

California Water Boards

Session 6: Protection Goals, Milestones, and Metrics

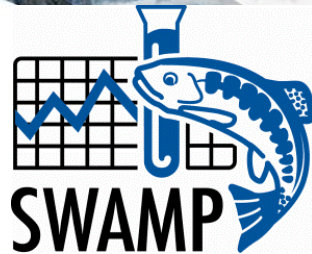
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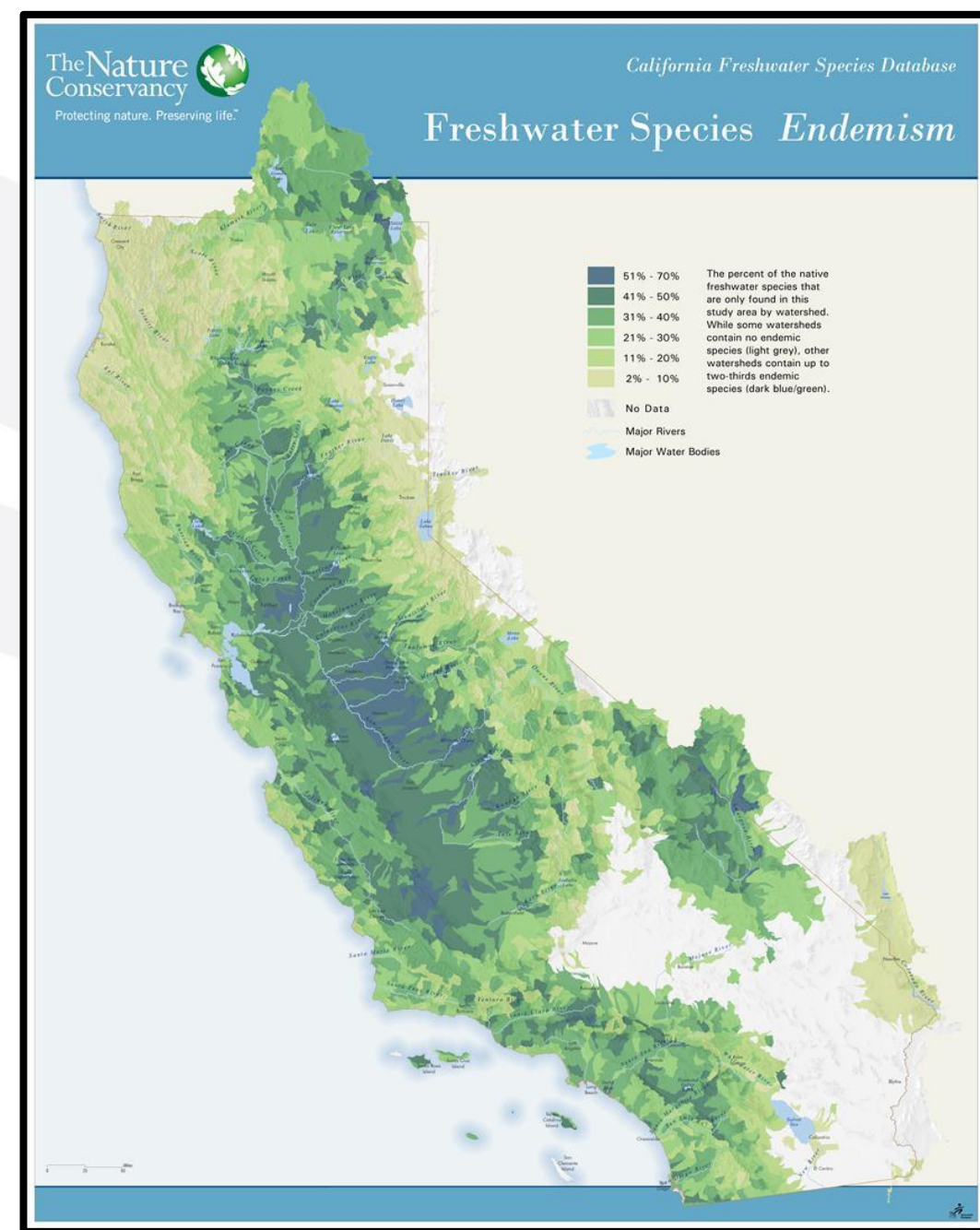


Outline

- 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)

