



State of Alaska
Department of Fish and Game
Habitat and Restoration Division

Nomination of Waters
Important to Anadromous Fish

Region: Southcentral

USGS Quad: Seldovia D-4

Anadromous Water Catalog Number of Waterway: 244-10-10010

Status:

Name of Waterway: Anchor River

USGS Name

Local Name

Addition

Deletion

Correction

Backup Information

For Office Use

Nomination # <u>01 302</u>	<u>[Signature]</u>	<u>11/10/01</u>
Revision Year: <u>2001</u>	Regional Supervisor	Date
Revision to: Atlas _____ Catalog _____	<u>[Signature]</u>	<u>11/14/01</u>
Both <u>X</u>	AWC Project Biologist	Date
Revision Code: <u>A-1</u>	<u>[Signature]</u>	<u>12/13/01</u>
	Drafted	Date

SITE INFORMATION Date Observed: 8/31/99

Station: SKP2002A04 Visit: 1 Latitude: 59.796506 Longitude: -151.202883 Legal: SE 1/4 Section 29, T. 4 S., R. 11 W., S.M.

Substrate Organic (%): Sand (%): Silt/Clay (%): Gravel (%): Cobble (%): Boulder (%): Bedrock (%):
35 30 35

Water Temp (C): 8 Strm. Stage: Medium OHW Width (m): 1.1 OHW Thalweg depth (m): 0.12

Station Comments: Surface channel discontinuous within 1 km upstream of site.

SPECIES INFORMATION

Species: Dolly Varden Life Stage: Juvenile Count: 5
Sampling Method: Portable Electrofisher Area (m2): Effort (s): 107

Fish passage barrier at site: Unknown Trap in: Trap out:

Species Comments: 2 additional Dolly Varden observed, not captured.

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.

Name of Observer: Michael Wiedmer, Habitat Biologist
Signature: [Signature] Date: 10/19/01
Address: Habitat and Restoration Division, Alaska Department of Fish and Game
333 Raspberry Road
Anchorage, AK 995181599 USA
9072672337

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 Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes per AS 16.05.870.

Signature of Area Biologist: _____ Revision 9/99



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Important to Anadromous Fish

Region: Southcentral USGS Quad: Seldovia D-4
 Anadromous Water Catalog Number of Waterway: _____ Status: _____
 Name of Waterway: Anchor River USGS Name Local Name
 Addition Deletion Correction Backup Information

For Office Use

Nomination # _____	_____	_____
Revision Year: _____	Regional Supervisor _____	Date _____
Revision to: Atlas _____ Catalog _____ Both _____	AWC Project Biologist _____	Date _____
Revision Code: _____	Drafted _____	Date _____

SITE INFORMATION Date Observed: 7/29/88
 Station: SKP8804A01 Visit: 1 Latitude: _____ Longitude: _____ Legal: SE 1/4 Section 29, T. 4 S., R. 11 W., S.M.
 Substrate Organic (%): Sand (%): Silt/Clay (%): Gravel (%): Cobble (%): Boulder (%): Bedrock (%):
 _____ 5 _____ 90 _____ 5 _____
 Water Temp (C): 9 Strm. Stage: Medium OHW Width (m): _____ OHW Thalweg depth (m): _____
 Station Comments: Numerous beaver dams in area. Slow water with muddy bottom. Willow and grass bank vegetation.

SPECIES INFORMATION
 Species: no fish collected or observed Life Stage: Not Applicable Count: _____
 Sampling Method: Portable Electrofisher Area (m2): 65 Effort (s): 180
 Fish passage barrier at site: Unknown Trap in: _____ Trap out: _____
 Species Comments: _____

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.

Name of Observer: Stewart Seaberg, Habitat Biologist
 Signature: *Stewart Seaberg* Date: 10/19/01
 Address: Habitat and Restoration Division, Alaska Department of Fish and Game
 333 Raspberry Road
 Anchorage, AK 995181599 USA
 9072672444

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 Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes per AS 16.05.870.

