

# Action Plan for the Gualala River Sediment Total Maximum Daily Load Public Workshop



# Outline

- Background
  - Purpose
  - Regulatory Background
  - History
- US EPA Total Maximum Daily Load (TMDL)
  - Problem Statement
  - Source Analysis
  - Load Allocations
  - Water Quality Indicators
- Action Plan
  - Development
  - Program of Implementation
  - Public Participation

# TMDL Action Plan Public Review

- This workshop provides opportunity for public oral comments and feedback from the North Coast Water Board to staff on the draft Action Plan and supporting documents
- Public comment and review period started on **July 11, 2025**
- Public comment period closes **August 25, 2025**
- Action Plan:
  - Implements the US EPA approved sediment TMDL, established in 2001
  - Relies on source analysis and other scientific findings from the TMDL

# Regulatory Background: Clean Water Act



- **Section 303.** [Water Quality Standards and Implementation Plans]

*(d)(1)(C) Each State shall establish for the waters identified in paragraph (l)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load.....*

- Clean Water Act requires a TMDL for waterbodies that do not meet water quality standards
- Requirement met with 2001 TMDL

# Regulatory Background: Porter Cologne (California Water Code)

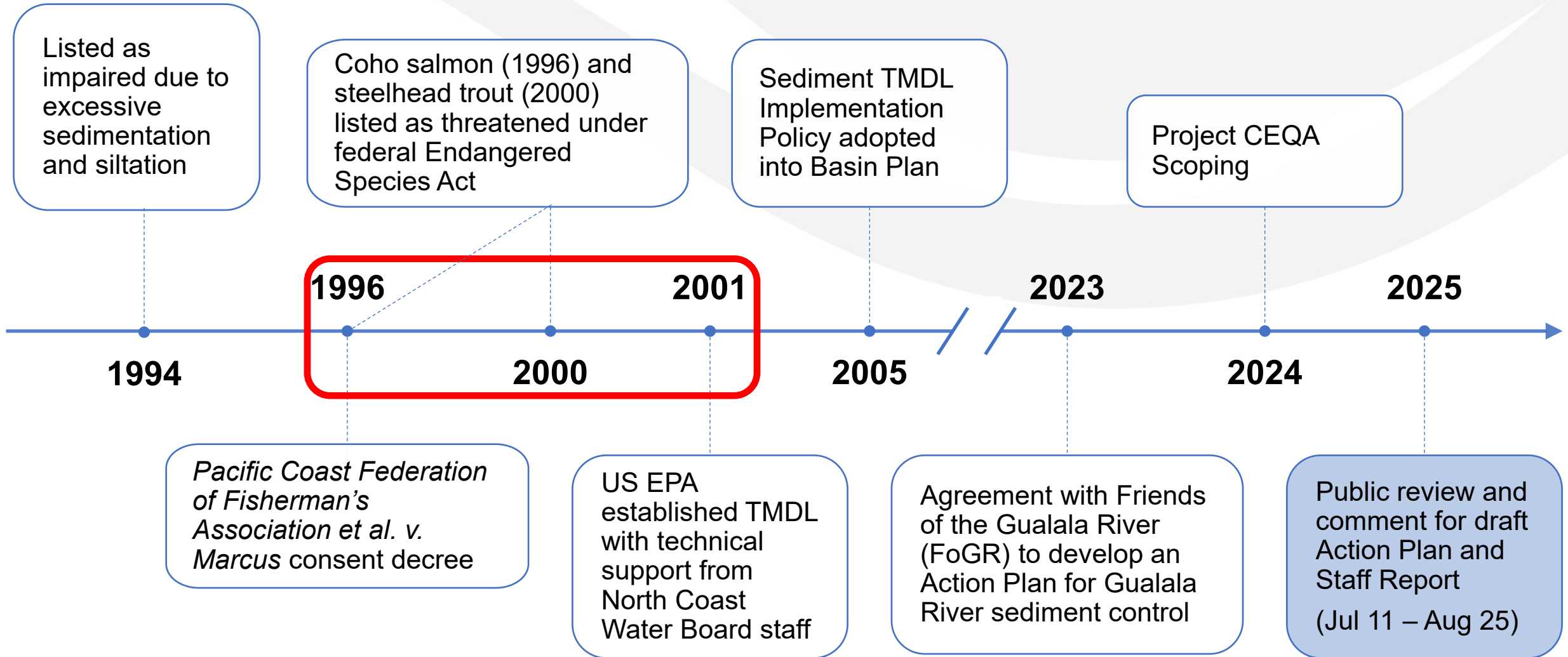


- Authorizes North Coast Water Board to develop implementation plans to meet water quality objectives.
- Implementation plan require description of actions, a schedule, and a monitoring plan

## **Section 13242.** [Implementation]

- *The program of implementation for achieving water quality objectives shall include, but not be limited to:*
  - a) *A **description of the nature of actions** which are necessary to achieve the objectives, including recommendations for appropriate action by any entity, public or private.*
  - b) *A **time schedule** for the actions to be taken.*
  - c) *A **description of surveillance** to be undertaken to determine compliance with objectives.*

# Background: History



# Components of a US EPA TMDL

Under Clean Water Act and federal regulations, all TMDLs require the following:

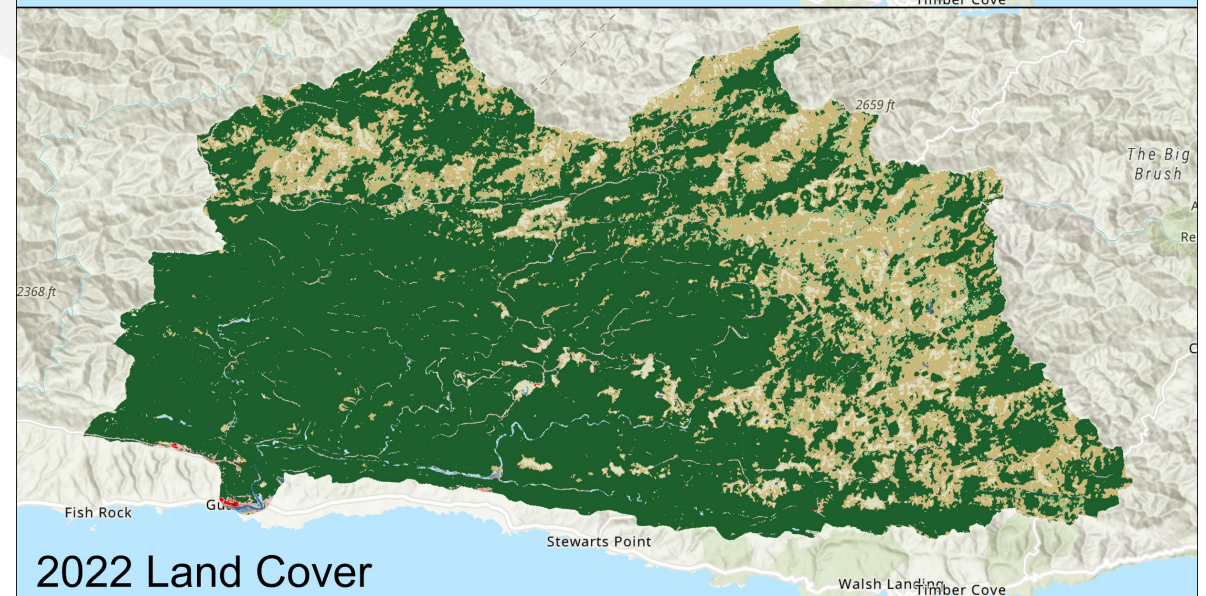
- Problem Statement
- Source Analysis
- Load and Wasteload Allocations
- Targets and Indicators
- Margin of Safety, Seasonal Variations, and Critical Conditions
- Public Participation

# US EPA TMDL: Watershed Setting

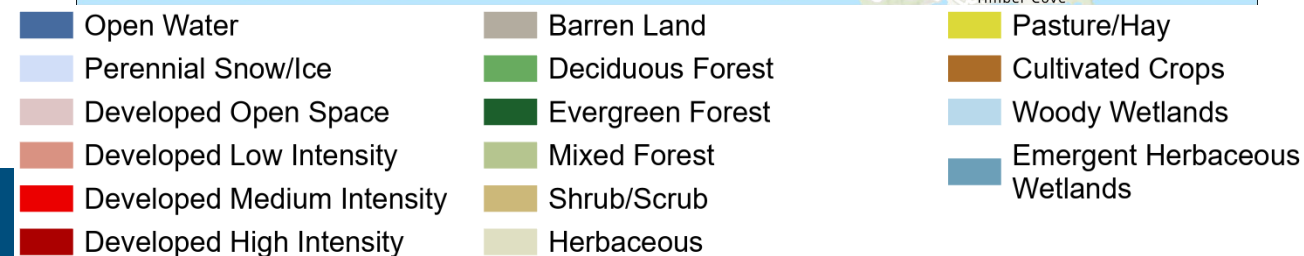
- Land Cover (NLCD, 2022)
  - Forests (75%); herbaceous grass and shrub (22%); developed (2.5%); wetlands (0.3%)
- Land Use
  - Timber: ~39% of watershed
  - Ranching
  - Vineyard
- Roads:
  - 1,511 road miles
    - ~5 miles per square miles
  - 1,064 stream miles
    - 1,554 road stream crossing points



2001 Land Cover



2022 Land Cover



# US EPA TMDL: Water Quality Objectives

Parameter	Water Quality Objective
Suspended Material	Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.
Settleable Material	Waters shall not contain substances in concentrations that result in deposition of material that causes nuisance or adversely affect beneficial uses.
Sediment	The suspended sediment load and suspended sediment discharge rate of surface water shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
Turbidity	Turbidity shall not be increased more than 20 percent above naturally occurring background levels. Allowable zones of dilution with which higher percentages can be tolerated may be defined for specific discharges upon the issuance of discharge permits or waiver thereof.

