State of Alaska
Department of Fish and Game
Sportfish Division

Nomination Form
Anadromous Waters Catalog

Region: Southeastern

USGS Quad(s): Juneau B-5

Anadromous Waters Catalog Number of Waterway: 114-80-10400

Name of Waterway: North Creek ☑ USGS Name ☑ Local Name

☑ Addition ☐ Deletion ☐ Correction ☐ Backup Information

For Office Use

Nomination # 12-566			
Revision Year: 2013	Fisheries Scientist		11/2/12 Date
Revision to: Atlas ____ ____ Both ✓	Habitat Operations Manager		11/2/12 Date
	AWC Project Biologist		10/11/12 Date
Revision Code: A-1, B-1, C-5, C-2	Cartographer		11/7/12 Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
coho salmon	08/14/2012		✓		

IMPORTANT: Provide all supporting documentation that this water body is important for the spawning, rearing or migration of anadromous fish, including: number of fish and life stages observed; sampling methods, sampling duration and area sampled; copies of field notes; etc. Attach a copy of a map showing location of mouth and observed upper extent of each species, as well as other information such as: specific stream reaches observed as spawning or rearing habitat; locations, types, and heights of any barriers; etc.

Comments:

Juvenile coho were captured at numerous points along this stream, up to the top of the AWC stream Track Layer (2 in hand) using an electrofisher. No barrier was encountered while on foot. An area map and stream track shapefile are attached
Coordinates (Lat,Long): Upper(58.435,-135.413) Lower(58.423,-135.446)

Change name to 0565 "North CREEK, AS shown on ITM
Revise hydrography layer, extend stream w/ coho salmon REARING

Name of Observer (please print): Greg Albrecht

Signature: 146.63.61.200 (Web Nomination) Date: 09/24/2012

Agency:

