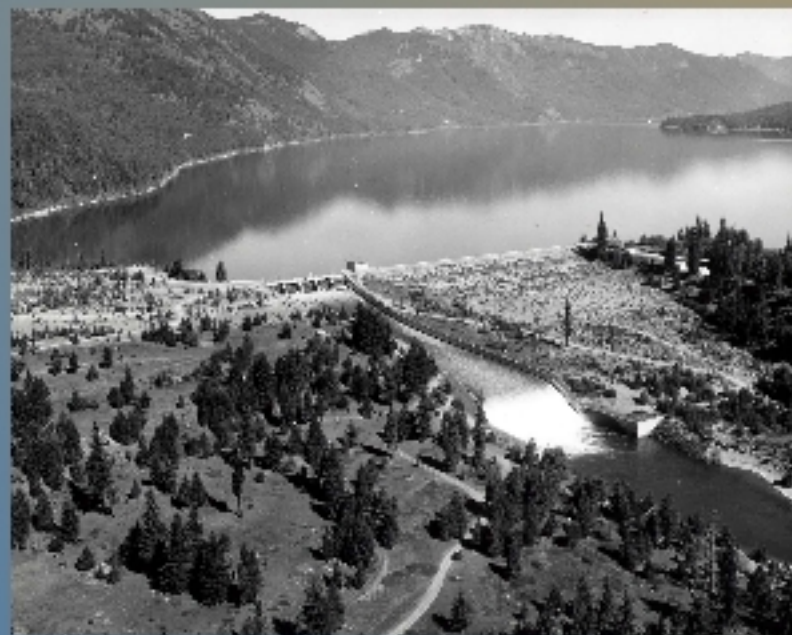


# RECLAMATION

*Managing Water in the West*

## Storage Dam Fish Passage Feasibility Study



U.S. Department of the Interior  
Bureau of Reclamation

# Recap

- **FY 2002 – FY 2003**
  - Phase I Assessment
- **FY 2003**
  - Developed Feasibility Study schedule & budget
  - Selected Cle Elum and Bumping Lake for early action
  - Began limnology & macroinvertebrate studies at Cle Elum and Bumping Lake
- **FY 2004**
  - First year of limited funding for feasibility study
  - Continued limnology and macroinvertebrate studies at Cle Elum and Bumping Lake
  - Developed plans and awarded construction contract for downstream interim passage at Cle Elum Dam

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# Current Activities

- **FY2005**

- Completed downstream interim (temporary) passage at Cle Elum Dam
- Completed macroinvertebrate studies at Cle Elum and Bumping Lake
- Will do additional limnology field work at Cle Elum this season
- USFS doing habitat surveys this summer on Cle Elum River and Deep Creek above Bumping Lake
- Developing production potential models for coho and sockeye salmon at Cle Elum and Bumping Lake
- Collecting feasibility design data for potential permanent passage facilities at Cle Elum and Bumping lake
- Developing benefits associated with passage at dams

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# Next Steps

- **FY 2006 – FY 2007**
  - Complete limnology reports
  - Revise and complete coho and sockeye models
  - Prepare feasibility designs and cost estimates for permanent passage facilities at Cle Elum and Bumping Lake
  - Prepare economic and financial analysis
  - Prepare environmental analysis including NEPA documents, ESA consultation and cultural clearances
  - Implement interim passage at Bumping Lake (as funding and authorities allow)
- **FY 2007 – FY 2008**
  - Prepare Feasibility Report for Cle Elum and Bumping Lake
  - Initiate studies of passage at remaining three dams (as funding allows)

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# Cle Elum Dam Interim Downstream Fish Passage



