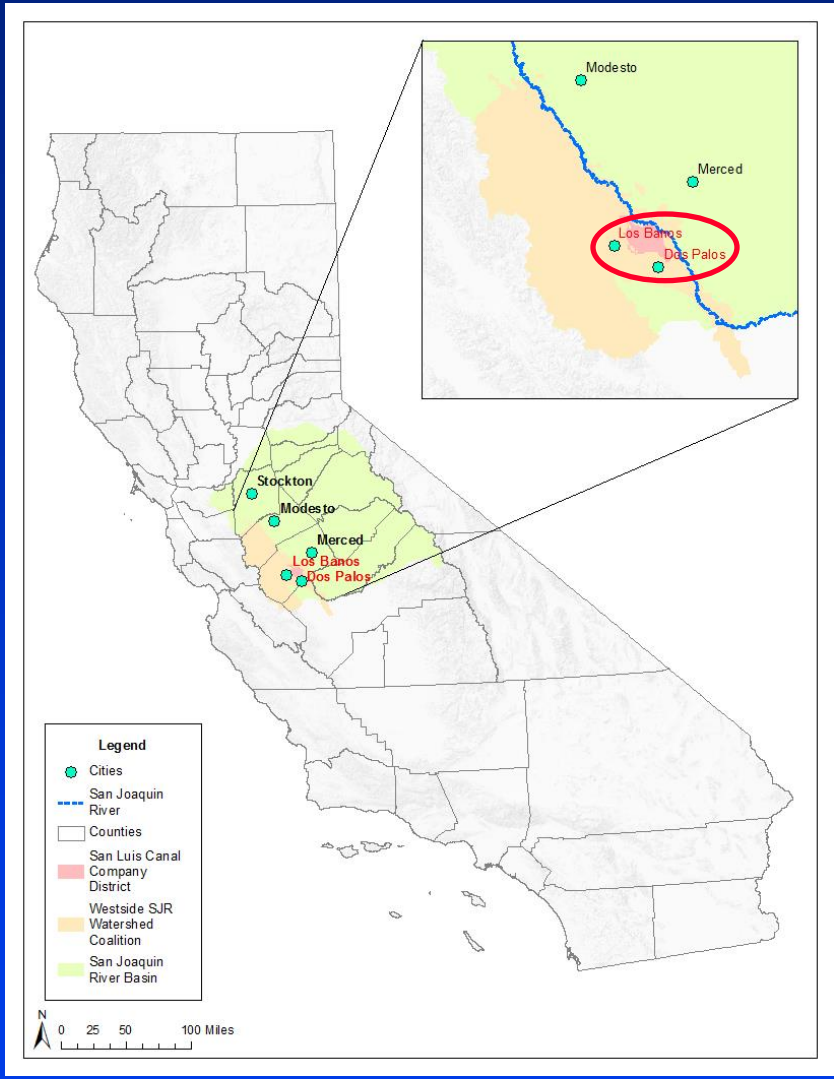
Water Body Categorization

Water Body Category
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)
Controlled Recirculating System

