

State of Alaska
 Department of Fish and Game
 Nomination for Waters
 Important to Anadromous Fish

~~X~~
89
 Year of Revision
 89-712

Anadromous Water Catalog Volume 1 Southeast VI
 USGS Quad SITKA D2+D3
 Name of Waterway WARD CREEK
 Anadromous Water Catalog Number of Waterway _____
112-17-10160

Change to ~~Atlas~~ Atlas
~~Catalog~~ Catalog
X Both

Addition _____
 Deletion _____
 Correction X

Name addition:
 USGS name _____
 Local name _____

For Office Use

Nomination # _____	
<u>Richard Reed</u> Regional Supervisor	<u>12/14/89</u> Date
<u>SB</u>	<u>12/14/89</u>
<u>FI</u> Drafted	<u>12/15/89</u> Date

Species	Date(s) Observed	Spawning	Rearing	Migration
<u>COHO.</u>	<u>(SEE ATTACHED)</u>	<u>X</u>	<u>X</u>	<u>X</u>
<u>PINK + CHUM</u>	<u>" "</u>	<u>X</u>		<u>X</u>
<u>DOLY VARPEN</u>	<u>" "</u>	<u>X</u>	<u>X</u>	<u>X</u>

Comments: Provide any clarifying information, including number of fish observed, location of fish survey data, etc.

SEE ATTACHED

Attach a copy of a map showing location of mouth and upper points of each species, specific stream reaches identified for spawning or rearing, locations of barriers, such as falls. Attach a copy of the fish survey data, if available.

Name of Observer (please print) USFS LEVEL 1 STREAM SURVEY 1982 - MATT LONGENBAUGH PHIL HUNSICKER

Date: 11/18/89 Signature: see attached documentation from USFS files

Address: USFS
SITKA RANGER DISTRICT

204 SIGWAKA WAY, SITKA, AK 99835

Signature of Area Biologist: [Signature]



United States
Department of
Agriculture

West
Service

Region 10

112-17-16
Tongass National Forest
Chatham Area
204 Siginaka Way
Sitka, Alaska 99835

Reply To: 2630 Habitat

Date: September 27, 1985

Subject: Ward Creek Fish Enhancement

To: Monument Manager, Admiralty National Monument

On September 18, 1985, David Browning (JRD Fisheries Biologist), Helen Clough, ANM Manager), and I visited the site of a potential fisheries habitat enhancement project at Ward Creek on Admiralty Island. Ward Creek (ADF&G No. 112-17-16) has a 13.8' waterfall approximately 400 m upstream from mean high water, and a cascading falls approximately 700 m above mean high water that drops 17.5' vertical over 80' horizontal. The first fall is a total barrier to pink and chum migration, and a partial barrier to coho salmon migration. The cascade is not a barrier to coho salmon, but would probably require some modification to insure pink and chum passage. The first mile of stream above tide water has numerous other small falls and cascades in a deeply incised canyon, but these are well dispersed, and should not discourage healthy pink and chum salmon by their cumulative effect.

Approximately 200 coho salmon were observed in a pool below the 13.8' fall, in addition to some pink and chum salmon. Few fish were jumping, and none leaped more than 1/2 the height of the falls. An additional 300 coho salmon were observed in a deep, low-gradient, sinuous channel, approximately one mile from salt water. The flow stage was in the lower 1/3 of normal September ranges (Steve Paustian measured a discharge of 272 cfs during a 1982 hydrological survey, with stage listed as being in the lower 1/3). The passable stage is probably within a narrow window higher than that observed.

Minnow traps were set above the falls to detect the presence and abundance of rearing species. Six traps were set for 4.5 hours each. Despite the high quality of rearing pools (undercut banks and large accumulations of large woody debris), only 8 coho salmon and three Dolly Varden were captured. This confirmed our visual observation that fry density immediately above the canyon is sparse. Previous observations during a limited 1982 stream survey indicated that fry density was greater nearer the headwaters, and that many fry were present in backwater areas off the main channel. Ward Creek should be re-surveyed using the IRI channel type method to quantify available spawning and rearing area, with particular emphasis paid to possible off-channel rearing areas. Extensive trapping should be conducted above and below the falls to determine if there is a difference in coho fry density. The trapping data will be analyzed under the assumption that differences in coho density will be due to



the partial barriers. This information is necessary to complete the biological and economic evaluations.

