

Tryon Creek Habitat Restoration Monitoring

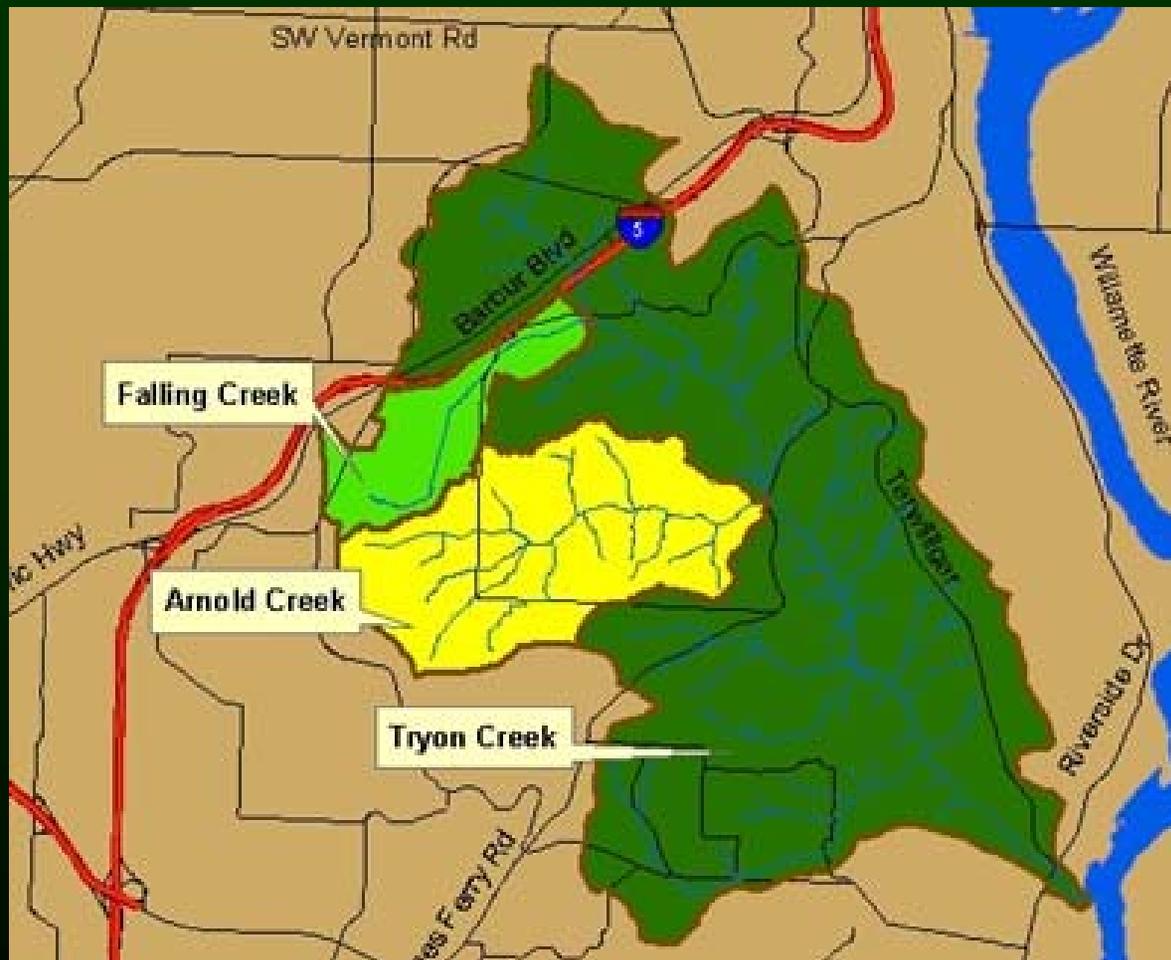


USFWS-Columbia River Fisheries Program Office

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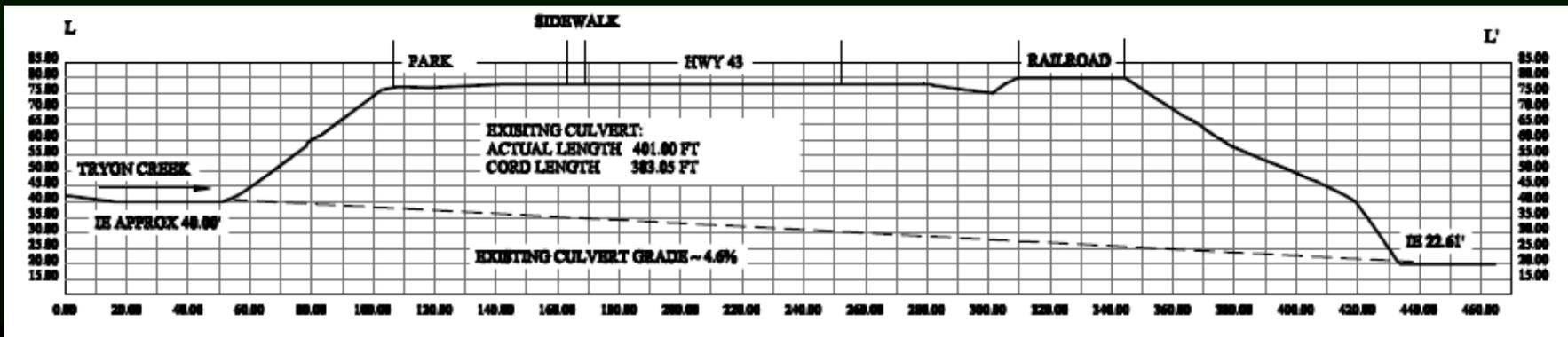
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Tryon Creek fish assessment



Background

- Culvert constructed for Tryon Creek in late 1920s
- Approximately 1200 ft above confluence with Willamette River
- Approximately 400 ft long



Objectives

- Determine if and quantify degree of adult lamprey passage through Hwy 43 culvert
- Determine the distribution of lamprey larvae in Tryon Creek
- Determine if and quantify degree of adult salmonid passage through Hwy 43 culvert
- Determine extent of juvenile salmonid movement through culvert

PIT tag technology



Lamprey

- Methodology
 - Capture
 - Electrofishing
 - Larval lamprey distribution
 - Pot Traps
 - Adult lamprey
 - Movement
 - PIT Tag Antennas
 - Radiotelemetry



Lamprey

- Results

- Electrofishing

- Entire stream electrofished on two occasions
 - No evidence of spawning upstream of culvert
 - Ammocoetes collected only downstream of culvert
 - August 16, 2005 – 7 ammocoetes
 - August 30, 2006 – 25 ammocoetes

- Pot Traps

- Fishing in Tryon since Spring 2006
 - Up to two at a time below culvert
 - No captures



Adult salmonids

- Methodology
 - Capture
 - Adult weir trap
 - Fall 2006 to present
 - Movement
 - PIT tag antennas
 - Spawning ground surveys
 - Hwy 43 to Boones Ferry Road



