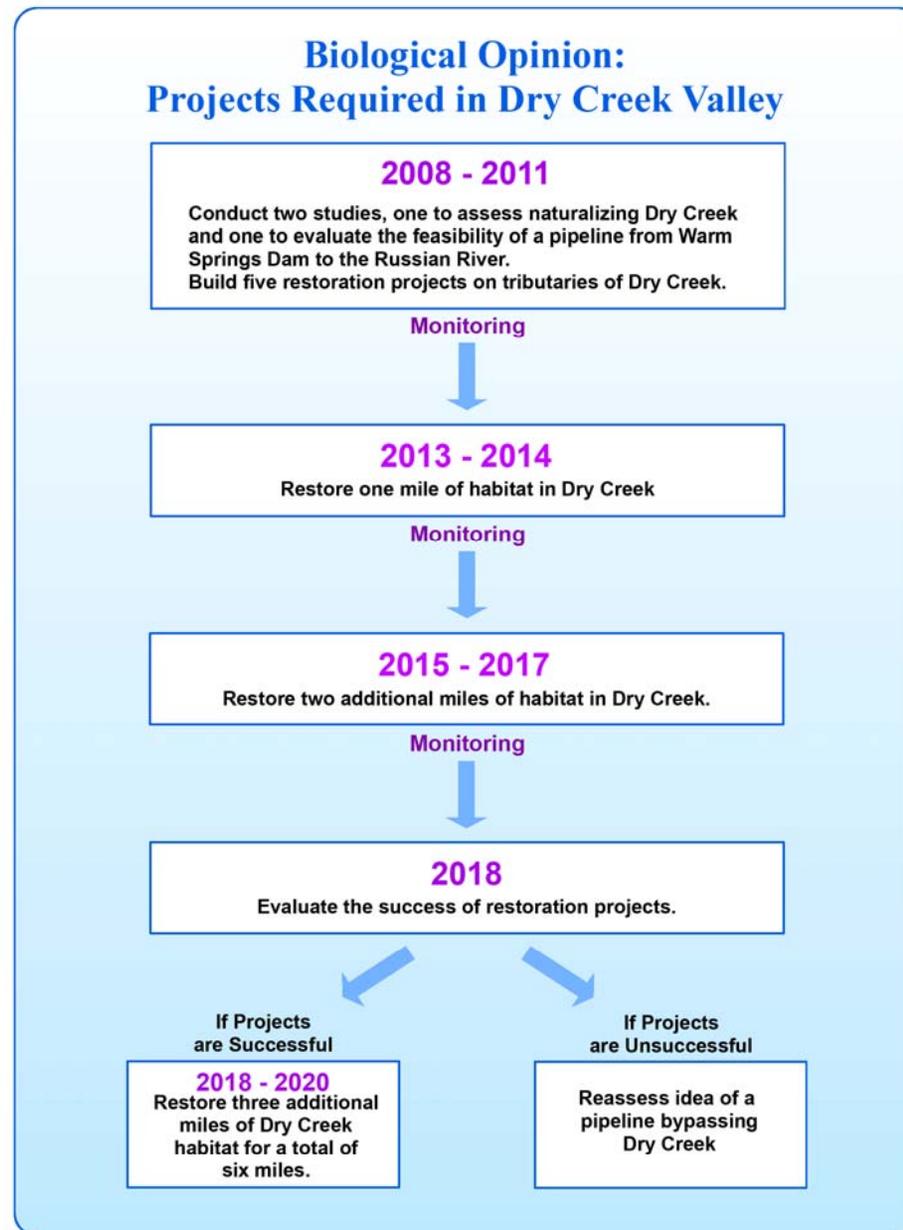


Dry Creek Habitat Enhancement, Monitoring, and Planning

David Manning, Principal Env. Specialist

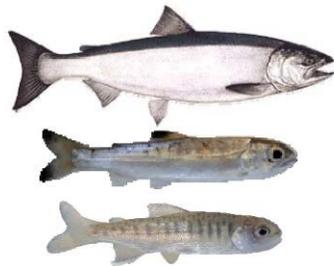


Dry Creek Biological Opinion Projects and Timeline



Habitat Enhancement Feasibility Study

Final Current Conditions Inventory Report



Current Conditions Inventory Report

Dry Creek:
Warm Springs Dam to
Russian River

Sonoma County, CA

Prepared for:

Sonoma County Water Agency
404 Aviation Boulevard
Santa Rosa, CA 95403

Prepared by:

Inter-Fluve, Inc.
1020 Wasco Street, Suite 1
Hood River, OR 97031

With:

Sanders & Associates
Geotechnical Engineering, Inc.
4180 Douglas Blvd., Suite 100
Granite Bay, CA 95746

Revised March 2010

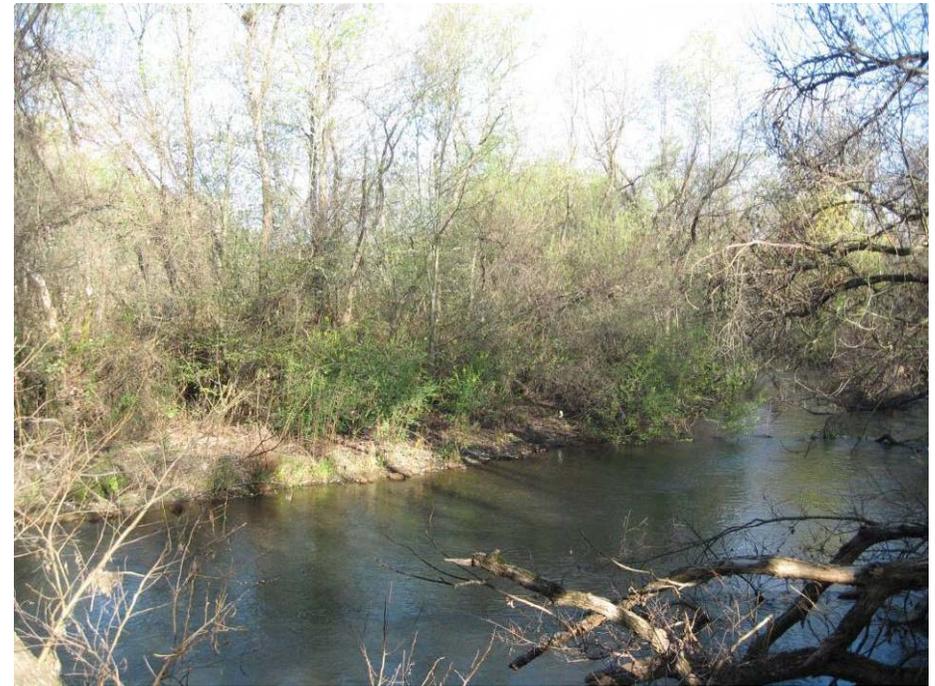


- Historic Hydrology, Land Management, and Geology
- Geomorphologic Changes Over Time - Evolution of Stream Channel
- Current Hydrology, Streambed Conditions, Riparian Vegetation, Fish Habitat
- Potential to Create Improved Fish Habitat

Stream Geomorphology Today

Growth of Vegetation:

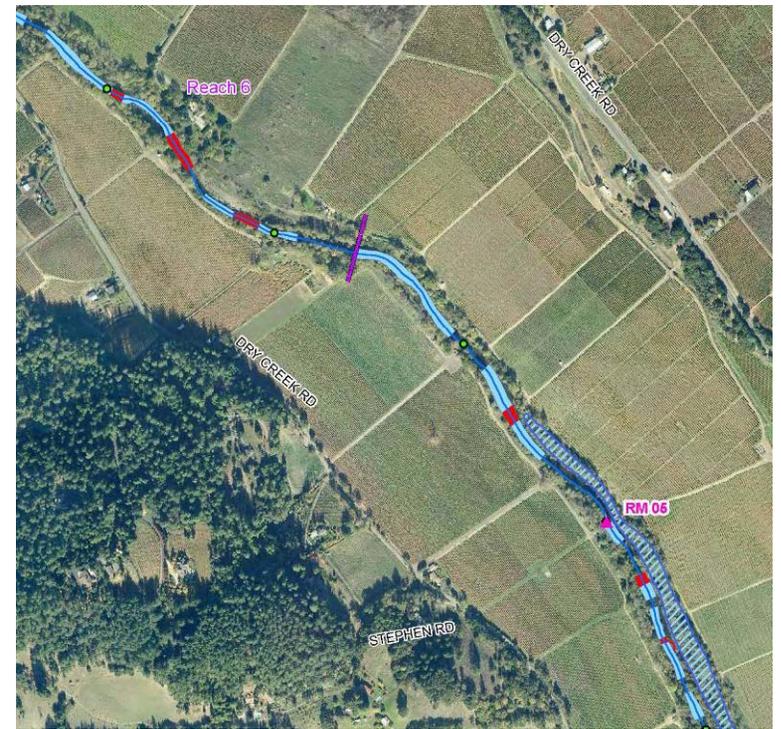
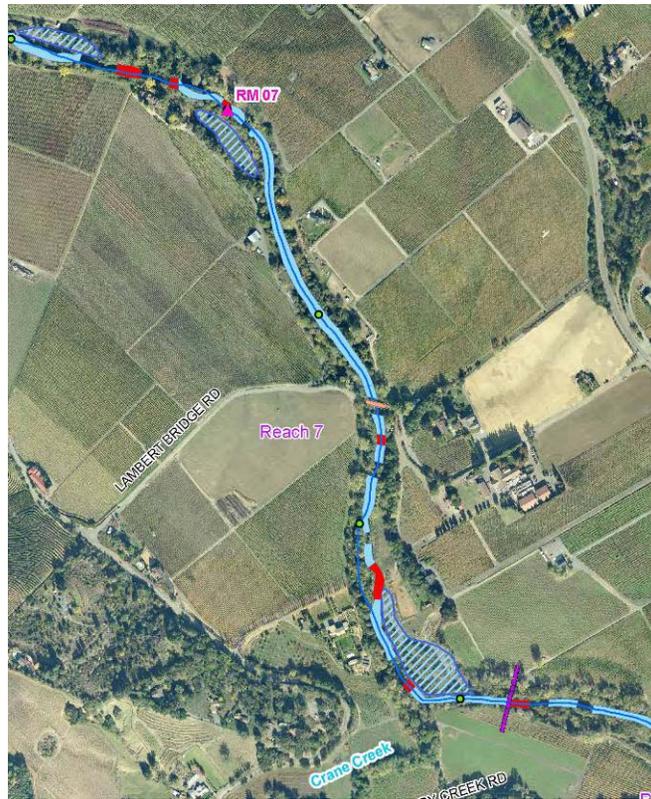
- Reduced winter floods and high summer flows combined with climate resulted in extensive riparian growth
- Stabilizes gravel bars
- Focuses flow in channel



Outlook for Fish Habitat Enhancement

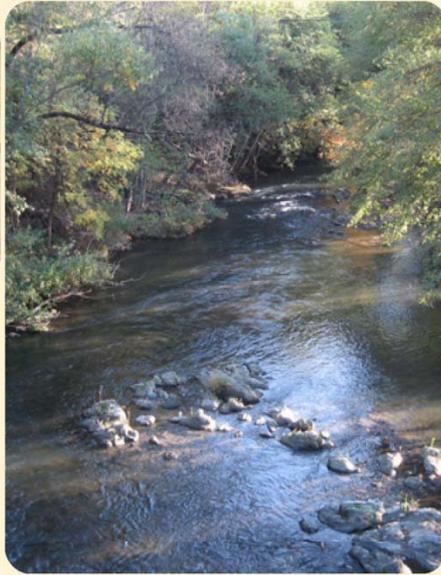
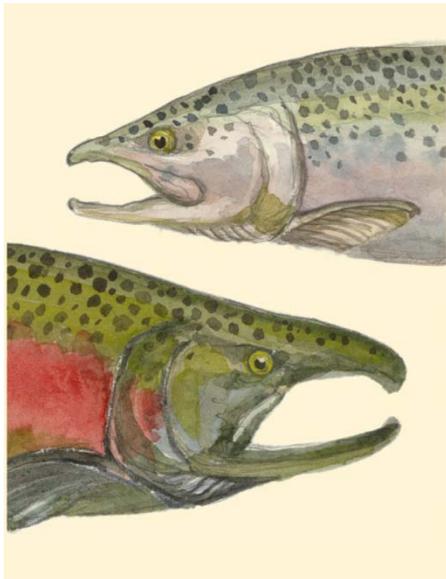
Potential Enhancement Opportunities

- More abundant than originally perceived
- Greater variability between sites than originally perceived

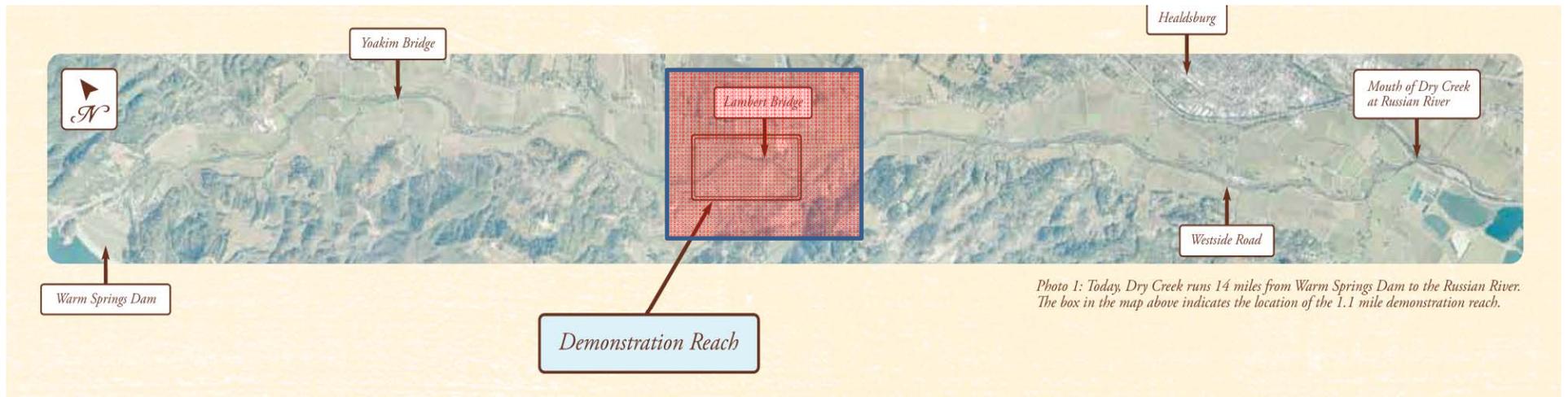


Dry Creek

*Habitat Enhancement
Demonstration Projects
Concept Designs*



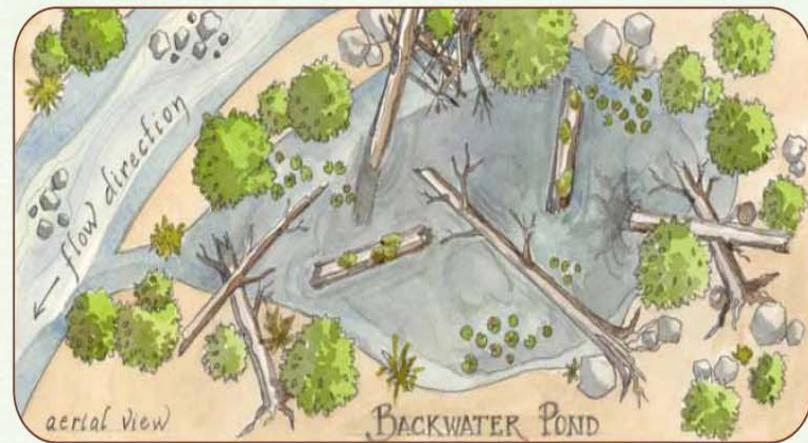
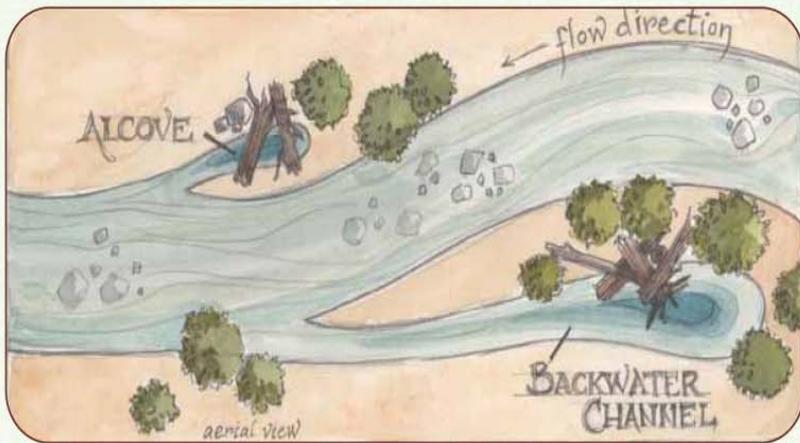
The Demonstration Mile



