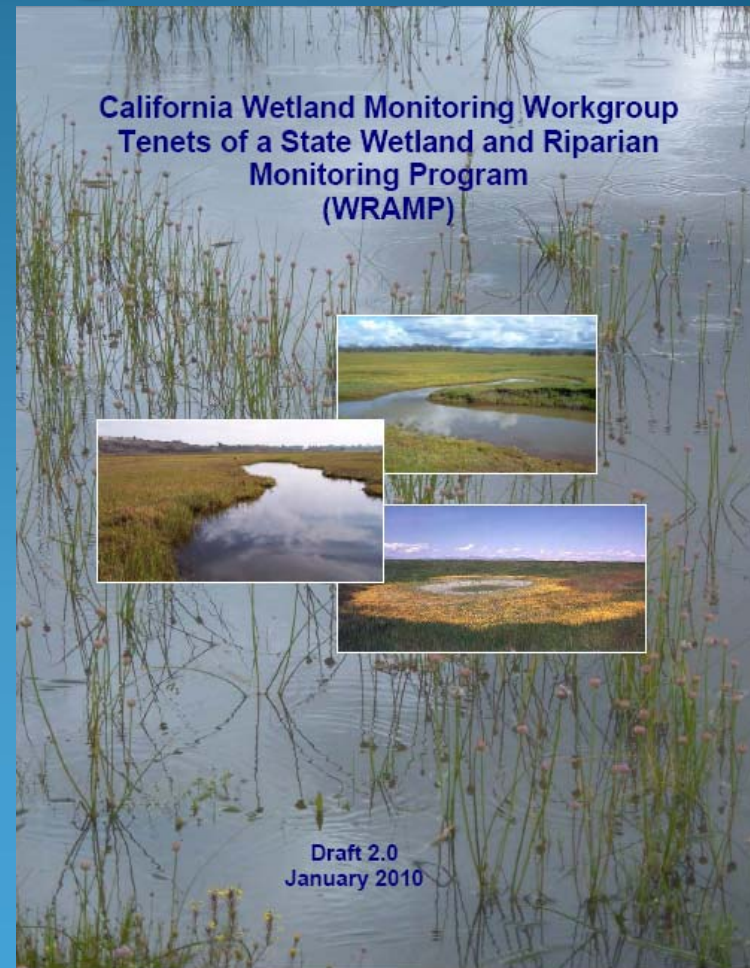


# Tenets of State Wetland Monitoring

Report from the California  
Wetland Monitoring  
Workgroup

February 10, 2010  
SCCWRP, Costa Mesa, CA



# CALIFORNIA WATER QUALITY MONITORING COUNCIL

- [Home](#)
- [Drinking](#)
- [Swimming](#)
- [Eating Fish & Shellfish](#)
- [Aquatic Ecosystem Health](#)
- [Stressors & Processes](#)

**My Water Quality – hosted by the Surface Water Ambient Monitoring Program (SWAMP)**

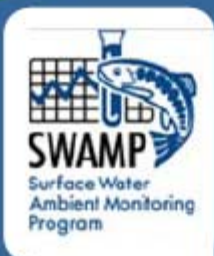
**GOVERNOR  
 SCHWARZENEGGER**



[Visit his Website](#)

- [Cal/EPA](#)
- [The Resources Agency](#)
- [About the California Water Quality Monitoring Council](#)
- [State & Regional Water Boards](#) (links to page 12)
- [Web Portal Partners](#)
- [Monitoring Programs, Data Sources & Reports](#)
- [Water Quality Standards, Plans and Policies](#)
- [Regulatory Activities](#)
- [Enforcement Actions](#)
- [Research](#)

- [About SWAMP](#)
- [SWAMP Tools](#)



## Welcome to My Water Quality

This web portal, supported by a wide variety of public and private organizations, presents California water quality monitoring data and assessment information from a variety of perspectives that may be viewed across space and time.



