WETLAND PROGRAM DEVELOPMENT IN CALIFORNIA

A CENTRAL COAST PERSPECTIVE

A brief history of our partnership with USEPA Region 9

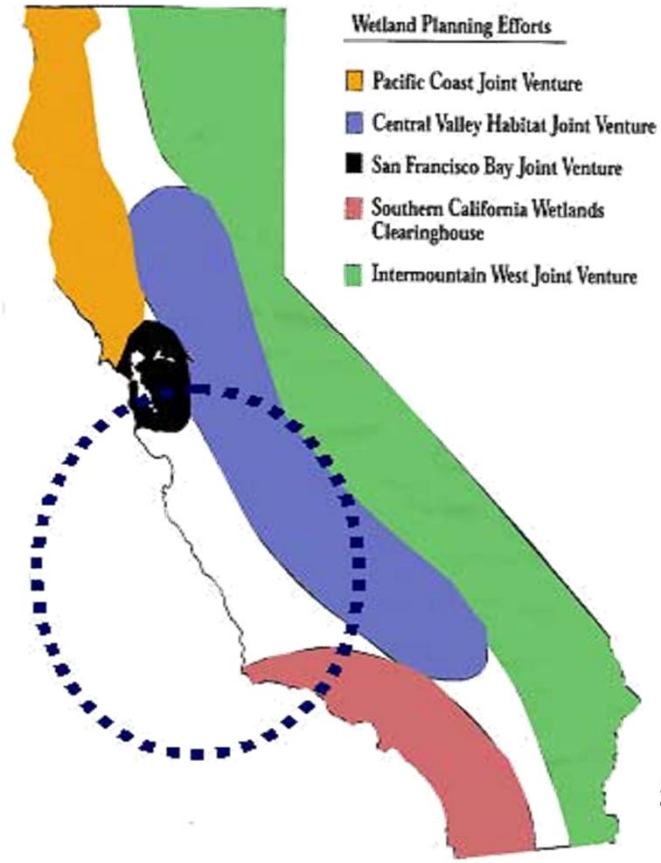
CCWG
CENTRAL COAST WETLANDS GROUP

STANDARD CHALLENGES FOR WETLAND MANAGERS THROUGHOUT CALIFORNIA

- No capacity to track management of wetlands other than at the project level
- Limited wetland mapping
- Central coast had no regional coordination

– only disparate watershed groups.

CALIFORNIA REGIONAL WETLAND PLANNING EFFORTS



AN INTRODUCTION TO THE CENTRAL COAST WETLANDS GROUP

To Advance the Coordination of Wetland Science and Management on the Central Coast

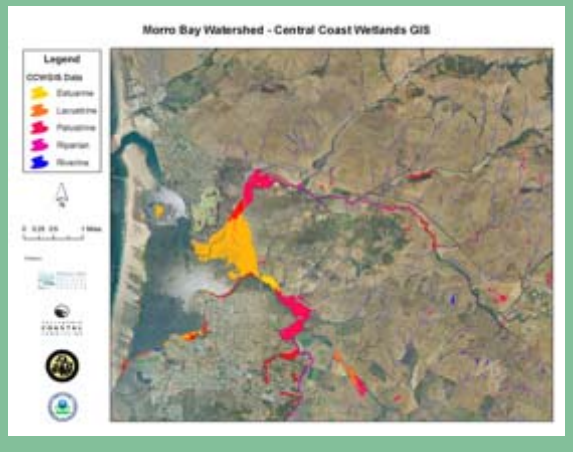
Working Principles included:

- Collaboration of Central Coast partners working to support wetland enhancement and protection
- Providing the infrastructure, tools and technical support for standardized monitoring and assessment
- Participate in State Wetland Monitoring Program as regional partner

ESTABLISHING A REGIONAL WETLAND PROGRAM PARTNER

Cheryl McGovern and Ross (at Coastal Commission)

- Initiated the first project in 2001 with Morro Bay NEP
  - compiled information on wetland restoration projects (grants and permit)
  - mapped the wetlands of Morro Bay
  - Started a historical ecology program
  - Led to:
    - State demonstration watershed
    - focus for Riparian tool development



THIS LED TO OUR PARTICIPATION IN THE DEVELOPMENT OF NUMEROUS STATE TOOLS AND PROGRAMS:

- State mapping projects: NWI (lacking on central coast) online mapping tools (ecoatlas), CARI
- Development of CRAM assessment tool to track wetland restoration efforts across California
- Integration of tools into agencies procedures

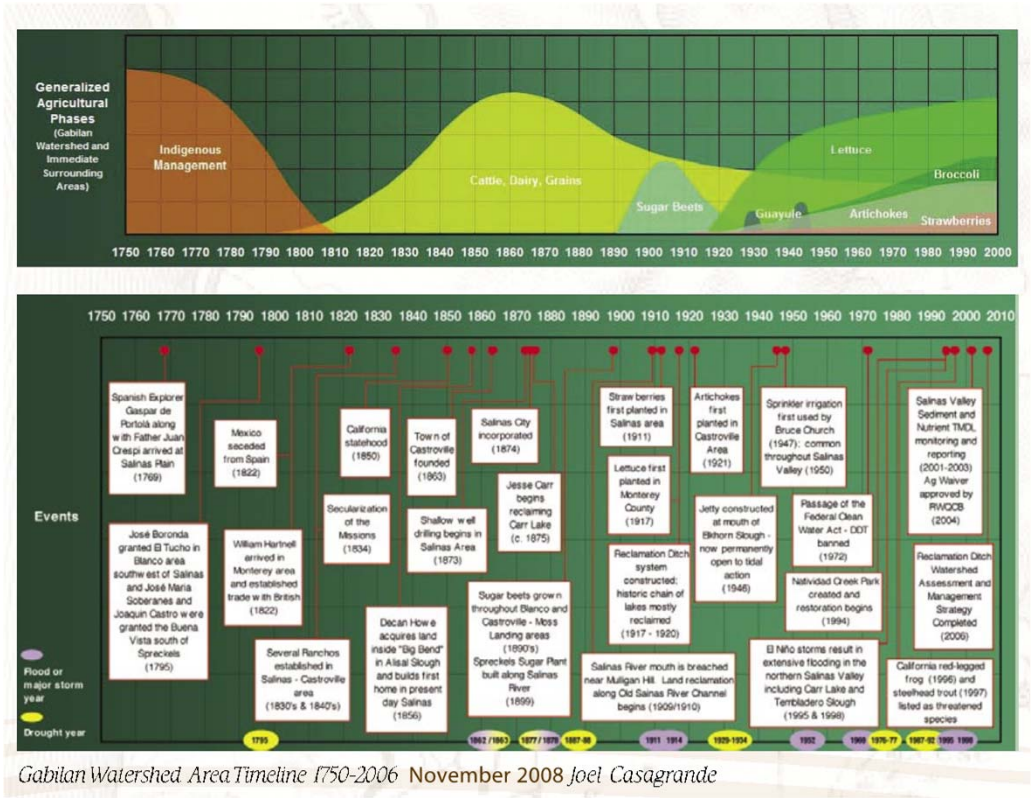
  and watershed management efforts

SUPPORT OF THE CENTRAL COAST WETLANDS GROUP PROGRAM OBJECTIVES

CD-96997601

OUTPUTS

- Established CCWG Program Charter and Program Objectives
- Established CCWG as a Research Affiliate at MLML
- Started a Historical Ecology Program at CCWG
- Developed the CCWG Website and Logo
- Hosted the first Central Coast Wetland Science Symposium



Gabilan Watershed Area Timeline 1750-2006 November 2008 *Joel Casagrande*

OUTCOMES

- Led to CCWG establishing itself in the wetland science and assessment “world”
- Several Wetland Science Symposiums have taken place since 2008
- All future grants to “CCWG” were made possible because of this one
- Allowed CCWG to be a the table with regional partners (CWMW, etc.)
- Allowed CCWG to be the field team lead for the NWCA (2011 and 2016)

CRAM TRAINING VIDEOS

OUTPUT-CRAM TRAINING VIDEOS FOR FOUR WETLAND TYPES

- Riverine
- Estuarine
- Bar-Built Estuarine
- Depressional

USING NEW METHODOLOGIES TO ASSESS BAR-BUILT ESTUARIES ALONG CALIFORNIA'S COASTLINE

CD-00T20101

BBE'S ARE UNIQUE ESTUARIES

- Established standardized classification for California estuaries
  - Bar-built estuaries separated from perennial estuaries