Dale Kanen (Fisheries Engineer) made a preliminary site inspection on July 1, 1981, then returned for a stadia survey on August 11, 1981. His field notes indicate that a steppass could be constructed along the south bank of the 13.8' falls, and the 17.5' cascades could be modified by jumping pools with flow control weirs. A large staging area is available at the lower falls, while the streambed could be used to land supplies at the upper site. Steppass installation may require some backfilling to stabilize a saturated slump zone. One or more trees may have to be removed to protect the steppass from future blowdown problems. Otherwise, the projects could be completed with little impact to the adjacent area.

The enhancement sites are located within the boundaries of the Admiralty Island National Monument administered by the Tongass National Forest, but much of the watershed above the canyon is owned by Shee Atica, Inc. The Admiralty Island National Monument/Wilderness Plan favors barrier removal on Ward Creek to other possible fisheries enhancement activities. Shee Atica has plans to develop roads and harvest timber on the Ward Creek drainage, so enhancement activities would be in a development oriented area. The proposed enhancement activities would have negligible impact to current users. Historically there has been little use of the area by sport fishermen or other groups.

Ward Creek fish passage improvement is addressed in the Comprehensive Salmon Plan, Phase II: Northern Southeast Alaska (draft revision for 1985). The plan sites the project as a category B opportunity under the chapter for pink salmon. The plan recommends allowing development if investigations show the project to be "feasible and desirable". A new project opportunity form was submitted by Thompson, 10/78, and a project verification form will be submitted at the October 9, 1985, ADF&G/USFS coordination meeting in Juneau.

William R. Lorenz
WILLIAM R. LORENZ
Fisheries Biologist

cc:

Jere Christner, SO
Charles Holstine, SO
David Browning, JRD
Hank Newhouse, RO
Harold Heinkle, ADF&G Douglas
Rick Reed, ADF&G Douglas
Dave Cantillon, ADF&G Douglas
Frank Van Hulle, ADF&G Douglas



POTENTIAL PROJECT VERIFICATION FORM

NAME: Ward Fork Fishway ADF&G CAT. NO.: 112-17-6
 LATITUDE: 57°52' N USFS REF. NO.: _____
 LONGITUDE: 134°43' W DATE: 9/26/85
 GEODETIC MAP NO.: S-3 SURVEYED BY: Bill Lorenz
 LOCATION: Admiral's Island, Chatham Strait
 AERIAL SURVEY NOTES: _____

TRAILS: No trails or roads

STRUCTURE WILL PRIMARILY BENEFIT: _____

AVAILABLE ESCAPEMENT DATA:

Year	Pink	Chum	Coho	Sockeye	King	Steelhead
1985		35	9/18	500	9/18	
1983	2500					8/8
1982	1500					8/1
1981	5000		15			8/17
1980	300					8/5
1979	7500					8/5
1978	1500					8/23
1977	20		30			8/12
1976	50					8/30
1975						
1974						
1973	1500					8/21
1972	100		2			9/9
1971	300					9/14
1970						
1969	300					9/3
1968	750					8/26

Other Species Present: _____

TIMING: _____

ESTIMATED SPAWNING AREA:

- 1) Below Barrier: _____ How Surveyed _____
- 2) Above Barrier: _____ How Surveyed _____

REARING AREA:

- 1) Below Barrier: _____ How Surveyed _____
- 2) Above Barrier: _____ How Surveyed _____

