

# The Status of Restoration Efforts for Bull Trout *Salvelinus confluentus* Populations in the Upper Willamette Basin, Oregon



Presented by:  
Jeff Ziller

Oregon Department of  
Fish and Wildlife  
Springfield Oregon

Major support provided by:



# Contributors



- David Bickford Willamette National Forest
- Doug Larson Forest
- Raymon Rivera



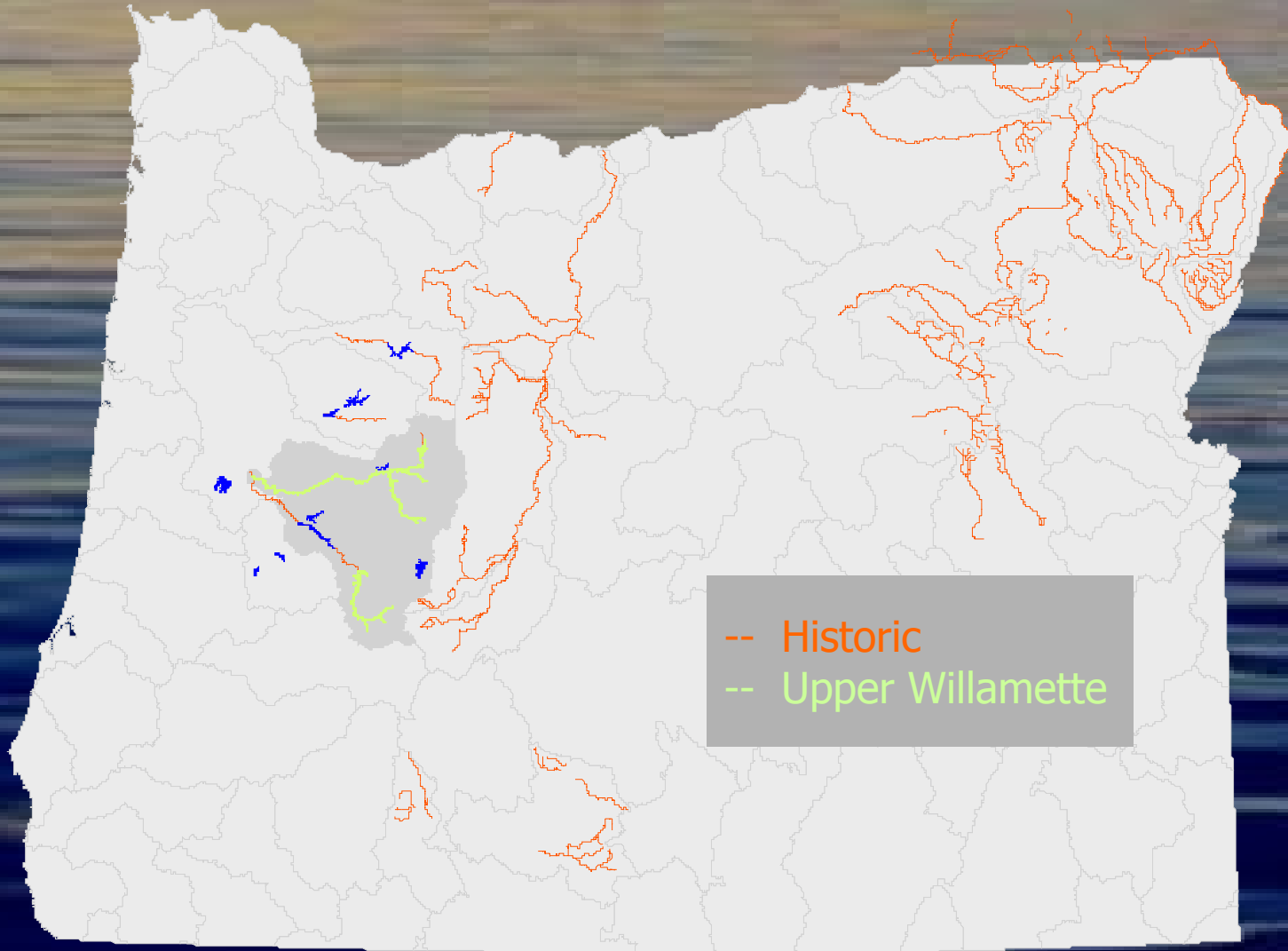
- Greg Taylor Willamette Valley Projects
- Doug Garletts Projects