### IS OUR WATER SAFE TO DRINK?

Safe drinking water depends on a variety of chemical and biological factors regulated by a number of local, state, and federal agencies. [More >>](#)



### IS IT SAFE TO SWIM IN OUR WATERS?

Swimming safety of our waters is linked to the levels of pathogens that have the potential to cause disease. [More >>](#)



### IS IT SAFE TO EAT FISH AND SHELLFISH FROM OUR WATERS?

Aquatic organisms accumulate certain pollutants from the water in which they live, sometimes reaching levels that could harm consumers. [More >>](#) (links to page 2)



### ARE OUR AQUATIC ECOSYSTEMS HEALTHY?

The health of fish and other aquatic organisms and communities depends on the chemical, physical, and biological quality of the waters in which they live. [More >>](#)



### WHAT STRESSORS AND PROCESSES AFFECT OUR WATER QUALITY?

Beneficial uses of our waters are affected by emerging contaminants, invasive species, trash, global warming, acidification, pollutant loads, and flow. [More >>](#)

# Why Wetland Monitoring?

- Wetlands are important
  - Many functions and social services
- Managed by more than a dozen agencies
  - Federal and State
- Lots of monitoring
  - Permit-driven
  - Joint ventures
  - Restoration, conservation, stewardship
- Difficult to answer fundamental questions
  - Extent, condition, and trends
  - Program effectiveness

# Current Wetland Monitoring Challenges

- Lack of coordinated statewide program for wetland monitoring
  - Agreed upon process for answering key questions
- No overarching assessment, reporting, and information management framework
- Existing wetland data can't be easily integrated
  - Different methods to assess wetland condition
  - Different monitoring designs and indicators
  - Disconnected data management
- Quality assurance programs are inconsistent and not well coordinated

*These issues are not unique to wetlands → solutions may transfer to other areas*

# Opportunities

- Existing regional partnerships
- Strong statewide workgroup with history of working together
- Regulatory drivers for interagency coordination
- New/emerging wetland & riparian policy
- Many technical tools already developed

# California Wetland Monitoring Workgroup (CWMW)

- Subcommittee of California Water Quality Monitoring Council
  - Meet every other month since July 2008
- State and Federal co-chairs + SB1070 liason
  - Participating agencies: 12 State, 5 Federal, 5 Academic/Research
- Established charter and governance structure
  - Forum for development, coordination, and implementation of wetland monitoring across California

# We Have Accomplished A Lot!

## Coordination

- Wetland definition and classification system (in support of State policy)
- Wetland mapping and data protocols
- Monitoring framework document
- Prioritize technical work

## Assessment

- 2007 Statewide estuarine ambient survey
- Riverine assessment through PSA

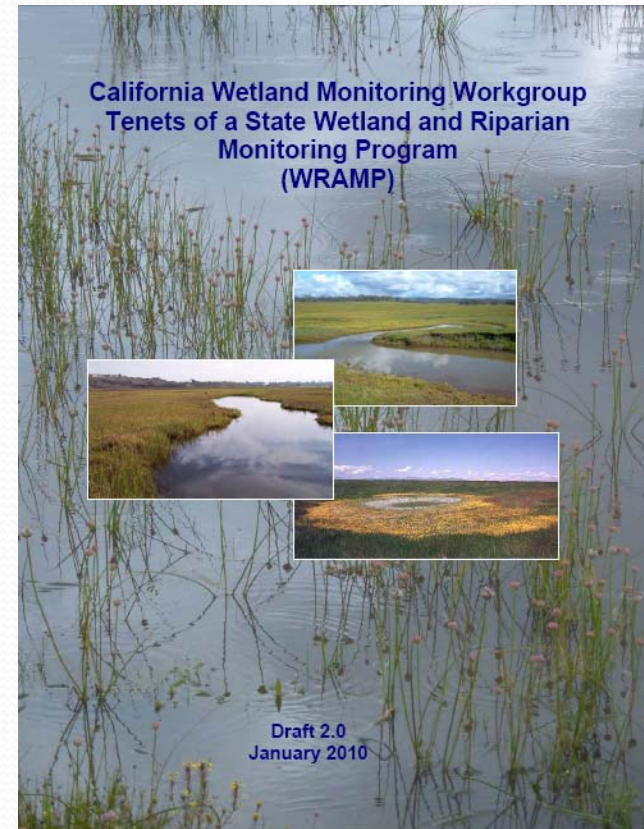
## Implementation Coordination

- CRAM Implementation Technical Bulletin
- CRAM trainings
- Coordination on Wetland Tracker (Portal)
- Coordination of grant proposals
- Funding subcommittee



