State of Alaska
Department of Fish and Game
Sportfish Division

Nomination Form
Fish Distribution Database

Region: Three

USGS Quad(s): Big Delta A-3

Fish Distribution Database Number of Waterway: 334-40-11000-2490-3416-~~4030-5004~~ 4028

Name of Waterway: Peckham Spring ☐ USGS Name ☑ Local Name

☐ Addition ☐ Deletion ☑ Correction ☑ Backup Information

For Office Use

Nomination #: 11-219

Revision Year: 2012

Revision to: Atlas ____ Catalog ____ Both X

Revision Code: D-2

ADF&G Fisheries Scientist — Date: 6/13/11

ADNR OHMP Operations Mgr. — Date: 6/13/11

FDD Project Biologist — Date: 17 May 11

Cartographer — Date: 9/21/11

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
CO spawning	1994-1998	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: Peckham Spring is a small spring tributary of Clearwater Creek. This nomination submission of Peckham Spring is to provide a description, change in AWC number, and add aerial coho salmon survey counts to the AWC database. On USGS Maps, Peckham Spring extends much further because of old stream channels. The map in the attached word document describes the watered section only. A new order to the AWC numbering system is recommended which is described in the attached word document (Peckham Spring.doc) From 1994-1998, ADF&G conducted aerial surveys of Peckham Spring and 34 other springs. Peckham Spring is 0.63 miles in length and coho salmon were observed in two of the five years of aerial surveys. The lower portion of Peckham Spring is at the confluence with Clearwater Creek (N64° 00.840', W145° 15.432') then 0.63 mile to the headwater springs which upwells from the ground (N64° 00.816', W145° 14.180'). TOPO! software was used to calculate distance and obtain lat/long locations.

Delete -4028 "Peckham Spring" is part of Clearwater Ck

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

Signature: _____ Date: 4/6/2011

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: _____

Name of Area Biologist (please print):

Revision 02/05

Unnamed spring (local name, no USGS name) 05/12/2011

Anadromous stream catalog number 334-40-11000-2490-3416-4028

Description: This unnamed tributary (4028) to Clearwater Creek as indicated on USGS maps does not have water and needs to be removed from the AWC. Figure 1 shows the Google Earth picture indicating no water exists and was confirmed during aerial surveys. Careful examination of Figure 1 indicates there was a pre-existing channel where "4028" was established from USGS maps (Figure 2). For this reason I have suggested that AWC number "4028" be relocated to the next tributary (Peckham Spring) upstream as shown in Figure 2. In the AWC, Peckham Spring as indicated on USGS maps is the natural conclusion of Clearwater Creek, in fact on the ground it does not appear so. USGS maps indicate that Peckham Spring is more extensive than what shows on the ground. It appears from the photos that Peckham Spring is a small tributary and Clearwater Creek continues upstream to its natural conclusion (spring upwelling) to the upper extent of "5007" (Figure 3). Figure 4 shows the current AWC map for upper Clearwater Creek and Figure 5 shows the suggested reconstruction of the AWC numbering of Clearwater Creek. Figure 5 also shows the reduction of Peckham Spring to its real size.

Figure 3. Google Earth picture that suggests the extent of Clearwater Creek from its confluence with Sawmill Creek to its natural conclusion at the upper extent of AWC "5007".

