

# California's Surface Water Ambient Monitoring Program

## SWAMP Bioassessment Program Update

California Aquatic  
Bioassessment Workgroup  
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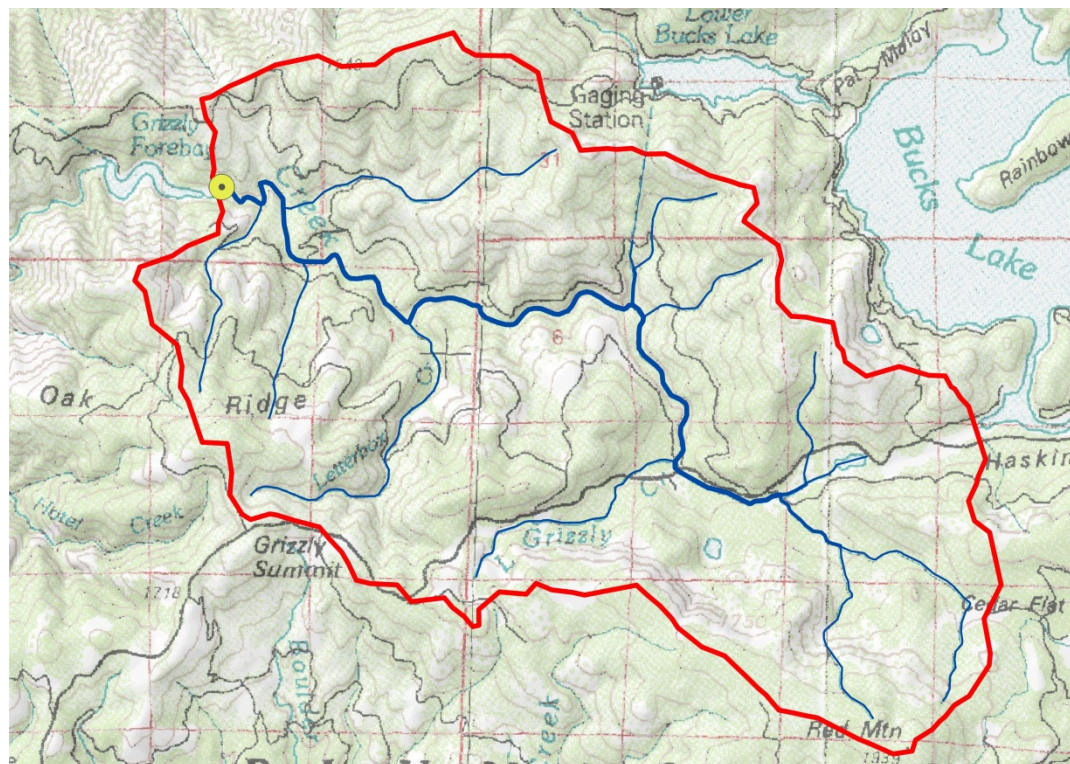
*SWAMP Coordinator, State Water Board*



# SWAMP Bioassessment Program Update

## Presentation Outline

- Long term vision
- Program elements
- Current status
- Plans for the future



# Why Bioassessment?

## Federal Clean Water Act

“ ... restore and maintain chemical, physical and biological integrity of the Nation’s waters.” [CWA Section 101(a)]

## Porter-Cologne Water Quality Control Act

Water quality defined as “chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use.” [Water Code, Section 13050(b)]





# SWAMP Bioassessment Program

## Long Term Vision

Ecological indicators are fully assimilated into water resource management

- Multiple indicators (BMIs, algae)
- Multiple aquatic ecosystem types (streams, rivers, lakes, wetlands)
- Multiple programs & agencies



# Bioassessment Program Elements

- Monitoring programs (statewide & regional)
- Data analysis tools
- Field and laboratory procedures
- QA/QC and data management
- Training and professional development
- Integration and coordination



# Lead Scientists



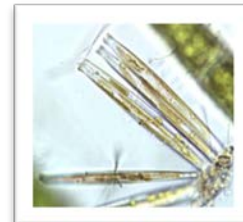
## Benthic Macroinvertebrates

*Dr. Pete Ode*



## Algae

*Dr. Lilian Busse*



# Monitoring Programs

- Perennial Streams Assessment (PSA)
- Reference Condition Management Program (RCMP)
- Regional Board monitoring programs (TMDLs, regional monitoring programs, permit compliance, etc.)



# Bioassessment Data Tools

- Ecoregion-based Indices of Biological Integrity (IBIs)
- California Stream Bioassessment Protocol (CSCI)
- Algae IBIs
- Algae CSCI (coming soon!)





# Field and Lab Procedures

- Field SOPs – BMIs & Algae
  - Wadeable streams
  - Depressional Wetlands (coming soon!)
- Identification/Taxonomy
  - Lab SOPs – BMIs & Algae
  - Taxonomic master lists (BMIs & Algae)

## QA/QC & Data Management

- Bioassessment QA/QC SOP
- Bioassessment Reporting Module

## Training and Professional Development

- College of Bioassessment
- CABW



# Integration and Coordination

## **‘Internal’ Coordination**

- Biological Integrity
- Beneficial use assessments
- Nutrient Criteria
- Discharge permits (e.g. stormwater)
- Wetlands Policy
- Clean Water Team – citizen scientists

# Integration and Coordination

## Partnerships with multiple programs and agencies

- Department of Fish and Wildlife
- Moss Landing Marine Labs
- SCCWRP/Stormwater Monitoring Coalition
- Healthy Streams Partnership - California Water Quality Monitoring Council
- US Forest Service
- CA Cyanobacteria HAB Network
- Many more!



# Plans for the Future

- CSCI automation tool
- New SWAMP Bioassessment website
- Depressional wetlands field SOP (coming soon!)
- Continue to support policy development; bio-integrity, nutrients, wetlands
- Improve feedback loop between permittees and technical staff
  - Ideas??





## *Plans for the future:*

- Other water body types
  - Non-perennial streams
  - Lakes
  - Large rivers

# QUESTIONS

???

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*SWAMP Website*

[http://www.waterboards.ca.gov/water\\_issues/programs/swamp/](http://www.waterboards.ca.gov/water_issues/programs/swamp/)

