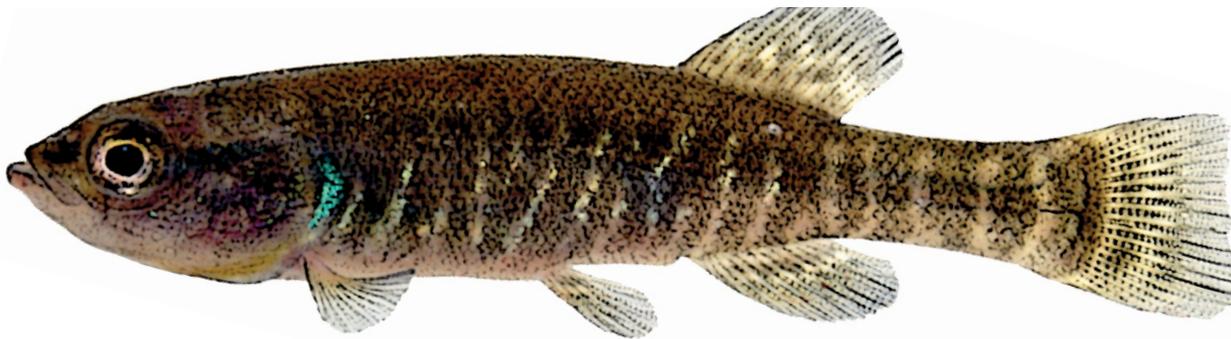


Wild Fish Conservancy

N O R T H W E S T

S C I E N C E E D U C A T I O N A D V O C A C Y



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P R E S E R V E P R O T E C T R E S T O R E



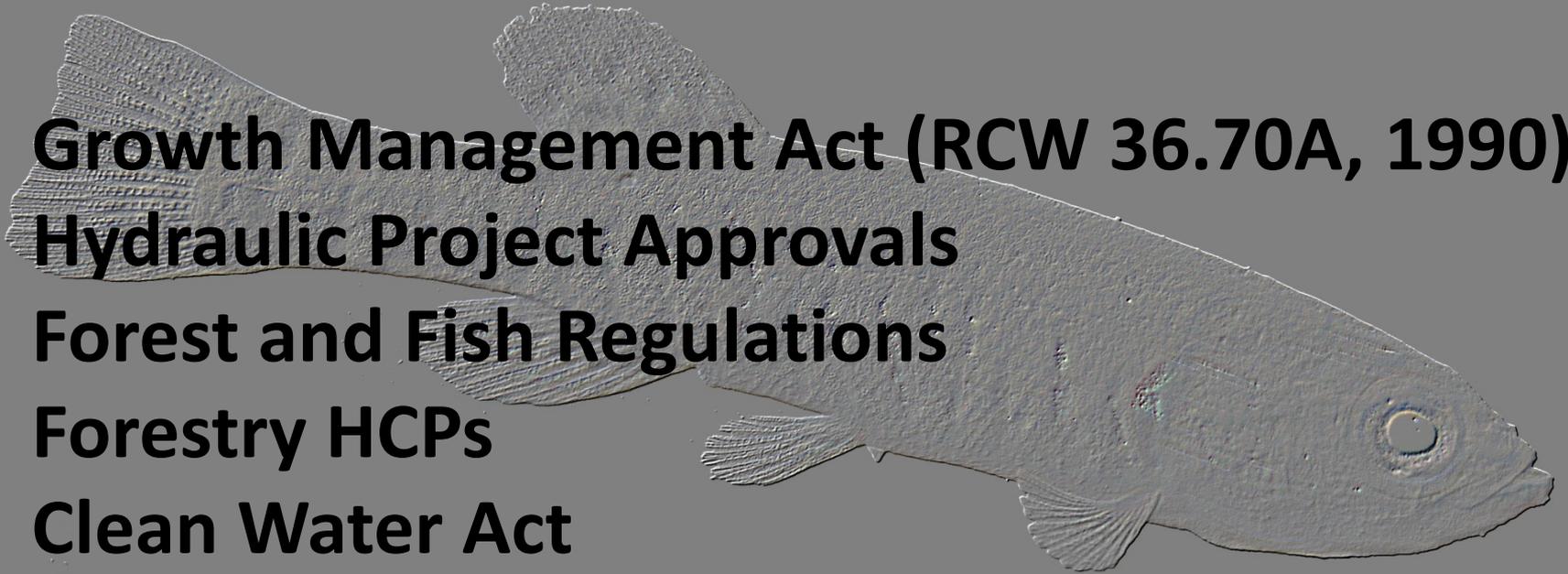
Recovering the Abundance and Diversity of PNW Native Fishes

- **Restore Important Habitats / Watershed Processes.**
- **Protect Existing Habitats and Watershed Processes from Further Degradation (Effective and Responsible Resource Management).**

Both actions are needed

The Good News:

- **Growth Management Act (RCW 36.70A, 1990)**
- **Hydraulic Project Approvals**
- **Forest and Fish Regulations**
- **Forestry HCPs**
- **Clean Water Act**
- **ESA**
- **Others**



The Good News:

- Growth Management Act (RCW 36.70A, 1990)

The effectiveness of these tools hinges on knowing where the fish habitats are.

- Clean Water Act
- ESA
- Others

WATER TYPING

A classification system used to regulate land-use around streams.



WHERE ARE THE FISH AND THEIR HABITATS?

