

105-10-10160

map: Fort Alexander A-1

Stream 105-10-16

Latitude $56^{\circ}11'28''$ Longitude $134^{\circ}00'21''$

This stream is located 1.5 miles northeast of the Near marker on the east side of Affleck Canal on Kuiu Island.

This stream drains relatively flat, lowland topography located on the narrow peninsula between Louise Cove and Affleck Canal. The stream is approximately 1.5 miles long.

The stream displays 1"-4" diameter gravel substrates in the upper intertidal area and contains good spawning habitat. There is a small bedrock outcropping which is located just inside the treeline and continues for 50 feet upstream.

The first .35 mile of the stream is extremely brushy and contains numerous windfalls which completely obscure the stream in places. The stream displays 1"-3" diameter gravel substrates with cobble in some of the riffle areas. There is good spawning and excellent rearing habitat in this section with brushy banks and numerous shallow pools behind windfalls. Photo #41 depicts a rather open area of the stream approximately .2 mile upstream.



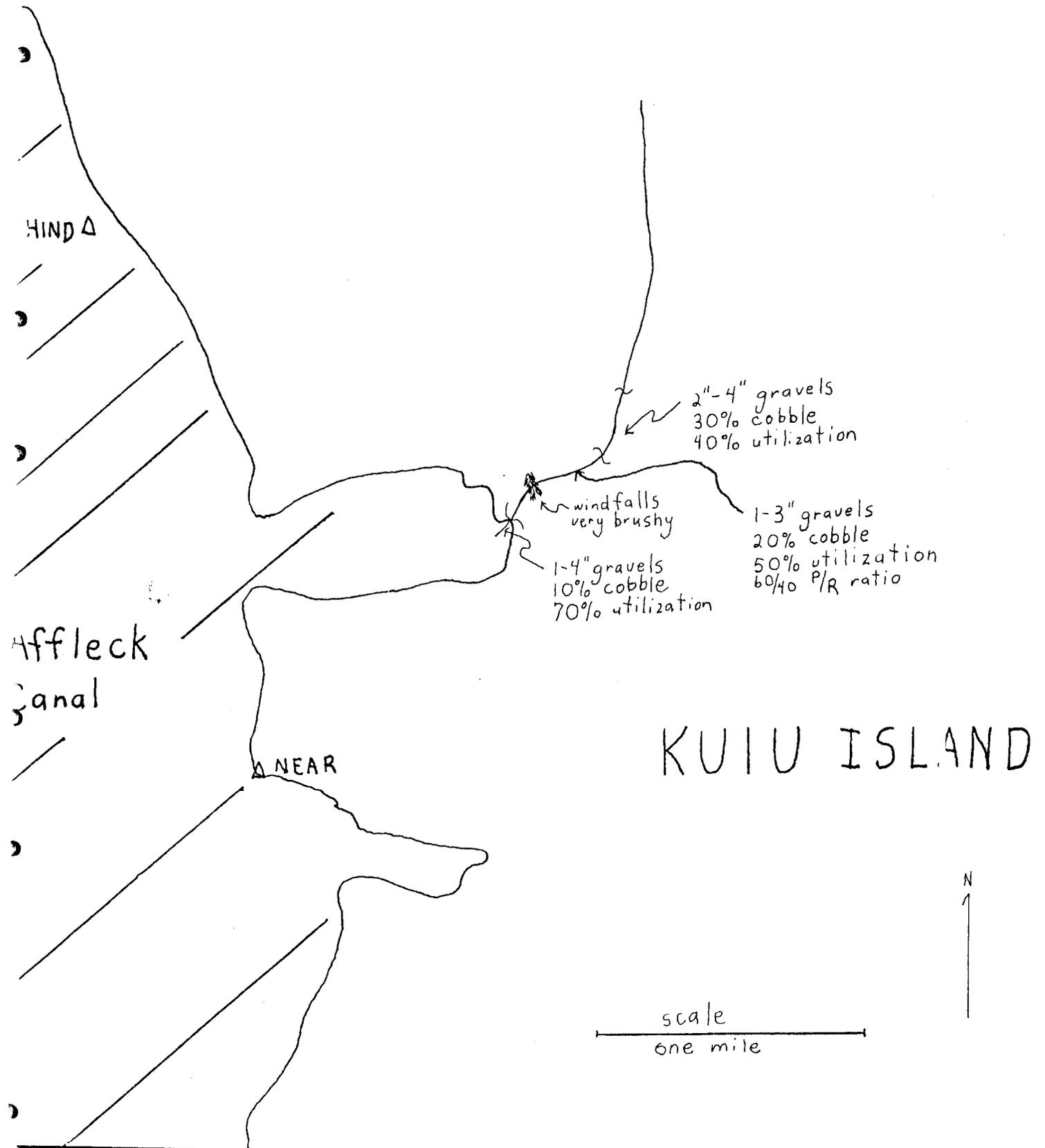
Photo #41: Stream .2 mile upstream.

