



State of Alaska  
Department of Fish and Game  
Division of Sport Fish

Nomination Form  
Anadromous Waters Catalog

ALASKA DEPT. OF  
FISH & GAME  
NOV 19 2009

Region Interior USGS Quad(s) Livengood D-6  
 Anadromous Waters Catalog Number of Waterway 334-40-11000-2681  
 Name of Waterway BIG SALT RIVER  USGS Name  Local Name  
 Addition  Deletion  Correction  Backup Information

For Office Use

Nomination # <u>100379</u>	Fisheries Scientist _____ Date _____
Revision Year: <u>2011</u>	Habitat Operations Manager _____ Date _____
Revision to: Atlas _____ Catalog _____	AWC Project Biologist _____ Date <u>1 July 10</u>
Both _____	Cartographer _____ Date _____
Revision Code: <u>F-1</u>	

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
<u>Chinook salmon</u>	<u>8/21/2009</u>		<u>65</u>		<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:** Additional documentation of chinook rearing in lower section of Big Salt River, including near mouth. Chinook all captured with minnow traps (all age-0 juveniles). All sampling conducted in stream above Yukon R. influence. Fry rearing extends from tributary mouth upstream to upper most capture site (see map & data sheet coord). It is recommended that COP be deleted from Big Salt R. unless positively confirmed.  
Route 4-462 added colosima do not remove

Name of Observer (please print): DAVID W. DAUM  
 Signature: [Signature] Date: 11/12/09  
 Agency: U.S. Fish & Wildlife Service  
 Address: 101 12th Ave., Room 110  
FAIRBANKS, AK 99701

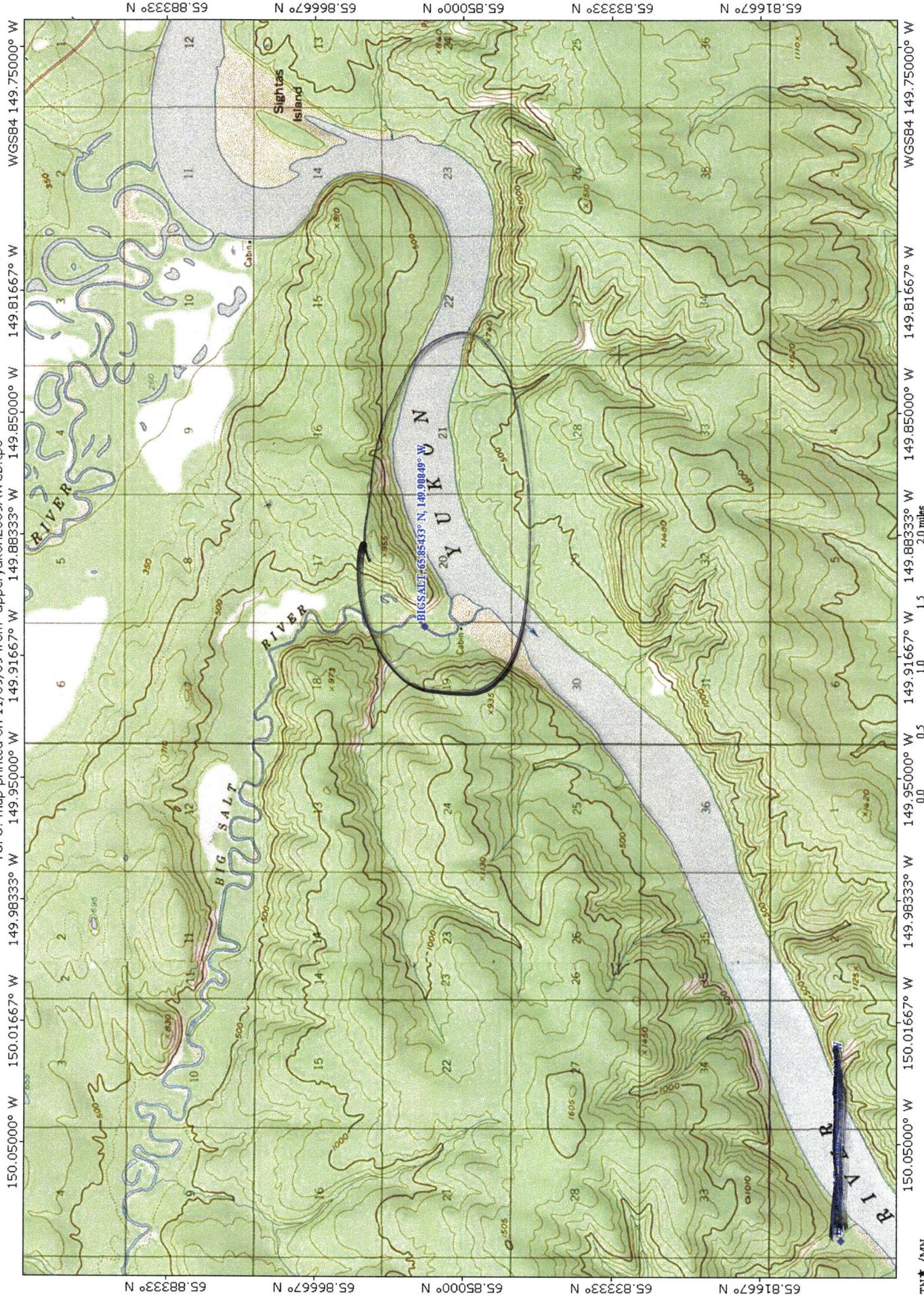
This certifies that in my best professional judgment and belief the above information is evidence that this waterbody should be included in or deleted from the Anadromous Waters Catalog.

