



**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>11-228</u>	_____	_____
Revision Year: <u>2012</u>	ADF&G Fisheries Scientist	Date _____
Revision to: Atlas _____ Catalog _____	ADNR OHMP Operations Mgr.	Date _____
Both _____	<i>[Signature]</i>	<u>10 AM 11</u>
Revision Code: <u>F-3</u>	FDD Project Biologist	Date _____
	Cartographer	Date _____

**OBSERVATION INFORMATION**

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
CO spawning	1994-1998	yes		yes	<input checked="" type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>

*Observations 10+ yrs old*

**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:** Chad Spring is a spring system on the South side of Delta Clearwater River at Mile 13. There is no AWC designation for Chad Spring so I recommend attaching a new fourth order number, 334-40-11000-2490-3416-"4021". This nomination submission of Chad Spring is to add nomination to the AWC, provide a description, and add aerial coho salmon survey counts to the AWC database. A description of Chad Spring is described in the word document (Chad Spring.doc) From 1994-1998, ADF&G conducted aerial surveys of Chad Spring and 34 other springs. Chad Spring is approximately 0.36 miles in length and spawning coho salmon were observed in two of the five years, counts ranging from 0-100. The headwater of Chad Spring (N64° 02.940', W145° 21.829') is connected to the Delta Clearwater River and the South end of Chad Spring (N64° 02.976', W145° 21.974') is also at the confluence with the Delta Clearwater River. This water body has the appearance of an oxbow however, there is water flowing into the Delta Clearwater River from both ends. There is high quality coho salmon rearing habitat in this spring system. TOPO! software was used to calculate distance and obtain lat/long locations.

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

Signature: \_\_\_\_\_ Date: 4/11/2011

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 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)**

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**From:** Parker, Fronty (DFG)  
**Sent:** Tuesday, May 03, 2011 9:39 AM  
**To:** Johnson, J D (DFG)  
**Subject:** AWC nomination: Chad Spring (334-40-11000-2490-3416-4022)  
**Attachments:** Chad Spring 04-08-2011.xls; Chad Spring.doc; AWC number system for DCR.xlsx

Chad Spring is one of 21 tributaries into the Delta Clearwater River that has aerial coho salmon survey data. Chad Spring AWC number is new, the numbering scheme for new waters such as Chad Spring and others is shown in the spreadsheet "AWC number system for DCR.XLSX". Descriptive information and aerial coho salmon survey data for Chad Spring is added to this nomination.

-Fronty

Chad Spring (local name, no USGS name)

04/11/2011

**Anadromous stream catalog number** 334-40-11000-2490-3416-4022

**Description:** Chad Spring is a small spring to the Delta Clearwater River from the South side at Mile 13 (Figure 1). It has the appearance of oxbow however, water flows into the Delta Clearwater River from both ends. At the mid-section of Chad Spring upwelling water creates a maze of small channels which is excellent habitat for rearing coho salmon and is where the majority of spawning salmon are located. Spawning coho salmon have observed and counted in two of five years aerial surveys in Chad Spring were conducted. There is no AWC designation for this water body and new number is recommended.

The Delta Clearwater River (DCR) is entirely spring fed. A report written in 1991 (Parker, J. F. 1991. Status of Coho Salmon in the Delta Clearwater River of Interior Alaska. Alaska Department of Fish and Game, Fishery Data Series 91-4, Anchorage.) gives a summary of coho life history and data collected on the DCR. The report documents the DCR being only 20 miles in length, as having the largest spawning concentration in the Yukon River drainage, the largest coho sport fishery in the Tanana River drainage, and an extensive record of coho escapement index counts. Adult coho salmon distribute throughout the DCR to spawn. Coho salmon eggs hatch in February and March and coho salmon fry emerge from the gravel in May, approximately 6 months after spawning. The springs provide consistent flows, little change in water temperature, highly productive aquatic communities, and favorable over-wintering habitat for rearing coho salmon. The majority of the juvenile coho salmon rear in the DCR for 1 - 3 years before smolting, and spend 1 year in the ocean before returning (Parker 1991).

