

Habitat Enhancement and Water Delivery

Pam Jeane
Deputy Chief Engineer- Operations
Sonoma County Water Agency
Pam.Jeane@scwa.ca.gov



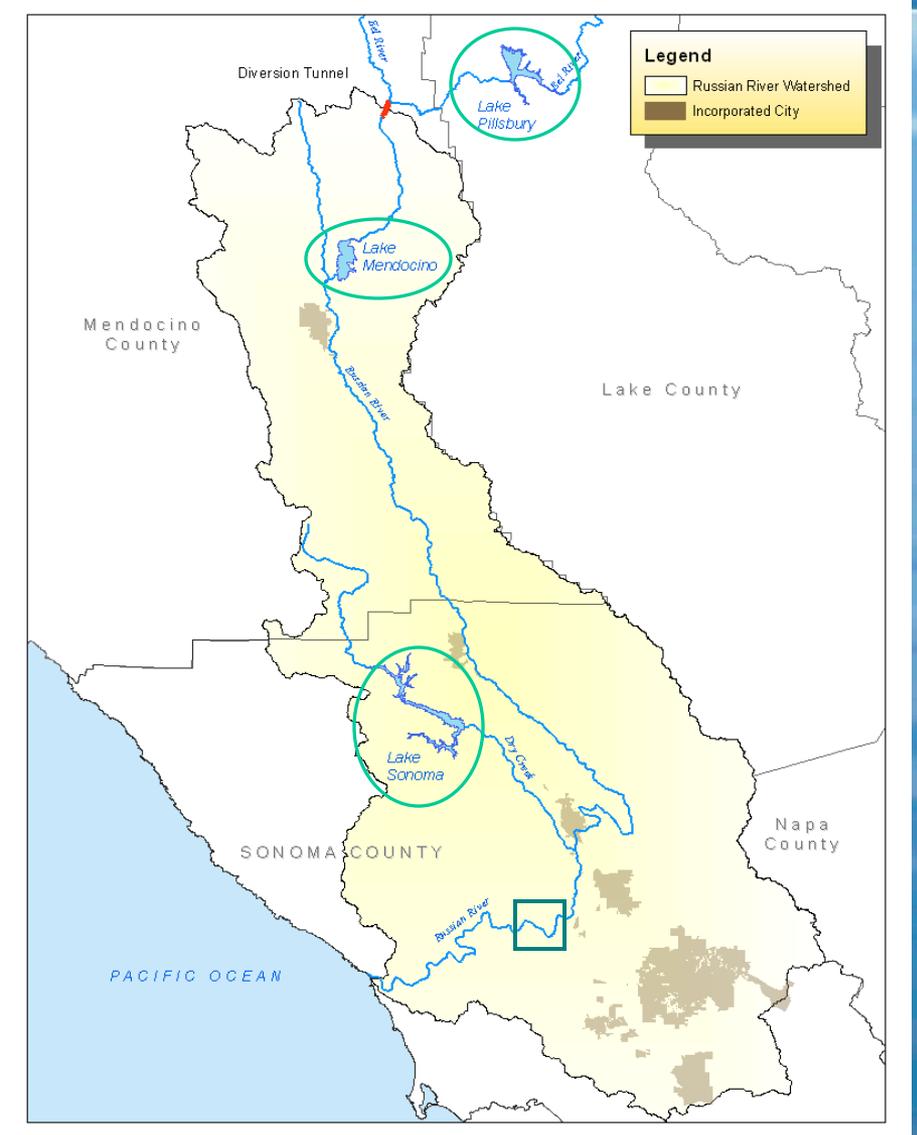
Presentation Outline

- System Overview
- Challenges from a Water Supplier's Perspective
- Endangered Species Act and our Biological Opinion
- Dry Creek
 - Issues
 - Solutions



Russian River Watershed

Facilities: Pillsbury, Mirabel





Challenges

- Changes in Potter Valley Project Inflows
 - Physical Problem
 - Need to Change Operational Criteria
- Low-flow Condition Operations
 - Uncoordinated Diversions
 - Takes Time to Make then See Flow Adjustments
- Endangered Species Act
 - Russian River Biological Opinion

Biological Opinion

- Request Changes in Russian River Flow Requirements
- Modify Russian River Estuary Management
- Modify Diversion Infrastructure at Wohler & Mirabel
- Continue to Participate in Coho Broodstock Program
- Address Dry Creek
 - Simplified
 - Swift Water
 - Flow Restrictions



Dry Creek

- Enhance Salmonid Habitat in Creek
- Develop Bypass Pipeline Plan
- Enhance Salmonid Habitat in Tributaries to Dry Creek
- Lots of Monitoring



Habitat Enhancement

Biological Opinion: Projects Required in Dry Creek Valley

2008 - 2011

Conduct two studies, one to assess naturalizing Dry Creek and one to evaluate the feasibility of a pipeline from Warm Springs Dam to the Russian River.
Build five restoration projects on tributaries of Dry Creek.

