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

Nomination Form
Anadromous Waters Catalog

M E

Region II

USGS Quad(s) 052 Kenai B/A / B-1

Anadromous Waters Catalog Number of Waterway ~~244-30-10010-2089~~ / 244-30-10010-2076-3095

Name of Waterway Upper Killey River / Benjamin Creek ☒ USGS Name ☐ Local Name

☒ Addition ☐ Deletion ☐ Correction ☒ Backup Information

For Office Use

Nomination # ~~130117~~ 13-143

Revision Year: 2014

Revision to: Atlas ____ Catalog ____ Both X

Revision Code: B-2

Fisheries Scientist	8/27/13 Date
Habitat Operations Manager	8/27/13 Date
AWC Project Biologist	8/14/13 Date
Cartographer	9/10/13 Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
Chinook salmon	2010, 2011, 2012	X		X	☒
					☐
					☐
					☐
					☐

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:
Radio telemetry data is attached showing locations of adult spawning Chinook Salmon. ADFG, Sportfish study w/ USFWS
Add Chinook Salmon spawning to Stream

ALASKA DEPT. OF FISH & GAME
JUL 31 2013

Name of Observer (please print): Adam Reimer

Signature: * Adam Reimer

Agency: ADFG, SportFish

Address: 43961 K Beach Rd. Ste. B
Soldotna, AK 99669

Date: 7/24/13

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: Virgil Lichtfield Date: 7/31/13 Revision

02/08

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

Nomination Form
Anadromous Waters Catalog

Region: II

USGS Quad(s): 052 Kenai B-2 / B-1

Anadromous Waters Catalog Number of Waterway: 244-30-10010-2082 / 244-30-10010-2076-3095

Name of Waterway: Upper Killey River / Benjamin Creek ☒ USGS Name ☐ Local Name

☐ Addition ☐ Deletion ☐ Correction ☒ Backup Information

For Office Use

Nomination #: _____

Revision Year: _____

Revision to: Atlas _____ Catalog _____ Both _____

Revision Code: _____

Fisheries Scientist	Date
Habitat Operations Manager	Date
AWC Project Biologist	Date
Cartographer	Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
Chinook Salmon	2010, 2011, 2012	X		X	☒
					☐
					☐
					☐
					☐

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:
Radio telemetry data is attached showing locations of adult spawning Chinook Salmon. ADFG, Sportfish study w/ USFWS

Name of Observer (please print): Adam Reimer

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Signature of Area Biologist: Virgil Lichtfield Date: 7/31/13 Revision

02/08

Berkhahn, Patti

From: Reimer, Adam M (DFG) <adam.reimer@alaska.gov>
Sent: Tuesday, June 25, 2013 1:25 PM
To: Berkhahn, Patti
Cc: Czarnezki, John
Subject: RE: FW: unsubs
Attachments: Berkhahn_Killey River Chinook locations 2010-12.xlsm

Here are the locations of radio tagged Chinook salmon tracked from the air since 2010.

Tim and Robert led projects where we handled Benjamin Creek Chinook for genetic sampling within the last decade.

Adam

From: Berkhahn, Patti [mailto:PBerkhahn@borough.kenai.ak.us]
Sent: Tuesday, June 25, 2013 10:12 AM
To: Reimer, Adam M (DFG)
Cc: Czarnezki, John
Subject: FW: FW: unsubs

Adam,

Can you please send me any data you have on Chinook or other salmon species for the Upper Killey River? We are looking for documentation to substantiate the inclusion of the Upper Killey in the Anadromous Waters Catalog. Locations of fish sighting or handling would also be important.

Thanks,

Patti Berkhahn
Habitat Biologist III
ADFG, Habitat Division
River Center
514 Funny River Road
Soldotna, AK 99669
907 714-2476
(State agency housed in Kenai Peninsula Borough Building)

From: Gates, Kenneth [mailto:kenneth_gates@fws.gov]
Sent: Tuesday, June 25, 2013 10:03 AM
To: Berkhahn, Patti
Subject: Re: FW: unsubs

Patti here is the report from last year. Probably wouldn't matter since 98% of the watershed is designated federal Wilderness area within the KNWR. ADFG also has telemetry data for Chinook. Adam Reimer would be the contact. Table 3 in the report give info on species other than Chinook, primarily sockeye for anadromous fish. --Ken

http://alaska.fws.gov/fisheries/fieldoffice/kenai/field/reports.htm

http://alaska.fws.gov/fisheries/fish/Data_Series/d_2013_5.pdf

On Tue, Jun 25, 2013 at 9:22 AM, Berkhahn, Patti <PBerkhahn@borough.kenai.ak.us> wrote:

If any of your data is for the Upper Killey, I can fill out the AWC (with your documentation) as soon as possible. That is a waterbody that has been enforced under the 50' Habitat ordinance for years that is currently undocumented. It is in jeopardy of coming off the books in the very near future without the documentation.

Patti Berkhahn

Habitat Biologist III

ADFG, Habitat Division

River Center

514 Funny River Road

Soldotna, AK 99669

907 714-2476

(State agency housed in Kenai Peninsula Borough Building)

From: Gates, Kenneth [mailto:kenneth_gates@fws.gov]
Sent: Tuesday, June 18, 2013 8:44 AM
To: Berkhahn, Patti
Subject: Re: FW: unsubs

Yes, We likely have data for several of the waterbodies. It may be a while before I can get any info to you. -- Ken

On Tue, Jun 18, 2013 at 8:32 AM, Berkhahn, Patti <PBerkhahn@borough.kenai.ak.us> wrote:

Good morning,

Do any of you have data that substantiates salmon in any of these waterbodies? If so, we need to fill out a nomination form to the Anadromous Waters catalog. If need be, I can help you with it as time allows this fall.

Please forward this list on to any others that might have done research in these areas – this is all related to the Borough's 50 foot ordinance.

Johnson, J D (DFG)

From: Berkhahn, Patti [PBerkhahn@borough.kenai.ak.us]
Sent: Wednesday, July 31, 2013 8:40 AM
To: Johnson, J D (DFG)
Cc: Kenneth_Gates@fws.gov; Reimer, Adam M (DFG); Litchfield, Virginia P (DFG)
Subject: Upper Killey AWC backup nomination part 1 of 2
Attachments: Killey backup nomination KG 2013.pdf

Categories: ready_to_do_something

J,

Please see attached document for AWC backup information for Upper Killey River. I am submitting this on behalf of Ken Gates. Another email will follow up shortly with more back-up (telemetry studies) for Upper Killey and Benjamin Creek. The second email is on behalf of Adam Reimer.

If you have questions, please contact Ken Gates or Adam Reimer. I will mail the original signed documents to you.

Patti Berkhahn
Habitat Biologist III
ADFG, Habitat Division
River Center
514 Funny River Road
Soldotna, AK 99669
907 714-2476
(State agency housed in Kenai Peninsula Borough Building)