Chad Spring is a small spring tributary connecting to The Delta Clearwater River for AWC purposes (Figure1). On the USGS map it is Clearwater Creek from the mouth to headwaters however, locally the main channel is called the Delta Clearwater River to the confluence of Sawmill Creek and Clearwater Creek at Mile 14. The upstream confluence of Chad Spring flows into the Delta Clearwater River (N64° 02.940', W145° 21.829') and also flows into the river at the South confluence to the Delta Clearwater River (N64° 02.976', W145° 21.974'). The length of Chad Spring is 0.36 mile and does not appear on the USGS map.

DF&G conducts an annual coho salmon survey to assess the coho salmon escapement goal of 5,200–17,000. Annual coho counts since 1972 to the present are found in Table 1 (Parker, J. F. 2009. Fishery management report for sport fisheries in the Upper Tanana River drainage in 2008. Alaska Department of Fish and Game, Fishery Management Report No. 09-47, Anchorage.) From 1994-1998, aerial coho surveys were conducted to determine numbers of spawning coho salmon in non-boatable portions of the DCR. A significant portion of coho salmon are found spawning in non-navigatable portions of the river in short spring tributaries contributing to the DCR. Aerial counts for coho salmon in areas not counted by boat, were 21.9%, 23.8%, 19.0%, 17.1%, and 20.0% (averaging 20.36%) of the escapement, respectively (Table 1). The average proportion is then applied to the mainstem DCR count and the resultant estimate for the non-navigatable component is added to the mainstem count to obtain an estimate of total escapement. From 1994-1998, the helicopter count for Chad Spring is presented in Table 2.

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

**Other Species:** round whitefish, Arctic grayling, long nose suckers, and slimy sculpins.

**Anadromous species data collection:**

This nomination is to provide a description for this water and provide aerial coho survey data.

Figure 1. Chad Spring, Google Earth picture of Chad Spring joining at the confluence of Delta Clearwater River at both ends of the spring.



Figure 2. USGS map of the upper Delta Clearwater River including the outline of Chad Spring.