The stream continues up at a gentle gradient with the gravel substrates becoming slightly larger and the amount of cobble gradually increasing. The stream canopy becomes more open and there is less windfall at .5 mile.

Coho fry were observed throughout the system. A few adult pink and chum salmon were seen jumping off the intertidal area. There is no ADF&G spawning escapement data available for this stream.

105-10-16

105-10-10160



HIND Δ

Affleck
Canal

Δ NEAR

2"-4" gravels
30% cobble
40% utilization

windfalls
very brushy

1-4" gravels
10% cobble
70% utilization

1-3" gravels
20% cobble
50% utilization
60/40 P/R ratio

KUIU ISLAND

scale
one mile

N
↑

105-10-10162

Map Port Alexander A-1

Stream #AC 3

Latitude 56° 11' ^{32"} 35" Longitude 134° 00' ^{31"} 25"

This stream enters Affleck Canal about 1.4 miles northeast of Near marker and 1.7 miles southeast of Hind marker.

The stream, about 1.2 miles long, drains a relatively high peak on the peninsula separating Affleck Canal and Sumner Strait.

Spawning potential is good throughout the 100-yard-long intertidal area but is best in the upper half where the substrate has less cobble. From the intertidal area to .25 mile upstream spawning potential remains good (40 percent utilization). Cover for rearing habitat is provided by heavy streamside vegetation and natural windfall. Photo #42 depicts the typical habitat present in the lower .25 mile.



Photo #42: "Typical" lower stream habitat.

Log jams which may be impassable to salmon at low water levels were located .13 and .25 mile upstream. Above .25 mile, the gradient becomes steeper and the substrate is predominately small boulders and cobble. At .38 mile upstream, a log with gravel deposited on the upstream side forms a four-foot-high partial barrier. No coho fry were observed above this barrier. From .38 to .50 mile upstream, the gradient is steep with several two- to four-foot bedrock falls and log/gravel dams. A 25-foot bedrock falls is located .5 mile upstream (Photo #43).



Photo #43: 25-foot bedrock falls .5 mile upstream.

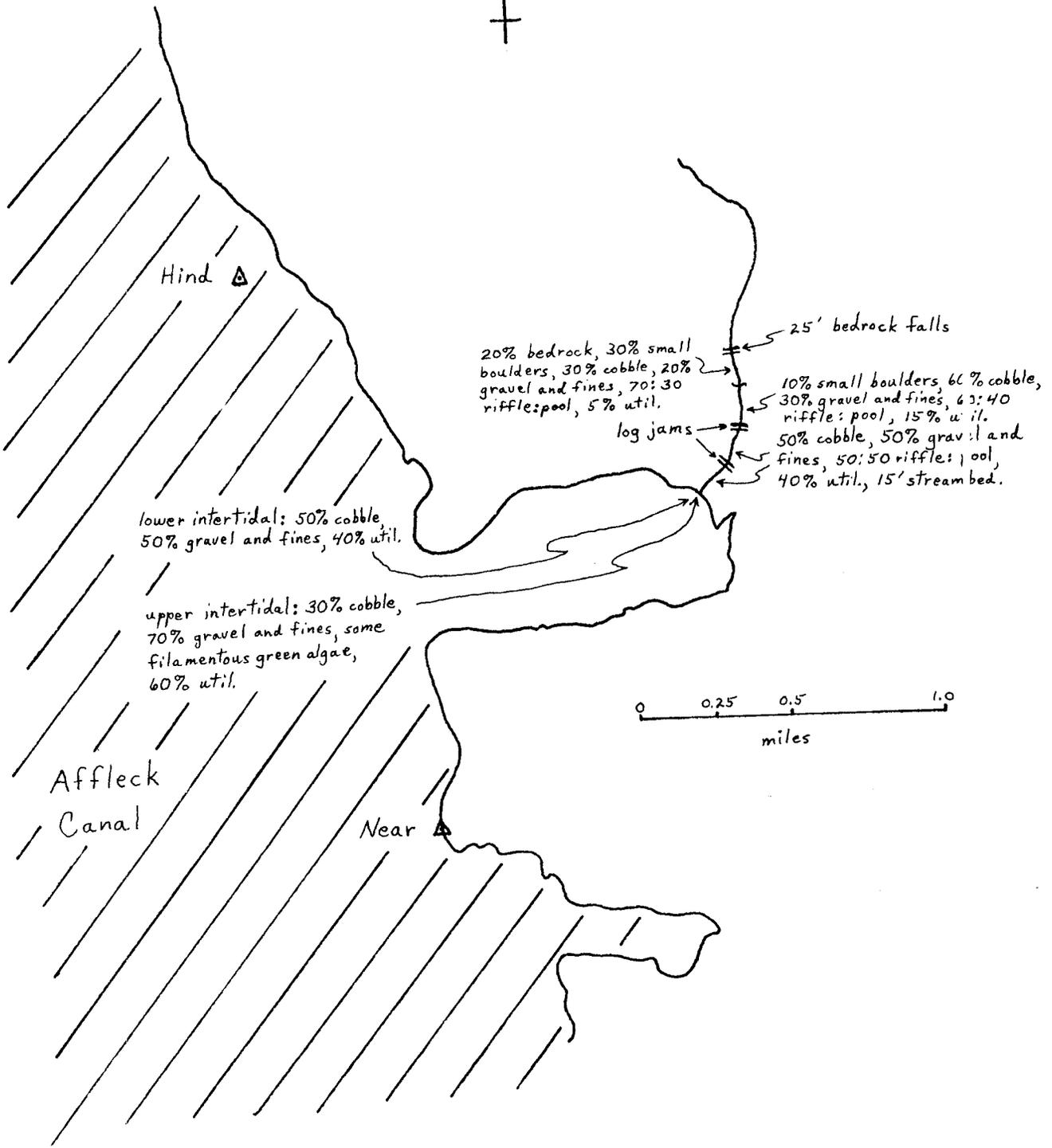
No ADF&G escapement data is available for this stream.