- Contiguous mile in middle Dry Creek Valley near Lambert Bridge
- 10 Voluntary landowners including 5 Wineries (Amista, Dry Creek Vineyard, Rued, Quivira, Seghesio)

Enhancement Techniques

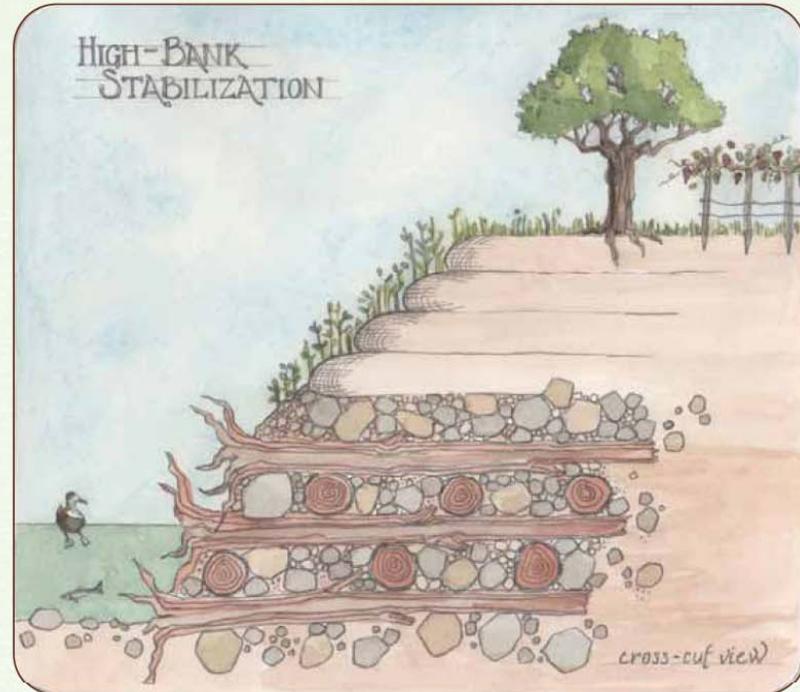
Low Velocity Backwater Pools, Alcoves Side Channels



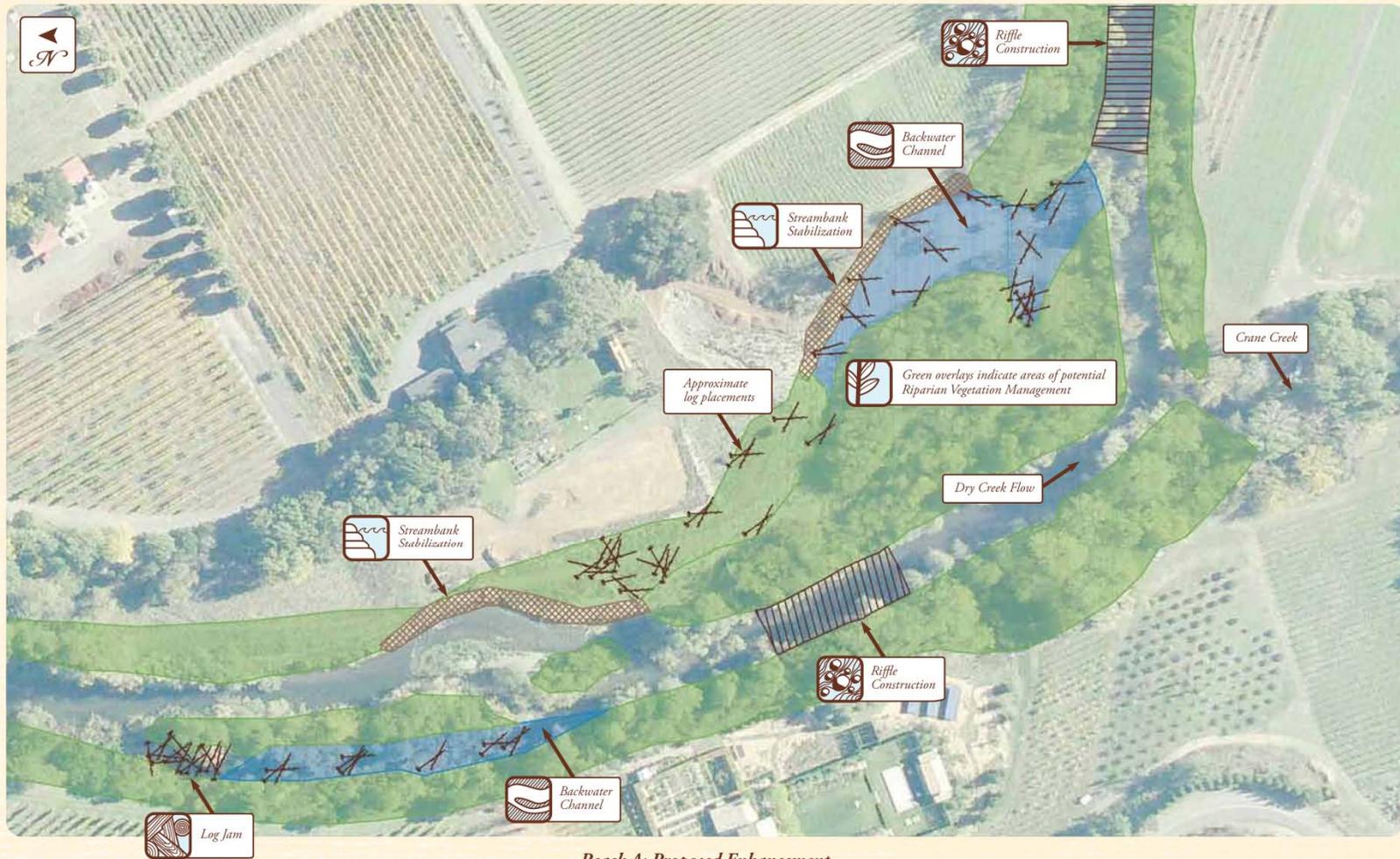
Enhancement Techniques

Stream Bank Stabilization

with native riparian vegetation. This forms a very durable, habitat-friendly streambank.



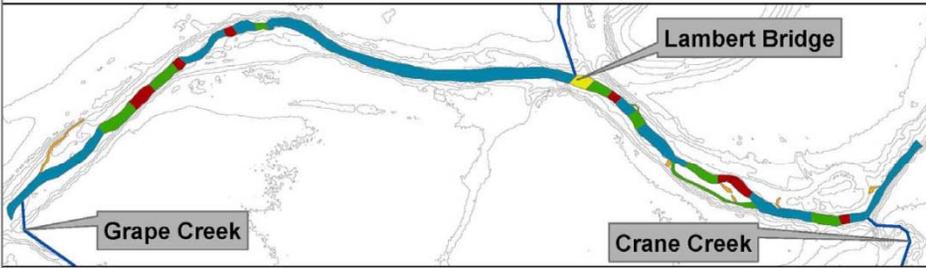
2. For high streambanks (greater than seven feet tall), the base of the streambank will be rebuilt in a manner similar to what was described for low streambanks. The upper part of the streambank will also be rebuilt with a technique that encapsulates soil in strong fabric blankets made from coconut fiber. Native plants are planted right through the fabric. After three to five years, the blankets decompose and the native vegetation takes over the role of stabilizing the upper part of the streambank. This approach also forms a very durable, habitat-friendly streambank that serves to protect valuable property.