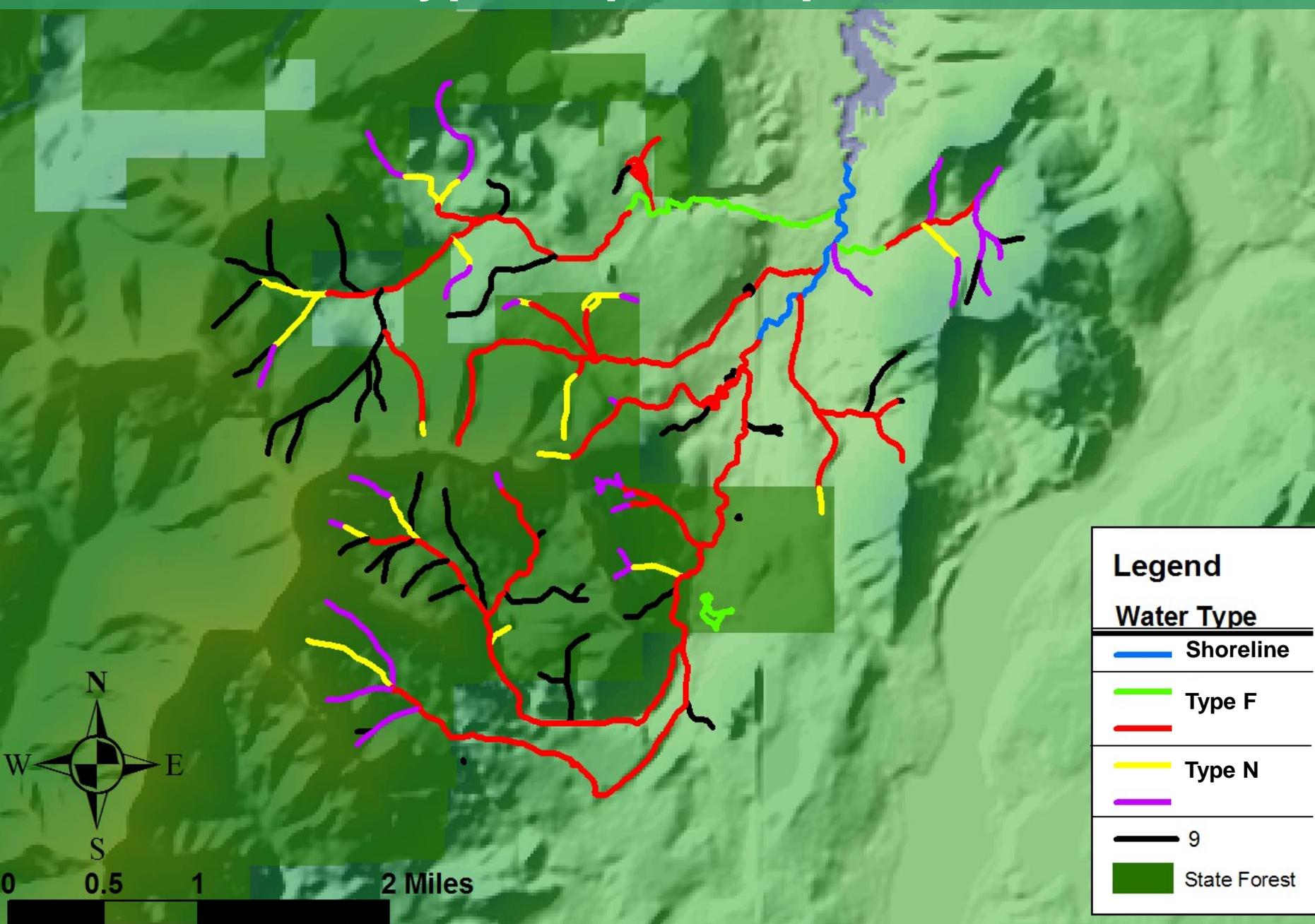
WATER TYPING



WA Department of Natural Resources Water Types

Type*	Description	Buffer Size
Type S (1)	Shorelines (SMA)	Large
Type F (2,3)	Fish Bearing	Medium
Type N (4,5)	Non Fish-Bearing	Small or none
Type U (9)	Unclassified	V. small or none

WDNR Water Type Map Example - McLane Creek

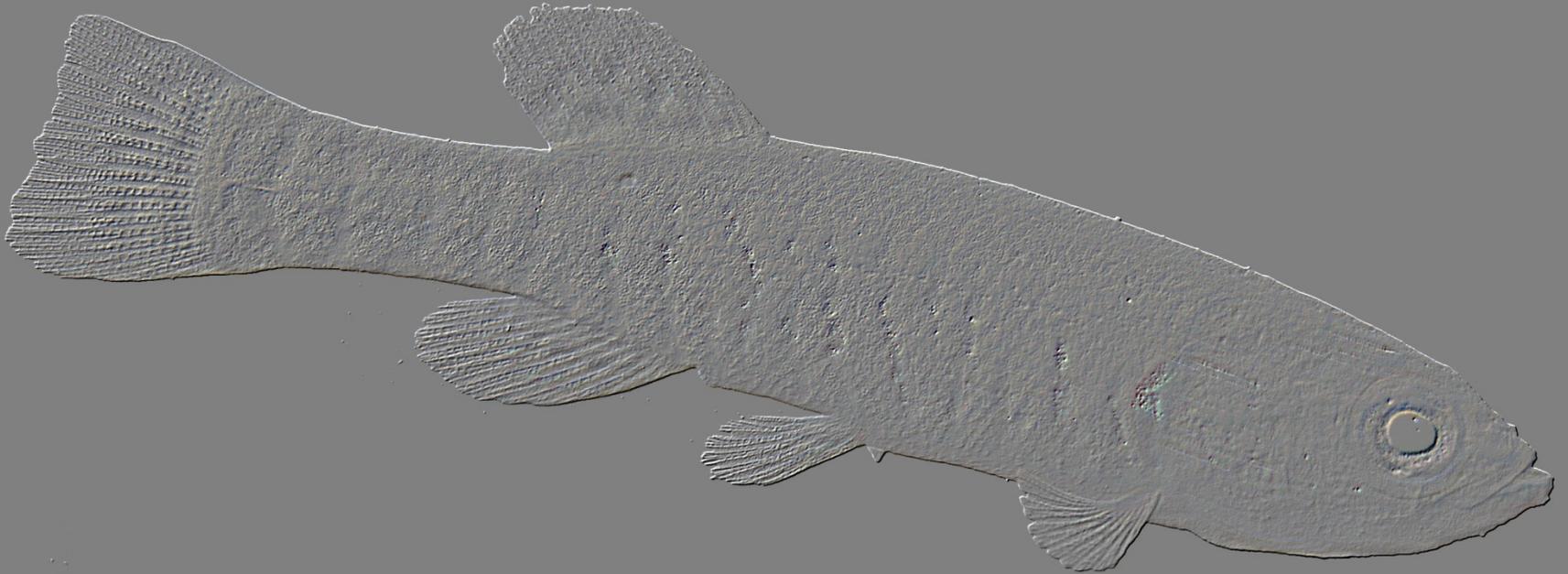


Kitsap County CAO

**TABLE 19.300.315
FISH AND WILDLIFE HABITAT CONSERVATION AREA DEVELOPMENT**

Streams			
Water Type	Buffer Width	Minimum Building Setback	Other Development
S Segments of Big Beef Creek, Curley Creek, Chico Creek, Burley Creek, Union River, Blackjack Creek and Tahuya River	200 feet	15 feet beyond buffer	Where applicable, refer to the de Chapters 19.200 (Wetlands) and Hazardous Areas). Where such fe more restrictive buffer or buildi
F	150 feet	15 feet beyond buffer	
Np	50 feet	15 feet beyond buffer	
Ns	50 feet	15 feet beyond buffer	

The Bad News:



Snoqualmie Watershed, King County

March 9, 2007



Regulatory maps that guide stream and wetland protection ordinances are often
INACCURATE

- **The maps frequently underestimate the distribution of fish and fish habitats.**
- **Many streams/wetlands are incorrectly mapped or are not on the maps at all.**

Regulatory maps that guide stream and wetland protection ordinances are often **INACCURATE**

Misidentified fish habitats do not receive the protection they warrant under existing laws



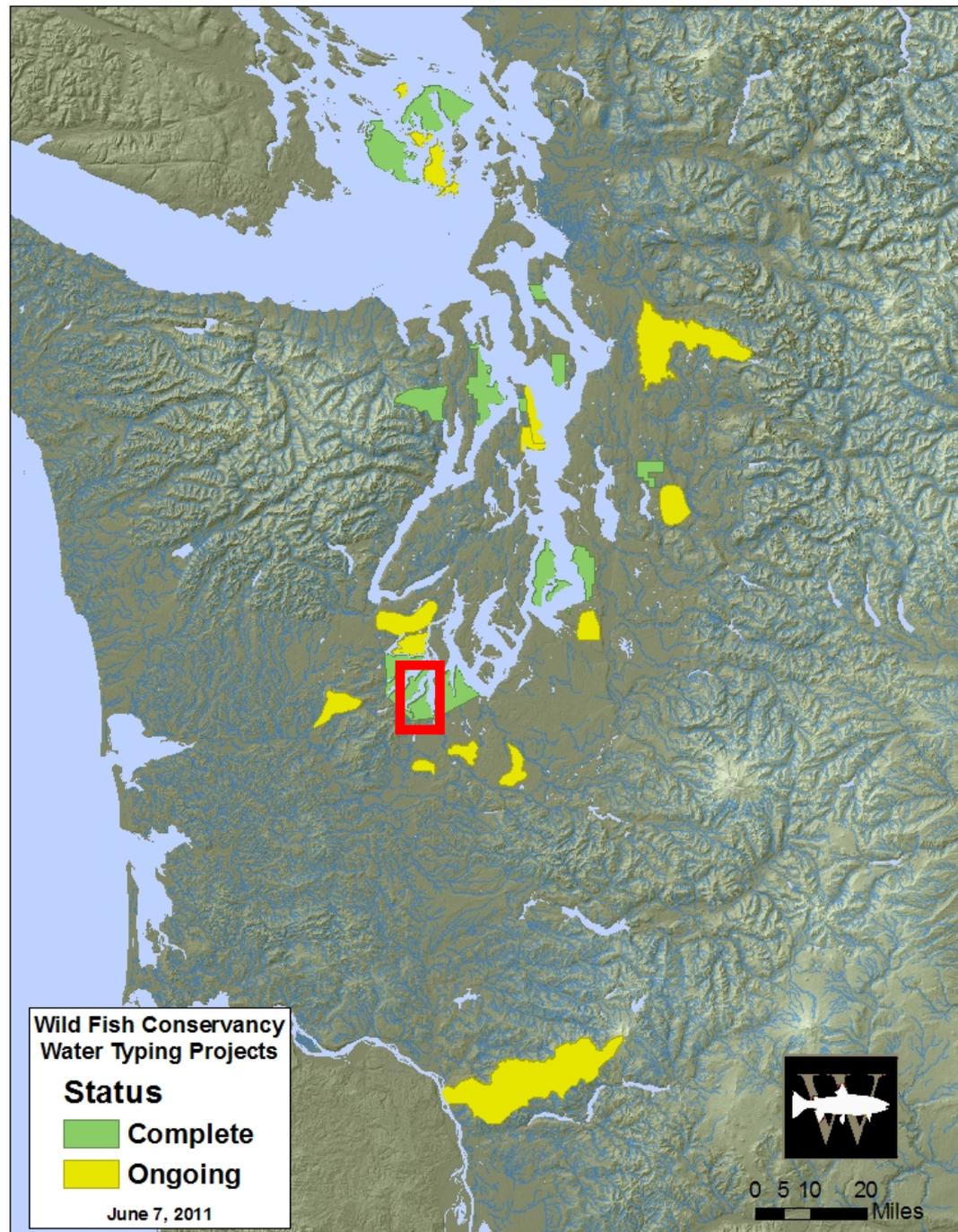
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Systematic Water Type Assessments