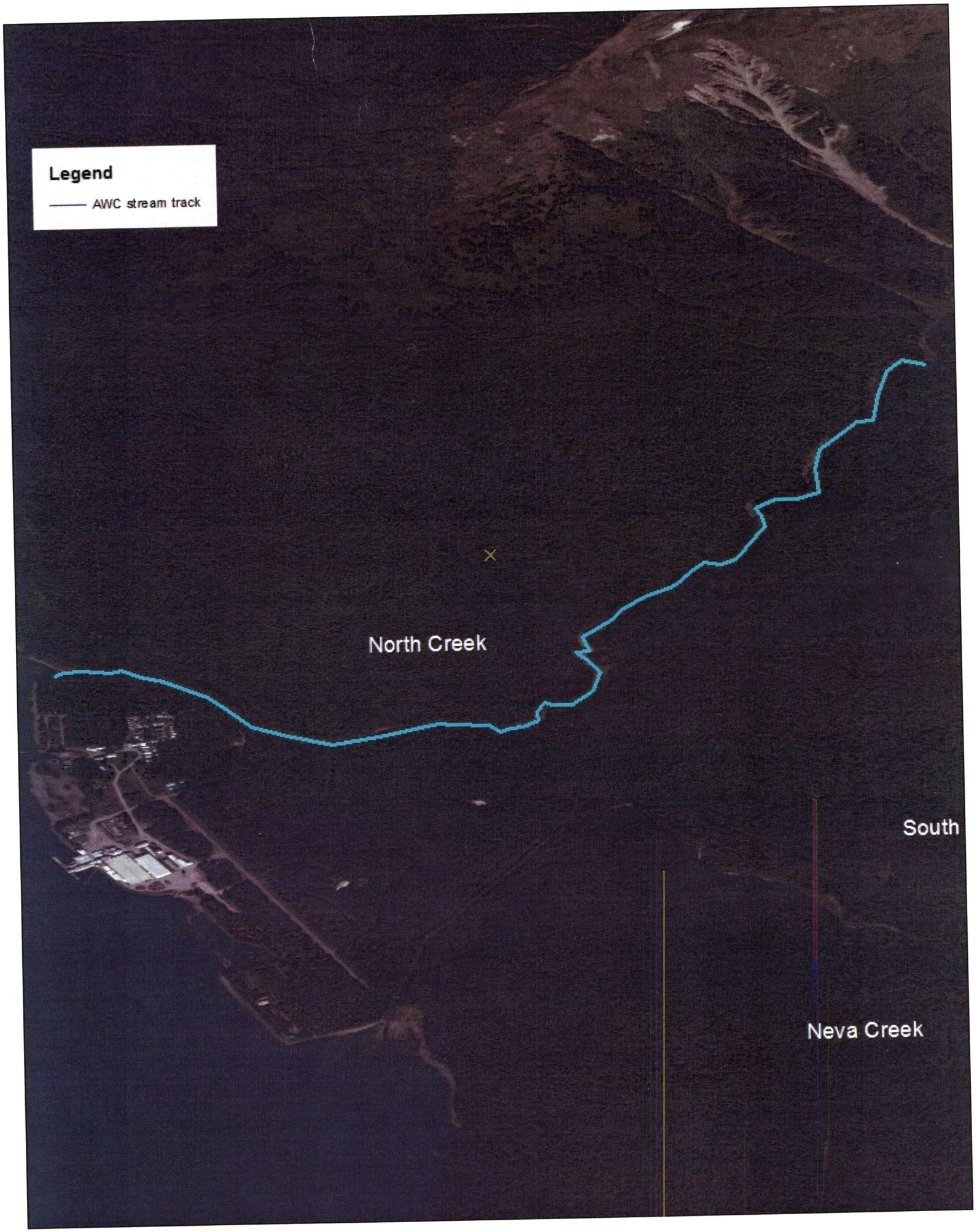
Address: PO Box 110024 PO Box 110024

Juneau, AK 99811

This certifies that in my best professional judgment and belief the above information is evidence that this waterbody should be included in or deleted from the Anadromous Waters Catalog.

Signature of Area Biologist: _____ Date: _____ Revision 02/08

Name of Area Biologist (please print):


Legend
AWC stream track
North Creek
South
Neva Creek

MEMORANDUM

State of Alaska

Department of Fish and Game
Division of Habitat

TO: Jackie Timothy
Southeast Region Supervisor

DATE: 9/12/2012

FILE NO:

THRU:

SUBJECT: Excursion Inlet Hydro
Trip Report
8/13/2012

FROM: Greg Albrecht
Habitat Biologist

PHONE NO: (907) 465-6384

On August 13 I traveled with Matt Kern (Habitat Biologist), Ken Ames (Environ Corp Geologist), and Mike Parton (Environ Corp Aquatic Ecologist) to Excursion Inlet to survey North Creek (ADFG Stream no. 111-80-10400; Pp) and South Creek (ADFG Stream no. 114-80-10450; CHp, COp, Pp, Sp) where a run-of-the-river hydroelectric project may be proposed by the City and Borough of Haines. ADF&G's primary objective was to document anadromous fish presence along the drainages and barriers to upstream migration. In addition to this, we collected data on stream characteristics and resident fish presence to aid in making permitting decisions if the hydro is pursued.

South Creek

Our South Creek foot survey spanned about 1.7 miles upstream from tidewater. In this reach, South Creek is characterized by clear, fast moving water, flowing through a steep canyon over an average gradient of 1 to 3%. A dike was used to reroute the last ¼ mile of South Creek around the town site in the 1940s. During our survey we estimated several thousand pink salmon to be present in this stretch of river; however, none were sighted upstream of the bridge at stream mile 1.3 (Figs 1&2), where gradient and channelization increase. The confluence of Neva Creek, a productive sockeye, coho and trout system, with South Creek is located at stream mile 1.1, just below the bridge (Figs 1&2). High flows and the steep canyon walls limited our foot survey to ¼ of a mile above the bridge. We electroshocked (375 volts, 30Hz, 15% duty cycle; see Table 1 and Figs 1-3 for data on all fish captures) one side channel near the top of the survey (Figs 1&3; Table 1; waypoint 106) and caught 4 Dolly Varden. There did not appear to be a barrier where the current upper extent of anadromy is recorded in ADF&G's Anadromous Waters Catalog (Figs 1&3; Table 1; waypoint 100).

Due to the difficulty in making upstream progress on both drainages, Environ Corp chartered a helicopter to fly over both creeks. Topographical maps and video taken during a helicopter fly-over show that the 1.2 mile portion of South Creek above the end of our foot survey (Figs 1-3: Table 1; waypoint 107) greatly increases in gradient and channelization, which would make a foot survey only possible during very low flows (about half of what was present during our visit). The sustained high gradient

and/or the two falls I marked during the fly-over may be a barrier to anadromous fish migration (Figs 1&3; Table 1; waypoints 148, 149), and requires additional investigation.

North Creek

Our North Creek foot survey spanned about 2.3 miles upstream from tidewater (Figs 1&2; Table 1; waypoint 130). In this reach, North Creek is characterized by clear, fast moving water, flowing through a canyon over an average gradient of 1 to 3%. Flow was 1 to 2 feet below Ordinary High Water, but was still too high to easily wade upstream and cross in most locations, making for slow progress. North Creek is currently cataloged for pink salmon presence up to about stream mile 1.7 (Figs 1&2; Table 1; waypoint 101); however, there is no barrier at this location and coho juveniles were captured upstream of here (Figs 1-3; Table 1; waypoint 128).