Credit: Alamy

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



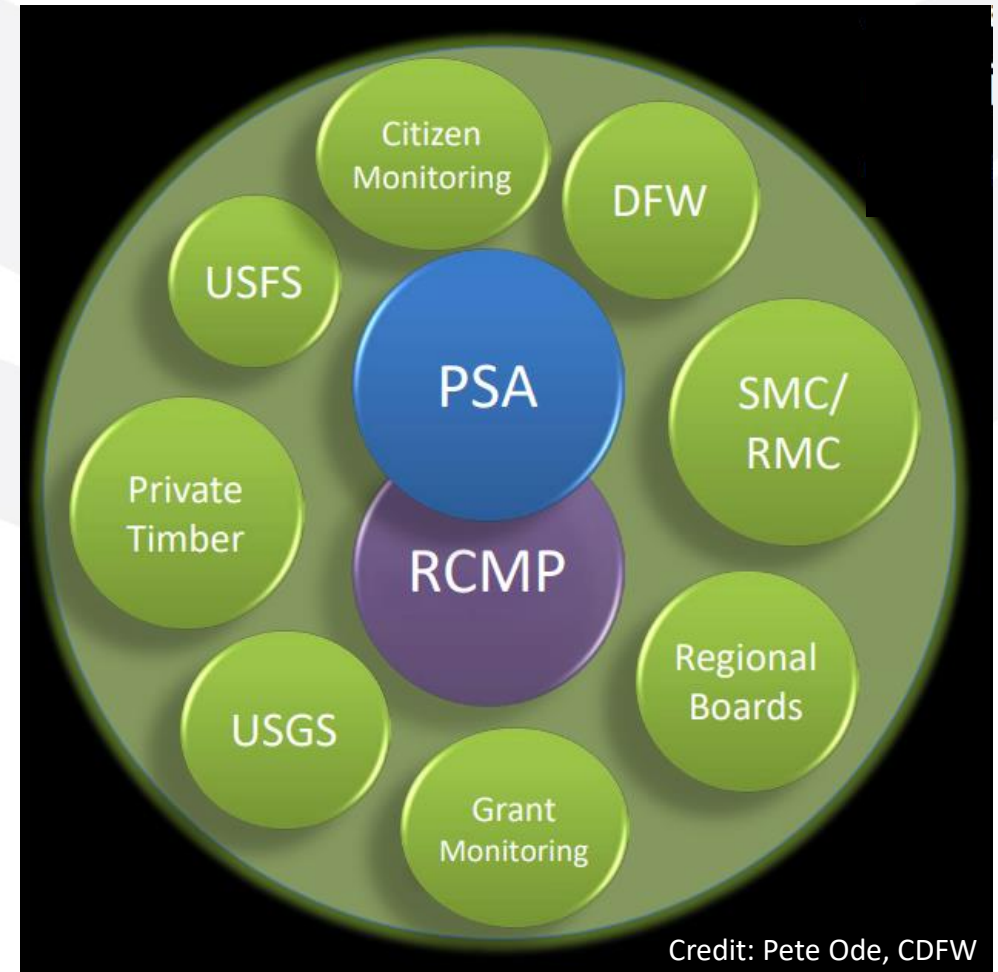
Bioassessment Program anchors large effort to support use of ecological data in freshwater management

