

Update on Dutch Bill Creek fish populations



*University of California
Sea Grant Extension Program*



UC Cooperative Extension and CA Sea Grant

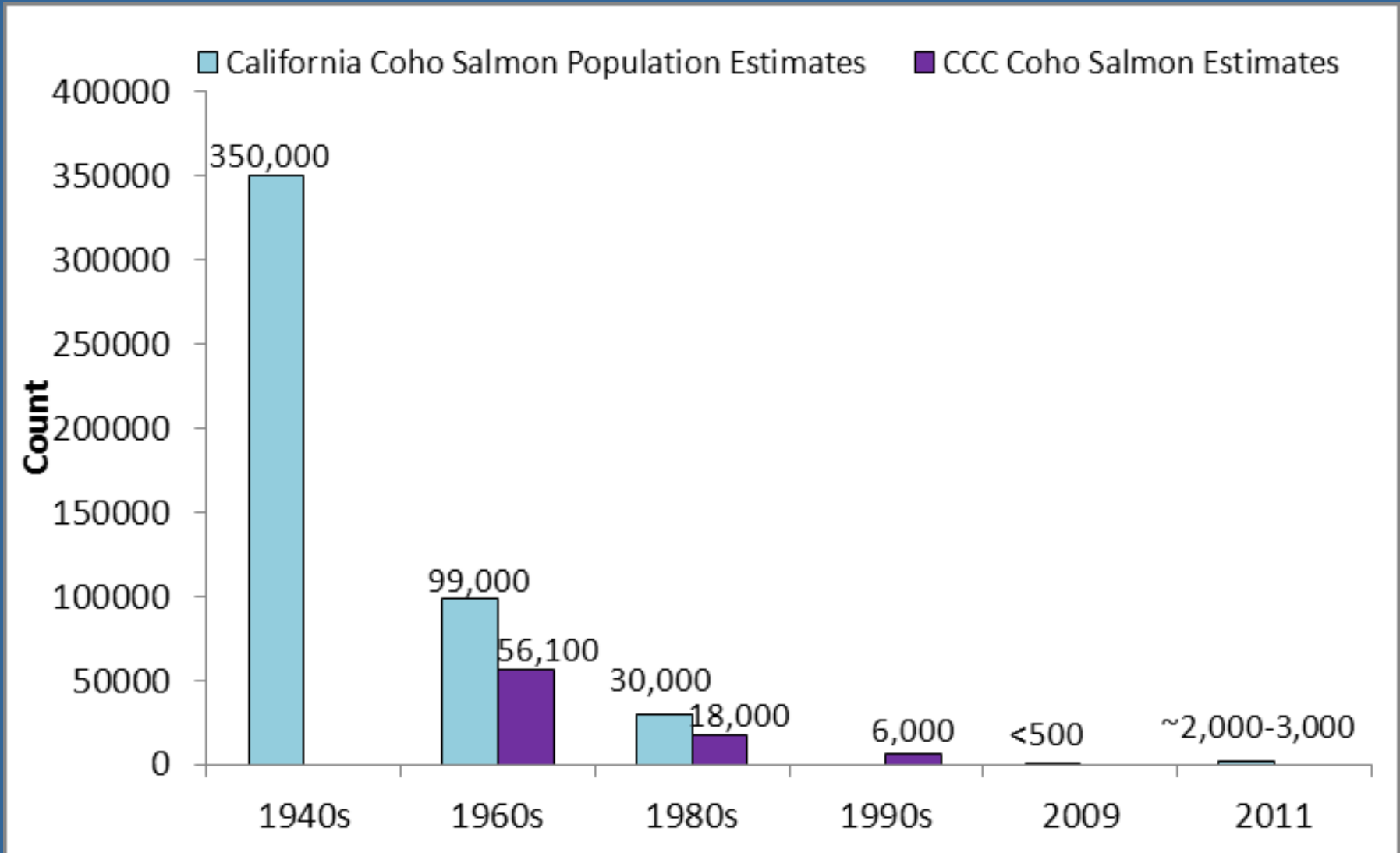


Program Goal:

Conduct monitoring and research to support salmon and steelhead recovery in the Russian River watershed