# US EPA TMDL: Impaired Beneficial Uses

Excessive sediment impairs the following Beneficial Uses:

- Cold Freshwater Habitat (COLD)
- Commercial or Sport Fishing (COMM)
- Estuarine Habitat (EST)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Fine sediment in rearing habitat
- Damage to fish gills
- Reduced feeding and growth rates
- Increased mortality

# US EPA TMDL: Source Analysis

Based on data spanning 1978-2000, methods used include:

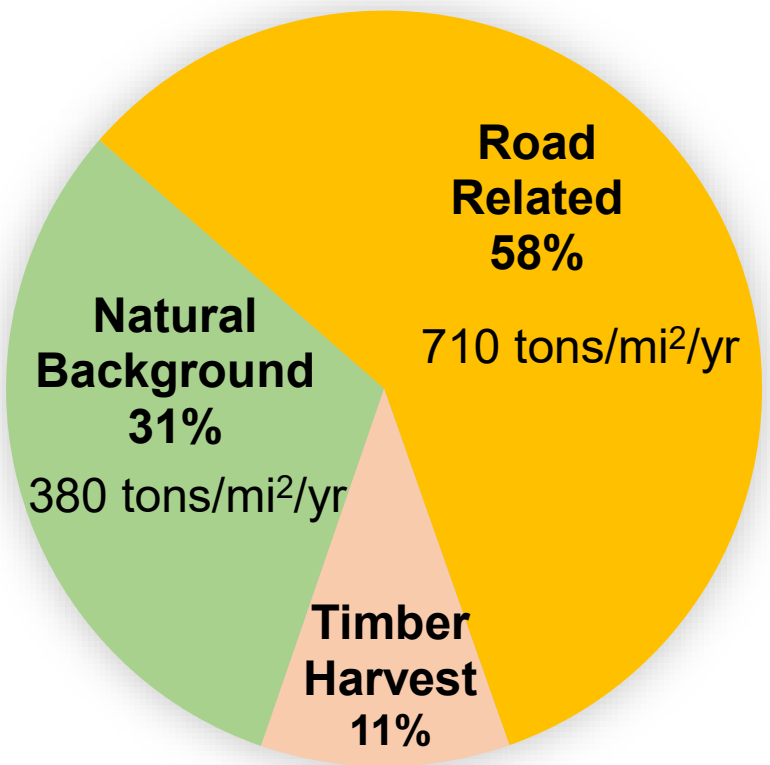
- Aerial photography analysis
- Sampling for field measurements for sediment sources
- Stream surveys
- Assessment of sediment delivery from public and private roads

Investigated sediment processes include:

- Debris slides
- Earth flows
- Gully erosion
- Stream crossing washouts and diversions
- Road surface erosion
- Skid trail surface erosion