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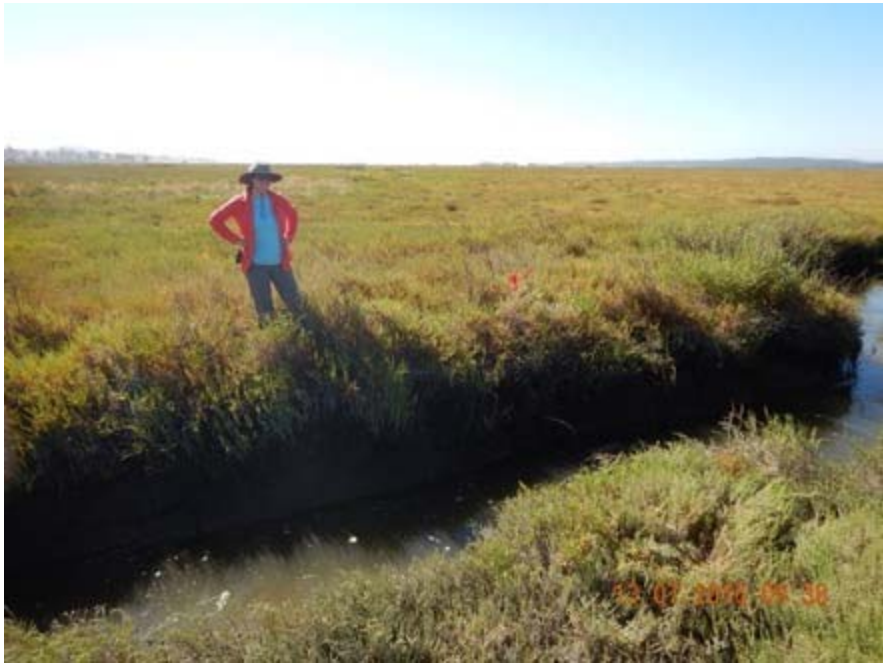
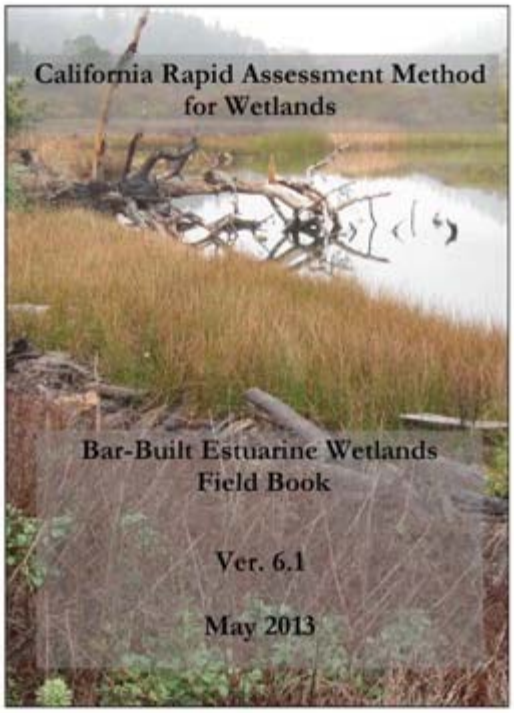