The SAS System

freq	pc	signal	mort	lat	long	drainage	fish	date	time
151223	14	139	Y	60.251	-150.347	Benjamin Creek	151223_14	8/19/2010	11:20
151244	1	144		60.2624	-150.374	Benjamin Creek	151244_1	7/15/2010	11:10
151244	1	146		60.2652	-150.373	Benjamin Creek	151244_1	8/6/2010	19:11
151244	1	149	Y	60.2587	-150.368	Benjamin Creek	151244_1	8/19/2010	11:23
151244	4	146	Y	60.265	-150.368	Benjamin Creek	151244_4	8/6/2010	19:11
151244	4	149	Y	60.2584	-150.367	Benjamin Creek	151244_4	8/19/2010	11:23
151244	8	139		60.2658	-150.363	Benjamin Creek	151244_8	8/6/2010	19:30
151244	8	148	Y	60.2538	-150.351	Benjamin Creek	151244_8	8/19/2010	11:20
151263	0	136		60.2623	-150.349	Benjamin Creek	151263_0	8/6/2010	19:30
151263	0	148	Y	60.2579	-150.363	Benjamin Creek	151263_0	8/19/2010	11:21
151263	4	132		60.2646	-150.357	Benjamin Creek	151263_4	8/6/2010	19:11
151263	4	148		60.2582	-150.366	Benjamin Creek	151263_4	8/19/2010	11:21
151285	15	139	Y	60.2597	-150.342	Benjamin Creek	151285_15	8/6/2010	19:31
151285	15	138	Y	60.2603	-150.359	Benjamin Creek	151285_15	8/19/2010	11:10
151301	13	138		60.264	-150.34	Benjamin Creek	151301_13	8/6/2010	19:12
151301	13	149	Y	60.2561	-150.35	Benjamin Creek	151301_13	8/19/2010	11:10
151323	1	137		60.2645	-150.361	Benjamin Creek	151323_1	7/15/2010	11:11
151323	1	143		60.268	-150.375	Benjamin Creek	151323_1	8/6/2010	19:27
151323	1	148	Y	60.262	-150.364	Benjamin Creek	151323_1	8/19/2010	11:23
151344	1	149		60.2607	-150.363	Benjamin Creek	151344_1	7/15/2010	10:49
151344	1	149		60.2518	-150.341	Benjamin Creek	151344_1	8/6/2010	19:31
151344	1	149	Y	60.2546	-150.349	Benjamin Creek	151344_1	8/19/2010	11:12
151344	14	120		60.2671	-150.369	Benjamin Creek	151344_14	8/6/2010	19:27
151363	11	148	Y	60.2561	-150.37	Benjamin Creek	151363_11	8/6/2010	19:32
151363	11	138	Y	60.2582	-150.353	Benjamin Creek	151363_11	8/19/2010	11:21
151382	9	132		60.2665	-150.377	Benjamin Creek	151382_9	7/15/2010	11:23
151382	9	148		60.25	-150.351	Benjamin Creek	151382_9	8/6/2010	19:31
151382	9	134	Y	60.253	-150.348	Benjamin Creek	151382_9	8/19/2010	11:18
151403	6	145		60.2583	-150.378	Benjamin Creek	151403_6	8/6/2010	19:32

151403	6	139	Y	60.2544	-150.363	Benjamin Creek	151403_6	8/19/2010	11:09
151404	26	129		60.258	-150.377	Benjamin Creek	151404_26	8/6/2010	19:32
151443	0	148		60.2578	-150.373	Benjamin Creek	151443_0	8/6/2010	19:25
151443	0	146	Y	60.2599	-150.359	Benjamin Creek	151443_0	8/19/2010	11:19
151443	1	145		60.2521	-150.352	Benjamin Creek	151443_1	7/15/2010	11:09
151443	1	122		60.2561	-150.37	Benjamin Creek	151443_1	8/6/2010	19:25
151443	1	149	Y	60.2528	-150.352	Benjamin Creek	151443_1	8/19/2010	11:25
151443	15	149		60.255	-150.358	Benjamin Creek	151443_15	8/19/2010	11:25
151464	5	137		60.2672	-150.374	Benjamin Creek	151464_5	8/6/2010	19:30
151464	5	149	Y	60.2558	-150.349	Benjamin Creek	151464_5	8/19/2010	11:19
151204	2	93		60.4636	-150.639	Killey River	151204_2	7/5/2010	14:13
151204	2	126		60.3349	-150.548	Killey River	151204_2	7/15/2010	11:44
151204	2	138		60.4126	-150.615	Killey River	151204_2	8/6/2010	19:41
151204	2	123	Y	60.3977	-150.597	Killey River	151204_2	8/19/2010	11:40
151223	1	146		60.3909	-150.593	Killey River	151223_1	6/25/2010	11:11
151223	1	125		60.3249	-150.536	Killey River	151223_1	7/5/2010	14:01
151223	1	126		60.3787	-150.566	Killey River	151223_1	7/15/2010	11:40
151223	1	137	Y	60.363	-150.583	Killey River	151223_1	8/6/2010	19:39
151223	1	135	Y	60.3654	-150.572	Killey River	151223_1	8/19/2010	11:38
151223	3	138		60.3679	-150.561	Killey River	151223_3	7/15/2010	11:58
151223	11	112		60.4704	-150.639	Killey River	151223_11	7/15/2010	12:07
151223	11	133		60.322	-150.526	Killey River	151223_11	8/6/2010	19:37
151223	11	136		60.4514	-150.651	Killey River	151223_11	8/19/2010	11:44
151223	13	134	Y	60.3282	-150.541	Killey River	151223_13	8/6/2010	19:37
151223	13	145	Y	60.3372	-150.546	Killey River	151223_13	8/19/2010	11:36
151223	14	107		60.227	-150.308	Killey River	151223_14	8/6/2010	19:17
151244	0	138		60.4239	-150.617	Killey River	151244_0	6/25/2010	11:13
151244	0	103		60.4233	-150.633	Killey River	151244_0	7/5/2010	14:12
151244	0	133		60.3946	-150.597	Killey River	151244_0	7/15/2010	11:47
151244	0	110	Y	60.4174	-150.618	Killey River	151244_0	8/6/2010	19:41
151244	0	148		60.4044	-150.602	Killey River	151244_0	8/19/2010	11:41
151244	1	110		60.4382	-150.632	Killey River	151244_1	7/5/2010	14:22

151244	4	125		60.3602	-150.583	Killey River	151244_4	7/15/2010	11:38
151263	0	125		60.3315	-150.507	Killey River	151263_0	7/5/2010	14:05
151263	0	136		60.2806	-150.409	Killey River	151263_0	7/15/2010	11:22
151263	3	128		60.2816	-150.411	Killey River	151263_3	7/15/2010	11:22
151263	3	92		60.3693	-150.584	Killey River	151263_3	8/6/2010	19:39
151263	3	121	Y	60.4064	-150.605	Killey River	151263_3	8/19/2010	11:41
151263	4	146		60.3558	-150.584	Killey River	151263_4	7/15/2010	11:38
151263	8	125		60.4284	-150.623	Killey River	151263_8	7/15/2010	11:48
151263	8	139	Y	60.3697	-150.585	Killey River	151263_8	8/6/2010	19:39
151263	8	146	Y	60.3738	-150.579	Killey River	151263_8	8/19/2010	11:39
151285	2	148		60.4213	-150.61	Killey River	151285_2	7/15/2010	12:10
151285	2	124		60.4748	-150.628	Killey River	151285_2	8/6/2010	19:44
151285	5	148	Y	60.4369	-150.63	Killey River	151285_5	7/15/2010	11:49
151285	5	146	Y	60.4233	-150.622	Killey River	151285_5	8/6/2010	19:42
151285	5	149	Y	60.4392	-150.62	Killey River	151285_5	8/19/2010	11:49
151301	2	120		60.3722	-150.581	Killey River	151301_2	7/15/2010	11:38
151301	5	85		60.4715	-150.631	Killey River	151301_5	7/5/2010	14:24
151301	5	124		60.4046	-150.589	Killey River	151301_5	7/15/2010	11:55
151301	13	121		60.3774	-150.584	Killey River	151301_13	7/15/2010	11:39
151323	1	104		60.4388	-150.617	Killey River	151323_1	7/5/2010	14:27
151323	13	104		60.4753	-150.614	Killey River	151323_13	7/5/2010	14:25
151323	13	145		60.306	-150.491	Killey River	151323_13	7/15/2010	11:34
151323	13	104		60.4264	-150.624	Killey River	151323_13	8/6/2010	19:42
151323	13	122	Y	60.4832	-150.649	Killey River	151323_13	8/19/2010	11:46
151344	0	131		60.4434	-150.636	Killey River	151344_0	7/15/2010	12:08
151344	0	123		60.4344	-150.63	Killey River	151344_0	8/6/2010	19:42
151344	0	148	Y	60.4388	-150.649	Killey River	151344_0	8/19/2010	11:43
151344	1	114		60.4563	-150.625	Killey River	151344_1	7/5/2010	14:16
151344	2	143		60.2764	-150.44	Killey River	151344_2	7/15/2010	11:20
151344	2	134	Y	60.3469	-150.577	Killey River	151344_2	8/6/2010	19:38
151344	2	106	Y	60.4144	-150.611	Killey River	151344_2	8/19/2010	11:41
151344	14	120		60.2665	-150.393	Killey River	151344_14	8/19/2010	11:28