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

Built around two core monitoring programs

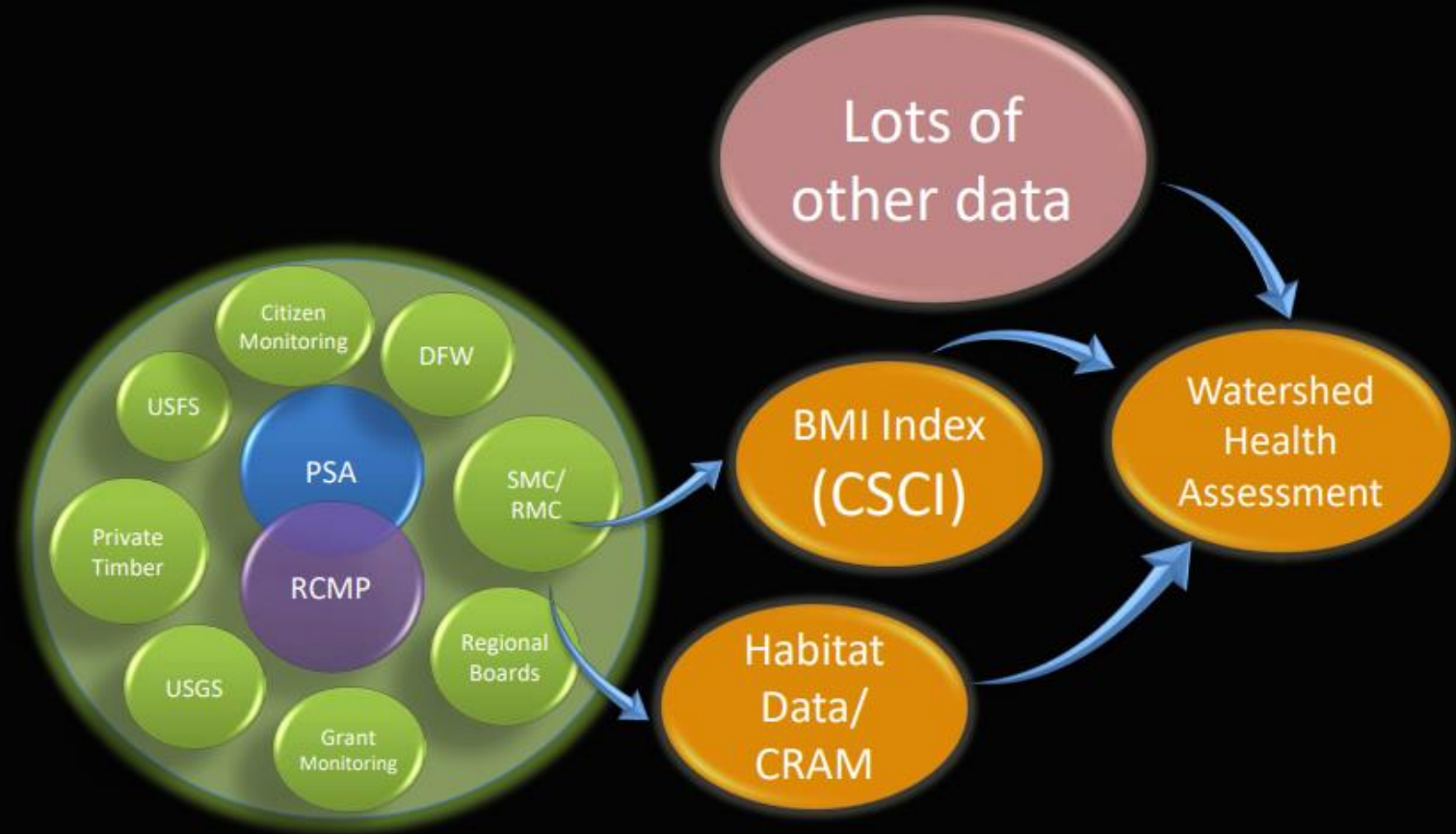
- **Perennial Streams Assessment (PSA)** – randomly selected sites
- **Reference Condition Management Program (RCMP)** – sites with low levels of human activity

Provides foundational data + science to inform healthy watershed protection efforts



