



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

Nomination Form
Anadromous Waters Catalog

Region USGS Quad(s)

AWC Number of Water Body

Name of Water body 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
	GIS Analyst	Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
Coho Salmon	May 14-16, 2015		X	X	<input checked="" type="checkbox"/>
Rainbow/Steelhead	May 14-16, 2015		X	X	<input type="checkbox"/>
Dolly Varden	May 14-16, 2015			X	<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

See supplemental information attached. This package was prepared by Cathy Needham. For questions or more information contact Ms. Needham at 907-723-4436 or cathy@kaienvironmental.com

Name of Observer (please print): Tony Sanderson

Signature: Date: 6-1-15

Agency: Hydaburg Cooperative Association

Address: P.O. Box 349
Hydaburg, AK 99922

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: _____ Date: _____ Revision 11/13

Name of Area Biologist (please print): _____

Supplemental information for Manhattan Creek

Baited minnow traps were used to document the presence of juvenile fish in Manhattan Creek, above Manhattan Lake. Manhattan Creek is listed in the Anadromous Waters Catalog (104-20-10100) for the presence of chum salmon, pink salmon and sockeye salmon. It is also listed for rearing of Coho salmon and steelhead trout. Trapping events occurred May 14-16, 2015. This current nomination is to extend the current extent of the anadromous catalog to additional stream reaches where Coho salmon and rainbow/steelhead trout were observed. Dolly Varden were also observed in all reaches of the creek that were mapped under this project. An ADFG fish trapping permit datasheet is attached to this nomination packet for further details on fish trapping efforts. The attached figure shows 6 new reaches where fish trapping data showed the presence and rearing of Coho salmon.

Stream mapping and survey data was collected by the Hydaburg Cooperative Association Stream Survey crew. Six (6) reaches on Manhattan Creek, above Manhattan Lake and the previous documented anadromous portion of the creek, were mapped (reach numbers in the tables correspond to a master dataset; see attached figure for locations). The stream survey data are in the following table:

	Reach 1	Reach 2	Reach 3
Average stream gradient	1.3	2.18	4.35
Average bankfull width	10.4	5.8	3.9
Average channel bed width	12.4	6.6	3.6
Average incision depth	0.66	0.65	0.74
Bank composition	Organic	Mixed	Mixed
Dominant substrate	Very course gravel	Small cobble	Large cobble
Sub-dominant substrate	Course gravel and Small cobble	Very course gravel and Large cobble	Small cobble and Very course gravel
Large wood count	177	41	16
Key wood count	31	4	1
Macro-pool count	35	9	10

	Reach 4	Reach 5	Reach 6
Average stream gradient	9.63	10.9	2.17
Average bankfull width	2.9	3.5	2.2
Average channel bed width	2.36	4.3	2.4
Average incision depth	0.6	0.8	0.38
Bank composition	Mixed	Mixed	Organic
Dominant substrate	Large cobble	Large boulder	Course gravel
Sub-dominant substrate	Small cobble and Very course gravel	Small boulder and large cobble	Very course gravel and medium gravel
Large wood count	70	85	58
Key wood count	14	21	12
Macro-pool count	42	23	21

Reaches 1 and 2 were classified as MMS (small moderate gradient mixed), Reach 3 was MCS (small moderate gradient contained channel) and Reaches 4 and 5 were classified as HCLw (low incision, high gradient, wetland phase). Reach 6 (lower in the system) was classified as FPS (narrow low gradient flood plain channel). Two barriers, waterfalls, were documented at the end of Reach 4 and Reach 5 (see attached figure). The waterfall on Reach 4 was 2.5 meters high with a 45% gradient (photo 1). The waterfall on Reach 5 was 2.5 meters high with a 45% gradient (photo 2).