151345	12	140		60.3275	-150.505	Killey River	151345_12	7/15/2010	11:30
151345	12	133	Y	60.3382	-150.566	Killey River	151345_12	8/6/2010	19:38
151345	12	149		60.338	-150.556	Killey River	151345_12	8/19/2010	11:37
151384	26	144		60.4369	-150.621	Killey River	151384_26	6/25/2010	11:19
151403	1	115		60.4211	-150.601	Killey River	151403_1	7/5/2010	14:19
151403	3	133		60.3939	-150.578	Killey River	151403_3	7/15/2010	11:56
151403	3	126	Y	60.3919	-150.594	Killey River	151403_3	8/6/2010	19:40
151403	3	124	Y	60.4169	-150.602	Killey River	151403_3	8/19/2010	11:50
151404	26	130		60.3934	-150.577	Killey River	151404_26	7/15/2010	11:56
151404	26	149	Y	60.2691	-150.405	Killey River	151404_26	8/19/2010	11:29
151423	3	117		60.3895	-150.59	Killey River	151423_3	7/15/2010	11:39
151423	6	147		60.4219	-150.615	Killey River	151423_6	7/15/2010	12:02
151423	6	144		60.2643	-150.398	Killey River	151423_6	8/6/2010	19:33
151423	8	147	Y	60.3966	-150.599	Killey River	151423_8	8/6/2010	19:40
151423	8	109	Y	60.3877	-150.583	Killey River	151423_8	8/19/2010	11:40
151423	12	148		60.3371	-150.534	Killey River	151423_12	7/15/2010	11:43
151423	12	147	Y	60.2764	-150.435	Killey River	151423_12	8/6/2010	19:34
151423	12	143		60.2788	-150.432	Killey River	151423_12	8/19/2010	11:30
151423	26	86		60.459	-150.641	Killey River	151423_26	7/5/2010	14:13
151423	26	147		60.3606	-150.581	Killey River	151423_26	7/15/2010	11:45
151423	26	141	Y	60.4051	-150.608	Killey River	151423_26	8/6/2010	19:41
151423	26	149	Y	60.4117	-150.603	Killey River	151423_26	8/19/2010	11:50
151443	0	139		60.2973	-150.483	Killey River	151443_0	7/15/2010	11:34
151443	1	125		60.4053	-150.617	Killey River	151443_1	7/5/2010	14:11
151443	2	148		60.4141	-150.615	Killey River	151443_2	7/15/2010	11:48
151443	2	148		60.408	-150.611	Killey River	151443_2	8/6/2010	19:41
151443	2	149	Y	60.4096	-150.603	Killey River	151443_2	8/19/2010	11:50
151443	5	142		60.3329	-150.548	Killey River	151443_5	7/15/2010	11:36
151443	5	148		60.2657	-150.386	Killey River	151443_5	8/6/2010	19:29
151443	5	113	Y	60.4199	-150.624	Killey River	151443_5	8/19/2010	11:42
151443	11	143		60.2667	-150.384	Killey River	151443_11	8/6/2010	19:29
151443	11	125	Y	60.2867	-150.47	Killey River	151443_11	8/19/2010	11:32

151443	15	112		60.3519	-150.581	Killey River	151443_15	8/6/2010	19:38
151443	26	130		60.4167	-150.615	Killey River	151443_26	7/15/2010	11:48
151443	26	135		60.3027	-150.493	Killey River	151443_26	8/6/2010	19:35
151443	26	126	Y	60.3	-150.483	Killey River	151443_26	8/19/2010	11:33
151464	0	144		60.4048	-150.608	Killey River	151464_0	6/25/2010	11:12
151464	0	98		60.4316	-150.628	Killey River	151464_0	7/5/2010	14:22
151464	0	130		60.3763	-150.584	Killey River	151464_0	7/15/2010	12:00
151464	0	139		60.411	-150.613	Killey River	151464_0	8/6/2010	19:41
151464	0	149		60.4065	-150.595	Killey River	151464_0	8/19/2010	11:51
151464	4	121		60.41	-150.621	Killey River	151464_4	7/5/2010	14:11
151464	4	136		60.3931	-150.595	Killey River	151464_4	7/15/2010	12:00
151464	4	113	Y	60.4106	-150.613	Killey River	151464_4	8/6/2010	19:41
151464	4	104	Y	60.4057	-150.593	Killey River	151464_4	8/19/2010	11:51
151464	5	83		60.4581	-150.642	Killey River	151464_5	7/5/2010	14:23
151464	5	138		60.301	-150.467	Killey River	151464_5	7/15/2010	11:32

The SAS System

signal	pc	lat	long	date	time	freq	mortpct	fish	drainage
139	1	60.2597	-150.346	11-Jul-11	12:20	151204	0	151204_1	Benjamin Creek
148	1	60.2575	-150.355	21-Jul-11	13:43	151204	0	151204_1	Benjamin Creek
138	1	60.2499	-150.358	30-Jul-11	11:54	151204	1	151204_1	Benjamin Creek
141	1	60.2579	-150.348	8-Aug-11	11:21	151204	1	151204_1	Benjamin Creek
148	1	60.2493	-150.36	16-Aug-11	10:32	151204	1	151204_1	Benjamin Creek
148	3	60.2569	-150.367	8-Aug-11	11:27	151204	0	151204_3	Benjamin Creek
147	3	60.2617	-150.353	16-Aug-11	10:20	151204	1	151204_3	Benjamin Creek
141	24	60.2499	-150.358	30-Jul-11	11:54	151204	1	151204_24	Benjamin Creek
138	24	60.2539	-150.365	8-Aug-11	11:27	151204	0	151204_24	Benjamin Creek
148	24	60.25	-150.349	16-Aug-11	10:16	151204	1	151204_24	Benjamin Creek
134	24	60.2511	-150.35	21-Jul-11	13:38	151223	0	151223_24	Benjamin Creek
98	24	60.2553	-150.365	30-Jul-11	11:54	151223	0	151223_24	Benjamin Creek
123	2	60.251	-150.359	30-Jul-11	11:54	151225	0	151225_2	Benjamin Creek
133	2	60.2489	-150.345	8-Aug-11	11:22	151225	1	151225_2	Benjamin Creek
147	2	60.2568	-150.342	16-Aug-11	10:20	151225	1	151225_2	Benjamin Creek
147	26	60.2497	-150.35	21-Jul-11	13:38	151225	1	151225_26	Benjamin Creek
138	26	60.2543	-150.363	30-Jul-11	11:54	151225	0	151225_26	Benjamin Creek
125	26	60.2492	-150.344	8-Aug-11	11:22	151225	1	151225_26	Benjamin Creek
147	26	60.2525	-150.362	16-Aug-11	10:16	151225	1	151225_26	Benjamin Creek
141	1	60.2571	-150.361	21-Jul-11	13:39	151245	0	151245_1	Benjamin Creek
130	1	60.2602	-150.363	30-Jul-11	11:55	151245	0	151245_1	Benjamin Creek
142	1	60.2499	-150.357	8-Aug-11	11:22	151245	1	151245_1	Benjamin Creek
144	1	60.2556	-150.372	16-Aug-11	10:32	151245	1	151245_1	Benjamin Creek
137	26	60.2537	-150.336	11-Jul-11	12:20	151245	0	151245_26	Benjamin Creek
135	26	60.2574	-150.362	21-Jul-11	13:39	151245	0	151245_26	Benjamin Creek
117	26	60.2395	-150.355	30-Jul-11	11:59	151245	0.92308	151245_26	Benjamin Creek
136	26	60.2495	-150.356	8-Aug-11	11:22	151245	1	151245_26	Benjamin Creek
143	26	60.2496	-150.343	16-Aug-11	10:21	151245	1	151245_26	Benjamin Creek
130	24	60.2514	-150.347	21-Jul-11	13:40	151263	0	151263_24	Benjamin Creek

