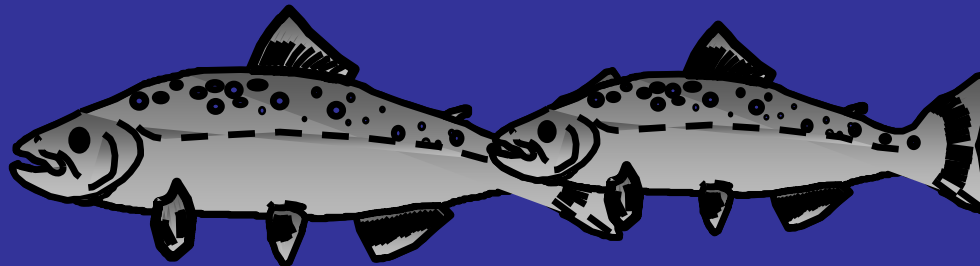


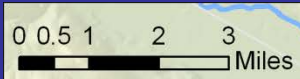
Taneum Watershed

A Case History of Multiple Strategies for Watershed Restoration

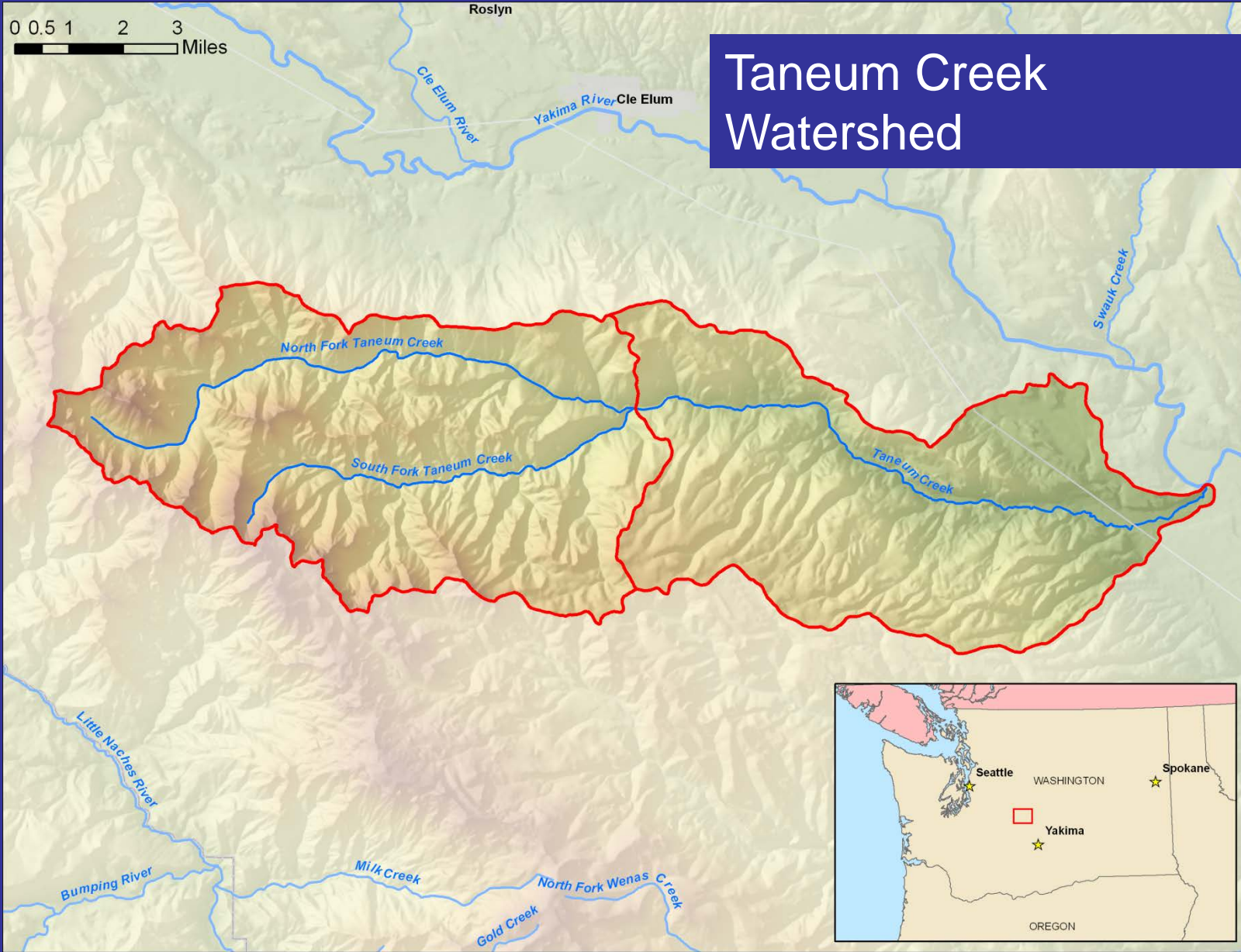
Patrick Monk
USFWS

Scott Nicolai
Yakama Nation YKFP





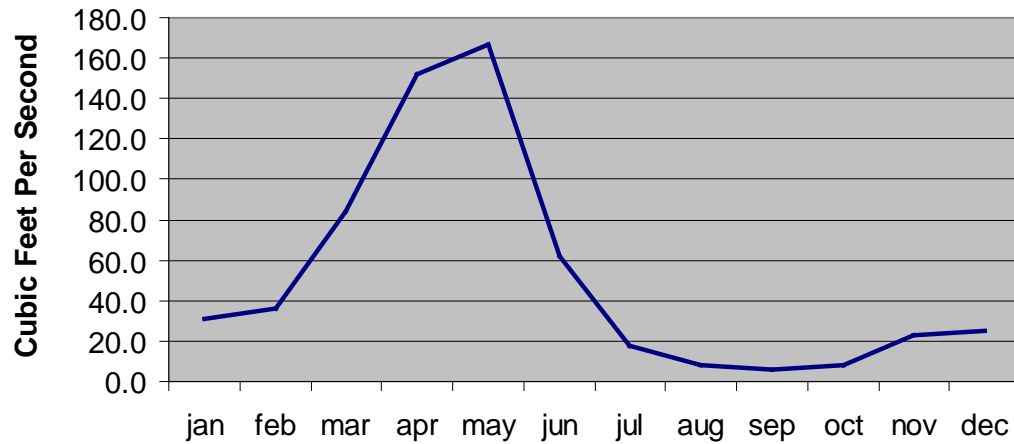
Taneum Creek Watershed



Some Facts

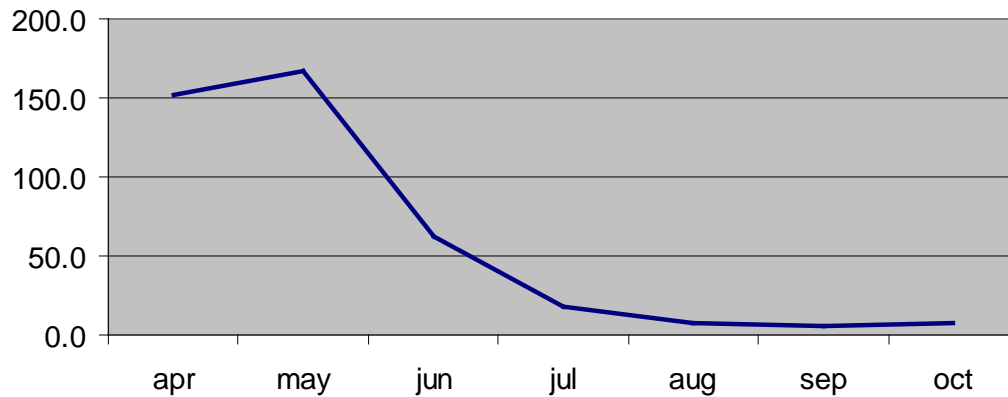
- Confluence with Yakima River at RM 166.1.
- Total basin area is approximately 82.9 square miles (Jones and Stokes, 1991).
- Annual precipitation ranges from >60 inches in the upper Taneum to approximately 10 inches near the Yakima River.
- Elevations in the basin range from 6,280 feet at Quartz Mountain to 1,690 feet at the confluence.
- The estimated mean annual flow at the mouth of Taneum Creek is 66 cfs.

Taneum Creek Average Monthly Flow



Brain Ranch Gage Station 2005-2008

**Taneum Creek Average Monthly Flow
(Irrigation Season)**



Brain Ranch Gage Station

Fish Stocks:

- Steelhead
- Adult coho plants since 2007
- Spring Chinook (juvenile rearing)
- Resident Trout
- Historic Bull Trout (none documented at present, but designated as critical habitat)

Past Impacts:

1. Livestock Grazing

Past Impacts:

- Livestock Grazing.
1. Irrigation - By 1910, fish passage was blocked at the Taneum Canal Diversion Dam

Past Impacts:

- Livestock Grazing.
 - Irrigation - By 1910, fish passage was completely blocked at the Taneum Canal Diversion Dam.
1. Railroad logging began about 1930.



Bureau of Fisheries 1936 Report:

'nice run of silvers' until 1910, when the irrigation dams were constructed.

Representative of
middle reaches of
Taneum Creek

08.29.2007 23:24

Advantages of Restoring Taneum Creek

- Only 3 irrigation diversions, with major irrigators active in basin water issues (specifically written in to YRBWEP law)
- Landownership largely public, private land only in lower few miles of watershed
- Historically important fishery