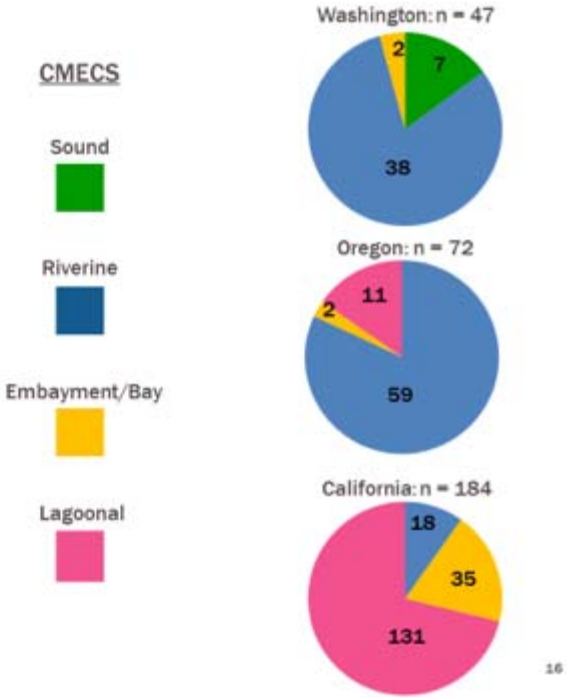
OUTPUT-BBE CRAM MODULE

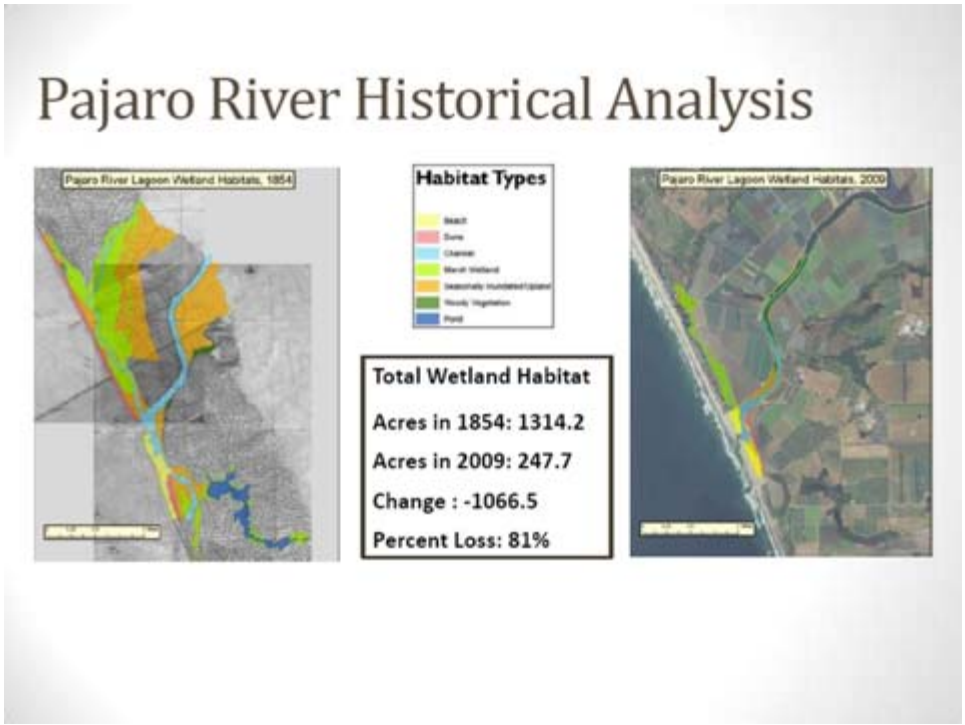
- Developed and then validated the CRAM module for BBEs



OUTPUT-COASTAL CONFLUENCE INVENTORY AND HISTORICAL HABITAT MAPPING

- Complete inventory of California Coastal Confluences
- Historical habitat maps based on 1850's T-sheets





OUTCOMES

- Collaboration with The Nature Conservancy on Coastal Confluence Inventory
- NOAA-NMFS BBE Management Guidance
- BBE Management and Prioritization with CA State Parks
- PMEP West Coast Estuary Portal/workgroup

DEVELOPMENT OF A BAR-BUILT ESTUARY MONITORING SYSTEM AND RESOURCE PRIORITIZATION TOOL FOR CALIFORNIA STATE PARKS

CD-99T18101

MANAGEMENT CHALLENGES

- Lack of a statewide inventory of the resources
- Disparate management of resources by multiple agencies for protection of various species
- Limited ability to compare data among systems
- Limited understanding of habitat loss due to historical land form changes
- Limited understanding of habitat change due to mouth management