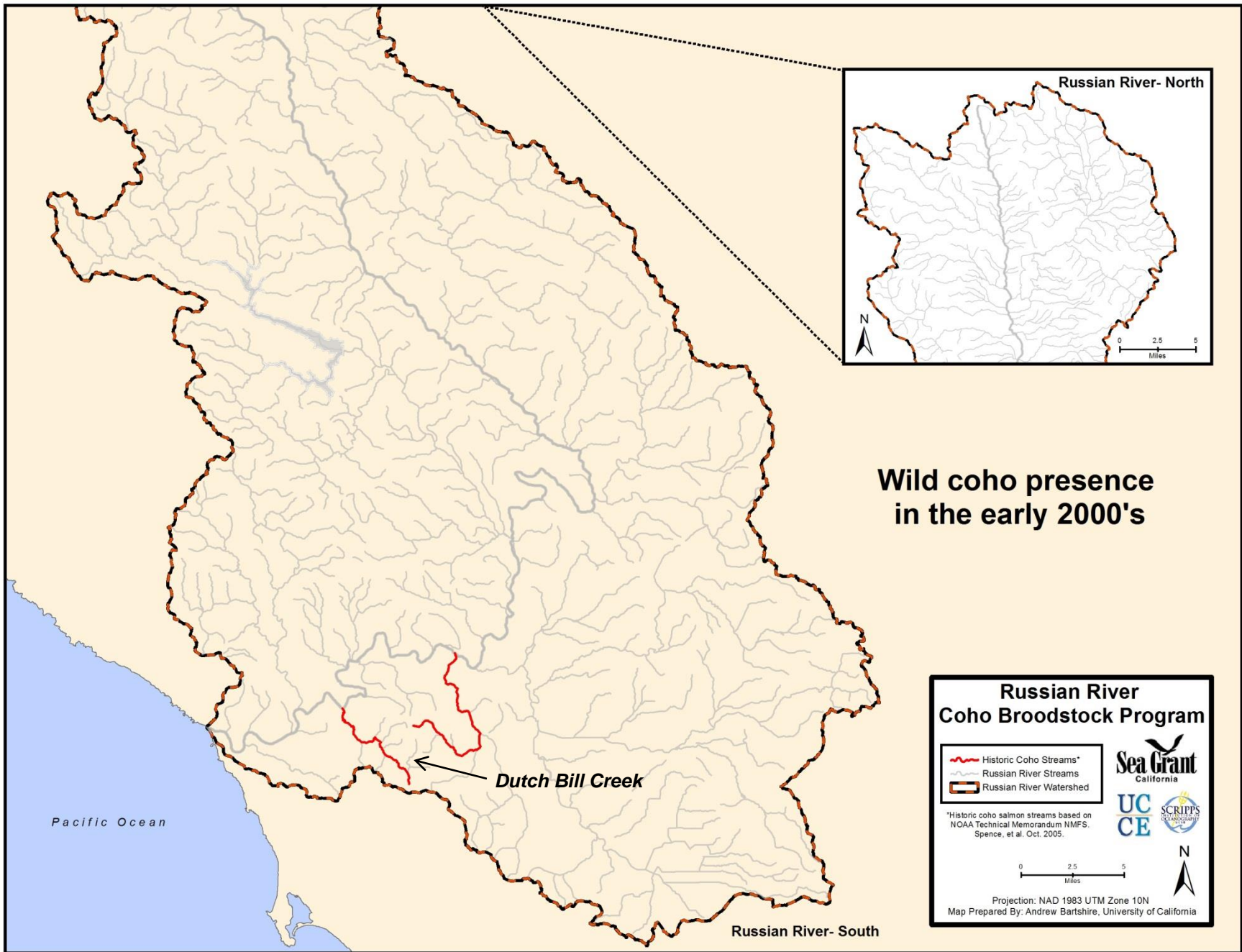
- Captive Broodstock Program
- CA Coastal Monitoring Program
- Coho Partnership
- Fish use of habitat enhancement projects

Decline of coho salmon



Source: NOAA fisheries, 2012





Russian River- North



Wild coho presence in the early 2000's

Dutch Bill Creek

Russian River Coho Broodstock Program

- Historic Coho Streams*
- Russian River Streams
- Russian River Watershed

*Historic coho salmon streams based on NOAA Technical Memorandum NMFS, Spence, et al. Oct. 2005.

Sea Grant California
UC CE SCRIPPS OCEANOGRAPHY

0 2.5 5 Miles

Projection: NAD 1983 UTM Zone 10N
Map Prepared By: Andrew Bartshire, University of California