DRAINAGE AREA: 50.6 mi²

DISCHARGE: 272 c.f.s. Flow lower 1/3 7/4/82

GRADIENT: 0.4 to 1% on main channel and north fork 1 to 2% on south fork 4% in

SURVEY OF BARRIER: 8/11/81 Dale Ranier, Bob Vaught first 1/2 m

SKETCH MAP OF ENTIRE SYSTEM: _____

PHOTOGRAPHS: _____

DISTANCE OF SITE FROM SALT WATER: Site 1: 400 m. Site 2: 700 m

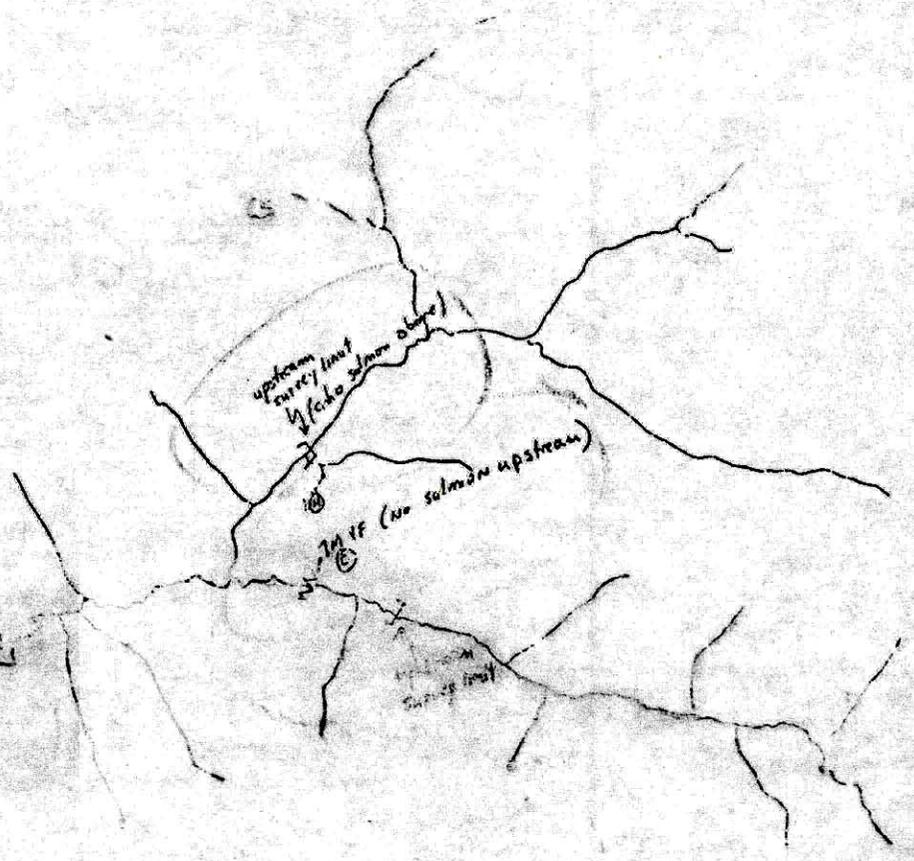
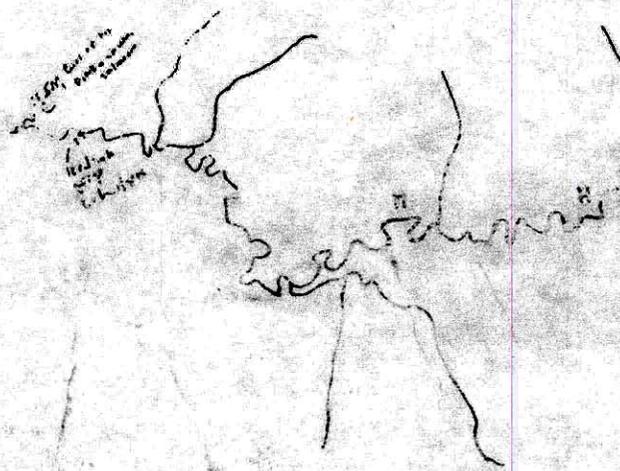
DISTANCE OF SITE FROM NEAREST ROAD: No road access.

ENGINEERING CRITERIA:

- 1) Ladder Type: Steeppass at 13.8' fall.
- 2) Etc.: Pool - concrete weir at 17.5' cascade (80' horiz)

Ward's
 42 mi² E. area
 Surveyed July 15, '82

- (1) - good helispot
- (2) - possible (flavor) helispot
- (3) - cascade falls
- (4) - no boat falls
- (5) - rocky area (no mosquitoes)
- (6) - rocky area



