




Sonoma  
Water

# Dry Creek Habitat Enhancement Maintenance Program

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# Habitat Maintenance Program

- Purpose
  - Maintain Dry Creek constructed habitats
    - Side channel
    - Alcove
    - Log structures
    - Riffle
  - Adaptively manage habitats to benefit rearing salmon and steelhead



# Regulations & Permits

- Aquatic and wetland habitats
  - US Army Corps of Engineers (Waters of the US)
  - Regional Water Quality Control Board (Waters of the State)
  - California Department of Fish and Wildlife (Lake and Streambed Alteration Agreement)
- Sensitive Fish and Wildlife
  - Federal Endangered Species Act (NMFS/USFWS)
  - California Endangered Species Act (CDFW)
  - Migratory Bird Act



# Maintenance Activities

- Constructed habitat features
  - Sediment removal
  - Bank repair, structure repair
  - Vegetation management
  - Debris removal

# Annual Maintenance Process

- Early Spring
  - Assess condition of enhancement sites
- Late Spring
  - Prioritize maintenance needs
  - Coordinate with landowners
  - Prepare work plan and notification
- Summer
  - Implement maintenance activities



# Maintenance Example: Reach 8 in 2025

- Side Channel
  - Built in 2017
  - 1000 feet long
  - Large wood structures
  - Rearing habitat for juvenile coho and steelhead



# Reach 8 Maintenance Need

- Sediment
  - Channel filled over several years
  - Exacerbated by log jam at inlet
- Unstable bank



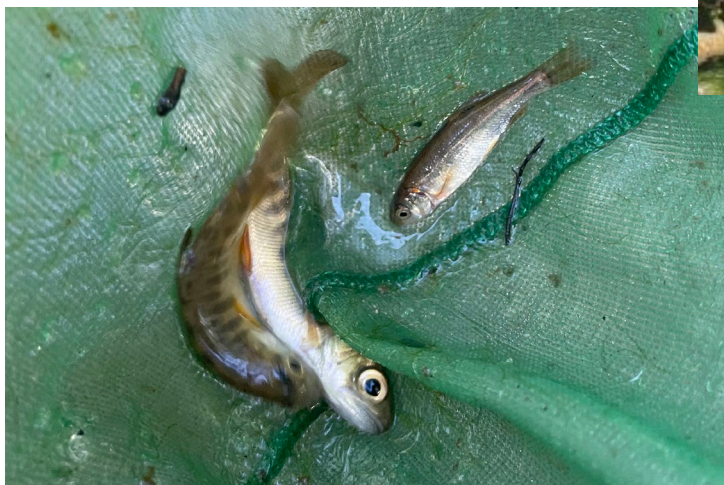
# Pre-Maintenance Surveys

- Surveys conducted before work begins to avoid and minimize disturbance to fish and wildlife
  - Active bird nest
  - Roosting bat
  - Foothill yellow-legged frog
  - California red-legged frog
  - Northwestern pond turtle
  - Fish



# Fish Rescue

- Fish rescued from isolated pool
- Fish relocated:
  - 90 coho
  - 2 Chinook salmon
  - 11 steelhead



# Vegetation Management

- Trees trimmed for equipment access



# Log Removal

- Large log at inlet affected flow into side channel, increased deposition, caused debris racking



# Excavation

- 3,000 cubic yards of sediment removed



# Debris Disposal

- Vegetation
  - Re-use on site if appropriate
  - Off-haul to green waste recycling facility
- Sediment
  - Re-use on site if appropriate
  - Stockpile for landowner
    - Signed release of liability
  - Off-haul to recycling facility
    - Sonoma Water pays recycling fee



# Bank Stabilization

- Rock added to protect retreating bank



# Inlet to Channel

Before



After



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# Mid Channel, Isolated Pool