Recommendations:

- 1) Continue biological observations to determine if pink and/or chum salmon are utilizing the stream. If so removal of the two log jams may enhance the use of the stream by these species.
- 2) Include the stream in the ADF&G stream numbering system due to the presence of anadromous salmonids.

Figure 1. Stream AC-3

105-10-10162



* 105-10-10171

Stream #AC 6

Map: Port Alexander A-1

Latitude 56°13'^{50"} Longitude 134°03'^{10"}

This stream enters Affleck Canal about .2 mile southeast of Enter marker and .8 mile north of Can marker.

The stream, less than one mile long, drains gently sloping terrain on the peninsula separating Affleck Canal and Sumner Strait. A small lake may be the origin of the stream.

The intertidal area is short, about 100 feet, with an ungraded, gravel substrate interspersed with small boulders. Small boulders and cobble dominate the substrate of the first 50 yards upstream, severely limiting spawning potential. From 50 yards to .5 mile upstream, the substrate is mainly loose, clean, .5"-2" gravels with excellent spawning potential. Small pools separate relatively long, wide sections of gentle, shallow riffles. Cover for rearing habitat is provided by natural windfall, streamside vegetation (heavy in some places) and some undercut banks. The excellent spawning and rearing habitat in this section is depicted in Photo #44.

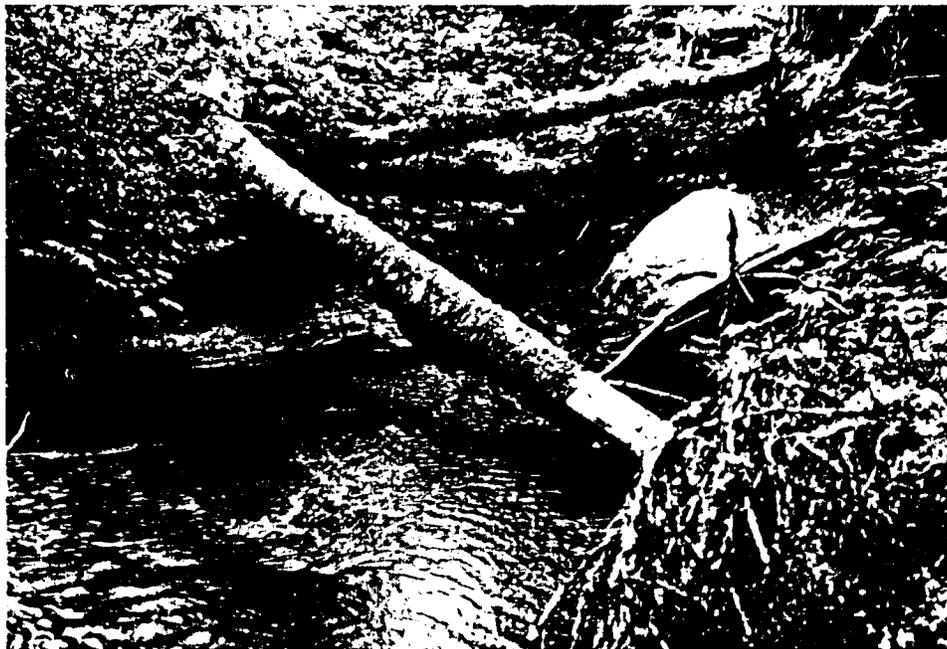


Photo #44: Stream AC 6 .3 mile upstream.

