

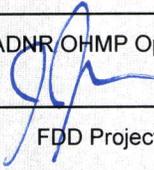


**State of Alaska
Department of Fish and Game
Sportfish Division**

**Nomination Form
Fish Distribution Database**

Region USGS Quad(s)
 Fish Distribution Database Number of Waterway
 Name of Waterway USGS Name Local Name
 Addition Deletion Correction Backup Information

For Office Use

Nomination # <u>11-215</u>	_____ ADF&G Fisheries Scientist	_____ Date
Revision Year: <u>2012</u>	_____ ADNR OHMP Operations Mgr.	_____ Date
Revision to: Atlas _____ Catalog _____ Both _____	 FDD Project Biologist	<u>9 May 11</u> Date
Revision Code: <u>F-1</u>	_____ Cartographer	_____ Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
CO spawning/rearing	1972-2011	yes	yes	yes	<input checked="" type="checkbox"/>
					<input type="checkbox"/>
					<input 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:
 Clearwater Lake documentation for spawning and rearing coho salmon is attached in a separate word document (Clearwater Lake.doc), includes pictures and a coho data table. A portion (~10%) of ADF&G coho survey counts of the Clearwater Lake Outlet is within the mouth of Clearwater Lake. In addition, extensive spawning area is along the Southern shore of Clearwater Lake as explained in the supporting document. Also, spring upwellings mid-lake causes exposure of gravel which attracts spawning salmon as well. Ice-free conditions in Clearwater Lake, year round, provide ideal rearing habitat for juvenile salmon which spend 2-3 years in fresh water before smolting.
Supports existing data

Name of Observer (please print): James F. Parker
 Signature: _____ Date: 3/11/2011
 Agency: ADF&G - Sport Fish
 Address: Box 605
Delta Junction, AK 99737

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 Fish Distribution Database.
 Signature of Area Biologist: _____ Date: _____ Revision 02/05
 Name of Area Biologist (please print): _____

Johnson, J D (DFG)

From: Parker, Fronty (DFG)
Sent: Monday, May 02, 2011 11:27 AM
To: Johnson, J D (DFG)
Subject: new AWC nomination, Clearwater Lake (334-40-11000-2490-3412-0010)
Attachments: Clearwater Lake.doc; Clearwater Lake 03-11-2011.xls