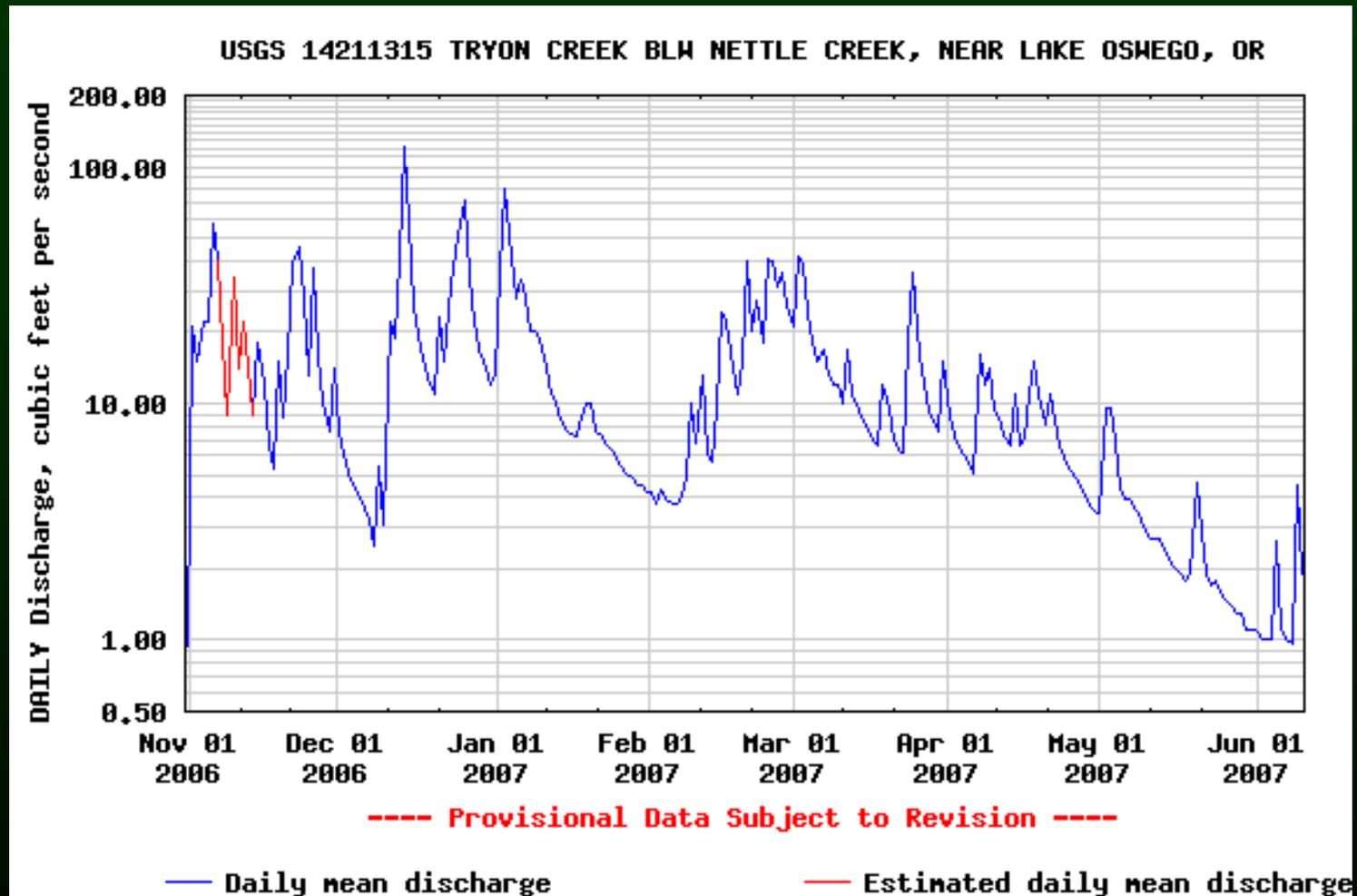
Adult salmonids

- Results
 - Adult weir trap
 - One capture – mid-Feb 2007 – STH – not tagged



December 15, 2006

Adult Salmonids



Adult salmonids

– Spawning ground surveys

- Four surveys completed – 12/7, 1/9, 2/5, 5/18
- Conducted following high flow situations or at the completion of a migration season
- No evidence of salmon or STH spawning

Juvenile salmonids

- Methodology
 - Capture
 - Electrofishing
 - 8 x 200 m reaches between Hwy 43 and Boones Ferry Road
 - Sampled in March and Oct. 2007
 - Movement
 - PIT Tag Antennas



Juvenile salmonids

- Results
 - March 2007 Captures
 - 59 CCT – 96-296 mm (50 tagged)
 - 27 STH – 114-241 mm (26 tagged)
 - 27 Hybrids – 103-205 mm (19 tagged)
 - 3 Coho – 113-127 mm (3 tagged)
 - 7 Trout Fry – 84-98 mm



Juvenile salmonids

- Results

- Movement

- Upper antenna turned on March 16, 2007
 - Lower antenna reinstalled May 18, 2007, but not active

- Emigrants

- Detected fish March 16 – May 20
 - 19/26 STH – 114-241 mm
 - 6/19 Hybrids – 138-171 mm
 - 2/3 Coho
 - 0/50 CCT



Juvenile salmonids

- Results

- October 2007 Captures

- 52 CCT – 95-277 mm (44 tagged) - 6 Recaps
 - 6 STH – 126-167 mm (6 tagged) – 0 Recaps
 - 56 Hybrids – 86-238 mm (46 tagged) – 4 Recaps
 - 2 Coho – 98-113 mm (2 tagged) – 0 Recaps
 - 7 Trout Fry – 73-99 mm

Note: One 167mm STH contained all physical characteristics of a hatchery raised fish, a genetic sample was collected



Future direction

- Lamprey
 - Larval – continued pre- and post-restoration electrofishing surveys
 - Adult – concentrated pot traps in pool below culvert
- Adult salmonids
 - Continued adult trap operation in winter 2007-08
- Juvenile salmonids
 - Continue with spring and fall electrofishing
 - Conduct population estimates for salmonids above the Hwy 43 culvert

Acknowledgements

- USFWS-CRFPO
- Friends of Tryon Creek
- ODFW, City of Lake Oswego, City of Portland, Tryon Creek State Natural Area, ODOT, Lewis and Clark College, NOAA, Metro