A three-foot-high partial barrier, consisting of a log with gravel deposited on the upstream side, is located .5 mile upstream. No pink salmon (and few coho fry) were observed above this barrier. The gradient increases for a short distance above the barrier and then appears to flatten out somewhat. Spawning potential decreases above the barrier as the bottom substrates become interspersed with cobble. Poor cover and a high riffle:pool ration limit rearing habitat above the barrier.

* Most still to added to AWC Blue books

4/20/87

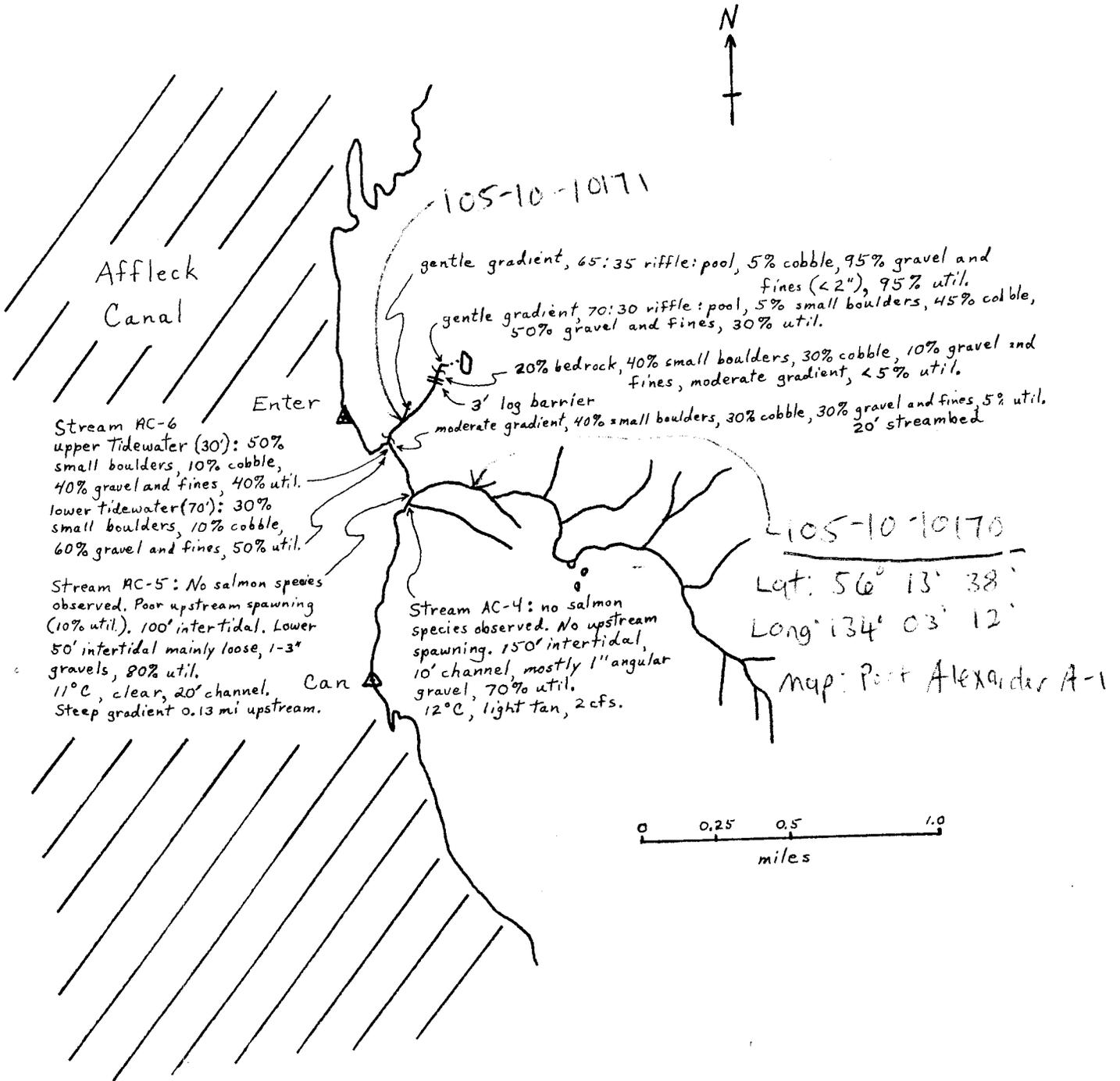
No ADF&G escapement data is available for this stream. About 50 pink salmon were observed in the stream at the time of this survey. Several hundred pink salmon were observed in Affleck Canal near the mouth of the stream.

Streams AC 4 and AC 5 have intertidal areas very close to AC 6. No juvenile or adult salmonids were observed in either of these systems during the time of the survey. A brief description of the existing habitat on these two systems is included with the map of AC 6.