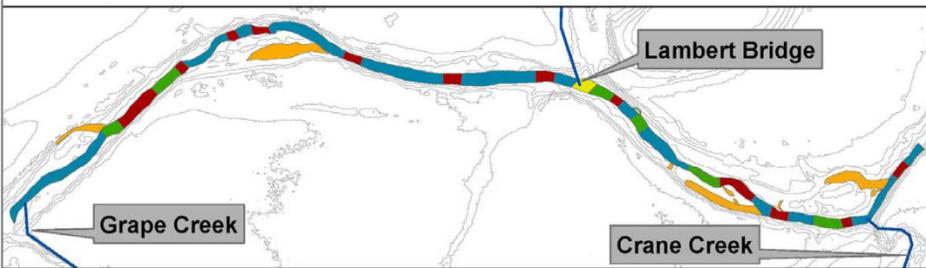
Reach A: Proposed Enhancement
 Scale: 1 inch equals 100 feet

Anticipated Habitat Benefits

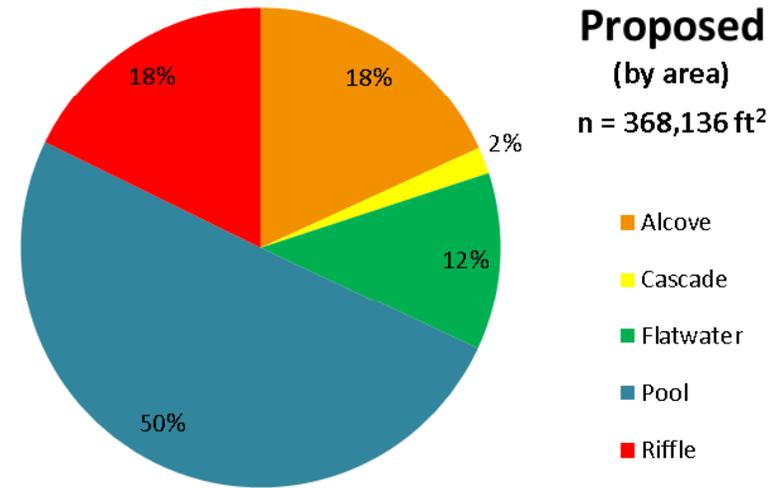
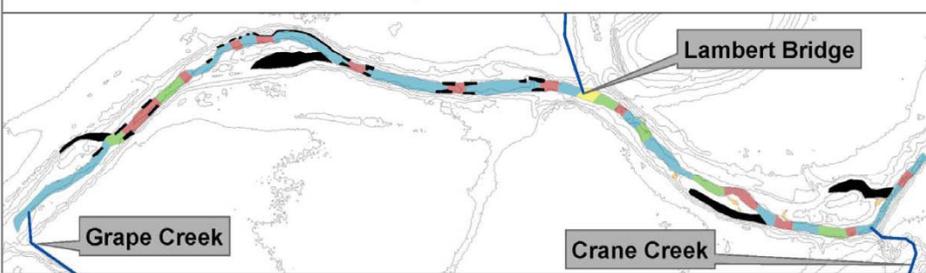
A. Existing



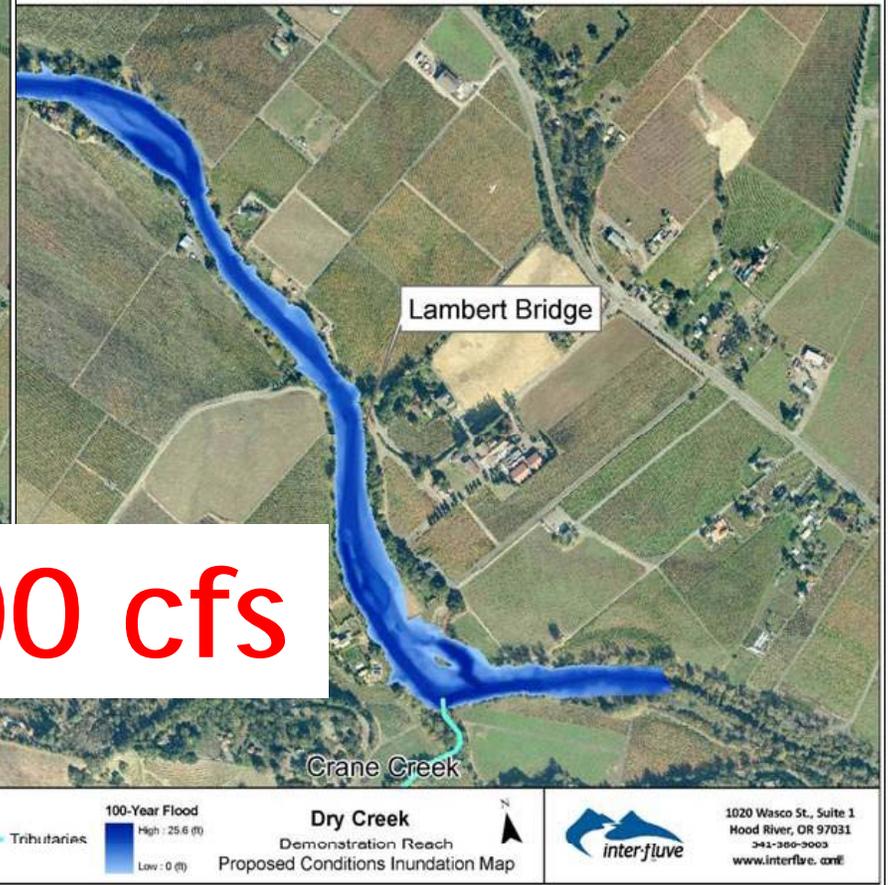
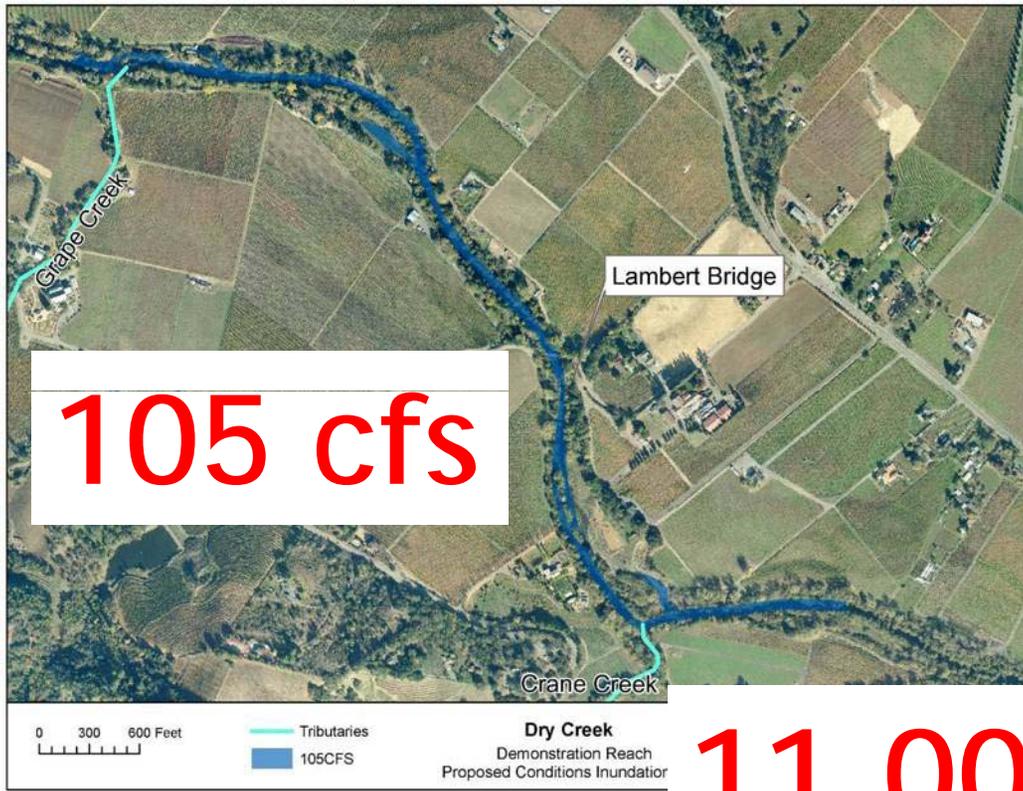
B. Proposed