Similar to South Creek, North Creek was rerouted around the town site with a dike by the US Army Corps of Engineers in the 1940s. Additionally, a low head dam was built upstream to create a reservoir used as part of a fire suppression system for the POW camp present where the canary now sits (Figs 1&2; Table 1; Waypoint 112). From this point down, the stream is relatively straight and side channel habitat was recorded over about 20% of the segment, including one 0.1 mile long stretch where about 40 adult pink salmon were sighted (Figs 1&2; Table 1; waypoint 139). No other adult salmon were sighted in North Creek, and locals confirm that few salmon are seen in North Creek. Upstream of this segment to the top of our foot survey, side channels (typically containing ~3 CFS of flow) were present over about 10% of the area and from that point up, gradient and channelization increased as seen in fly-over video and topographical maps.

During the fly-over I was able to land upstream of our survey (river mile 4) and electroshock two large side channel systems (600' total length). Shocking at 450 Volts, 30Hz, and a 15% duty cycle, I captured at least 50 Dolly Varden ranging from 30 to 140mm fork length, but no coho. During the fly-over I marked four structures downstream of this site that require additional investigation as they may be barriers to upstream fish passage (Figs 1&3; Table 1; waypoints 142-145).

ADF&G Habitat Biologists will return to both creeks during low flows to confirm barriers to anadromous fish migration on each system and will update the *Anadromous Waters Catalog* accordingly. Please feel free to contact Greg Albrecht at (907) 465-6384 or by email at greg.albrecht@alaska.gov with any questions or to view fly-over videos.

Table 1 Table showing waypoints, notes, fish captures, and pictures along South and North Creek survey reaches.

Waypoint	Notes	Fish caught	Pictures located in Appendix A
South Creek			
100	ADF&G *Anadromous Waters Catalog* top of anadromous fish presence		
106		4 Dolly Varden (DV) 30-90mm	
107	3-4' falls not a total barrier		1121
148	Potential Barrier *South Creek Fly-over*		S Creek 1

	video minute 0:18		
149	Potential Barrier *South Creek Fly-over* video minute 0:54		S Creek 2
North Creek			
101	ADF&G *Anadromous Waters Catalog* top of anadromous fish presence		
110		Minnow trap Several coho (CO) juveniles	
111		1 CO, 2 DV	
112	Large Log jam, site of previous low head dam. 2-3% gradient up to here,		1125
113	Side Channel (SC)	9 DV 30-60mm, 2 CO 40, 80mm	1127
114	Some incised banks beginning		
115	2% gradient here, Lunch spot	2 CO, 6 DV	1131
116	2.5% gradient over 200'	2 CO	1132, 1133
118	SC with about 3 Cubic Feet per Second (CFS) of flow	CO numerous	1135
119	Long SC with ~ 30 CFS		1136
120	Top of survey day 1	8" DV hook and line	1138
121	Small tributary		1141
122	Small SC		
123	Good SC and rearing		1143
124	Old dam site and penstock support		1145
125	Old logging road start		
126	Remnant building		
127	High gradient trib. that was followed to stream		
128	SC Top of anadromous fish capture	2 CO, 4 DV	1148
129	Bottom of slide at left		1150
130	Top of survey, no barrier present. Typical substrate along survey reach pictured		1152, 1153
135	XIP winter water intake site		
136	SC		
137	Concrete footing, excellent rearing habitat here		1173
138	Start of 0.1 mile SC	~40 adult pinks, some digging redds	1175
139	SC		1176
140	Crossing cable and SC		1177
141	Tidewater falls, below mean		1178

142	Potential Barrier *North Creek Fly-over* video minute 1:38		N Creek 1
143	Potential Barrier *North Creek Fly-over* video minute 2:11		N Creek 2
144	Potential Barrier *North Creek Fly-over* video minute 2:21		N Creek 3
145	Potential Barrier *North Creek Fly-over* video minute 2:30		N Creek 4
146	Landing site and SCs *North Creek Fly-over* video minute 2:58		N Creek 5