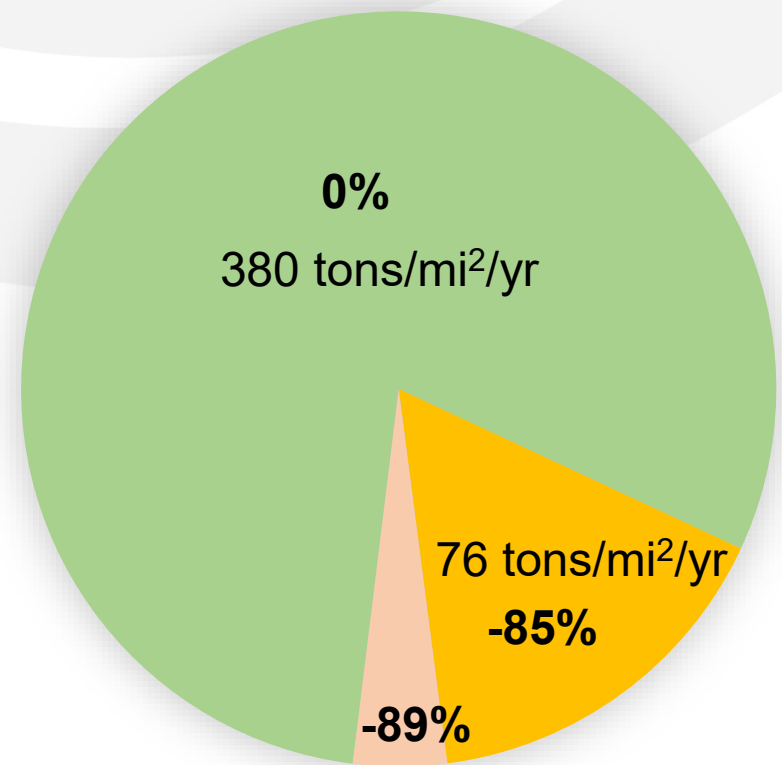
# US EPA TMDL: Load Allocations

2001 Sediment Loads by Category



**Watershed-wide  
TMDL = 475 tons/mi²/yr**

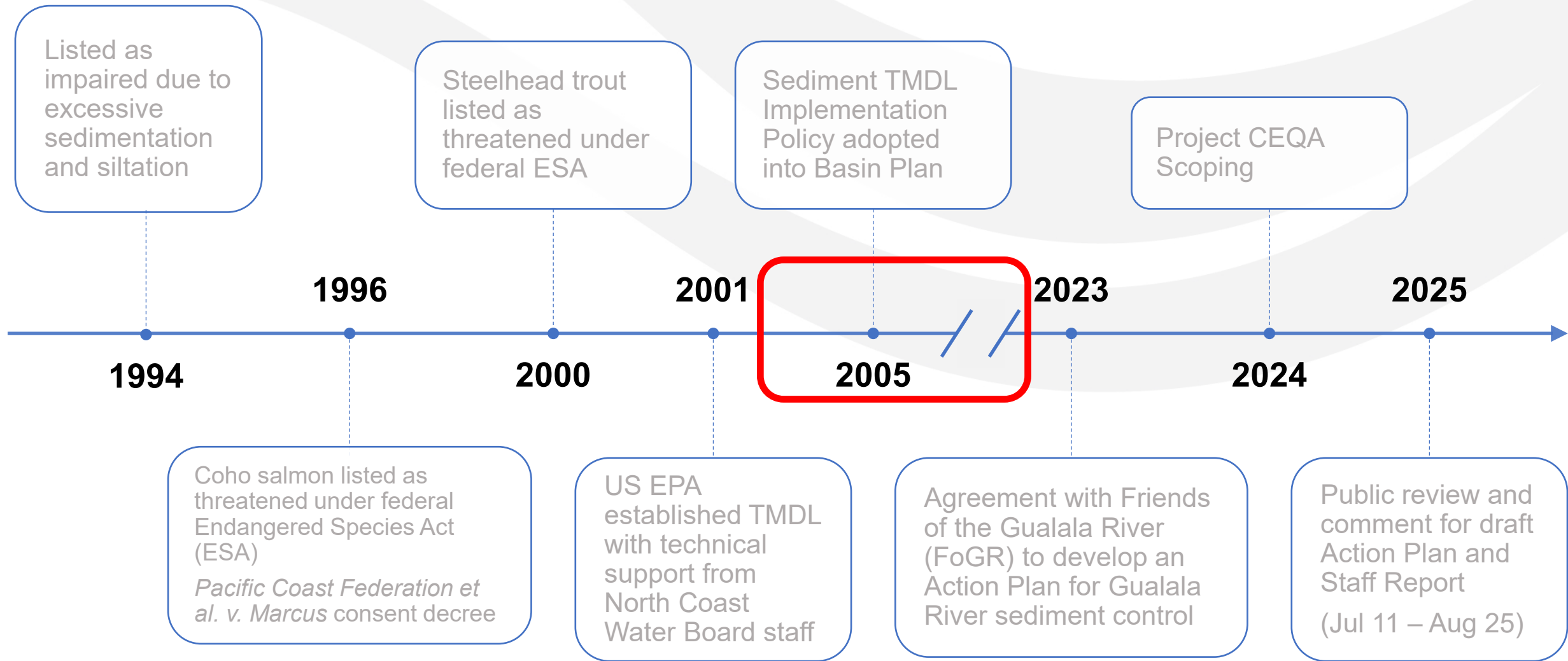
Load Allocations and Percent Reduction Required



19 tons/mi²/yr

# US EPA TMDL: Numeric Targets and Indicators

- Serve as guideposts for monitoring and implementation
- Categorized by **instream** and **hillslope**
  - Hillslope targets expected to be accomplished by source control (i.e., permits and other regulatory tools)
  - Instream targets gauge stream “health” and responsiveness to source control and restoration activities
- Targets and indicators further divided by expected response time:
  - **Short-term**: every few years (though still applicable to TMDL’s lifetime)
  - **Mid-term**: based on storm frequency/magnitude and episodic events
  - **Long-term**: on the order of decades



