Appendix: Excursion Inlet

Guide to direct fieldwork for cataloging anadromous water bodies in Southeast Alaska

Alaska Department of Fish and Game **Division of Habitat**

Symbols and Abbreviations

Survey data codes.

Code	
	Species
K	Chinook salmon
CH	chum salmon
CO	coho salmon
CT	cutthroat trout (anadromous and resident juveniles and adults)
DV	Dolly Varden char
OU	eulachon
S	sockeye salmon
P	pink salmon
RT	rainbow trout (unknown juvenile or resident adult)
SC	sculpin spp.
SH	steelhead trout (adult)
SB	threespine stickleback
LP	lamprey
	Lifestage
s	spawning
r	rearing
p	presence
	Sampling
EF	electrofish
VI/VL	visual identification
HN	handnet
RS	route survey
MT	minnow trap
BS	beach seine
FN	fyke net

Map color key.

Action	Color
route correction	ginger pink
addition	apatite blue
future investigation	solar yellow
resident fish	poinsettia red
conveyance	lepidolite lilac
AWC	lapis lazuli

This appendix is a working document updated as new information is acquired. Figures and tables are numbered per water body. Pages numbers are eliminated to prevent document reprinting when individual pages are inserted or removed.

EXCURSION INLET SURVEYS

Excursion Inlet is located 40 miles from Juneau and included in the Haines Borough.[1] The former native village has been the site of fish canneries since 1891 and was used during World War II as a prisoner of war camp and strategic base. The 2010 census documents 12 people living in Excursion Inlet[2] (Figure 1).