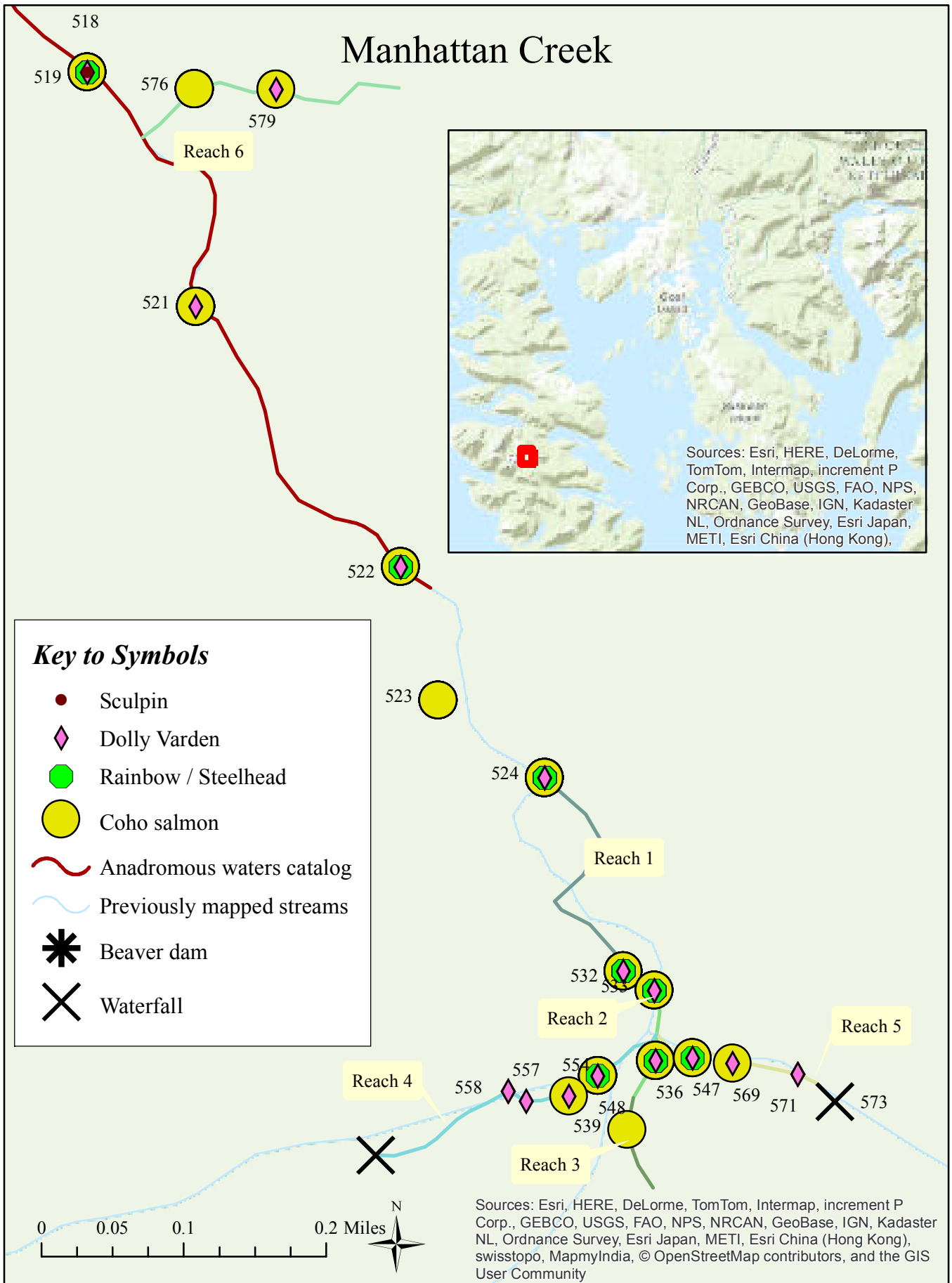


Photo 1. Waterfall at the end of Reach 4



Photo 2. Waterfall at the end of Reach 5

Manhattan Creek



ADF&G permit no. SF201X-XXX (FILL IN)

Summary report of fish collection activity.

The area biologist was contacted on: TIME/DATE

Location ID (optional)	Latitude	Longitude	Datum	Coordinate determination method	Name of water body	Date	Observer name (first name, middle initial, last name)	Fish collection method	Species	Life stage	Length (mm) No estimates/r anges	Length method	Disposition (1)
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	62	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	Dolly Varden	juvenile	122	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	59	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	Dolly Varden	juvenile	114	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	rainbow trout	juvenile	80	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	60	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	rainbow trout	juvenile	100	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	rainbow trout	juvenile	92	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	Dolly Varden	juvenile	112	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	Dolly Varden	juvenile	115	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	82	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	Dolly Varden	juvenile	116	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	62	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	Dolly Varden	juvenile	95	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	58	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	70	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	50	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	58	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	rainbow trout	juvenile	55	Fork	measured and released
515	55.08253	-133.13632	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	62	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	Dolly Varden	juvenile	72	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	Dolly Varden	juvenile	115	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	Dolly Varden	juvenile	118	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	sculpin-unspecified	juvenile	135	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	75	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	65	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	62	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	rainbow trout	juvenile	65	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	67	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	82	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	72	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	77	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	61	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	45	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	Dolly Varden	juvenile	74	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	60	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	55	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile		Fork	ID'd and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	44	Fork	measured and released
516	55.08193	-133.13519	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	34	Fork	measured and released
517	55.08161	-133.13390	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	50	Fork	measured and released



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For Office Use

Nomination # _____ Revision Year: _____ Revision to: Atlas _____ Catalog _____ Both _____ Revision Code: _____	_____ Fisheries Scientist	_____ Date
	_____ Habitat Operations Manager	_____ Date
	_____ AWC Project Biologist	_____ Date
	_____ GIS Analyst	_____ Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
Coho Salmon	May 14, 2015		X	X	<input checked="" type="checkbox"/>
Rainbow/Steelhead	May 14, 2015		X	X	<input type="checkbox"/>
Dolly Varden	May 14, 2015			X	<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
 See supplemental information attached. This package was prepared by Cathy Needham. For questions or more information contact Ms. Needham at 907-723-4436 or cathy@kaienvironmental.com