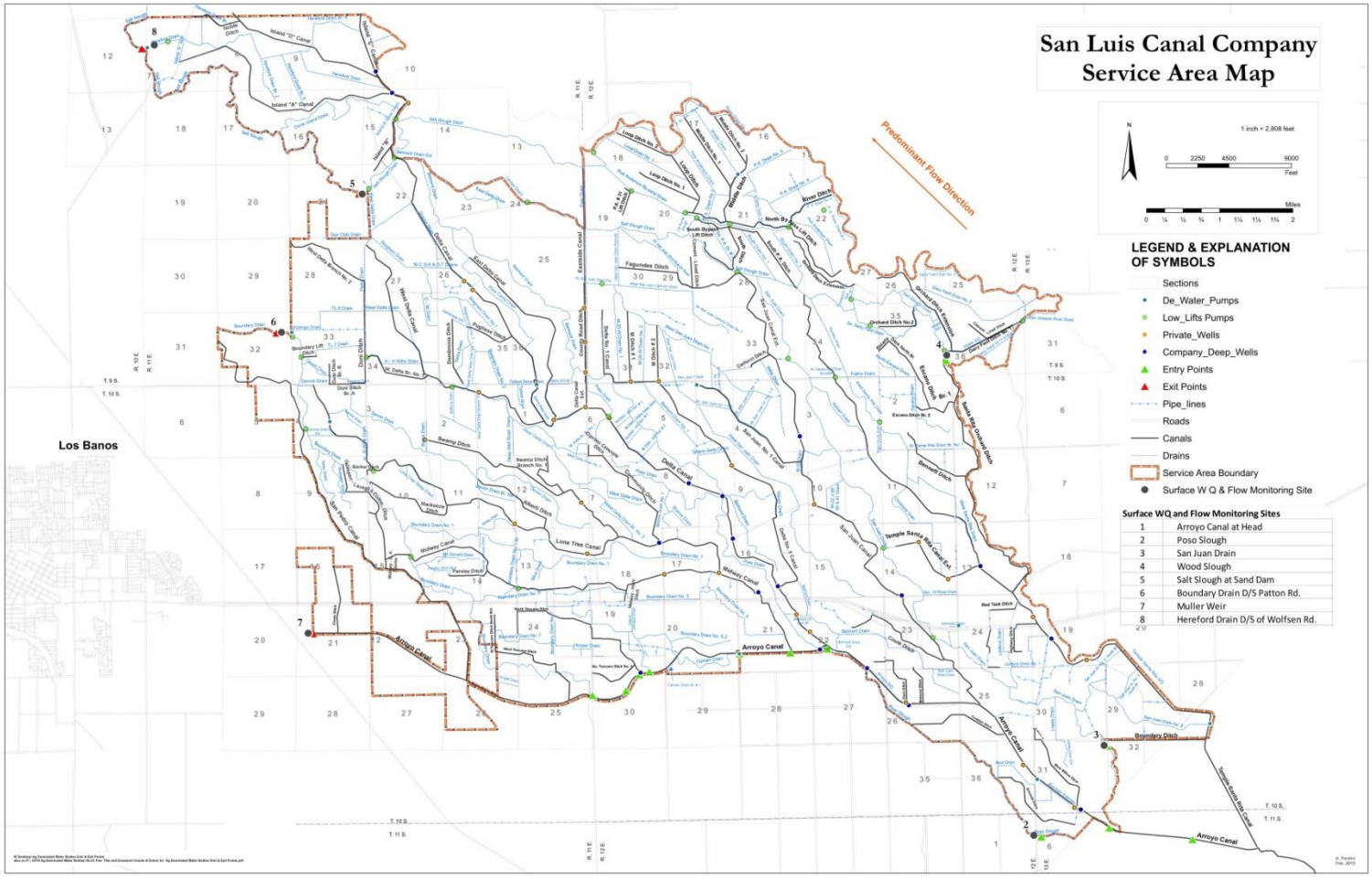
Location of Sacramento River Basin Case Study



Location of San Joaquin River Basin Case Study



San Joaquin River Basin Case Study - San Luis Canal Company



Characterizing/Categorizing Water Bodies

San Luis Canal Company

- Complete WB Categorization Report
  - ✓ Maps/Water Body Listings
  - ✓ Background/Conditions/Uses
  - ✓ Water Quality/Monitoring

- Use Flow Chart 1 (WB Categorization) to categorize water bodies
  - ✓ Review ISWP category where available

Characterizing/Categorizing Water Bodies

Central Valley Water Board

- Evaluate report findings and maps/GIS layers

- Site surveys to “ground truth” water body category designations
  - ✓ Water bodies that were modified/natural
  - ✓ ~10% constructed water bodies

Findings

- Total of 232 water bodies
  - ✓ 230 **C1** water bodies
  - ✓ 2 **M1** water bodies
    - Poso Slough
    - Salt Slough (already in Basin Plan with NO MUN)

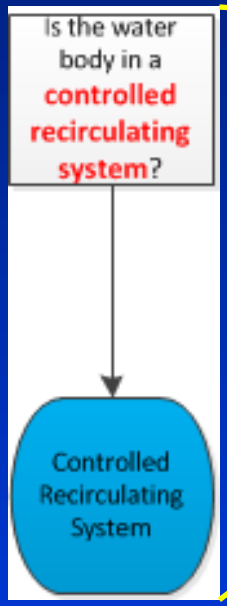
- All constructed or modified to convey Ag drainage (no Supply Only channels)