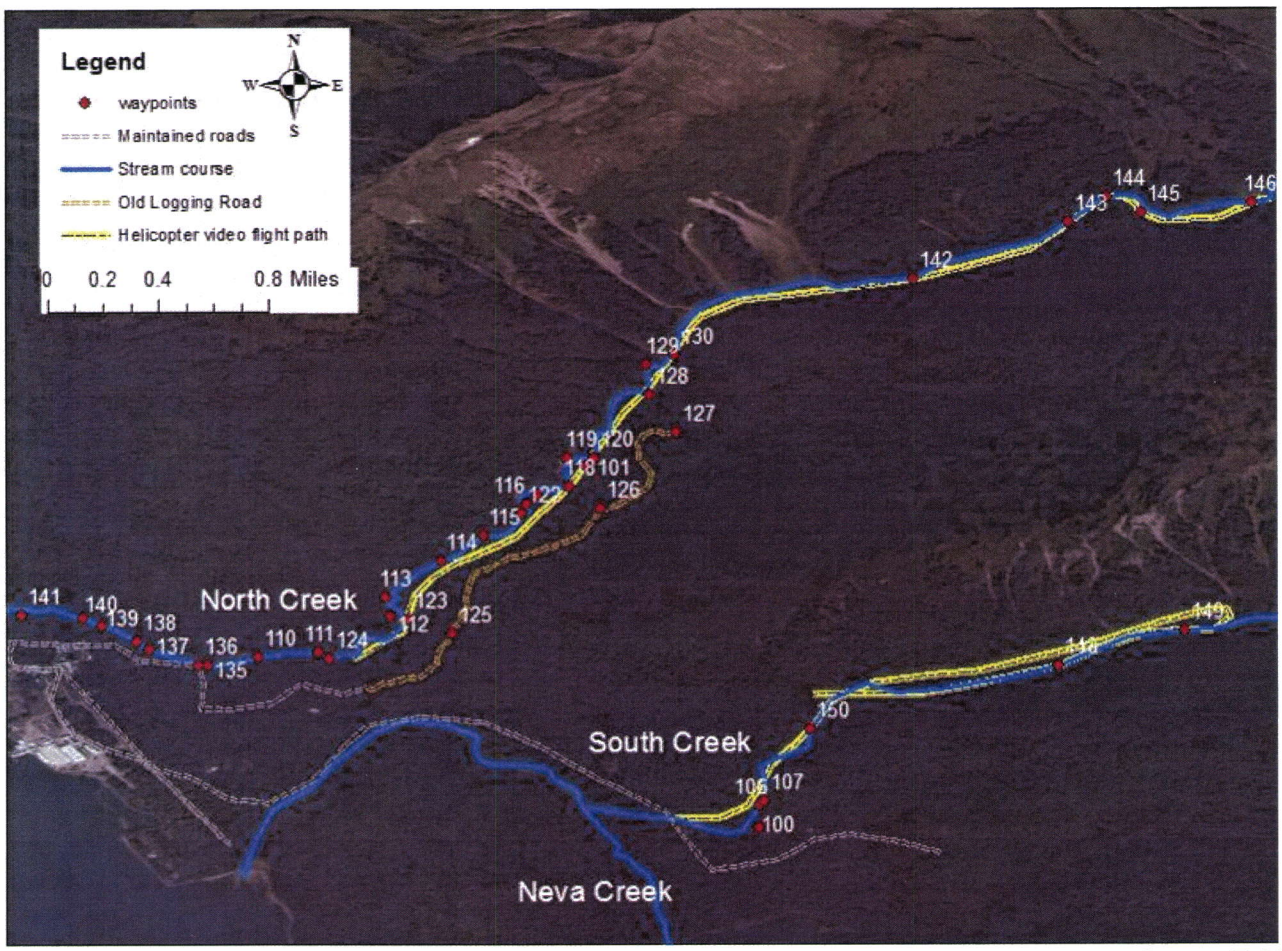


Figure 1 Map showing surveyed reaches of North and South Creeks. Waypoint numbers correspond to those on Table 1