Name of Observer (please print): Tony Sanderson
 Signature: Date: 6-1-15
 Agency: Hydaburg Cooperative Association
 Address: P.O. Box 349
Hydaburg, AK 99922

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: _____ Date: _____ Revision 11/13
 Name of Area Biologist (please print): _____

Supplemental information for Manhattan Lake Stream 1

Three baited minnow traps were soaked for 1.5 to 3.5 hours in a tributary stream to Manhattan Lake on May 14, 2015. The waterbody is not currently listed in the Anadromous Waters Catalog. This current nomination is to include the presence and rearing of Coho salmon. It is also noted Dolly Varden and rainbow/steelhead trout were present in traps set in the stream. An ADFG fish trapping permit datasheet is attached to this nomination packet for further details on fish trapping efforts (see attached figure for reach and trap locations).

Stream mapping and survey data was collected by the Hydaburg Cooperative Association Stream Survey crew for Manhattan Lake Stream 1 on May 14, 2015. Data was taken on two reaches (reach numbers in the tables correspond to a master dataset; see attached figure for locations). The stream survey data are in the following table:

	Reach 1	Reach 2
Average stream gradient	0	1.275
Average bankfull width	1.8	1.3
Average channel bed width	4.32	2.42
Average incision depth	0.58	0.65
Bank composition	Organic	Organic
Dominant substrate	Organic	Medium gravel
Sub-dominate substrate	Sand/Silt	Course gravel and Organic
Large wood count	6	11
Key wood count	1	1
Macro-pool count	4	24

Reach 1 was classified as FPS (narrow low gradient flood plain channel), Reach 2 was classified as FPO (micro flood plain channel). No anadromous fish were trapped in Reach 2; however Dolly Varden were found in the trap. Reach 2 became a muskeg, and is unlikely fish habitat.



Photo 1. The end of reach 2 on stream 1 of Manhattan Lake.

Manhattan Lake Unnamed Stream 1

Key to Symbols

- Sculpin
- ◆ Dolly Varden
- Rainbow / Steelhead
- Coho salmon
- ~ Anadromous waters catalog
- ~ Previously mapped streams
- * Beaver dam
- × Waterfall

505



Reach 1



Reach 2

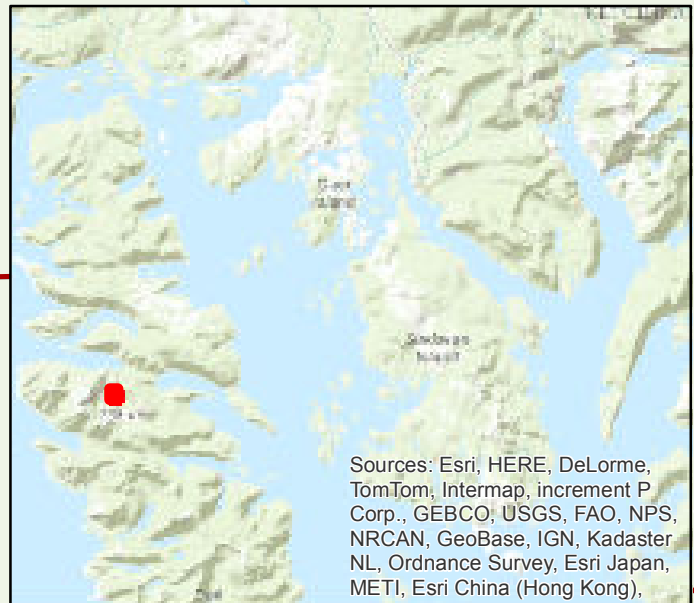
509



512



0 0.0225 0.045 0.09 Miles



Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong),

ADF&G permit no. SF201X-XXX (FILL IN)

Summary report of fish collection activity.

The area biologist was contacted on: TIME/DATE

Location ID (optional)	Latitude	Longitude	Datum	Coordinate		Date	Observer name (first name, middle initial, last name)	Fish collection method	Species	Life stage	Length (mm)		Disposition (1)
				determination method	Name of water body						No estimates/ra nges	Length method	
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	38	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	45	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	35	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	37	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	35	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	48	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	47	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	40	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	40	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	34	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	42	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	45	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	46	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	37	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	50	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	40	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	55	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	40	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	42	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	35	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	39	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	50	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	40	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	21	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	57	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	40	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	54	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	37	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	40	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	42	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	36	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	40	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	29	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	stickleback	juvenile	31	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	40	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	42	Fork	measured and released
505	55.08656	-133.13746	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	44	Fork	measured and released
509	55.08521	-133.13684	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	62	Fork	measured and released
509	55.08521	-133.13684	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	72	Fork	measured and released
509	55.08521	-133.13684	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	Dolly Varden	juvenile	66	Fork	measured and released
509	55.08521	-133.13684	WGS84	GPS	Manhattan	5/14/2015	Tony Sanderson	Minnow Trap	coho salmon	juvenile	70	Fork	measured and released