C. Additional Juvenile Rearing Habitat

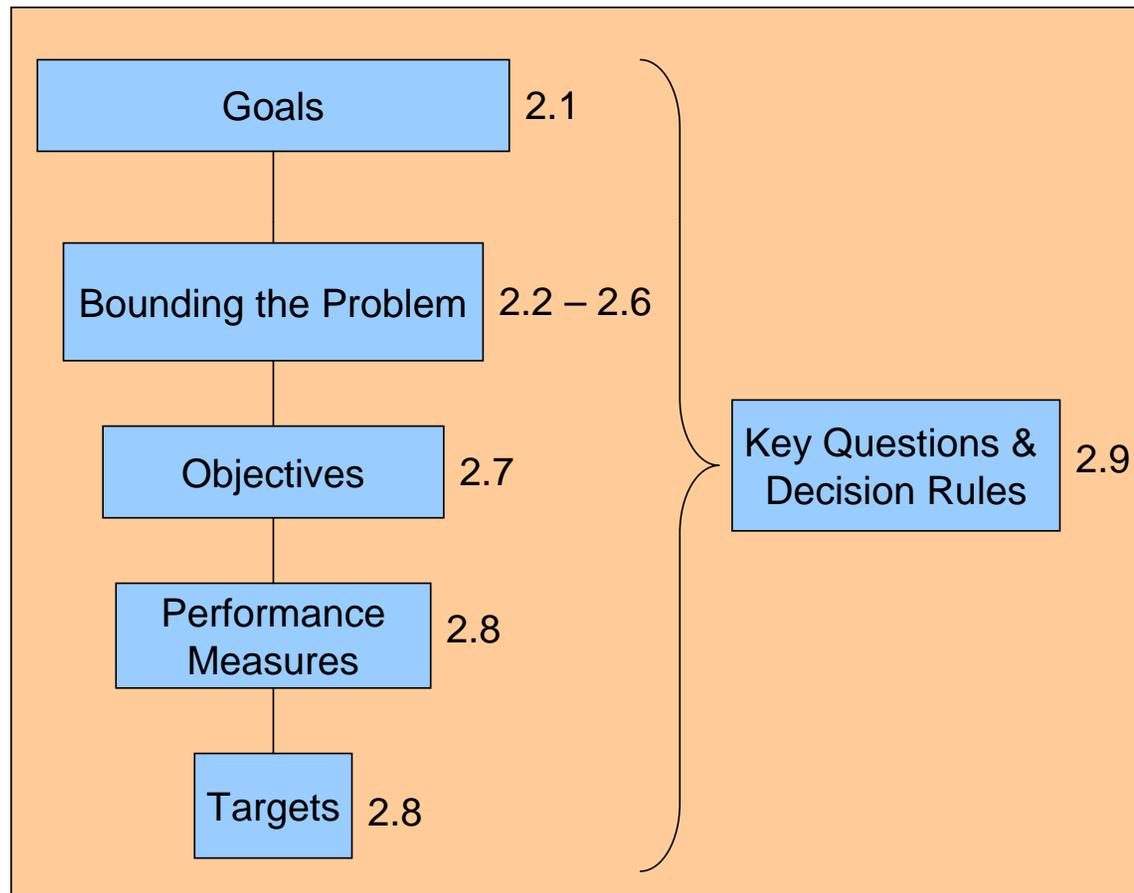


Planning for High Flow Events



Adaptive Management

ESSA Technologies, Interfluve,
SCWA, NMFS, DFG, USACE



Communication with Regulatory Agencies and Landowners

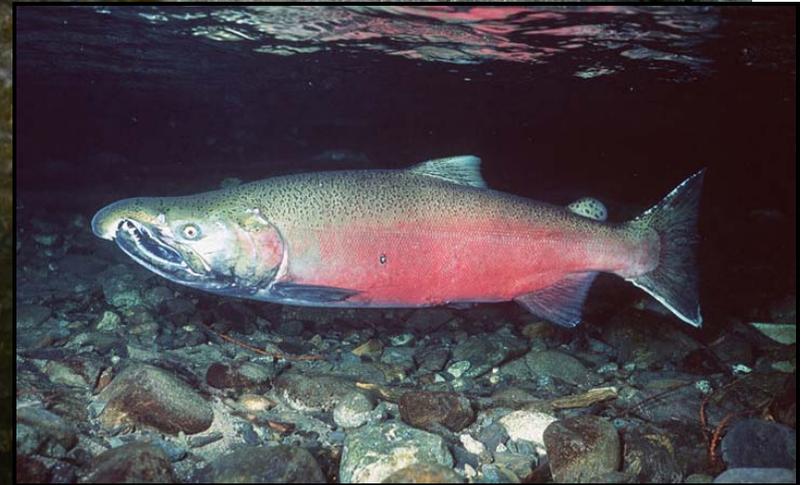


NMFS Headquarters,
Washington DC