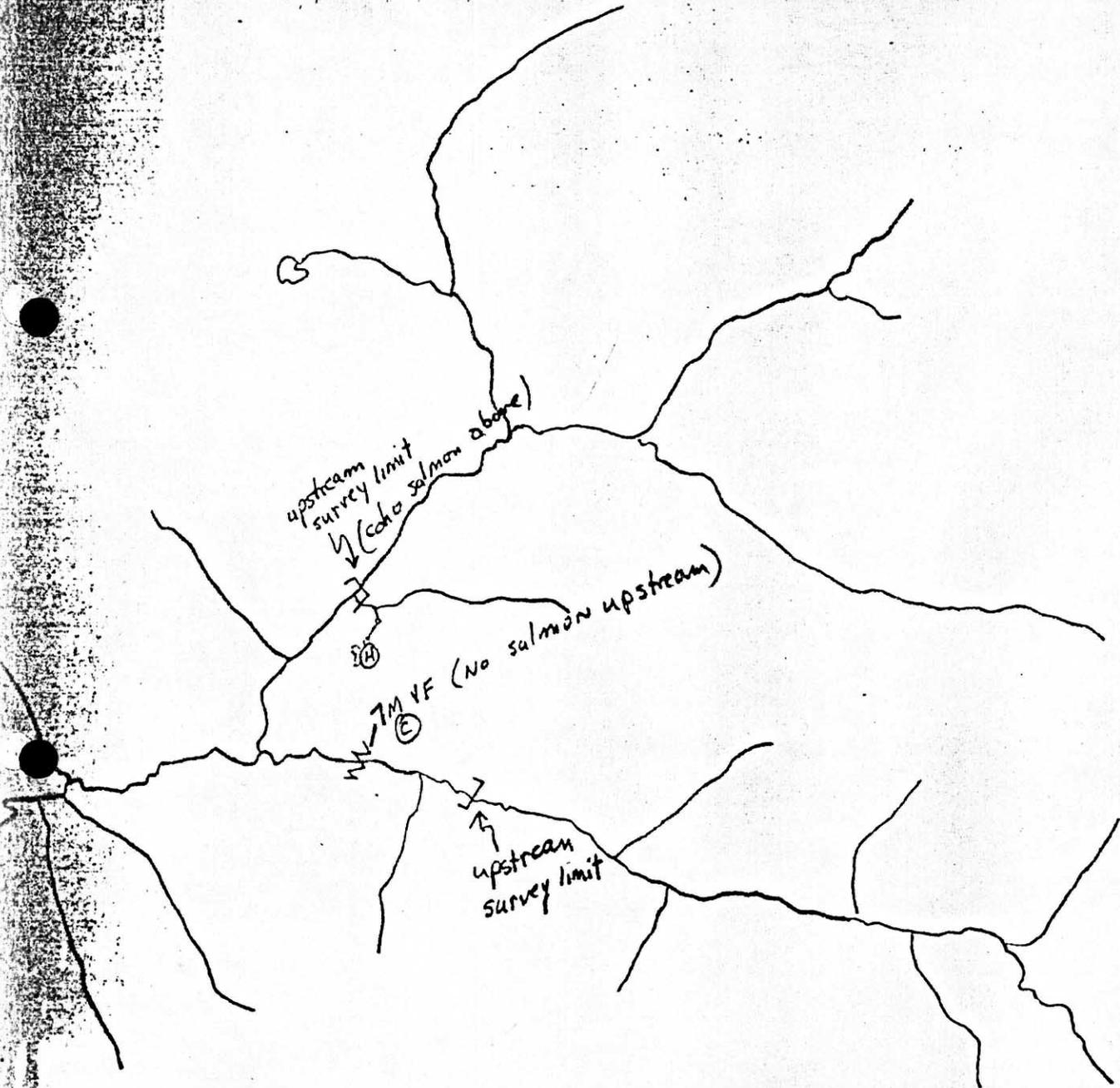
From May 22, 1980
Letter from B. Pollard - FRED Engineer
to Dale Kanen