Before



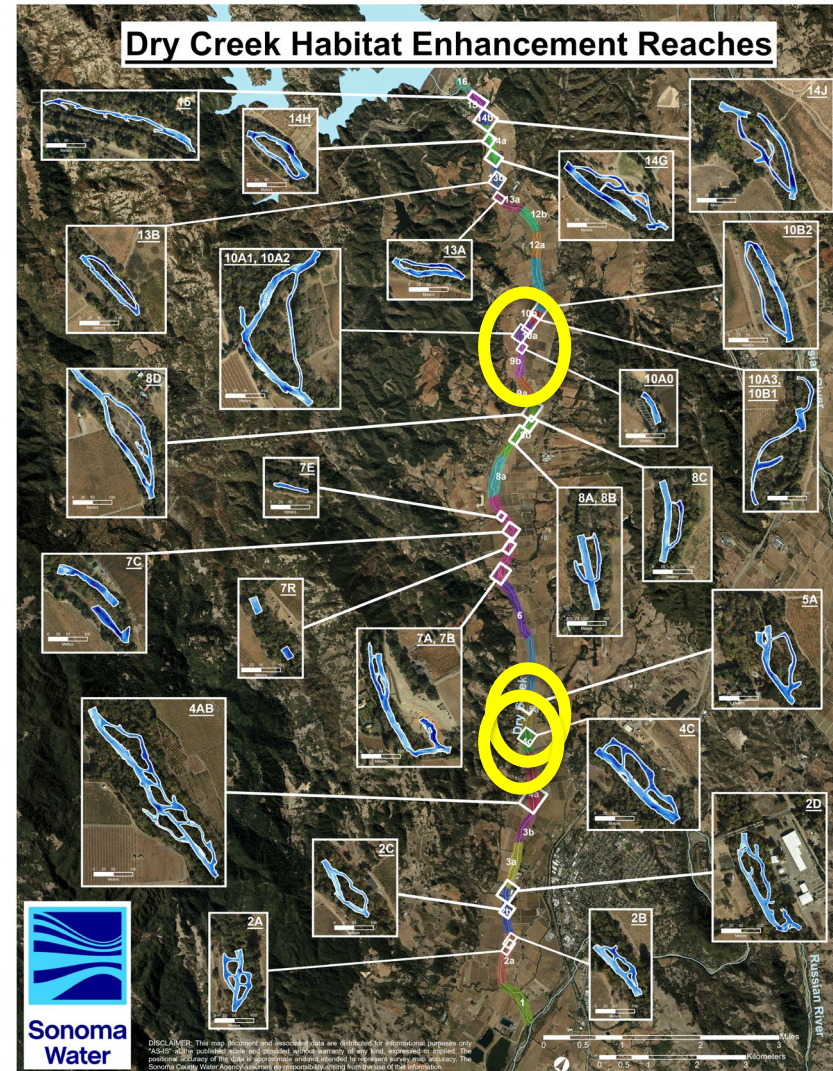
After





# 2026 Maintenance

- Anticipated sites
  - Reach 4, 5, 10
  - Needs ground truth in spring
- Anticipated maintenance
  - Tree trimming
  - Fish rescue, if needed
  - Sediment removal



# Reach 4C: Side Channel Maintenance

2024

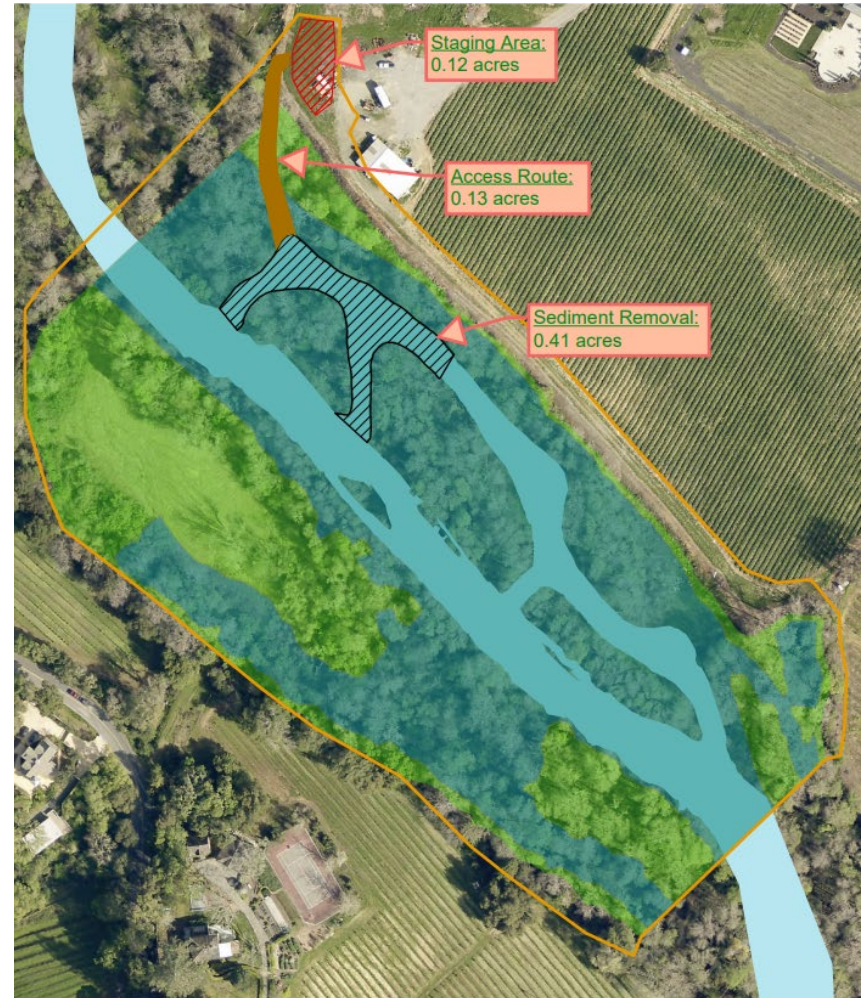
2025





~ 1,000cy of sediment

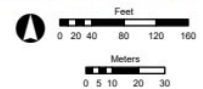
# Annual Notification

- Work plan of proposed maintenance
- Prepared each spring
- Submitted to regulatory agencies



Enhancement 4C

 Waters of the U.S.	 Sediment Removal
 Waters of the State	 Temporary Access Route
 Project Area	 Staging Area





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