WRIAs

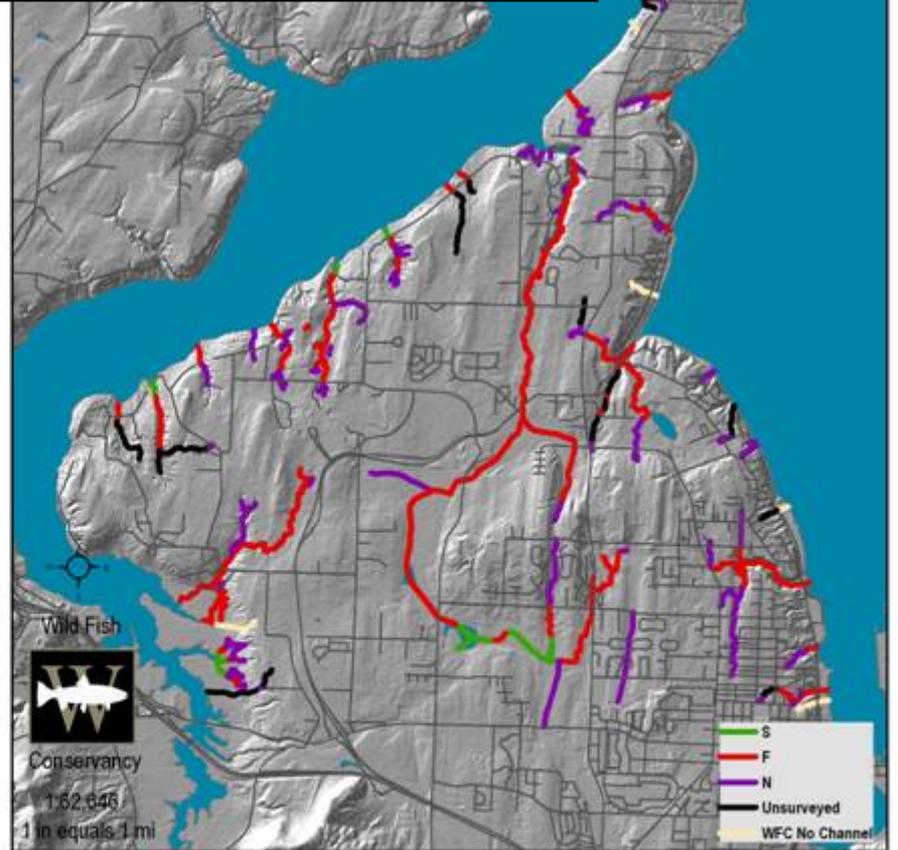
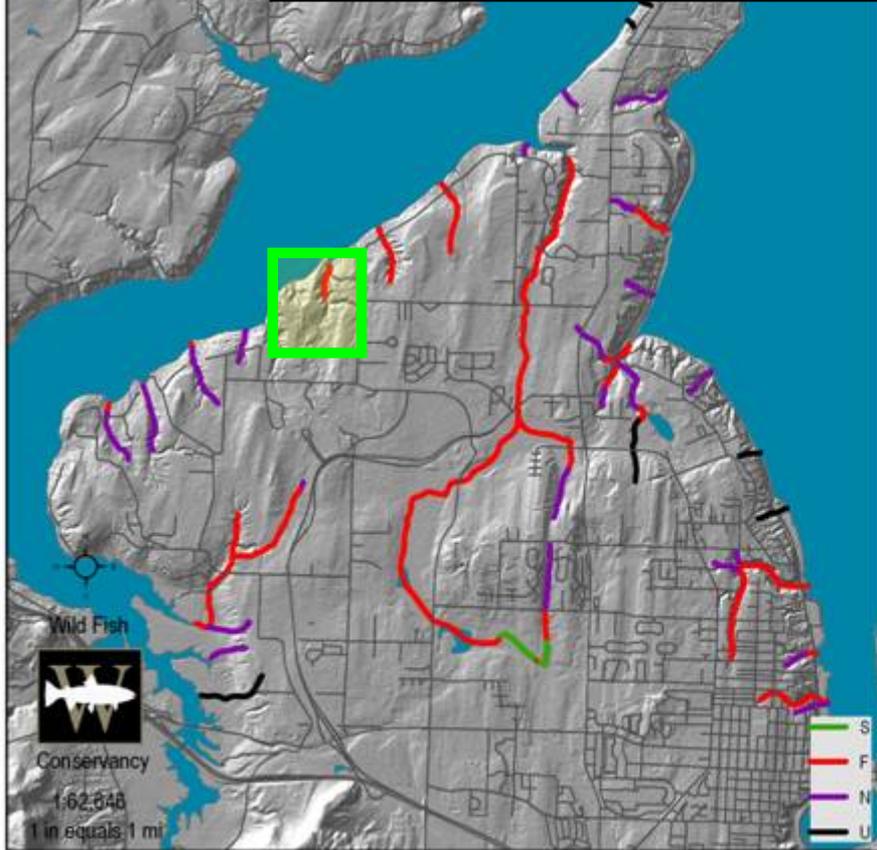
02, 07, 09, 13, 14,
15, 17, 22-23, 28.