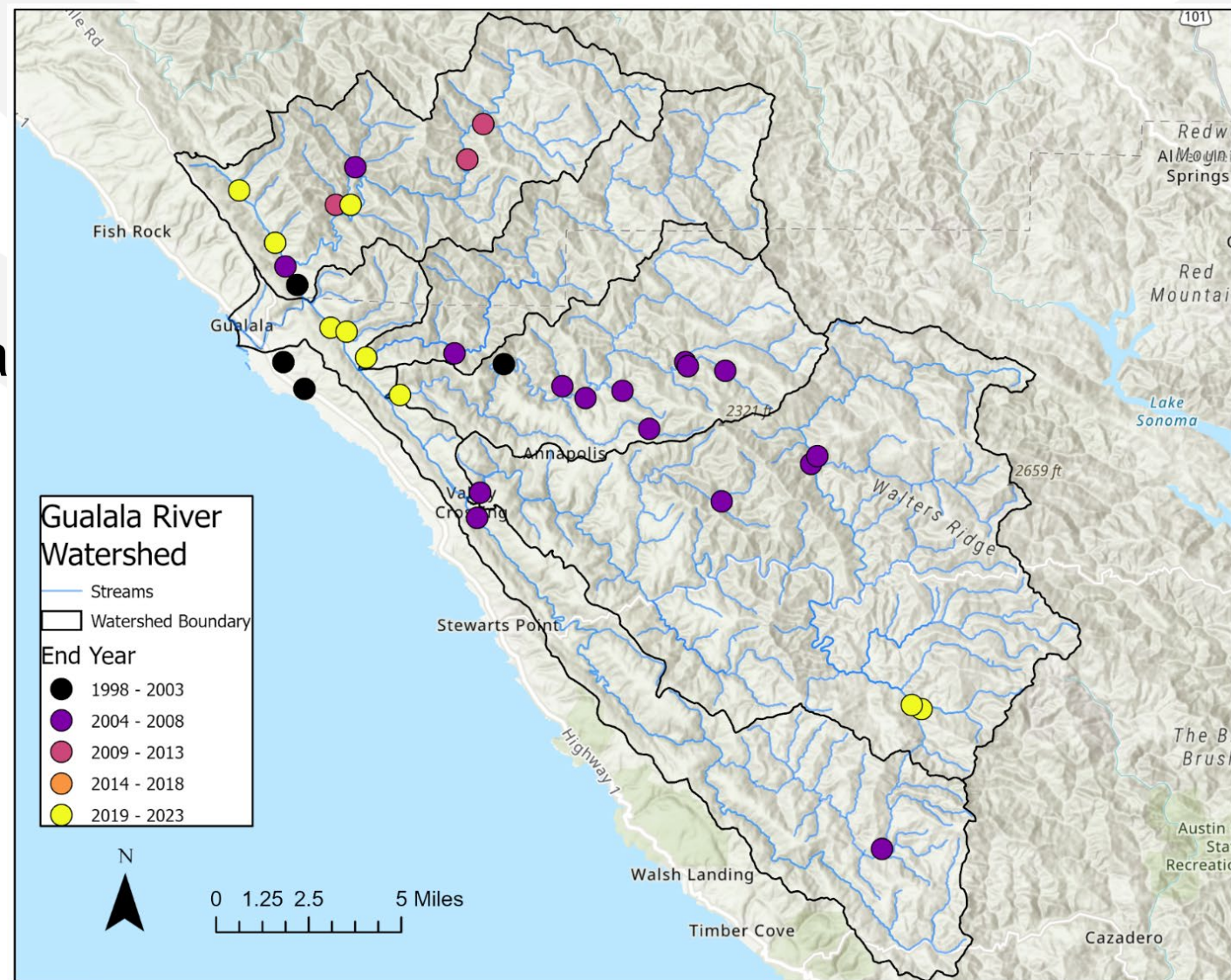
# Activities after US EPA TMDL establishment

- North Coast Water Board activities
  - Permits adopted for sediment control in timberlands and roads
  - **Sediment TMDL Implementation Policy**
    - Addresses US EPA established consent decree sediment TMDLs, including Gualala
  - Basin Plan remediation amendment incorporating consent decree TMDLs
- Other Activities
  - Improvement and evolution of management practices
    - California Forest Practice Rules - CalFIRE
    - Rural Roads Handbook – Pacific Watersheds Associates
  - Individual road projects on private property
  - Grant-funded:
    - Restoration work (large woody debris projects)
    - Instream habitat and water quality monitoring (Gualala River Watershed Council)

# Data Assessment

Staff received and assessed instream data collected by Gualala River Watershed Council

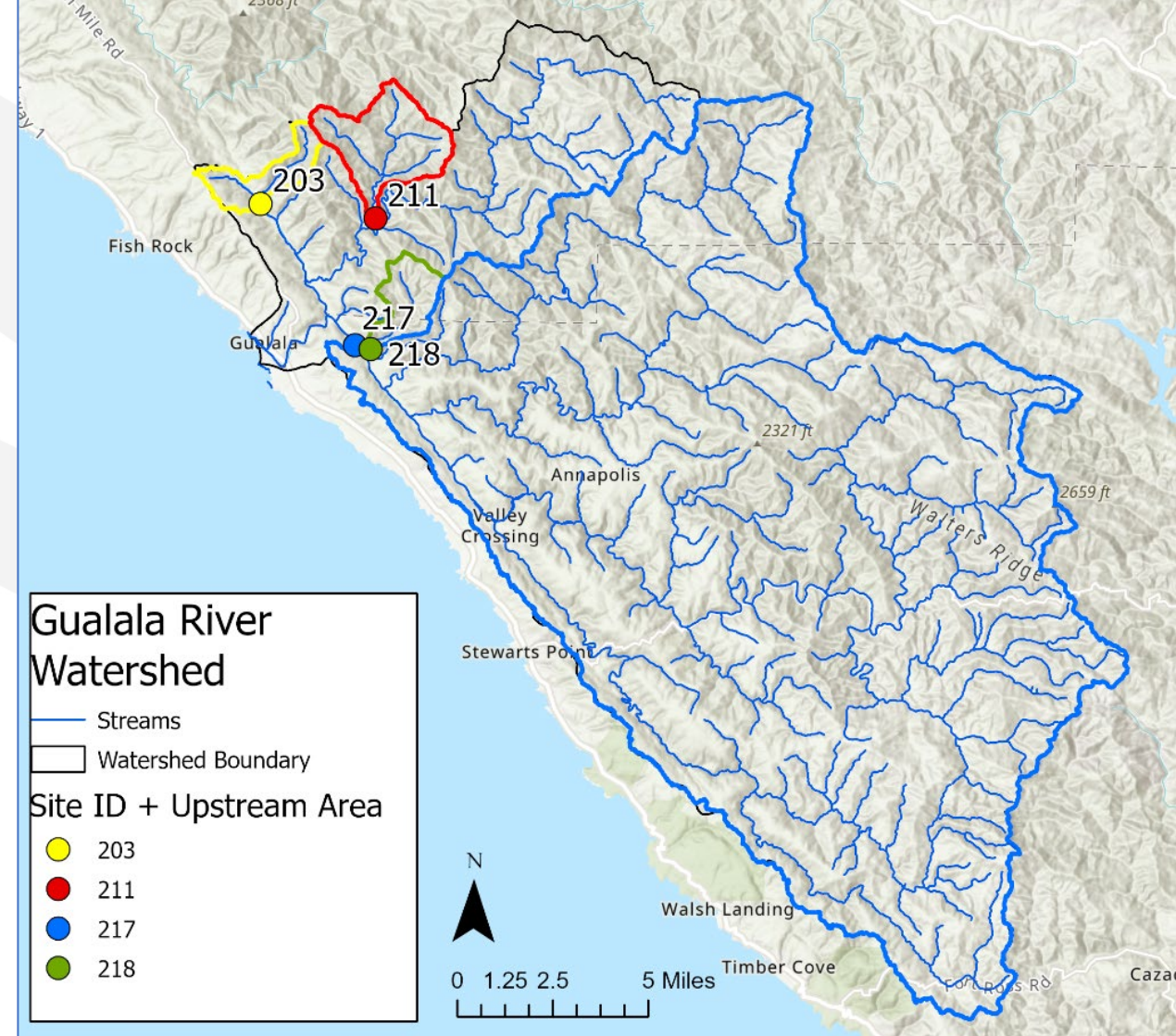
- Habitat surveys for Coho and steelhead salmon
- Median pebble size (D50)
- Streambed variation index or SVI (proxy for measure for habitat complexity)
- Channel elevation (aggradation vs. degradation)
- Large woody debris



