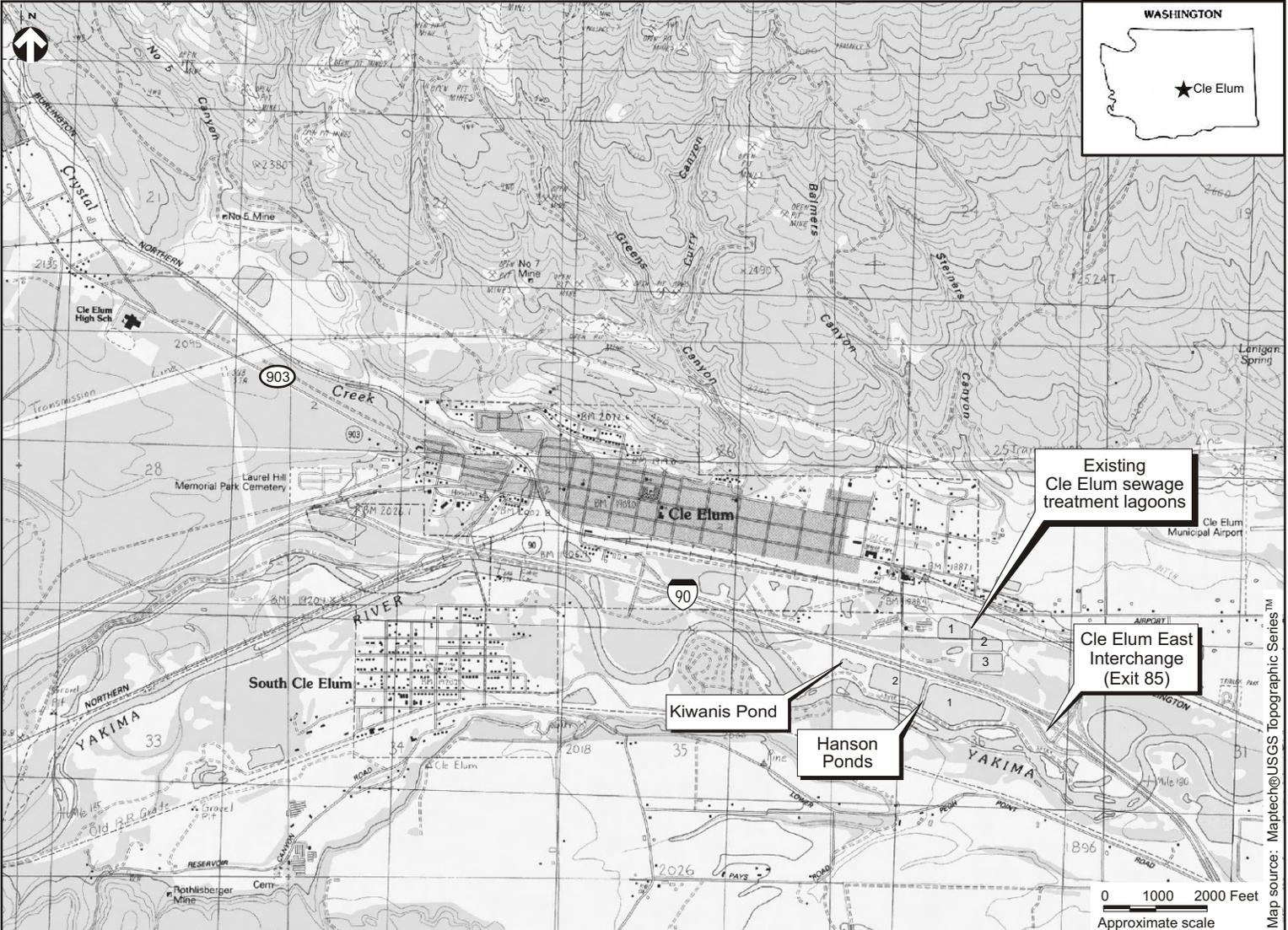
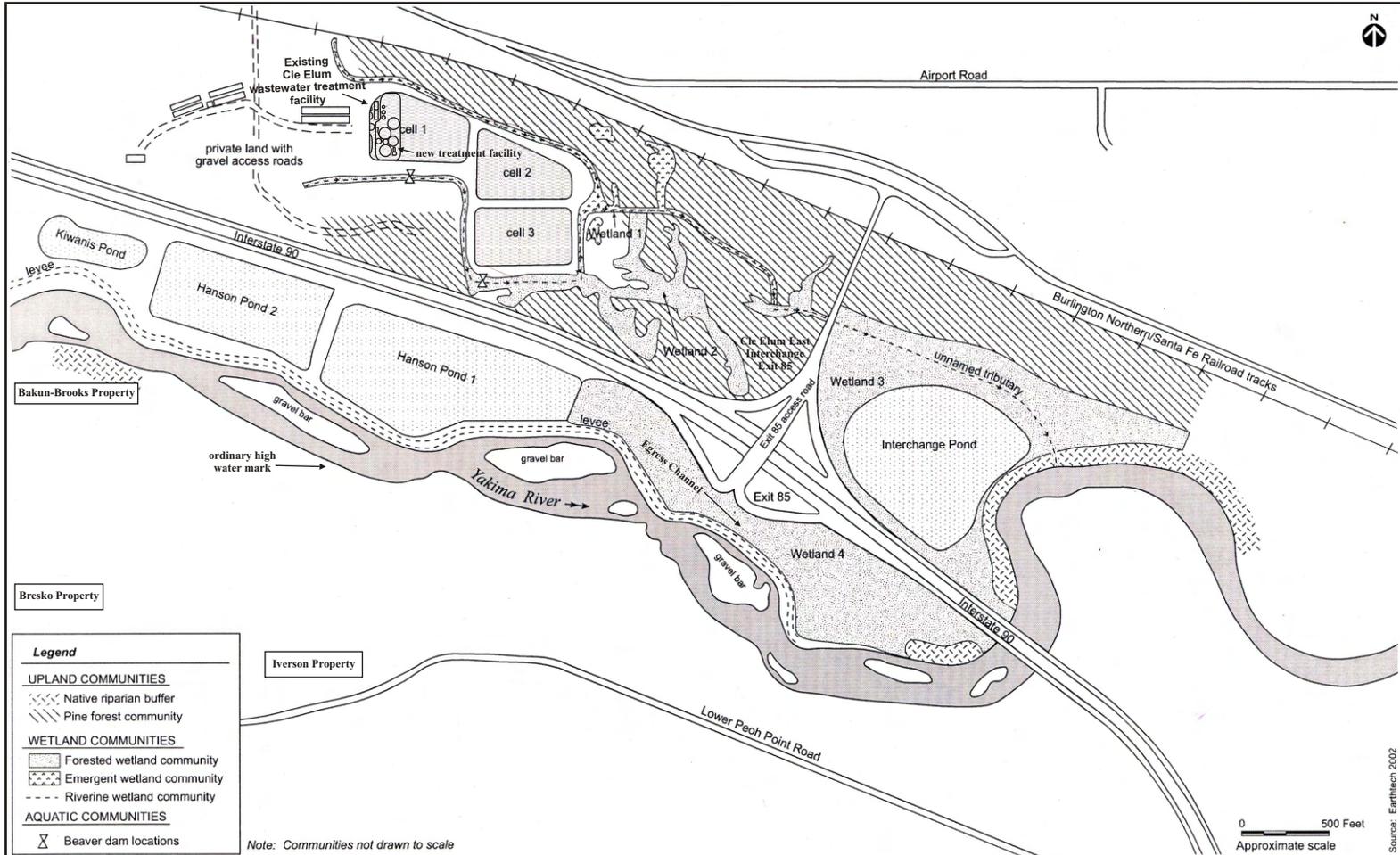