# State Wetland and Riparian Monitoring Program (WRAMP)

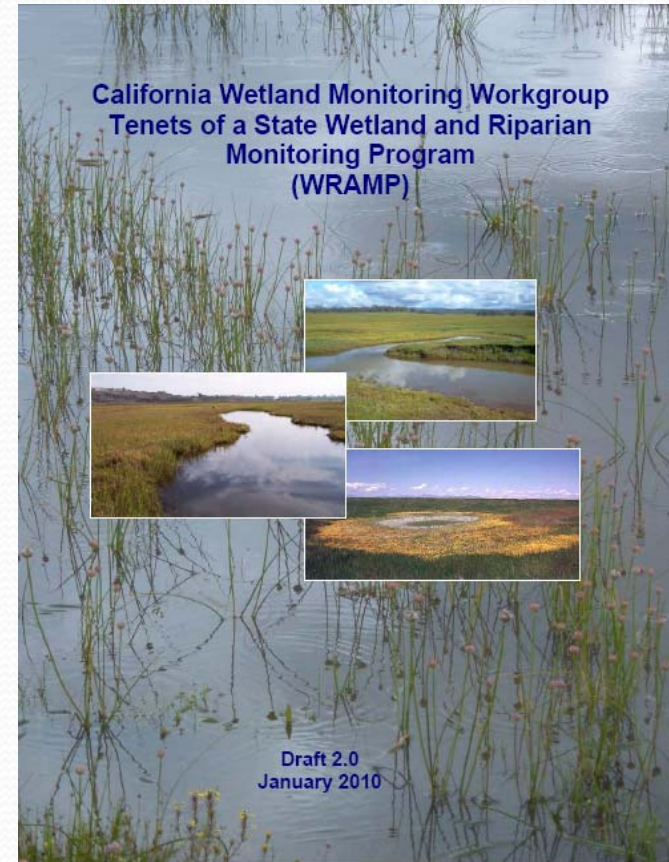
- Address challenges and capitalize on opportunities
- Question driven
  - What is the extent and distribution of wetlands?
  - Are conditions getting better or worse?
  - Are our programs being effective?
- Flexible application based on agency needs
  - Support, not subsume agency programs
- Recommendations
  - Current status
  - Implementation priorities
  - Preliminary costs
  - Funding strategies