Signature of Area Biologist: [Signature] Date: 16 Nov 2009 Revision \_\_\_\_\_  
 02/08

Chinook juvenile sampling - upper Yukon mainstem tributaries - 2009											
Stream	Sample site	Lat deg (N)	Long deg (W)	Lat deg (N)	Long deg (W)	coordinates replotted from map	Sample date	Number Chinook sampled	Number of traps deployed	Sample time (h)	Length range of sample (mm)
Big Salt River	Site 1	65.85435	-149.91077	65.85433	-149.90849		8/21/2009	65	6	26.00	59 - 86
Other fish captured: slimy sculpin, juvenile longnose sucker											

# Livengod D-6

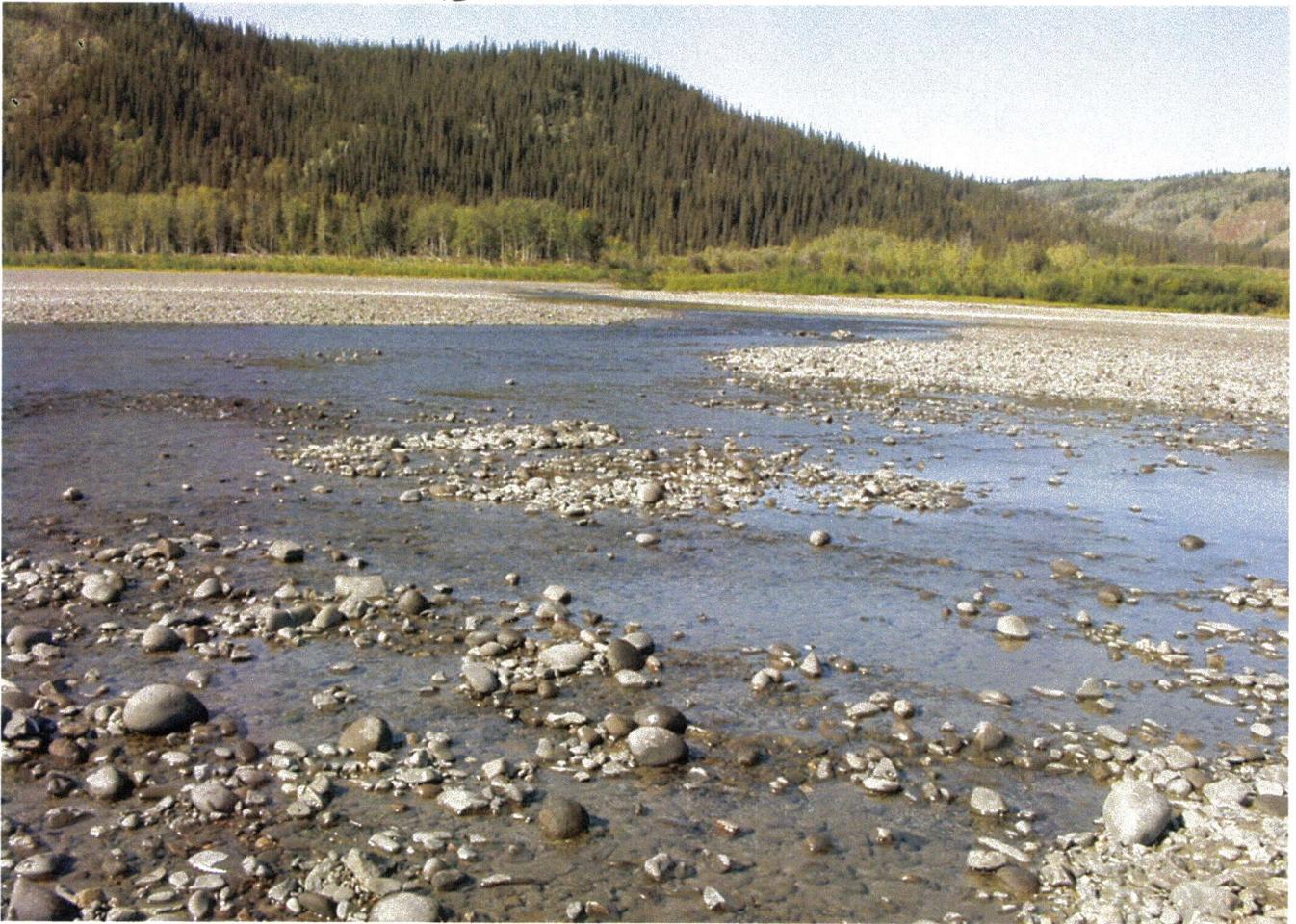
TOPOI map printed on 11/09/09 from "upperyukon2009AWCb.tpo"