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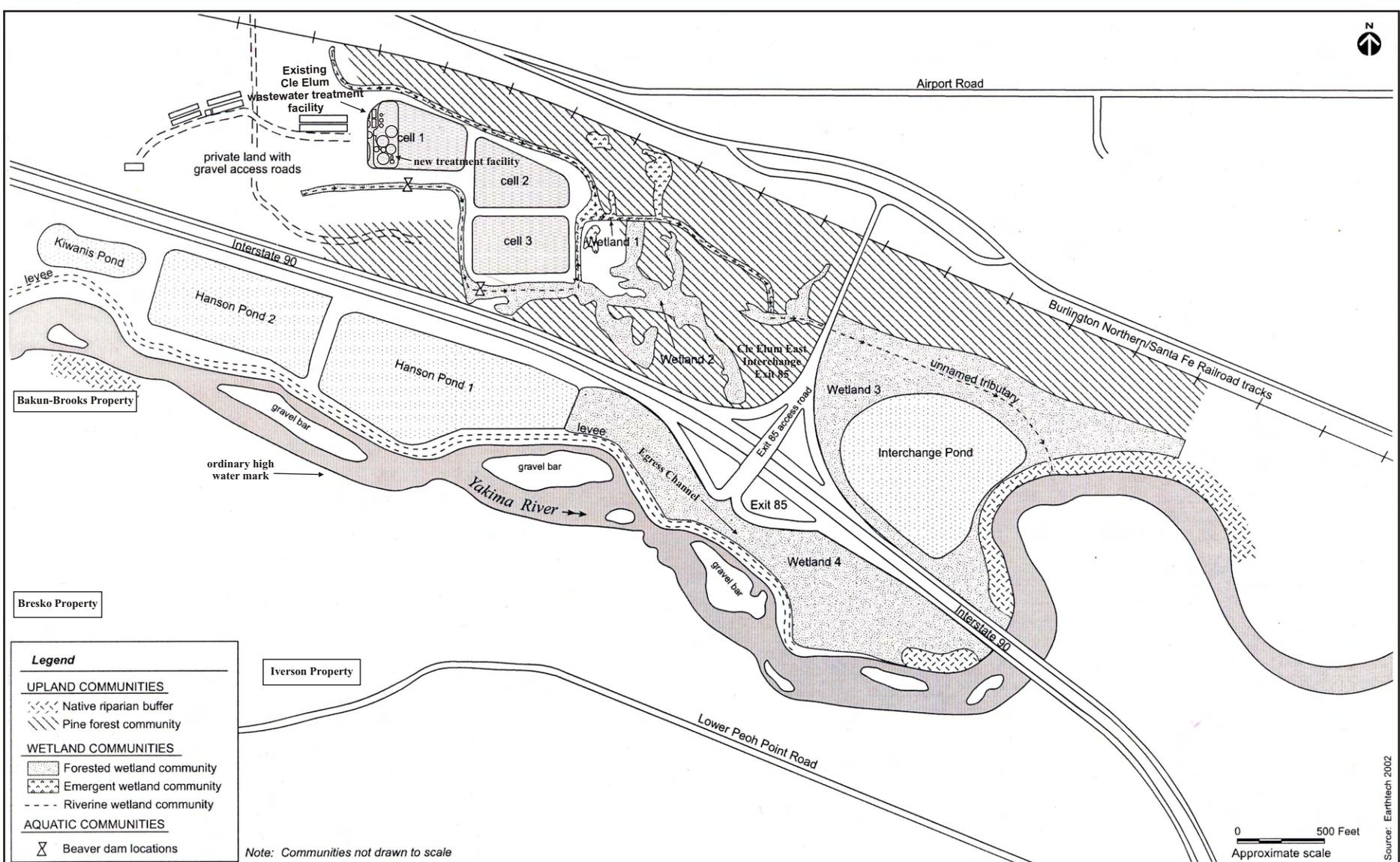