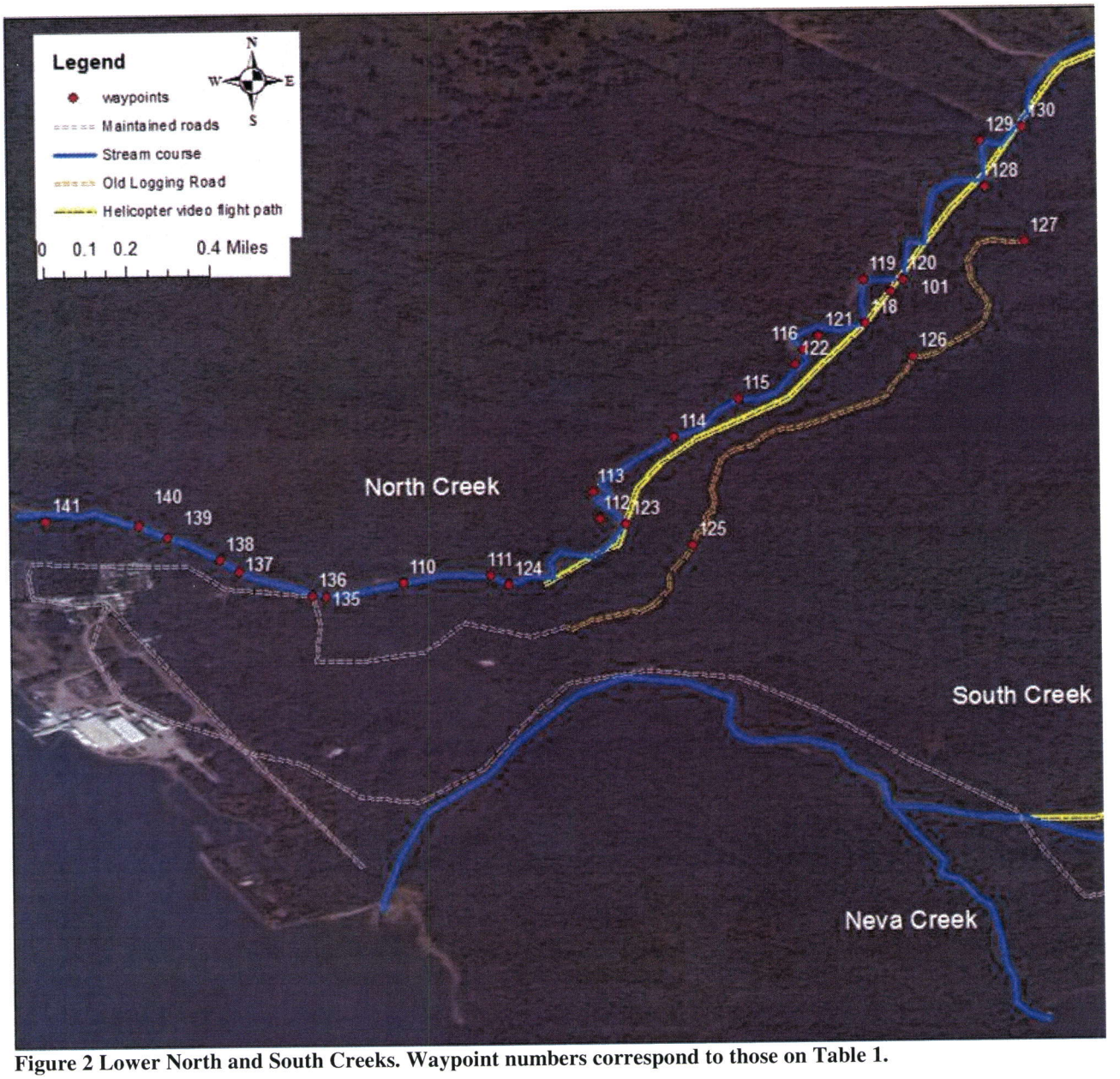


Figure 2 Lower North and South Creeks. Waypoint numbers correspond to those on Table 1.