Past Restoration Actions:

1. All three irrigation diversions screened in 1989

Past Restoration Actions:

2. Meadow closures in early 1990's



Interstate

90

GVT

LOT 2

GVT LOT 1

Past Restoration Actions:

3. Hart K land and water purchase

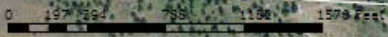
0 197 394 788 1182 1576 Feet



Interstate
90

GVT LOT 2
GVT LOT 1

**Past Restoration
Actions:**
3. Hart K land and water
purchase ~240 acres



LOCAL

Land management classes help rural property owners

Washington State University Extension plans a series of four evening classes to aid rural property owners on better management of their land in Kittitas County. The series will be 6:30 p.m. on each of the above dates at the Heritage Center on the Kittitas County Fairgrounds.

The four-class series will provide basic answers to common issues facing new landowners who want to improve their property. Tip Hudson, WSU Extension range and livestock educator, said the classes and subjects are:

- Sept. 22 — Setting land management goals
- Sept. 29 — Land and vegetation renovation, restoration and rehabilitation
- Oct. 6 — Managing live-

Taneum Canal Co. honored for water sale for fish

Steelhead, bull trout will be helped

By DOUG WARNOCK
special to the Daily Record

THORP — The sale of Taneum Canal Co.'s winter conveyance stock water rights to the state to aid fish runs in Taneum Creek was hailed on Monday as a landmark deal and, possibly, the first of its kind in the state.

The transfer involves the sale of conveyance water rights to the state by the Taneum Canal Co.'s 32 shareholders to ensure winter in-stream flows in Taneum Creek. Conveyance rights comprise the amount of water used by livestock owners to move water that will be used by livestock.

Officials gathered Monday at the East Taneum home of Ben George, president of the canal company's board, to honor holders for approving the deal and the organization that helped make it possible.