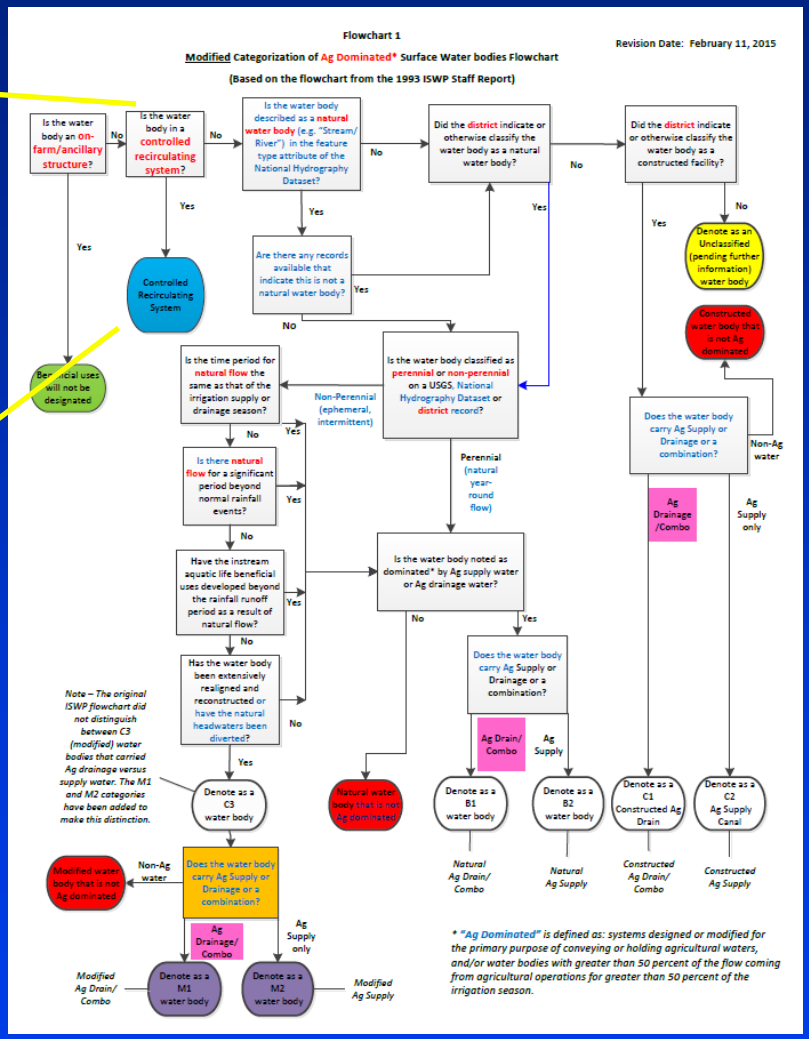
Findings

- Extensive hydrologic modifications (weirs, pumps, lifts, pipes, concrete lining, etc.)

