State of Alaska
Department of Fish and Game
Sportfish Division

Nomination Form
Fish Distribution Database

Region: Three

USGS Quad(s): Big Delta A-4; Quad No. 095

Fish Distribution Database Number of Waterway: 334-40-11000-2490-3390

Name of Waterway: Delta River ☑ USGS Name ☐ Local Name

☑ Addition ☐ Deletion ☐ Correction ☐ Backup Information

For Office Use

Nomination #	11-217		
		ADF&G Fisheries Scientist	Date
Revision Year:	2012		
Revision to:	Atlas ____ Catalog ____	ADNR OHMP Operations Mgr.	Date
	Both ____		9 May 11
		FDD Project Biologist	Date
Revision Code:	F-1		
		Cartographer	Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
CH spawning	1972-present	yes		yes	☑
CO spawning/rearing	?-present	Yes	yes	yes	☑
					☐
					☐
					☐

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: This is a new nomination for Delta River. A separate word document (Delta River.doc) contains a descriptive explanation of Delta River, includes ADF&G chum salmon survey data, and contains maps showing location. ADF&G has surveyed the Delta River since 1972 by aerial and foot survey methods. Fall chums is the principal species counted however, since 1996 coho numbers were added to the fall chum tally sheets but the numbers are unreported but included on chum salmon data sheets. The lower one mile of the Delta River is fed by upwelling spring water after summer flows in the river subside. This area of clean flowing water is one of the few spawning areas available for late returning fall chum salmon. The upwelling water provides salmon eggs deposited in these gravels warm temperatures and plenty of oxygen. The warmer gravel temperature allows the eggs to grow more rapidly to make up for the late arrival of the returning adults so they emerge in time for spring breakup. Proxity to the Tanana River is important for chums after fry emerge from the gravels, they immediately proceed to the ocean.

Supports existing AWC data

Name of Observer (please print): James F. Parker

Signature: _____ Date: 3/15/2011

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 water body 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 10:04 AM
To: Johnson, J D (DFG)
Subject: AWC nomination; Delta River (334-40-11000-2490-3390)
Attachments: Mouth of Delta River.doc; Delta River 03-23-2011.xls

New nomination. The nomination is in two parts, the nomination form and a word document that I am able to include maps, pictures, and more descriptive text. Let me know if this works for you.

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	south 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 (Forck)
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					

Delta River (USGS name) Wednesday, March 23, 2011
Anadromous stream catalog number 334-40-11000-2490-3390

Description: Delta River; headwaters at Tangle Lake flows North, 80 miles to Tanana River (64° 9.269' N; 145° 51.647' W). In the Department of Natural Resources Tanana Basis Area Plan the lower one mile of the Delta River, is critical habitat for spawning chum salmon. To recognize the importance of this area, and to protect the habitat from potentially incompatible uses, this area is recommended for legislative designation as a State Critical Habitat Area. According to DNR Mineral Order #601, states gravel removal or any development that would disrupt the spring water flow or gravel beds is prohibited.
Alluvial aquifers associated with porous floodplain gravels store water and stabilize winter flows in the lower Delta River and areas near Delta Junction. These aquifers are located on the south side of the Tanana River and are associated with sub-surface water flows from the north slope of the Alaska Range. Headwater glaciers such as Black Rapids, Jarvis, and Canwell provide water storage and increases stream flows in summer.
The lower one mile of the Delta River (Figure 1&2) is fed by upwelling spring water after summer flows in the river subside. This area of clean flowing water is one of the few spawning areas available for fall chum and coho salmon. These upwelling areas in the Delta River Mouth have stable inter-gravel temperatures, which provided the needed accumulated temperature units (ATU) for incubation and emergence.
ADF&G has surveyed the Delta River since 1972 (JTC, 2010[1]) by aerial and foot survey methods (Table 1). Fall chums is the principal species counted however, since 1996 coho numbers were added to the fall chum tally sheets but the numbers are unreported (Bonnie Borba, ADF&G-CF Biologist, personal communications). The numbers represent a peak count, where DF&G conducted about eight replicate surveys a year between October and December. The unreported coho numbers are added to Table 1. Bonnie Borba also indicated in recent years in the east channel (Figure 2) hundreds of juvenile salmon have been observed. These juveniles were minnow trapped in 2009 and identified as coho. Again in 2010, juvenile coho salmon were observed in the Eastern Channel of the Delta River.
A cursory article pertaining to Delta River Chums was written by James Parker in 2007. The article contains some relevant life history information and pictures of the Delta River area. (http://www.adfg.alaska.gov/index.cfm?adfg=wildlifenews.view_article&articles_id=329&issue_id=56).
See also attached salmon pictures (Figures 3-6).
Anadromous species present: Chum salmon (spawning and present), coho salmon (spawning and rearing).

Other Species; Arctic grayling, long nose suckers, burbot, and slimy sculpins.

Anadromous species data collection:
This nomination is to establish data for a stream that has no nomination, provide a description, and include known salmon survey data.

[1] (Joint Technical Committee of the Yukon River US/Canada Panel); 2011.; Yukon River salmon 2010; season summary and 2011 season outlook.; "Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report No. 3A10-01, Anchorage."

Figure 1. Google Earth picture of Delta River confluence with the Tanana River.

Figure 2. Google Earth picture of Delta River showing extent of spawning area and confluence with Tanana River.