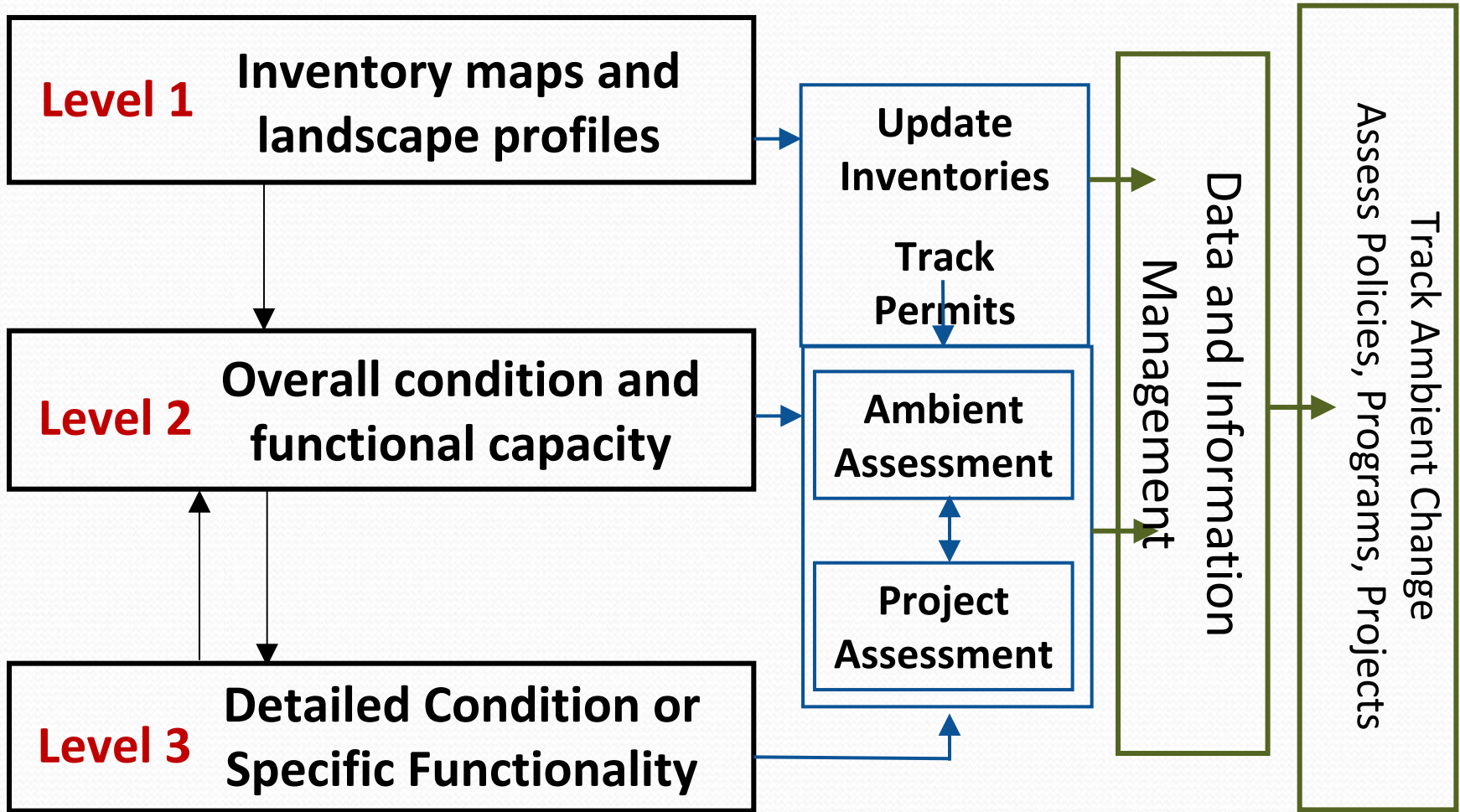


# State Wetland Monitoring Plan

- Consistent Statewide Framework
  - Common tools and data management
- Regional Implementation
  - Build on existing programs
  - Customize to meet regional needs
- Management of Statewide Products
  - Level 1 (mapping) = Natural Resources
  - Level 2 (CRAM + assessment) = Cal. EPA
- Ongoing Technical Support & Coordination
  - CWMW provides statewide coordination
  - Most “work” occurs through regional teams