Taneum Canal Co. shareholders will receive \$316 for their winter water conveyance rights, which is normally from Nov. 16 through Feb. 19. The funds come from



Photo by Doug Warnock

Representatives of groups involved in the transfer of Taneum Canal Co. winter stock water rights to the state gathered Monday at the canal's head gate near Thorp. They are, from left, Lisa Pelly of the Washington Water Trust, Stan Isley of the state Department of Ecology, Taneum Canal Co. Board President Ben George and Tom Ring of the Yakima Nation.

result of nearly three years of discussion by the canal company board with representatives of the state Department of Ecology, the Washington Water Trust, the Yakima Nation, U.S. Bureau of Reclamation and the Columbia Basin Water Transition Program.

"This is a win-win for everyone. It couldn't have been accomplished without the cooperation of the good people on the board and the shareholders."

The shareholders retain their conveyance stock

water right. Funds from the sale will give shareholders the opportunity to drill wells to supply the water they sold or seek other sources.

Taneum Creek is a tributary of the Yakima River and the canal company's system provides water to 32 users following an agreement of \$2,700 a

lower Taneum Creek is often less than desired for fish habitat. This agreement will enhance the spawning, egg incubation and rearing habitat in the stream for steelhead, bull trout and other fish species.

The Taneum Canal Co. water rights were originally established in 1873 and are among the oldest water rights in Kittitas County. This transfer is believed to be the first of its kind and was engineered by board members John Dyk, Jack Wheatley and George.

"We were able to find a way to restore natural winter flow in the creek for fish, while preserving the valuable stock water needed by livestock producers," said Stan Isley, an Ecology Department conservation specialist, who is currently assigned to the Bureau of Reclamation for the Yakima Basin Water Enhancement Project.

Isley said the hope is the extra water will help restore habitat for steelhead and benefit bull trout.

"I can't say enough about the willingness of the canal company's board members to keep working on this."

Lisa Pelly, project manager for the private, nonprofit Washington Water Trust, said it was gratifying to work on a project that demon-

Past Restoration Actions:

4. 28.8 cfs winter stockwater purchase completed in 2008.

"This is the first time stock water has been sold in the state of Washington. We're proud that we were able to do this in a way that meets our needs and helps fish recover locally. The bottom line is cooperation. That's what made it happen. It's a good thing for everybody."
— Ben George, President, Taneum Canal Co.

A photograph of a stream in a wooded area. The stream is partially blocked by a large, chaotic pile of logs and branches of various sizes, some of which are partially submerged. The water is visible on either side of the log pile, appearing slightly turbulent. The surrounding forest has bare trees, suggesting a late autumn or winter setting. There are patches of snow on the ground and on the logs.

Past Restoration Actions:

5. Large Wood placement
(phase one)

03.30.2009 14:39



Past Restoration Actions:

6. Bruton Dam Removal

Bruton Dam Removal Had Many Participants

Yakama Nation, Hank Fraser

Kittitas Conservation Trust, David Gerth

WDFW, Jennifer Scott

National Marine Fisheries Service, Ellensburg staff

Bureau of Reclamation, YRBWEP and YFO staff

Kittitas Reclamation District, Ken Hasbrouck

Washington Water Trust, Jason McCormick

Project Engineer: Paul Tappel, Fisheries Consultants

Bruton Ditch Landowners



Structure was built by Kittitas Reclamation District in 1968 to accommodate I-90

No fish ladders or screens; Reclamation built ladders and screens in 1989, agreed to maintain fish facilities

Served 47.75 acres of land with irrigation water only from Taneum Creek; 1873 priority date; 2.1% of creek flow.

Despite Screen and Ladders there were still problems with Bruton

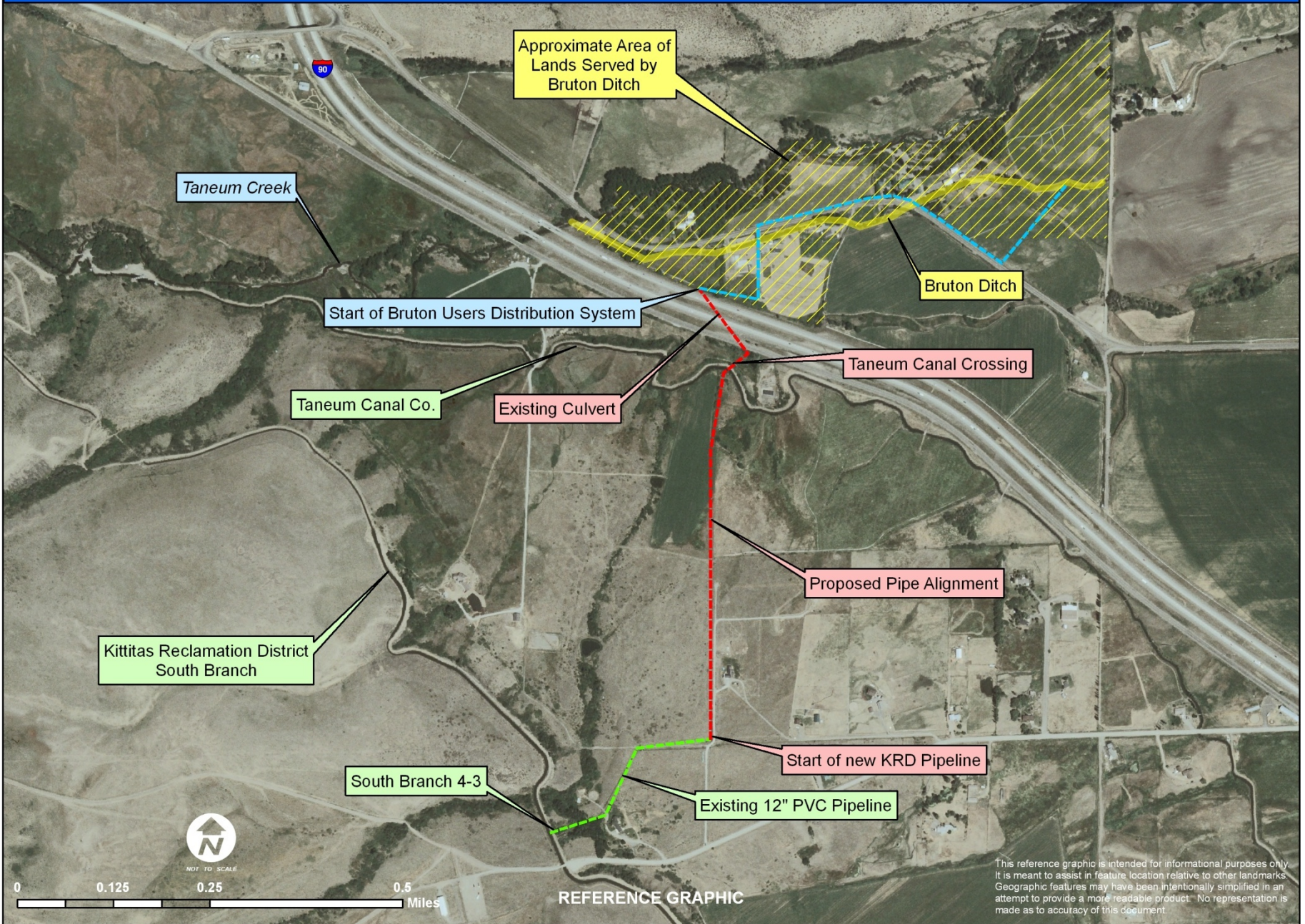
Counts of juvenile spring chinook salmon above and below Bruton Dam.