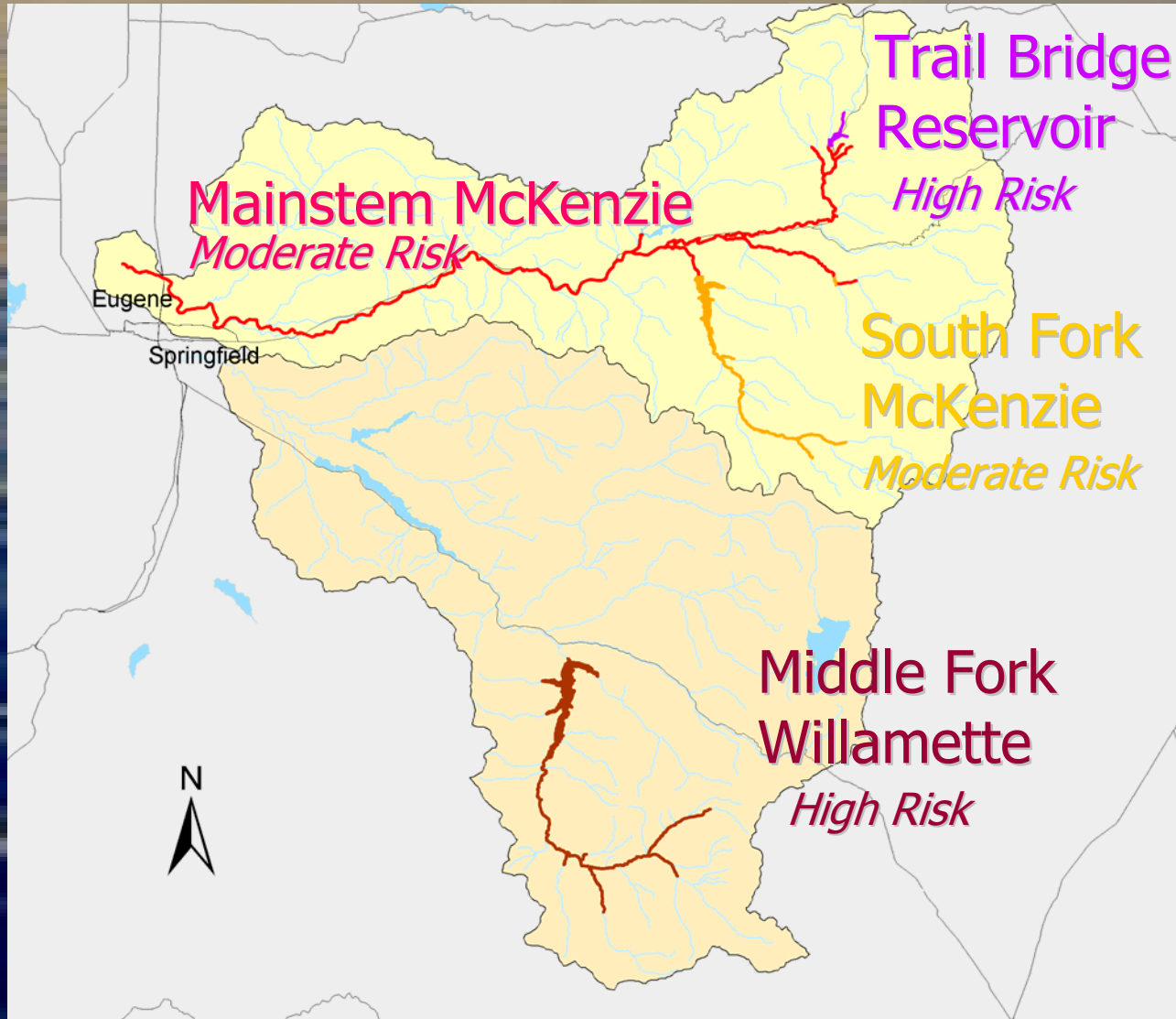
- Kelly Reis South Willamette Watershed District
- Jason Seals Watershed District
- Mark Wade ODFW Research