Signature of Area Biologist: _____ Revision 9/99



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Nomination of Waters
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Nomination # _____	_____	_____
Revision Year: _____	Regional Supervisor _____	Date _____
Revision to: Atlas _____ Catalog _____	_____	_____
Both _____	AWC Project Biologist _____	Date _____
Revision Code: _____	_____	_____
_____	Drafted _____	Date _____

SITE INFORMATION Date Observed: 7/29/88
 Station: SKP8804A01 Visit: 2 Latitude: _____ Longitude: _____ Legal: SE 1/4 Section 29, T. 4 S., R. 11 W., S.M.
 Substrate Organic (%): Sand (%): Silt/Clay (%): Gravel (%): Cobble (%): Boulder (%): Bedrock (%):
 _____ 5 _____ 90 _____ 5 _____
 Water Temp (C): 9 Strm. Stage: Medium OHW Width (m): _____ OHW Thalweg depth (m): _____
 Station Comments: Numerous beaver dams in area. Slow water with muddy bottom. Willow and grass bank vegetation.

SPECIES INFORMATION
 Species: no fish collected or observed Life Stage: Not Applicable Count: _____
 Sampling Method: Minnow Trap Area (m2): _____ Effort (s): _____
 Fish passage barrier at site: Unknown Trap in: _____ Trap out: _____
 Species Comments: _____

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.

Name of Observer: Stewart Seaberg, Habitat Biologist
 Signature: *Stewart Seaberg* Date: 10/19/01
 Address: Habitat and Restoration Division, Alaska Department of Fish and Game
 333 Raspberry Road
 Anchorage, AK 995181599 USA
 9072672444

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 Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes per AS 16.05.870.