Recommendations:

- 1) Continue biological observations to: A) assess pink and possibly chum salmon utilization of the spawning areas below the barrier, and B) determine the potential value of the upper spawning areas for pink (and chum) salmon if the barrier were removed.
- 2) Include this stream in the ADF&G stream numbering system due to the presence of anadromous salmonids.

Figure 1. Stream AC-6



105-10-10175
Stream #AC 7
Latitude 56° 16' ~~18~~⁰⁴" Longitude 134° 02' ~~30~~²³"
map Port Alexander B-1

This stream is located .4 mile south of the Weak marker and 1.25 miles north of the Mill marker on the east side of Affleck Canal on Kuiu Island.

This stream drains steep terrain located on a narrow isthmus between Affleck Canal and Port Beauclerc.

The intertidal spawning area is 200 feet long and displays cobble and gravels in the upper part which grade into 1"-2" angular gravels in the lower part. The cobbles are compacted and covered with green filamentous algae. There is good spawning habitat in the lower section.

The lower 200 yards of the stream contains the primary spawning area. The stream displays cobble and 1"-3" gravel substrates which provide fair spawning habitat. The stream has a gentle to moderate gradient with moderately steep banks (Photo #45).



Photo #45: "Typical" habitat lower 200 yards of Stream AC 7.

A 10-foot bedrock barrier falls is located 200 yards upstream which is a total blockage to fish migration (Photo #46).



Photo #46: 10-foot barrier falls located 200 yards upstream.

Bottom substrates above this barrier are primarily bedrock, boulder and cobble. The lack of suitable bottom substrates and moderate stream gradient provide poor spawning and rearing habitat.

No coho fry were observed either above or below the barrier falls, although a few trout fry were present. Approximately 200 adult pink and 20 adult chum salmon were observed schooling off the mouth. There is no ADF&G spawning escapement data available for this stream.

Recommendations:

- 1) Stream should be included in ADF&G's stream numbering system as anadromous salmonids are present.
- 2) The lower 200 yards of the stream should have an adequate streamside vegetative buffer zone to protect the existing spawning habitat.

105-10-10177

map: Port Alexander B-1

Stream #AC 8

Latitude ~~56° 17' 00"~~ 56° 16' 53" Longitude 134° 02' ~~40"~~ 39"

This stream is located .65 mile north of the Weak marker and 1.2 miles south of the Trus marker in Affleck Canal in Kuiu Island.

This stream drains steep, high topography terrain located on the narrow isthmus between Affleck Canal and Port Beauclerc.

The intertidal area displays 1"-2" gravels in a 100 yard section. Spawning habitat is good but limited by lack of water.

The lower .16 mile of the stream contains fair to good spawning habitat. The stream displays 1"-3" gravels and cobbles in this section and has a gentle to moderate gradient. The stream has brushy banks, numerous windfalls, and a spruce canopy which provides fair to good rearing habitat.

The stream gradient increases above .16 mile. There is little spawning or rearing habitat above due to the moderately steep stream gradient.