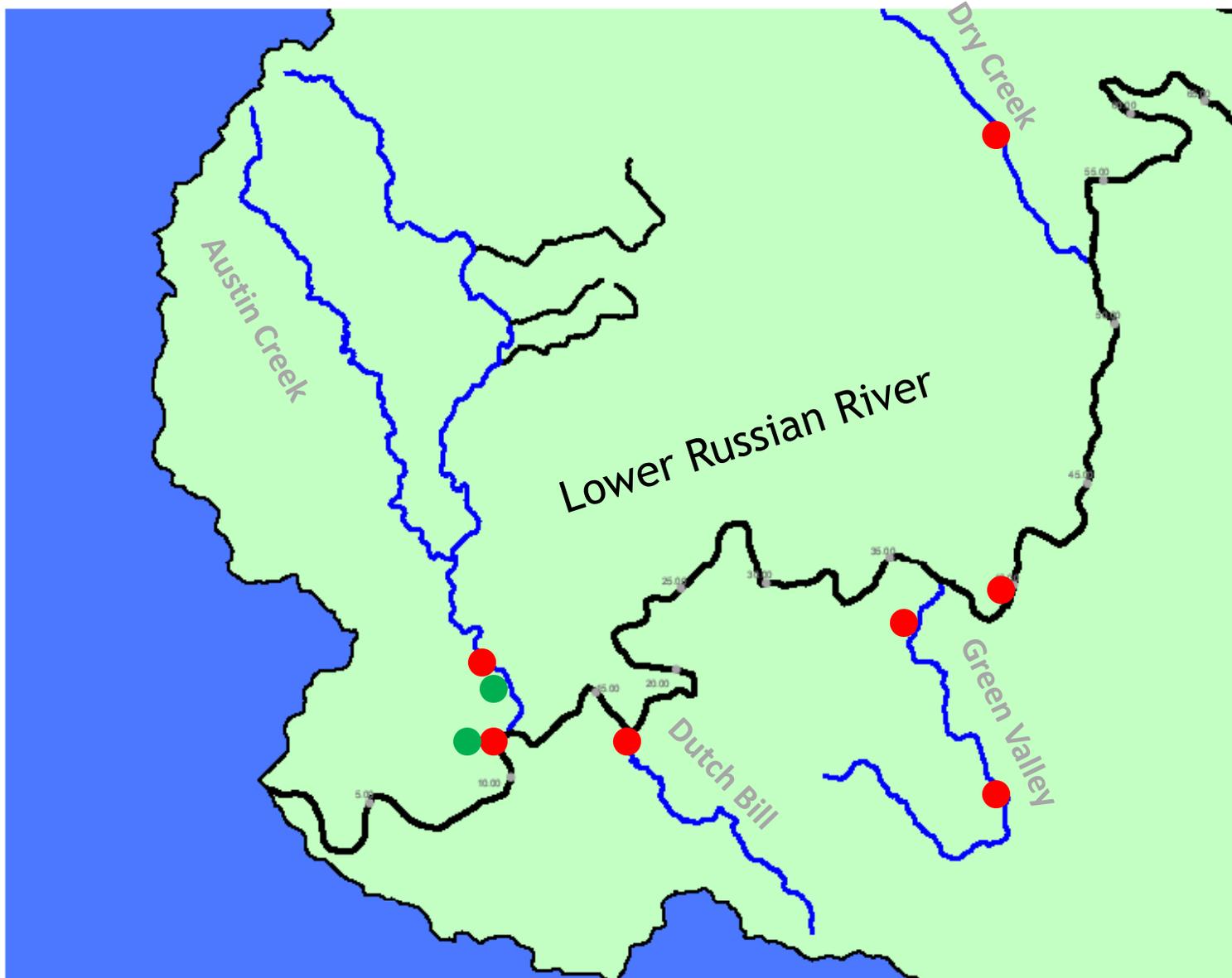


NMFS Administrator,
Eric Schwaab field
visit to Demonstration
Project

Recent Activities



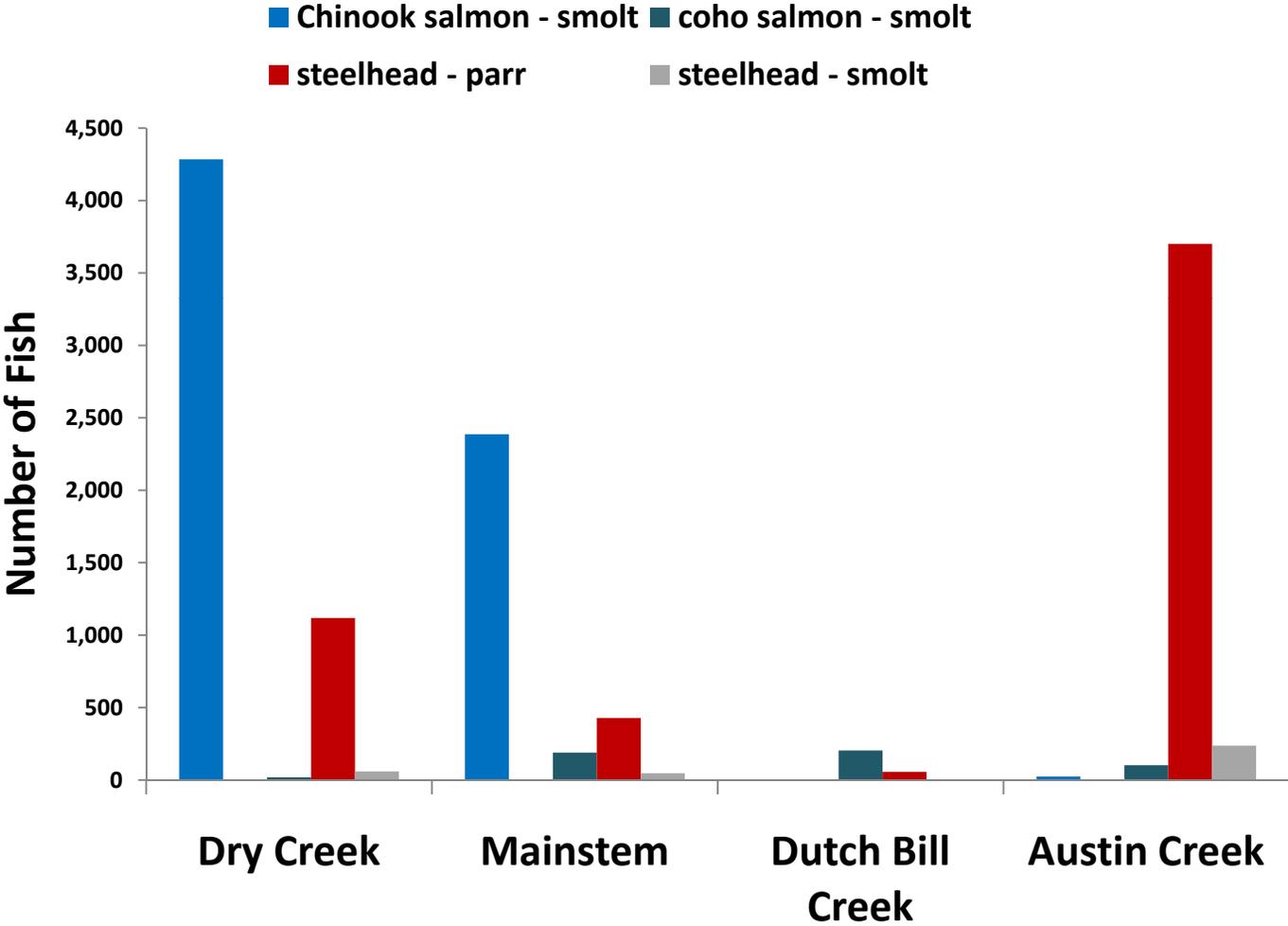
Coordinated Fish Sampling



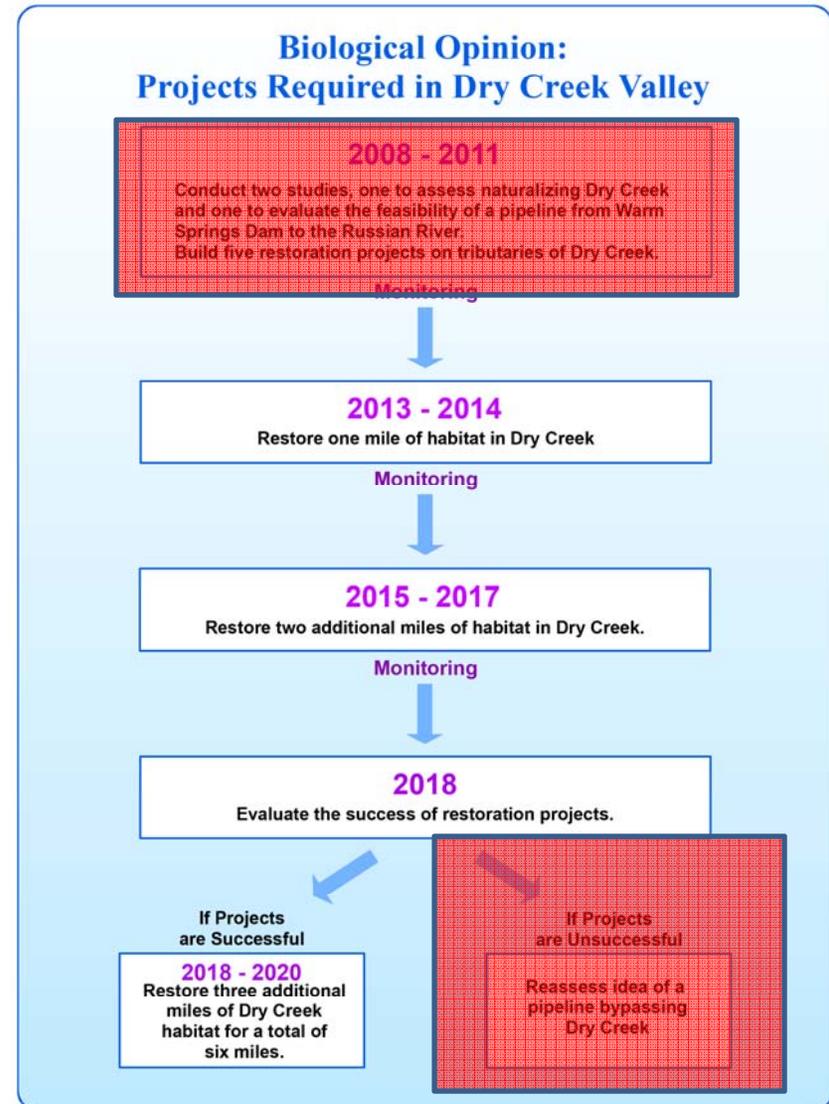
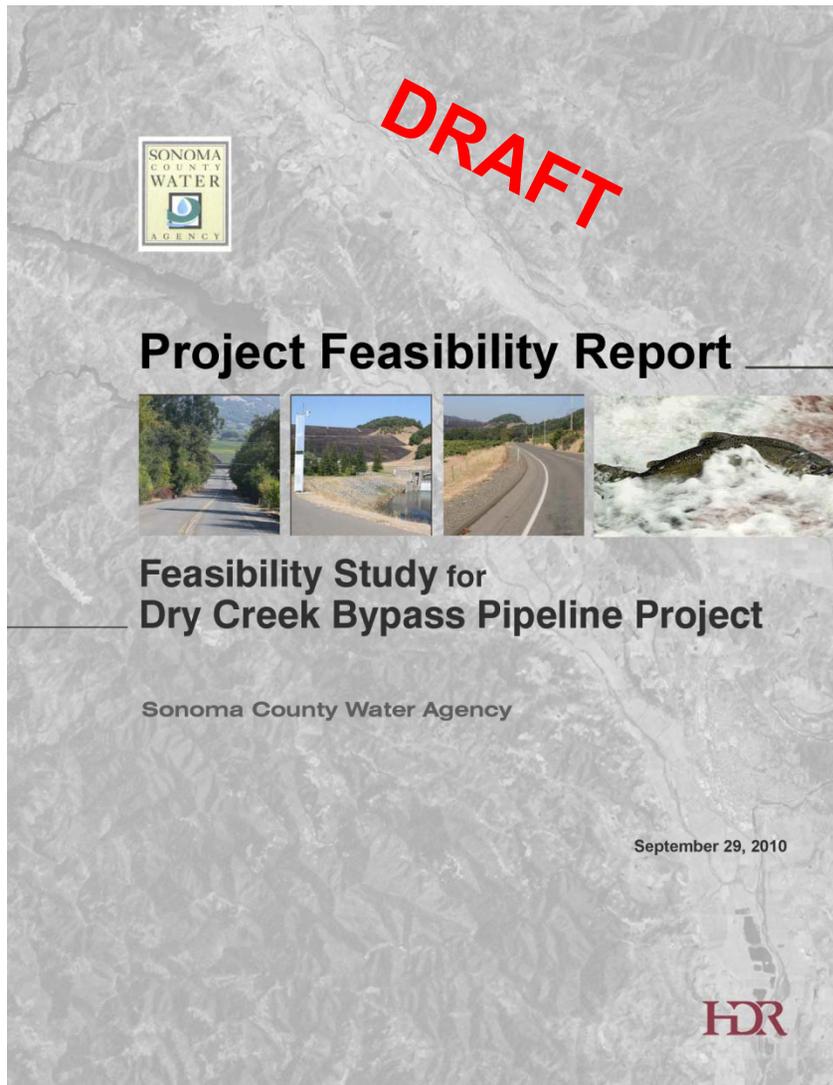
Fish Sampling Techniques - Traps