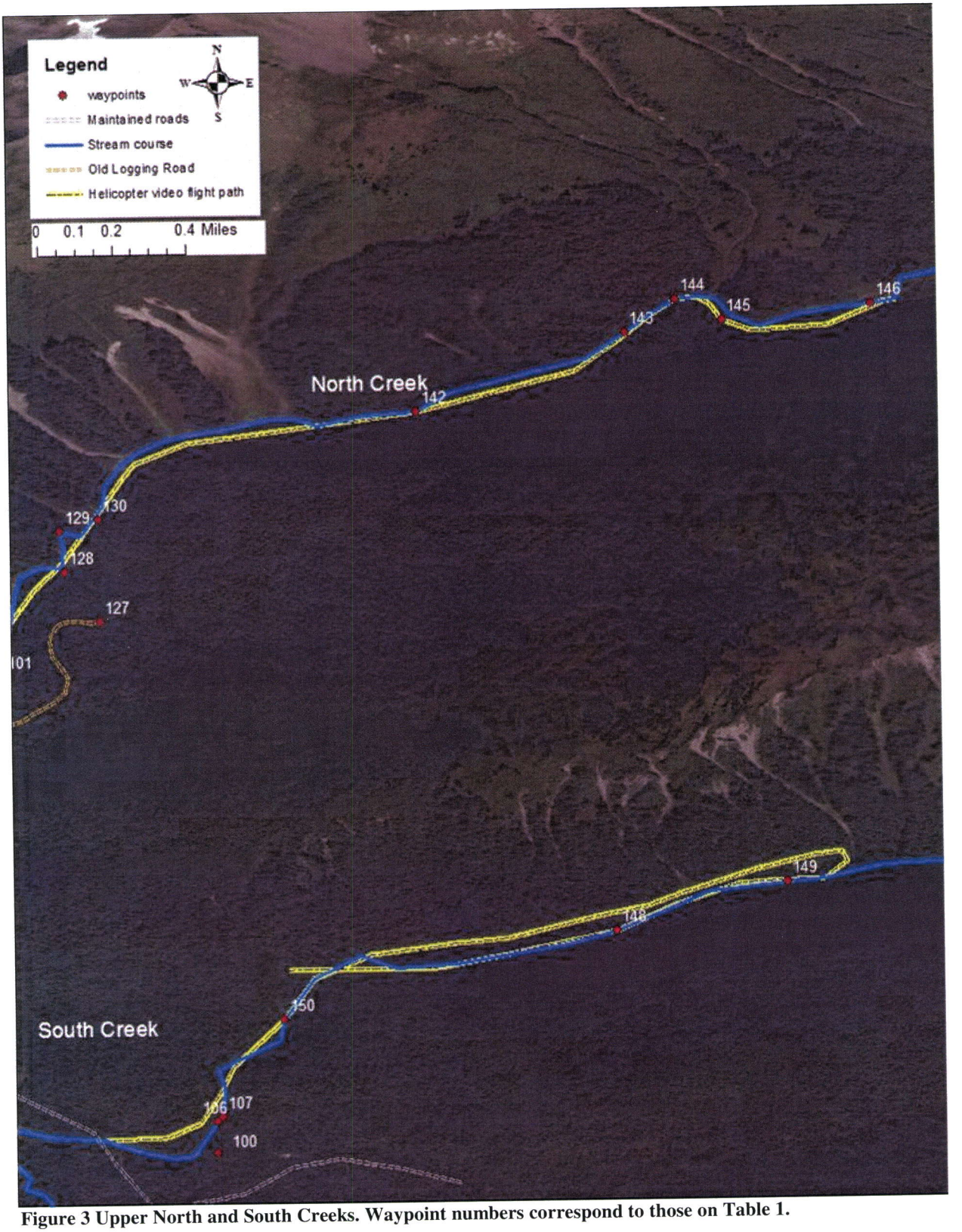


Figure 3 Upper North and South Creeks. Waypoint numbers correspond to those on Table 1.

Appendix A

1121

1125

S creek 1

1127

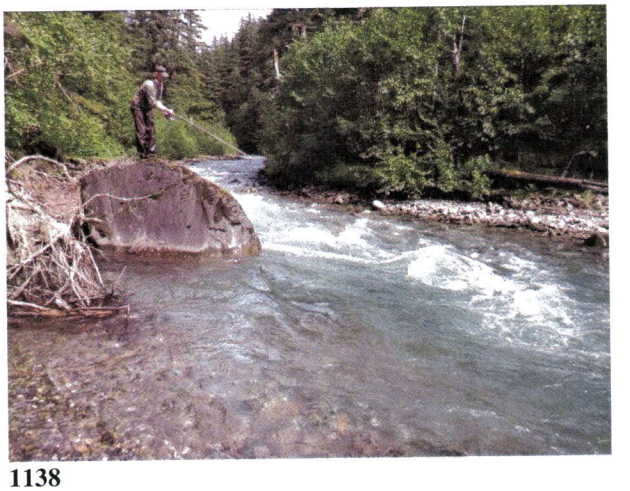
S Creek 2

1131

1132

1136

1133



1138

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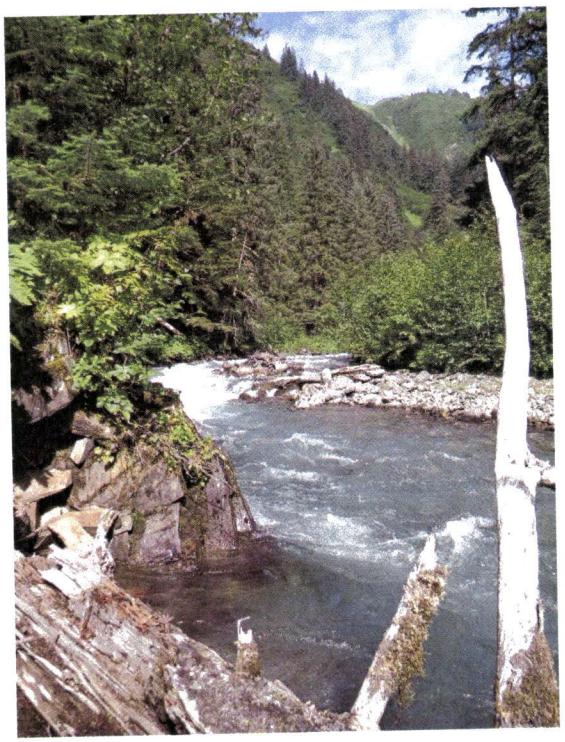
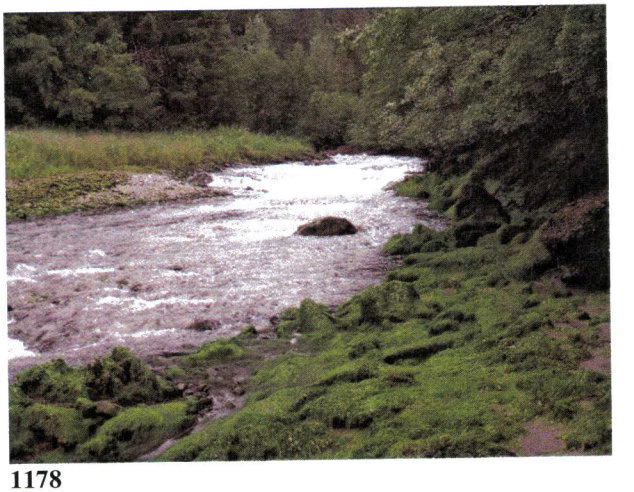
1152