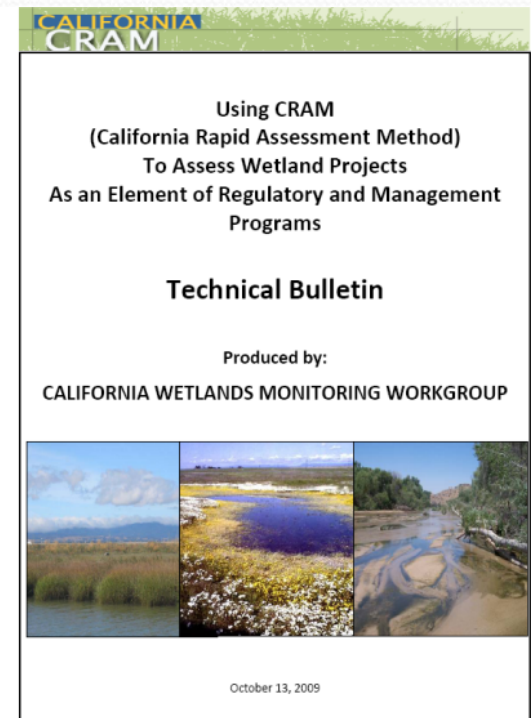


# Assessment Framework

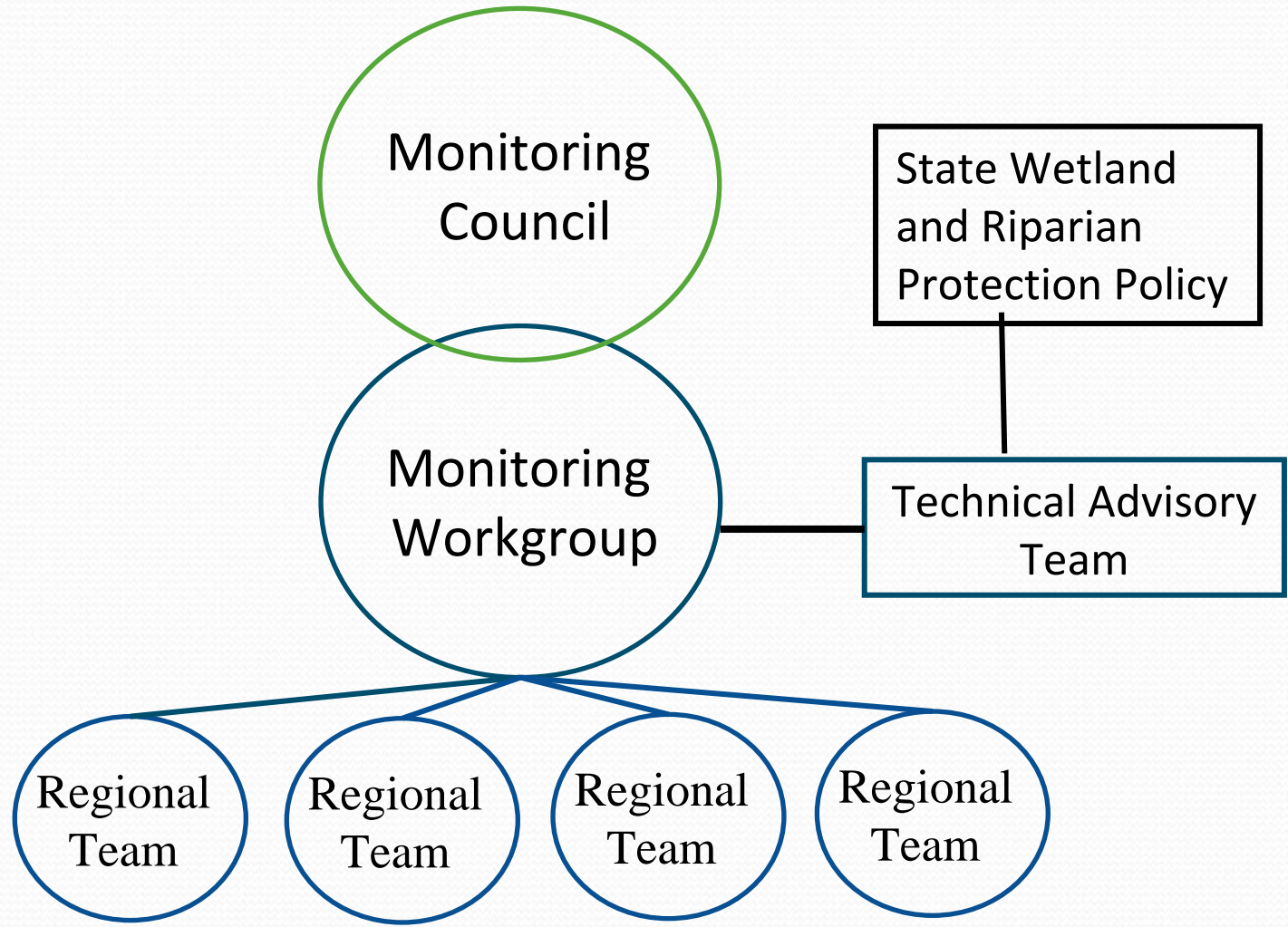


# The Wetland Assessment Toolbox

- Level 1
  - Standardized wetland definition and classification
  - Enhanced NWI mapping
- Level 2
  - California Rapid Assessment Method (CRAM)
- Level 3
  - Recommended indicators
  - Standardized protocols for some indicators
- Data Management
  - Wetland Portal (with Tracker functionality)



# Coordination of State Wetland Program



State Wetland Monitoring and Assessment Program

# Recommendations of State Program Document

- ***Wetland Definition, Mapping, Classification, and Delineation***
  - Adopt a common approach for wetland and riparian classification in California.
  - Adopt a common approach for wetland and riparian mapping in California.
  - Develop an analytical approach and data standards for reporting on wetland changes.
- ***Wetland Monitoring and Assessment***
  - Conduct ambient assessments for all major wetland classes in all ecoregions.
  - Develop consistent procedures for assessing the effect of projects.
  - Facilitate the adoption of rapid assessment methods as a core tool.
  - Develop a strategy for prioritization of research and intensive assessment.
- ***Data Quality Assurance and Quality Control***
  - Develop a coordinated quality assurance/quality control (QAQC) plan.
  - Develop consistent quality control and metadata requirements.
- ***Data Management, Outreach and Information Sharing***
  - Establish a coordinated and integrated data management program.
  - Establish a wetland data portal as a repository of all wetland data