137	24	60.2576	-150.35	30-Jul-11	11:55	151263	0	151263_24	Benjamin Creek
132	24	60.2593	-150.353	8-Aug-11	11:27	151263	0	151263_24	Benjamin Creek
143	24	60.2518	-150.356	16-Aug-11	10:21	151263	1	151263_24	Benjamin Creek
145	75	60.2577	-150.351	30-Jul-11	11:55	151263	0	151263_75	Benjamin Creek
133	75	60.2546	-150.366	8-Aug-11	11:23	151263	0	151263_75	Benjamin Creek
146	20	60.2525	-150.36	30-Jul-11	11:59	151285	0	151285_20	Benjamin Creek
120	26	60.2606	-150.362	8-Aug-11	11:23	151285	0	151285_26	Benjamin Creek
131	19	60.2563	-150.359	21-Jul-11	13:44	151323	0	151323_19	Benjamin Creek
145	19	60.2546	-150.341	30-Jul-11	11:50	151323	0	151323_19	Benjamin Creek
143	19	60.2468	-150.356	8-Aug-11	11:18	151323	0	151323_19	Benjamin Creek
135	19	60.2609	-150.35	16-Aug-11	10:18	151323	0.34091	151323_19	Benjamin Creek
134	3	60.25	-150.358	8-Aug-11	11:24	151325	1	151325_3	Benjamin Creek
117	3	60.258	-150.341	16-Aug-11	10:18	151325	0.98039	151325_3	Benjamin Creek
141	26	60.2555	-150.362	11-Jul-11	12:19	151325	0	151325_26	Benjamin Creek
149	26	60.2547	-150.356	21-Jul-11	13:45	151325	1	151325_26	Benjamin Creek
147	26	60.2585	-150.345	30-Jul-11	12:00	151325	1	151325_26	Benjamin Creek
132	26	60.2552	-150.343	8-Aug-11	11:24	151325	0	151325_26	Benjamin Creek
135	26	60.2623	-150.355	16-Aug-11	10:17	151325	1	151325_26	Benjamin Creek
139	75	60.252	-150.34	21-Jul-11	13:45	151344	0	151344_75	Benjamin Creek
149	75	60.2385	-150.311	30-Jul-11	12:00	151344	0	151344_75	Benjamin Creek
140	75	60.2565	-150.366	8-Aug-11	11:19	151344	0	151344_75	Benjamin Creek
95	19	60.2547	-150.31	11-Jul-11	12:18	151363	0	151363_19	Benjamin Creek
146	19	60.2476	-150.348	30-Jul-11	12:01	151363	0	151363_19	Benjamin Creek
137	19	60.2549	-150.341	8-Aug-11	11:20	151363	1	151363_19	Benjamin Creek
145	19	60.2508	-150.35	16-Aug-11	10:19	151363	1	151363_19	Benjamin Creek
141	23	60.2553	-150.364	11-Jul-11	12:21	151382	0	151382_23	Benjamin Creek
138	23	60.2559	-150.344	21-Jul-11	13:45	151382	0	151382_23	Benjamin Creek
142	23	60.256	-150.347	30-Jul-11	11:57	151382	0	151382_23	Benjamin Creek
143	23	60.2589	-150.349	8-Aug-11	11:25	151382	1	151382_23	Benjamin Creek
143	23	60.2543	-150.363	16-Aug-11	10:19	151382	0	151382_23	Benjamin Creek
137	24	60.2547	-150.357	21-Jul-11	13:42	151382	0	151382_24	Benjamin Creek
149	24	60.2574	-150.351	30-Jul-11	11:57	151382	1	151382_24	Benjamin Creek

140	24	60.2565	-150.344	8-Aug-11	11:26	151382	0	151382_24	Benjamin Creek
146	24	60.2609	-150.349	16-Aug-11	10:23	151382	1	151382_24	Benjamin Creek
139	9	60.2555	-150.364	11-Jul-11	12:21	151384	0	151384_9	Benjamin Creek
147	24	60.2569	-150.352	21-Jul-11	13:45	151423	0	151423_24	Benjamin Creek
110	24	60.2513	-150.337	30-Jul-11	11:58	151423	0	151423_24	Benjamin Creek
131	24	60.2542	-150.34	8-Aug-11	11:26	151423	1	151423_24	Benjamin Creek
129	24	60.2313	-150.339	16-Aug-11	10:31	151423	1	151423_24	Benjamin Creek
141	75	60.2584	-150.355	21-Jul-11	13:46	151443	0	151443_75	Benjamin Creek
148	75	60.2585	-150.356	30-Jul-11	11:52	151443	0	151443_75	Benjamin Creek
131	75	60.2563	-150.365	8-Aug-11	11:29	151443	1	151443_75	Benjamin Creek
146	75	60.2525	-150.357	16-Aug-11	10:19	151443	0.90698	151443_75	Benjamin Creek
148	19	60.2552	-150.349	21-Jul-11	13:43	151464	0	151464_19	Benjamin Creek
145	19	60.2554	-150.347	30-Jul-11	12:02	151464	0	151464_19	Benjamin Creek
116	1	60.2488	-150.355	30-Jul-11	11:49	151465	0	151465_1	Benjamin Creek
108	1	60.2588	-150.367	8-Aug-11	11:29	151465	1	151465_1	Benjamin Creek
115	1	60.2508	-150.34	16-Aug-11	10:16	151465	0.94118	151465_1	Benjamin Creek
149	9	60.2554	-150.349	21-Jul-11	13:43	151465	0	151465_9	Benjamin Creek
149	9	60.2557	-150.346	30-Jul-11	12:02	151465	1	151465_9	Benjamin Creek
143	9	60.2489	-150.354	8-Aug-11	11:26	151465	1	151465_9	Benjamin Creek
145	9	60.2632	-150.356	16-Aug-11	10:20	151465	0.98684	151465_9	Benjamin Creek
149	3	60.264	-150.378	21-Jul-11	13:46	151204	0	151204_3	Killey River
128	9	60.3727	-150.578	11-Jul-11	12:31	151204	0	151204_9	Killey River
128	9	60.4641	-150.628	21-Jul-11	14:05	151204	0	151204_9	Killey River
96	9	60.4611	-150.637	30-Jul-11	12:22	151204	1	151204_9	Killey River
133	19	60.4564	-150.624	29-Jun-11	11:36	151204	0	151204_19	Killey River
114	19	60.3299	-150.526	21-Jul-11	13:55	151204	1	151204_19	Killey River
149	19	60.3359	-150.54	30-Jul-11	12:14	151204	1	151204_19	Killey River
111	19	60.3254	-150.512	8-Aug-11	11:37	151204	1	151204_19	Killey River
136	20	60.4298	-150.621	11-Jul-11	12:34	151204	0	151204_20	Killey River
148	20	60.4131	-150.598	21-Jul-11	14:02	151204	0	151204_20	Killey River
146	20	60.4647	-150.635	30-Jul-11	12:22	151204	0	151204_20	Killey River
106	24	60.2611	-150.381	11-Jul-11	12:21	151223	0	151223_24	Killey River