TN\* /MN  
21%

Map created with TOPOI® ©2002 National Geographic (www.nationalgeographic.com/topo)

Big Salt R



MOUTH



Site 1



State of Alaska  
Department of Fish and Game  
Division of Sport Fish

Fish Survey  
Nomination Form  
Fish Distribution Database

1

X

ALASKA DEPT OF FISH & GAME  
8-2-2004

Region: Interior  
 Fish Distribution Database Number of Waterway: N/A 334-40-11000-2681 USGS Quad: Tanana D-1, LIND-6 Status: N/A  
 Name of Waterway: Big Salt River  USGS Name  Local Name  
 Addition  Deletion  Correction  Backup Information

For Office Use

2/24/05

Nomination # <u>04 482</u>	<u>[Signature]</u>	<u>2/24/05</u>
Revision Year: <u>2006</u>	Fisheries Scientist	Date
Revision to: Atlas _____ Catalog _____	<u>[Signature]</u>	<u>12-02-04</u>
Both <input checked="" type="checkbox"/>	FDD Project Biologist	Date
Revision Code: <u>B-6 B-1, A-1</u>	<u>[Signature]</u>	<u>1-27-05</u>
	Drafted	Date

**Site Information** Station: FSI0421A01 Date Observed: 8/24/2004 Legal Desc.: Sec 9, T. 12 N., R. 13 W., F.M. Latitude: Longitude: Datum:  
 Stream Depth (m) Width (m) Water Temp. (C): 9.1 Down Stream (Transformed) 65.88189 -150.26203 NAD27  
 Parameters: OHW 0.9 21.6 Stream Stage: Medium Up Stream (Transformed) 65.88229 -150.15426 NAD27  
 Wetted 0.6 17.8 Dominant Substrate: Gravel Down Stream (Original) 65.88144 -150.26465 WGS84  
 Rosgen Channel Type: C4 Low gradient, meandering, point-bar, riffle/pool, alluvial channels with broad, well-defined floodplains. Up Stream (Original) 65.88184 -150.15688 WGS84

Station Comments: Waypoint located at upstream terminus of reach was marked from the ground. Waypoint at the downstream terminus of the reach was marked from the helicopter. All on-ground sampling occurred at the upstream terminus of reach. Visual observations below this point were made from the helicopter (Samp. ID B).