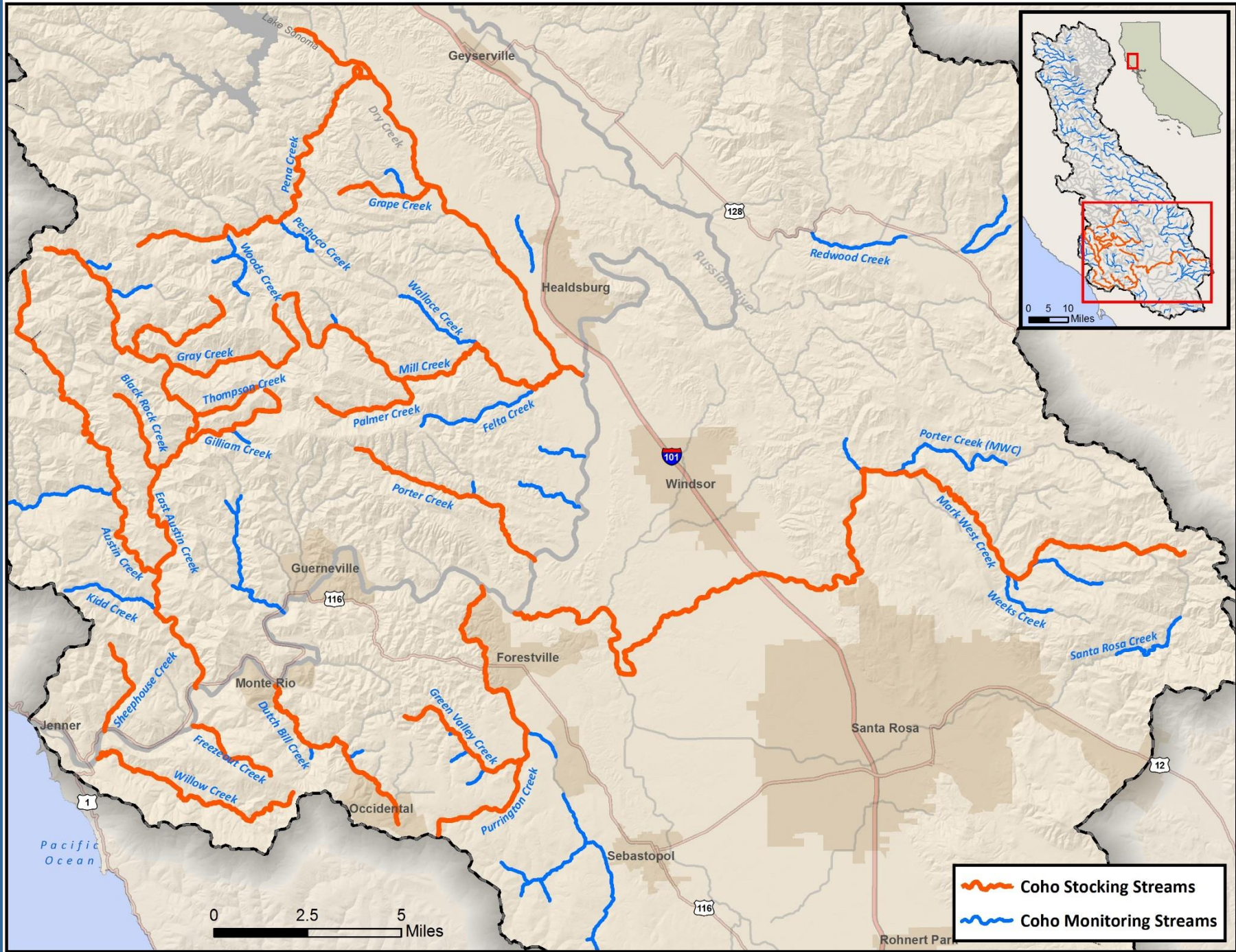
Pacific Ocean

Russian River- South

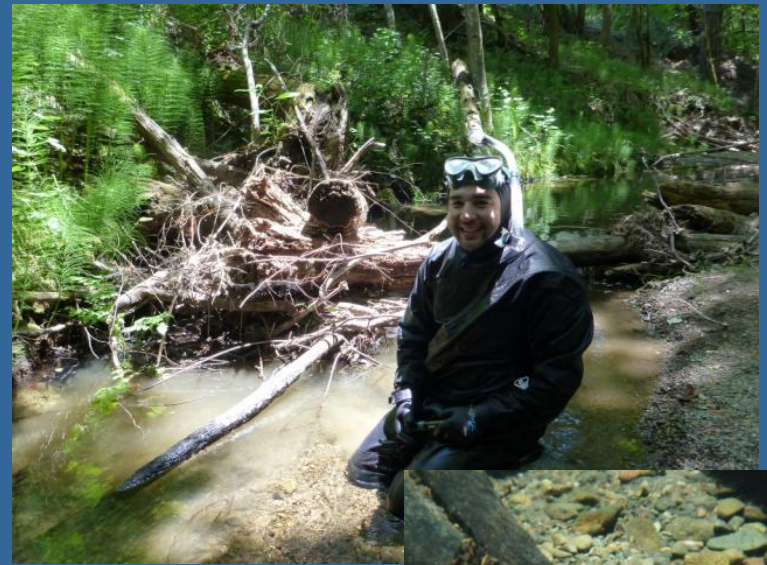
Russian River Coho Salmon Captive Broodstock Program

- Extinction of coho salmon in the Russian River basin imminent without immediate intervention
- In 2001, state and federal agencies collaborated with local organizations to create captive broodstock program
- Program Goal: Re-establish self-sustaining runs of native coho salmon in historic coho streams