DNR Hydro

Wild Fish Conservancy Hydro

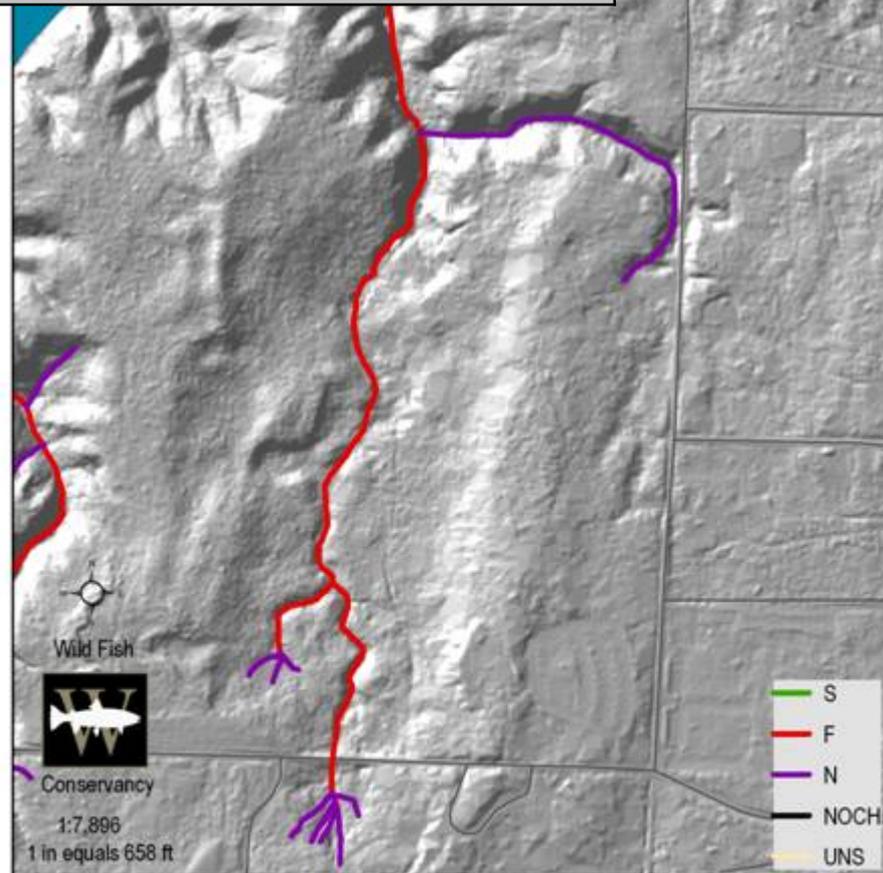
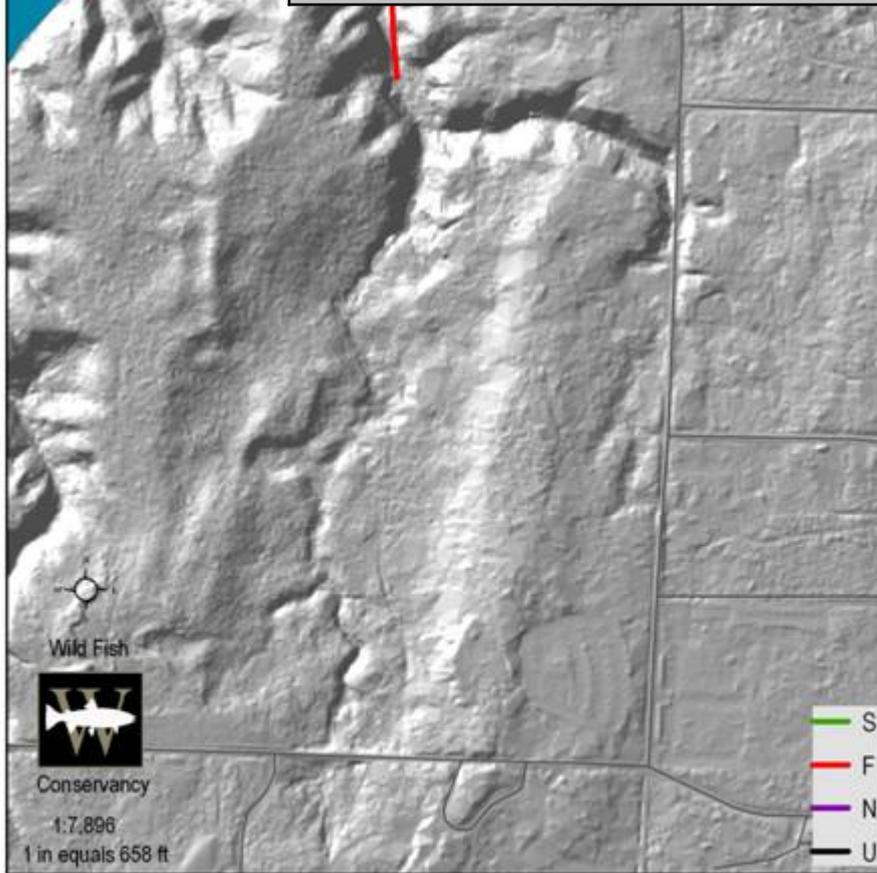
	DNR	WFC	% Increase
Stream Miles	16.2	28.1	74%
F Miles	9.5	16.3	71%
N Miles	5.5	8.3	51%



DNR Hydro

Wild Fish Conservancy Hydro

	DNR	WFC	% Increase
Stream Miles	0.2	1.4	600.0%
F Miles	0.2	0.8	300.0%
N Miles	0.0	0.5	n/a





Why We Water Type < >

- Infectious Salmon Anemia Virus (ISAv)
- Links
- Online Maps**
- Science Library
- Video Library**
- View Wild Salmon & Steelhead
- WFC Publications

JOIN NOW!

2012 Wild Fish Soirée & Benefit Auction

NEWS & ANNOUNCEMENTS

[Action Required - Help Stop Washington's Hatchery Addiction](#)
Oct 11, 2012

[WFC Presents at Olympic Mudminnow Workshop](#)
Sep 25, 2012

[Breaking Ground: Waterwheel Creek Restoration Underway](#)
Aug 23, 2012

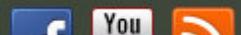
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[Watertyping Details](#)

Stream:CP25A-1

Crew:Glasgow/Staller

Date:5/3/2005

Stream ID:CP25A-1

Point ID:135



Enter an Address

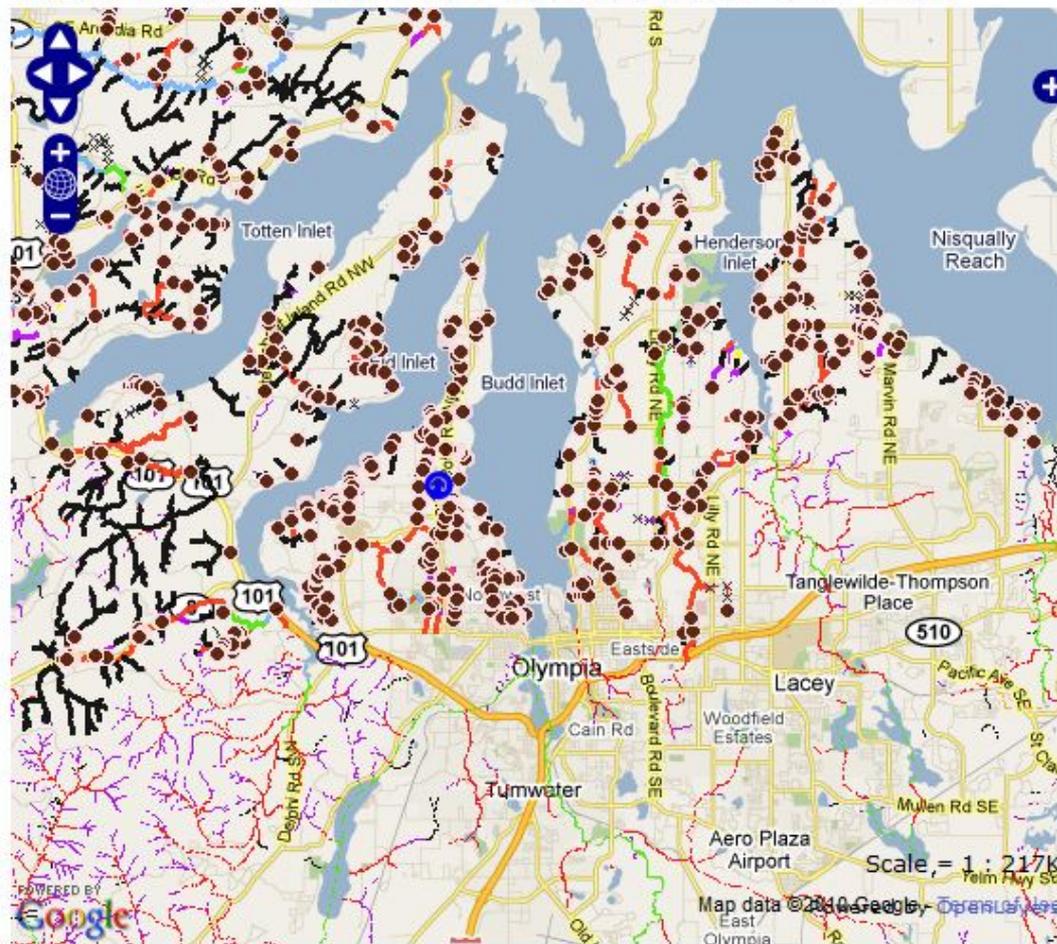
[Find Location](#)

[View Legend](#)

Interactive Map by
[Umbrella Consulting](#)

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Puget Sound Water Type Assessment: 2005-2007