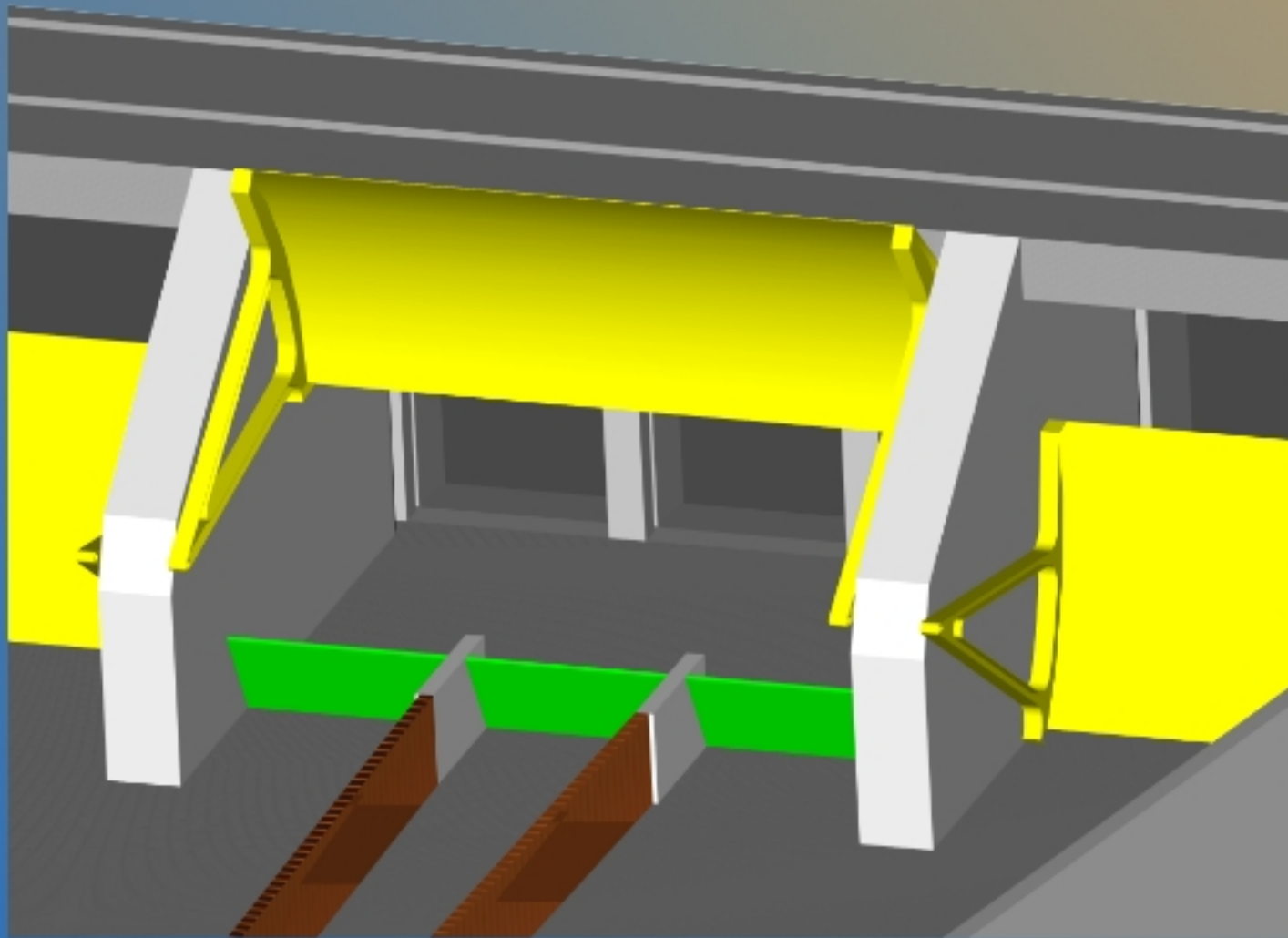
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# Objectives

- **Develop temporary conditions that will allow juvenile fish to volitionally pass downstream at critical migration times**
  - Provide surface releases at the spillway of sufficient quantity to attract fish
  - Provide physical features to safely pass fish down the spillway
- **Reclamation**
  - Construct temporary passage features
  - Modify operations on temporary basis as needed
- **YN & WDFW**
  - Develop goals and objectives for reintroduction of fish
  - Develop monitoring and evaluation plans
  - Supply and handle fish

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# The Concept



RECLAMATION

Interim Downstream Fish Passage Cle Elum Dam  
04-CC-10-1578 CONCORD CONSTRUCTION INC  
Fork lift removing interior cube of sawcut concrete for  
the stop log guide floor slab. Photo by C Kriewald  
Sept. 29, 2004 040929P1