Monitoring locations colored by most recent year of available data

# Data Assessment

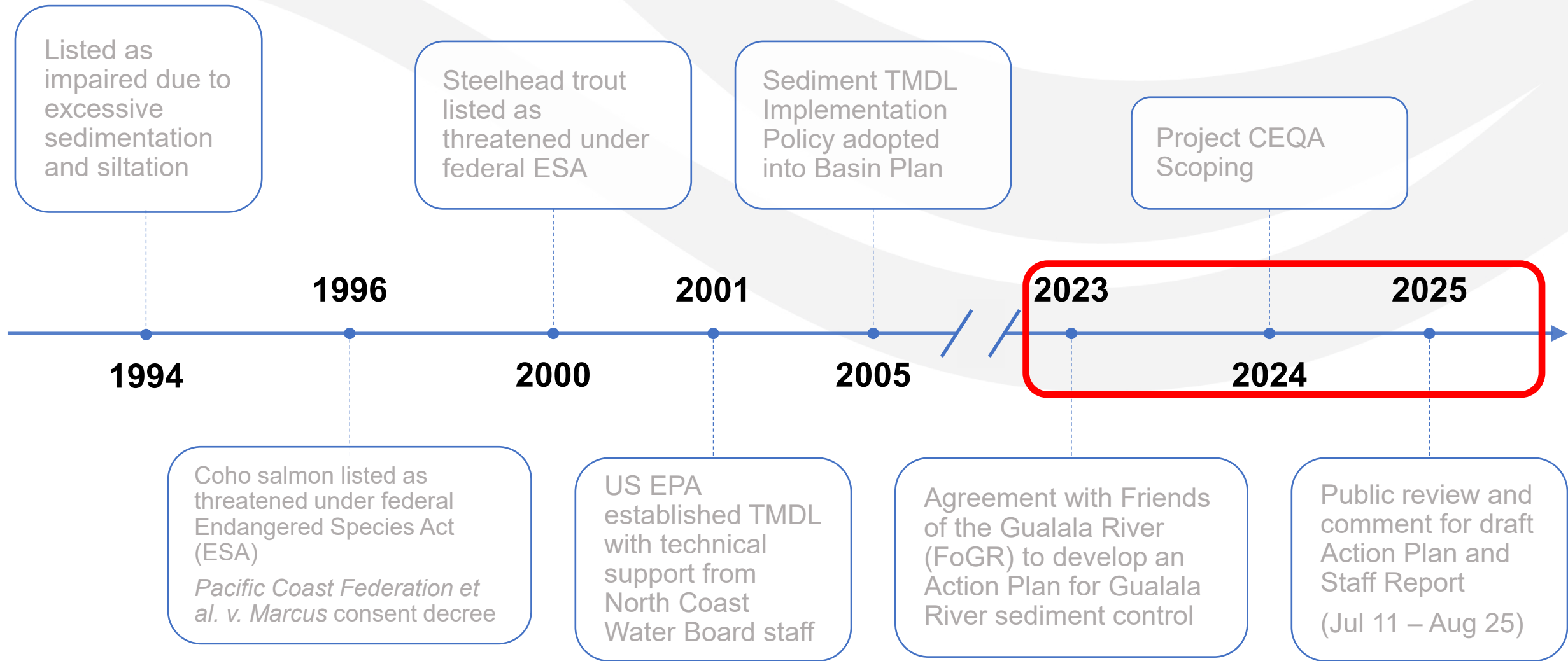
- D50
  - **Decreasing** trend (sediment fining) at 203, 211
  - **Increasing** trend (sediment coarsening) at 217
- Channel elevation
  - Aggradation at 203, 211
  - Degradation at 216
- Streambed variation index
  - **Increasing** trend at 217
- Large woody debris
  - **Increasing** trend at all sites shown
- Steelhead salmon
  - **Increasing count** at 217
- Watershed-wide trends not detected