AWC nomination for Clearwater Lake.
-Fronty

DELTA CLEARWATER RIVER AERIAL SURVEY													
NAMES OF SPRINGS SURVEYED AND COHO COUNTS													
No.	IDENTIFICATION NAME	AWC # (numbers in Red are new)	1994	1995	1996	1997	1998	DESCRIPTION OF LOCATION					
1	SAWMILL CREEK	334-40-11000-2490-3416-4020	19,125	4,700	4,275	3,050	2,625	headwaters to Mile 14					
2	ANDERSEN	334-40-11000-2490-3416-4020-5030	25	8	25	0	0	south spring into Sawmill					
3	GRANITE	334-40-11000-2490-3416-4020-5020	250	150	0	25	50	headwaters to Sawmill					
4	South Clearwater Tributary	334-40-11000-2490-3416-4030-5007	1,700	400	300	125	575	headwaters to Reed Lake					
5	Clearwater Creek	334-40-11000-2490-3416-4030	8,525	2,525	1,425	1,300	1,150	headwaters to confluence of Sawmill Cr.					
6	PECKHAM	334-40-11000-2490-3416-4030-5004	100	50	0	0	0	spring on north side of Clearwater cr					
9	FRONTY	334-40-11000-2490-3416-4020-5014	175	175	0	25	0	first spring below Granite-south side					
10	JAN	334-40-11000-2490-3416-4020-5014-0010	200	150	0	0	0	between Fronty and Jesse					
11	JESSE	334-40-11000-2490-3416-4020-5010	250	50	0	0	25	south side of Sawmill Creek					
12	JENNIE	334-40-11000-2490-3416-4030-5002	25	25	25	0	0	north side-near mouth of CH20-DCR					
13	CHAD	334-40-11000-2490-3416-4021	100	25	0	0	0	south side of DCR					
14	BUNS	334-40-11000-2490-3416-4020	200	75	0	0	0	south side of DCR					
15	PATTY	334-40-11000-2490-3416-4019	20	0	0	0	0	north side of DCR					
16	DAVE	334-40-11000-2490-3416-4018	25	0	0	0	0	north side of DCR					
17	TRAVIS	334-40-11000-2490-3416-4017	175	75	50	25	0	north side of DCR					
18	REMMINGTON	334-40-11000-2490-3416-4016	not surveyed	100	0	0	0	north side of DCR					
19	DUBOIS	334-40-11000-2490-3416-4015	10	0	200	25	125	south side of DCR					
20	CHRISTIE	334-40-11000-2490-3416-4014	25	225	150	125	75	north side of DCR					
21	CALEB	334-40-11000-2490-3416-4013	325	325	25	25	125	north side of DCR across from camp					
22	ISAAC'S SLOUGH	334-40-11000-2490-3416-4012	700	225	250	25	0	between Caleb and Parker-north side					
23	PARKER	334-40-11000-2490-3416-4011	775	200	50	0	50	north side of DCR					
24	KENNA	334-40-11000-2490-3416-4010	350	100	0	0	0	north side of DCR					
25	DOS GRIS	334-40-11000-2490-3416-4009	not surveyed	0	75	125	100	south side of DCR (Gartz)					
26	BARB	334-40-11000-2490-3416-4008	90	25	0	0	0	north side of DCR					
27	BACKY	334-40-11000-2490-3416-4007	15	0	0	0	0	south side of DCR (Fork)					
28	RIDDER	334-40-11000-2490-3416-4006	300	125	50	25	25	north side of DCR					
29	PEARSE	334-40-11000-2490-3416-4005	1,175	150	75	125	50	South side of DCR connects at mile 3					
30	HODGES	334-40-11000-2490-3416-4004	not surveyed	25	0	0	25	north side of DCR					
31	STUGA	334-40-11000-2490-3416-4003	not surveyed	100	25	25	0	south side of DCR (Al Svenston)					
32	SALMON ALLEY	334-40-11000-2490-3416-4002	not surveyed	350	50	50	25	Loop of north side of DCR					
33	MALLARD	334-40-11000-2490-3416-4001	5	25	0	0	0	north side of DCR, above mile one					
34	MAINSTEM MILE 0-14	334-40-11000-2490-3416	45,500	11,475	8,225	7,250	8,850	Mouth of DCR to Tanana to mile 14					
35	Total Delta Clearwater River		80,165	21,858	15,275	12,350	13,875	Total estimated escapement					
			0.57	0.52	0.54	0.59	0.64						
			0.57										

Clearwater Lake (common name)

Anadromous stream catalog number 334-40-11000-2490-3412-0010

Description: Clearwater Lake is approximately 340 acres, has 100% shoal area, maximum depth is 12 feet (see figure 1); connects (64° 6' 34.692" N, 145° 35' 43.229" W) to the Clearwater Lake Outlet which flows 1.3 miles to the Tanana River.

Anadromous species present: Coho salmon (spawning and rearing).

Other Species: least cisco, round whitefish, humpback whitefish, Arctic grayling, long nose suckers, slimy sculpins, and northern pike.

Anadromous species data collection:

This nomination is for Clearwater Lake. Clearwater Lake independent of its outlet and inlet has spawning and rearing habitat for Coho salmon. A more extensive description of the characteristics of this lake and associated waters is required in understanding the dynamics of this salmon spawning system.

Coho survey data was collected by ADF&G staff in Delta Junction from 1972-2006 for the Clearwater Lake Outlet. A portion of the Clearwater Lake Outlet count extends into the Clearwater Lake where favorable graveled spawning areas exist. Approximately 10% of the survey count can be attributed the area surrounding the mouth of Clearwater Lake.

For the most part the bottom of Clearwater Lake consists of deep sediments and organic materials. Several small areas within the lake have spring upwelling's, containing exposed gravel, and spawning Coho have been observed on these locations.

The Inlet to Clearwater Lake and the southern leading edge of the Lake has extensive spring upwelling's. This edge of the lake is primarily graveled areas free of sediments and provides ideal salmon spawning habitat. From the air (see photo 1) this southern edge including the inlet resembles a fault line where ground water seeps into the lake.

From 1994-1998 aerial Surveys of Clearwater Lake documented Coho salmon counts. In addition residents living along the Clearwater Lake inlet and along the southern leading edge of Clearwater Lake have indicated to Fish and Game Coho spawning activity in front of their homes from September to as late as December and early January. Table 1, is survey data summarized to date (10/2010) from ADF&G Sport Fish files. Clearwater Lake coho data is extracted from a proportion of the Clearwater Lake Outlet count, which is a minimum estimate. More coho spawn in Clearwater Lake but are not surveyed.