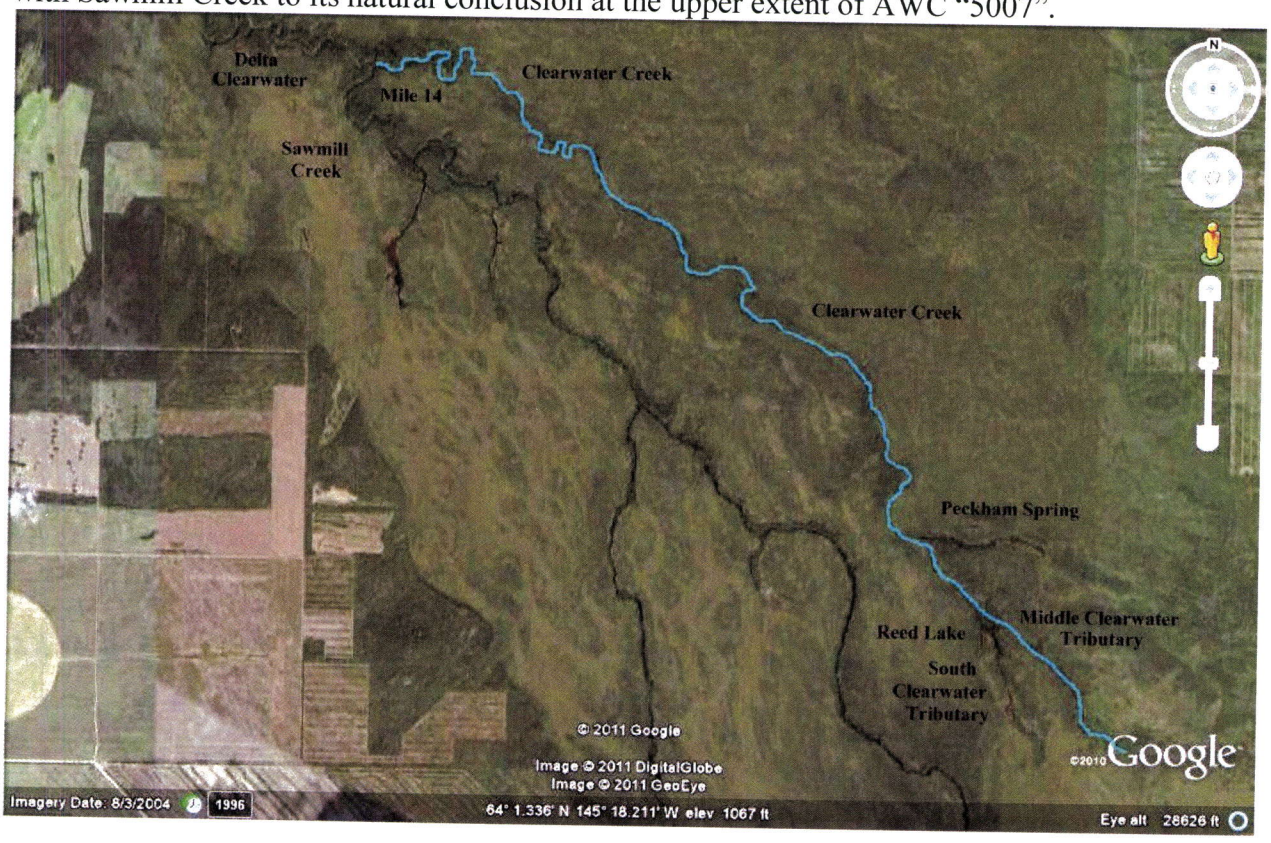


Figure 1. Google Earth picture of location of AWC 4028 and Peckham Spring in the upper Clearwater Creek.

Figure 1. Google Earth picture of upper Clearwater Creek.