# Study Area

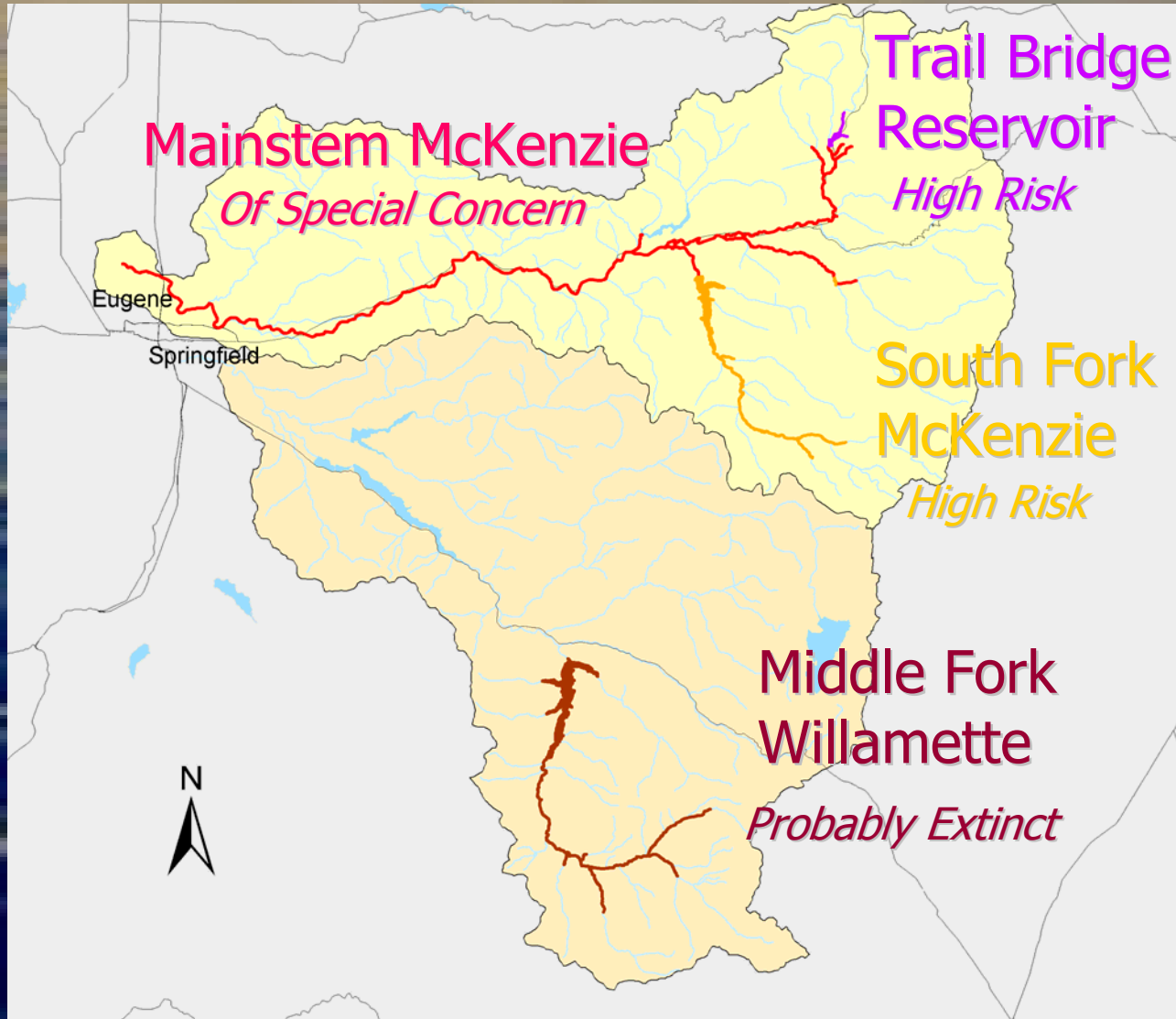
## Oregon Bull Trout Distribution



# Population Status of Bull Trout Upper Willamette Basin (Ratliff and Howell 1991)



# Population Status of Bull Trout Upper Willamette Basin (Buchanan, Hanson and Hooton 1996)



# Middle Fork Willamette Bull Trout Observations



<u>Water Body</u>	<u>Last Year Observed</u>
• Middle Fork Willamette <i>below</i> Hills Creek Reservoir	1953
• Salt Creek	1960
• NF Middle Fork Willamette	1962
• Hills Creek Reservoir	1988
• Middle Fork Willamette <i>above</i> Hills Creek Reservoir	1990



# Information Dissemination Upper Willamette Bull Trout Working Group



# Willamette Bull Trout Recovery Actions



- Reduce angler harvest
- Increase habitat effectiveness
- Increase access to habitat
- Increase prey base
- Re-establishment of populations





# Reducing Angler Harvest Hatchery Rainbow Trout Program Changes

<b>Year</b>	<b>Location</b>	<b>Action</b>
1988	McKenzie River (RK 0 to RK 24)	<b>Rb stocking discontinued</b>
1992	McKenzie River	Ad fin-clipped harvest only
1994	McKenzie River (RK 105 to RK 133)	<b>Rb stocking discontinued</b>
1997	South Fork McKenzie	<b>Rb stocking discontinued</b>
1997	Trail Bridge Reservoir	Ad fin-clipped harvest only
1997	Middle Fork Willamette (above Hills Creek Res)	Ad fin-clipped harvest only

# Reducing Angler Harvest

## Restrictive Angling Regulations



<u>Year</u>	<u>Location</u>	<u>Action</u>
1991	Willamette Basin	Taking bull trout prohibited
1992	McKenzie River (Mainstem and South Fork)	All wild trout must be released
1994	McKenzie River (RK 105 to RK 133)	Artificial flies and lures only
1997	South Fork McKenzie	Artificial flies and lures only
1997	Trail Bridge Reservoir	All wild trout must be released
1997	Middle Fork Willamette (above Hills Creek Res.)	Artificial flies and lures only All wild trout must be released
2001	Most McKenzie River tributaries and Trail Bridge Reservoir	Artificial flies and lures only All wild trout must be released



# Reducing Angler Harvest Increasing Angler Awareness



- Informational posters since 1992
- High quality signs at key access points
- R&E funds



# Increasing Habitat Effectiveness

## McKenzie Watershed

### Large Wood placements



Year	Location	Pieces	Distance (km)	Approximate Cost
1991	Anderson Creek	14	0.1	\$4,300
1993	Buck Side Channel	31	0.4	\$7,800
1995	S Fk McKenzie (below Cougar Reservoir)	40	1.5	\$14,000
1996	S Fk McKenzie (above Cougar Reservoir)	191	4.0	\$65,000
1998	S Fk McKenzie (above Cougar Reservoir)	160	3.2	\$57,600
1998	Roaring River	40	0.8	\$14,400

