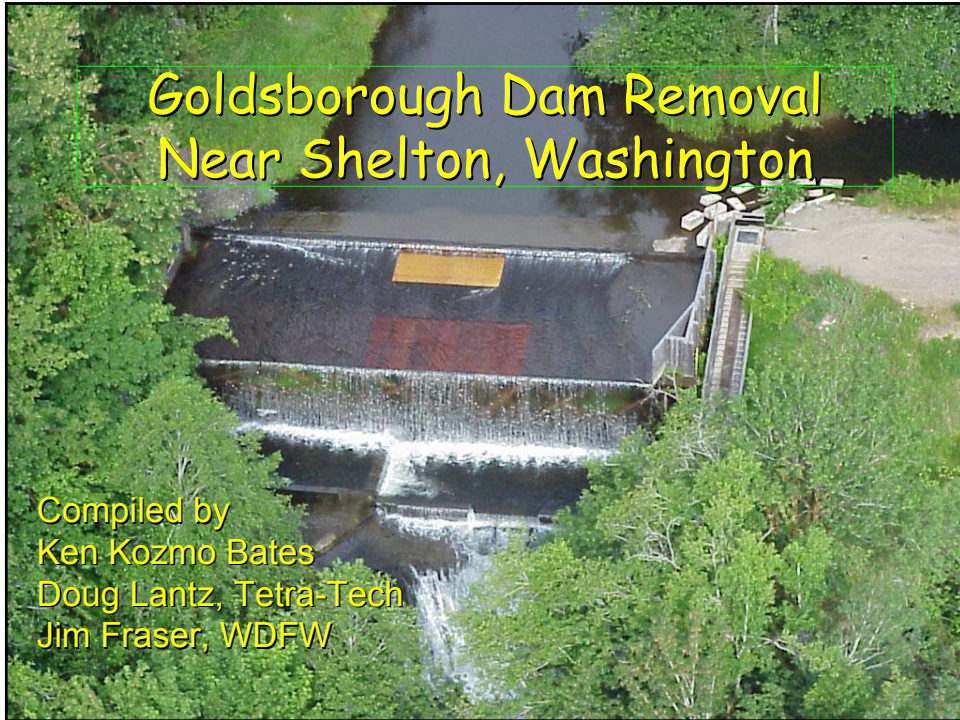


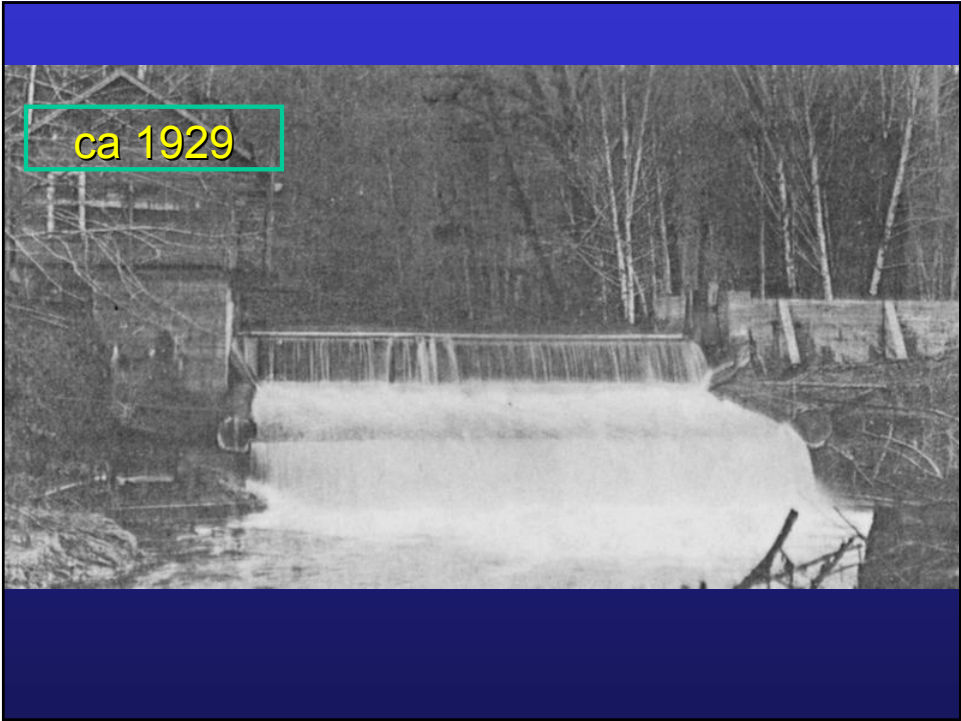
Goldsborough Dam Removal Near Shelton, Washington