<u>Year</u>	<u>Downstream</u>	<u>Upstream</u>
2007	28	1
2009	115	4



BRUTON HAD TO GO

- First proposal was modified ladder, but roughened channel was preferred option
- *Reclamation made decision to allow dam removal and either pump from Taneum Creek or find another source of water*
- Pumping was undesirable due to winter stock water
- *Developed Bruton-KRD water exchange*



REFERENCE GRAPHIC

This reference graphic is intended for informational purposes only. It is meant to assist in feature location relative to other landmarks. Geographic features may have been intentionally simplified in an attempt to provide a more readable product. No representation is made as to accuracy of this document.

With a little luck!

- KRD agreed in concept
- Cooperative landowner (scratch my back)
- I-90 culvert
- Landowners sell water right, which finances the cost-share of pipeline (17.5%) and on-farm





BACK TO BRUTON











Screen-All

Screen-All CV-40B

elude west

44E

CV-40
2734

























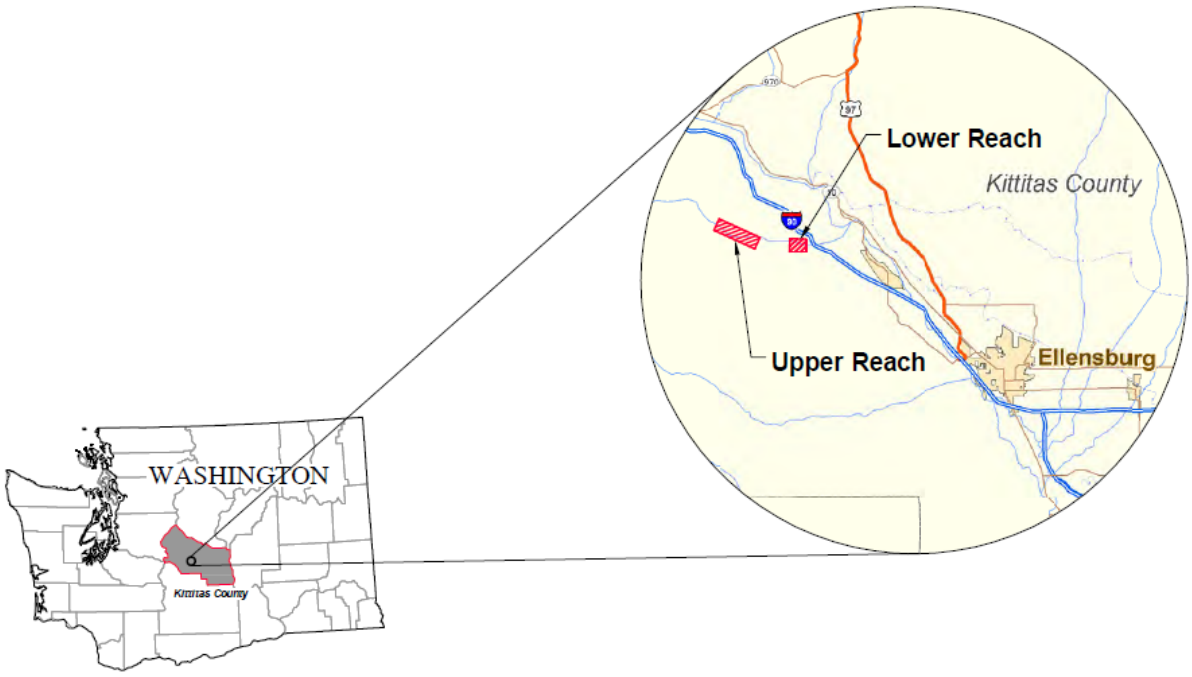


Restoration in

2010:

Based upon designs that were completed in 2009.

TANEUM CREEK CONCEPTUAL ENHANCEMENT DESIGN



SHEET	SHEET TITLE
S-1	COVER SHEET
S-2.1	PROJECT VISION GOALS AND OBJECTIVES
S-2.2	PROPOSED ENHANCEMENT
S-3.1 - S-3.3	HISTORIC CHANNEL ALIGNMENTS AND SHEET INDEX
S-4.1 - S-4.5	PROPOSED ENHANCEMENT CONCEPTS

Reference: Base map obtained from ESRI.