Monitoring

2013 - 2014

Restore one mile of habitat in Dry Creek

Monitoring

2015 - 2017

Restore two additional miles of habitat in Dry Creek.

Monitoring

2018

Evaluate the success of restoration projects.

If Projects
are Successful

2018 - 2020

Restore three additional miles of Dry Creek habitat for a total of six miles.

If Projects
are Unsuccessful

Reassess idea of a pipeline bypassing Dry Creek

- Multiple Phases
- Multiple Goals
 - 5 Tributary Projects
 - 6 Miles of Restoration
 - 8 Sites (Upper, Middle, Lower)
 - Summer and Winter Habitat
 - Bank Stabilization
 - Flow Preservation

Habitat Enhancement



Two Study Phases

1) Inventory of Current Conditions
Watershed Characteristics
Stream Geomorphology
Fish Habitat

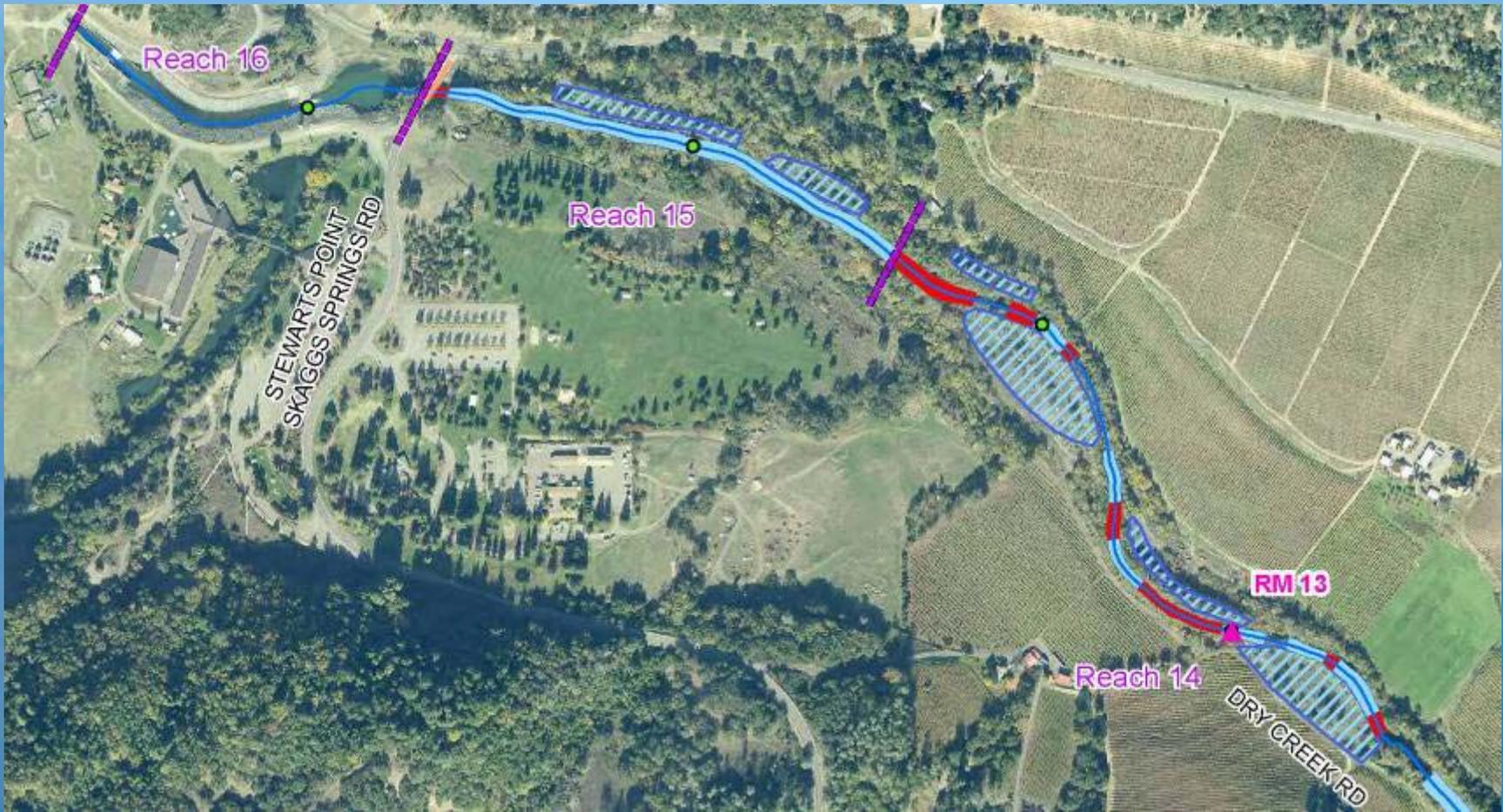


2) Feasibility Analysis and
Conceptual Design

Opportunities

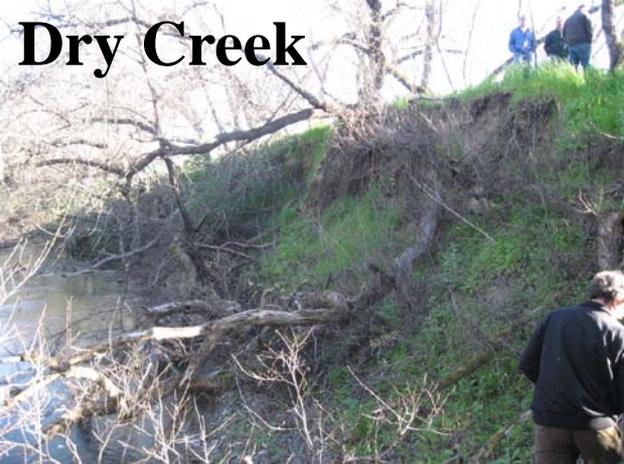
Abundant opportunities for enhancement of pools, riffles, stream banks and creation of off-channel habitats

- All areas of interest within historic channel



Habitat Enhancement

Dry Creek



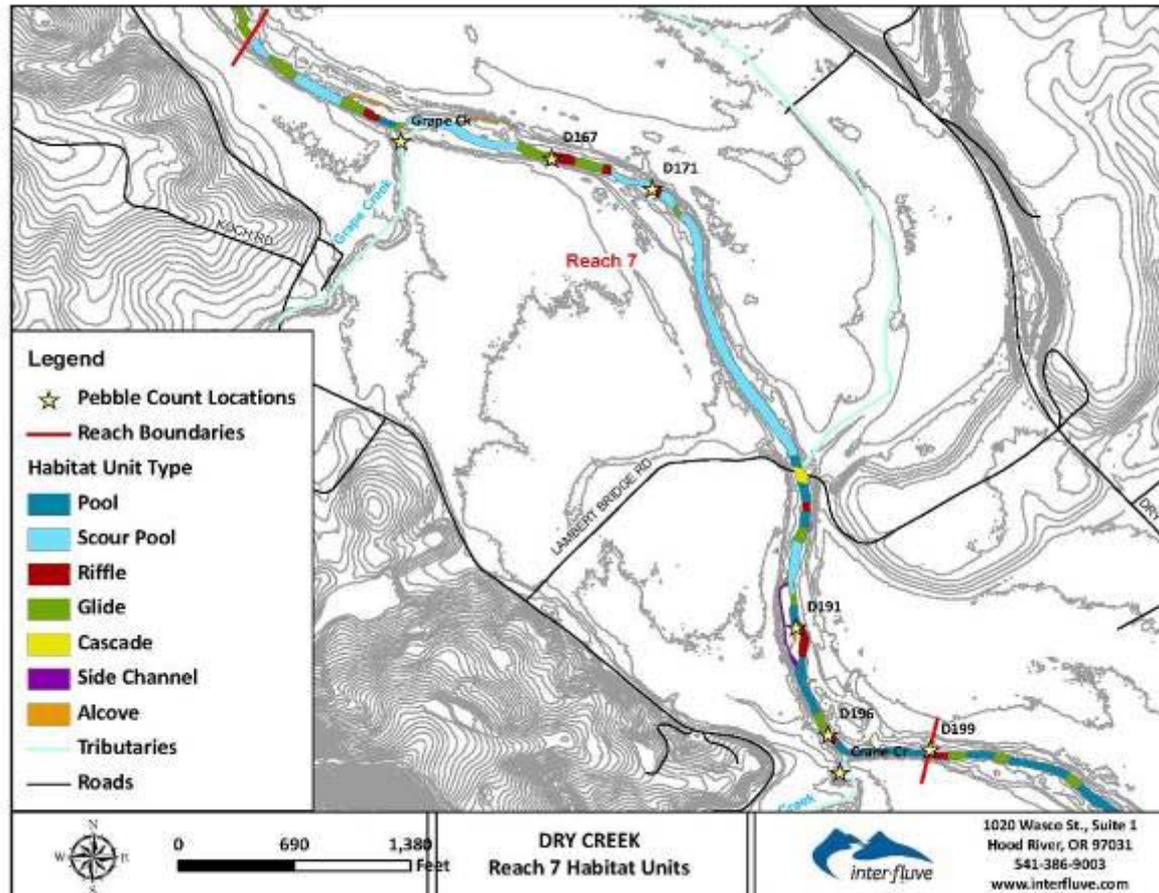
Before



After

Demonstration Project

Willing landowners stepped forward
1-mile project centered on Lambert Bridge



Next Steps

Upcoming Work

- Spring - summer 2010: Detailed feasibility analysis
- Fall 2010: Concept designs and ranking of opportunities
- Summer 2011: Pilot project implementation





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