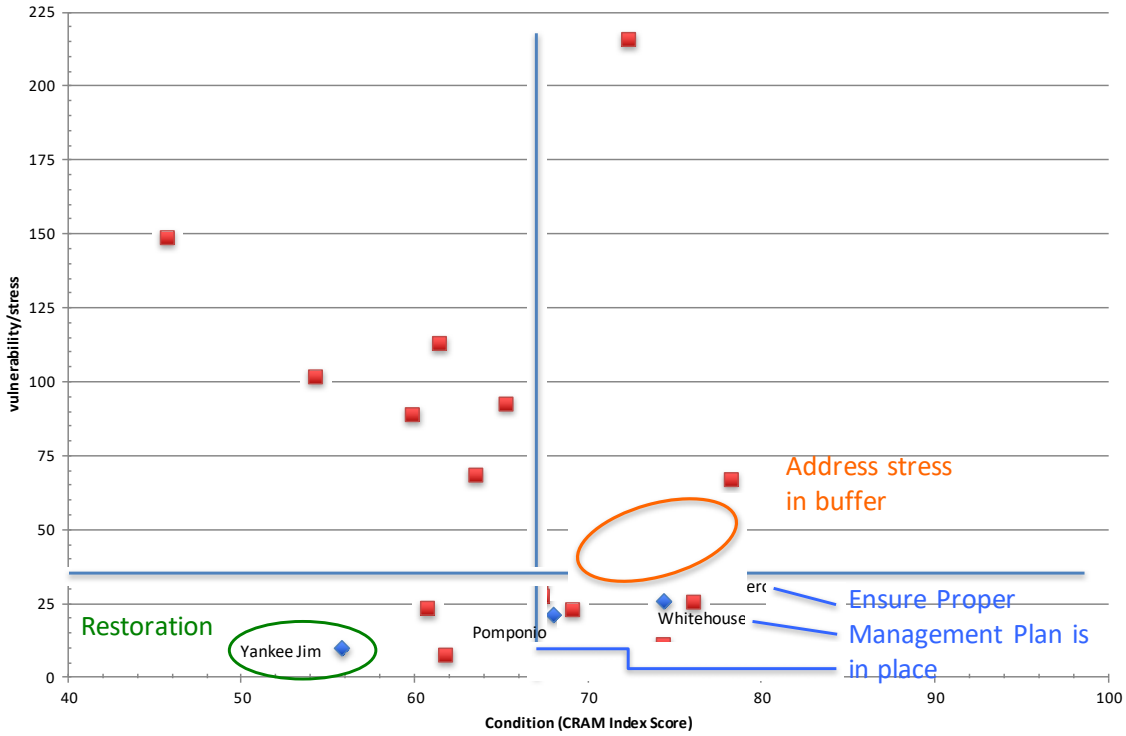
SOLUTIONS

- Lack of a statewide inventory of the resources
  - Inventory complete for California
- Disparate management of resources by multiple agencies for protection of various species
  - Working to implement standardized monitoring tools
  - NOAA/NMFS - standard breaching guidance
- Limited ability to compare data among systems
  - BBE CRAM module complete - Assess the condition of ~100 BBEs
  - Standard data being collected - watershed stressor, CRAM, depth loggers, topographic surveys, beach grainsize, etc.
- Limited understanding of habitat loss due to historical land form changes
  - Change analysis between 1850 and current habitat maps
- Limited understanding of relationship between mouth breaches and habitat changes
  - Marsh plain mapping and depth loggers
  - Developed Inundation Periodicity Index

- For 30 bar-built estuaries:
  - BBE Condition (CRAM)
  - Watershed stressors
  - Historical loss/alteration of habitat
  - Temp/Depth loggers
  - Marsh plain and beach topo survey
  - Beach sand grain size analysis
  - SLR Vulnerability (SCCWRP method)
- Combined to assist with management, restoration, etc.
- Establish long-term water level monitoring program at multiple sites

PRIORITIZATION STRATEGIES

1. Threshold Evaluation
2. Condition-Vulnerability Graph
3. EPA Decision Support Tool



OUTCOMES

- Increased knowledge of BBEs at State Parks RMD office in Sacramento
- Increased ability of know the condition of BBEs by RMD and District staff
- May lead to adoption of WRAMP tools by RMD staff for BBE monitoring and Management

DEVELOPMENT OF NEW TOOLS TO ASSESS RIPARIAN EXTENT AND CONDITION-A CENTRAL COAST PILOT STUDY

CD-00T83101

OUTPUTS

- Development and Verification of the Riparian Rapid Assessment Method (RipRAM)
- Testing remote riparian mapping and assessment methods on the central coast (RipZET, pixel-based classification, etc.)
- Assessment of five watersheds on the central coast using RipRAM