Revision No:	Date:	Description:	Initials:	Designed: RLE, CEC, JRS	Conceptual Enhancement Design Ellensburg, Washington Yakama Nation Fisheries Program	Confederated Tribes and Bands of the Yakama Nation WSPB - Forest & Vegetation Resource Management Program	GEOENGINEERS 523 East Second Avenue Spokane, WA 99202	Cover Sheet	Sheet S-1
DRAFT		Drawn: MGF	Checked: MKH	Conceptual Enhancement Design					
Not For Construction.		Date: 09/25/09	Project No: 9098-010-00						



Revision No:	Date:	Description:	Initials:	Designed: JJF
		DRAFT		Drawn: MGF
		Not For Construction.		Checked: MKH
				Date: 09/25/09
				Project No: 9098-010-00

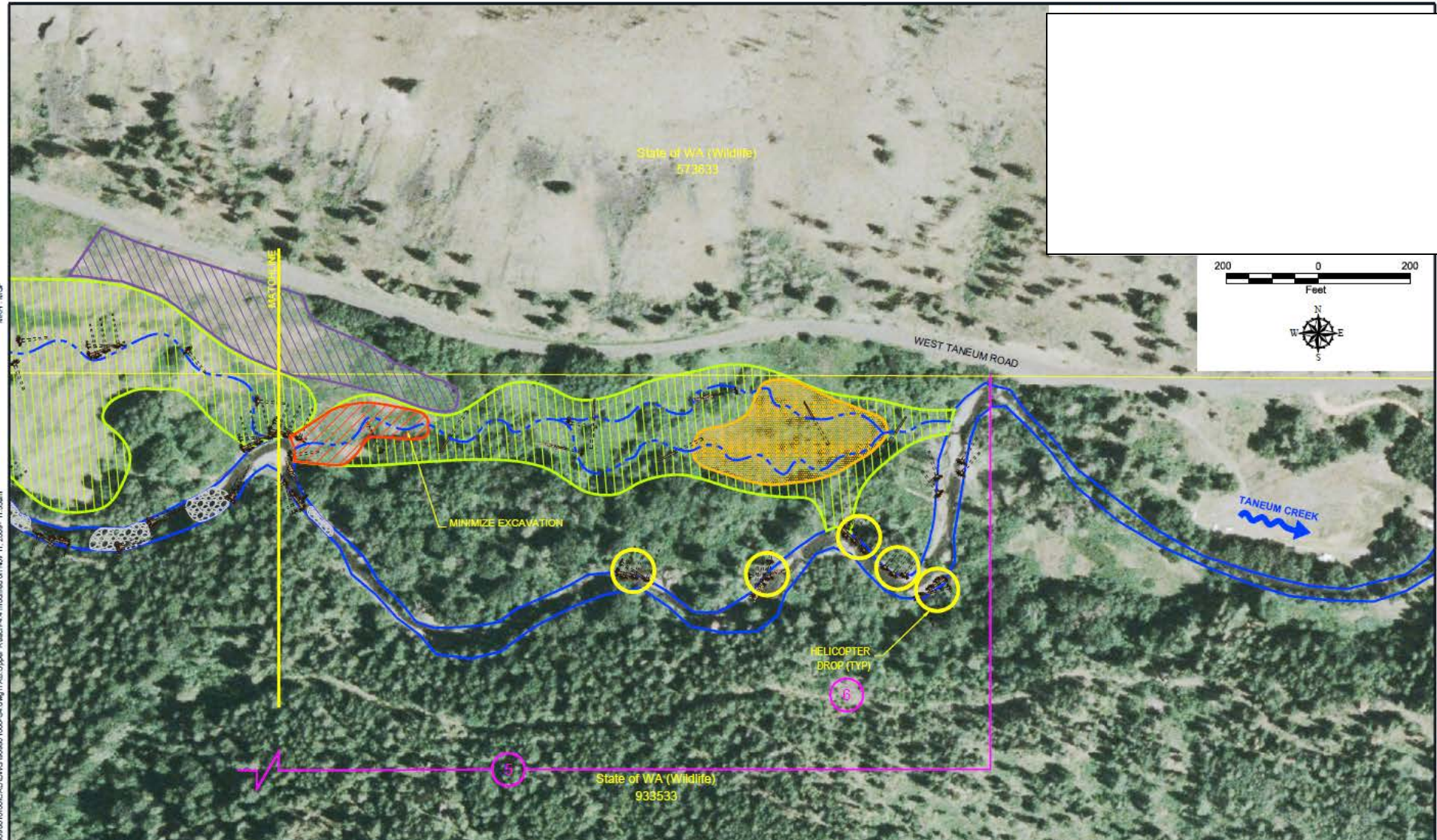
Conceptual Enhancement Design
 Ellensburg, Washington
 Yakama Nation Fisheries Program



GEOENGINEERS
 523 East Second Avenue
 Spokane, WA 99202

Proposed Enhancement Concept
 Conceptual Enhancement Design

Sheet
S-4.2



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		DRAFT		Drawn: MGF
		Not For Construction.		Checked: MKH
				Date: 09/25/09
				Project No: 9098-010-00