Signature of Area Biologist: _____ Revision 9/99

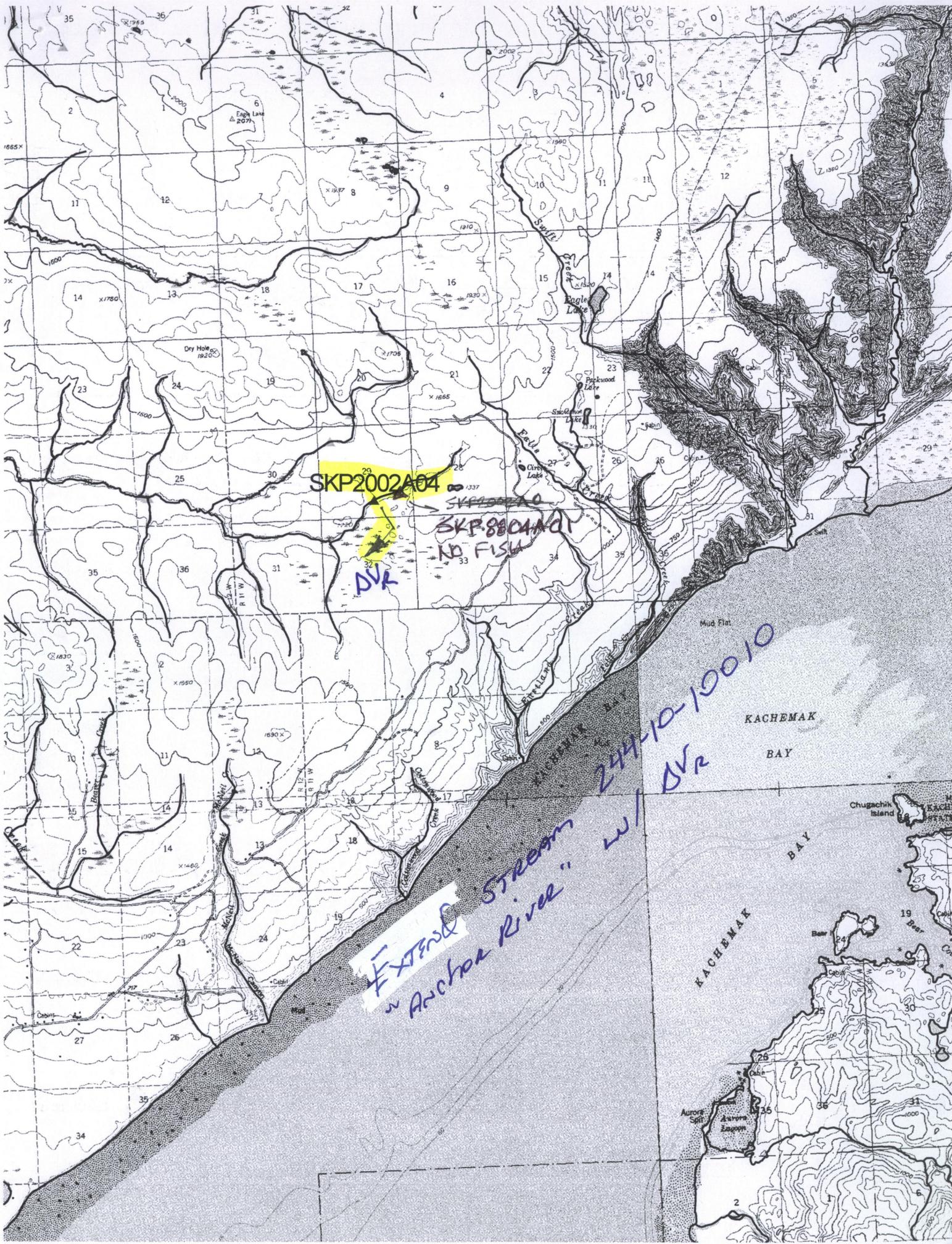
SKP2002A04

SKP 8804A01
NO FISH

DVR

244-10-10010
DVR

Extend Stream
"Anchor River" W



Ed Weiss

From: Ed Weiss [ed_weiss@fishgame.state.ak.us]
Sent: Friday, July 14, 2000 11:48 AM
To: 'mike_wiedmer@fishgame.state.ak.us'
Cc: Lance L Trasky; Donald O Mckay; Wayne Dolezal
Subject: RE: Aquatic habitat in Center Plateau State Timber Sale

Given the weir data I agree about classifying the Dolly's within the system as anadromous. Get me a nomination with supporting documentation (weir data, etc.).

Perhaps we can get someone to do a strontium test on some of these fish to confirm.

-----Original Message-----

From: Michael Wiedmer [mailto:mike_wiedmer@fishgame.state.ak.us]
Sent: Friday, July 14, 2000 11:12 AM
To: Steven W Albert; Jeff Davis; Donald O Mckay; Edward W Weiss
Subject: Aquatic habitat in Center Plateau State Timber Sale

I have calculated the following statistics for the area within the proposed Center Plateau State Timber Sale. This information is based on our fish habitat surveys as compiled in our FishSurvey GIS project (which is on the I: drive).

Streams:
Count: 22
Total length: 97.5 km

Documented Anadromous Fish Waterbodies:
Count: 5
Total length: 40.9 km

Resident Fish Waterbodies:
Count: 9
Total length: 11.1 km

Note that Dolly Varden is the species found in the streams classified resident. However, anadromous Dolly Varden are the most common species counted through the Deep Creek weir and no anadromous fish migratory blockages are known in this portion of the watershed. A strong argument could (should?) be made that all the Dolly Varden-only streams found in the Center Plateau timber sale should be classified anadromous.

Let me know if you have any questions.

11/7/01 Done w/ Anchor submissions
Still working on Deep Creek

Fishery Data Series No. 95-44

**Lower Kenai Peninsula Dolly Varden Studies
During 1994**

by

Larry L. Larson

December 1995

Alaska Department of Fish and Game

Division of Sport Fish



Table 1.-Historical catch and harvest data from the Anchor River Dolly Varden sport fishery, 1977-1994.

Year	Creel Survey ^a		Statewide Harvest Survey ^b	
	Catch	Harvest	Catch	Harvest
1977				9,222
1978				17,357
1979				21,364
1980				10,948
1981				15,271
1982				10,375
1983				17,277
1984				5,560
1985				7,720
1986				3,910
1987	9,414	2,653		2,735
1988	11,992	2,915		2,746
1989	5,605	1,615		1,476
1990	5,391	2,124 ^c	11,441	2,821
1991	5,995	1,520 ^d	14,433	1,409
1992			18,303	2,532
1993			9,719	1,031
1994			13,305	1,574

^a Larson et al. 1988; Larson and Balland 1989; Larson 1990-1992.