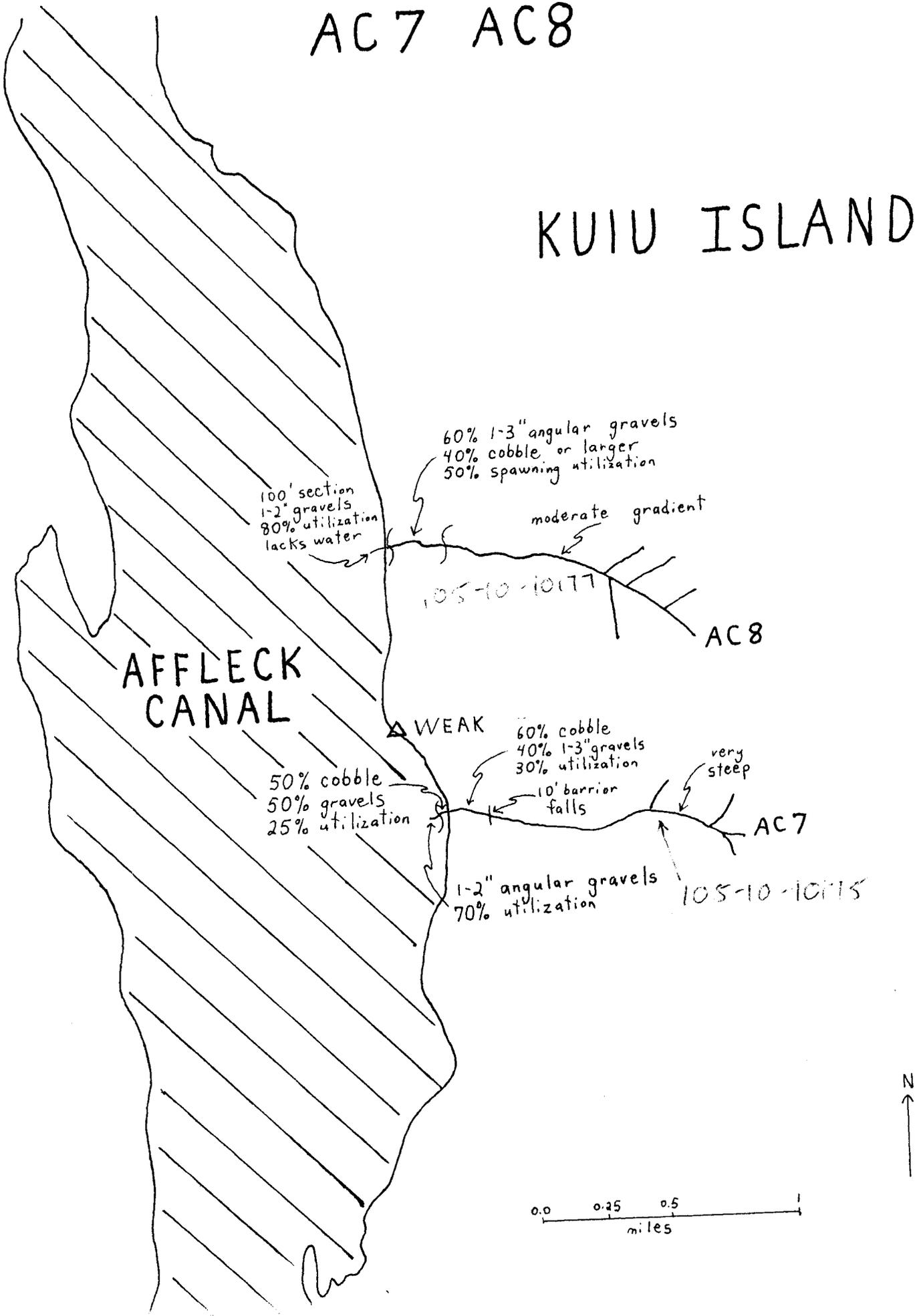
No juvenile or adult fish were observed during the survey. There is no ADF&G spawning escapement data available for this stream.

Recommendations:

- 1) Further biological reconnaissance is needed to determine if anadromous salmonids are present as suitable habitat exists.

AC 7 AC 8

KUIIU ISLAND



100' section
1-2" gravels
80% utilization
lacks water

60% 1-3" angular gravels
40% cobble or larger
50% spawning utilization

moderate gradient

105-10-10177

AC 8

AFFLECK CANAL

△ WEAK

50% cobble
50% gravels
25% utilization

60% cobble
40% 1-3" gravels
30% utilization

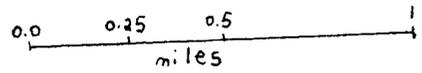
very steep

10' barrier falls

AC 7

1-2" angular gravels
70% utilization

105-10-10175



105-10-10180

Stream #AC 9

Latitude 56°18'40" Longitude 134°04'00"

Map: Port Alexander B-1

This stream enters Affleck Canal about .5 mile southeast of Scot marker and .75 mile north-northwest of the Trus marker.

The stream is about one mile long and drains relatively steep terrain on the peninsula separating Affleck Canal and Port Beauclerc.

The intertidal area is short, about 120 feet, and relatively narrow. The substrate of the lower 50 feet of the intertidal area is mainly ungraded gravel interspersed with cobble. Spawning potential is good (50 percent utilization). The upper 70 feet of the intertidal area has poor spawning potential due to low streamflows and cobble substrates. For the first 50 yards, the stream was flowing subterraneously during the survey. Scouring, braiding and other evidence of gravel movement suggest seasonal, high-velocity flows in this section of the stream. Above the subterraneous section, the bottom substrates are chiefly composed of cobble which provides little spawning habitat (Photo #47).