Compiled by
Ken Kozmo Bates
Doug Lantz, Tetra-Tech
Jim Fraser, WDFW



Constructed 1921





ca 1929



April, 2001







Goldsborough Creek

- Upstream of dam
 - 60 sq miles of watershed
 - 24 miles excellent low gradient rearing habitat
- Expected anadromous species adult passage
 - Coho - 2,000
 - Chum - 10,000
 - Chinook – (threatened)
 - Steelhead, sea-run cuts



Goldsborough Dam

- Initially built in 1921 for power, RM 2.3
- 1 mile upstream of City of Shelton
- Initially 8 – 14 feet high
- Built on Kitsap clay – channel incision accelerated by bed material depletion
- Damage, not useful after 1996 flood damage
- 35 feet high, 100 feet wide when removed in 2001

Dam Removal Partners

Washington Department of Fish and Wildlife

- Sponsor
- \$1.4M - Legislative appropriation



Corps of Engineers

- Design
- Section 206 - 65% cost \$2.8M
- Final design by Tetra-Tech

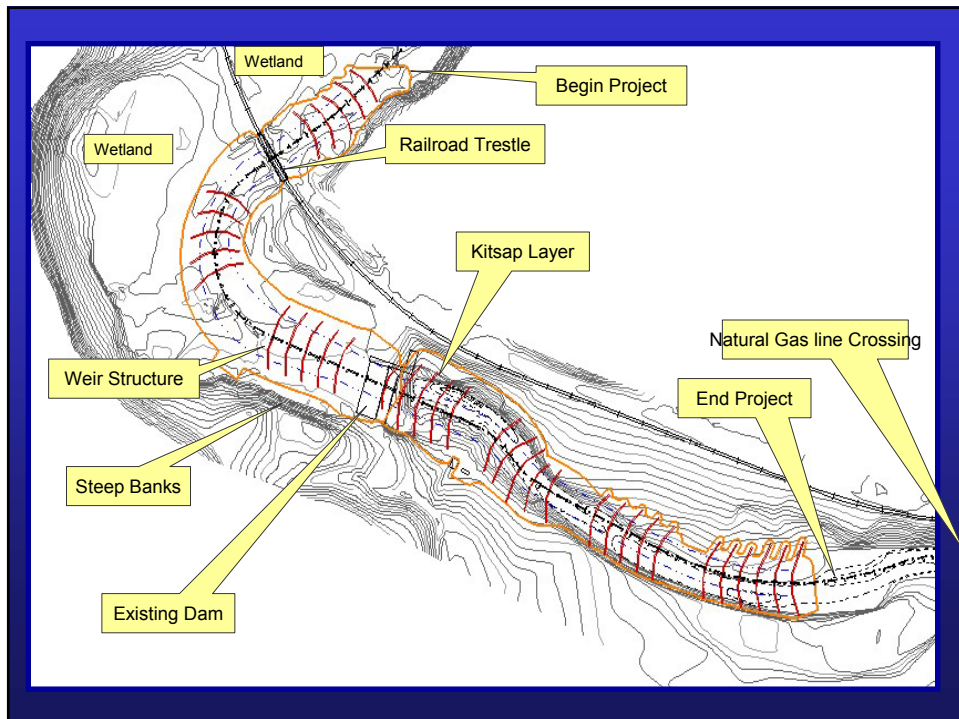


Simpson Timber Company

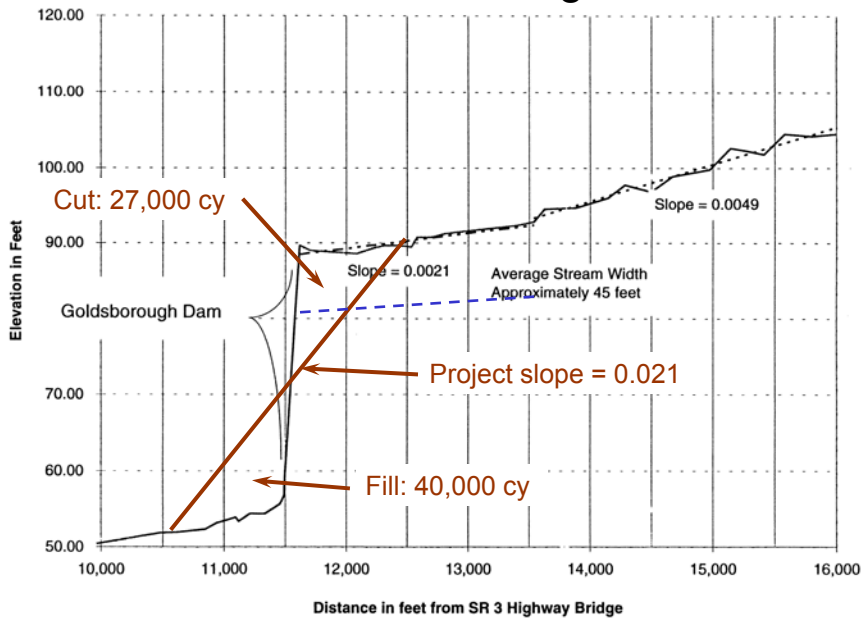
- Owner-operator by MOU with state
- \$148k dam removal and real estate
- Conservation District

Design / Construct Issues

- Passage for all species, life stages
- Rigid channel chosen
 - Minimize flood hazard risk in City of Shelton
 - Manage headcut potential
- Kitsap formation clay
- Wetlands
- Railroad trestle
- Cost



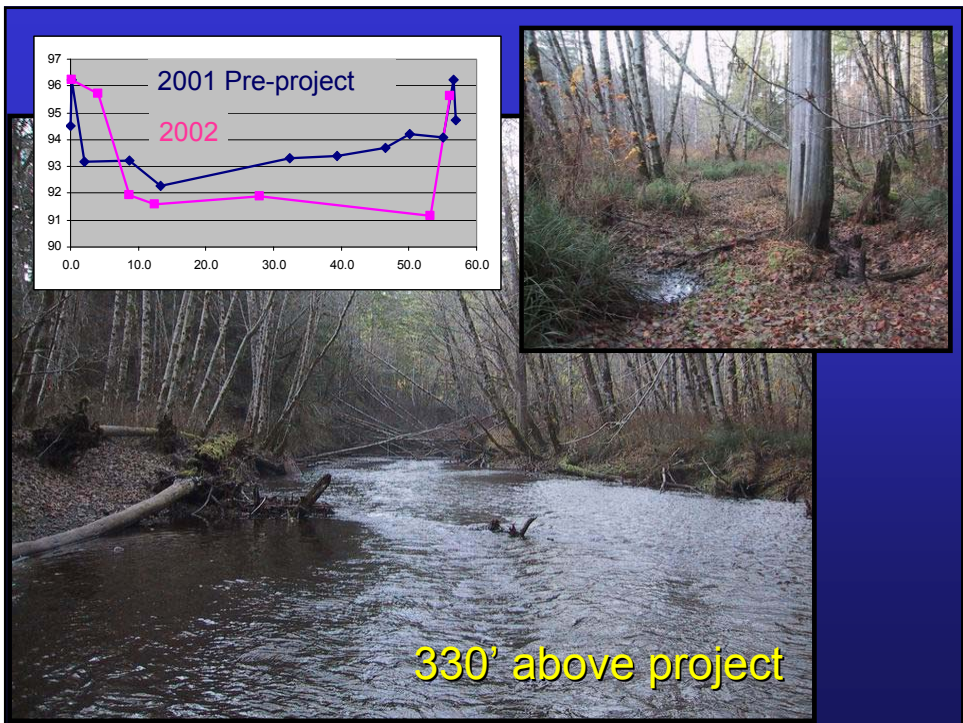
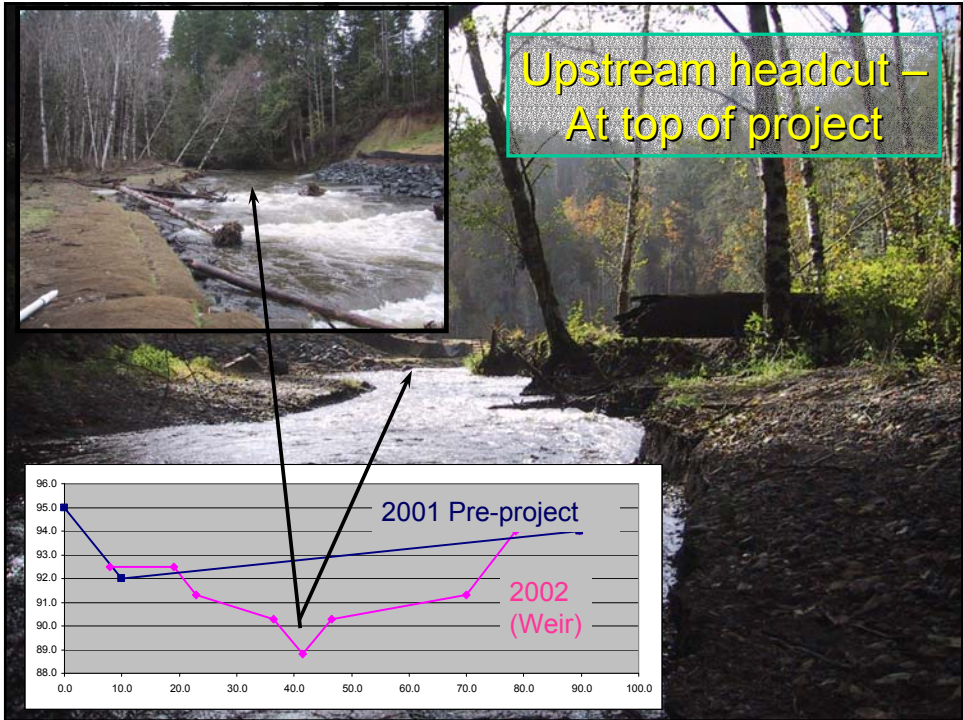
Profile of Goldsborough Creek

