California Water Boards

Session 6: Protection Goals, Milestones, and Metrics

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Outline

• Brief introduction to CA watersheds
• Big picture protection goals
• Use of biological + watershed data and indices for protection
• Where we are
• 189,454 miles of river
• <3,000 lakes, reservoirs
• ~ 2.9 - 4.3 million acres wetlands
• global biodiversity hotspot
  • Highest total number of species and highest number of endemic species in US
• highly altered landscape
  • Most rare and imperiled species of any state with more than 30% of California’s species threatened with extinction

Howard et. al, 2015
Growing population + economic development have changed natural systems to highly productive ag and urbanized landscapes

<95% wetlands gone (historically ~110 million acres)

Significant aquatic species declines

- >60% of native freshwater reptiles and amphibians vulnerable to extinction
- >80% of native fishes likely to be lost in next 100 years (if changes in management are not made and negative effects of climate change not addressed)
The Big Picture - Clean Water Act Goal

“to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters”

(33 U.S.C. Section 1251(a); CWA Section 101(a))
Use of biological + watershed data and indices for protection efforts
Bioassessment Program anchors large effort to support use of ecological data in freshwater management

- Goal = achieve better resource management outcomes with ecological condition indicators

Built around two core monitoring programs

- Perennial Streams Assessment (PSA) – randomly selected sites
- Reference Condition Management Program (RCMP) – sites with low levels of human activity

Provides foundational data + science to inform healthy watershed protection efforts
A framework for integrating watershed condition data
Credit: Pete Ode, CDFW
Healthy Watersheds Assessment – Dashboard

Goal: Where are healthy & vulnerable watersheds?

- Assessment uses open data (AB 1755)
- Open source tool (e.g., R Shiny)
- User-driven indicator or index selection & weighting
- Downloadable tables
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Credit: Pete Ode, CDFW
Where we are
Identification of high quality waters through Integrated Report Assessment

Waterbodies assessed with CSCI score of 0.79 or higher placed in Category 1 of the 2020-2022 Integrated Report

• All core beneficial uses are supported
Nonpoint Source Program Goals

Goal 1. Develop Landscape Assessment Tool
- Objectives and milestones: develop strategic action plan, phased implementation

Goal 2. Use the NPS Grant Program to protect high quality and/or healthy watersheds.
- Objectives and milestones: allocate % of CWA 319 funds to protection of high quality waters listed in Category 1 of IR, use landscape assessment tool to identify high quality, healthy and/or threatened waters to be included as program preferences in NPS Grant Program
Goal 1: Prevent and/or correct threats to high quality waters

• Objectives and Milestones: Utilize NPS Grant Program funds for projects that protect high quality waters; solicit NPS grant projects to prevent and/or correct threats to high quality waters (2020 – 2025)
San Diego (Region 9) Goal 1: Protect and restore natural flow regimes; net gain in wetland and riparian areas and quality; RARE beneficial use is not impaired; streams support ecologically balanced and sustainable communities of native organisms.

Objectives and Milestones

• Improve stream and wetlands conditions by protecting and restoring natural flow regimes and controlling NPS pollution to support ecologically-balanced communities of native organisms
  • Support development of biological objectives for ephemeral streams;…
  • Use CSCI scores to identify priority NPS and point source pollution efforts
  • …
Thanks!
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