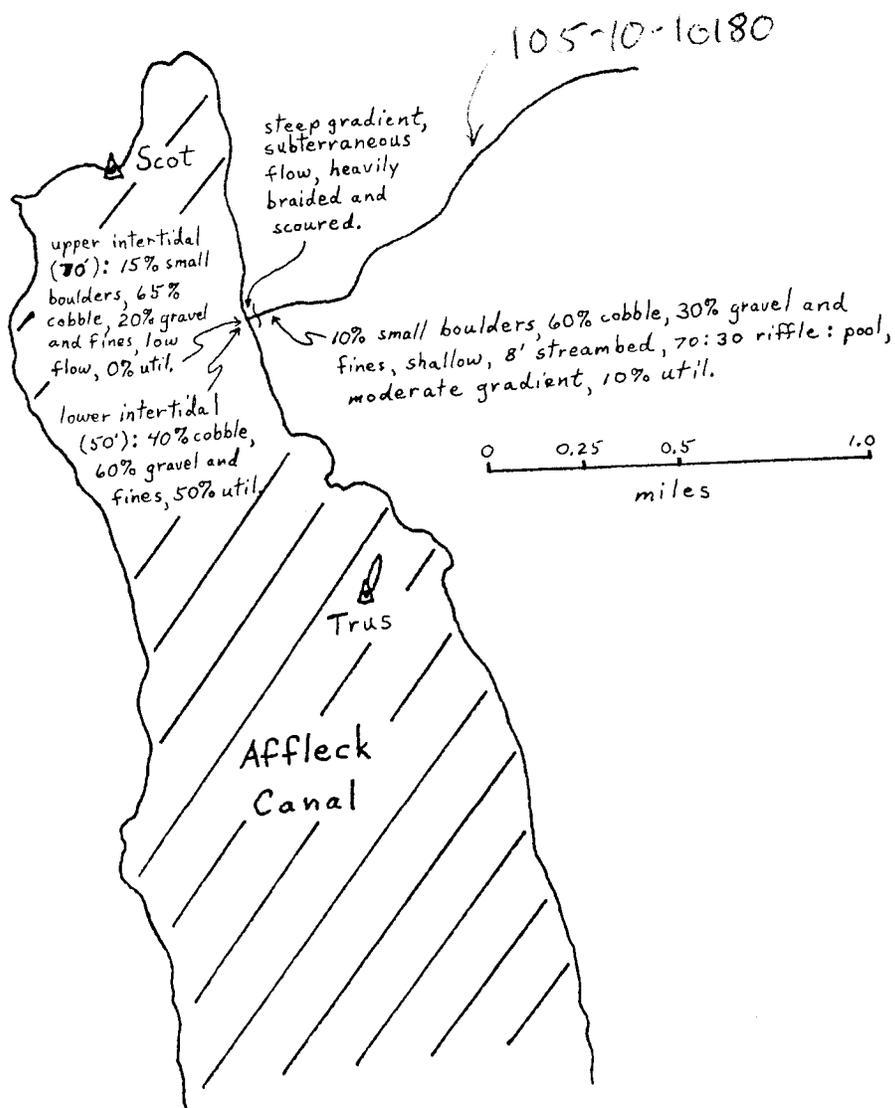


Photo #47: "Typical" habitat above subterraneous section.

No fish were observed in this stream.

There is no ADF&G spawning escapement data available for this stream.