RECLAMATION

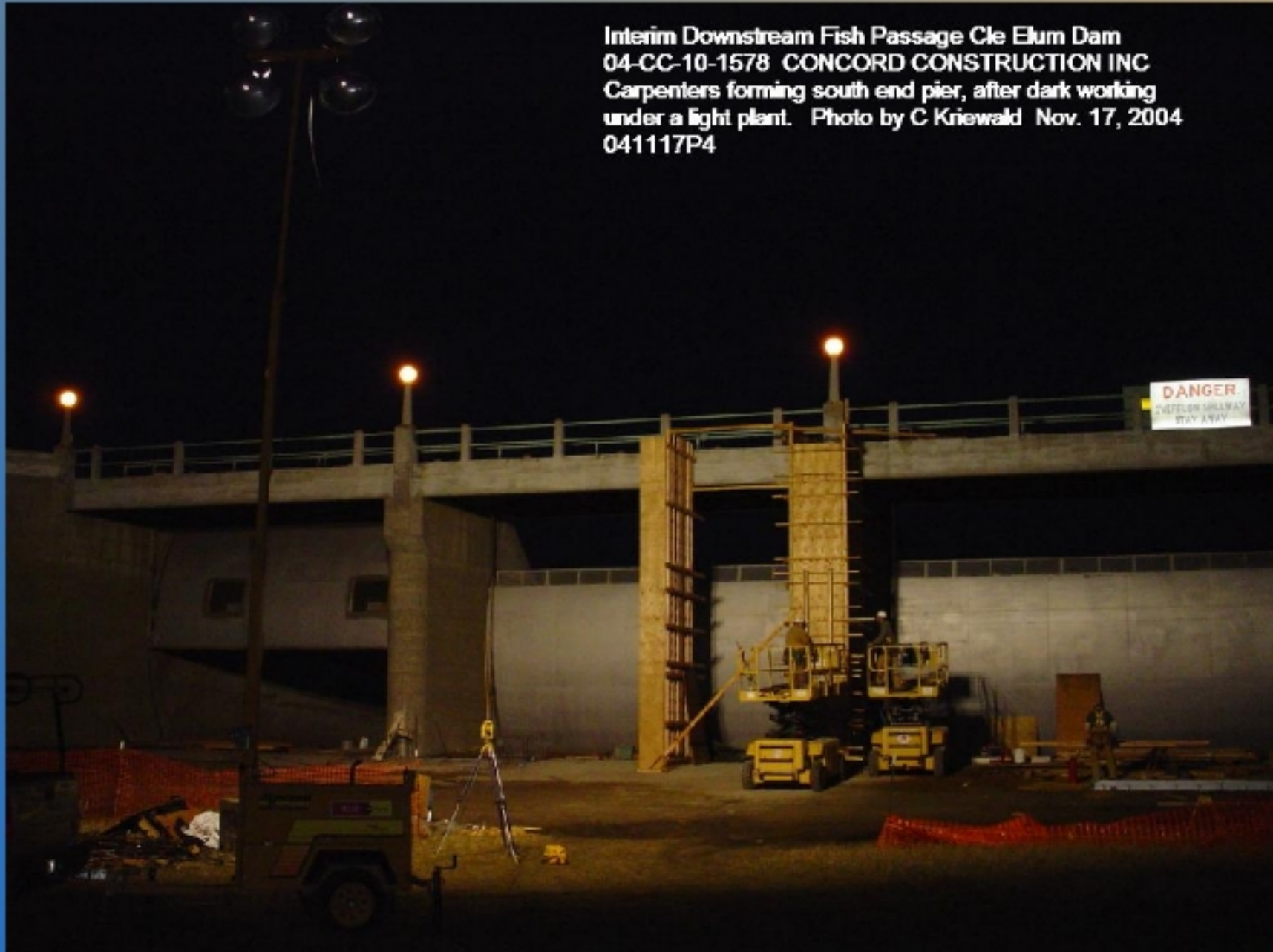


Interim Downstream Fish Passage Cle Elum Dam  
04-CC-10-1578 CONCORD CONSTRUCTION  
INC Subgrade for Stop Log floor after the  
concrete removal. 1" rebar about 5" closer to  
the cj at the near end. Photo by C Kriewald  
October 8, 2004 041008P4



# RECLAMATION

Interim Downstream Fish Passage Cle Elum Dam  
04-CC-10-1578 CONCORD CONSTRUCTION INC  
Carpenters forming south end pier, after dark working  
under a light plant. Photo by C Kriewald Nov. 17, 2004  
041117P4



RECLAMATION

Interim Downstream Fish Passage Cle Elum Dam  
04-CC-10-157B CONCORD CONSTRUCTION INC  
Carpenter crew removing the Spillway Deck Slab  
Forms. Photo by C Kriewald Dec. 20, 2004  
041220P2



RECLAMATION

Interim Downstream Fish Passage Cle Elum Dam  
04-CC-10-1578 Concord Construction Inc.  
Pro Cut making the concrete saw cut behind  
radial gate No. 2. Concord storing tools behind  
radial gate No. 3. Photo by C Kriewald Sept.  
22, 2004 040922P



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Interim Downstream Fish Passage Cle Elum Dam  
04-CC-10-1578 CONCORD CONSTRUCTION INC  
Carpenters forming the two plunge pool gate piers.  
Photo by C Kriewald Sept. 30, 2004 040930P4



RECLAMATION

Interim Downstream Fish Passage Cle Elum Dam  
04-CC-10-1578 CONCORD CONSTRUCTION INC  
Fork Lift attempting to lower 4'x8' bunk (40 sheets) AB  
Marine plywood for the Wood Flume onto the spillway  
floor. Photo by C Kriewald Sept. 29, 2004  
040929P8



RECLAMATION

Interim Downstream Fish Passage Cle Elum Dam  
04-CC-10-1578 CONCORD CONSTRUCTION INC  
Left wall of the 2"x6" framing for the Wood Flume.  
Photo by C Kriewald October 14,2004 041014P2