112	24	60.3848	-150.584	8-Aug-11	11:41	151223	1	151223_24	Killey River
102	75	60.4331	-150.625	11-Jul-11	12:34	151223	0	151223_75	Killey River
139	75	60.4158	-150.602	21-Jul-11	14:02	151223	0	151223_75	Killey River
117	75	60.4352	-150.627	30-Jul-11	12:21	151223	0	151223_75	Killey River
126	75	60.4378	-150.628	8-Aug-11	11:44	151223	1	151223_75	Killey River
142	75	60.45	-150.637	16-Aug-11	10:44	151223	1	151223_75	Killey River
94	0	60.435	-150.627	11-Jul-11	12:34	151225	0	151225_0	Killey River
135	0	60.4158	-150.602	21-Jul-11	14:02	151225	1	151225_0	Killey River
105	0	60.4333	-150.626	30-Jul-11	12:21	151225	1	151225_0	Killey River
98	0	60.3848	-150.584	8-Aug-11	11:41	151225	1	151225_0	Killey River
132	0	60.4145	-150.614	16-Aug-11	10:43	151225	1	151225_0	Killey River
115	2	60.4315	-150.623	11-Jul-11	12:34	151225	0	151225_2	Killey River
134	2	60.2663	-150.386	21-Jul-11	13:47	151225	0	151225_2	Killey River
137	9	60.4235	-150.615	29-Jun-11	11:34	151225	0	151225_9	Killey River
111	26	60.2602	-150.378	11-Jul-11	12:21	151225	0	151225_26	Killey River
119	24	60.3261	-150.506	30-Jul-11	12:13	151244	0	151244_24	Killey River
146	24	60.3248	-150.519	8-Aug-11	11:37	151244	0	151244_24	Killey River
123	24	60.3572	-150.584	16-Aug-11	10:40	151244	1	151244_24	Killey River
115	1	60.4633	-150.638	11-Jul-11	12:36	151245	0	151245_1	Killey River
134	19	60.4267	-150.611	29-Jun-11	11:34	151245	0	151245_19	Killey River
128	19	60.3262	-150.521	11-Jul-11	12:27	151245	0	151245_19	Killey River
147	19	60.3845	-150.575	21-Jul-11	13:58	151245	0	151245_19	Killey River
117	19	60.3958	-150.598	30-Jul-11	12:18	151245	0	151245_19	Killey River
108	19	60.3922	-150.589	8-Aug-11	11:42	151245	1	151245_19	Killey River
118	19	60.4188	-150.618	16-Aug-11	10:43	151245	1	151245_19	Killey River
103	26	60.4275	-150.61	29-Jun-11	11:35	151245	0	151245_26	Killey River
148	75	60.2629	-150.375	21-Jul-11	13:44	151263	0	151263_75	Killey River
138	75	60.3167	-150.518	16-Aug-11	10:37	151263	0	151263_75	Killey River
112	1	60.3519	-150.578	8-Aug-11	11:39	151265	0	151265_1	Killey River
109	1	60.3599	-150.583	16-Aug-11	10:40	151265	0	151265_1	Killey River
146	3	60.3605	-150.57	21-Jul-11	13:57	151285	0	151285_3	Killey River
143	3	60.4	-150.598	30-Jul-11	12:18	151285	0	151285_3	Killey River

148	3	60.3952	-150.595	8-Aug-11	11:42	151285	0	151285_3	Killey River
89	3	60.3683	-150.581	16-Aug-11	10:40	151285	1	151285_3	Killey River
142	9	60.2652	-150.37	29-Jun-11	11:24	151285	0	151285_9	Killey River
118	20	60.2692	-150.395	21-Jul-11	13:47	151285	0	151285_20	Killey River
141	20	60.3289	-150.51	8-Aug-11	11:36	151285	0	151285_20	Killey River
113	20	60.37	-150.582	16-Aug-11	10:40	151285	1	151285_20	Killey River
120	22	60.3559	-150.564	29-Jun-11	11:31	151285	0	151285_22	Killey River
112	22	60.3409	-150.564	11-Jul-11	12:29	151285	0	151285_22	Killey River
141	22	60.3607	-150.578	30-Jul-11	12:16	151285	0	151285_22	Killey River
124	22	60.3568	-150.582	8-Aug-11	11:40	151285	0	151285_22	Killey River
141	22	60.3679	-150.581	16-Aug-11	10:40	151285	1	151285_22	Killey River
106	24	60.2628	-150.37	21-Jul-11	13:44	151285	0	151285_24	Killey River
112	24	60.3258	-150.52	30-Jul-11	12:13	151285	0	151285_24	Killey River
133	24	60.3298	-150.537	8-Aug-11	11:37	151285	0	151285_24	Killey River
132	24	60.3247	-150.531	16-Aug-11	10:37	151285	0	151285_24	Killey River
121	26	60.2632	-150.372	21-Jul-11	13:44	151285	0	151285_26	Killey River
113	26	60.2617	-150.386	30-Jul-11	12:06	151285	0	151285_26	Killey River
132	26	60.2619	-150.387	16-Aug-11	10:32	151285	1	151285_26	Killey River
110	22	60.3386	-150.529	29-Jun-11	11:29	151301	0	151301_22	Killey River
148	22	60.3902	-150.579	21-Jul-11	13:59	151301	0	151301_22	Killey River
111	22	60.4018	-150.598	8-Aug-11	11:42	151301	0.83333	151301_22	Killey River
84	22	60.4241	-150.621	16-Aug-11	10:43	151301	1	151301_22	Killey River
146	6	60.3372	-150.53	21-Jul-11	13:55	151302	0	151302_6	Killey River
115	19	60.4073	-150.608	11-Jul-11	12:33	151302	0	151302_19	Killey River
127	19	60.4243	-150.606	21-Jul-11	14:03	151302	1	151302_19	Killey River
132	19	60.4424	-150.629	30-Jul-11	12:21	151302	1	151302_19	Killey River
126	19	60.4432	-150.631	8-Aug-11	11:45	151302	1	151302_19	Killey River
117	19	60.4241	-150.621	16-Aug-11	10:43	151302	1	151302_19	Killey River
103	19	60.4345	-150.612	29-Jun-11	11:35	151323	0	151323_19	Killey River
122	19	60.3092	-150.493	11-Jul-11	12:26	151323	0	151323_19	Killey River
126	23	60.2675	-150.406	11-Jul-11	12:22	151323	0	151323_23	Killey River
148	23	60.2713	-150.401	21-Jul-11	13:47	151323	0	151323_23	Killey River

118	23	60.2675	-150.4	30-Jul-11	12:07	151323	0	151323_23	Killey River
104	23	60.3175	-150.504	8-Aug-11	11:35	151323	0	151323_23	Killey River
145	23	60.3316	-150.542	16-Aug-11	10:38	151323	0	151323_23	Killey River
117	0	60.2646	-150.369	21-Jul-11	13:41	151325	0	151325_0	Killey River
134	0	60.2656	-150.392	30-Jul-11	12:06	151325	0	151325_0	Killey River
142	0	60.2647	-150.391	8-Aug-11	11:30	151325	0	151325_0	Killey River
142	0	60.2771	-150.458	16-Aug-11	10:34	151325	0	151325_0	Killey River
133	2	60.3631	-150.566	21-Jul-11	13:57	151325	0	151325_2	Killey River
141	2	60.4045	-150.603	8-Aug-11	11:42	151325	1	151325_2	Killey River
140	3	60.4283	-150.609	21-Jul-11	14:03	151325	0	151325_3	Killey River
145	3	60.2667	-150.395	30-Jul-11	12:06	151325	0	151325_3	Killey River
124	19	60.2627	-150.381	21-Jul-11	13:41	151344	0	151344_19	Killey River
106	19	60.2684	-150.407	30-Jul-11	12:07	151344	0	151344_19	Killey River
135	19	60.2667	-150.394	8-Aug-11	11:30	151344	0	151344_19	Killey River
131	19	60.27	-150.41	16-Aug-11	10:33	151344	0	151344_19	Killey River
143	75	60.2695	-150.412	11-Jul-11	12:22	151344	0	151344_75	Killey River
98	75	60.2667	-150.373	16-Aug-11	10:22	151344	1	151344_75	Killey River
143	9	60.4116	-150.611	11-Jul-11	12:33	151346	1	151346_9	Killey River
122	9	60.415	-150.589	21-Jul-11	14:01	151346	1	151346_9	Killey River
149	9	60.4073	-150.608	30-Jul-11	12:19	151346	1	151346_9	Killey River
148	9	60.4074	-150.609	8-Aug-11	11:43	151346	1	151346_9	Killey River
147	75	60.4133	-150.61	30-Jul-11	12:19	151363	1	151363_75	Killey River
130	75	60.4137	-150.611	8-Aug-11	11:43	151363	1	151363_75	Killey River
103	75	60.3762	-150.584	16-Aug-11	10:41	151363	1	151363_75	Killey River
120	9	60.4389	-150.619	29-Jun-11	11:35	151364	0	151364_9	Killey River
104	9	60.4529	-150.636	11-Jul-11	12:35	151364	0	151364_9	Killey River
113	9	60.4527	-150.627	21-Jul-11	14:05	151364	1	151364_9	Killey River
106	9	60.4107	-150.61	30-Jul-11	12:19	151364	0	151364_9	Killey River
107	9	60.4095	-150.611	8-Aug-11	11:43	151364	0.95833	151364_9	Killey River
111	9	60.4311	-150.624	16-Aug-11	10:43	151364	1	151364_9	Killey River
145	21	60.3417	-150.546	29-Jun-11	11:30	151382	0	151382_21	Killey River
120	21	60.3294	-150.536	11-Jul-11	12:28	151382	0	151382_21	Killey River