^b Mills 1979-1994, Howe et al. 1995.

^c Fishing for Dolly Varden was closed by emergency order after 7 August 1990.

^d The daily Dolly Varden bag limit was reduced from five to two beginning in 1991.

was prohibited from 1 September through 31 December (ADF&G 1991). The reduction in bag limit from five to two Dolly Varden was implemented on the Anchor River, Deep Creek, Stariski Creek, and the Ninilchik River to protect the Dolly Varden spawning stocks of the lower Kenai Peninsula. These same regulations remained in effect during 1994.

The Anchor River Dolly Varden population seems to follow a life history model similar to those described for Kodiak and Southeast Alaskan Dolly Varden (Sonnichsen 1990;

Armstrong 1965, 1984). In this hypothetical model, the Anchor River is a spawning stream inhabited by juveniles (presmolt) and adults. The adults that spawn in the Anchor River remain there over winter and those that survive return to salt water the following spring (Larson 1990). Subadults forage in Cook Inlet and migrate to an overwintering area possibly other than the Anchor River for 1 or 2 years after smolting. Major coastal overwintering areas that have been described for Dolly Varden are lakes (Armstrong 1965 and 1984); thus, likely areas for the Anchor

Table 10.-Anchor River Dolly Varden estimates by age of percent composition, weir counts, annual survival and annual mortality from 1 July through 15 August, 1988-1994.

Year	n	Age ^a									Total
		2	3	4	5	6	7	8	9	10+	
<u>Weir Count</u>											
1988	622	58	842	3,353	7,040	2,366	682	73	102	0	14,516
1989	557	71	750	2,492	2,681	3,520	933	231	14	0	10,692
1990	366	38	1,961	2,580	3,409	1,595	769	25	25	21	10,427
1991	240	164	1,663	6,262	6,229	2,185	1,040	423	36	0	18,002
1992	380	8	1,387	2,474	2,751	1,882	552	182	57	0	9,293
1993	400	5	858	1,585	3,097	2,065	439	194	19	0	8,262
1994	410	23	2,911	5,727	5,189	2,430	865	114	0	0	17,259
<u>Percent</u>											
1988	622	0.4	5.8	23.1	48.5	16.3	4.7	0.5	0.7	0.0	100.0
1989	557	0.7	7.0	23.3	25.1	32.9	8.7	2.2	0.1	0.0	100.0
1990	366	0.4	18.8	24.7	32.7	15.3	7.4	0.2	0.2	0.2	100.0
1991	240	0.9	9.2	34.8	34.6	12.1	5.8	2.3	0.2	0.0	100.0
1992	380	0.1	14.9	26.6	29.6	20.3	5.9	2.0	0.6	0.0	100.0
1993	400	0.1	10.4	19.2	37.5	25.0	5.3	2.3	0.2	0.0	100.0
1994	410	0.1	16.9	33.2	30.1	14.1	5.0	0.7	0.0	0.0	100.1

	Age ^a				
	5-6	6-7	7-8	8-9	9-10
<u>Annual Survival</u>					
1988-1989	0.500	0.394	0.339	0.192	0.000
1989-1990	0.595	0.218	0.027	0.108	1.500
1990-1991	0.641	0.652	0.550	1.440	0.000
1991-1992	0.302	0.253	0.175	0.135	0.000
1992-1993	0.751	0.233	0.351	0.104	0.000
1993-1994	0.785	0.419	0.260	0.000	0.000
<u>Annual Mortality</u>					
1988-1989	0.500	0.606	0.661	0.808	1.000
1989-1990	0.405	0.782	0.973	0.892	-0.500
1990-1991	0.359	0.348	0.450	-0.440	1.000
1991-1992	0.698	0.747	0.825	0.865	1.000
1992-1993	0.249	0.767	0.649	0.896	1.000
1993-1994	0.215	0.581	0.740	1.000	1.000

^a Age composition based on fish mortalities collected on the weir face (1988) and random sampling schedules (1989-1994).

Appendix A2.-The daily and cumulative number of fish, by species, passed downstream through the Anchor River weir during 1994.