# Increasing Habitat Effectiveness

## Middle Fork Willamette

### Large Wood placements

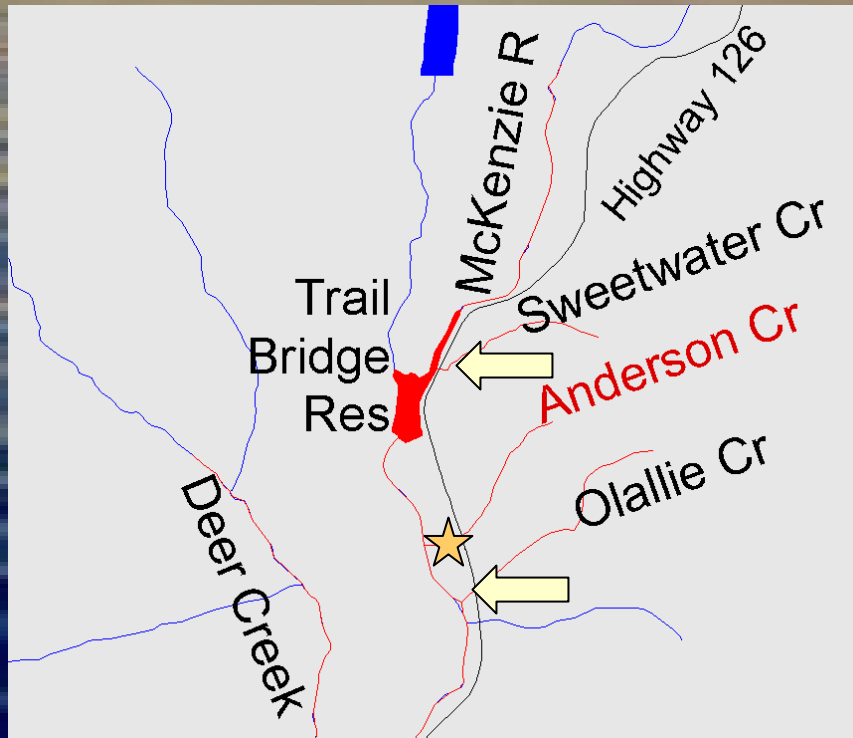


- Middle Fork Willamette above Hills Creek Res
- Future Projects
  - McKenzie River above Trail Bridge
  - McKenzie River below Trail Bridge Dam in off-channel habitats.
  - South Fork McKenzie River



# Increasing Access

## Upper McKenzie Study Area



- Downstream migrant trap
- Upstream passage problems

# Increasing Access Sweetwater Cr Culvert



# Increasing Access Olallie Cr Culvert





# Increase Prey Base



- 1,000's of spring chinook released into bull trout rearing areas above dams
- Nutrients from carcasses
- Juvenile chinook as prey