Search site

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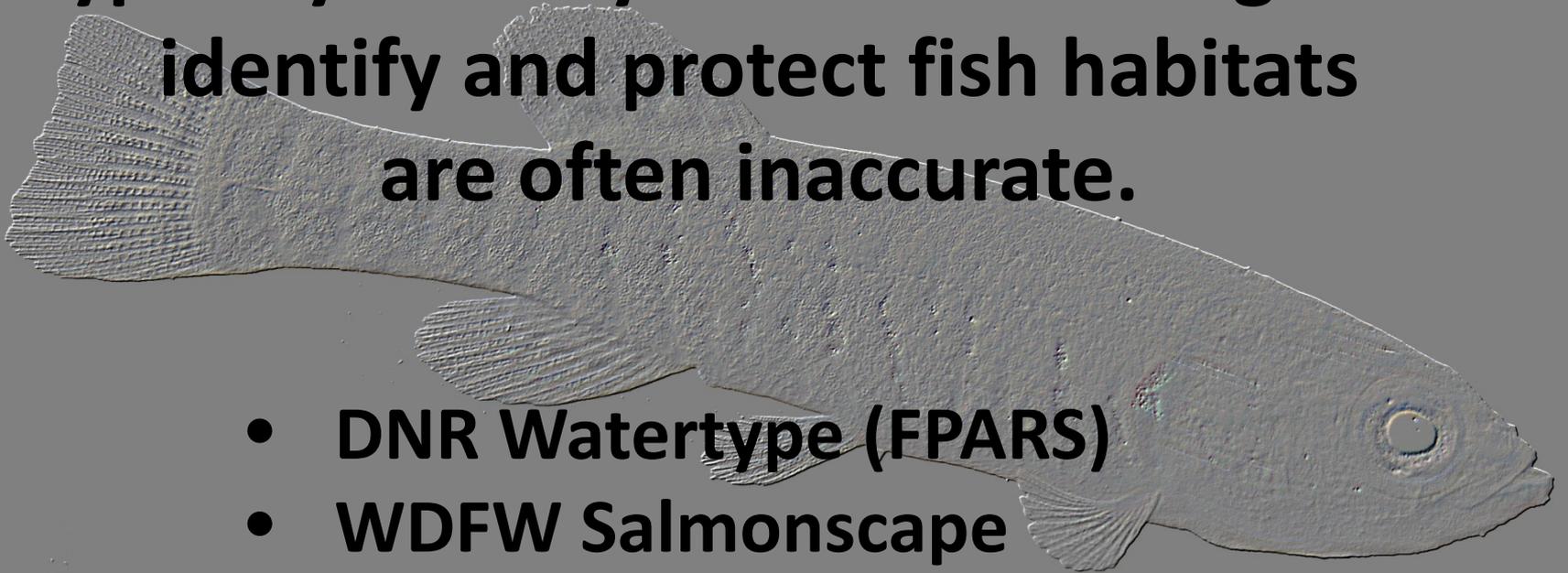
ADVOCACY

JOIN NOW

VOLUNTEER

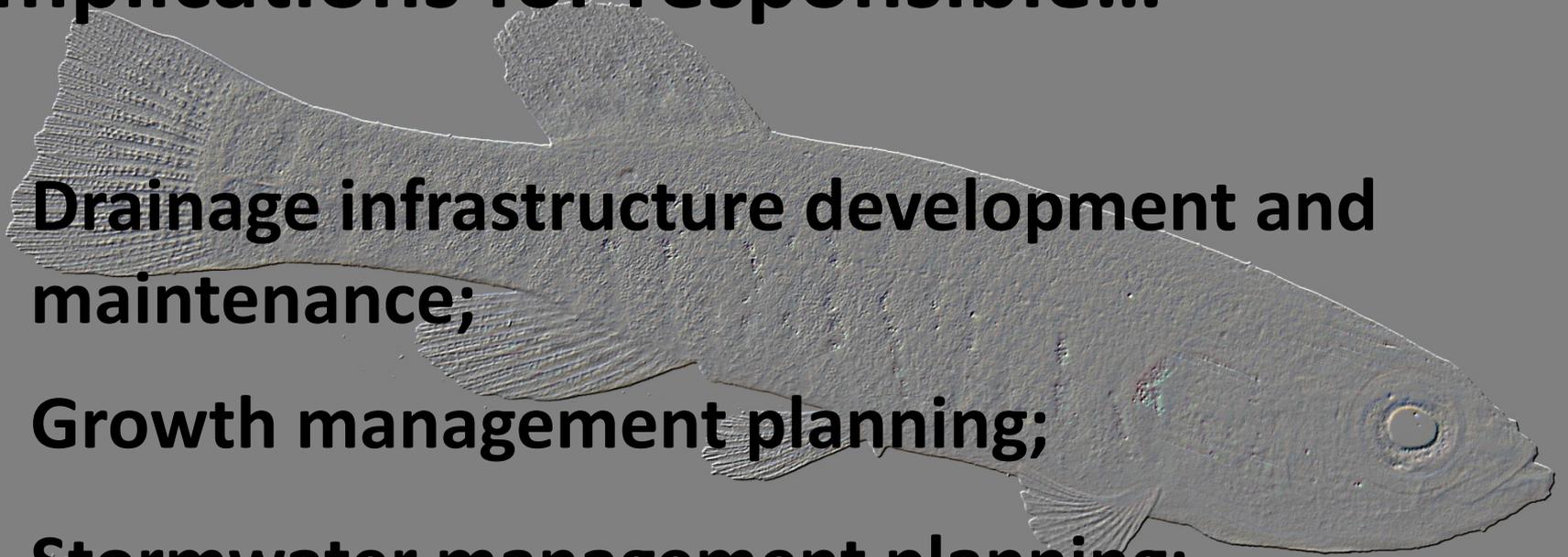
The stream / wetland geographic data typically used by Resource Managers to identify and protect fish habitats are often inaccurate.

- **DNR Watertype (FPARS)**
- **WDFW Salmonscape**
- **USGS Quads**
- **Dept. of Ecology Hydro**
- **Nat'l Wetland Inventory**
- **Local gov't GIS**



Implications for responsible...

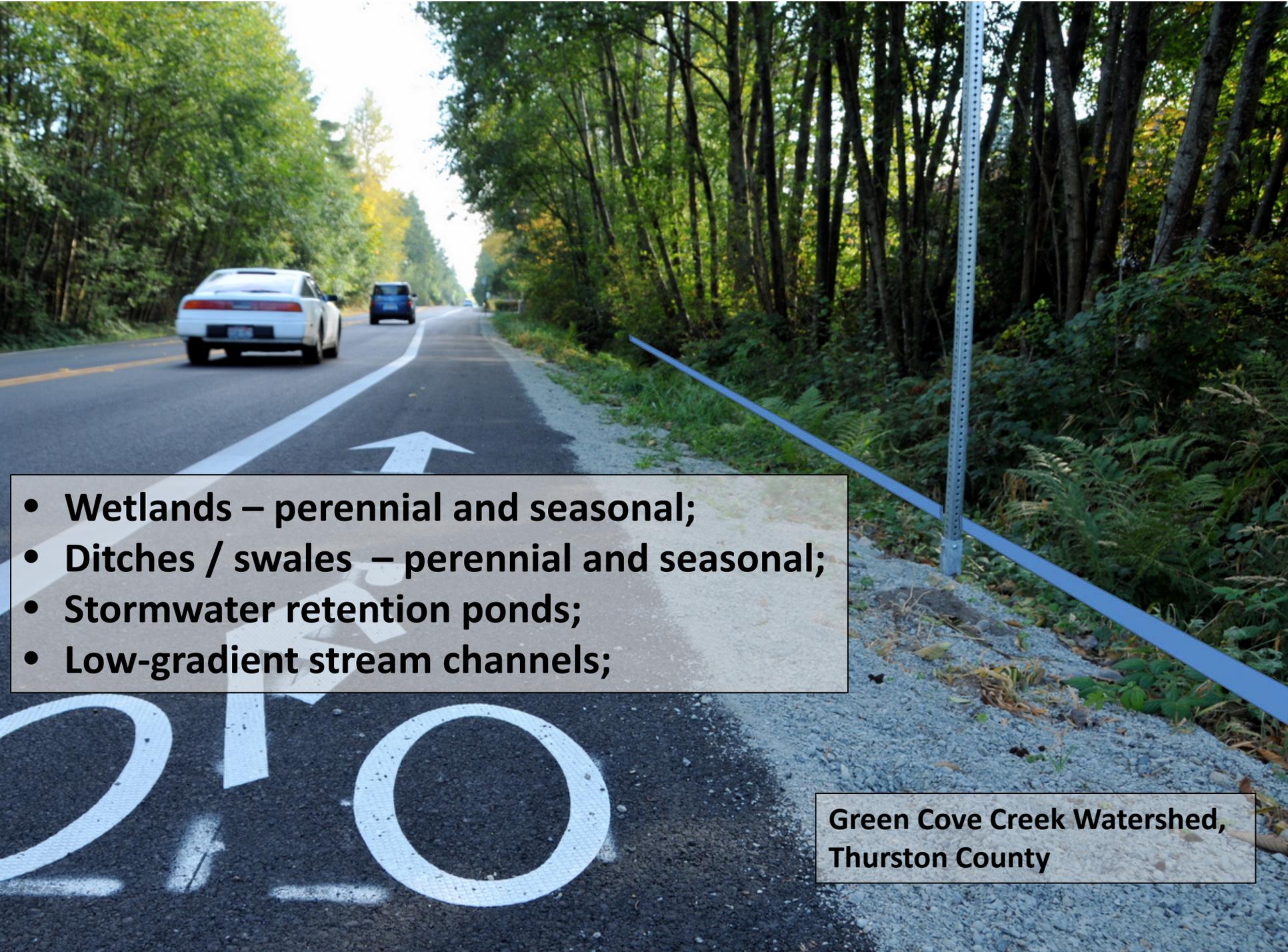
- **Drainage infrastructure development and maintenance;**
- **Growth management planning;**
- **Stormwater management planning;**
- **Forest Practices planning.**