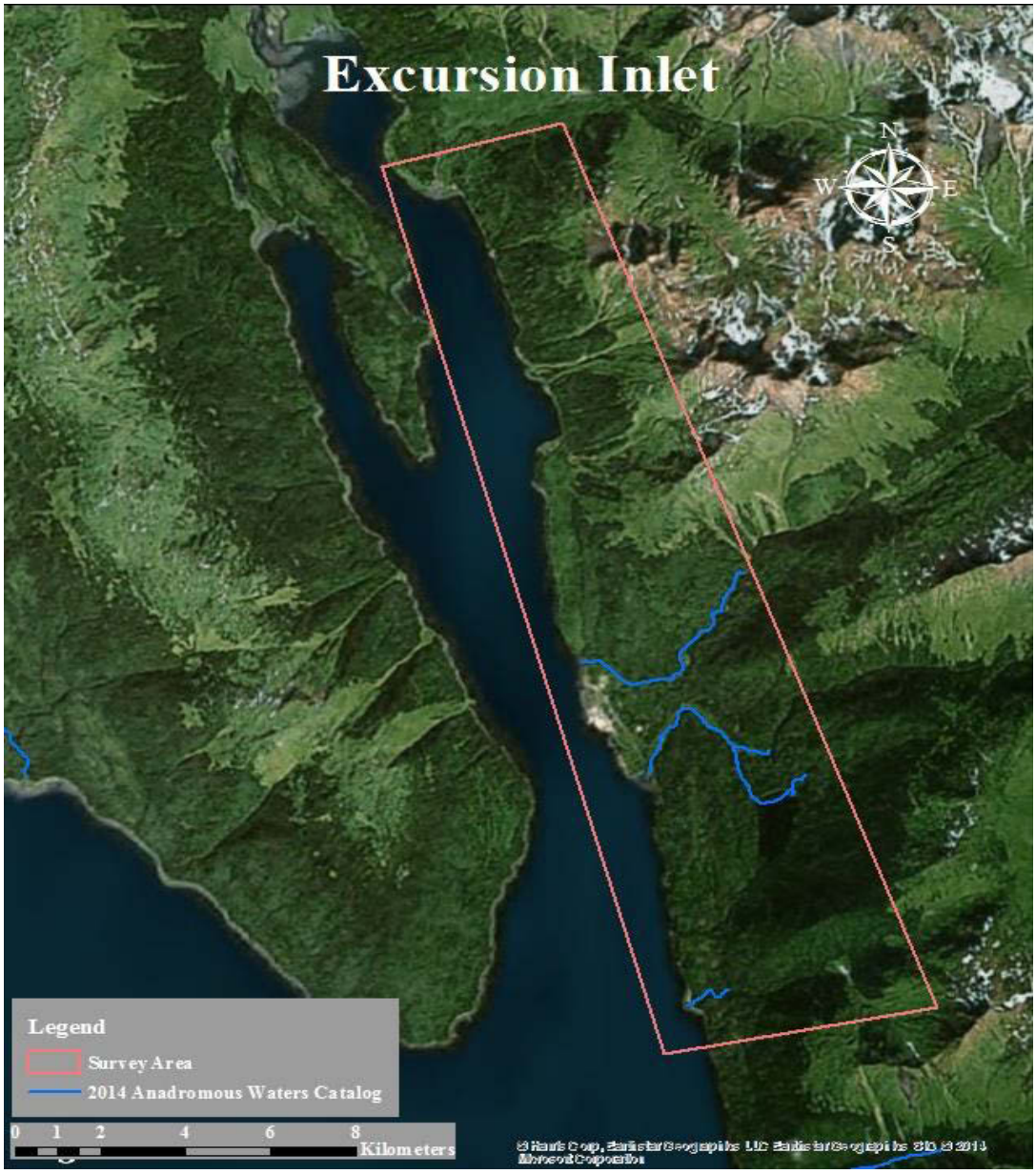

Figure 1.–Excursion Inlet survey map.

[1] U.S. Census Bureau. 2010. Borough/Census area maps for Haines Borough. 2010 Census: Alaska demographic profiles. Retrieved from: http://labor.alaska.gov/research/census/borcamaps/5_9_0map.pdf (Accessed March 17, 2015).

[2] U.S. Census Bureau. 2010. Demographic profile for Haines Borough. 2010 Census: Alaska demographic profiles. Retrieved from: http://live.laborstats.alaska.gov/cen/dp.cfm (Accessed March 17, 2015).

Excursion Inlet

114-80-10400 CORRECTION

Water body name: North Creek **Survey date:** 11/7/2012
Water body number: 114-80-10400 **Species & Lifestage:** COr, Pp
Watershed: Excursion River-Frontal Icy Strait
MTR: C040S060E **Quad:** Juneau B-5
Findings: I surveyed this stream using an electrofisher, minnow traps and GPS (Table 1). I captured rearing coho salmon, Dolly Varden char and rainbow trout and visually identified adult pink salmon.
Recommendations: I discovered I did not correctly report the upper extent in 2012, so I submitted a new nomination to waypoint 187 in November 2014 (Figure 1).
Nomination: 15-512

Table 1.–114-80-10400 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
141	58.4233	-135.4455	Tidewater falls, below mean.		
138	58.4219	-135.4394	Start of 0.1 mile side channel (SC). Pinks digging redds.	VI	40 Ps
137	58.4214	-135.4388	Concrete footing, excellent rearing habitat here.		
136	58.4206	-135.4362	SC.		
135	58.4206	-135.4358	XIP winter water intake site.		
110	58.4210	-135.4331	Minnow trap several CO juveniles.	MT	CO
111	58.4212	-135.4300		EF	1 CO, 2 DV
124	58.4209	-135.4294	Old dam site and penstock support.		
125	58.4223	-135.4230	Old logging road start.		
123	58.4230	-135.4253	Good SC and rearing.		
112	58.4232	-135.4262	Large Log jam, site of previous low head dam. 2-3% gradient up to here.		
113	58.4241	-135.4264	SC.	EF	9 DV, 2 CO
114	58.4260	-135.4236	Some incised banks beginning.		
115	58.4273	-135.4213	2% gradient here.		
122	58.4285	-135.4194	Small SC.		
116	58.4290	-135.4191	2.5% gradient over 200'.	EF	2 CO
136	58.4206	-135.4362	SC.		
121	58.4295	-135.4185	Small tributary.		
120	58.4314	-135.4156	Top of survey day 1, hook and line sampling.	VI	8 DV
127	58.4327	-135.4113	High gradient trib. that was followed to stream.		
128	58.4347	-135.4127	SC top of anadromous fish capture.	EF	2 CO, 4 DV
129	58.4363	-135.4128	Bottom of slide at left.		