- ILRP and district water quality monitoring

Controlled Recirculating System

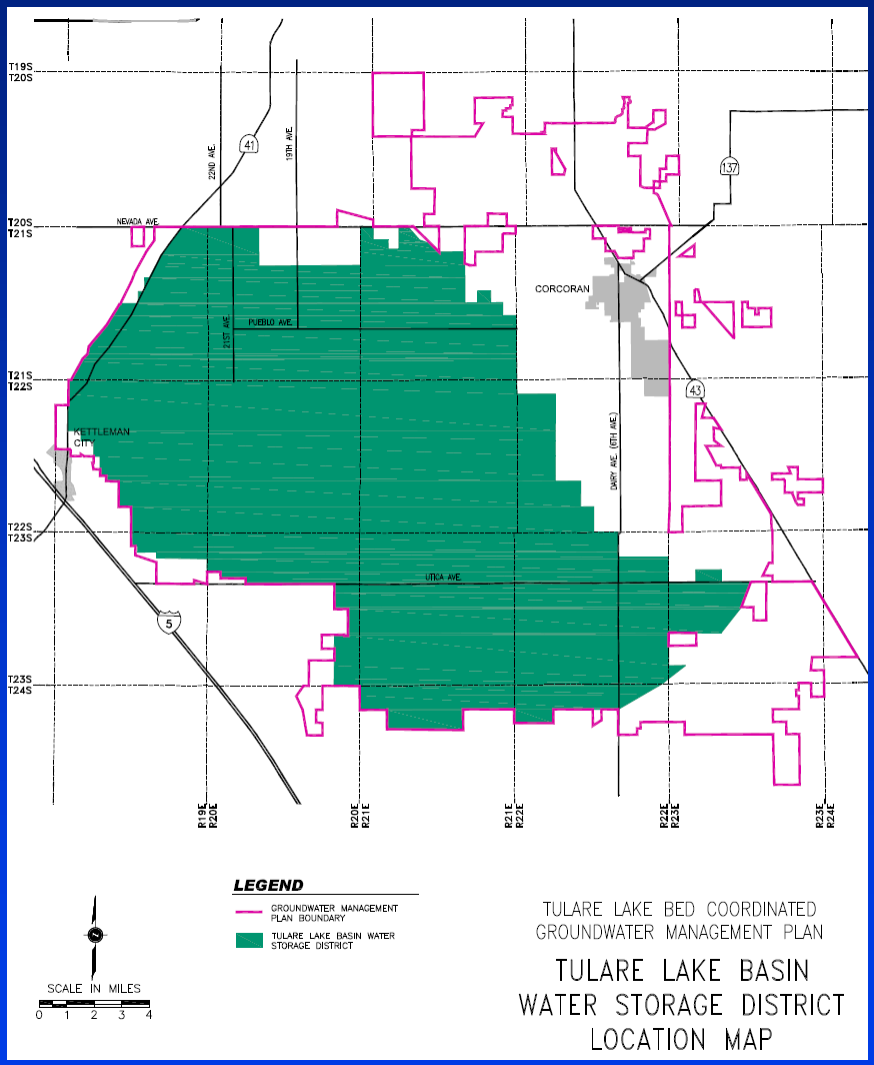




- Unique characteristics
- Qualify with a Board approved Operation Plan

Tulare Lake Basin Water Storage District

- Example of a Controlled Recirculating System
- No external receiving water discharge year-round
- Operation Plan outline



Basin Plan Amendment Alternatives

1. No Action
2. Region-wide Water Body Categorization Framework
3. Basin-by-Basin Water Body Categorization Framework
4. Site Specific Objectives

Selection Criteria for Alternatives

1. Consistent with federal and state laws and policies
2. Appropriate protection of MUN
3. Downstream protection of beneficial uses
4. Utilization for intended design and purpose
5. Efficient use of resources
6. Provides reasonable implementation solution

Preferred Alternative

1. No Action
2. Region-wide Water Body Categorization Framework
3. Basin-by-Basin Water Body Categorization Framework
4. Site Specific Objectives

Preferred Alternative Components

1. Beneficial Uses
2. Water Quality Objectives
3. Implementation Program
4. Monitoring and Surveillance

MUN Beneficial Use

- No MUN
- MUN
- LIMITED-MUN

LIMITED-MUN

- Where change in management and/or treatment above conventional required for MUN

- Examples:
  - Constructed supply channels
  - Natural Ag dominated ephemeral streams

Beneficial Use Designation

Water Body Category	Beneficial Use
C1 (Constructed Ag Drain/Combo)	**No MUN**
M1 (Modified Ag Drain/Combo)	**No MUN**
C2 (Constructed Ag Supply)	**LIMITED-MUN**
M2 (Modified Ag Supply)	**LIMITED-MUN**
B1 (Natural Ag Drain/Combo)	**LIMITED-MUN**
B2 (Natural Ag Supply)	**LIMITED-MUN**
Controlled Recirculating System	**No MUN***

***Requires a Board Approved Operation Plan**

Water Quality Objectives

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)	**LIMITED-MUN**	**Narrative and/or Numeric**
M2 (Modified Ag Supply)	**LIMITED-MUN**	
B1 (Natural Ag Drain/Combo)	**LIMITED-MUN**	
B2 (Natural Ag Supply)	**LIMITED-MUN**	
Controlled Recirculating System	**No MUN**	**N/A**

Establishing WQO for LIMITED-MUN

- Protect water bodies without restricting intended use
- Provide flexibility to address naturally elevated background constituents
- Ensure protection of downstream beneficial uses

Example Language
LIMITED-MUN

1. *Discharge from these water bodies will not impair downstream Municipal or Domestic Supply (MUN) beneficial uses.*

2. *Accumulation of constituents in the water body must be found to provide maximum benefit to the people of the state and not unreasonably affect managed and/or treated use of the water for MUN use or impact downstream beneficial uses, and not exceed natural background water quality. Maintenance of a constructed water body for its intended purpose is considered a maximum benefit as long as the discharge does not impact downstream beneficial uses. Accumulation of a constituent occurs when the concentration is elevated above the water body's best quality since 1975, unless subsequent lowering of water quality was due to previously approved regulatory action (e.g. construction of a reservoir).*