140	21	60.3226	-150.514	21-Jul-11	13:54	151382	0	151382_21	Killey River
133	21	60.369	-150.573	30-Jul-11	12:17	151382	0	151382_21	Killey River
149	21	60.3667	-150.572	8-Aug-11	11:40	151382	1	151382_21	Killey River
114	21	60.3821	-150.586	16-Aug-11	10:41	151382	0	151382_21	Killey River
129	24	60.2722	-150.416	11-Jul-11	12:23	151382	0	151382_24	Killey River
133	0	60.3459	-150.571	11-Jul-11	12:29	151384	0	151384_0	Killey River
127	0	60.3398	-150.545	21-Jul-11	13:56	151384	0	151384_0	Killey River
139	0	60.3681	-150.572	30-Jul-11	12:17	151384	1	151384_0	Killey River
149	0	60.3645	-150.572	8-Aug-11	11:40	151384	1	151384_0	Killey River
107	0	60.3827	-150.586	16-Aug-11	10:41	151384	1	151384_0	Killey River
112	26	60.4104	-150.586	21-Jul-11	14:01	151384	0	151384_26	Killey River
115	26	60.4175	-150.611	30-Jul-11	12:20	151384	0	151384_26	Killey River
105	26	60.4204	-150.612	8-Aug-11	11:43	151384	1	151384_26	Killey River
99	26	60.3867	-150.588	16-Aug-11	10:41	151384	1	151384_26	Killey River
117	21	60.3457	-150.556	29-Jun-11	11:30	151403	0	151403_21	Killey River
122	21	60.3529	-150.579	11-Jul-11	12:29	151403	1	151403_21	Killey River
149	21	60.3707	-150.567	21-Jul-11	13:58	151403	1	151403_21	Killey River
121	21	60.3764	-150.58	30-Jul-11	12:17	151403	1	151403_21	Killey River
148	21	60.3702	-150.574	8-Aug-11	11:40	151403	1	151403_21	Killey River
107	21	60.341	-150.569	16-Aug-11	10:39	151403	1	151403_21	Killey River
107	24	60.3922	-150.591	11-Jul-11	12:32	151403	0	151403_24	Killey River
147	24	60.4531	-150.636	30-Jul-11	12:22	151403	0	151403_24	Killey River
142	24	60.4543	-150.636	8-Aug-11	11:45	151403	1	151403_24	Killey River
127	24	60.4631	-150.639	16-Aug-11	10:45	151403	0	151403_24	Killey River
103	9	60.3916	-150.59	11-Jul-11	12:32	151405	0	151405_9	Killey River
89	9	60.3771	-150.58	30-Jul-11	12:17	151405	0	151405_9	Killey River
88	9	60.3714	-150.576	8-Aug-11	11:40	151405	1	151405_9	Killey River
119	9	60.3944	-150.594	16-Aug-11	10:41	151405	1	151405_9	Killey River
127	22	60.4447	-150.621	29-Jun-11	11:35	151423	0	151423_22	Killey River
121	22	60.3572	-150.581	11-Jul-11	12:30	151423	0	151423_22	Killey River
148	22	60.3828	-150.582	30-Jul-11	12:17	151423	1	151423_22	Killey River
133	22	60.3753	-150.582	8-Aug-11	11:41	151423	1	151423_22	Killey River

110	22	60.3974	-150.597	16-Aug-11	10:42	151423	1	151423_22	Killey River
92	24	60.4457	-150.622	29-Jun-11	11:35	151423	0	151423_24	Killey River
145	24	60.3352	-150.538	11-Jul-11	12:28	151423	0	151423_24	Killey River
117	1	60.3286	-150.511	21-Jul-11	13:54	151424	0	151424_1	Killey River
129	1	60.3278	-150.533	30-Jul-11	12:14	151424	0	151424_1	Killey River
147	1	60.3408	-150.563	8-Aug-11	11:39	151424	0	151424_1	Killey River
108	1	60.3435	-150.573	16-Aug-11	10:39	151424	1	151424_1	Killey River
134	21	60.3861	-150.574	29-Jun-11	11:32	151443	0	151443_21	Killey River
120	21	60.3966	-150.597	11-Jul-11	12:32	151443	0	151443_21	Killey River
147	21	60.4084	-150.601	21-Jul-11	14:02	151443	1	151443_21	Killey River
108	21	60.3792	-150.582	8-Aug-11	11:41	151443	1	151443_21	Killey River
130	21	60.4019	-150.603	16-Aug-11	10:42	151443	1	151443_21	Killey River
104	75	60.3624	-150.578	11-Jul-11	12:30	151443	0	151443_75	Killey River
141	0	60.2771	-150.428	11-Jul-11	12:23	151445	0	151445_0	Killey River
114	0	60.2801	-150.415	21-Jul-11	13:48	151445	0	151445_0	Killey River
113	0	60.275	-150.416	30-Jul-11	12:07	151445	0	151445_0	Killey River
129	0	60.2736	-150.414	8-Aug-11	11:31	151445	1	151445_0	Killey River
130	0	60.2761	-150.433	16-Aug-11	10:34	151445	0	151445_0	Killey River
122	1	60.3667	-150.576	11-Jul-11	12:30	151445	0	151445_1	Killey River
124	1	60.3532	-150.572	21-Jul-11	13:57	151445	0	151445_1	Killey River
149	1	60.3478	-150.57	30-Jul-11	12:15	151445	1	151445_1	Killey River
148	1	60.3471	-150.568	8-Aug-11	11:39	151445	1	151445_1	Killey River
142	1	60.349	-150.58	16-Aug-11	10:39	151445	1	151445_1	Killey River
139	19	60.3368	-150.548	11-Jul-11	12:28	151464	0	151464_19	Killey River
144	19	60.2792	-150.461	8-Aug-11	11:32	151464	0	151464_19	Killey River
138	19	60.4086	-150.61	16-Aug-11	10:42	151464	1	151464_19	Killey River
128	21	60.4389	-150.622	21-Jul-11	14:04	151464	1	151464_21	Killey River
112	21	60.4324	-150.624	8-Aug-11	11:44	151464	1	151464_21	Killey River
124	9	60.3167	-150.509	11-Jul-11	12:26	151465	0	151465_9	Killey River
126	26	60.4402	-150.622	21-Jul-11	14:04	151465	1	151465_26	Killey River
109	26	60.4277	-150.616	30-Jul-11	12:20	151465	1	151465_26	Killey River
117	26	60.4315	-150.623	8-Aug-11	11:44	151465	1	151465_26	Killey River