Excursion Inlet

Table 1.–Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
130	58.4358	-135.4107	Top of survey, no barrier present.		
188	58.4400	-135.4099	Side channel, good rearing habitat.		
180	58.4398	-135.4063	Fished 60 ft of good rearing habitat.	EF	4 DV
181	58.4400	-135.4042	160 mm Rainbow Trout Electrofished.	EF	RBT
187	58.4404	-135.4037	2 Coho - 30 mm, 10 DV electrofished in calm side channel. Good habitat between here and snow bridge.	EF	2 CO, 10 DV
183	58.4405	-135.4002	High gradient chute.		
184	58.4405	-135.4002	Chute continued.		
186	58.4408	-135.3985	7% gradient, 21.5 m.	EF	2 DV
142	58.4408	-135.3989	Potential Barrier *North Creek Fly-over* video minute 1:38.		
143	58.4437	-135.3908	Potential Barrier *North Creek Fly-over* video minute 2:11.		
144	58.4450	-135.3888	Potential Barrier *North Creek Fly-over* video minute 2:21.		
145	58.4442	-135.3870	Potential Barrier *North Creek Fly-over* video minute 2:30.		
146	58.4447	-135.3812	Landing site and SCs *North Creek Fly-over* video minute 2:58.	EF	>50 DV

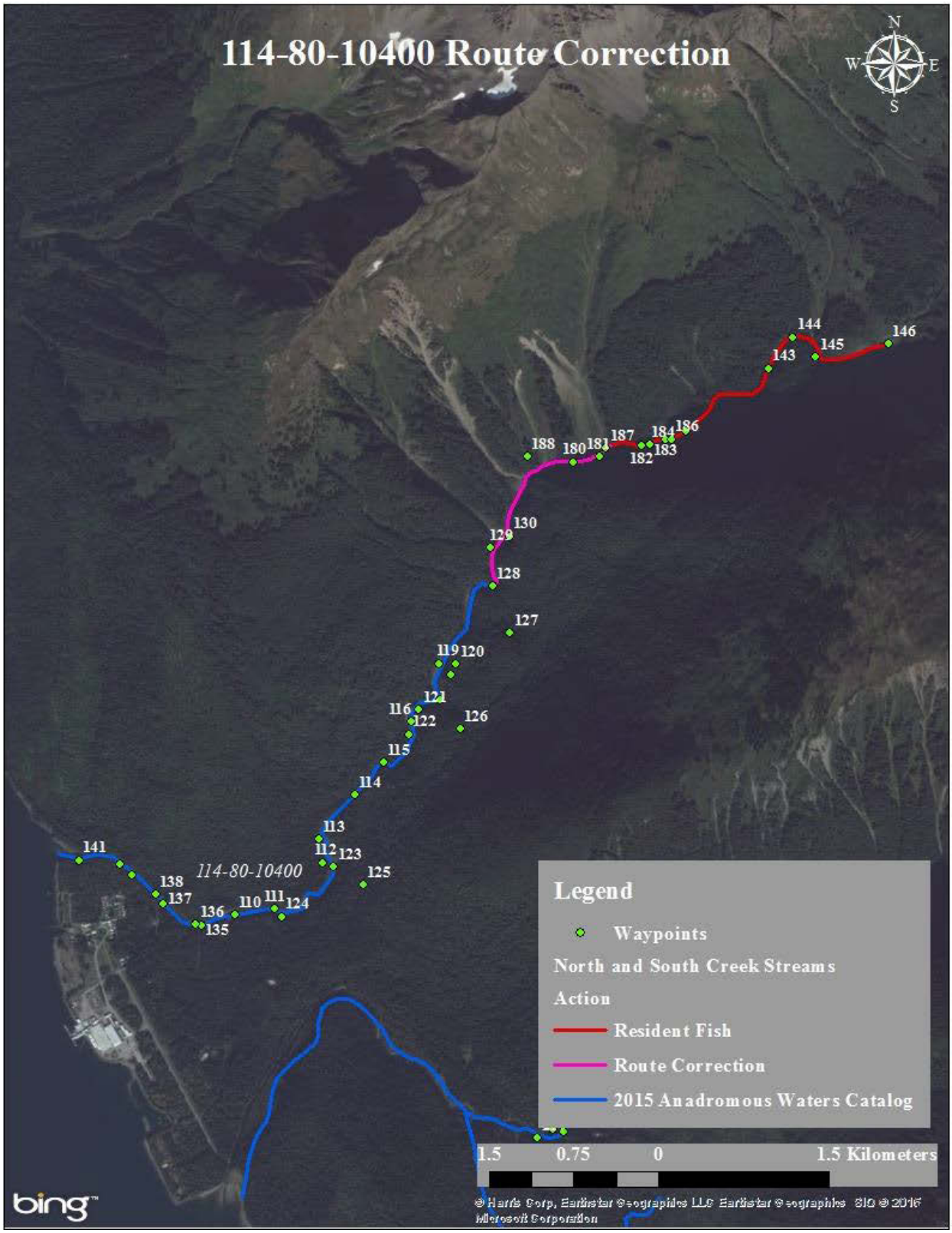

Figure 1.–114-80-10400 route correction map.