Map source: Maptech/USGS Topographic Series™

<p><b>PURPOSE:</b></p>	<p><b>SHEET 1 of 9 VICINITY MAP</b></p>	<p><b>PROJECT LOCATION:</b></p>
<p>Rock Drop Stabilization Structures for Fisheries Habitat Restoration, Flood Protection, and Replacement Outfall Stabilization.</p>	<p>City of Cle Elum Wastewater Treatment Plant Outfall and Yakama Nation Hanson Ponds Habitat Restoration/Enhancement</p>	<p>ALONG: Yakima River WITHIN: Kittitas County</p>
<p><b>DATUM:</b></p>	<p><b>APPLICATION BY:</b></p>	<p><b>LOCATED WITHIN:</b></p>
<p>N.G.V.D. September 27, 2000</p>	<p>City of Cle Elum and Yakama Nation</p>	<p>Sections 35 and 36, Township 20 N, Range 15 E, W.M.</p>
<p><b>ADJACENT PROPERTY OWNER:</b></p>	<p>119 W. First Street</p>	<p>LONGITUDE: 120.55' 08.29" W</p>
<p>Joe Bakun and Betty Brooks</p>	<p>Cle Elum, WA 98922-1159 Phone: 509.674.2262</p>	<p>LATITUDE: 47.11' 09.35" N</p>



<b>SHEET 2 of 9</b>		
<b>REPLACEMENT OUTFALL ALTERNATIVE ROUTES</b>		
<b>PURPOSE:</b>	<b>PROJECT LOCATION:</b>	<b>LOCATED WITHIN:</b>
Rock Drop Stabilization Structures for Fisheries Habitat Restoration, Flood Protection, and Replacement Outfall Stabilization.	City of Cle Elum Wastewater Treatment Plant Outfall and Yakama Nation Hanson Ponds Habitat Restoration/Enhancement	ALONG: Yakima River WITHIN: Kittitas County
<b>DATUM:</b>	<b>APPLICATION BY:</b>	<b>LOCATED WITHIN:</b>
N.G.V.D. September 27, 2000	City of Cle Elum and Yakama Nation	Sections 35 and 36, Township 20 N, Range 15 E, W.M.
<b>ADJACENT PROPERTY OWNER:</b>	119 W. First Street Cle Elum, WA 98922-1159 Phone: 509.674.2262	LONGITUDE: 120.55' 08.29" W LATITUDE: 47.11' 09.35" N



PURPOSE:	SHEET 2 of 9 REPLACEMENT OUTFALL ALTERNATIVE ROUTES	PROJECT LOCATION:
Rock Drop Stabilization Structures for Fisheries Habitat Restoration, Flood Protection, and Replacement Outfall Stabilization.	City of Cle Elum Wastewater Treatment Plant Outfall and Yakama Nation Hanson Ponds Habitat Restoration/Enhancement	ALONG: Yakama River WITHIN: Kittitas County
DATUM:	APPLICATION BY:	LOCATED WITHIN:
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ADJACENT PROPERTY OWNER:	119 W. First Street	LONGITUDE: 120.55' 08.29" W
Joe Bakun and Betty Brooks	Cle Elum, WA 98922-1159	LATITUDE: 47.11' 09.35" N
	Phone: 509.674.2262	

Source: Earthtech 2002



**Legend**

**UPLAND COMMUNITIES**

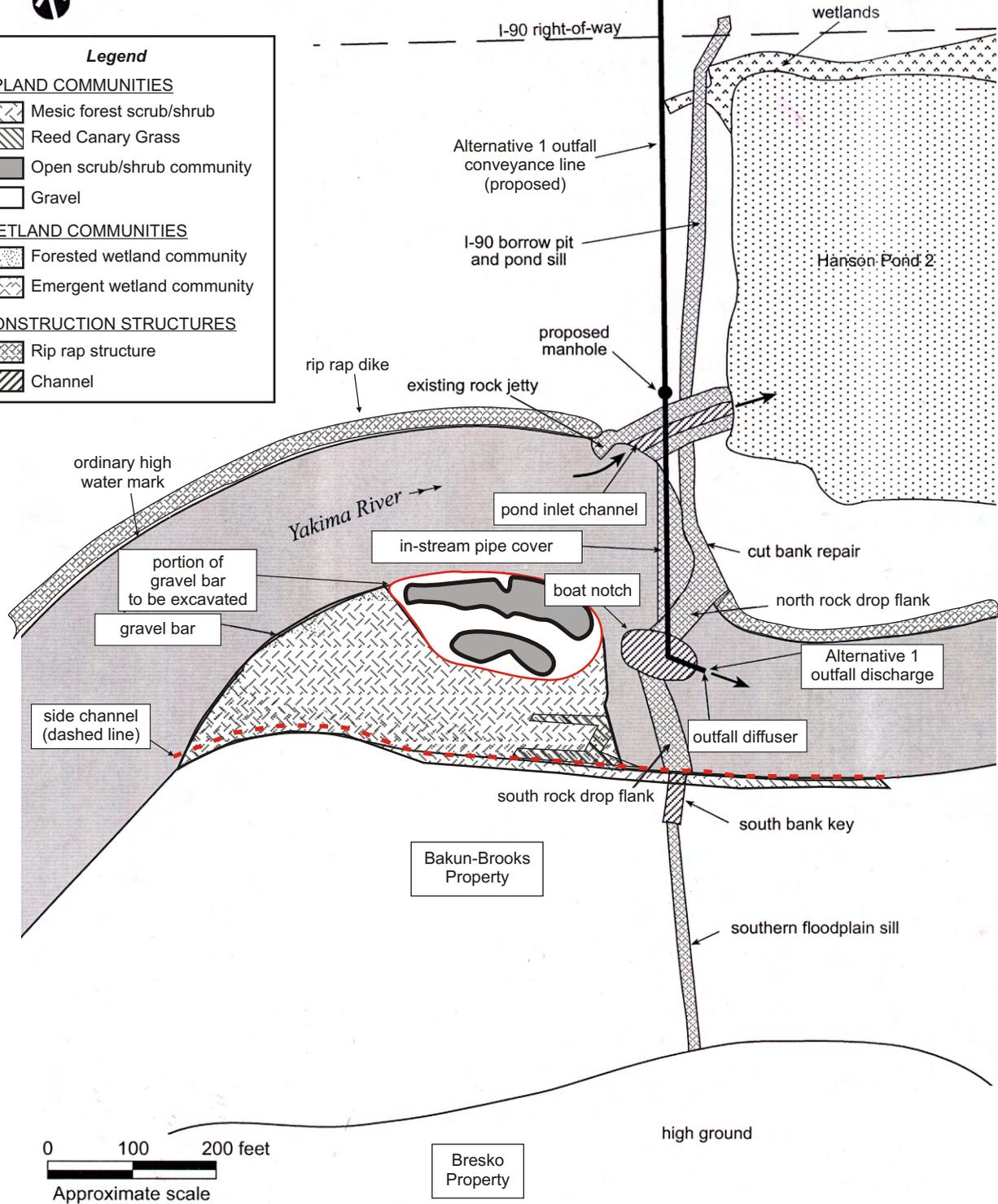
-  Mesic forest scrub/shrub
-  Reed Canary Grass
-  Open scrub/shrub community
-  Gravel

