

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

HARRISON BAY A-2

Region ARCTIC ↓

USGS Quad HARRISON BAY B-2

Anadromous Water Catalog Number of Waterway 330-00-00700-0247

Name of Waterway UNNAMED LAKE  USGS Name  Local Name

Addition  Deletion  Correction  Backup Information

For Office Use

Nomination #	<u>98 115</u>	<u>[Signature]</u>	<u>10-13-97</u>
Revision Year:		Regional Supervisor	Date
Revision to: Atlas	Catalog	<u>[Signature]</u>	<u>4/27/98</u>
Both	<u>X</u>	AWC Project Biologist	Date
Revision Code:	<u>A-2</u>	<u>[Signature]</u>	<u>4/2/98</u>
		Drafted	Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
LEAST CISCO	7-21-95		X	X	<input checked="" type="checkbox"/>
HUMPBACK WHITEFISH	7-21-95		X	X	<input checked="" type="checkbox"/>
BROAD WHITEFISH	7-24-95		X	X	<input checked="" type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

**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.

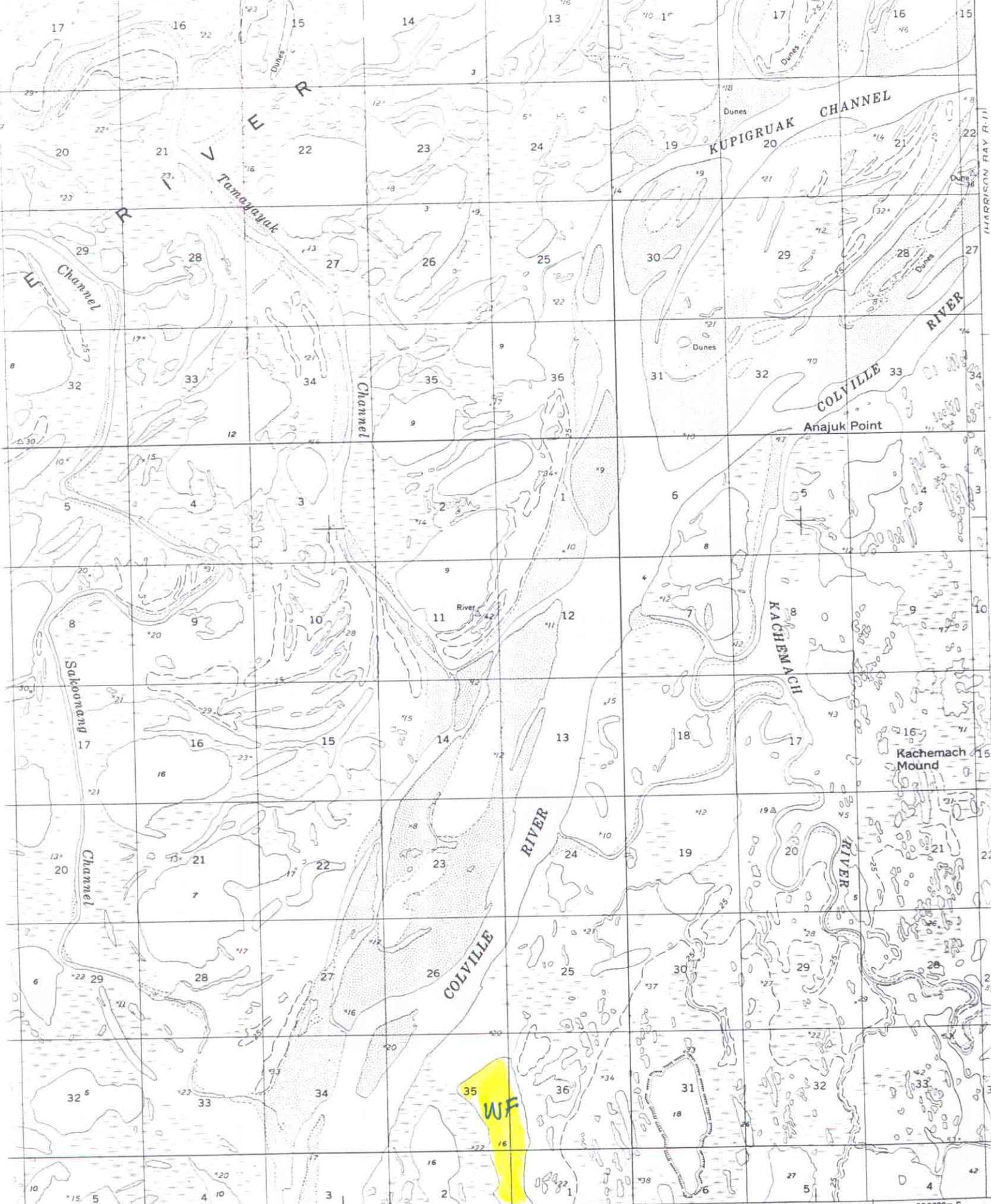
Comments: SEE ATTACHED PAGES FROM MOULTON (1997), LAKES SAMPLED FOR FISH IN AND NEAR COLVILLE RIVER DELTA, ALASKA 1979-1996