Excursion Inlet

Excursion Inlet

114-80-10450 RESIDENT FISH

Water body name: South Creek **Survey date:** 8/16 and 11/8/2012
Water body number: 114-80-10450 **Species & Lifestage:** DVp
Watershed: Excursion River-Frontal Icy Strait
MTR: C040S060E **Quad:** Juneau B-5
Findings: I flew over stream in a helicopter to locate potential fish barriers and conducted an on the ground survey using an electrofisher and GPS (Table 1, Figure 1). I captured Dolly Varden char up to a barrier falls.
Recommendations: No further investigation.
Nomination: Not accepted.

Table 1.–114-80-10450 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
217	58.4117	-135.4091	Small cascade about 3 feet high, wider channel. Still limited rearing and spawning habitat.		
216	58.4121	-135.4079	Gradient <1%.		
215	58.4131	-135.4070	End of cascades, gradient >1%.		
106	58.4132	-135.4070	4 DV 30-90mm.	EF	4 DV
107	58.4134	-135.4068	3-4' falls not a total barrier.		
214	58.4139	-135.4068	Pool and 3 ft high cascades, Gradient 1.5%.		
189	58.4141	-135.4068	Coho salmon remains on log across river.		
190	58.4147	-135.4065	LWD jam.	EF	4 DV
213	58.4149	-135.4061	Slower water, some still pools with LWD potential for resident fish movement - Gradient 1.5%.		
212	58.4151	-135.4059	Series of cascades - Total of 10 ft high but with some resting pools.		
211	58.4157	-135.4047	Side channel habitat, good rearing potential - 2-5% gradient here with 2-3 cascades.		
191	58.4158	-135.4053		EF	6 DV
192	58.4161	-135.4048	Large woody debris pool.	EF	4 DV
210	58.4161	-135.4046	2 ft high cascades.		
209	58.4168	-135.4039	Several deep pools and complex LWD, 1.5% gradient with step pools.		
208	58.4177	-135.4036	3-5 ft cascades.		

Table 1.–Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
207	58.4187	-135.4031	6 ft high falls on one side of River, 5 foot on the other, close to a barrier with jump pool less than 4 feet.		
206	58.4194	-135.4014	Cascades, gradient ~2%.		
205	58.4194	-135.4003	Lower gradient, no falls, smaller cascades, potentially first area for upstream resident fish migration, 2% gradient.		
204	58.4198	-135.3984	Many cascades, 4 foot chute.		
203	58.4201	-135.3972	4 ft cascade, some lower gradient here ~150 ft.		
202	58.4200	-135.3963	Several 3 ft cascades, a 4 ft falls.		
193	58.4199	-135.3960		EF	2 DV
201	58.4200	-135.3954	5 ft cascade.		
200	58.4203	-135.3947	1 ft cascades, 3 ft falls, logjam.		
199	58.4209	-135.3938	3 ft cascades.		
198	58.4208	-135.3926	3 ft falls and cascade into large pool.		
197	58.4205	-135.3914	5 ft cascade.		
148			Potential Barrier *South Creek Fly-over* video minute 0:18.		
196	58.4208	-135.3908	2 ft falls.		
194	58.4214	-135.3901	Start of steep area/barrier.		
195	58.4219	-135.3886	Top of falls complex - 10 foot falls with 4 foot jump pool (see video) cascade through another 10 foot fallso into 8 foot pool. Total length is 190 Meters at 13 % Gradient.		
149	58.4223	-135.3848	Potential Barrier *South Creek Fly-over* video minute 0:54.		