Adult spawner surveys



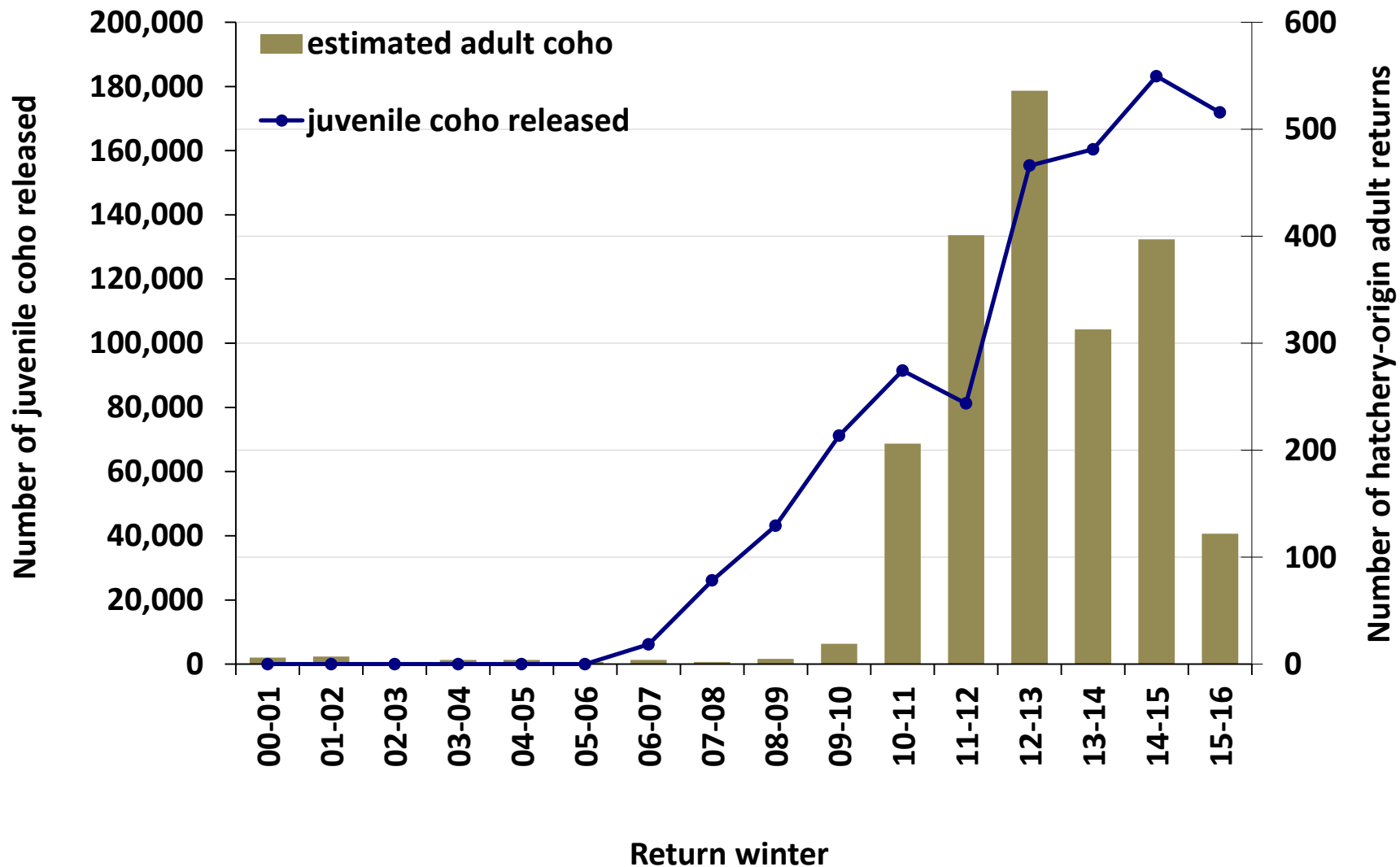
Juvenile snorkel surveys



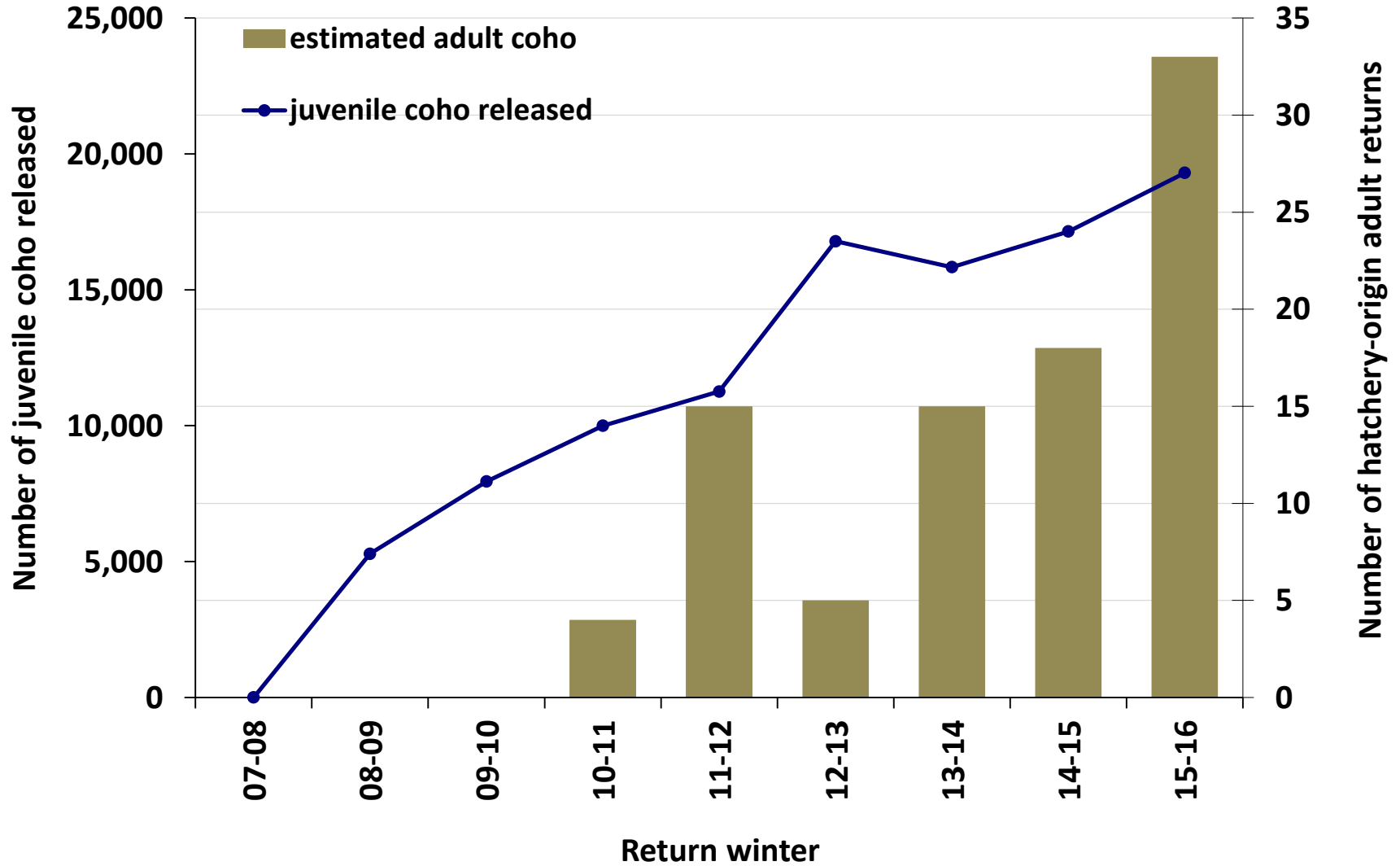
Downstream migrant smolt trapping



Juvenile releases and corresponding adult coho returns to the Russian River basin