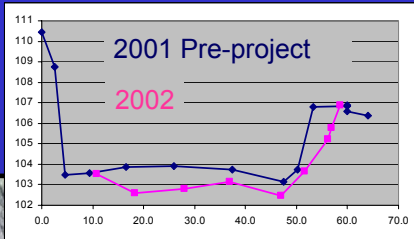






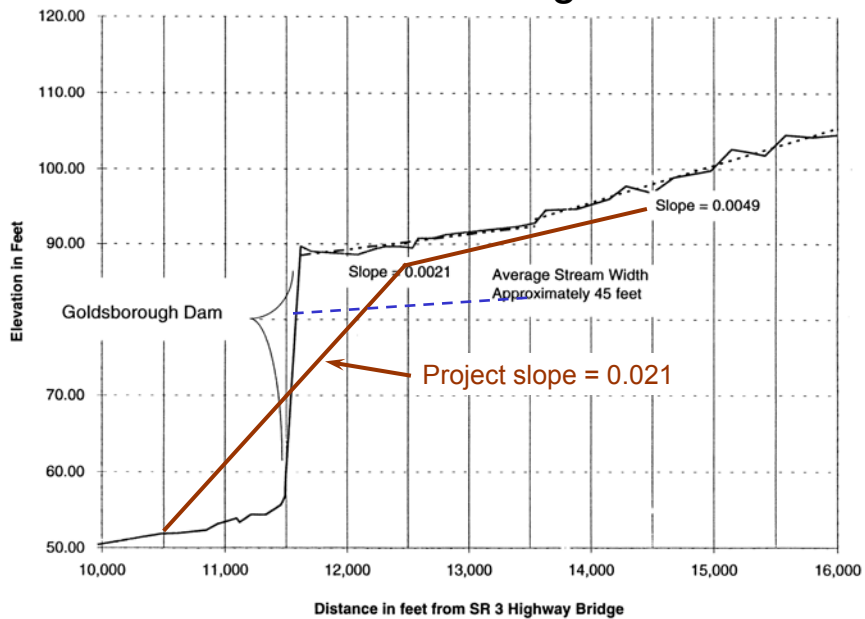






1360'
above
project

Profile of Goldsborough Creek





Ten-Year Monitoring Plan



- Pre and post smolt monitoring
- Downstream passage through the project
- Fish passage snorkeling observations, radio tracking if necessary
- No juvenile passage monitoring
- Construction compliance - survey, veg plats, photos

Habitat Monitoring

- Pre-project and post (?) habitat evaluation – upstream, downstream
- TFW ambient monitoring protocol – 5 km
- Benthic Index of Biotic Integrity
- Spawner surveys



O&M Agreement

- Duration: for life of project – 100 years
- Annual and post-flood inspections and surveys
 - fish passage
 - Habitat features
- Repair as necessary
- \$7500 / year funded by Simpson Timber Company







4 days later
10-yr flood event

94 1:25