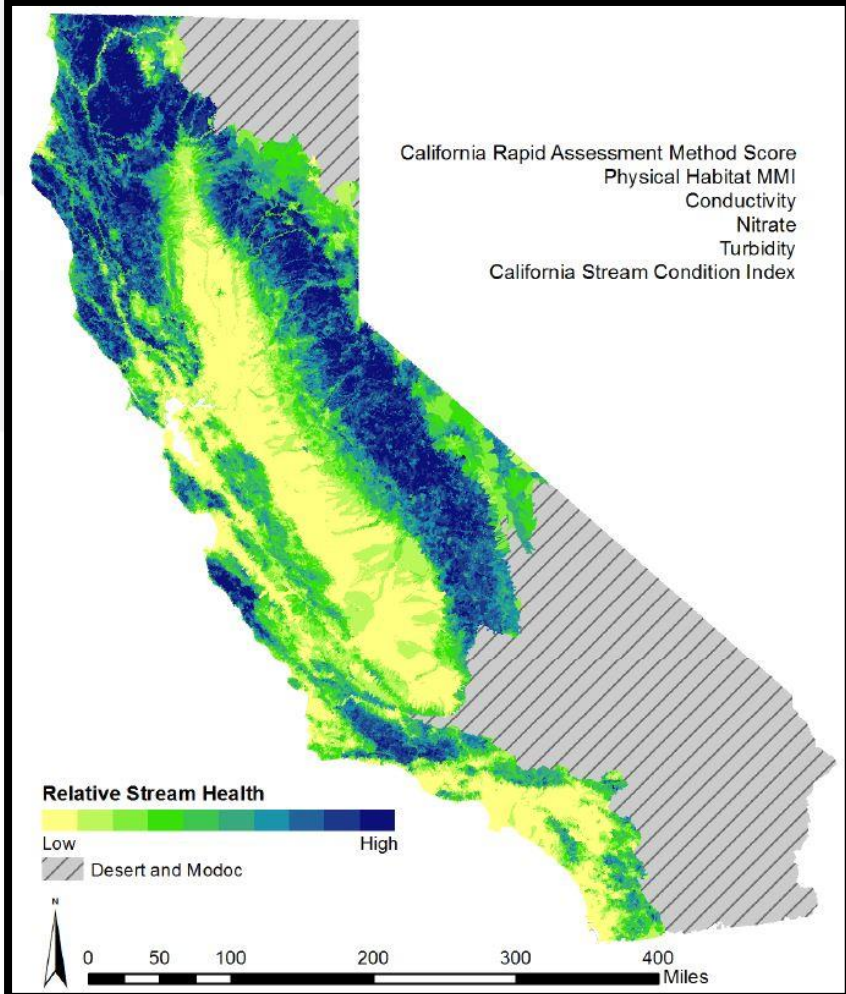
California Integrated Assessment of Watershed Health (2013):

- Watershed condition
- Watershed vulnerability
- Stream health (2013 map pictured below)