120	26	60.4471	-150.636	16-Aug-11	10:44	151465	1	151465_26	Killey River

The SAS System

signal	pc	lat	long	date	mort	time	freq	mortpct	drainage
121	14	60.2627	-150.387	9-Jul-12		13:50	151204	0	Benjamin Creek
128	14	60.2498	-150.361	9-Jul-12		13:46	151225	0	Benjamin Creek
125	14	60.258	-150.374	9-Jul-12		13:47	151325	0	Benjamin Creek
112	15	60.2637	-150.375	9-Jul-12		13:47	151364	0	Benjamin Creek
134	24	60.252	-150.341	20-Jul-12		10:49	151204	0	Benjamin Creek
134	26	60.2494	-150.342	20-Jul-12		10:50	151224	0	Benjamin Creek
135	14	60.2411	-150.35	20-Jul-12		10:44	151225	0	Benjamin Creek
116	16	60.2467	-150.357	20-Jul-12		10:44	151285	0	Benjamin Creek
131	14	60.2587	-150.378	20-Jul-12		10:48	151325	0	Benjamin Creek
126	16	60.2576	-150.377	20-Jul-12		10:48	151325	0	Benjamin Creek
144	24	60.2543	-150.369	20-Jul-12		10:45	151364	0	Benjamin Creek
137	24	60.2541	-150.366	20-Jul-12		10:50	151385	0	Benjamin Creek
133	15	60.2563	-150.371	20-Jul-12		10:51	151424	0	Benjamin Creek
137	16	60.2581	-150.349	20-Jul-12		10:49	151445	0	Benjamin Creek
143	15	60.2579	-150.346	20-Jul-12	Y	10:46	151465	1	Benjamin Creek
121	26	60.2556	-150.37	31-Jul-12		12:00	151203	0	Benjamin Creek
140	24	60.2544	-150.37	31-Jul-12	Y	11:58	151204	1	Benjamin Creek
140	14	60.2445	-150.354	31-Jul-12	Y	11:54	151225	1	Benjamin Creek
129	26	60.251	-150.362	31-Jul-12		11:55	151265	0	Benjamin Creek
137	24	60.251	-150.362	31-Jul-12		11:55	151266	0	Benjamin Creek
140	16	60.2661	-150.375	31-Jul-12	Y	11:58	151285	1	Benjamin Creek
136	14	60.2639	-150.38	31-Jul-12		11:55	151325	0	Benjamin Creek
142	24	60.2604	-150.353	31-Jul-12	Y	11:59	151364	1	Benjamin Creek
142	18	60.258	-150.346	31-Jul-12		11:56	151405	0	Benjamin Creek
123	15	60.2544	-150.342	31-Jul-12		11:57	151424	0	Benjamin Creek
145	16	60.2527	-150.34	31-Jul-12	Y	11:49	151445	1	Benjamin Creek
137	15	60.2494	-150.355	31-Jul-12	Y	11:57	151465	1	Benjamin Creek
139	26	60.2527	-150.361	9-Aug-12	Y	11:20	151203	1	Benjamin Creek
138	24	60.2527	-150.361	9-Aug-12	Y	11:20	151204	1	Benjamin Creek

146	14	60.2563	-150.366	9-Aug-12	Y	11:20	151225	1	Benjamin Creek
127	26	60.262	-150.358	9-Aug-12	Y	11:18	151265	1	Benjamin Creek
142	24	60.2631	-150.361	9-Aug-12		11:18	151266	0	Benjamin Creek
136	16	60.259	-150.353	9-Aug-12		11:18	151285	0	Benjamin Creek
116	24	60.2602	-150.354	9-Aug-12		11:10	151364	0	Benjamin Creek
149	18	60.2535	-150.348	9-Aug-12	Y	11:10	151405	1	Benjamin Creek
145	16	60.2558	-150.369	9-Aug-12	Y	11:15	151445	1	Benjamin Creek
116	15	60.26	-150.377	9-Aug-12	Y	11:18	151465	1	Benjamin Creek
145	14	60.3546	-150.582	29-Jun-12		16:23	151225	0	Killey River
106	15	60.4363	-150.631	29-Jun-12		16:27	151225	0	Killey River
126	14	60.3375	-150.562	29-Jun-12		16:22	151245	0	Killey River
93	16	60.4417	-150.635	29-Jun-12		16:27	151245	0	Killey River
117	14	60.3633	-150.58	29-Jun-12		16:24	151265	0	Killey River
94	14	60.3904	-150.593	29-Jun-12		16:25	151302	0	Killey River
94	14	60.4248	-150.619	29-Jun-12		16:27	151325	0	Killey River
98	23	60.4581	-150.638	29-Jun-12		16:28	151346	0	Killey River
112	14	60.3324	-150.542	29-Jun-12		16:22	151424	0	Killey River
98	26	60.4	-150.601	9-Jul-12		14:00	151224	0	Killey River
122	15	60.3965	-150.597	9-Jul-12	Y	13:59	151225	1	Killey River
125	16	60.45	-150.635	9-Jul-12		14:02	151225	0	Killey River
116	23	60.3994	-150.6	9-Jul-12		13:59	151225	0	Killey River
145	14	60.3333	-150.544	9-Jul-12	Y	13:56	151245	1	Killey River
103	16	60.4032	-150.604	9-Jul-12		14:00	151245	0	Killey River
130	16	60.4075	-150.609	9-Jul-12		14:00	151265	0	Killey River
122	23	60.3792	-150.585	9-Jul-12		13:58	151266	0	Killey River
135	24	60.3605	-150.581	9-Jul-12		13:57	151266	0	Killey River
135	16	60.2826	-150.469	9-Jul-12		13:52	151285	0	Killey River
119	23	60.4124	-150.612	9-Jul-12		14:00	151285	0	Killey River
121	14	60.4167	-150.614	9-Jul-12		14:00	151302	0	Killey River
101	23	60.3162	-150.517	9-Jul-12		13:55	151303	0	Killey River
118	16	60.4216	-150.615	9-Jul-12		14:01	151325	0	Killey River
108	23	60.4194	-150.615	9-Jul-12		14:01	151325	0	Killey River

137	15	60.32	-150.522	9-Jul-12		13:55	151346	0	Killey River
122	23	60.4282	-150.62	9-Jul-12	Y	14:01	151346	1	Killey River
98	14	60.4315	-150.625	9-Jul-12		14:01	151364	0	Killey River
146	23	60.4315	-150.625	9-Jul-12		14:01	151364	0	Killey River
114	15	60.3255	-150.531	9-Jul-12		13:55	151384	0	Killey River
122	23	60.3442	-150.571	9-Jul-12		13:57	151385	0	Killey River
116	15	60.2771	-150.459	9-Jul-12		13:52	151424	0	Killey River
123	17	60.3489	-150.576	9-Jul-12		13:57	151424	0	Killey River
109	23	60.3923	-150.592	9-Jul-12		13:59	151464	0	Killey River
138	26	60.3205	-150.521	20-Jul-12		11:04	151203	0	Killey River
146	18	60.3546	-150.583	20-Jul-12		11:06	151204	0	Killey River
104	19	60.4133	-150.613	20-Jul-12		11:15	151204	0	Killey River
120	15	60.421	-150.619	20-Jul-12	Y	11:10	151225	1	Killey River
107	16	60.46	-150.639	20-Jul-12		11:17	151225	0	Killey River
118	18	60.462	-150.639	20-Jul-12	Y	11:17	151225	1	Killey River
102	23	60.4206	-150.618	20-Jul-12		11:15	151225	0	Killey River
126	14	60.3237	-150.53	20-Jul-12	Y	11:04	151245	1	Killey River
118	16	60.4293	-150.623	20-Jul-12		11:10	151245	0	Killey River
130	19	60.4282	-150.624	20-Jul-12	Y	11:16	151245	1	Killey River
132	23	60.4297	-150.623	20-Jul-12	Y	11:10	151245	1	Killey River
145	14	60.3266	-150.537	20-Jul-12		11:05	151265	0	Killey River
124	26	60.3294	-150.541	20-Jul-12		11:05	151265	0	Killey River
119	23	60.3644	-150.582	20-Jul-12		11:07	151266	0	Killey River
120	18	60.4372	-150.632	20-Jul-12		11:11	151285	0	Killey River
108	14	60.4305	-150.608	20-Jul-12		11:13	151302	0	Killey River
120	23	60.4299	-150.607	20-Jul-12		11:13	151303	0	Killey River
144	24	60.335	-150.552	20-Jul-12		11:05	151303	0	Killey River
111	15	60.3786	-150.585	20-Jul-12		11:08	151346	0	Killey River
141	23	60.4436	-150.634	20-Jul-12		11:11	151346	0	Killey River
127	14	60.4474	-150.636	20-Jul-12		11:11	151364	0	Killey River
119	23	60.3888	-150.59	20-Jul-12		11:08	151364	0	Killey River
113	15	60.345	-150.575	20-Jul-12	Y	11:06	151384	1	Killey River