**Observation Information**

Life History: Obligate anadromous population

Species\Lifestage: chum salmon carcass (suspected spawning) Samp. ID (# Fish): B (100) C (3) Barriers: Specific Barrier Unknown  
 Species\Lifestage: coho salmon juvenile Samp. ID (# Fish): A (6) Barriers: Specific Barrier Unknown

Life History: Resident

Species\Lifestage: Arctic grayling juvenile/adult Samp. ID (# Fish): C (1) D (1) Barriers: None  
 Species\Lifestage: Arctic grayling juvenile Samp. ID (# Fish): A (1) Barriers: None  
 Species\Lifestage: slimy sculpin adult Samp. ID (# Fish): A (3) Barriers: None  
 Species\Lifestage: slimy sculpin juvenile/adult Samp. ID (# Fish): A (7) Barriers: None  
 Species\Lifestage: slimy sculpin juvenile Samp. ID (# Fish): A (5) Barriers: None

Extend CHp in stream  
 Add CR to stream reach 334-40-11000

Additional Comments: Extend 334-40-11000-2681 (Big Salt River) with CHs (photos 3,4) and CR (New species. See photos 6,7). FDD shows chum salmon spawning in the Big Salt River about 5 km downstream, and coho salmon present in the Yukon River, about 20 km downstream.

Name of Observer: Joe Buckwalter Phone: (907) 267-2345 Date Printed: 11/2/2004  
 Signature: [Signature]  
 Address: Alaska Department of Fish and Game, Division of Sport Fish  
 333 Raspberry Road  
 Anchorage, AK 99518-1599

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: \_\_\_\_\_

Consideration of removal of coho salmon AWC documentation in Yukon River systems.

Issue – Based on an extensive sampling effort trapping juvenile fishes downstream from the Canadian border, Dave Daum (USF&WS) has submitted several nomination forms to delete coho salmon rearing, spawning, or presence from a number of AWC listed water bodies. The water bodies listed below are being considered for revision. Existing AWC coho salmon life stage documentation and lower pt fish species/life stage info (in parenthesis) is included.

334-45-11000-2325 (Kandik River (Charley Creek)) – coho salmon present (CHp,COp,Ksr)

334-45-11000-2325-3013 – coho salmon rearing (COOr,Kr)

334-45-11000-2325-3017 – coho salmon rearing (COOr,Kr)

334-45-11000-2325-3021 – coho salmon rearing (COOr,Kr)

334-45-11000-2325-3021-4006 – coho salmon rearing (COOr,Kr)

334-45-11000-2501 (Tatonduk River) – coho salmon present/spawning (CHp,COp,Ks)

334-40-11000-2661 – coho salmon rearing (COOr,Kr)

334-40-11000-2665 – coho salmon rearing (COOr,Kr)

334-40-11000-2681 – (Big Salt River) coho salmon rearing/present (CHs,COp,Kr)

(J. Johnson) AWC documentation for Kandik River (334-45-11000-2325) & tribs or 334-45-11000-2501 (Tatonduk River) to add coho salmon does not exist (no nom), 334-40-11000-2661 - added with Chinook & coho salmon rearing, nom # 04-479 (OHMP), 334-40-11000-2665 - added with Chinook & coho salmon rearing nom# 04-473, 334-40-11000-2681 – (Big Salt River) added with coho salmon, nom # 04-482 (AFFI).

Following are excerpts from emails or phone conversations -

(Dave Daum) I would delete these records unless there is definitive proof that these juvenile fish are actually coho. I have done genetics on over 800 age-0 juveniles in this part of the Yukon and they are all Chinook so far. As I have been saying for years now, the NOAA, Morrow, etc. keys for juvenile salmon identification can be very misleading for upper Yukon River Chinook salmon. I have caught fish with sickle-shaped anal fins, white leading edges, orange hue, parr marks narrow relative to space, etc. and so far they have been all genetically identified as Chinook. I had fish removed out of the UAF museum collection that were misidentified by ADF&G personnel as coho in the 1970's in the upper Yukon area (I sent to Ray Baxter, and he confirmed through meristics as Chinook). USFWS conducted a contaminants study in the Innoko River in the 1990's and misidentified numerous coho and Chinook salmon fry using these keys. Our genetics lab since those days screens ALL salmon fry for species before doing analysis. They do this because mis-identification of juvenile salmonids has been a common occurrence,

Consideration of removal of coho salmon AWC documentation in Yukon River systems.

especially in some areas of the Yukon River. We have recently done some work on the Tanana River and did pyloric caeca counts to confirm speciation in age-0 juvenile Chinook and coho. I sampled Minook Creek (directly across from Squaw Creek) on Aug 29, 2006. I captured 104 juvenile salmonids, they ranged from 65 - 95 mm, and all were genetically screened as Chinook salmon.