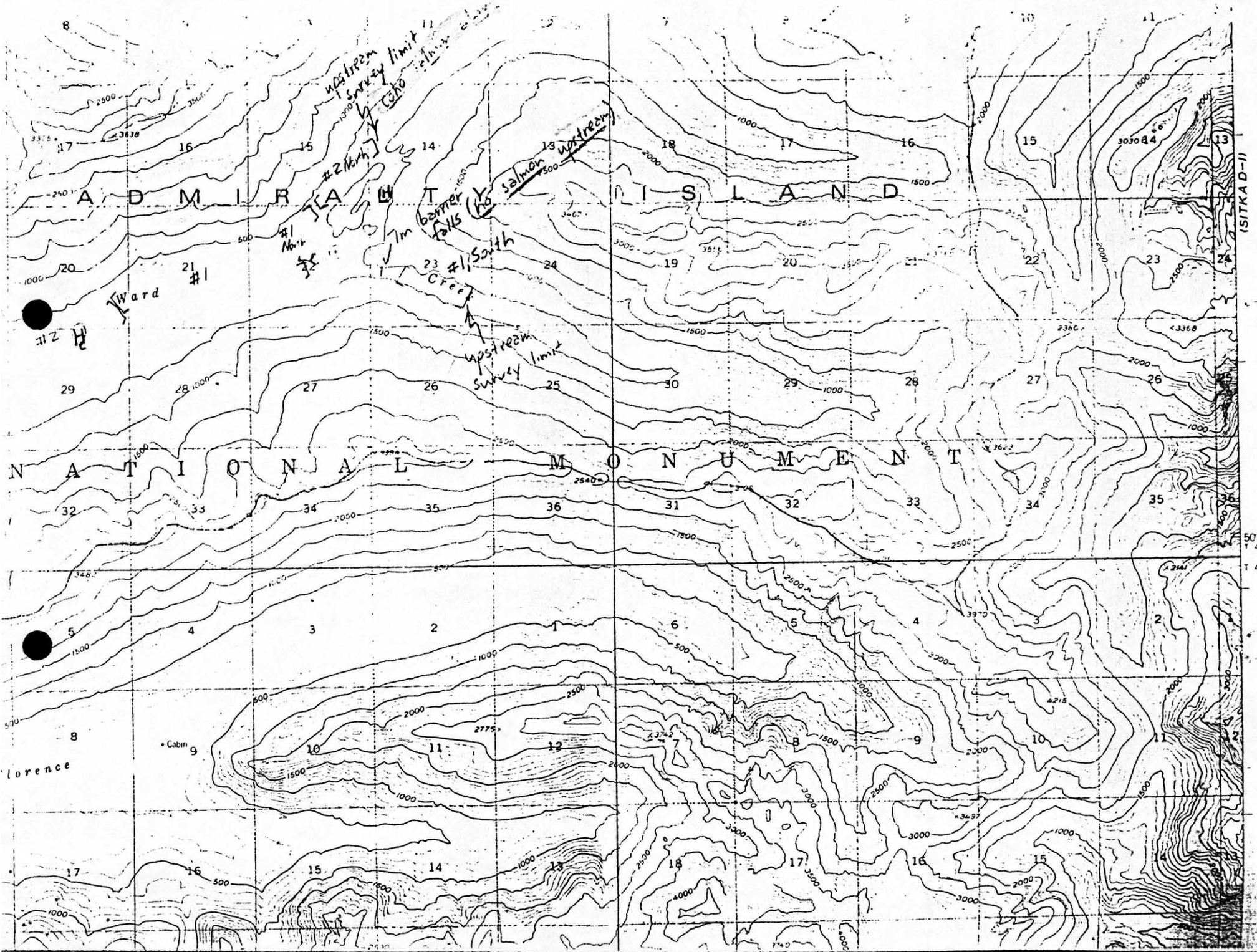
112-17-25

-3-

5) Fishery Creek located on the west side of Admiralty Island, has a falls approximately one half mile from the mouth. The creek drops a total of 34 feet through a pair of falls of roughly equal height. An overflow channel on the left bank is separated from the main falls by a wooded promontory. Ice scarring and high water marks are much in evidence. The left bank looks like the best location for a fish ladder. A double width of 4 foot deep steep pass would lift the fish approximately 20 feet above the plunge pool through a series of switchbacks and turning basins. At that elevation the fish would enter a vertical slot fish pass through about 150 feet of tunnel to a suitable exit pool location above the top of the overflow channel. Bed rock exposed in the falls is a faulted and folded metasediment. In the tunnel section the rock looked to be quite competent but a tunnel lining should be provided to control weathering and erosion. Even though it is not far from tide water, construction access to the site will be complicated by the steepness of the terrain around the falls. Some helicopter support may be needed to spot equipment and materials on the jobsite. Disposal of spoiled rock may be possible behind a gabion revetment constructed at the down stream portal of the tunnel. A suitable campsite may be found a short distance upstream.

6) The last site we looked at was a falls in the stream draining Lake Florence, about three miles north of the Fishery Creek site. We did not get on the ground at this site and it was impossible to approach closely with the helicopter, being located at the bottom of a very narrow and twisting gorge. From what we could see of the site a falls perhaps 25 feet high could be laddered through a relatively short tunnel in the right bank. The tunnel might be too steep for a vertical slot fish pass so a denil or steep pass may be required. Difficult access to either end of the tunnel dictates access through an inclined shaft at some intermediate point. I observed a prominent linear depression in the ground surface along the most direct tunnel route. This depression may indicate the presence of a large fault which could greatly complicate tunneling. Construction access to the site would be fairly difficult. The falls are about one half mile upstream from the creek mouth and the creek has a gentle gradient for most of that distance. However, the creek deepens before the foot of the falls is reached and the terrain around the falls is very steep. It would be hard to come up with a campsite or spoil area close to the site. Some helicopter assistance would likely be needed to move workers, equipment and materials around the site.