RECLAMATION

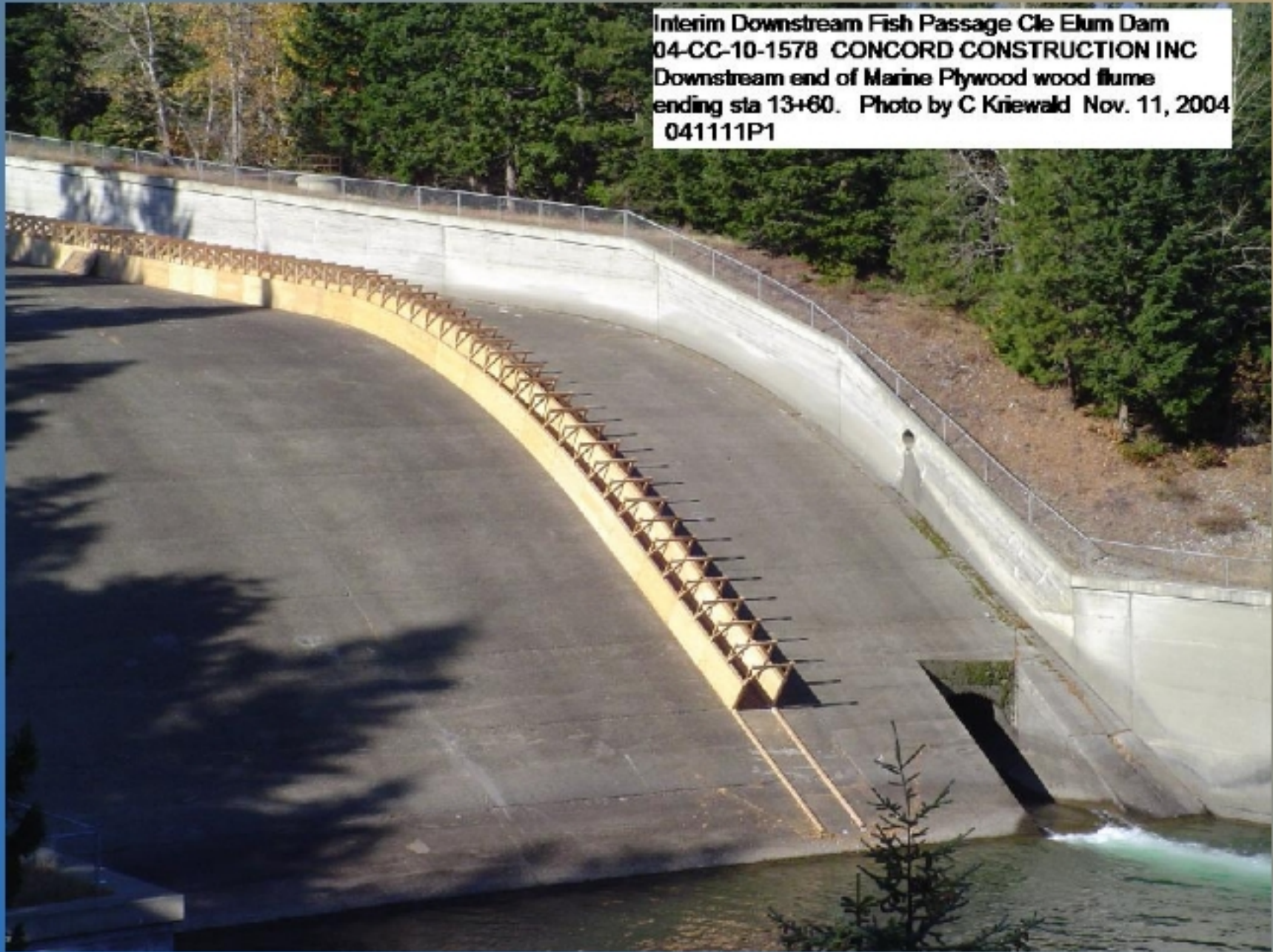


Interim Downstream Fish Passage Cle Elum Dam  
04-CC-10-1578 CONCORD CONSTRUCTION INC  
Carpenter installing Sikaflex 1a Sealant at the bottom  
of the inside of the Wood Flume walls. Photo by  
C Kriewald Nov. 6, 21004 041106P3

RECLAMATION



Interim Downstream Fish Passage Cle Elum Dam  
04-CC-10-1578 CONCORD CONSTRUCTION INC  
Downstream end of Marine Plywood wood flume  
ending sta 13+60. Photo by C Kriewald Nov. 11, 2004  
041111P1



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Bald Eagle in the top of pine tree  
at the north end of Cle Elum Dam.  
October 4, 2004 041004P1



RECLAMATION