Implementation Program

- Goal – provide a consistent, transparent and streamlined process
- Options
  - "As Needed Basis"
  - Time Schedule

Implementation Program

Preferred Process

- Apply on “As Needed Basis”
- Use of a Water Body Categorization Report
- Use of a Reference Document
- Public approval process to adopt water bodies into Basin Plan

Monitoring/Surveillance

Purpose: Protection of downstream beneficial uses

- Use Existing Monitoring Programs
- Require Additional Monitoring
- Develop New Monitoring Program

Monitoring/Surveillance

- District and other monitoring (e.g. ILRP) information is included in Water Body Categorization Report

- Monitoring/Surveillance Analysis
  - ✓ Review monitoring in downstream water bodies to the first municipal intake

Challenges

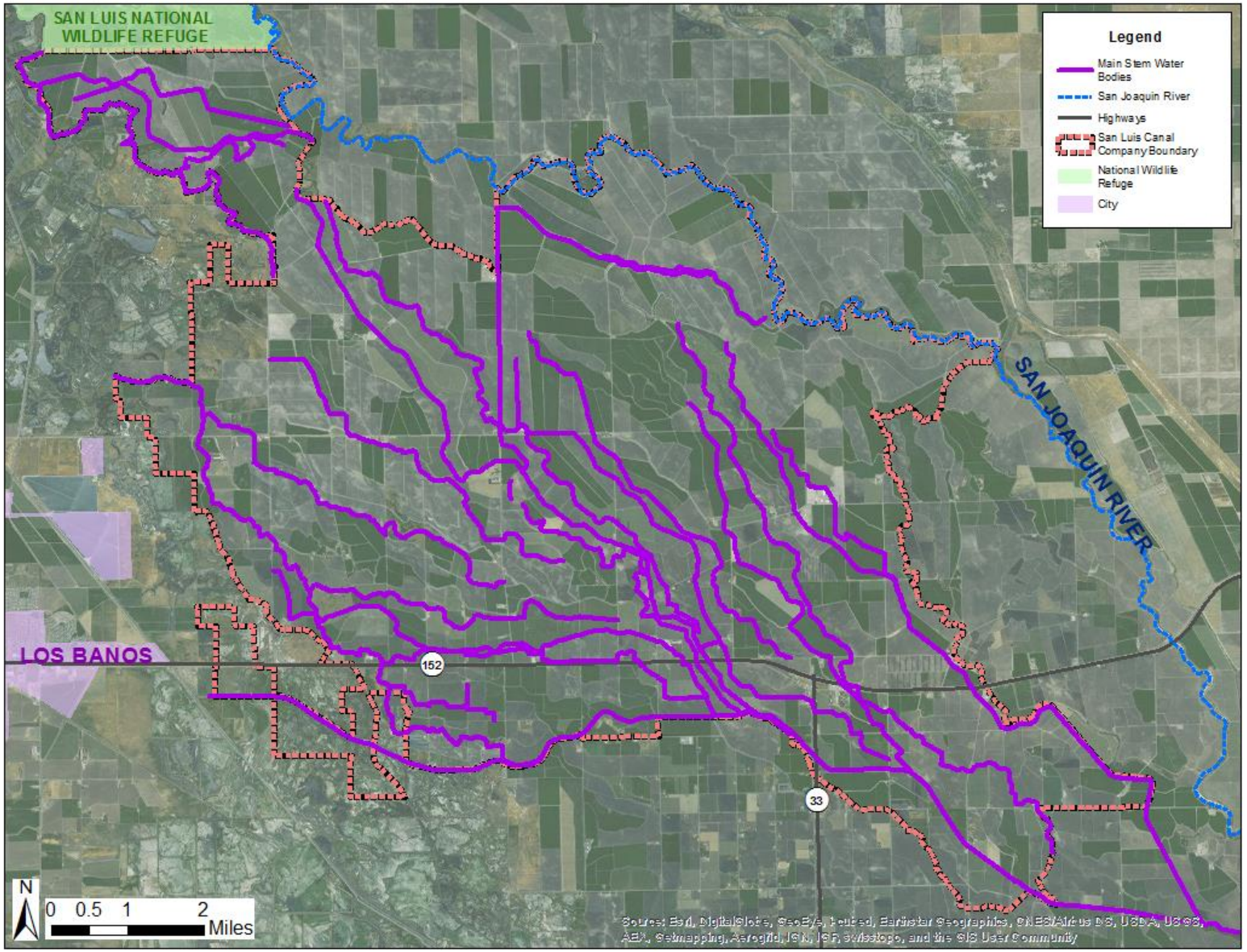
Issues for further discussion:

- Water Body Listings – Level of Detail
- LIMITED-MUN
- Monitoring/Surveillance

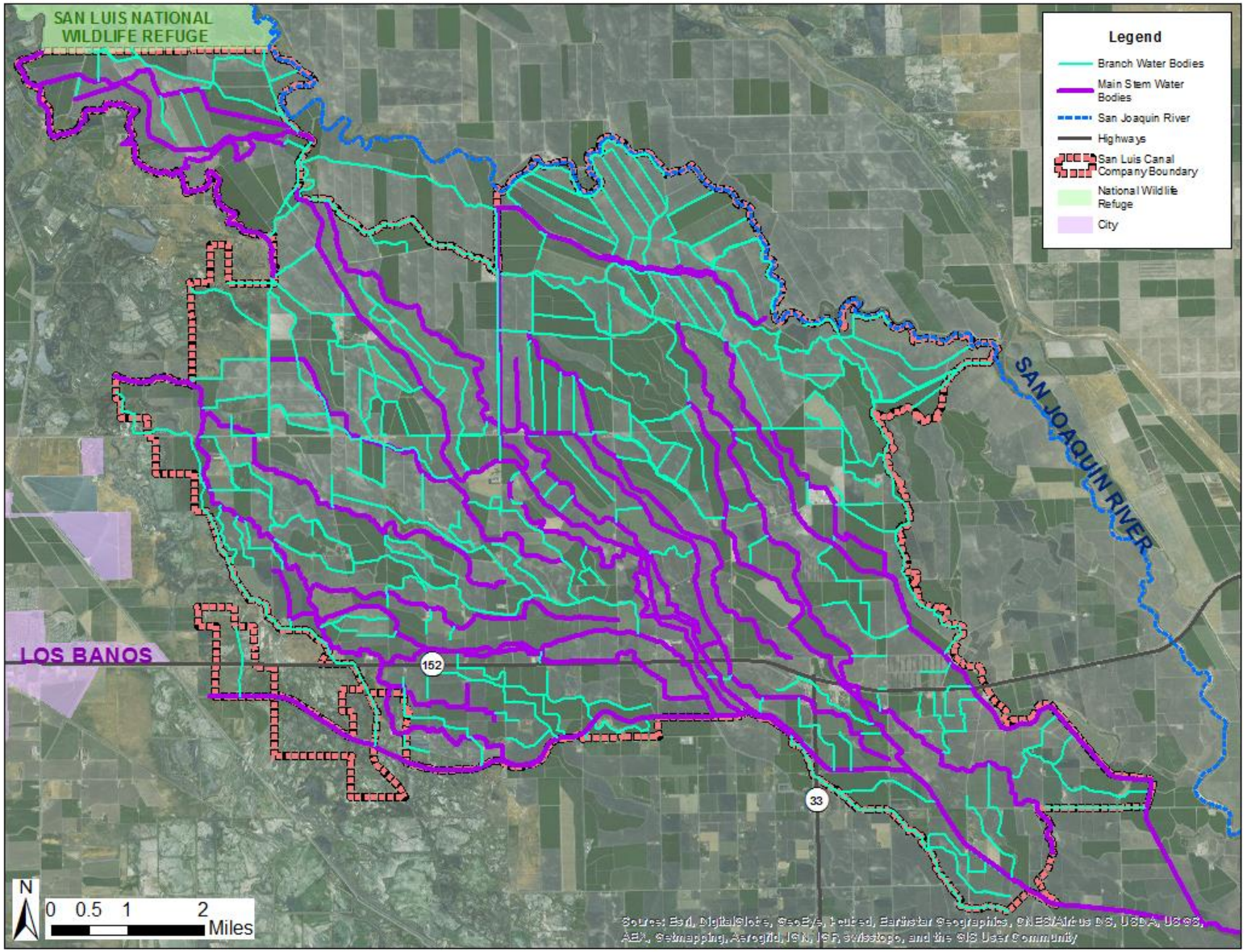
Challenges
Water Body Listings
Level of Detail

- Name hundreds of water bodies in the Basin Plan?
- How do we plan ahead for new or modified Ag water bodies?