# Re-establishment Downstream Migrant Trap Anderson Creek



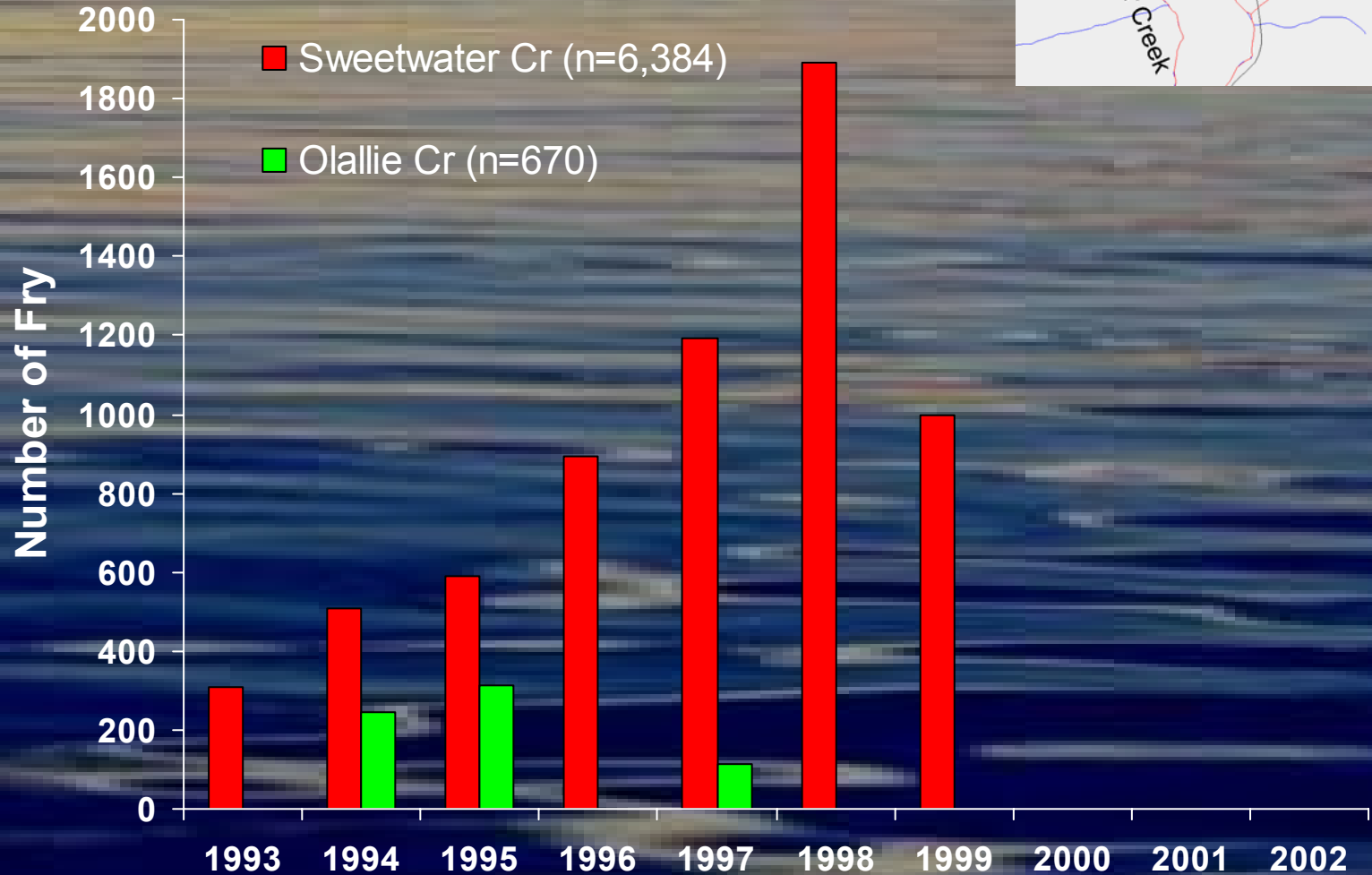
**Fry**



**Age 1+**



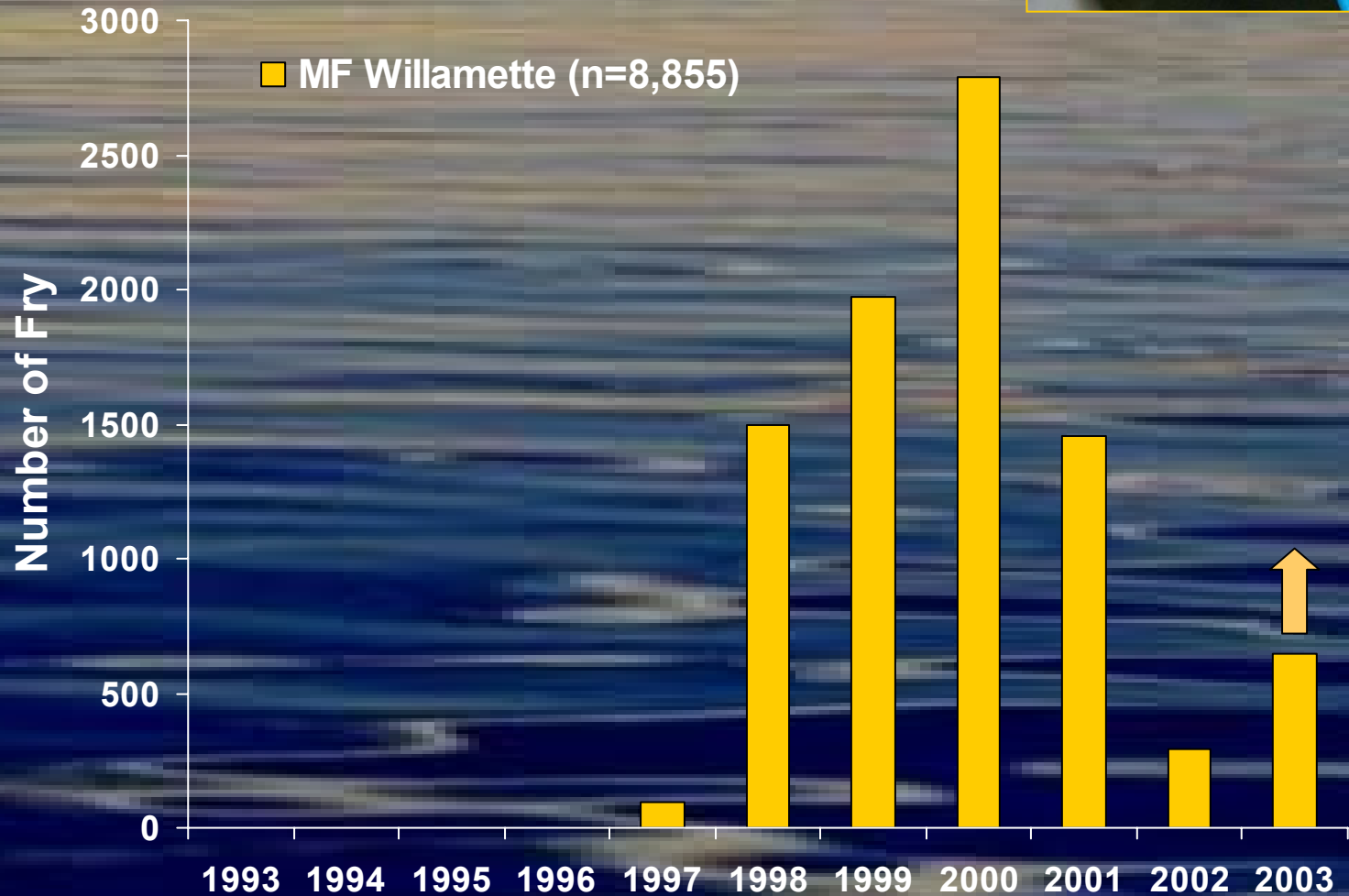
# McKenzie River Bull Trout Releases for Rehabilitation