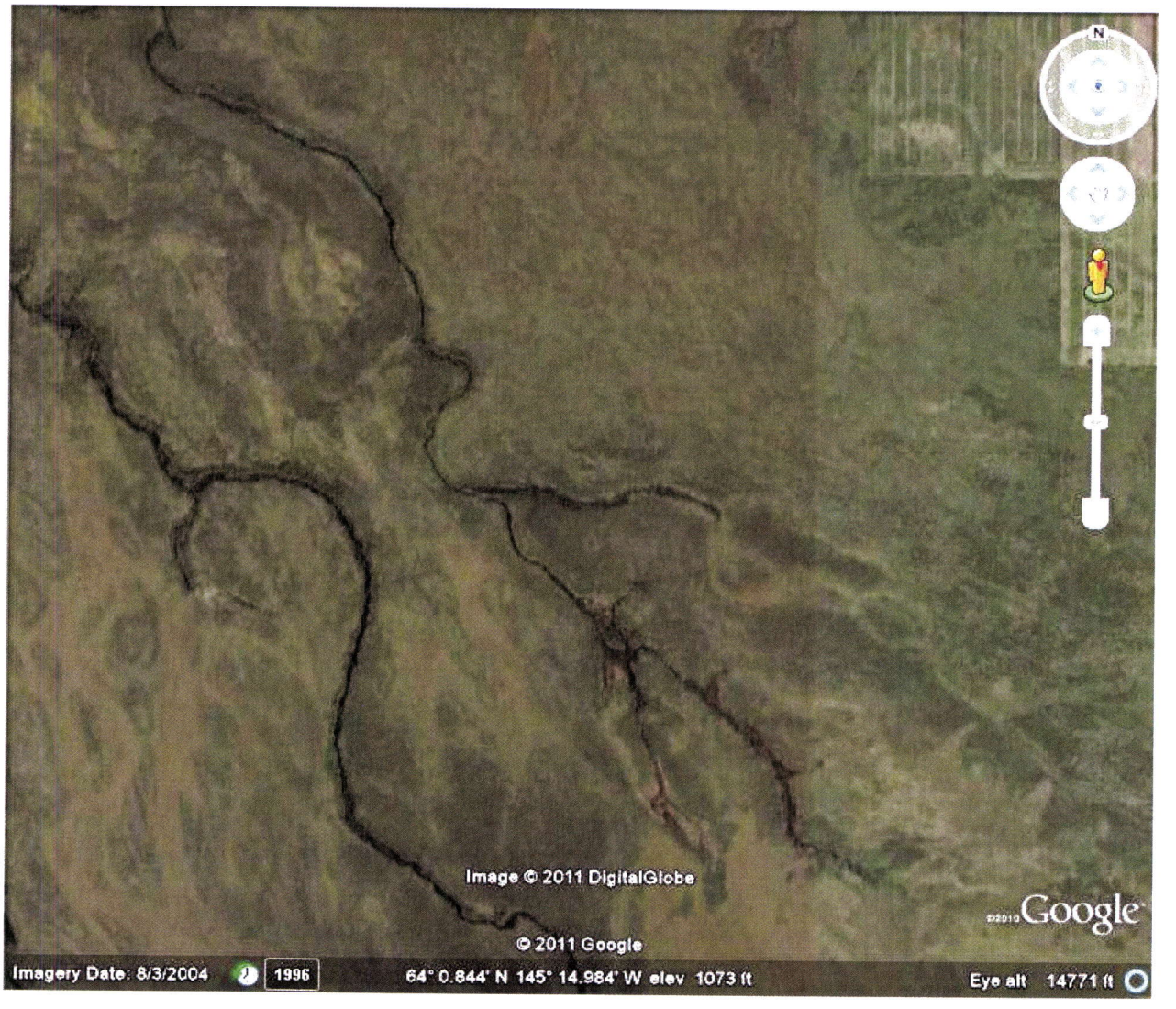


Figure 4. AWC map of upper Clearwater Creek.