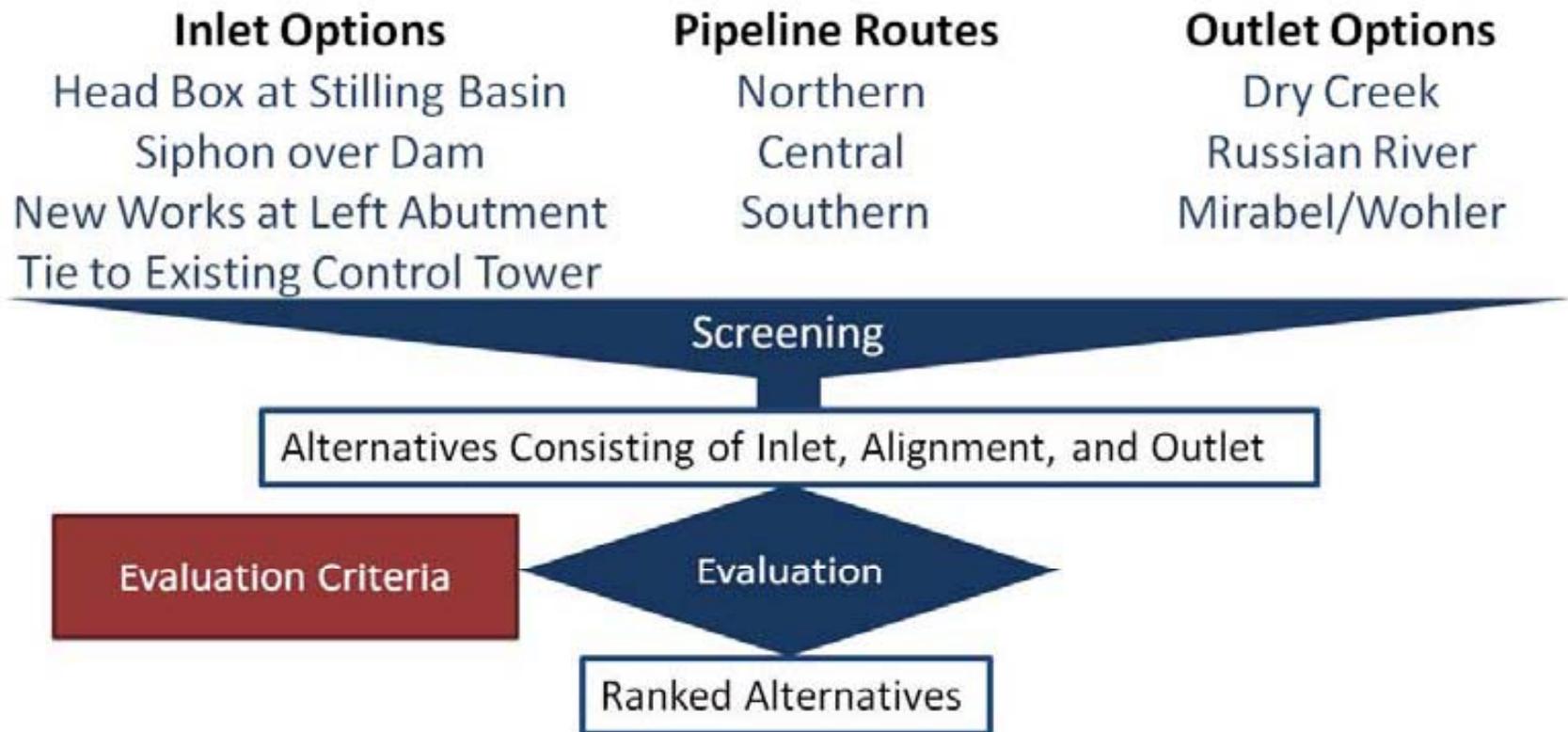
2010 Juvenile Salmon and Steelhead Trap Data



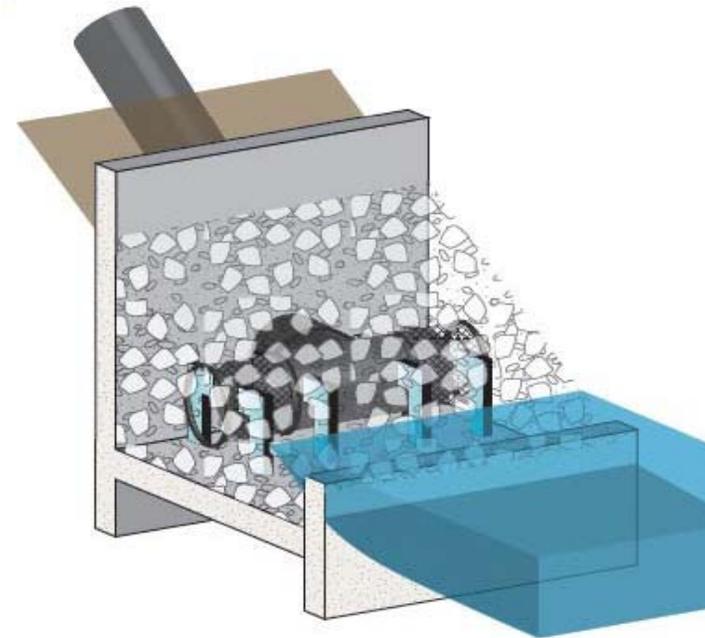
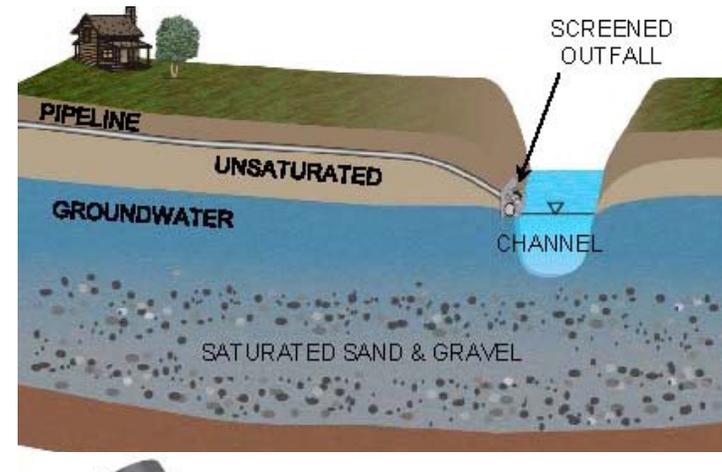
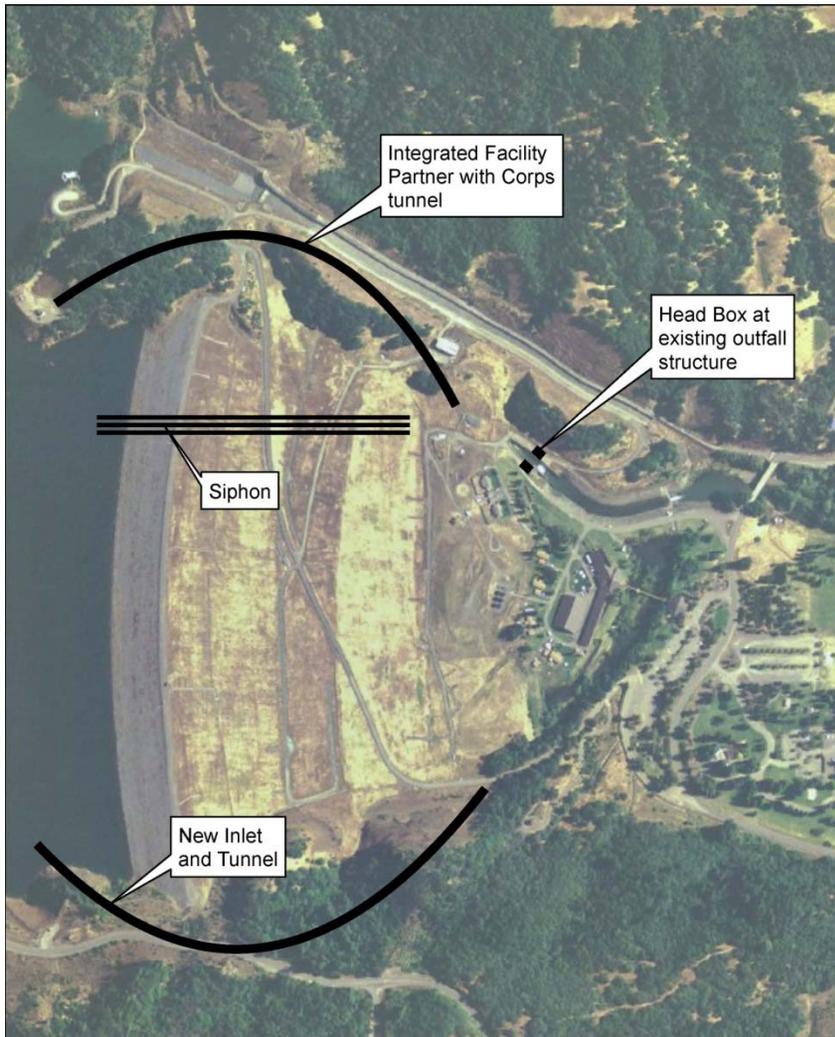
Dry Creek Bypass Pipeline Study