Conceptual Enhancement Design
Ellensburg, Washington

Yakama Nation Fisheries Program



GEOENGINEERS

523 East Second Avenue
Spokane, WA 99202

Proposed Enhancement Concept

Conceptual Enhancement Design

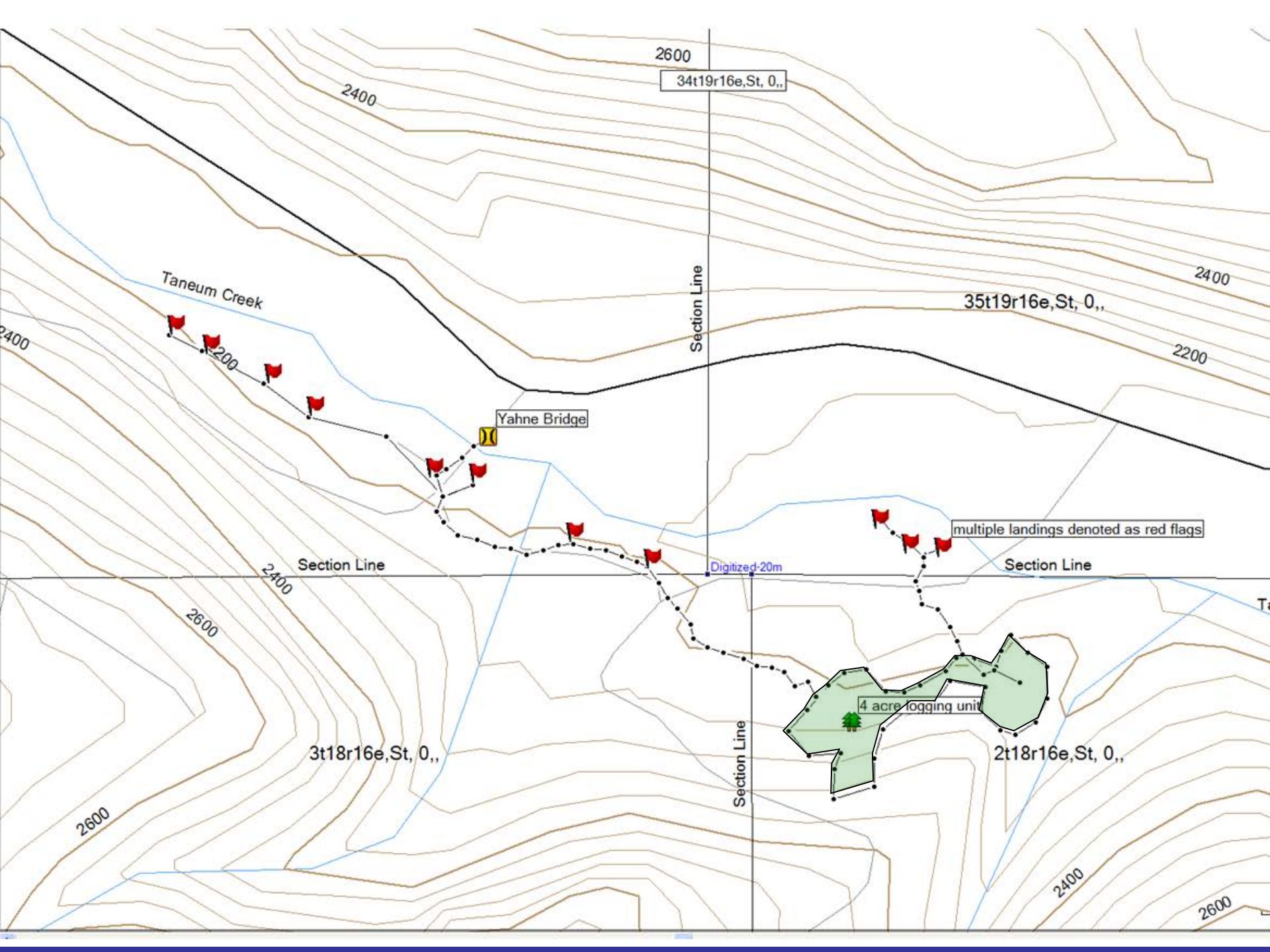
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S-4.4

A photograph of a logging site. In the foreground, there is a muddy, rutted field with several large stacks of cut logs. The logs are piled up in neat rows, extending into the distance. In the background, there is a red barn and a white house, surrounded by trees. The sky is overcast and hazy. The overall scene depicts a rural logging operation.

~150 trees anxiously awaiting their one-way trip to Taneum Creek!

Restoration will involve more intensive Large Wood replenishment, to improve instream complexity, and to enhance floodplain connectivity.