126	18	60.4138	-150.596	20-Jul-12		11:14	151405	0	Killey River
104	19	60.3973	-150.599	20-Jul-12		11:08	151405	0	Killey River
129	24	60.4479	-150.639	20-Jul-12		11:17	151405	0	Killey River
102	17	60.4042	-150.607	20-Jul-12		11:09	151424	0	Killey River
124	24	60.41	-150.613	20-Jul-12		11:09	151444	0	Killey River
139	23	60.4144	-150.615	20-Jul-12	Y	11:09	151464	1	Killey River
99	24	60.4551	-150.624	20-Jul-12		11:12	151464	0	Killey River
123	14	60.284	-150.468	31-Jul-12		12:07	151204	0	Killey River
109	15	60.3852	-150.587	31-Jul-12	Y	12:14	151225	1	Killey River
118	16	60.4407	-150.632	31-Jul-12		12:17	151225	0	Killey River
106	23	60.3843	-150.586	31-Jul-12	Y	12:14	151225	1	Killey River
133	14	60.3227	-150.522	31-Jul-12	Y	12:10	151245	1	Killey River
142	16	60.4441	-150.635	31-Jul-12	Y	12:17	151245	1	Killey River
105	19	60.3895	-150.59	31-Jul-12	Y	12:14	151245	1	Killey River
107	23	60.4459	-150.636	31-Jul-12	Y	12:17	151245	1	Killey River
149	14	60.3246	-150.524	31-Jul-12	Y	12:10	151265	1	Killey River
140	23	60.3649	-150.578	31-Jul-12	Y	12:13	151266	1	Killey River
130	18	60.4008	-150.604	31-Jul-12	Y	12:15	151285	1	Killey River
118	23	60.4	-150.604	31-Jul-12	Y	12:15	151285	1	Killey River
119	24	60.3994	-150.603	31-Jul-12	Y	12:15	151285	1	Killey River
125	24	60.3298	-150.539	31-Jul-12		12:11	151303	0	Killey River
149	16	60.4073	-150.611	31-Jul-12	Y	12:15	151325	1	Killey River
131	17	60.4061	-150.61	31-Jul-12	Y	12:15	151325	1	Killey River
102	26	60.4541	-150.639	31-Jul-12		12:18	151345	0	Killey River
125	15	60.4111	-150.612	31-Jul-12	Y	12:15	151346	0.66667	Killey River
123	23	60.4528	-150.639	31-Jul-12	Y	12:18	151346	1	Killey River
112	14	60.4579	-150.641	31-Jul-12	Y	12:18	151364	1	Killey River
105	18	60.4582	-150.641	31-Jul-12		12:18	151364	0	Killey River
125	19	60.418	-150.615	31-Jul-12		12:16	151405	0	Killey River
148	14	60.3737	-150.581	31-Jul-12	Y	12:13	151424	1	Killey River
107	16	60.4649	-150.639	31-Jul-12	Y	12:18	151424	1	Killey River
110	24	60.4213	-150.616	31-Jul-12		12:16	151444	0	Killey River

118	23	60.4291	-150.621	31-Jul-12		12:16	151464	0	Killey River
129	14	60.2832	-150.467	9-Aug-12		11:23	151204	0	Killey River
107	15	60.3833	-150.586	9-Aug-12	Y	11:29	151225	1	Killey River
117	16	60.4409	-150.633	9-Aug-12	Y	11:32	151225	1	Killey River
117	18	60.4752	-150.63	9-Aug-12	Y	11:34	151225	1	Killey River
117	23	60.387	-150.587	9-Aug-12		11:29	151225	0	Killey River
115	14	60.3418	-150.567	9-Aug-12	Y	11:27	151245	1	Killey River
144	16	60.4429	-150.635	9-Aug-12	Y	11:32	151245	0.57143	Killey River
111	19	60.4432	-150.635	9-Aug-12	Y	11:32	151245	1	Killey River
148	14	60.3271	-150.533	9-Aug-12	Y	11:26	151265	1	Killey River
138	23	60.3675	-150.576	9-Aug-12		11:28	151266	0	Killey River
113	24	60.3929	-150.593	9-Aug-12		11:29	151285	0	Killey River
110	14	60.4498	-150.637	9-Aug-12	Y	11:32	151302	1	Killey River
134	24	60.3475	-150.573	9-Aug-12	Y	11:27	151303	1	Killey River
131	16	60.3997	-150.6	9-Aug-12	Y	11:30	151325	1	Killey River
105	17	60.4007	-150.6	9-Aug-12	Y	11:30	151325	1	Killey River
129	15	60.4069	-150.607	9-Aug-12	Y	11:30	151346	1	Killey River
122	23	60.4548	-150.638	9-Aug-12	Y	11:33	151346	1	Killey River
118	14	60.4583	-150.639	9-Aug-12	Y	11:33	151364	1	Killey River
133	23	60.4111	-150.612	9-Aug-12		11:30	151364	0	Killey River
116	23	60.2771	-150.456	9-Aug-12		11:22	151385	0	Killey River
113	19	60.4189	-150.62	9-Aug-12		11:31	151405	0	Killey River
108	24	60.4196	-150.62	9-Aug-12	Y	11:31	151405	1	Killey River
147	14	60.3769	-150.582	9-Aug-12	Y	11:29	151424	1	Killey River
128	16	60.4645	-150.639	9-Aug-12		11:33	151424	0	Killey River
117	23	60.4696	-150.635	9-Aug-12	Y	11:33	151444	1	Killey River
116	24	60.4272	-150.623	9-Aug-12		11:31	151444	0	Killey River
127	23	60.4297	-150.624	9-Aug-12	Y	11:31	151464	1	Killey River

Johnson, J D (DFG)

From: Reimer, Adam M (DFG)
Sent: Wednesday, August 14, 2013 10:45 AM
To: Johnson, J D (DFG)
Cc: McKinley, Timothy R (DFG); Begich, Robert N (DFG)
Subject: RE: 244-30-10010-2076-3095 Chinook salmon

J,

Those dots represent position's taken from a plane, which explains why they are all over the place.

At any rate, we have made several trips to Benjamin Creek where staff landed and visually observed Chinook salmon are spawning in the Creek. Based on several years of radio tag data (reaching back to the 80's) we know it is one of the primary spawning destinations for early-run Kenai River Chinook salmon. You can defiantly list it as "Chinook salmon spawning" with zero doubt.

Adam

From: Johnson, J D (DFG)
Sent: Tuesday, August 13, 2013 11:39 AM
To: Reimer, Adam M (DFG)
Subject: 244-30-10010-2076-3095 Chinook salmon

Adam

I've plotted the radio telemetry data coordinates from around Benjamin Creek provided w/the nomination you submitted (see attached map). All the red "fish" dots correspond to table lat/longs for radio telemetry data collected from 2010 – 2012
If all those dots really represent spawning Chinook salmon, I'd like to add Chinook salmon spawning to Benjamin Creek
Or would Chinook salmon present be more appropriate, what do you think?

J. Johnson
AWC Project Biologist
267-2337