**WETLAND COMMUNITIES**

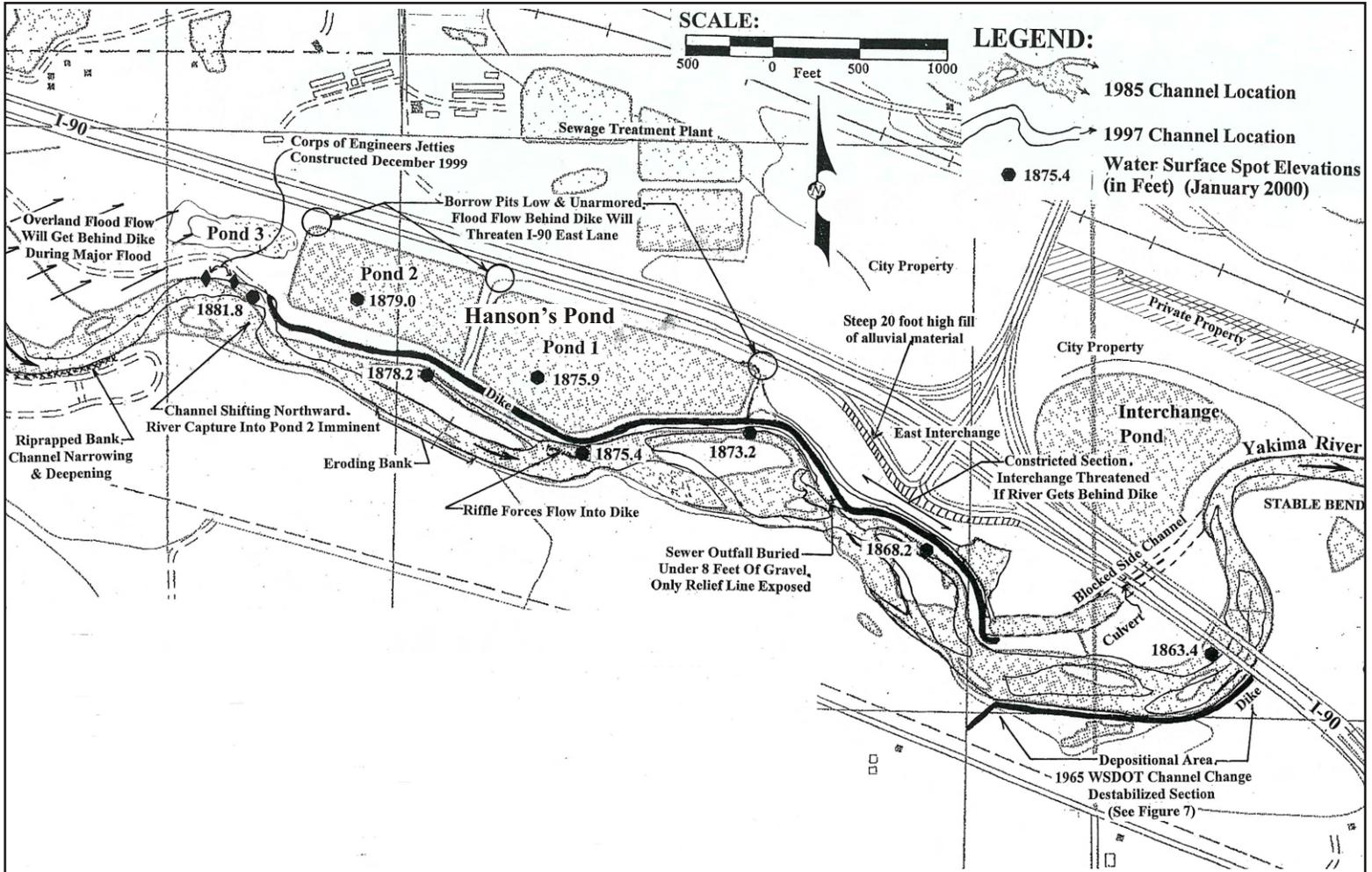
-  Forested wetland community
-  Emergent wetland community