Yahne Bridge
Landing

L Landing

W. Meadow Road

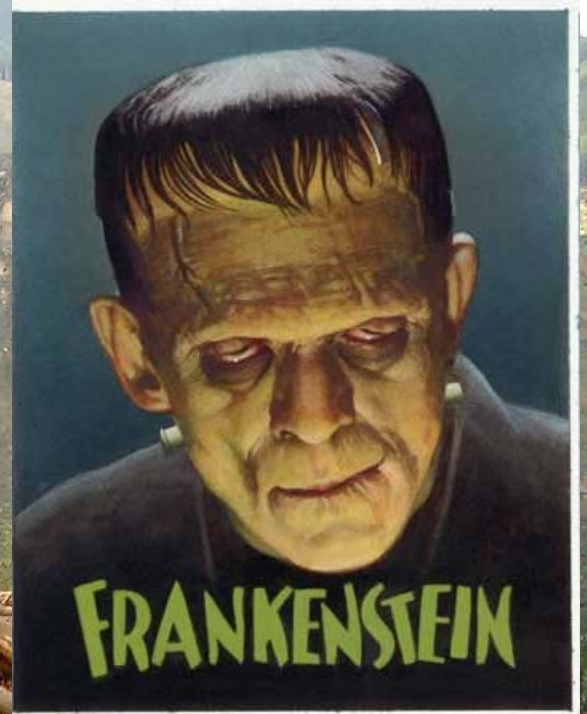
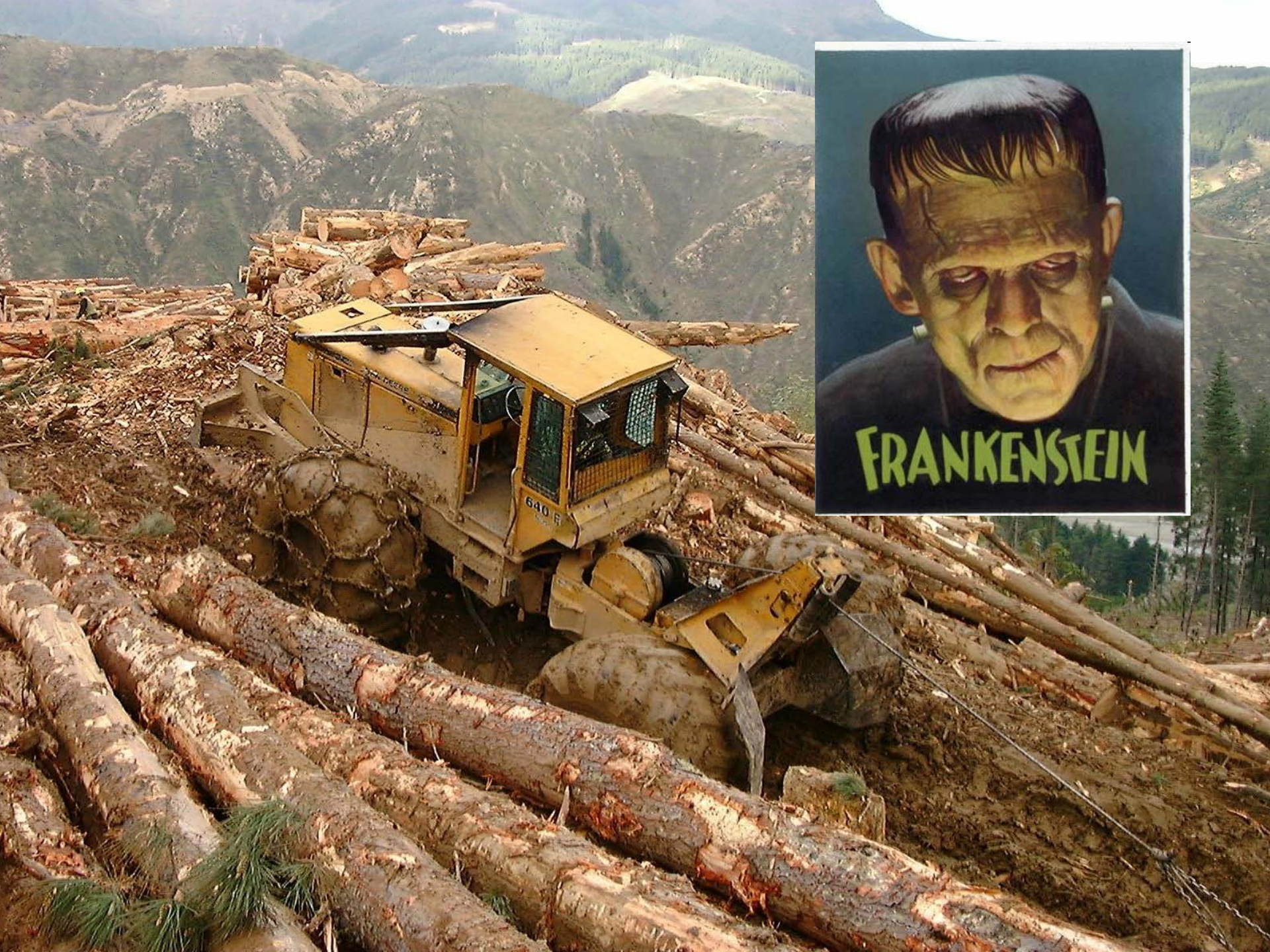


Image U.S. Geological Survey

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Google

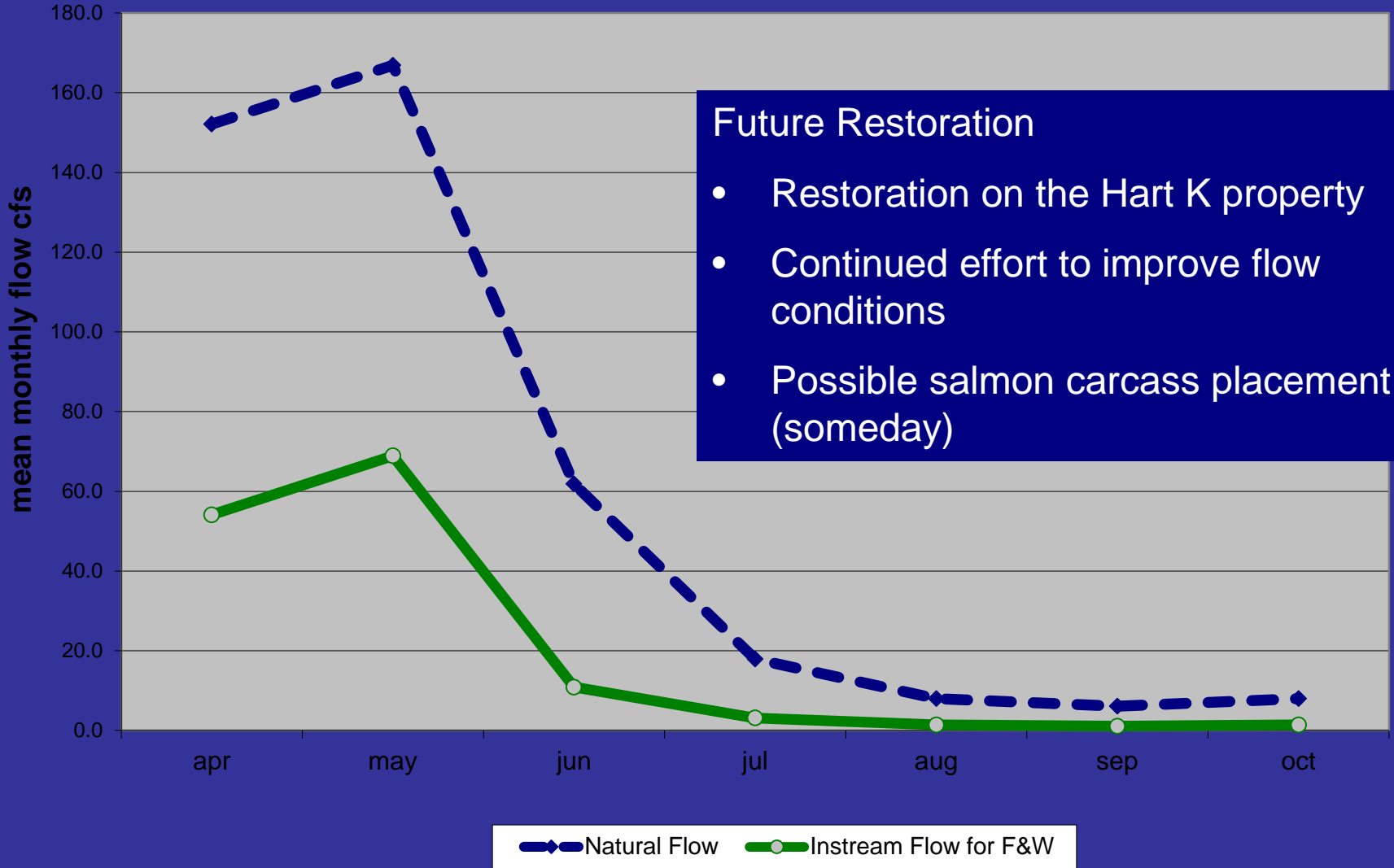
© 2010 Google
47°05'11.55" N 120°48'42.50" W elev 2169 ft