What does mudminnow habitat look like?

**Green Cove Creek Watershed,
Thurston County**

A photograph of a wetland area. In the foreground, there is a body of water with tall, thin green grasses growing out of it. The water is dark and reflects the sky and the trees. In the background, there is a dense forest of evergreen trees, likely Douglas firs, under a cloudy, overcast sky. The overall scene is a natural, undisturbed habitat.



- Wetlands – perennial and seasonal;
- Ditches / swales – perennial and seasonal;
- Stormwater retention ponds;
- Low-gradient stream channels;

**Green Cove Creek Watershed,
Thurston County**

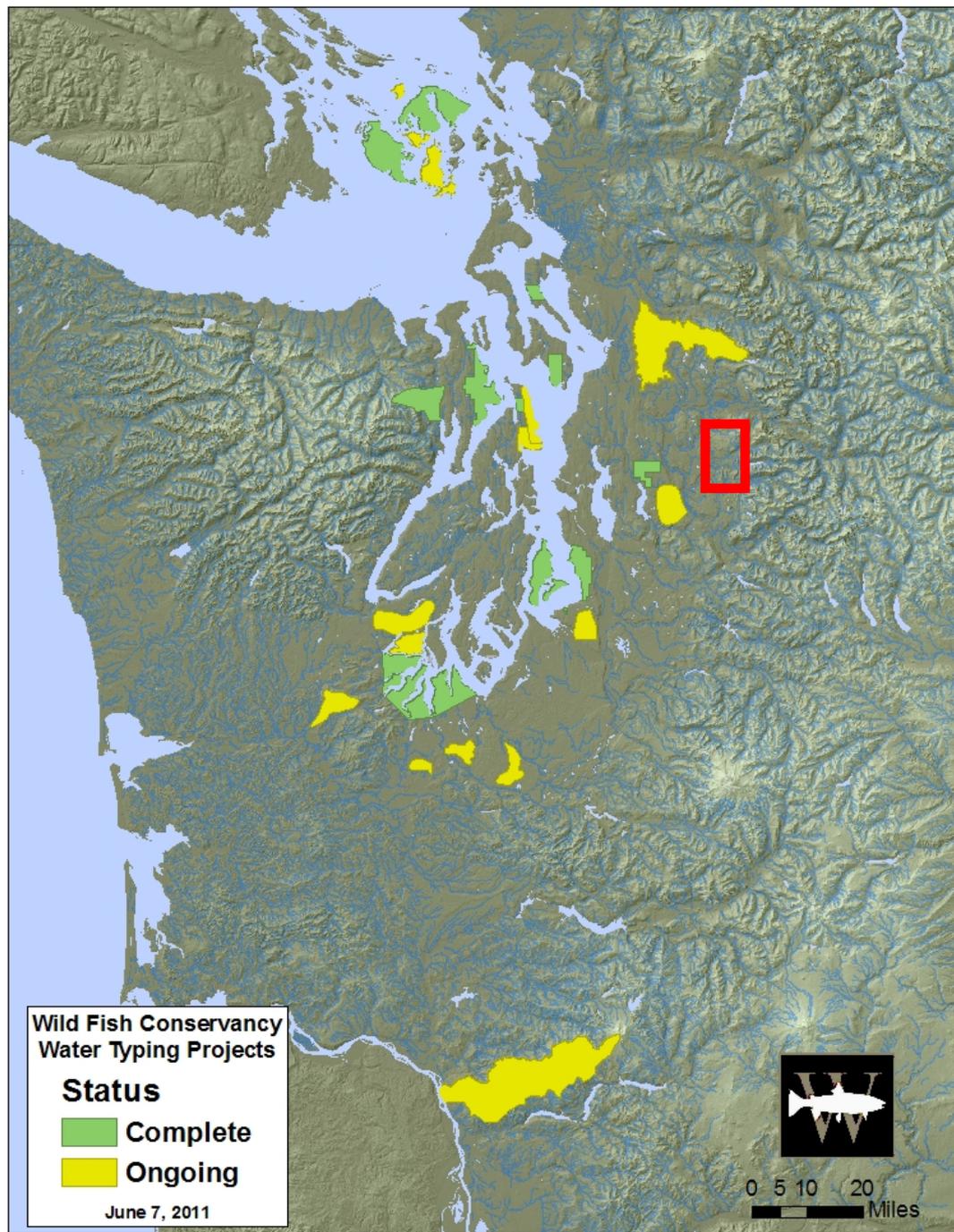
In their range? Assume they're there.