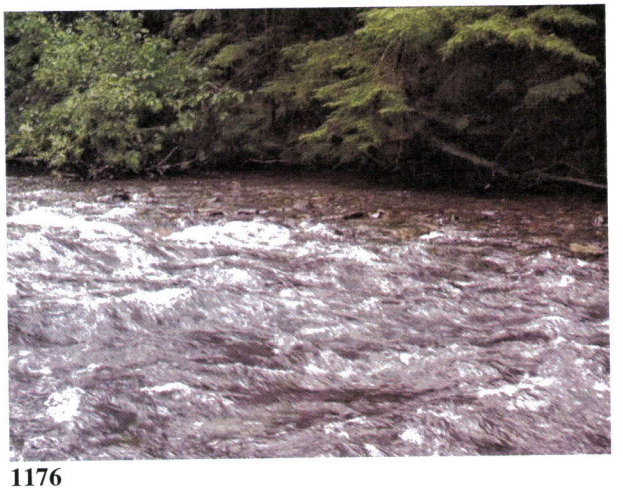
1153

1173

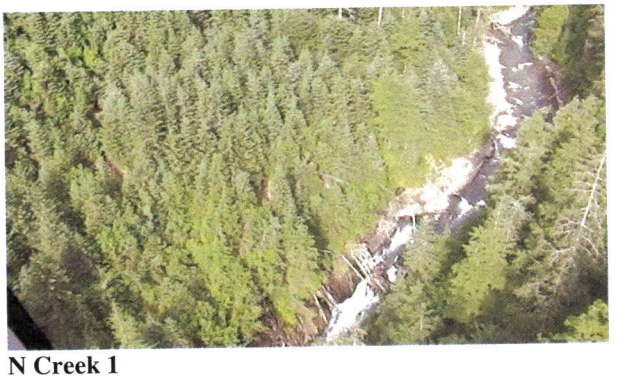
1175



1178

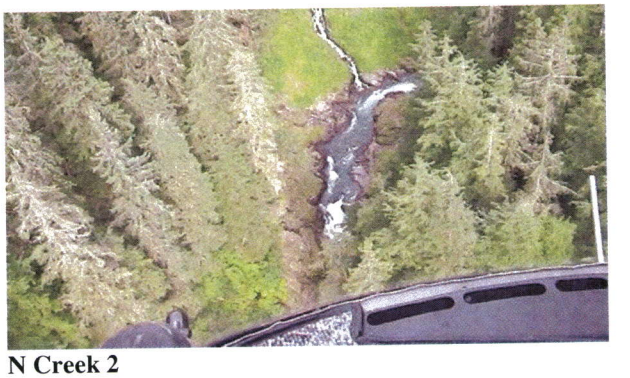


1176

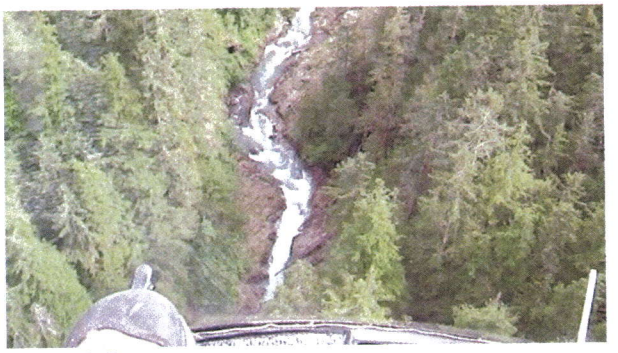


N Creek 1

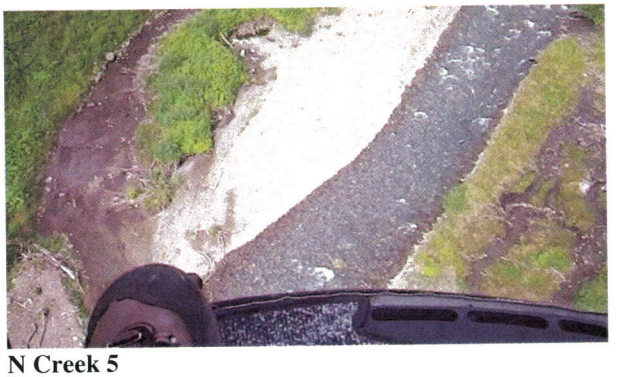
1177



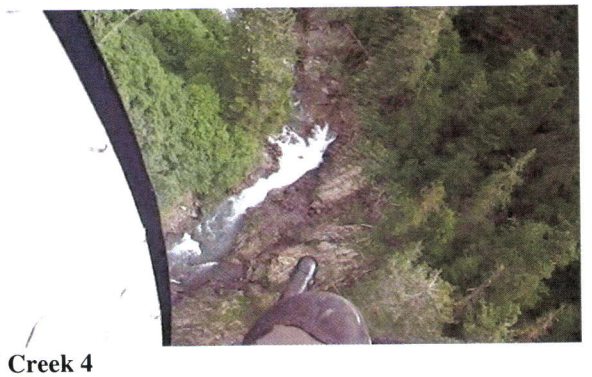
N Creek 2



N Creek 3

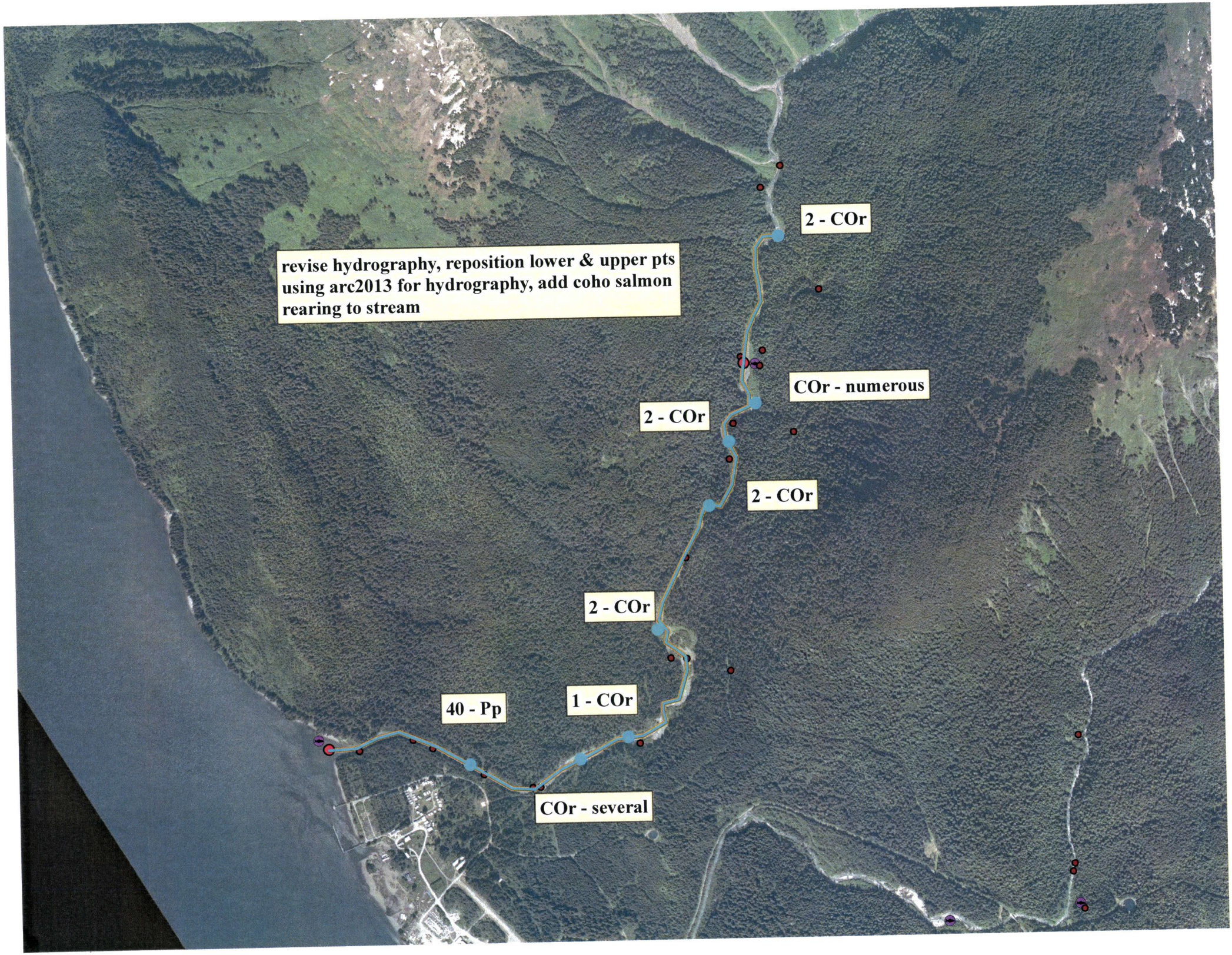


N Creek 5



N Creek 4

cc:
Al Ott, ADF&G Habitat, Fairbanks
All, Douglas Habitat Staff
Brian Glynn, ADF&G/SF, Juneau
David Harris, ADF&G/CF, Juneau
Ryan Scott, ADF&G/WC, Juneau
Steve Brockmann, USFWS, Juneau
Victor Ross, USACE, Juneau
Ken Ames, Environ Corp, Seattle
Mike Parton, Environ Corp, Olympia


revise hydrography, reposition lower & upper pts using arc2013 for hydrography, add coho salmon rearing to stream
2 - COr
COr - numerous
2 - COr
2 - COr
2 - COr
1 - COr
40 - Pp
COr - several