Main Systems (23 Total)



All Water Bodies (232 Total)



Challenges
LIMITED-MUN
Stakeholder Concerns

- Preferred alternative is a Narrative Water Quality Objective
- Developing the exact language is a challenge

Challenges
Monitoring and Surveillance
Stakeholder Concerns

Water quality impacts to downstream MUN water bodies

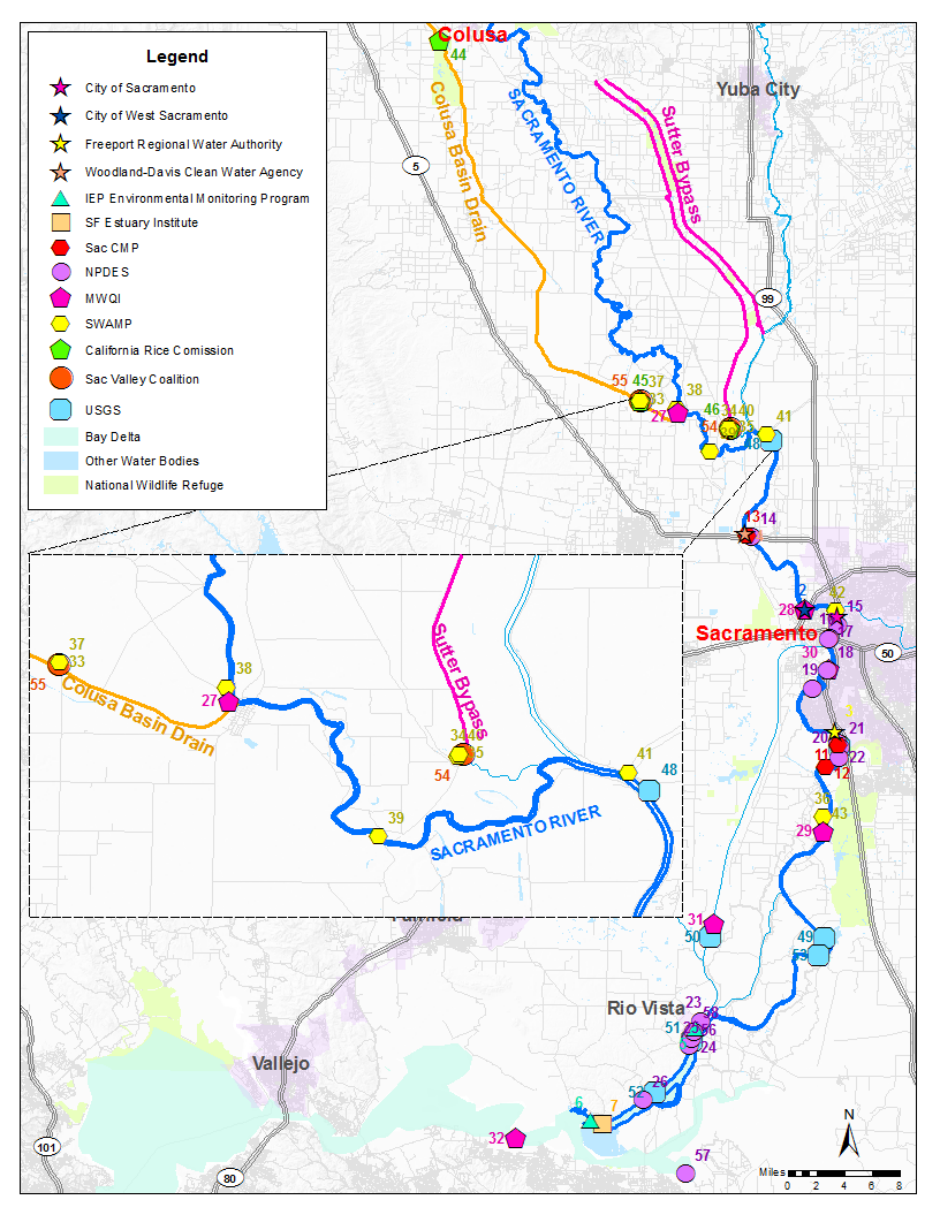
- Adequacy of current monitoring to quickly detect water quality changes
- Sufficient evaluation of all MUN water quality objectives
- Monitoring requirements for de-designated water bodies vs. LIMITED-MUN water bodies

Challenges
Monitoring and Surveillance
Stakeholder Concerns

Cumulative Impacts

- Cumulative impact analysis required for CEQA
- Must consider application of process for >6000 water bodies region-wide
- What type of monitoring information is needed?