Juvenile releases and corresponding adult coho returns to Dutch Bill Creek



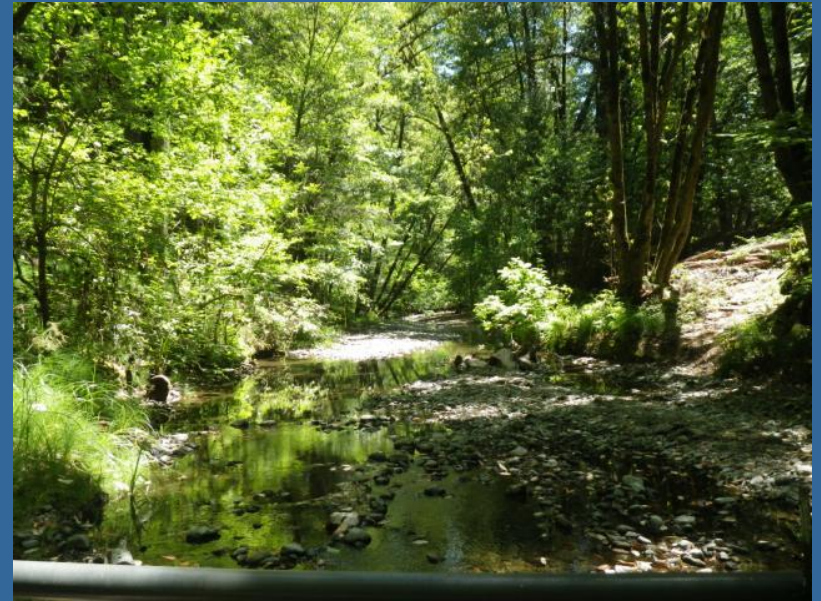
Dutch Bill Creek juvenile presence



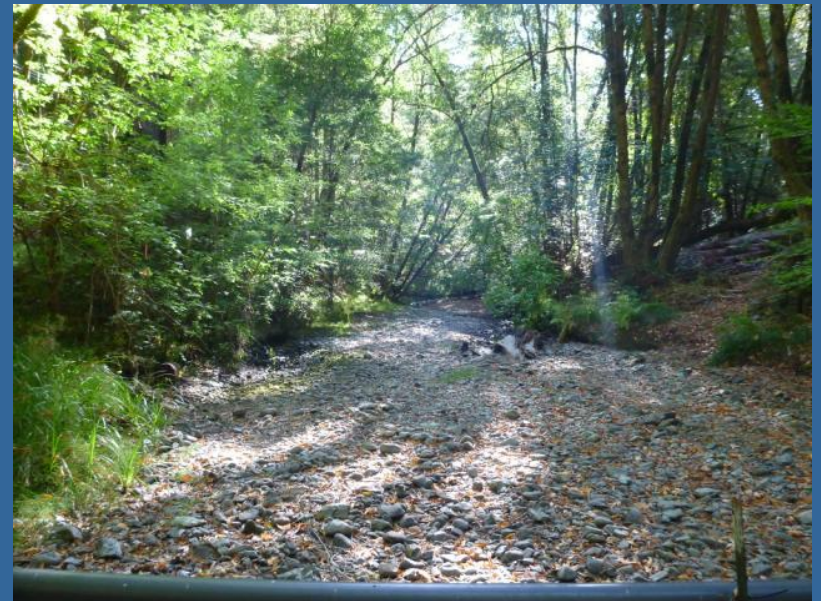
Summer 2015:

*estimated 1,300 wild coho
(13% of basinwide total)*

Low summer streamflow: bottleneck to survival



Lower study reach in June



Lower study reach in September

2015 Juvenile Coho Snorkel Counts

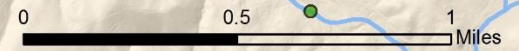
Dutch Bill Creek



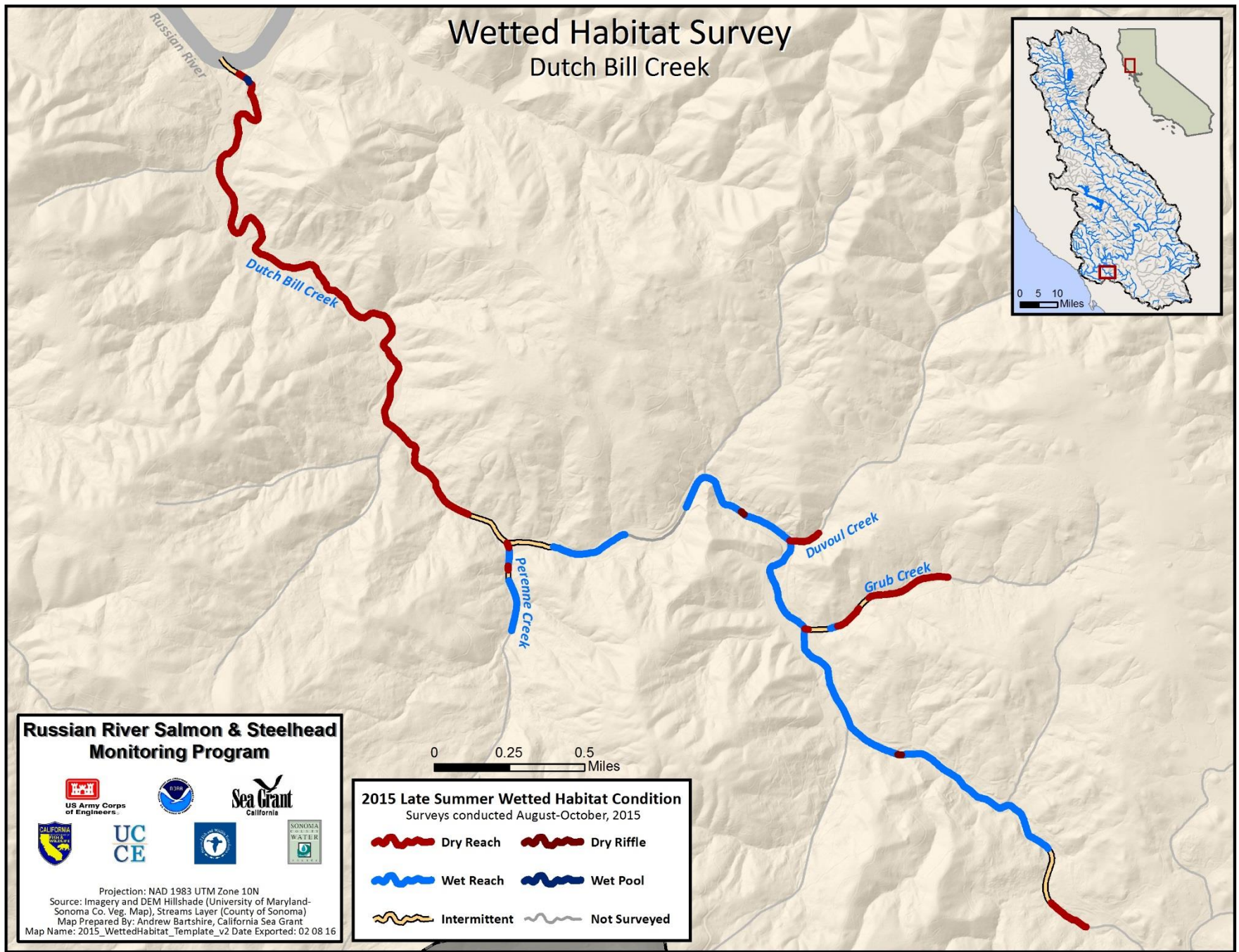
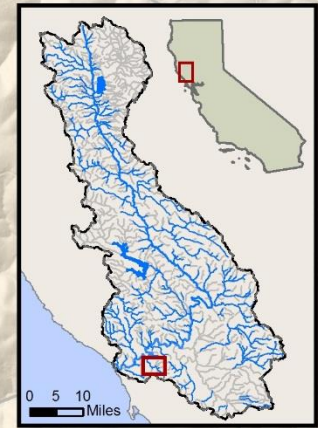
Russian River Salmon & Steelhead Monitoring Program



Projection: NAD 1983 UTM Zone 10N
 Source: Imagery and DEM Hillshade (University of Maryland-Sonoma Co. Veg. Map), Streams Layer (County of Sonoma)
 Map Prepared By: Andrew Bartshire, California Sea Grant
 Map Name: 2015_WettedHabitat_Template_v2 Date Exported: 02 23 16