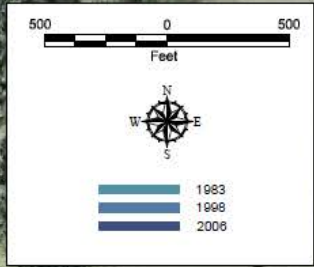
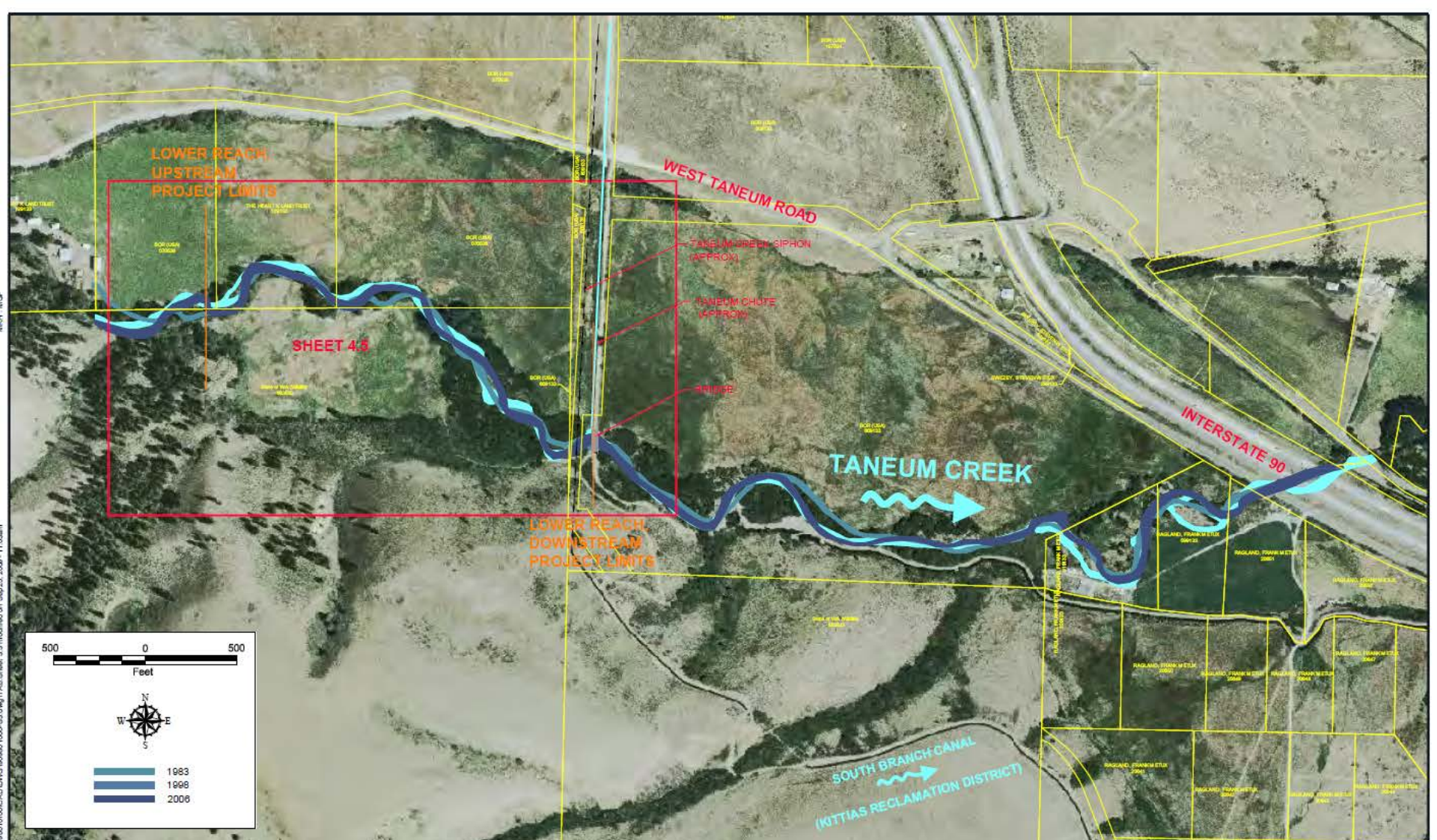
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Taneum Creek Flow During Irrigation Season





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Yakama Nation Fisheries Program



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Historic Channel Alignments
and Sheet Index

Conceptual Enhancement Design

Sheet
S-3.3

Coho Restoration



The End...