Date	<u>Dolly Varden</u>		<u>Chinook S.</u>		<u>Pink Salmon</u>		<u>Coho Salmon</u>		<u>Steelhead</u>		<u>Sockeye S.</u>		<u>Chum Salmon</u>	
	Daily Count	Cum. ^a Count	Daily Count	Cum. Count	Daily Count	Cum. Count	Daily Count	Cum. Count	Daily Count	Cum. Count	Daily Count	Cum. Count	Daily Count	Cum. Count
03-Jul	5	5	1	1	7	7		0		0		0		0
04-Jul	5	10	2	3	2	9		0		0		0		0
05-Jul	8	18	16	19	9	18		0		0		0		0
06-Jul	13	31	3	22	7	25		0		0		0		0
07-Jul	20	51	2	24	4	29		0		0		0		0
08-Jul	62	113	1	25	16	45		0		0		0	1	1
09-Jul	60	173	2	27	8	53		0		0		0		1
10-Jul	196	369	10	37	2	55		0		0		0		1
11-Jul	316	685	2	39	31	86		0		0		0		1
12-Jul	331	1,016	1	40	41	127		0		0		0		1
13-Jul	310	1,326		40	16	143		0		0	1	1		1
14-Jul	513	1,839		40	16	159		0		0		1		1
15-Jul	900	2,739		40	10	169		0		0	1	2		1
16-Jul	378	3,117	2	42	13	182		0		0		2		1
17-Jul	964	4,081		42	9	191		0		0		2		1
18-Jul	1,567	5,648		42	20	211		0		0		2		1
19-Jul	2,672	8,320	2	44	22	233		0		0	3	5		1
20-Jul	722	9,042		44	12	245		0		0		5		1
21-Jul	732	9,774	4	48	24	269		0		0	1	6		1
22-Jul	532	10,306	4	52	12	281		0		0		6	1	2
23-Jul	929	11,235	9	61	28	309		0		0	1	7		2
24-Jul	603	11,838	1	62	13	322		0		0	2	9		2
25-Jul	620	12,458	3	65	24	346		0		0	4	13		2