Figure 1. Stream AC9



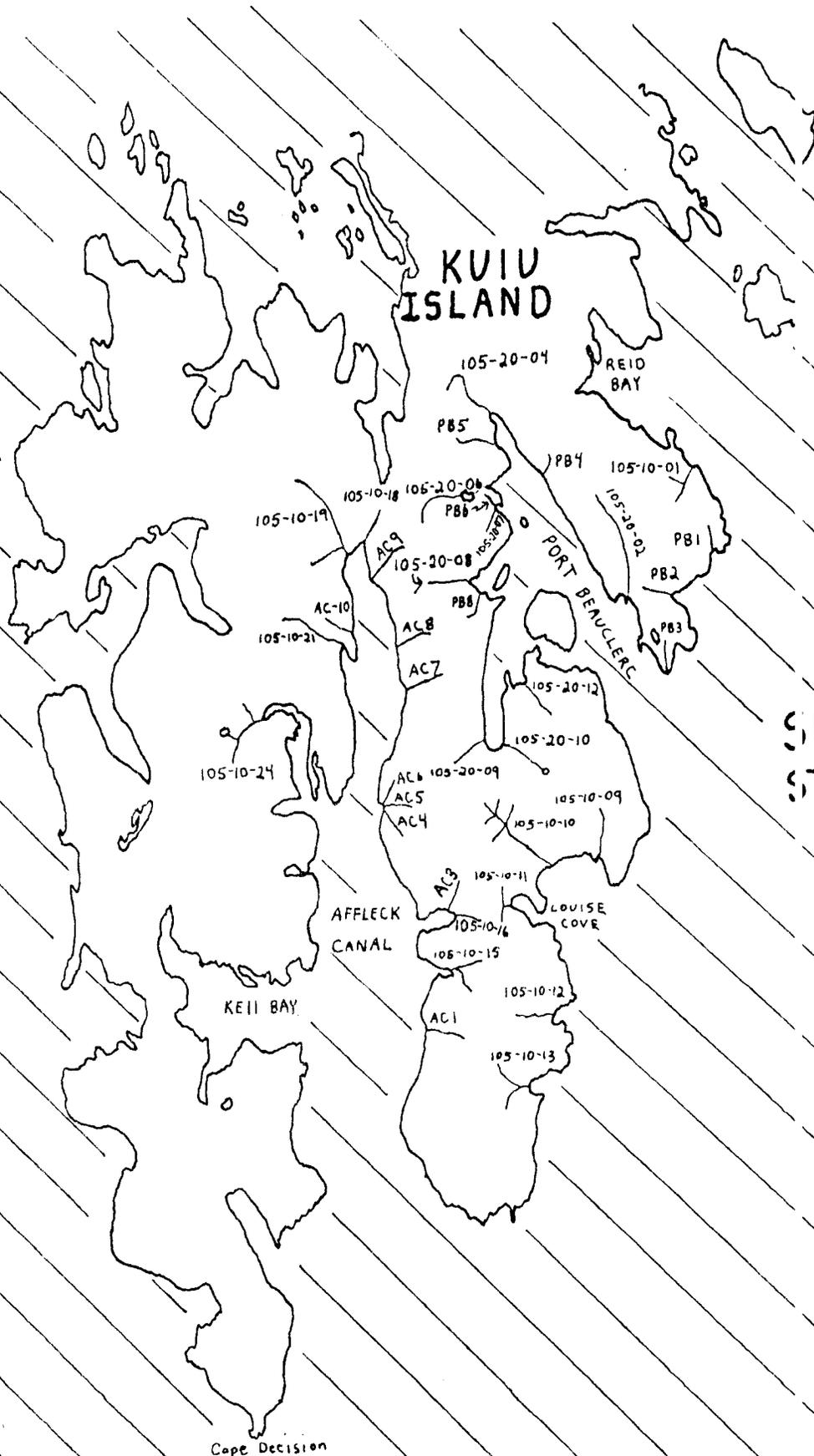
STREAMS OF THE S.E. KUIU STUDY AREA

17

FREDERICK SOUND

KUIU ISLAND

SUMNER STRAIT



Cape Decision

STREAM HABITAT INVENTORY

AREA AND STREAM	TYPE AND DISTANCE OF SURVEY	FISH SPECIES AND MATURITY	STREAM QUALITY			STREAM		VELOCITY		WATER		MAJOR SUBSTRATE	
			Spanning Inter-tidal	Up-stream	Rearing	Gradient	Mean width (ft.)	Mean depth (ft.)	Inter-tidal	Upstream	Color	Temp. °C	Inter-tidal
Affleck Canal AC #1	0.3 mile foot	coho fry, trout	good	poor/fair	fair	gentle/moderate	20' channel 15' x 3"	5-7cfs		clear	12.50	cobble and gravel	small boulder and cobble
Affleck Canal 105-10-15	0.6 mile foot	coho fry, trout	excellent	good/very good	good/very good	gentle/moderate	30' channel below fork 15' x 4"	7 cfs		clear	12.50	gravel and fines	cobble and gravel
105-10-16	.5 mile	coho fry, adult pink and chums	good	good	excellent	gentle	20' channel 10' x 8"	4 cfs		clear	12.0	1-4" gravels	1-3" gravels
Affleck Canal AC-3	0.5 mile foot	coho fry, trout	good	fair/good	fair/good	moderate	15' channel 12' x 1"	3 cfs		clear	12.50	gravel and cobble	gravel and cobble

CENTRAL HADLIDAL INVENTORY

AREA AND STREAM	TYPE AND DISTANCE OF SURVEY	FISH SPECIES AND MATURITY	STREAM QUALITY			STREAM		VELOCITY		WATER		MAJOR SUBSTRATE	
			Spawning Inter-tidal	Up-stream	Rearing	Mean width (ft.)	Mean depth (ft.)	Inter-tidal	Upstream	Color	Temp. °C	Inter-tidal	Upstream
Affleck Canal AC-6	0.6 mile foot	adult pink salmon, coho fry, trout	fair/good	excellent	fair/good	20' channel 20' x 5"	20' channel 20' x 5"	6-8cfs	clear	120	small boulders and gravel	gravel	
AC-7	.2 mile foot	trout, adult pink and chum	fair	fair	fair	15' channel 10' x 2"	15' channel 10' x 2"	2 cfs	clear	120	cobble gravel	cobble gravel	
AC-8	1/4 mile foot	none	good	fair/good	fair/good	15' channel 4' x 2"	15' channel 4' x 2"	1-2cfs	clear	120	1-2" angular gravels	1-3" gravel	
AC-9	0.12 mile foot	no fish observed	lower is good upper is poor	poor	poor	8' channel 6' x 1"	8' channel 6' x 1"	1-2cfs	clear	120	cobble and gravel	cobble	
Affleck Canal 105-10-19	1.4 mile foot	adult pink and chum salmon, coho fry, trout	excellent	good/very good	good/very good	60' channel 40' channel .25 mi. upstream 30' x 5"	60' channel 40' channel .25 mi. upstream 30' x 5"	20 cfs	clear	130	gravel	gravel and cobble	