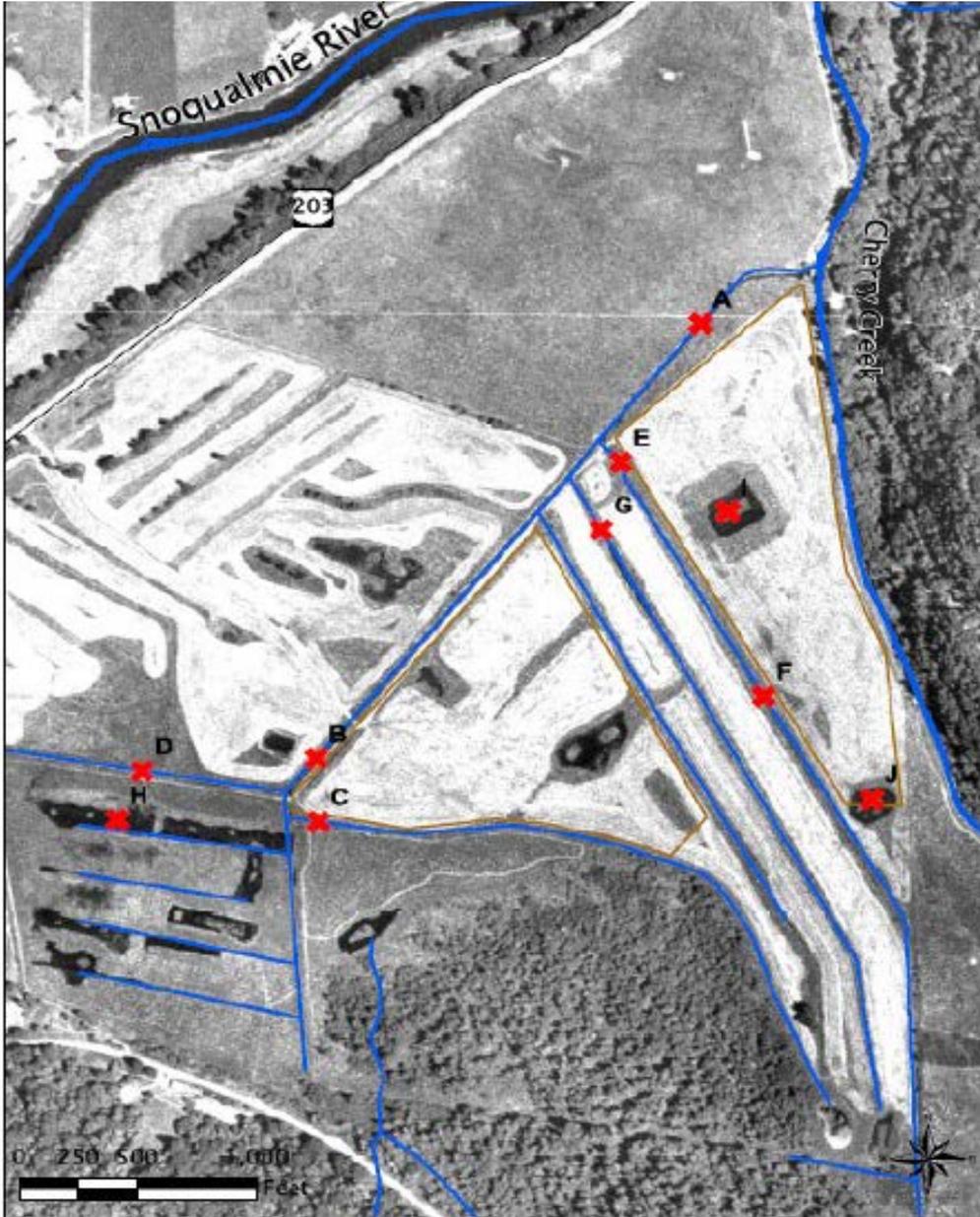


A Case Study in the Evolution of Distribution

Cherry Creek Watershed, tributary to the Snoqualmie R.