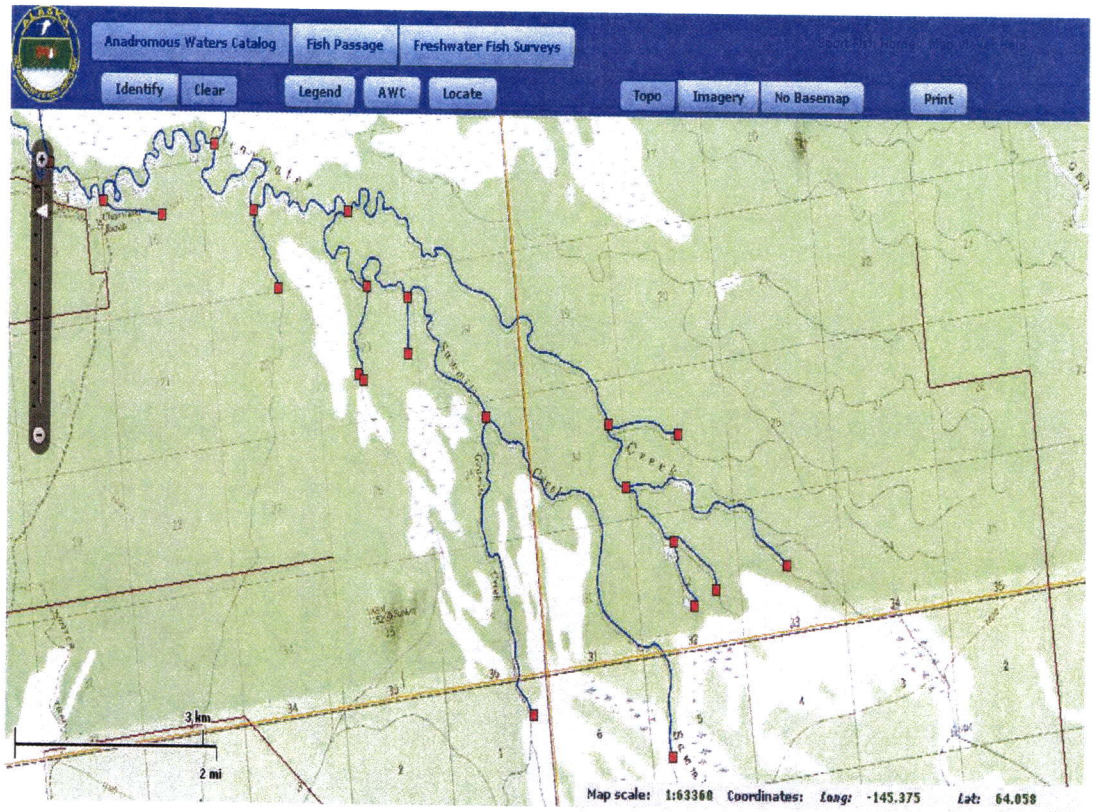
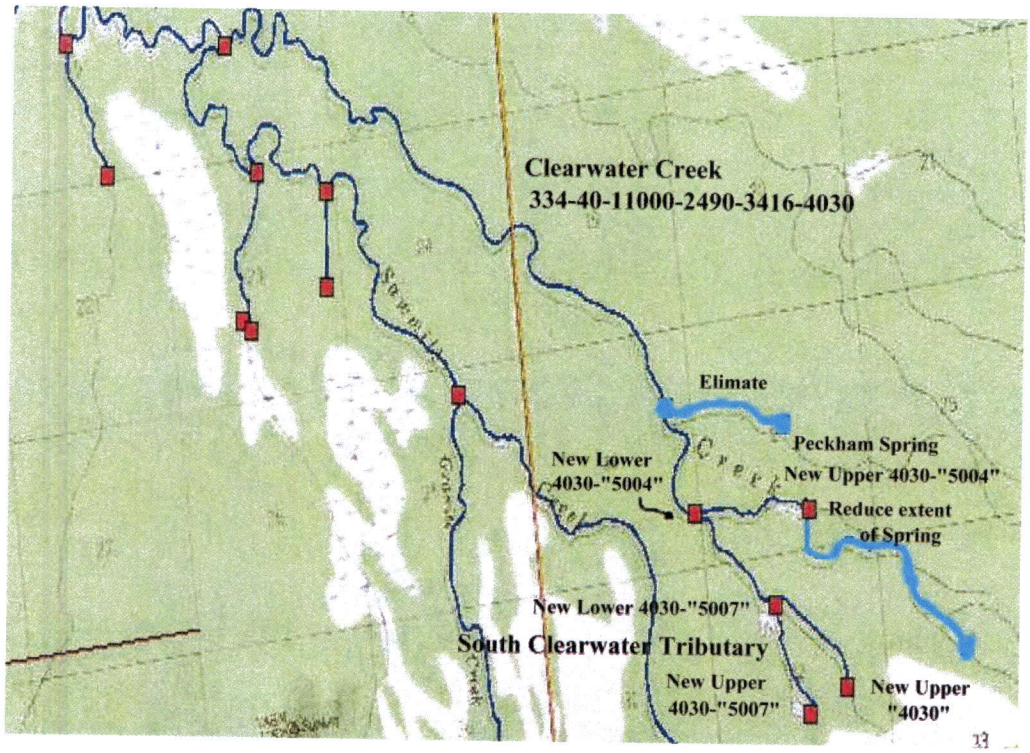


Figure 5. AWC map of upper Clearwater Creek.



Johnson, J D (DFG)

From: Parker, Fronty (DFG)
Sent: Tuesday, May 03, 2011 9:19 AM
To: Johnson, J D (DFG)
Subject: AWC nomination: Peckham Spring (334-40-11000-2490-3416-4030-5004)
Attachments: AWC number system for DCR.xlsx; Peckham Spring 04-06-2011.xls; Peckham Spring.doc

Peckham Spring is one of three tributaries to Clearwater Creek. Peckham Spring AWC number is modified as to location and extent, this is explained in the nomination form and reflected in the attached a spreadsheet "AWC number system for DCR.XLSX". Aerial coho salmon survey data for Peckham Spring is added to this nomination.
-Fronty

Figure 2. AWC map of South Clearwater Tributary including Clearwater Creek and Peckham Spring. The top picture is the original and the bottom picture is proposed changes to AWC catalog numbers.