Monitoring locations with statistically significant results

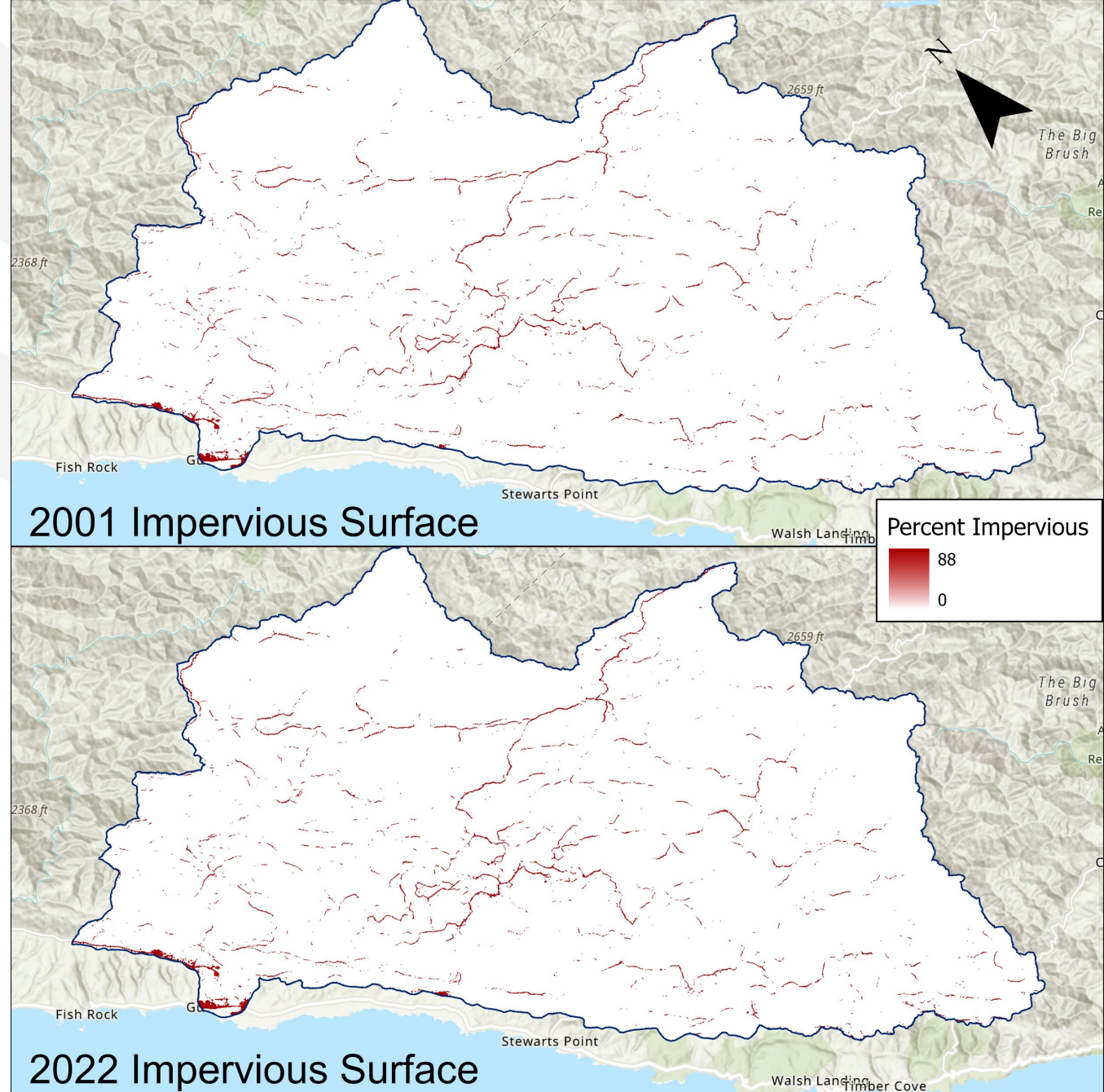
203 = Little North Fork      211 = Dry Creek

217 = South Fork, Mainstem    218 = Big Pepperwood Creek



# Action Plan: Development

- No new source analysis
  - 2001-2022 land cover change limited to increase in forested lands
  - Impervious surface (proxy for road and human development) increased by ~11.7 percent
- Data assessment indicates minimal change across watershed for instream targets and indicators
- Load allocations remain valid



# Action Plan: Components

- Problem Statement
- Source Analysis
- Load Allocations and TMDL
- Targets and Indicators
- Monitoring
- Program of Implementation

# Action Plan: Proposed Program of Implementation

- Reliance on existing permits and development of new roads-focused permit to fill regulatory gaps