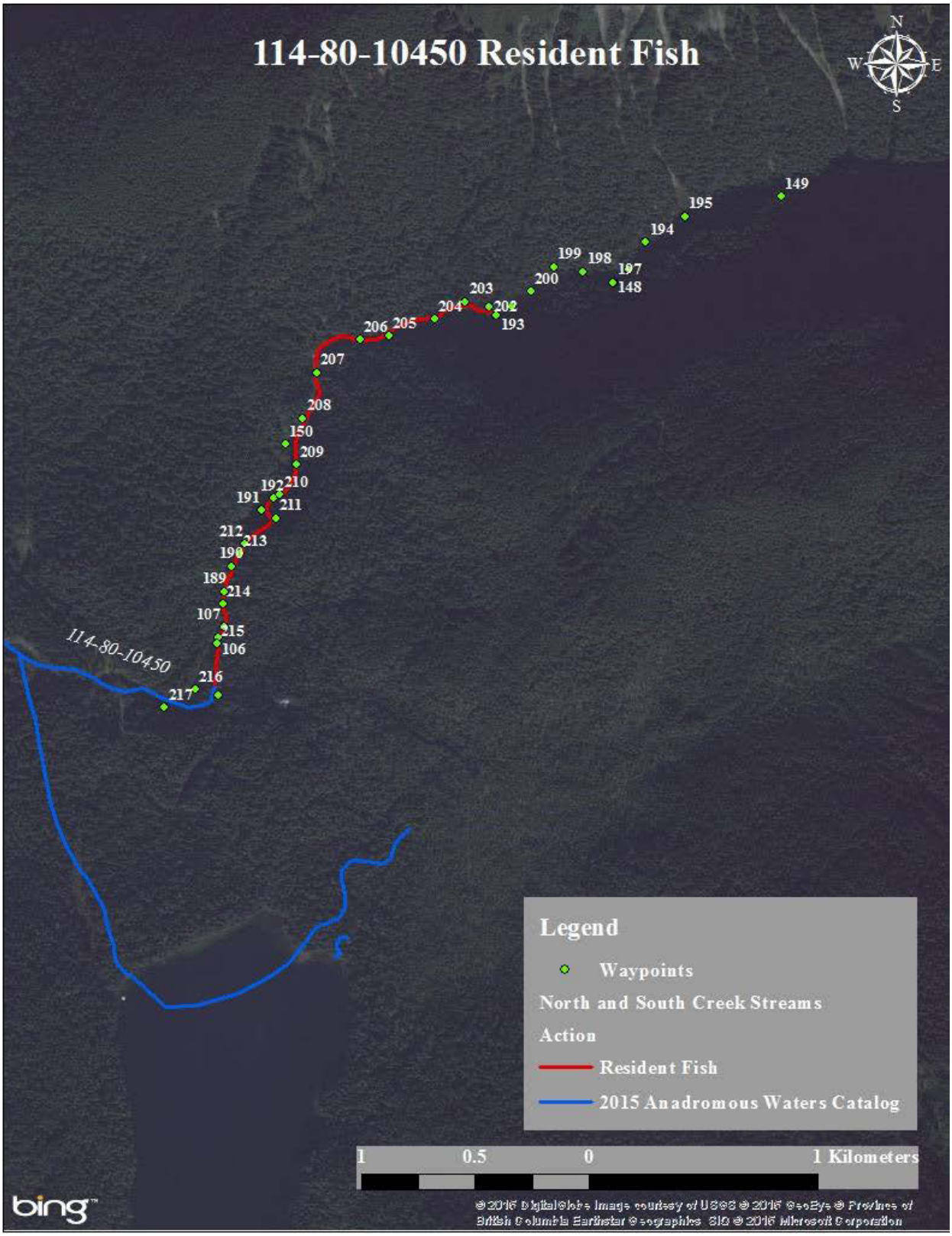

Figure 1.–114-80-10450 resident fish map.

Excursion Inlet

Excursion Inlet

114-80-10450-2004 CORRECTION

Water body name: Neva Creek **Survey date:** 9/2/2015
Water body number: 114-80-10450-2004 **Species & Lifestage:** Ps
Watershed: Neva Creek
MTR: C040S061E **Quad:** Juneau B-5
Findings: I visually observed 18 spawning pink salmon beginning at waypoint 394 and downstream from there to waypoint 399 (Table 1, Figure 1).
Recommendations: Correct to add spawning pink salmon and adjust the upper extent of the stream to reflect the field-verified route, as shown in Figure 1.
Nomination: 15-503

Table 2.–114-80-10450-2004 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
394	58.4095	-135.4005	I began counting spawning pink salmon here while walking downstream.	VI	18Ps
399	58.4091	-135.4012	I counted 18 adult pink salmon to this point where I stopped to measure stream discharge.	VI	