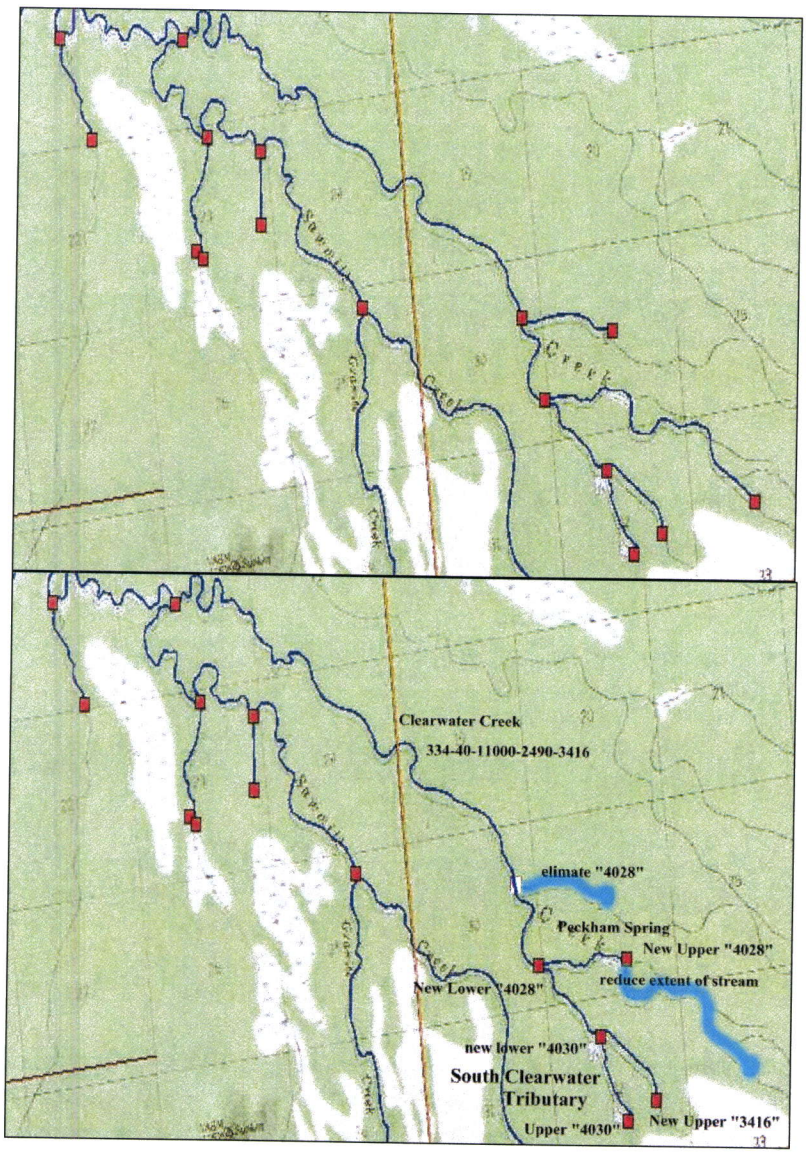


Table 1. Delta Clearwater River coho counts by boat and aerial counts from 1994-1998, expanded to include non-navigatable portions of the river in years when aerial surveys were not done.

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 Peckham Spring from 1994-1998.

Year	Peckham Spring
1994	100
1995	50
1996	0
1997	0
1998	0

Peckham Spring (local name, no USGS name) 04/07/2011
Anadromous stream catalog number 334-40-11000-2490-3416-4030-5004

Description: Peckham Spring is a small tributary to Clearwater Creek with observed spawning coho salmon. 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).

Peckham Spring is an upper reach tributary to Clearwater Creek (Figure1). The lower portion of Peckham Spring is at the confluence with Clearwater Creek (N64° 00.840', W145° 15.432'). Peckham Spring is 0.63 mile in length and its headwater springs wells from the ground (N64° 00.816', W145° 14.180').

It is recommended that Peckham Spring AWC numbering be changed from the former fourth order to a fifth order 334-40-11000-2490-3416-4030-5004 (Figure 1 and 2). Currently, "4028" is now the designation of Peckham Spring (Figure 2).

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-navigable component is added to the mainstem count to obtain an estimate of total escapement. From 1994-1998, the helicopter count for just Peckham 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, make corrections to AWC designations, and provide aerial coho survey data.

Figure 1. Peckham Spring, Google Earth picture of Peckham Spring joining at the confluence of Clearwater Creek.