# Middle Fork Willamette Juvenile bull trout release sites



# Middle Fork Willamette Bull Trout Releases for Rehabilitation





# Results





# Middle Fork Willamette Monitoring



- 3 age classes found in release locations
- Estimated 240 juvenile bull trout in about 8 Km of Mainstem Middle Fk
- At least one 45 cm bull trout in Hills Creek Reservoir



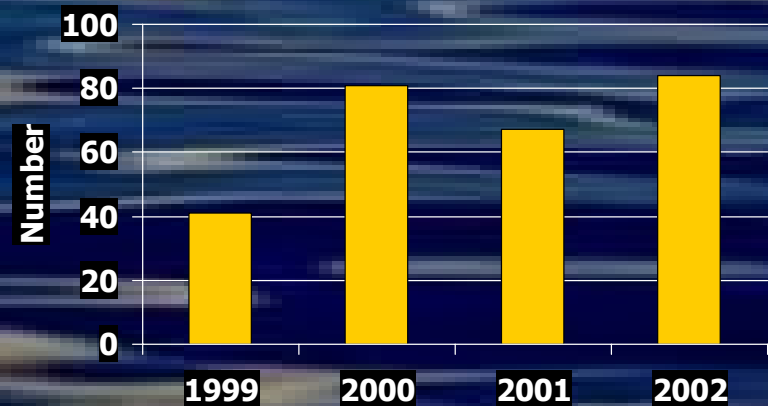
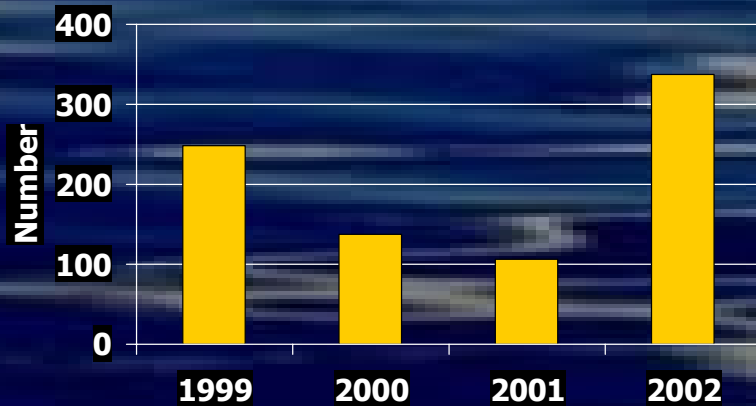
# Adult bull trout moving upstream through electronic counting devices on the McKenzie and South Fork McKenzie