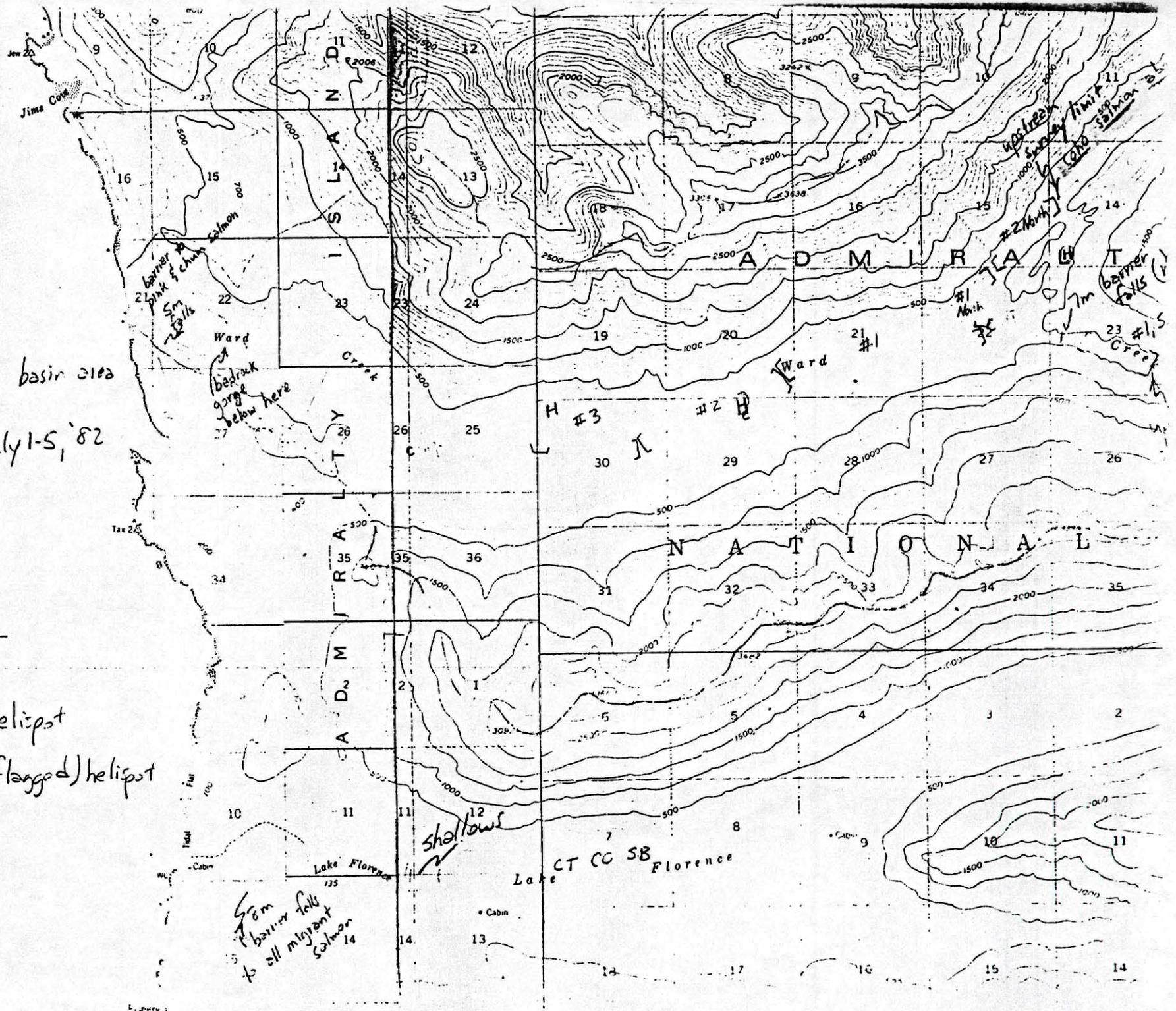


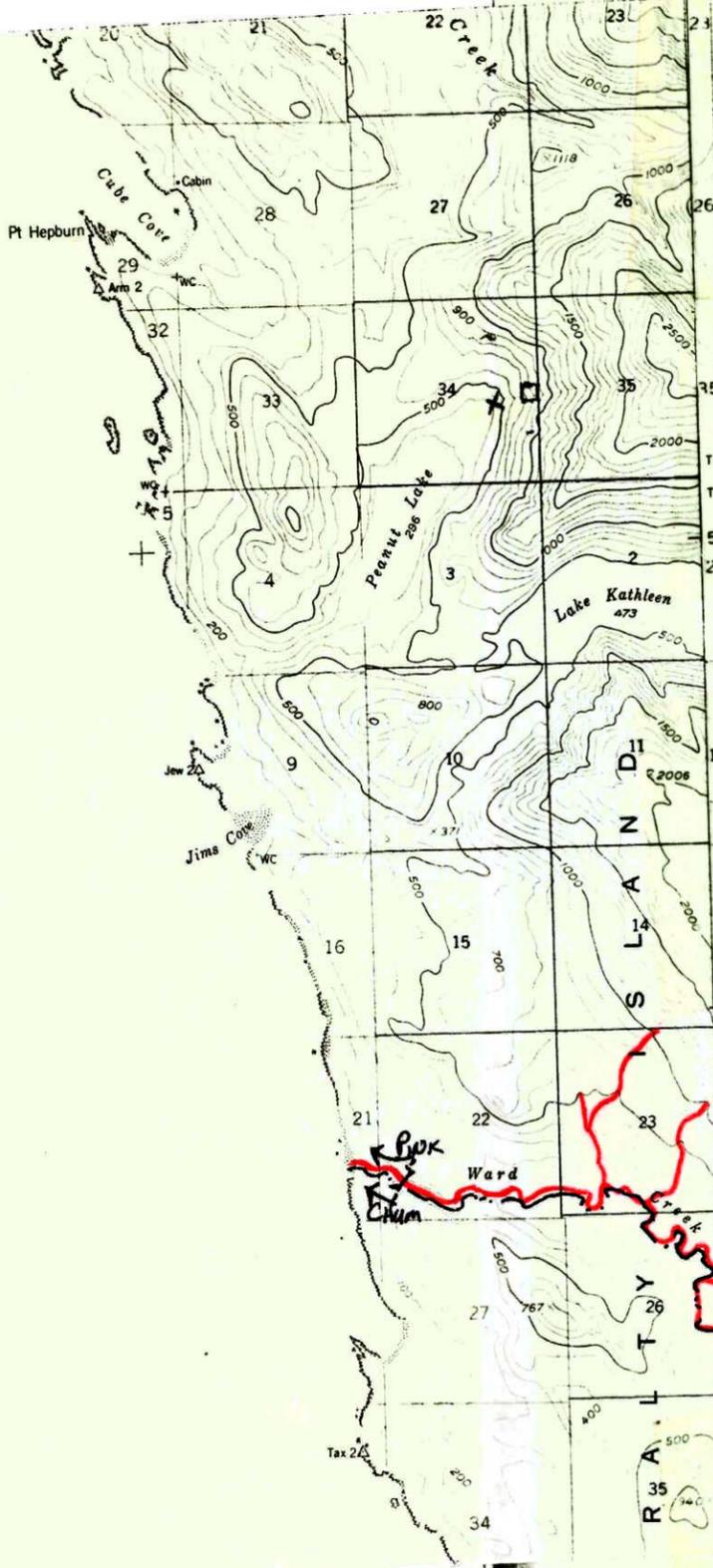


(SITKA D-1)

● Ward Cr.
 42 mi² basin area
 surveyed July 1-5, '82

● (H) good heliport
 H possible (flagged) heliport





ALTHOUGH I HAVE SEEN REARING FISH IN
A NUMBER OF SIDE TRIBS, I HAVE NOT
TRAPPED THEM NOR 10'D FOR DOLLY VARDEN
OR COHO. THIS ADDITION COVERS
MAIN STEM + N + SOUTH FORKS
AS MARKED IN BLUE BELOW

Don Hardy

UPSTREAM SURVEY
LIMIT - COHO ABOVE (PROBABLY
SEVERAL MILES)

ADMIRALTY ISLAND

BARRIER
Creek

Ward

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