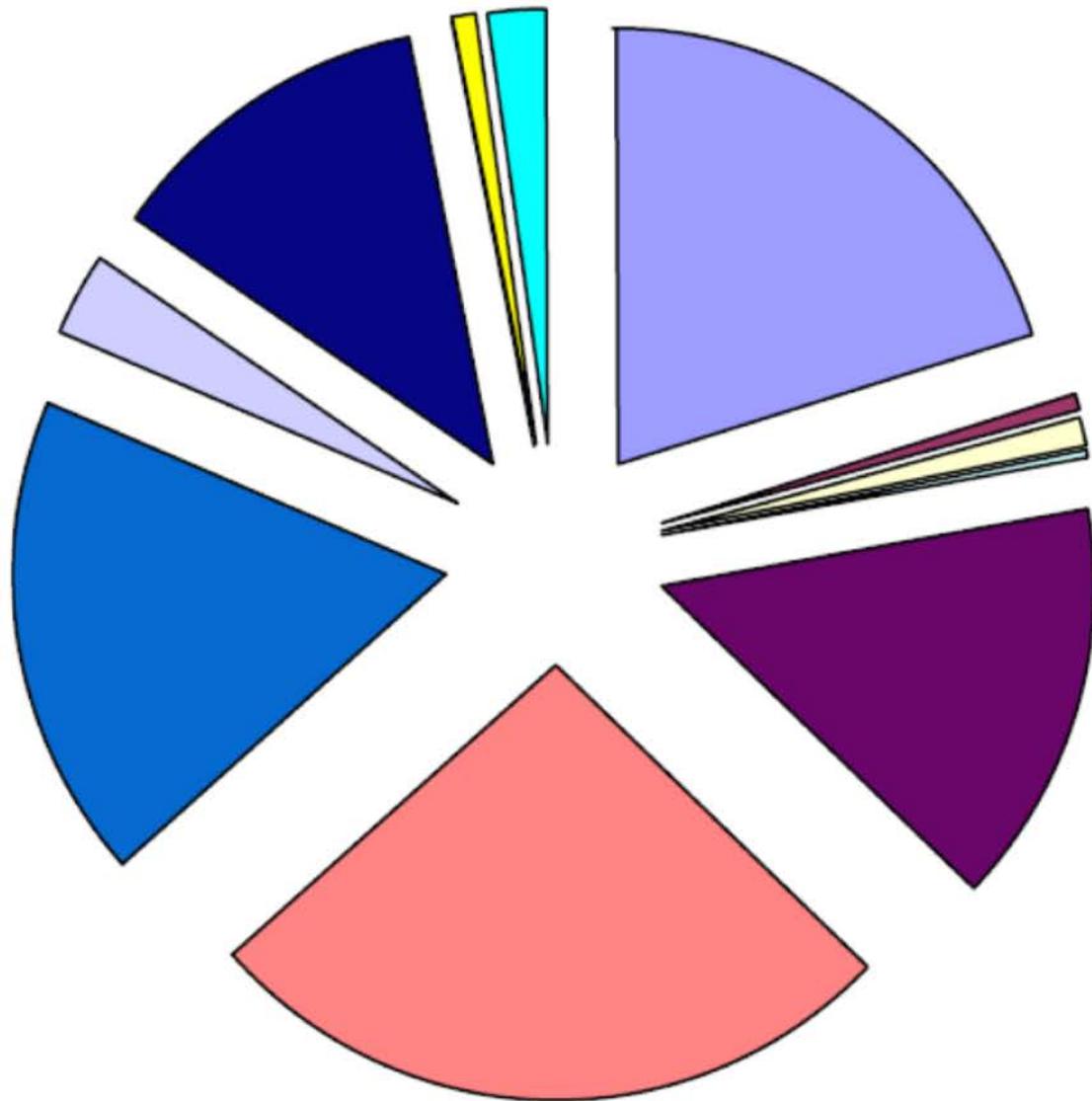


Cherry Valley Fish Sampling Sites, January through May 2001

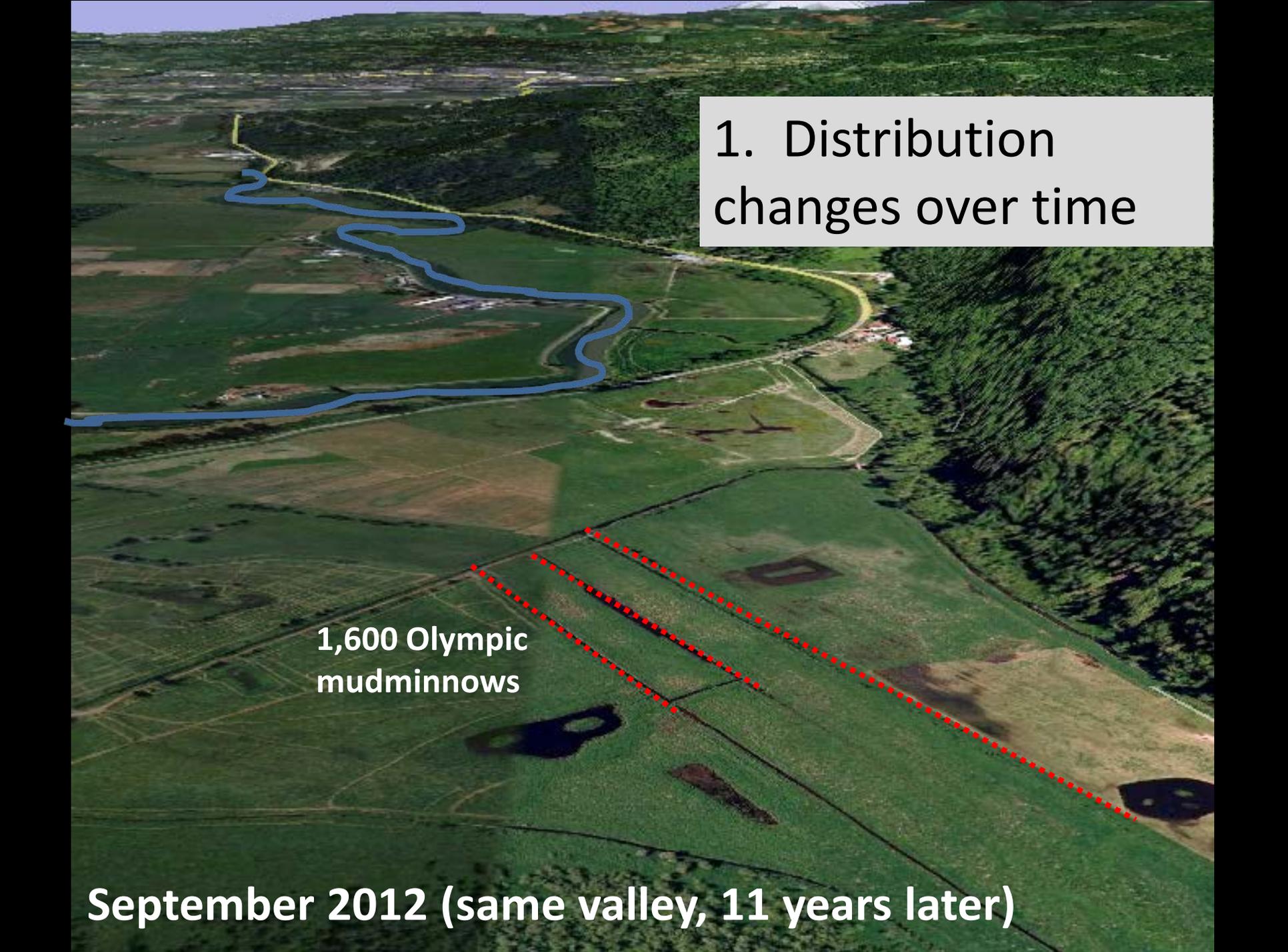


Map Design and Cartography
By Washington Trout
Duval, Washington

2001, n=7,400



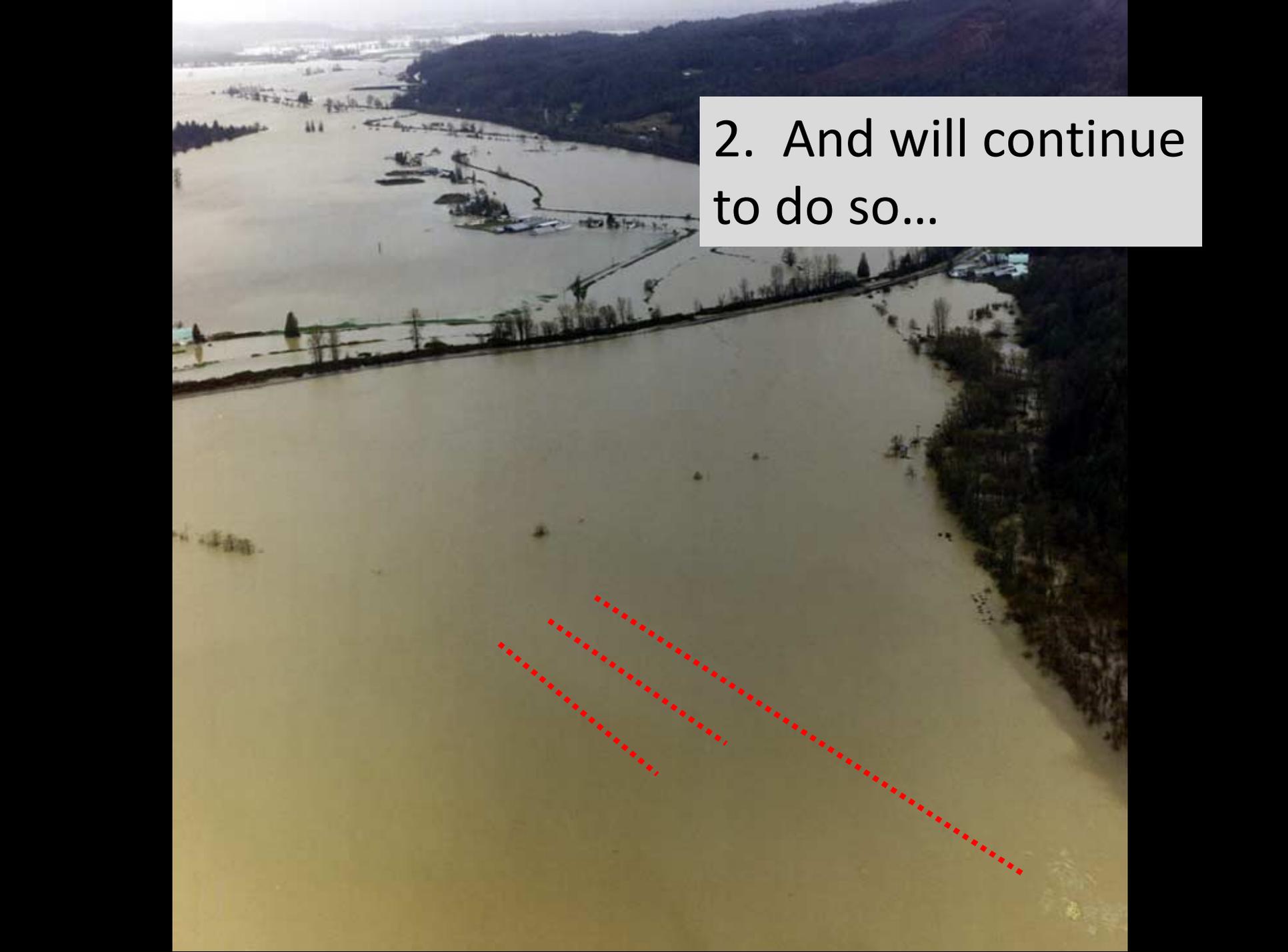
- Coho
- Rainbow
- Cutthroat
- Chinook
- Non-Native Centrarchids
- Native Cyprinids
- Stickleback
- Catfish
- Amphibians
- Lamprey
- Sucker
- Sculpin



1. Distribution
changes over time

1,600 Olympic
mudminnows

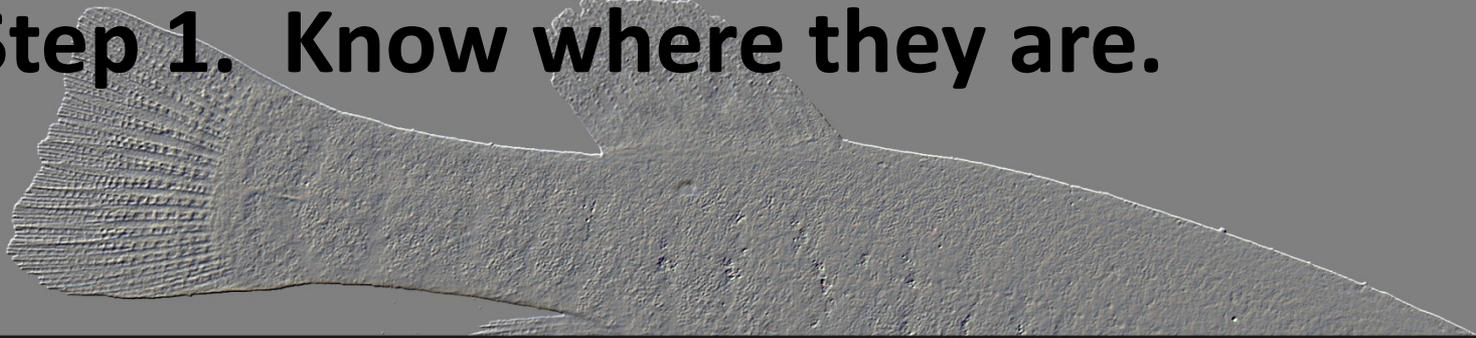
September 2012 (same valley, 11 years later)

An aerial photograph of a wide, muddy river valley. The water is a turbid, brownish-yellow color. The surrounding land is mostly green, with some buildings and structures visible. In the background, there are hills and a town. A white rectangular box is overlaid on the upper right portion of the image, containing the text "2. And will continue to do so...". Three red dotted lines are drawn across the lower half of the image, starting from the left and pointing towards the right, following the general direction of the river's flow.

2. And will continue to do so...

Mudminnow Conservation Strategy

Step 1. Know where they are.



**Accessible and updateable GIS showing
where mudminnows have been found and
where they are presumed to be.**



Jamie Glasgow, Director of Science

**360/866-4669,
jamie@wildfishconservancy.org**

**For More
Information:**

www.wildfishconservancy.org