**Anderson Creek**



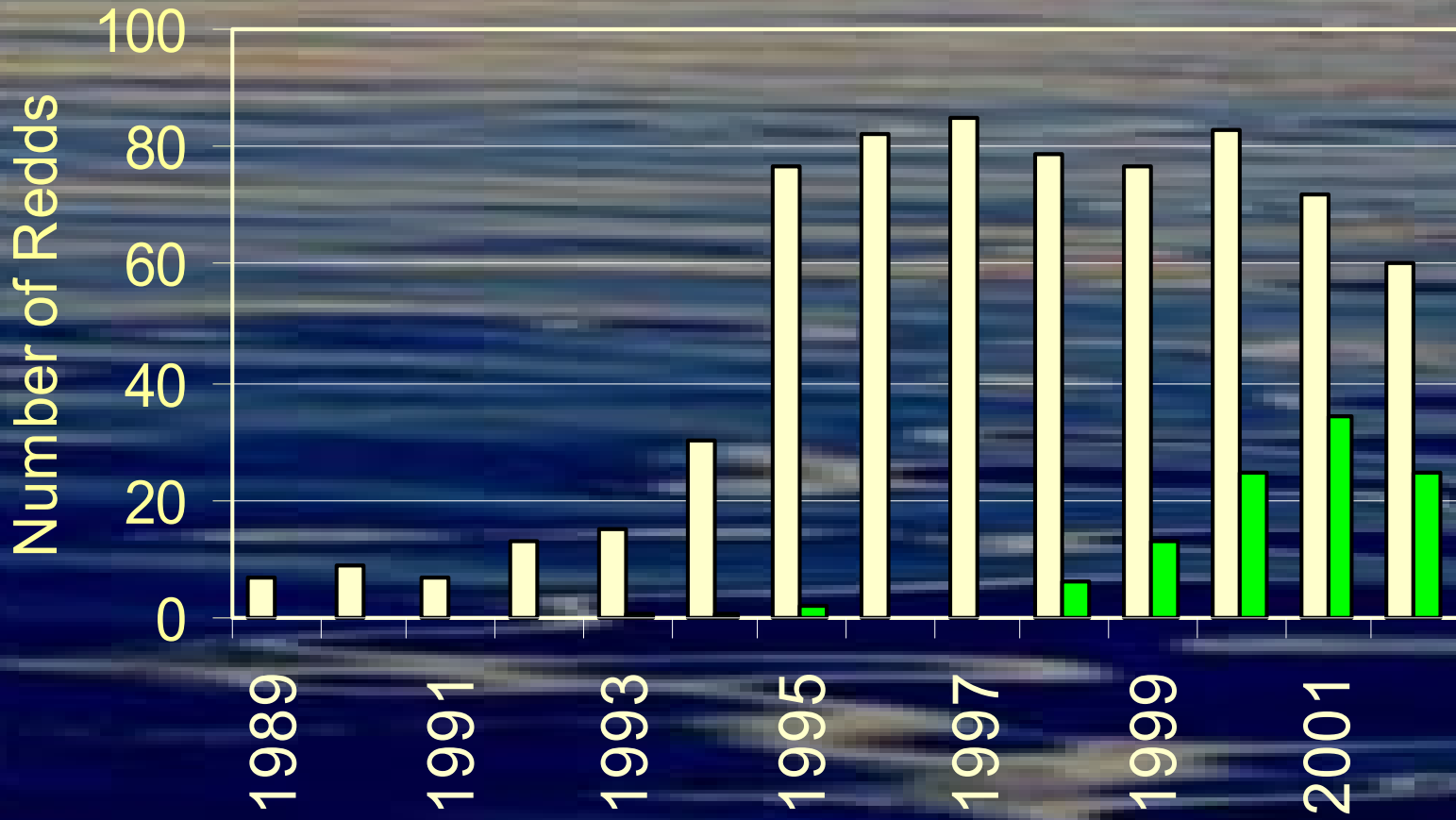
**Roaring River**



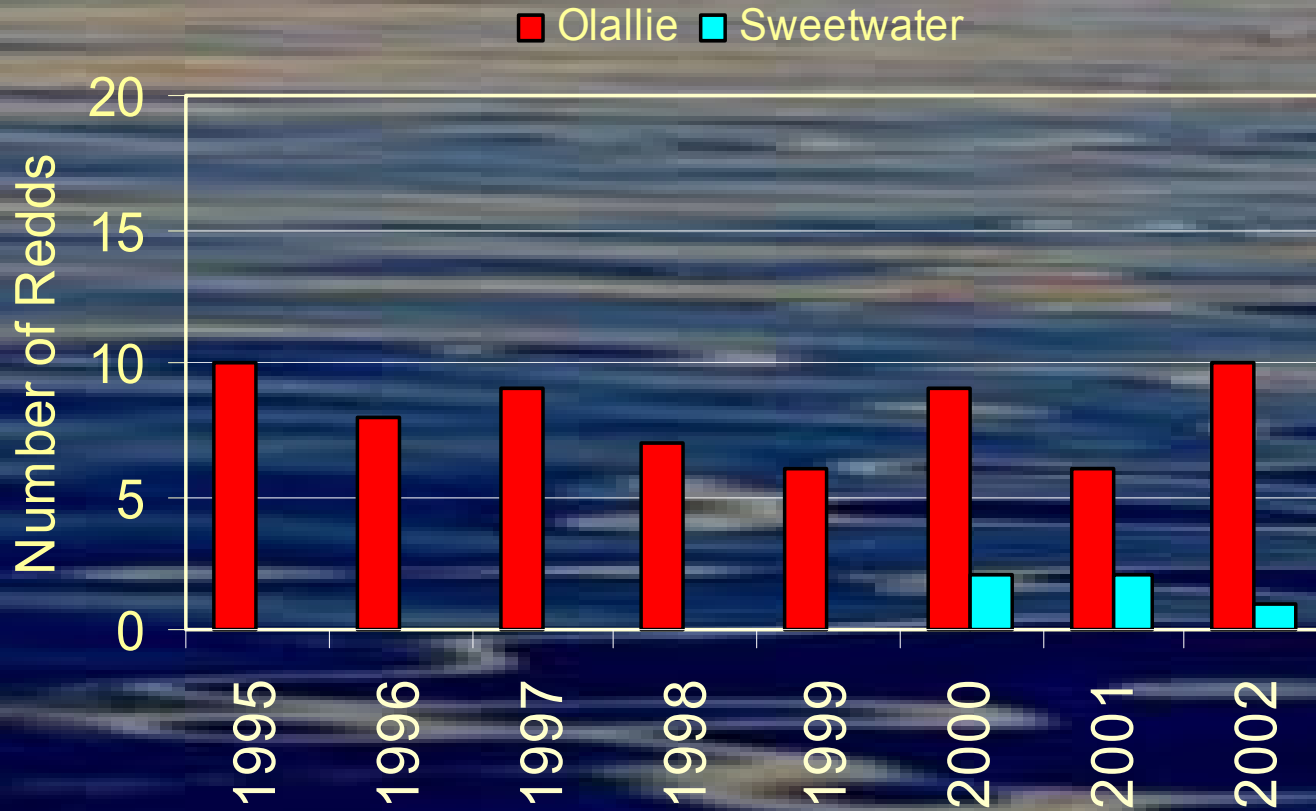
# Willamette Bull Trout Spawning Surveys