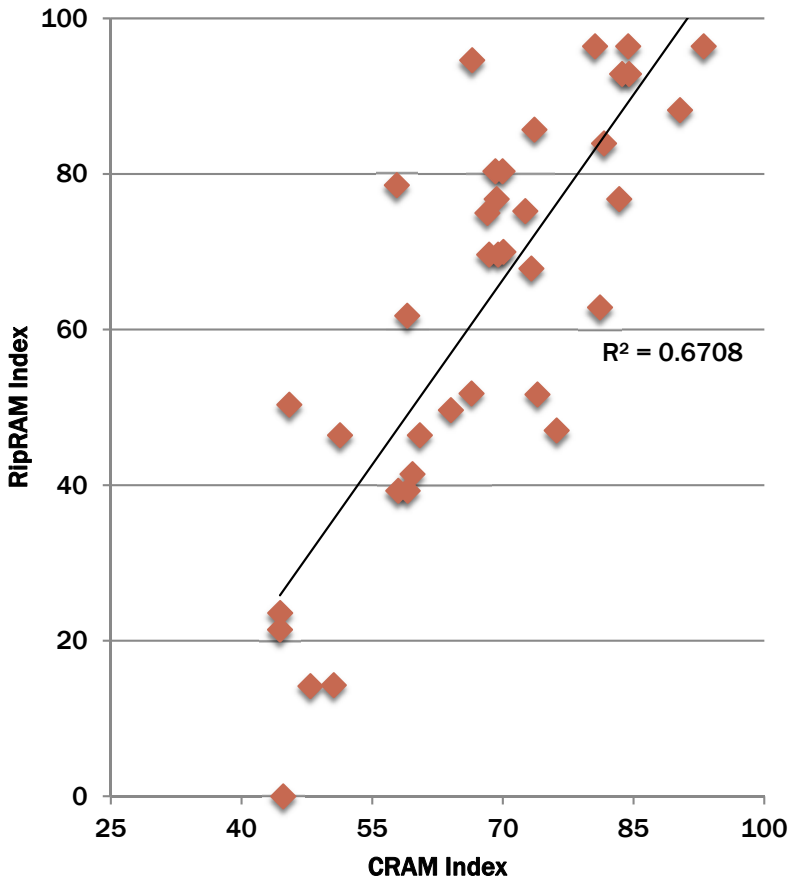
RIPRAM SCORES

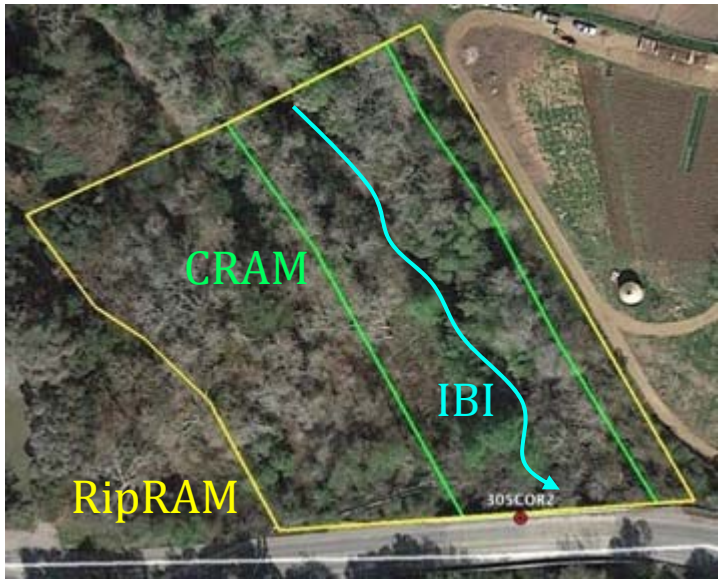
RipRAM index score=0-20

RipRAM index score = 50-70

RipRAM index score =80-100

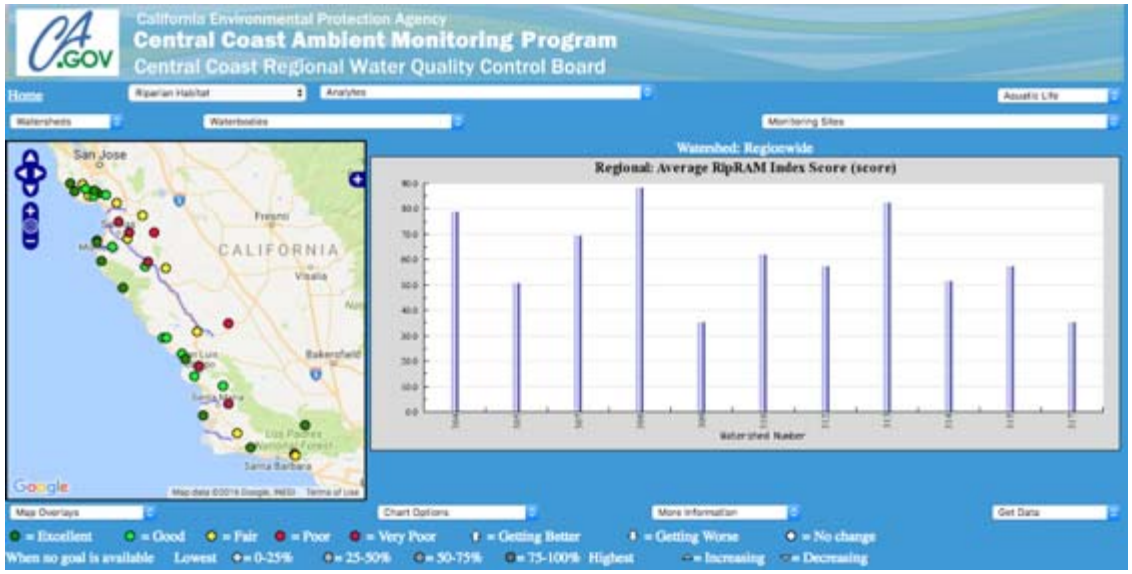
RIPRAM AND CRAM



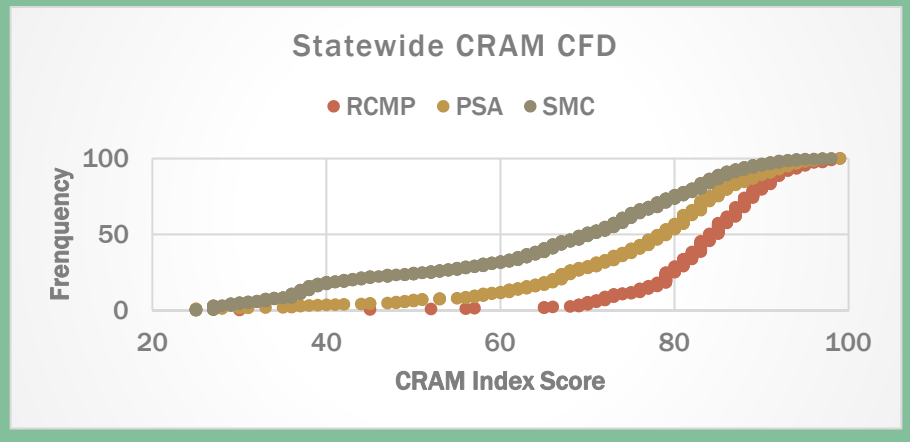


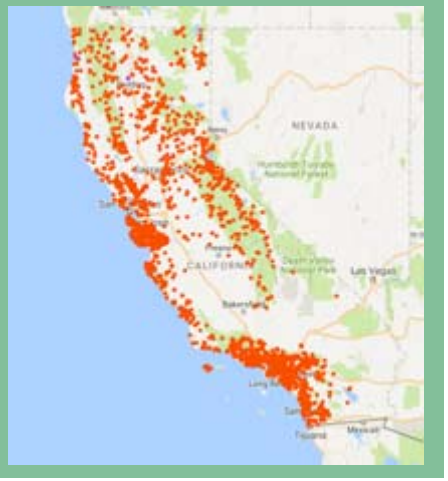
OUTCOMES

- Led to the adoption of RipRAM by RB3 as a measure of riparian health for the CCAMP data navigator
- Led to WSP having a placement site at CCWG
- Raising the importance of riparian areas /buffers on the central coast
- Lots of interest in the new methodologies in SoCal (WRP)



- Completed 805 CRAM assessments across CA
- Integrated CRAM and EcoAtlas into RB3 protocols
  - Salinas River management program (401)
  - CCAMP watershed rotational monitoring
  - Riparian assessment and policy development
  - Using CRAM in Salinas Valley Storm Water Plan
- Trained over 200 practitioners in use of CRAM
- Worked with local watershed groups to document restoration success (RCD, Land Trusts, ESF, CC&R, NMCUSD)





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