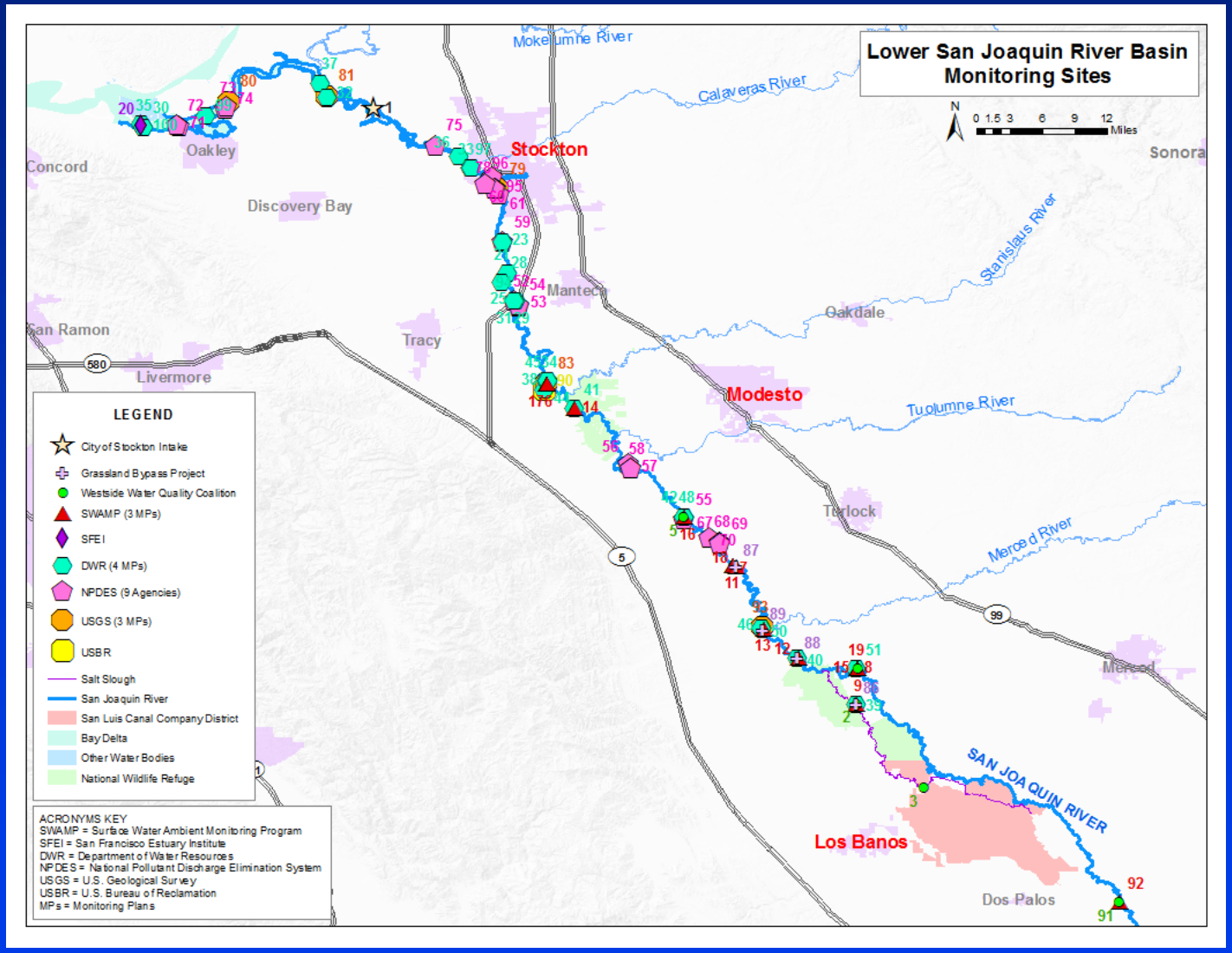
Monitoring/Surveillance



Monitoring Sites downstream of the 12 Sacramento POTW water bodies

Monitoring/Surveillance

Monitoring Sites downstream of SLCC



Challenges
Monitoring and Surveillance

- Evaluation of all of our regulatory programs
  - ILRP
  - NPDES
  - WDRs
- Flexibility to address individual scenarios

Schedule

- CEQA Environmental Review and Economic Analysis - Summer 2015
- Draft Staff Report Peer Review – Summer/Fall 2015
- Draft Staff Report Public Review – Fall 2015
- Board Hearing – Winter 2015/2016

Public Forum