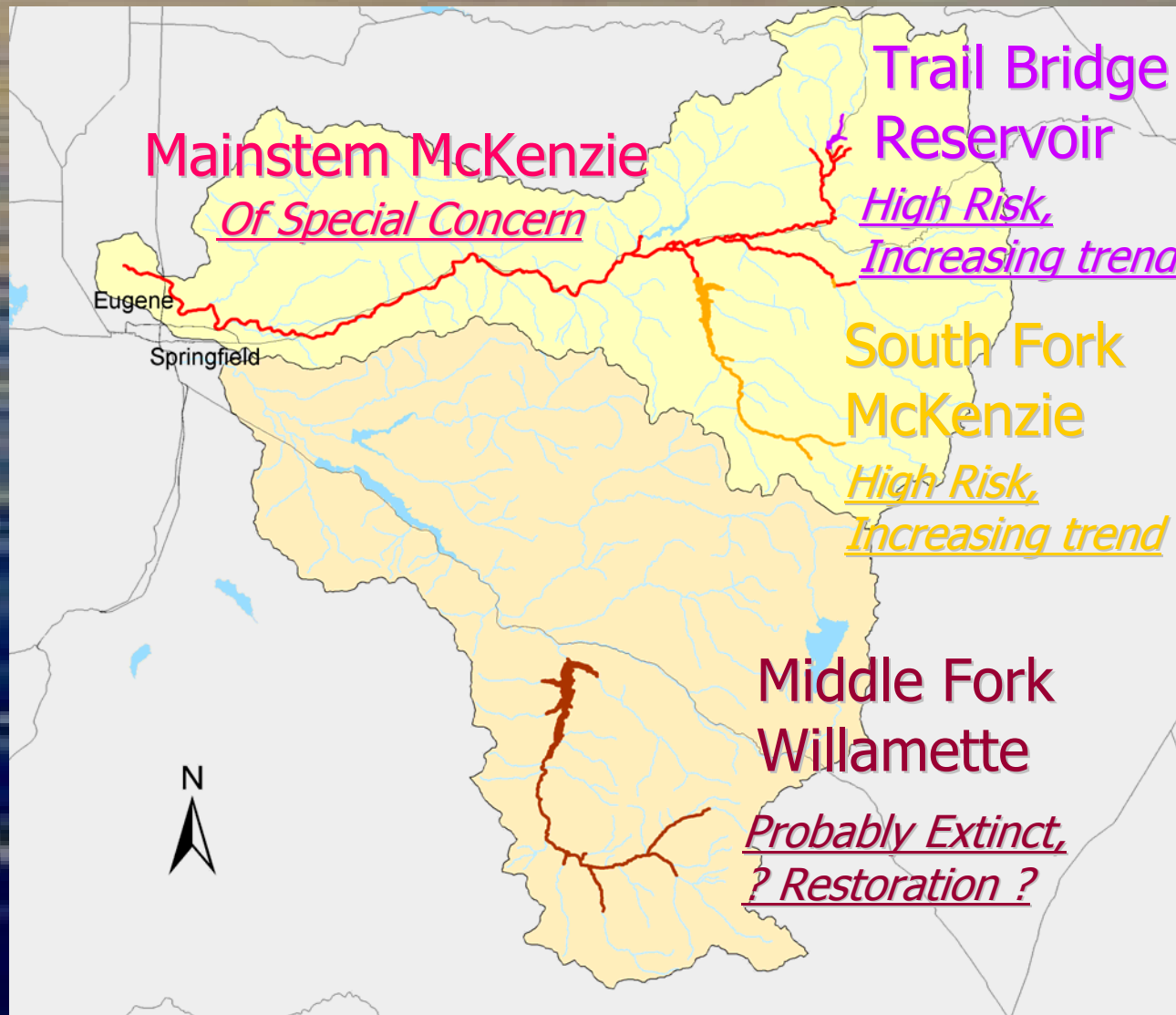
■ Anderson ■ Roaring River



# Willamette Bull Trout Spawning Surveys



# Population Status of Bull Trout Upper Willamette Basin 2003

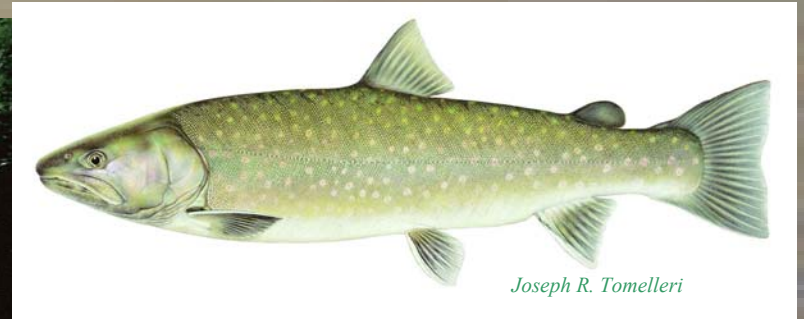


# Recovery Project Partners



- **Bonneville Power Administration**
- **Willamette National Forest**
- **US Fish and Wildlife Service**
- **Eugene Water and Electric Board**
- **Oregon Department of Transportation**
- **Oregon State Police**
- **Oregon Council Federation of Flyfishers**
- **McKenzie Flyfishers**
- **National Fish and Wildlife Foundation (Bring Back the Natives Program)**
- **Weyerhaeuser Company**
- **Bureau of Land Management**
- **McKenzie Watershed Council**
- **Saturday Academy (Apprenticeships in Science and Engineering)**
- **Oregon Chapter American Fisheries Society**
- **Oregon Chapter Trout Unlimited**







# Upper Willamette River Recovery Criteria

- 4 or more local populations
- Stable or increasing
- 600-1,000 adults
- Connected