**CONSTRUCTION STRUCTURES**

-  Rip rap structure
-  Channel

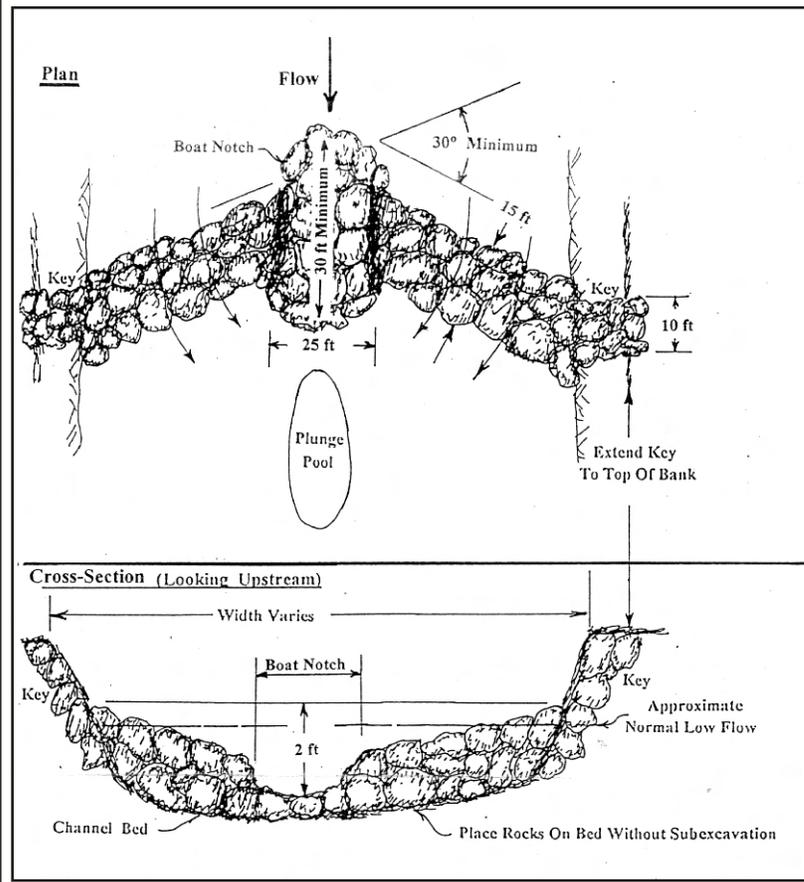


<b>PURPOSE:</b>	<b>SHEET 3 of 9 SCHEMATIC ROCK DROP DESIGN</b>	<b>PROJECT LOCATION:</b>
Rock Drop Stabilization Structures for Fisheries Habitat Restoration, Flood Protection, and Replacement Outfall Stabilization.	City of Cle Elum Wastewater Treatment Plant Outfall and Yakama Nation Hanson Ponds Habitat Restoration/Enhancement	ALONG: Yakima River WITHIN: Kittitas County
<b>DATUM:</b>	<b>APPLICATION BY:</b>	<b>LOCATED WITHIN:</b>
N.G.V.D. September 27, 2000	City of Cle Elum and Yakama Nation	Sections 35 and 36, Township 20 N, Range 15 E, W.M.
<b>ADJACENT PROPERTY OWNER:</b>	119 W. First Street	LONGITUDE: 120.55' 08.29" W
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	Phone: 509.674.2262	



<b>SHEET 4 of 9</b>		
<b>PURPOSE:</b>	<b>EXISTING CONDITIONS AND HISTORIC CHANNEL CHANGES</b>	<b>PROJECT LOCATION:</b>
Rock Drop Stabilization Structures for Fisheries Habitat Restoration, Flood Protection, and Replacement Outfall Stabilization.	City of Cle Elum Wastewater Treatment Plant Outfall and Yakama Nation Hanson Ponds Habitat Restoration/Enhancement	ALONG: Yakima River WITHIN: Kittitas County
<b>DATUM:</b>	<b>APPLICATION BY:</b>	<b>LOCATED WITHIN:</b>
N.G.V.D. September 27, 2000	City of Cle Elum and Yakama Nation	Sections 35 and 36, Township 20 N, Range 15 E, W.M.
<b>ADJACENT PROPERTY OWNER:</b>	119 W. First Street	LONGITUDE: 120.55' 08.29" W
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	Phone: 509.674.2262	





**Detailed Rock Drop Construction Sequence**

Sequence for Drop Structures

Placement of rock in an active channel shall normally follow the sequence listed below:

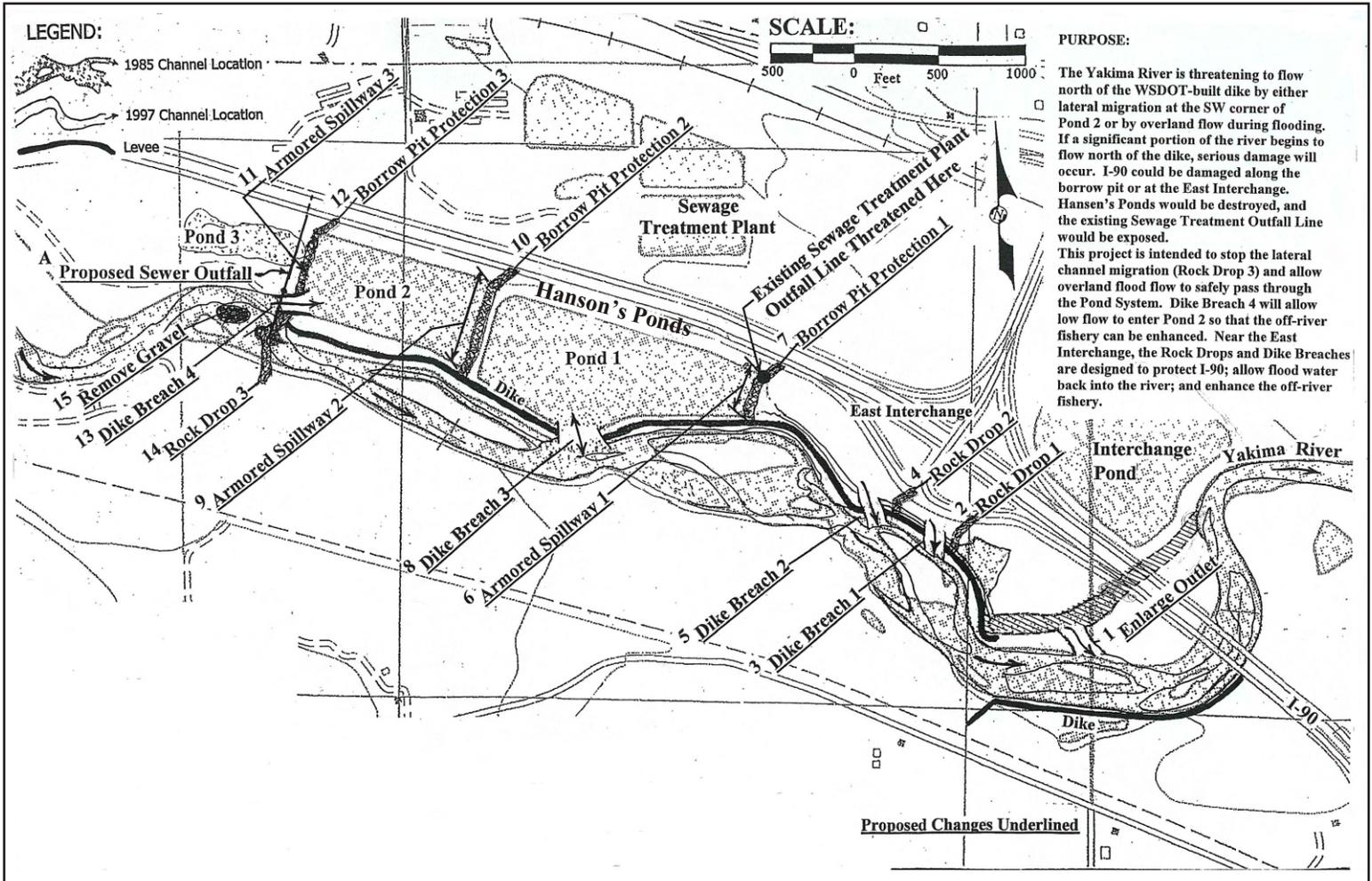
1. Excavate the keyway or sill in the farthest bank from the rock stockpile. Maintain a berm at the water's edge and deposit the spoils out of the water to protect the water quality.
2. Place structural rock and willow cuttings in the far key and backfill void with finer material that will promote vegetative growth.
3. Place rock along the specified alignment without subexcavation if possible. Begin at the far key and proceed across the channel no more than three-quarters (3/4) of the stream width. If necessary, use the partially completed structure as a work platform to avoid excessively deep water.
4. Excavate keyway in the near bank following instructions in Step No. 1 and then repeat Step No. 2.
5. Place rock along the specified alignment beginning at the near key and extend structure to meet and mesh with the previously placed rock.
6. Complete the installation by dressing up the key areas and upper banks.

When rock can be stockpiled near both ends of the Drop (at Rock Drop 4 for example), the order of keyway construction will normally depend on using the sequence that minimizes in-water activity and water quality disturbance. In the case of Rock Drop 4, the south keyway would be considered the far keyway in the above discussion.

The following instructions may be altered if bed or bank scouring will not occur when the channel is constricted during construction.

Note:  
On small Rock Drops (such as in the rock drops for Hanson Ponds) boat passage often is not required so the Boat Notch can be omitted. However, it may be desirable to provide a Small Notch to concentrate low flow in smaller Rock Drops.

<b>SHEET 5 of 9</b>		
<b>PURPOSE:</b>	<b>PROPOSED CONSTRUCTION SEQUENCE: ROCK DROPS AND BOAT NOTCH</b>	<b>PROJECT LOCATION:</b>
Rock Drop Stabilization Structures for Fisheries Habitat Restoration, Flood Protection, and Replacement Outfall Stabilization.	City of Cle Elum Wastewater Treatment Plant Outfall and Yakama Nation Hanson Ponds Habitat Restoration/Enhancement	ALONG: Yakima River WITHIN: Kittitas County
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<b>ADJACENT PROPERTY OWNER:</b>	119 W. First Street	
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	Phone: 509.674.2262	LATITUDE: 47.11' 09.35" N