(Bonnie Borba) Only kings and chum salmon noted in the Charley Creek in the aerial survey database, local report of coho salmon in the Black River as well as in the local subsistence fisheries.

(Roger Dunbar) Reports capture of coho salmon @ Eagle sonar site, but very few

(Pat Milligan- DFO) Documentation of coho salmon in the Porcupine River (Canadian side) and rearing coho salmon in Fishing Branch River (trib of Porcupine R.). The coho run within the Porcupine River drainage appears to be much stronger than the one to the upper Yukon. Coho are often caught in the aboriginal fishery located on the main stem Porcupine River near Old Crow late in the season by individuals fishing under the ice.

(Joe Buckwalter) I haven't had genetic tests run on any voucher specimens, but I routinely use meristic counts (esp. pyloric caeca and branchiostegals) to confirm difficult ID on difficult specimens. White leading edge of anal fin means nothing—however, a white leading edge *followed by a black stripe/zone*, when present, seems to be a very good indicator for coho (although the black can fade on larger specimens). However, so far I'm not convinced there is sufficient evidence to retract any coho listings, at least not for Squaw Creek or Big Salt River (which I can vouch for).

(Robert Clark) The best way to confirm coho presence will be to confirm adults spawning in drainages, which I am relatively sure does occur in the upper Yukon, albeit infrequently. CF aerial surveys aren't late enough in the year to detect coho salmon adults. It's a shame, but deletion probably should (will) occur until we can confirm adults in these rivers, which will be infrequent based on my experience.

(James Durst) Attached is a spreadsheet summarizing field and laboratory examinations of juvenile salmon in the Tanana River basin near Big Delta. In this reach, live juvenile coho salmon and Chinook salmon can be tricky to tell apart in the hand if using parr marks, dorsal fin shading, or anal fin shading or shape. The definitive external characteristic turned out to be adipose fin pigmentation.

(Robert Karlen) Reports he has no reason to doubt the validity of the fish species identifications, does not recall any difficulty or issues w/identification. Streams added were 334-40-11000-2661 - added with Chinook & coho salmon rearing, nom # 04-479  
334-40-11000-2665 - added with Chinook & coho salmon rearing nom# 04-473,  
(OHMP)

Consideration of removal of coho salmon AWC documentation in Yukon River systems.

Streams under consideration for revision w/SF AB & CF/AB

334-45-11000-2325 - John Burr, John Linderman  
334-45-11000-2325-3013 - John Burr, John Linderman  
334-45-11000-2325-3017 - John Burr, John Linderman  
334-45-11000-2325-3021 - John Burr, John Linderman  
334-45-11000-2325-3021-4006 - John Burr, John Linderman  
334-45-11000-2501 - John Burr, John Linderman  
334-40-11000-2661 – John Burr, John Linderman  
334-40-11000-2665 – John Burr, John Linderman  
334-40-11000-2681- John Burr, John Linderman

334-45-11000-2325 – Kandik River is documented in AWC w/Chinook salmon rearing to the US-Canada border and coho salmon present to the mouth of 334-45-11000-2325-3021, revision would not affect the extent of AWC documentation in the Kandik River, only result would be deletion of single species (coho salmon). Since no documentation can be located to substantiate coho salmon observations, recommend deleting coho salmon present from stream.

334-45-11000-2325-3013 – Delete coho salmon rearing due to lack of substantiating occurrence observations.

334-45-11000-2325-3017 - Delete coho salmon rearing due to lack of substantiating occurrence observations.

334-45-11000-2325-3021 – Delete coho salmon rearing due to lack of substantiating occurrence observations.

334-45-11000-2325-3021-4006 - Delete coho salmon rearing due to lack of substantiating occurrence observations.

334-45-11000-2501 – Delete coho salmon present & spawning due to lack of substantiating occurrence observations.

334-40-11000-2661 – Observers are confident in their identification of juvenile coho salmon, do not delete coho salmon rearing.

334-40-11000-2665 – Observers are confident in their identification of juvenile coho salmon, do not delete coho salmon rearing.

334-40-11000-2681- Observers are confident in their identification of juvenile coho salmon, do not delete coho salmon rearing or present.