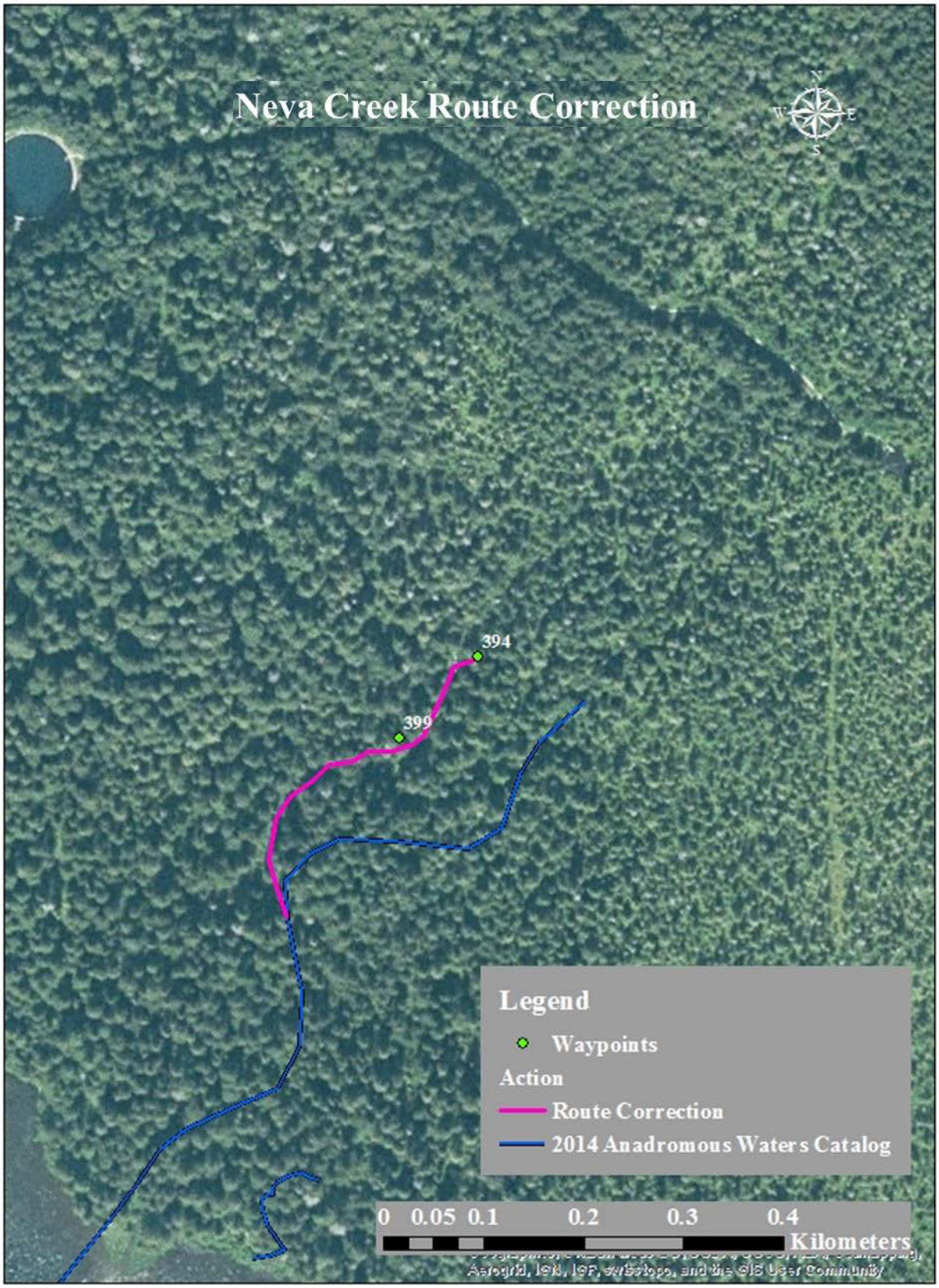

Figure 2.–Neva Creek route correction map.

Excursion Inlet

114-80-10450-2004-3008 ADDITION

Water body name: **Survey date:** 9/2/2013
Water body number: 114-80-10450-2004-3008 **Species & Lifestage:** Ss
Watershed: Excursion River-Frontal Icy Strait
MTR: C040S060E **Quad:** Juneau B-5
Findings: I observed 15 spawning sockeye in an uncataloged tributary to Neva Creek (Table 1, Figure 1).
Recommendations: Add stream and spawning sockeye to the Anadromous Waters Catalog.
Nomination: 15-504

Table 1.–114-80-10450-2004-3008 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
6	58.4074	-135.4032	Start of tributary where adult sockeye spawning was documented on 9/2/2013.	VI	Ss
11	58.4082	-135.4006	15 spawning sockeye salmon downstream from this point on 9/2/2013. Barrier falls and conveyance only beyond this point.	VI	2 Ss

Figure 1.–114-80-10450-2004-3008 addition map, labeled Tributary 1 on map.