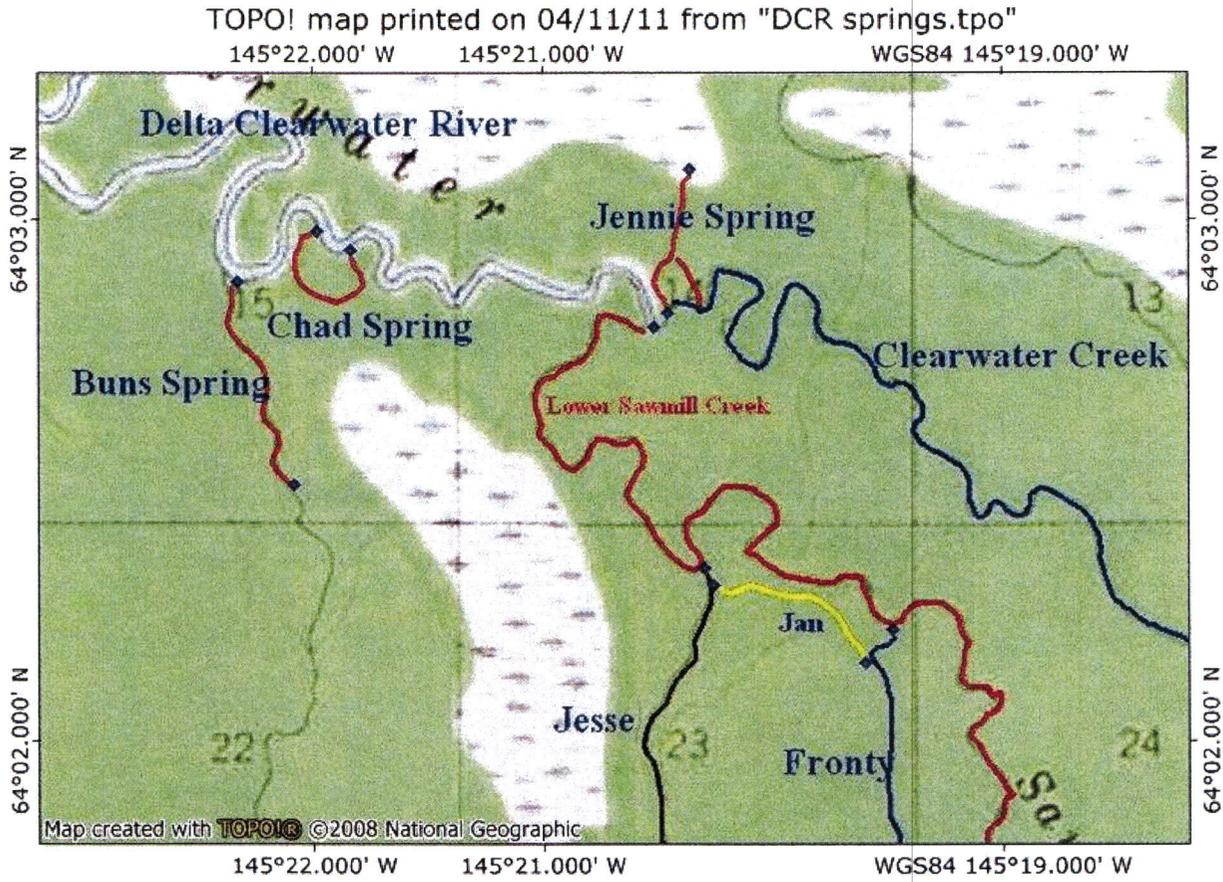


Table 1. Delta Clearwater River coho counts by boat and aerial counts from 1994-1998, expanded to include non-navigatable portions of the river in years when aerial surveys were not done.

Year	Mainstem DCR Escapement	Counts in Lower River Mile 0-8	Counts in Upper River Mile 8-18	Only Tributaries	Coho's % in Tributaries	Expanded Count to include Tributaries.
1972	632					803
1973	3,322					4,220
1974	3,954					5,023
1975	5,100					6,479
1976	1,920					2,439
1977	4,793					6,089
1978	4,798					6,095
1979	8,970					11,395
1980	3,946					5,013
1981	8,563					10,878
1982	8,365					10,627
1983	8,019					10,187
1984	11,061					14,052
1985	5,358					6,807
1986	10,857					13,793
1987	22,300					28,330
1988	21,600					27,441
1989	12,600					16,007
1990	8,325					10,576
1991	23,900					30,362
1992	3,963					5,035
1993	10,875					13,816
1994	62,675			17,565	21.9%	80,240
1995	20,100			6,283	23.8%	26,383
1996	14,070			3,300	19.0%	17,370
1997	11,525			2,375	17.1%	13,900
1998	11,100			2,775	20.0%	13,875
1999	10,975			2,967	21.3%	13,942
2000	9,225	4,200	5,025	2,494	21.3%	11,719
2001	46,875	19,375	27,500	12,013	21.3%	59,547
2002	38,625	17,700	20,925	10,441	21.3%	49,067
2003	102,800	41,575	61,225	27,791	21.3%	130,591
2004	37,550	16,775	20,775	10,551	21.3%	47,701
2005	31,175	13,825	17,350	8,428	21.3%	39,603
2006	15,950	10,100	5,850	4,312	21.3%	20,262
2007	14,650	7,325	7,325	3,961	21.3%	18,611
2008	7,500	2,475	5,025	1,917	21.3%	9,417
2009	16,850	9,425	7,425	4,307	21.3%	21,157
2010	5,867	1,961	3,906	1,586	21.3%	7,453

**Table 2.-** Helicopter Aerial Coho surveys of Chad Spring from 1994-1998.

Year	Chad Spring
1994	100
1995	25
1996	0
1997	0
1998	0