ALASKA DEPT. OF FISH & GAME  
 OCT 23 1997  
 REGION II

Name of Observer (please print) LARRY MOULTON HABITAT AND RESTORATION DIVISION  
 Date: \_\_\_\_\_ Signature: MGM RESEARCH  
 Address: 5460 NE TOLO ROAD  
BAINBRIDGE ISLAND, WA 98110

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 Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes per AS 16.05.870.

Signature of Area Biologist: [Signature]



(HARRISON BAY) A-2)

SCALE 1:63360



INTERIOR—GEOLOGICAL SURVEY RESTON, VIRGINIA—1981

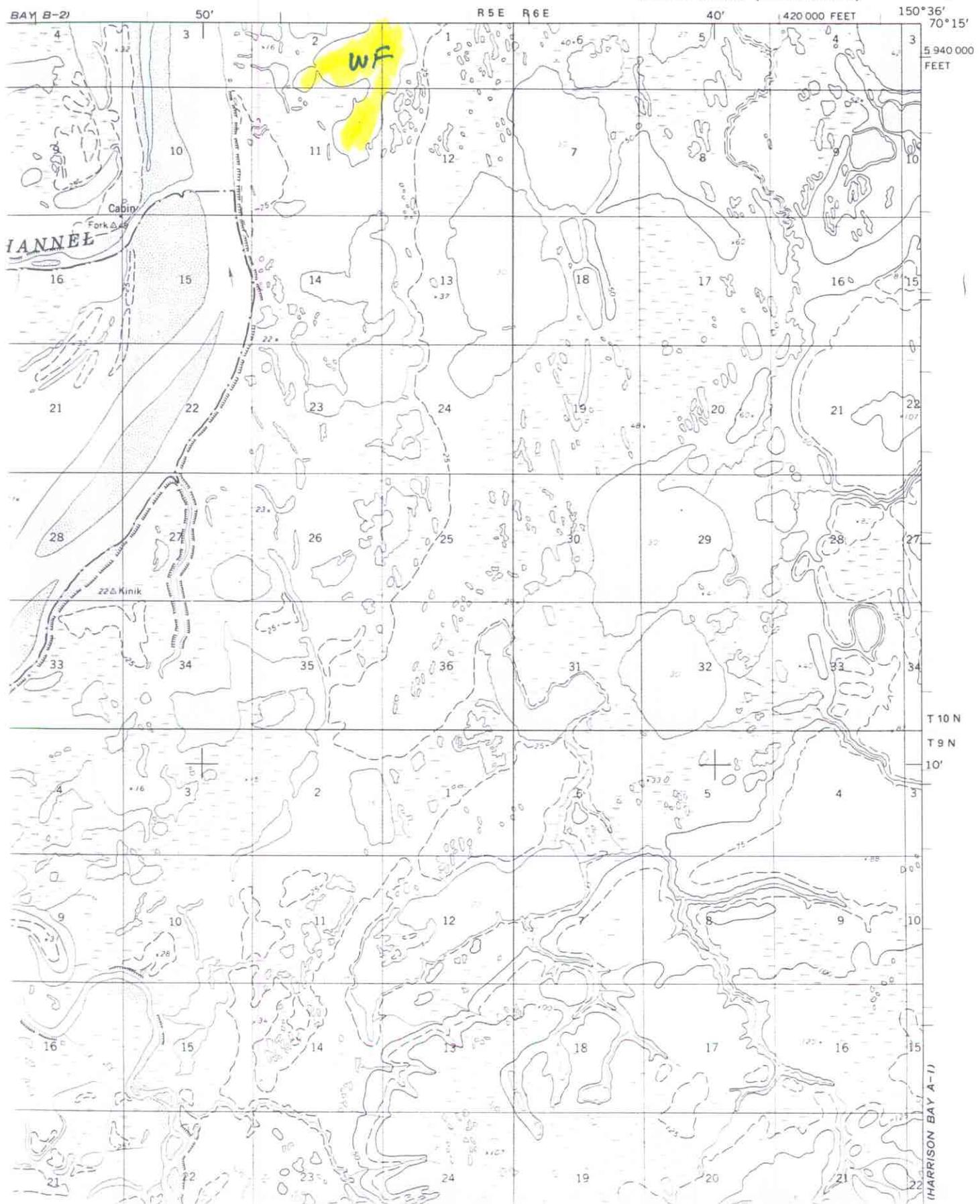
R 5 E R 6 E

59000m E. 150

ADD LAKE  
330-00-00700-0247  
w/ WF

HARRISON BAY (A-2) QUADRANGLE  
ALASKA-NORTH SLOPE BOROUGH  
1:63 360 SERIES (TOPOGRAPHIC)

(HARRISON BAY B-1)



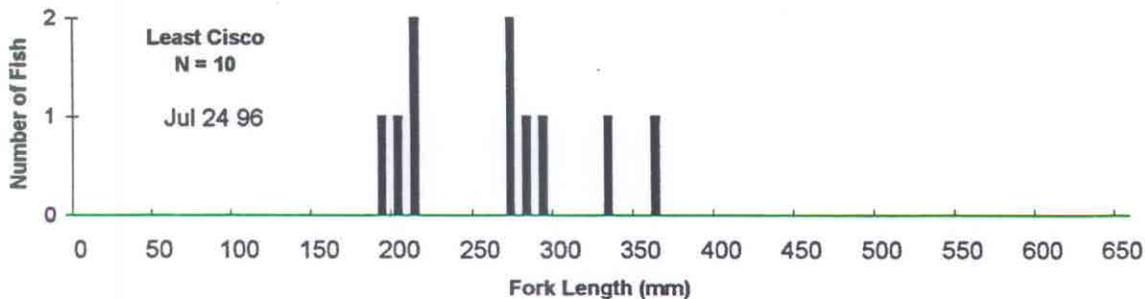
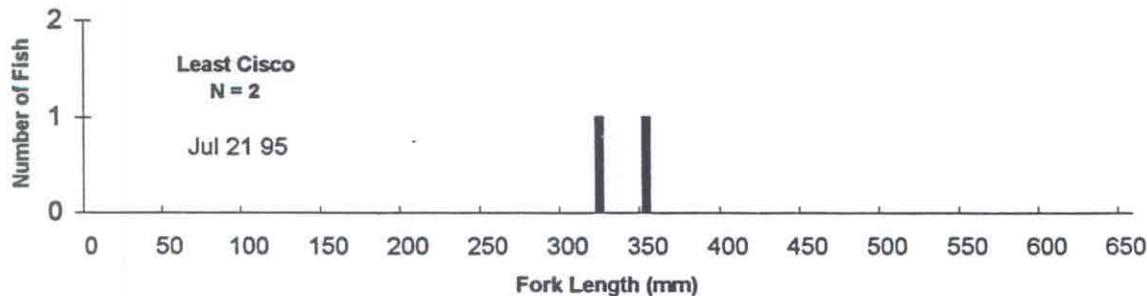
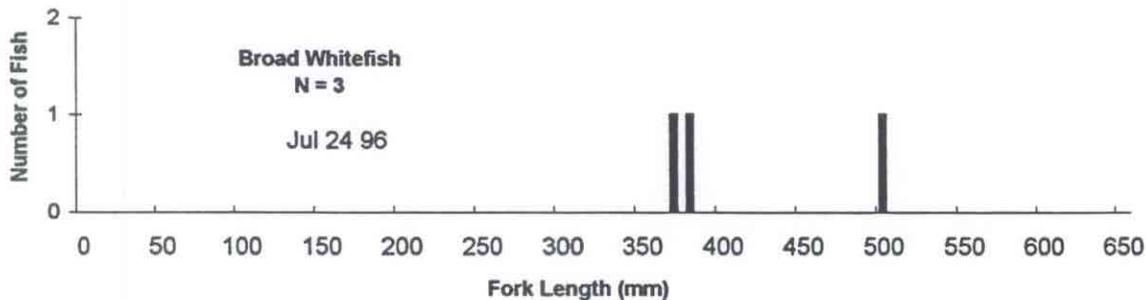
**Lake L9334**

