Goldsborough Dam Removal
Near Shelton, Washington

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Constructed 1921
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

September, 2001
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
Project slope = 0.021
Cut: 27,000 cy
Fill: 40,000 cy
Profile of Goldsborough Creek
Construction bypass
2000 feet
300 cfs capacity
summer flood of record
Downstream juvenile passage
Soldier Piles
35 weirs
527 piles - Drive / drill

Precast concrete panels
Fish passage weir crest – cast in place, streambed shape

Debris
Bank protection – cut and fill slopes
Upstream headcut – At top of project

330' above project
Profile of Goldsborough Creek

- Project slope = 0.021
Passage conditions near fish passage design flow

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