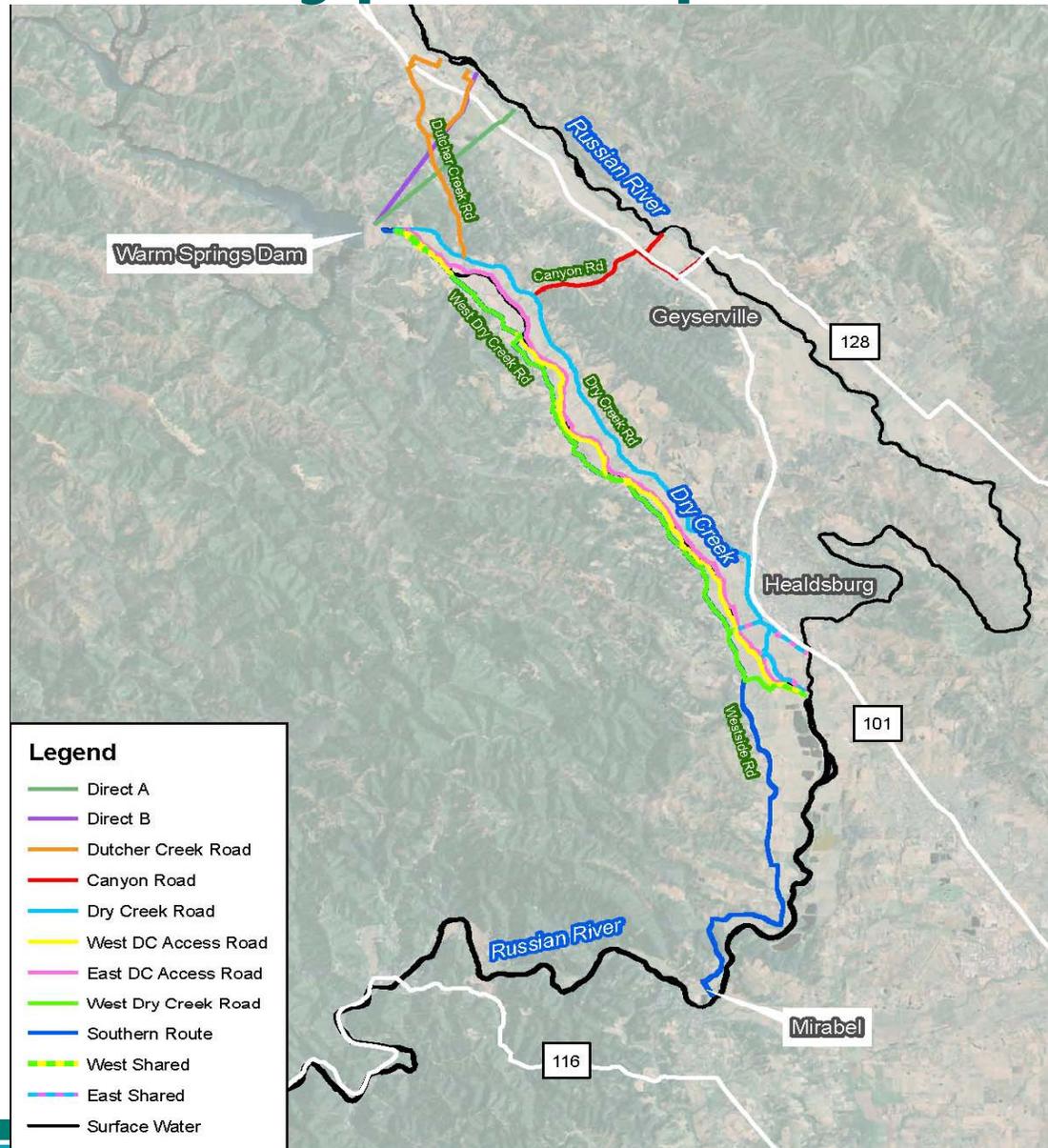
Pipeline Screening and Evaluation Criteria



Pipeline Inlet and Outlet Options



Potential Bypass Pipeline Routes

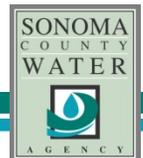


Milestones, Status, & Next Steps

Dry Creek Habitat Enhancement Project:

SCWA, InterFluve, ESSA Inc.

Milestone:	Habitat Enhancement Feasibility Study	End of 2010.
Status:	Demonstration Project 10% Design	August 2010. Completed
	Demonstration Project 30% Design	November 2010. Completed
	Current Conditions Report completed	December 2010. Completed
Next:	Full Feasibility Study 14 miles of Dry Creek	February 2011
	Demonstration Project 60% Design	February 2011
	Adaptive Management and Monitoring Plan	March 2011



Milestone, Status, & Next Steps

Tributary Habitat Enhancement Projects

*SCWA, Sotoyome RCD, Prunuske Chatham, Trout Unlimited,
County Public Works, County PRMD*

Milestone:	Five Tributary Projects Completed	End of 2011
Status:	Grape Creek Habitat Enhancement Willow Creek Funding Agreement	August 2010. Completed October 2010. Completed
Next:	Grape Creek Fish Passage Wallace Creek Fish Passage Mill Cr. Or Crane Cr. Fish Passage	Summer 2011 Fall 2011 Fall 2012

Milestones, Status, & Next Steps

Dry Creek Bypass Pipeline Feasibility Study:

SCWA, HDR Inc.

Milestone:	Dry Creek Bypass Pipeline Feasibility Study	End of 2010.
Status:	Draft feasibility study is currently under review	September 2010
Next:	Feasibility Study Draft released	February 2011



Habitat Enhancement, Monitoring, and Planning

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