# Implementation Funding

- Incorporate tools into existing agency programs
  - Improve efficiencies through information sharing
- Coordinate through regional data centers
- Recommend dedicated agency staff to support CWMW activities
- Initial up-front costs + annual costs

# Estimated Statewide Costs

- Up front costs
  - Complete update of statewide maps - \$5 million
  - Complete mapping protocols & standards - \$60,000
  - Develop QA/QC procedures - \$75,000
- Annual costs (statewide, 7 year cycle)
  - Status and trends - \$315,000/yr
  - Ambient assessment - \$850,000/yr
  - QA/QC, data management, reporting - \$1.2 million
- Periodic update of state wetland map - \$8.5 million over 20 years

# Estimated Statewide Costs

- Up front costs
  - Complete update of statewide maps - \$5 million
  - Complete mapping protocols & standards - \$60,000
  - Develop QA/QC procedures - \$75,000
- Annual costs (statewide, 7 year cycle)
  - Status and trends - \$315,000/yr
  - Ambient assessment - \$850,000
  - QA/QC, data management, reporting - \$1.2 million
- Periodic update of state wetland map - \$8.5 million over 20 years

Incremental/unit costs  
\$500,000 per ecoregion  
\$100,000 per  
ecoregion/wetland type

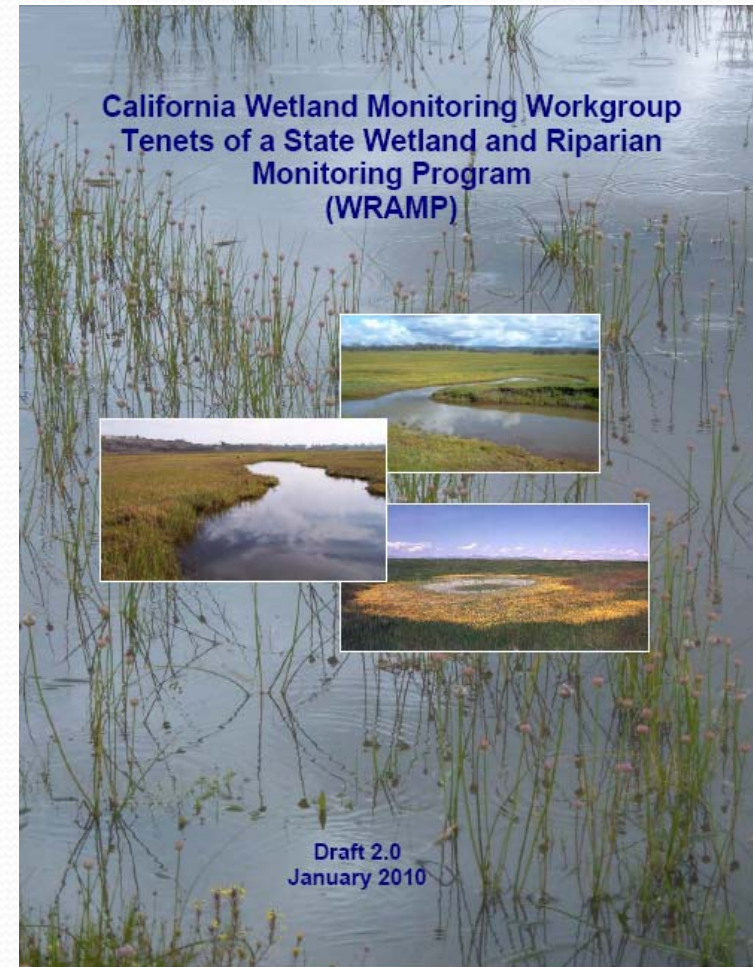


# Potential Funding Strategies

- Endowment based on fines, mitigation fees, etc
- Capture a portion of permit fees
- Environmental License Plate Fund (new plate)

# State Strategy – Next Steps

- Approval by SB1070 Council
- Incorporation into overall state strategy
- Briefing to Secretaries
  - Cal EPA
  - Natural Resources
- Pursue funding strategies
- Initial implementation
  - Local workgroups, joint venture, etc.





**Thank you!**