A framework for integrating watershed condition data

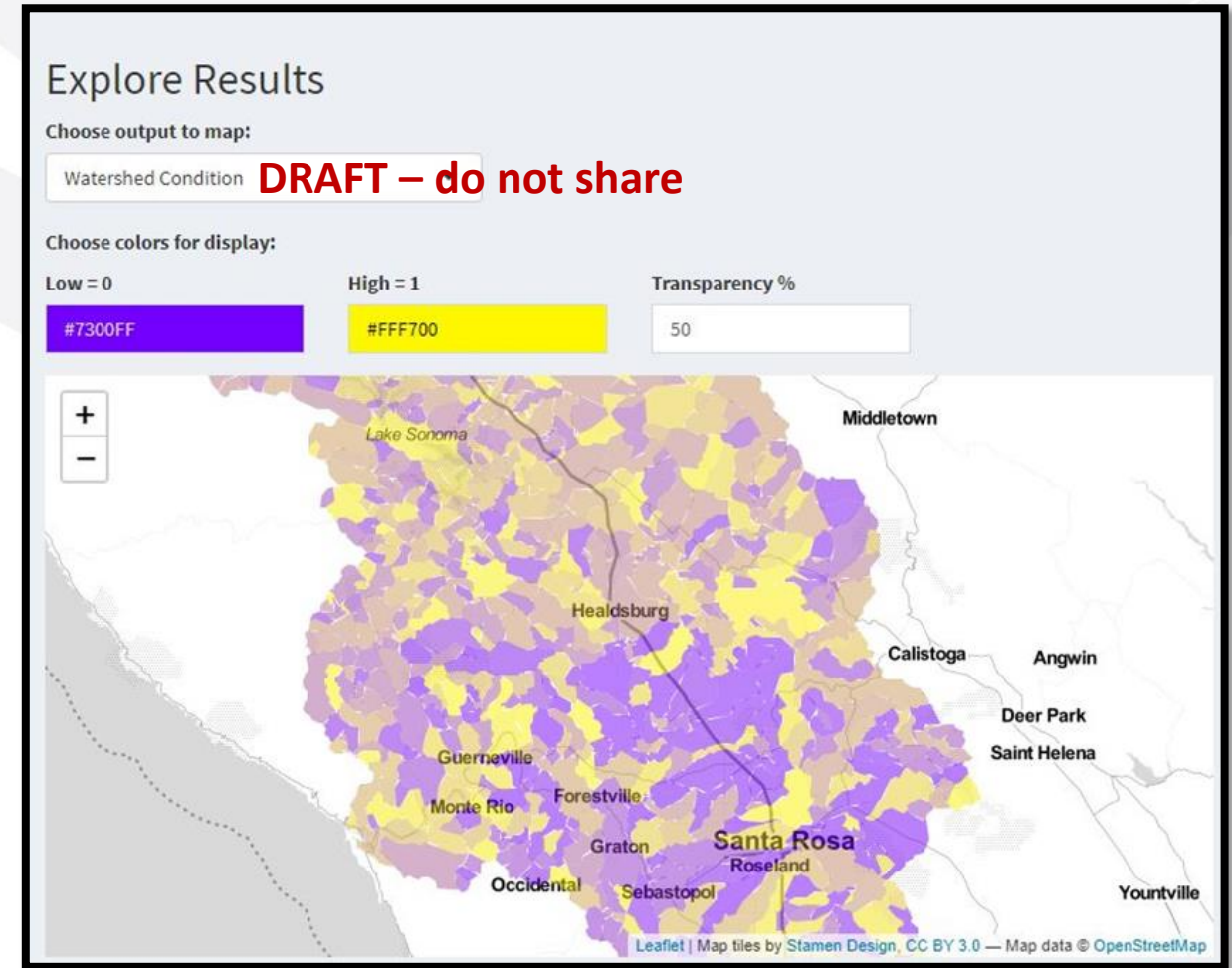
Credit: Pete Ode, CDFW

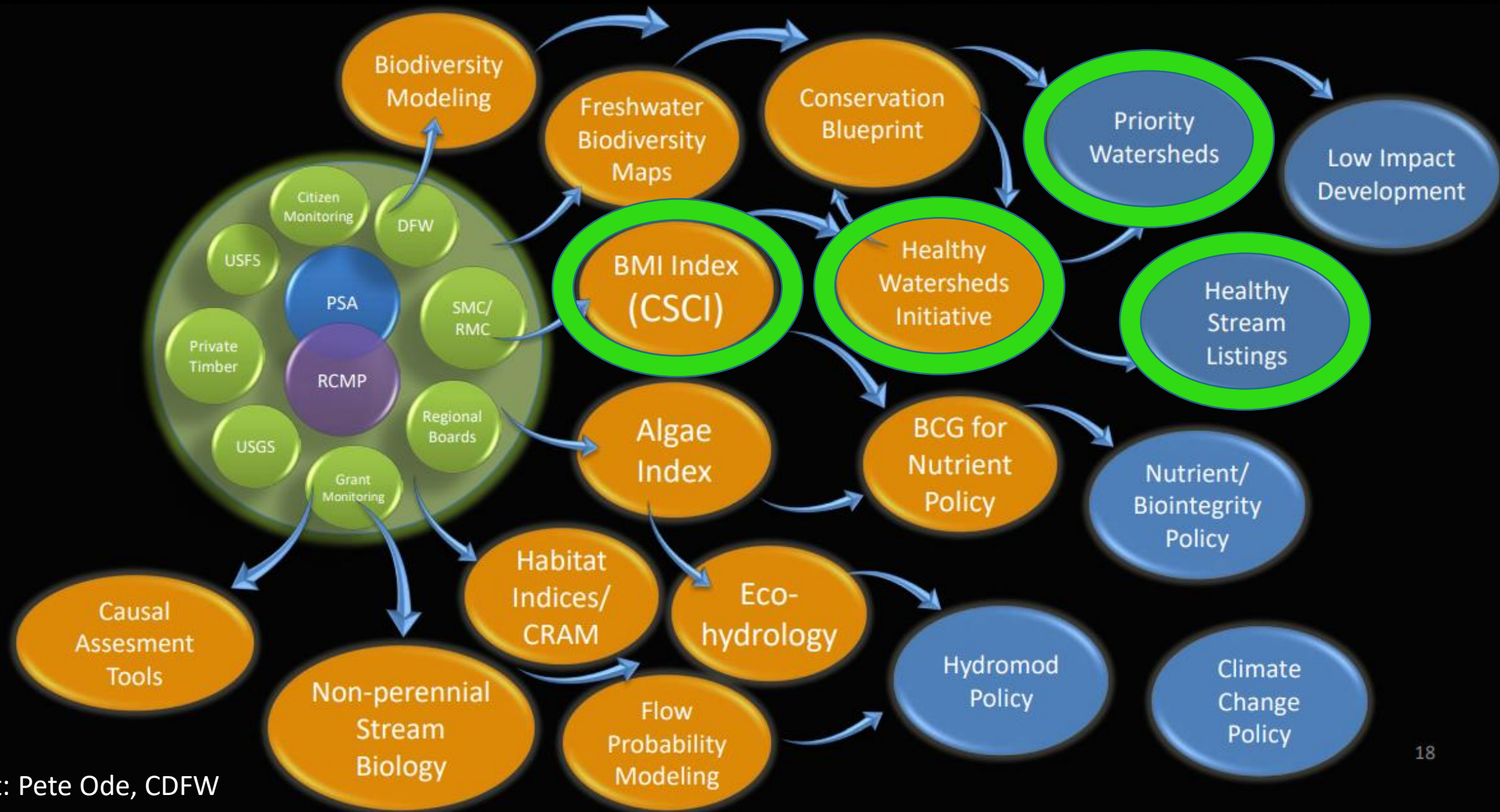


Healthy Watersheds Assessment – Dashboard

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





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



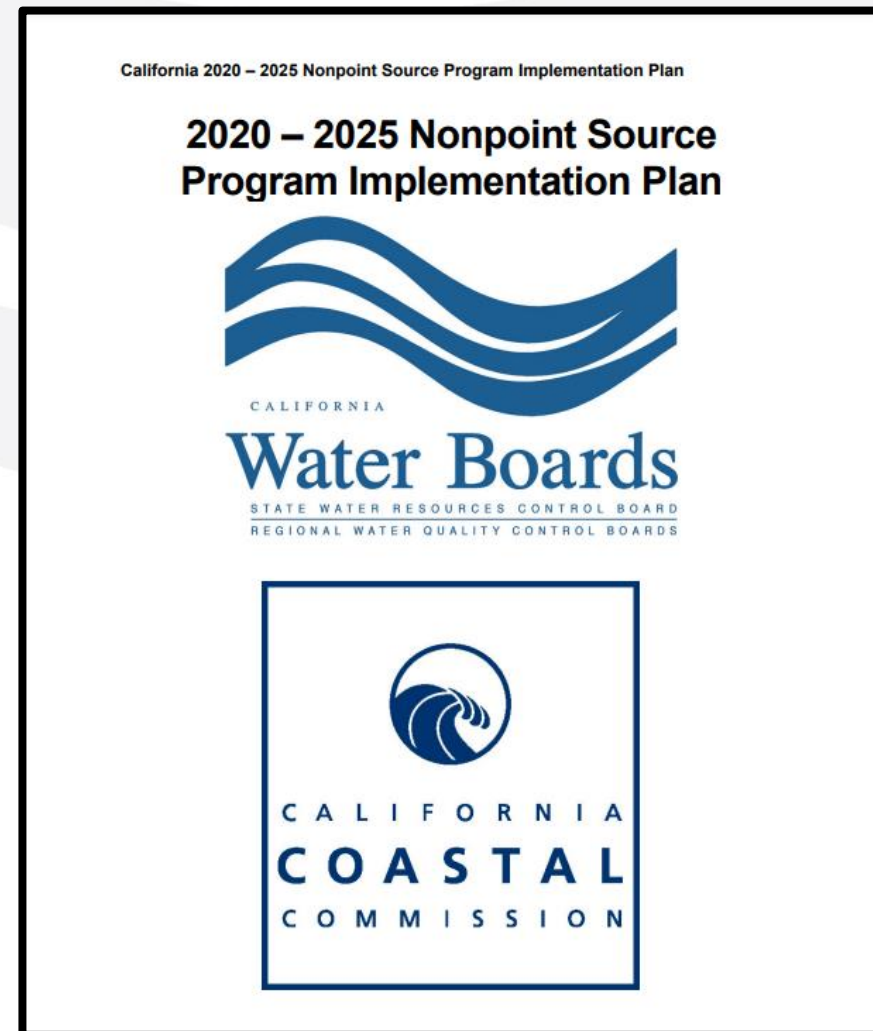
Nonpoint Source Program Goals

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)



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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
 - ...

California Regional Water Quality Control Board
San Diego Region

Resolution No. R9-2020-0234

A RESOLUTION AMENDING *THE WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO BASIN (9)* TO INCORPORATE A WATER QUALITY OBJECTIVE FOR BIOLOGICAL CONDITION



Thanks!

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22.29°N 127.83°W

Credit: Nelson Minar