# Action Plan: Existing and *Proposed* Permits

Permit	Responsible Party and Covered Activity	Sources Addressed
Timber Harvest WDRs and Waiver	Industrial and non-industrial timber harvest on non-federal lands	Roads-related landslides; road-stream crossing failures; road related surface erosion; skid-trails; other harvest-related delivery
5C Waiver	Sonoma County and Mendocino County road maintenance and construction	<ul style="list-style-type: none"> <li>- Roads-related landslides</li> <li>- Road-stream crossing failures</li> <li>- Road related surface erosion</li> </ul>
Caltrans Stormwater Permit	Caltrans-owned roads and infrastructure	
Construction Stormwater	Parties and projects disturbing >= 1 acre of land	
401 Certification	Parties and activities within or adjacent to waters of the State	
Vineyard Order	Parties and activities with sediment discharge related to vineyard cultivation	
<i>Gualala watershed-wide roads WDR</i>	<i>Private landowners with rural roads, including timber roads outside of enrolled timber harvest plans</i>	

# Preliminary Scope of New Permit

Purpose: Address road-related sediment sources on private and commercial rural roads not addressed by existing permits in the watershed

## High-Level Requirements

- All landowners would be required to maintain their roads to reduce erosion and sediment delivery
- Landowners with  $\geq 1,000$  acres or specific roads that pose a significant risk to water quality would also be required to:
  - ***Inventory*** and ***assess*** roads and stream crossings
  - ***Prioritize*** roads and stream crossings for repairs
  - ***Repair*** roads and ***monitor*** completed road treatments
  - ***Maintain*** roads to prevent erosion and sediment delivery

## Timeline

- Draft permit for public review anticipated by **summer 2026**
- Proposed permit for board adoption consideration anticipated by **fall 2026**

# Funding and Technical Assistance

- US Department of Agriculture Natural Resources Conservation Service Programs and Initiatives
  - <https://www.nrcs.usda.gov/programs-initiatives>
- Clean Water Act 319 Nonpoint Source Pollution
  - [https://www.waterboards.ca.gov/water\\_issues/programs/nps/319grants.html](https://www.waterboards.ca.gov/water_issues/programs/nps/319grants.html)
- Cal Fire Forest Improvement Program
  - <https://www.fire.ca.gov/what-we-do/grants/california-forest-improvement>
- California Department of Fish and Wildlife
  - Restoration Grants: <https://wildlife.ca.gov/Grants/Restoration-Grants>
  - Fisheries Restoration Grant program: <https://wildlife.ca.gov/Grants/FRGP>
- Sonoma Resource Conservation District
- North Coast Resource Partnership
- **Watershed-wide roads assessment funded through Water Board contracts**

# Public Participation

## Action Plan

- CEQA scoping meetings:
  - June 3, 2024 (virtual)
  - June 5, 2024 (physical in Horicon School, Annapolis, CA)
- AB52 tribal outreach:
  - Cloverdale Rancheria of Pomo Indians
  - Kashia Rancheria of Pomo Indians
  - Lytton Rancheria of Pomo Indians
  - Manchester Rancheria of Pomo Indians
- Direct engagement with:
  - Friends of the Gualala River (FoGR)
  - Gualala Redwood Timber, Inc.
  - Gualala River Watershed Council
  - Redwood Empire, a division of Pacific States Industry, Inc.
  - Jackson Family Wines
  - Landowners

## Action Plan and New Gualala Roads Permit

- 8 Project Status Updates
  - 180 GovDelivery email recipients
  - Posted on webpage
- Direct engagement with:
  - Affected landowners
  - Kashia Band of Pomo Indians
  - The Conservation Fund
  - Mendocino Redwood Company
  - Coast Ridge Community Forest
  - Central Coast Firewise Council
  - Redwood Coast Land Conservancy
- Tabled at the Wildfire Preparedness Event in Timber Cove
- Twice-monthly office hours: virtual and in-person
- CEQA scoping meetings:
  - July 21, 2025 (virtual)
  - July 24, 2025 (physical at Gualala Arts Center in Gualala, CA)

# Key Takeaways

- Action Plan implements EPA-established TMDL
  - Rely on existing science and technical analysis
- Available monitoring data collected shows limited changes or improvements in in-stream conditions
- Existing permits address majority of sediment sources identified in TMDL
- New Gualala Roads Permit is in early development, addressing private roads, including those roads not covered by THPs
  - To be adopted as a separate Board action

# Action Plan: Next Steps

- Public comment and review period ends August 25, 2025
- Review and respond to comments and revise Action Plan and Staff Report, as necessary
- North Coast Water Board adoption hearing scheduled for December 4 or 5, 2025
- State Water Board Approval, 2026
- Office of Administrative Law, 2026-2027

# Future Notices of Opportunities to Comment

- Subscribe to Project email list for all future notifications:

[https://waterboards.ca.gov/resources/email\\_subscriptions/reg1\\_subscribe.html](https://waterboards.ca.gov/resources/email_subscriptions/reg1_subscribe.html)

- Total Maximum Daily Load (TMDL)
- Elk River - TMDL
  - Freshwater Creek - TMDL
  - Klamath River - TMDL
  - Laguna de Santa Rosa - TMDL
  - Navarro River - TMDL
  - Russian River - TMDL
  - Scott River - TMDL
  - Shasta River - TMDL
  - Sediment TMDL Implementation
  - Gualala River Watershed - TMDL

Submit

Cancel

# Contact



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