Clearwater Lake is suitable salmon habitat all year long. Because of its spring-fed nature, moving waters (inlet and outlet) remains ice-free during the winter and the lake itself has a thin ice layer and open water is available in early April. The Clearwater Lake level rises and falls with the Tanana River. During the summer when the Tanana River level is high, the water from

Clearwater Lake to back up, thus increasing the lake level by 3-4 feet. The Clearwater Lake increases in size proportionally as associated wetlands become inundated with water, providing ideal habitat for rearing fish.

The Clearwater lake Inlet is 2 miles in length, is independent, and originates from spring upwelling's. This can be misconstrued from the topographical map which indicates the inlet originates from the Delta Clearwater River; Figure 1 shows the correct origins of the inlet. A separate AWC nomination for Clearwater Lake Inlet is recommended. The mouth of the Clearwater Lake Inlet into Clearwater Lake is difficult to distinguish; the cessation of flowing water has been marked on the map in Figure 1 for a suitable division.

Table 1. Coho salmon escapement estimates for Clearwater Lake, 1972-2010.

Year	Coho Clearwater lake outlet	Proportion Coho's Clearwater Lake ¹	Clearwater lake inlet aerial	Year	Coho Clearwater lake outlet	Proportion Coho's Clearwater Lake ¹	Clearwater lake inlet aerial
1972	417	42		1991	3,150	315	
1973	551	55		1992	229	23	
1974	560	56		1993	550	55	
1975	1,575	158		1994	3,425	493	1,100
1976	1,500	150		1995	3,625	363	1,525
1977	730	73		1996	1,125	113	350
1978	570	57		1997	2,775	278	325
1979	1,015	102		1998	2,775	278	350
1980	1,545	155		1999	No survey		
1981	459	46		2000	1,025	103	
1982	No survey			2001	4,425	443	
1983	253	25		2002	5,900	590	
1984	1,368	137		2003	8,800	880	
1985	750	75		2004	2,925	293	
1986	1,800	180		2005	2,100	210	
1987	4,225	423		2006	4,375	438	
1988	825	83		2007	2,075	208	
1989	1,600	160		2008	7,500	1,275	
1990	2,375	238		2009	16,850	5,450	
				2010	813	81	

¹Approximately 10% coho are counted in Clearwater Lake above the Clearwater Lake Outlet. There is a large gravel apron before the outlet used extensively by coho salmon.

¹ An estimated 10% of the Coho's in the Clearwater Lake Outlet is counted where the lake empties into the outlet.

Figure 1. Clearwater Lake.

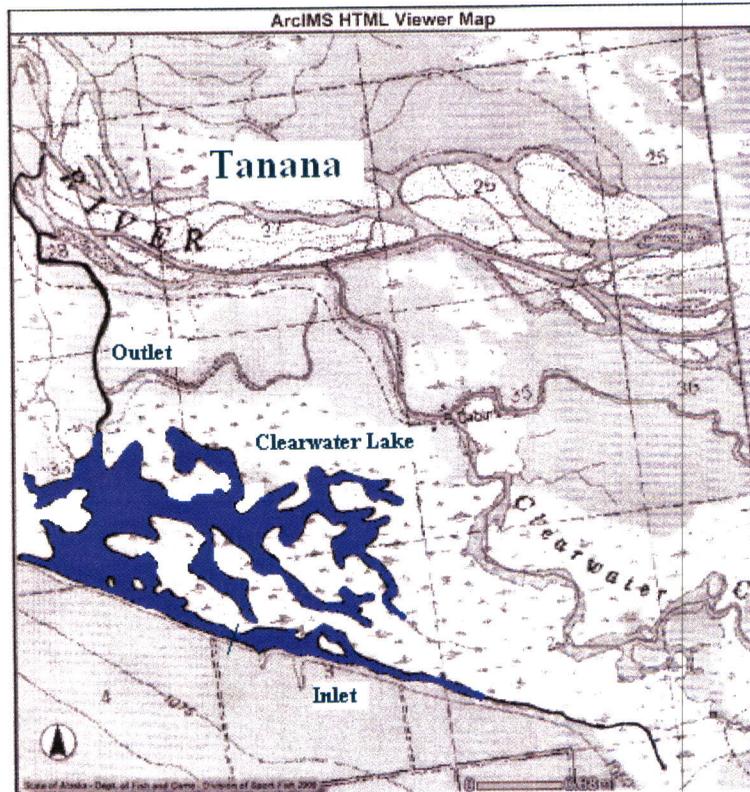


Figure 2. Aerial Photo view of Clearwater Lake to the West. Note that the Delta Clearwater River is in the foreground, Clearwater Lake in the background is independent of the Delta Clearwater River