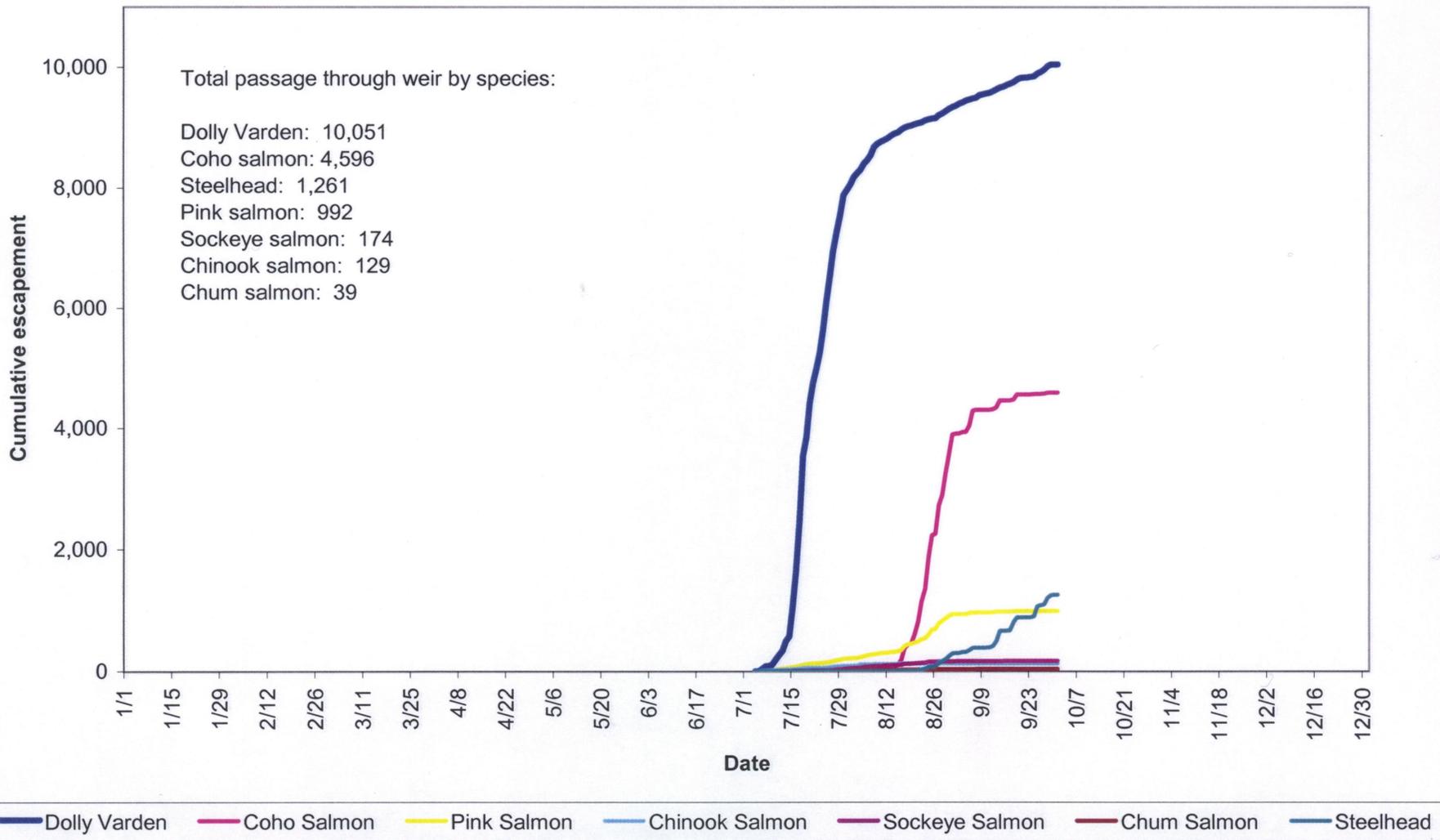
-continued-

Appendix A2.-Page 2 of 2.

Date	<u>Dolly Varden</u>		<u>Chinook S.</u>		<u>Pink Salmon</u>		<u>Coho Salmon</u>		<u>Steelhead</u>		<u>Sockeye S.</u>		<u>Chum Salmon</u>	
	Daily Count	Cum. ^a Count	Daily Count	Cum. Count	Daily Count	Cum. Count	Daily Count	Cum. Count	Daily Count	Cum. Count	Daily Count	Cum. Count	Daily Count	Cum. Count
26-Jul	754	13,212	4	69	17	363		0		0	3	16		2
27-Jul	466	13,678	7	76	36	399	2	2		0	4	20		2
28-Jul	501	14,179	2	78	36	435		2		0	3	23		2
29-Jul	618	14,797	4	82	50	485		2		0	3	26		2
30-Jul	532	15,329	2	84	48	533		2		0		26		2
31-Jul	385	15,714		84	29	562	1	3		0	4	30		2
01-Aug	283	15,997		84	27	589	1	4		0	2	32		2
02-Aug	164	16,161		84	12	601	5	9		0	8	40		2
03-Aug	130	16,291	3	87	16	617	6	15		0	3	43		2
04-Aug	291	16,582	1	88	15	632	15	30		0	2	45		2
05-Aug	211	16,793	1	89	19	651	24	54		0	2	47		2
06-Aug	133	16,926	3	92	15	666	24	78		0	1	48		2
07-Aug	55	16,981	1	93	8	674	23	101		0		48		2
08-Aug	51	17,032	5	98	15	689	177	278		0	3	51		2
09-Aug	42	17,074	6	104	9	698	48	326	1	1	1	52		2
10-Aug	39	17,113	3	107	8	706	11	337		1	2	54		2
11-Aug	48	17,161	3	110	2	708	3	340		1	5	59		2
12-Aug	45	17,206		110	2	710	17	357		1	1	60		2
13-Aug	19	17,225		110	2	712	2	359		1		60		2
14-Aug	13	17,238		110	4	716	22	381		1	1	61		2
15-Aug	21	17,259	1	111	7	723	39	420		1		61		2

^a Cumulative count.

**Cumulative return of anadromous stocks passed upstream through the Anchor River weir,
July 4 through October 1, 1992**



GEN 010 J 048