Wetted Habitat Survey Dutch Bill Creek



Russian River Salmon & Steelhead Monitoring Program

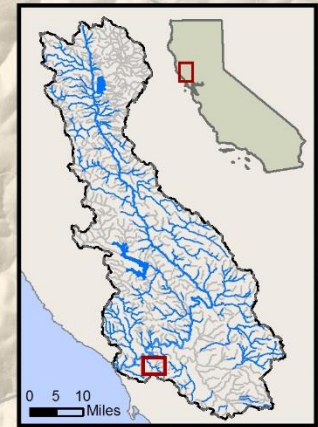


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2015 Late Summer Wetted Habitat Condition Surveys conducted August-October, 2015

- | | |
|--------------|--------------|
| Dry Reach | Dry Riffle |
| Wet Reach | Wet Pool |
| Intermittent | Not Surveyed |

Juvenile Salmonid Counts & Wetted Habitat Dutch Bill Creek



Summer 2015

Number of Coho and Steelhead Yoy Observed

• 0	○ 11-25	○ 51-100
○ 1-10	○ 26-50	○ 100+

● Wet	● Dry	● Intermittent
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Russian River Salmon & Steelhead Monitoring Program

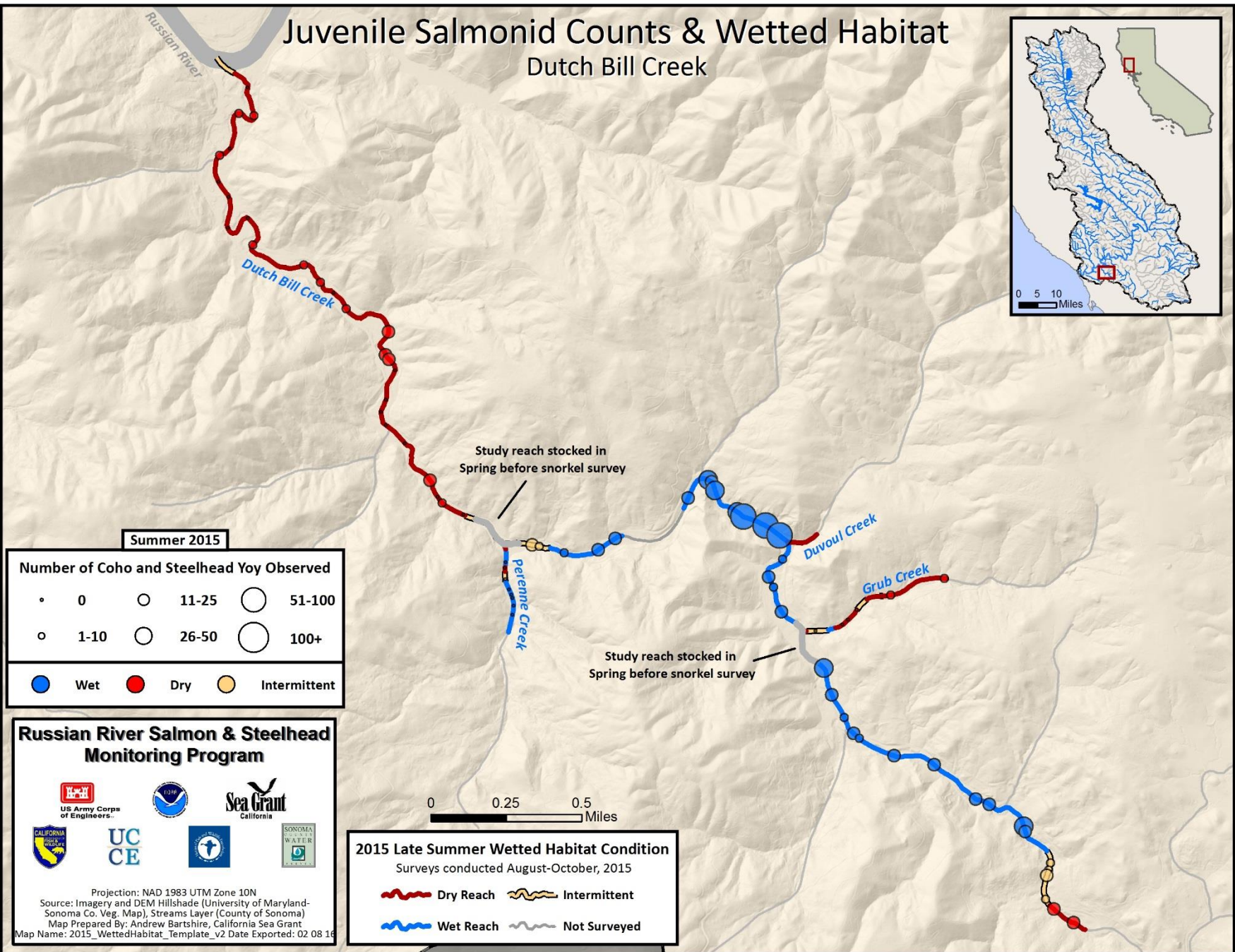


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0 0.25 0.5 Miles

2015 Late Summer Wetted Habitat Condition
 Surveys conducted August-October, 2015

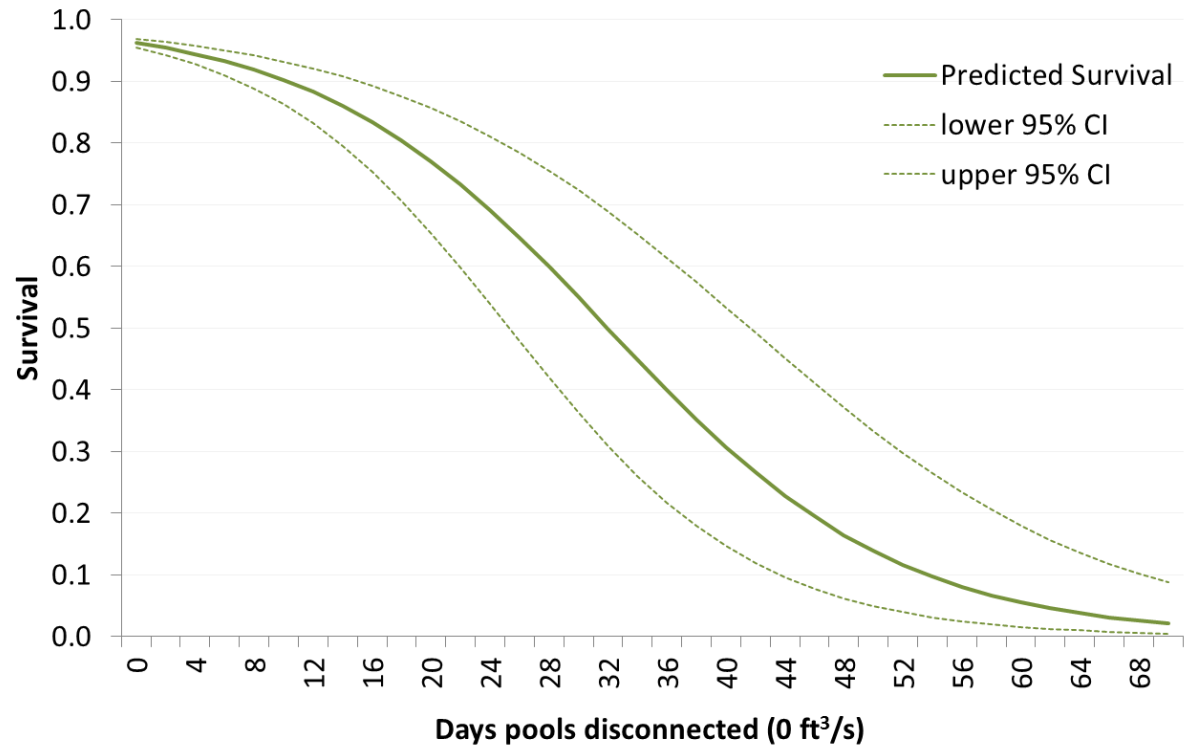
Dry Reach	Intermittent
Wet Reach	Not Surveyed

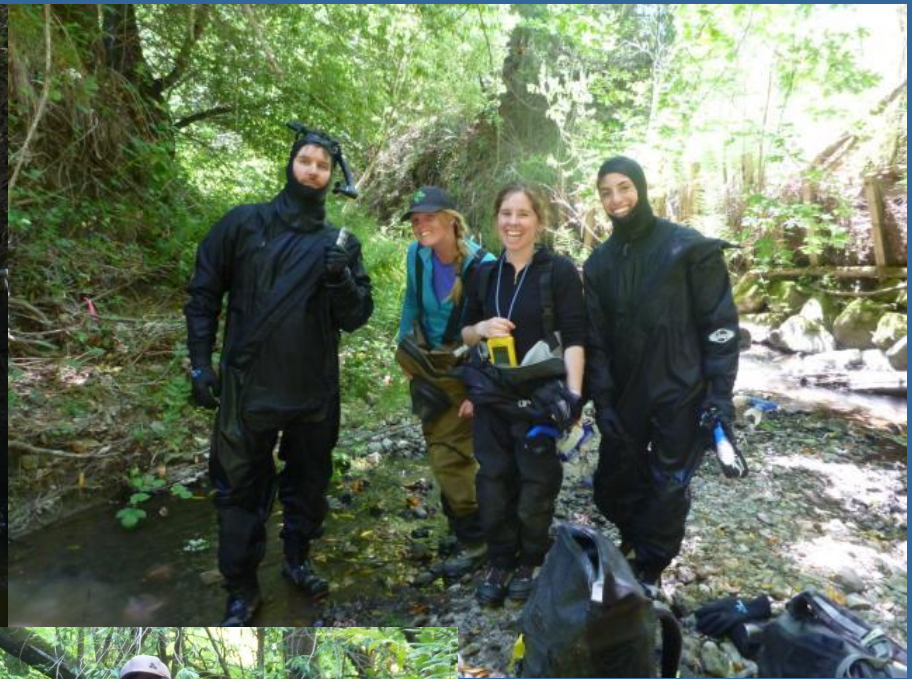


**Keeping pools
connected is
KEY**

*only a very
small amount
of water is
needed*

Survival and Flow: Green Valley reference reach 2010-2013





ca-sgep/ucsd.edu/RussianRiverCoho