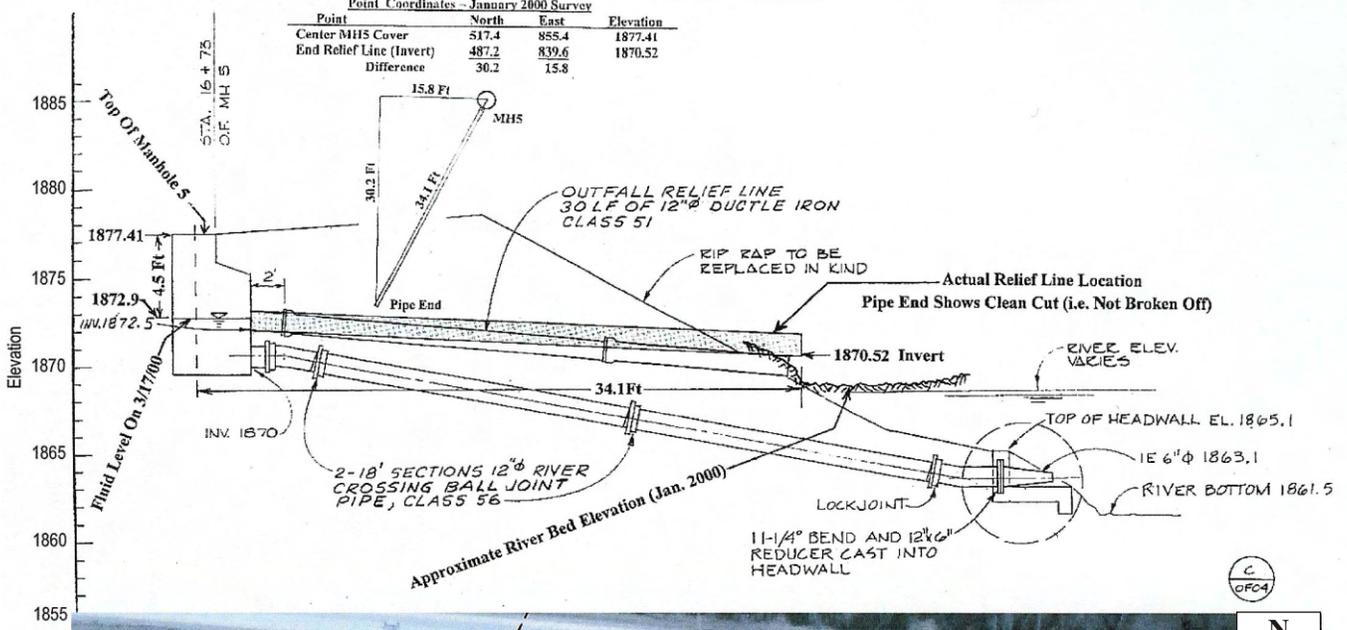


**PURPOSE:**

The Yakima River is threatening to flow north of the WSDOT-built dike by either lateral migration at the SW corner of Pond 2 or by overland flow during flooding. If a significant portion of the river begins to flow north of the dike, serious damage will occur. I-90 could be damaged along the borrow pit or at the East Interchange. Hansen's Ponds would be destroyed, and the existing Sewage Treatment Outfall Line would be exposed. This project is intended to stop the lateral channel migration (Rock Drop 3) and allow overland flood flow to safely pass through the Pond System. Dike Breach 4 will allow low flow to enter Pond 2 so that the off-river fishery can be enhanced. Near the East Interchange, the Rock Drops and Dike Breaches are designed to protect I-90; allow flood water back into the river; and enhance the off-river fishery.

<b>SHEET 6 of 9 PLAN VIEW OF PROPOSED IMPROVEMENTS</b>		
<b>PURPOSE:</b>	<b>PROJECT LOCATION:</b>	
Rock Drop Stabilization Structures for Fisheries Habitat Restoration, Flood Protection, and Replacement Outfall Stabilization.	City of Cle Elum Wastewater Treatment Plant Outfall and Yakama Nation Hanson Ponds Habitat Restoration/Enhancement	ALONG: Yakima River WITHIN: Kittitas County
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	Phone: 509.674.2262	

Point Coordinates - January 2000 Survey			
Point	North	East	Elevation
Center MHS Cover	517.4	855.4	1877.41
End Relief Line (Invert)	487.2	839.6	1870.52
Difference	30.2	15.8	