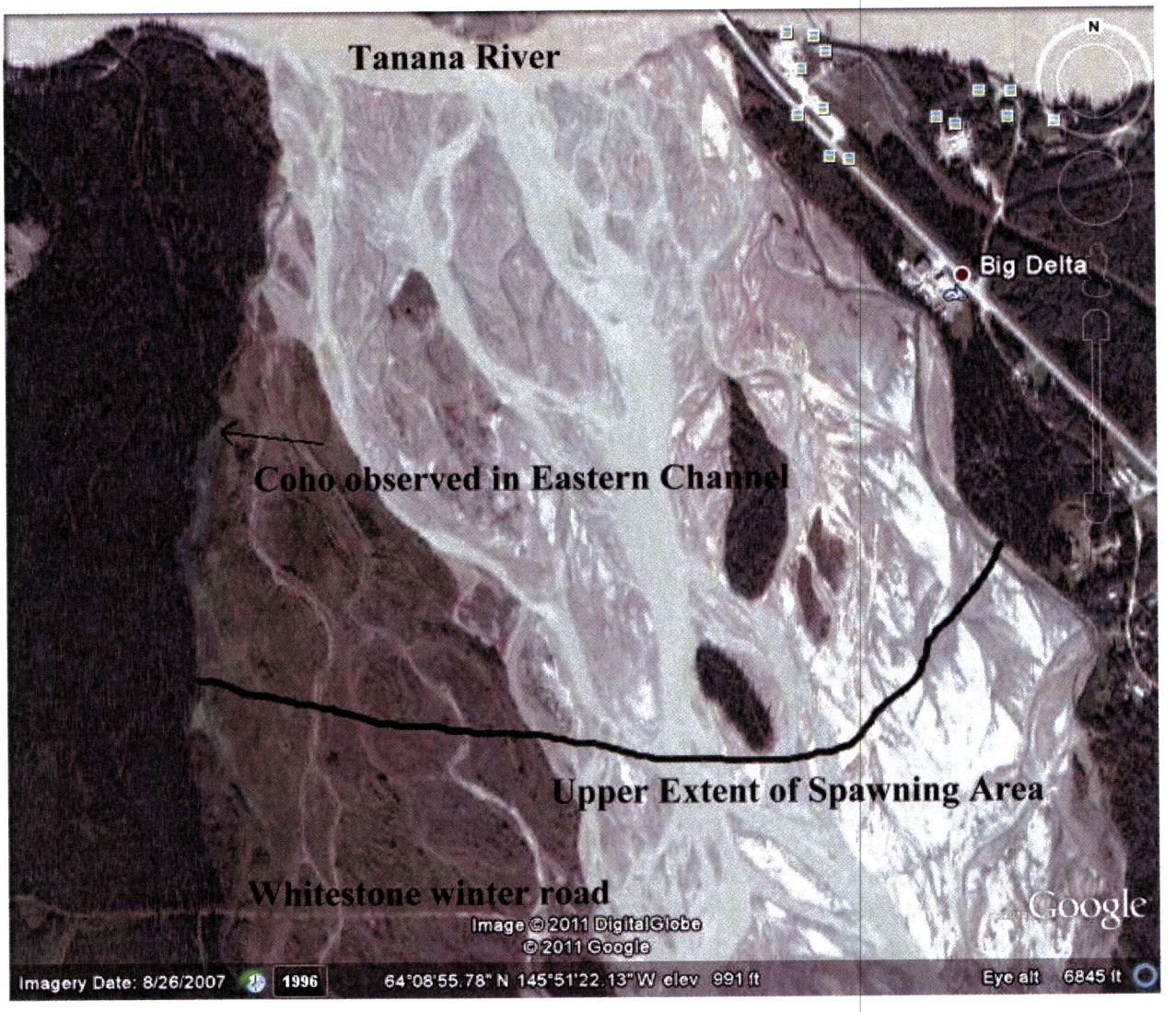

Table 1. DF&G survey counts of chum and coho salmon in the Delta River, 1972 - 2010.

Year	Fall Chum[1]	Coho[2]	Year	Fall Chum	Coho
1972	5,384	..	1992	8,893	..
1973	10,469	..	1993	19,857	..
1974	5,915	..	1994	23,777	..
1975	3,734	..	1995	20,587	..
1976	6,312	..	1996	19,758	19
1977	16,873	..	1997	7,705	143
1978	11,136	..	1998	7,805	61
1979	8,355	..	1999	16,534	23
1980	5,137	..	2000	3,001	98
1981	23,508	..	2001	8,103	160
1982	4,235	..	2002	11,992	26
1983	7,705	..	2003	22,582	243
1984	12,411	..	2004	25,073	99
1985	17,276	..	2005	28,132	79
1986	6,703	..	2006	14,055	38
1987	21,180	..	2007	18,610	238
1988	18,024	..	2008	23,055	47
1989	21,342	..	2009	13,492	60
1990	8,992	..	2010	17,933	99
1991	32,905	..			

[1] (Joint Technical Committee of the Yukon River US/Canada Panel); 2011.; Yukon River salmon 2010; season summary and 2011 season outlook.; "Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report No. 3A10-01, Anchorage."
[2] Bonnie Borba, Commercial Fisheries Biologist, Personal Communications, information from field survey forms.

Figure 3. Picture of Delta River confluence with Tanana River showing spawning channels during low flow (November).

Figure 4. Picture of chum salmon swimming up into the Delta River from the Tanana River, note the ice-free conditions of spawning channel (November).

Figure 5. Picture of chum salmon in the Delta River.

Figure 6. Picture of chum salmon fry in the Delta River.