**Other Names:** none

**Location:** 70°15.27'N 150°46.48'W; Harrison Bay B-2: T10N R5E, Sect 1, 2

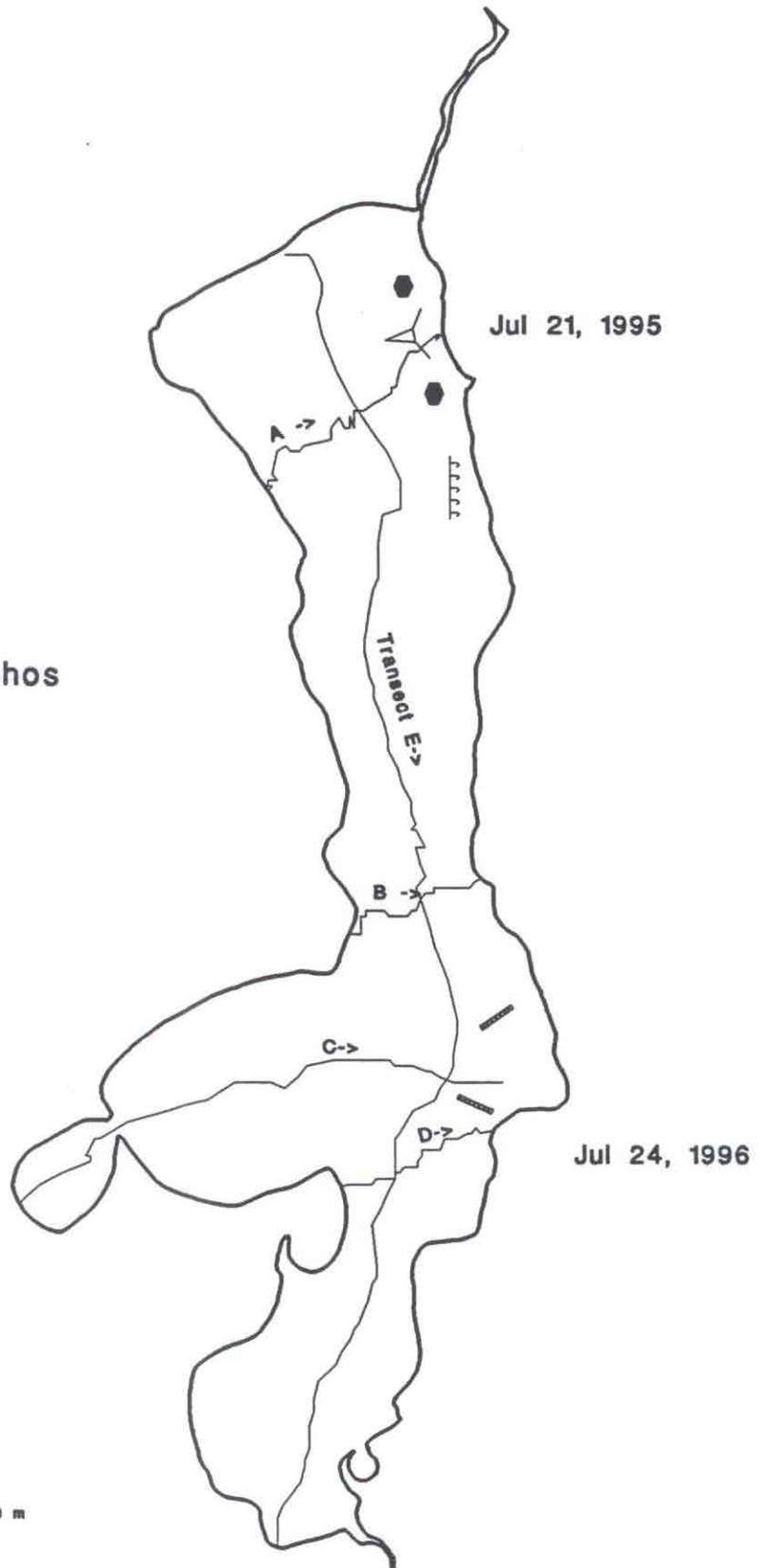
**Habitat:** Drainage Lake

Catch Record:		Effort		Number	Fork Length
Gear	Date	(hours)	Species	Caught	(mm)
Fyke Net	Jul 21 95	24.2	Arctic grayling	4	
			Least cisco	2	
			Humpback whitefish	2	331, 350
			9spine stickleback	62	
2 Minnow Traps	Jul 21 95	47.7	None	0	
Set Line	Jul 21 95	24.1	None	0	
Gill Net	Jul 24 96	11.3	Broad whitefish	3	
			Round whitefish	1	320
			Least cisco	10	



**L9334**  
70°15.27'N 150°46.48'W

Area = 515 acres  
Max. Depth=22.0'  
Conductivity=113 umhos



## Answers to your Questions about Unnamed Lakes with Least Cisco and Broad Whitefish - Colville River

(Question #1) if an outlet stream exists and where is it? Many of the lakes do not have outlet streams. For those lakes with defined outlets I have shown them on the USGS maps.

(Question #2) if there is no outlet stream, are these fish truly anadromous? Yes, the lakes without outlets or inlets that have least cisco and/or broad whitefish are flooded periodically by the Colville River. During these flood events which may occur annually or in some cases maybe only during a 5-year event, fish (anadromous species) move into and out of the lakes. Many of the lakes within the Colville River delta are classified as perched (either frequently or infrequently flooded) and the same thing happens. Whitefish move in and out based on flow events. Most movement into or out of lakes occurs during breakup when flood levels in the Colville River peak. Unlike other streams on the North Slope, major flood events in the Colville River (at least the lower portion - the delta) are spring breakup events.

(Question #3) if so can you provide some references or documentation supporting anadromy, migration patterns, spawning etc? The main reference is Moulton (1997) in which he summarizes fisheries data collection and lists the species. He also includes growth curves for least cisco that can be compared with a growth curve based on data from anadromous least cisco. Generally, growth for lake residents is higher than for anadromous. But, at any point in time, a lake resident fish with access to brackish waters, may go to the nearshore to feed.

Lakes within the delta should continue to be covered with the polygon. One could possibly make the argument that a polygon is also appropriate for many of the lakes located just east of the main channel of the Colville River. Most of these lakes, even though the sampling is still fairly limited, contain broad whitefish and least cisco. Moulton's prefers to use fyke-nets to collect fish to reduce mortality but in the deeper lakes the broad whitefish are generally not caught with fyke-nets. Thus the number of fish, particularly broad whitefish and least cisco, in the deeper lakes is much higher than shown by fyke-net data.