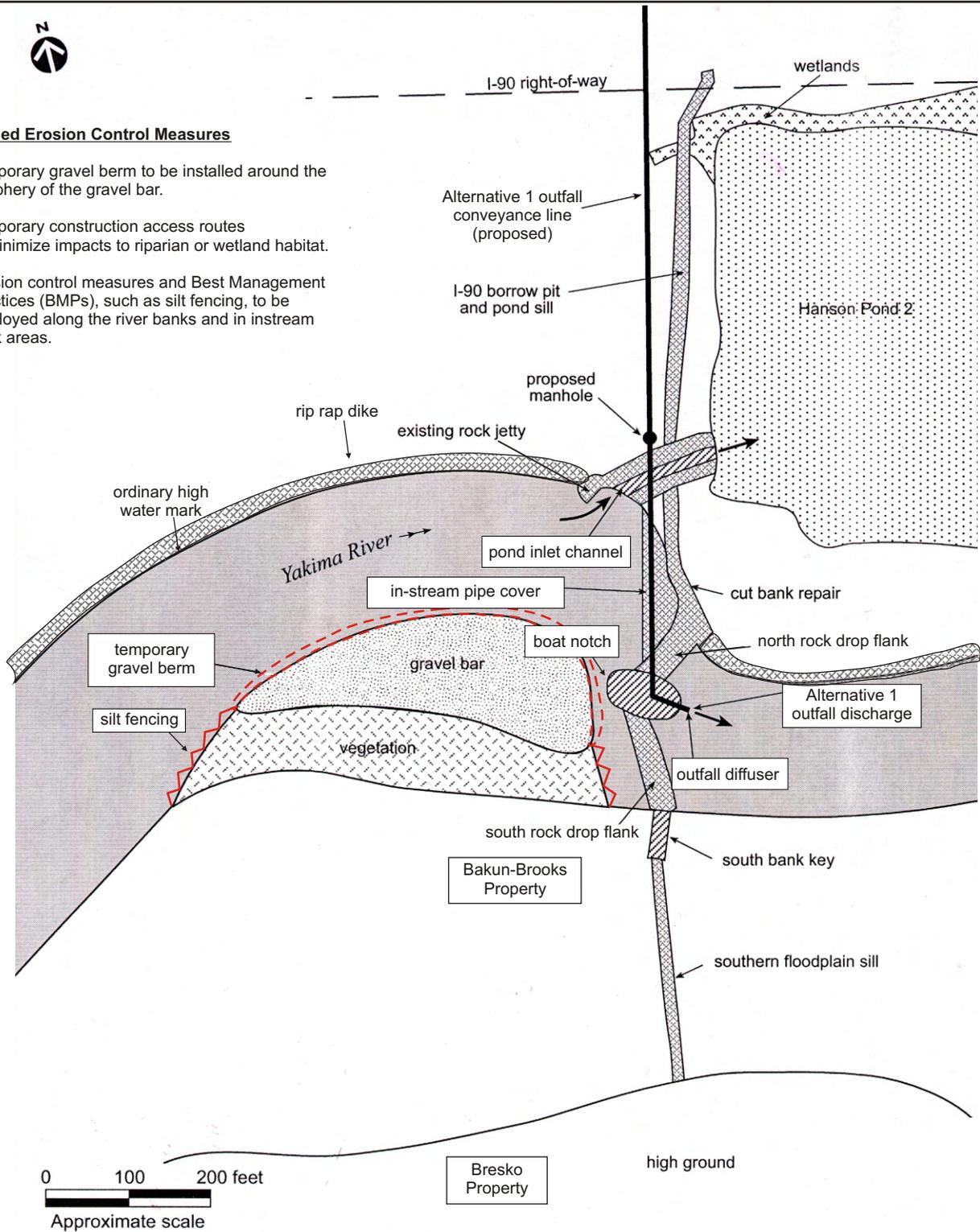


SHEET 7 of 9 EXISTING CLE ELUM WASTEWATER TREATMENT PLANT OUTFALL		
<b>PURPOSE:</b>	<b>PROJECT LOCATION:</b>	
Rock Drop Stabilization Structures for Fisheries Habitat Restoration, Flood Protection, and Replacement Outfall Stabilization.	ALONG: Yakima River WITHIN: Kittitas County	
<b>DATUM:</b>	<b>APPLICATION BY:</b>	<b>LOCATED WITHIN:</b>
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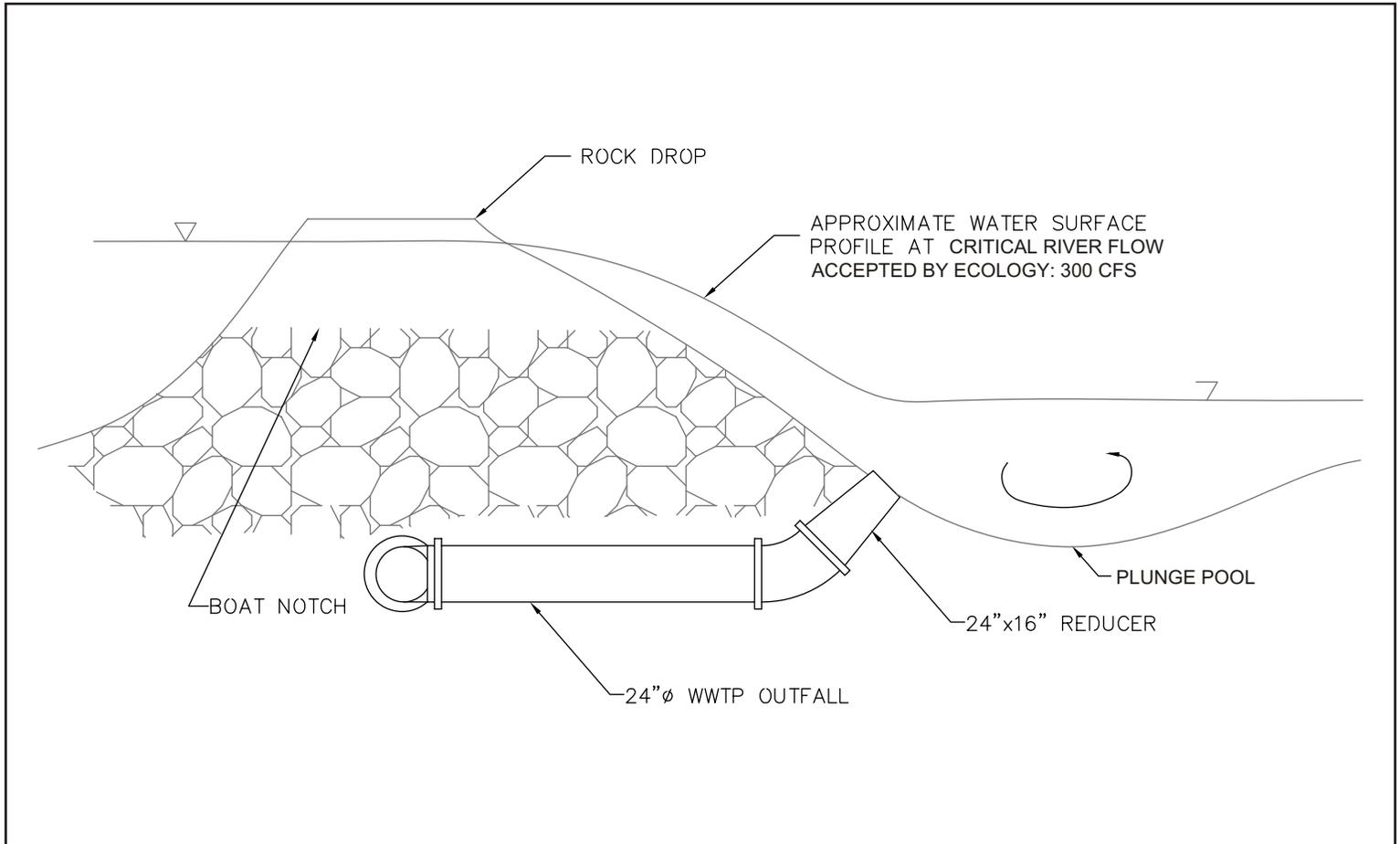


**Proposed Erosion Control Measures**

1. Temporary gravel berm to be installed around the periphery of the gravel bar.
2. Temporary construction access routes to minimize impacts to riparian or wetland habitat.
3. Erosion control measures and Best Management Practices (BMPs), such as silt fencing, to be employed along the river banks and in instream work areas.



<b>PURPOSE:</b>	<b>SHEET 8 of 9 PROPOSED EROSION CONTROL MEASURES</b>	<b>PROJECT LOCATION:</b>
Rock Drop Stabilization Structures for Fisheries Habitat Restoration, Flood Protection, and Replacement Outfall Stabilization.	City of Cle Elum Wastewater Treatment Plant Outfall and Yakama Nation Hanson Ponds Habitat Restoration/Enhancement	ALONG: Yakima River WITHIN: Kittitas County
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<b>SHEET 9 of 9</b>		
<b>PURPOSE:</b>	<b>REPLACEMENT OUTFALL CROSS-SECTION WITHIN ROCK DROP</b>	<b>PROJECT LOCATION:</b>
Rock Drop Stabilization Structures for Fisheries Habitat Restoration, Flood Protection, and Replacement Outfall Stabilization.	City of Cle Elum Wastewater Treatment Plant Outfall and Yakama Nation Hanson Ponds Habitat Restoration/Enhancement	ALONG: Yakima River WITHIN: Kittitas County
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