Excursion Inlet

114-80-10500 CORRECTION

Water body name: Cabin Creek **Survey date:** 7/30/2013
Water body number: 114-80-10500 **Species & Lifestage:** CHp, Pp
Watershed: Excursion River-Frontal Icy Strait
MTR: C040S060E **Quad:** Juneau B-5
Findings: I surveyed this stream using an electrofisher and GPS (Table 1, Figure 1). I found a fish barrier in the existing cataloged reach.
Recommendations: Correct the upper extent of the cataloged extent to end at waypoint 374 (Figure 1).
Nomination: 13-626

Table 1.–114-80-10500 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
387	58.3803	-135.4251	Mouth of creek.		
386	58.3803	-135.4249	At high tide line.		
365	58.3807	-159.4220			
385	58.3813	-135.4214	2-3' woody debris falls with adult pink salmon present. No salmon observed this points.	EF/VI	3 DV, P
366	58.3816	-135.4208	Less then 2% gradient, highest quality pink spawning habitat.		
367	58.3818	-135.4206	Transition from hightest to lower quality spawning area. 2% gradient here, marked with two pink flags.	EF	9 DV
368	58.3819	-135.4197	3' falls with a 1' jump pool.	EF	1 DV
369	58.3815	-135.4197	Cascade falls, low density spawning gravel near this point.	EF	1 DV
384	58.3812	-135.4195	Some suitable pink salmon spawning gravel upstream of here.		
383	58.3812	-135.4192	No spawning gravel from this point on downstream for about 100' of WPT# 371.		
370	58.3811	-135.4188			
371	58.3811	-135.4182	Step falls 2-4' with a 1-2' jump pool, 2.5% gradient, marginal upstream pink salmon passage.		
382	58.3814	-135.4179	3.5% gradient, minimal spawning habitat, about 11 CFS estimated discharge.	EF	1 DV
372	58.3816	-135.4171			
373	58.3820	-135.4166	Large Woody debris falls, complex with 2-3' steps.		

Table 1.–Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
374	58.3819	-135.4160	Base of barrier falls, marked with pink and green flagging. 9% gradient over about 300'. First half 6%, second half 12%. 30-40' vertical falls just upstream of this complex.		
375	58.3815	-135.4120	Continued falls complex visible from this location off the channel.		
376	58.3816	-135.4098	Less then 3% gradient above falls, begin electrofishing again. No fish captured. First evidence of surface water tributaries here, supplemental flow through groundwater below this point.	EF	No Fish
377	58.3820	-135.4092	Tributary at green hose.	EF	No Fish
378	58.3820	-135.4083			
379	58.3819	-135.4070	Increased gradient and less then 10' falls.	EF	No Fish
380	58.3824	-135.4056			
381	58.3825	-135.4049	Top of survey. About 8 CFS discharge estimate, marked with two pink flags.	EF	No Fish

Figure 5.–114-80-10500 route correction map.

Excursion Inlet

Excursion Inlet

FUTURE INVESTIGATION

Water body name: Devil's Creek **Survey date:** 11/9/2012
Water body number: **Species & Lifestage:** DVp
Watershed: Excursion River-Frontal Icy Strait
MTR: C039S060E **Quad:** Juneau B-5
Findings: I surveyed this stream using an electrofisher and GPS (Table 1, Figure 1) and captured rearing Dolly Varden char. The stream appears to shift around on its delta frequently.
Recommendations: Investigate this stream in the future for anadromous fish (Figure 1).
Nomination: N/A

Table 1.–Devil's Creek survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
1	58.4880	-135.4781	Electrofished and caught 5 DV between here and tidewater. Gradient is increasing and there is minimal rearing habitat. Substrate dominated by bedrock.	EF	5 DV
2	58.4880	-135.4772	Proposed microhydro intake		
3	58.4901	-135.4733	Top of survey, high gradient, minimal pools. Electrofished and got nothing.	EF	

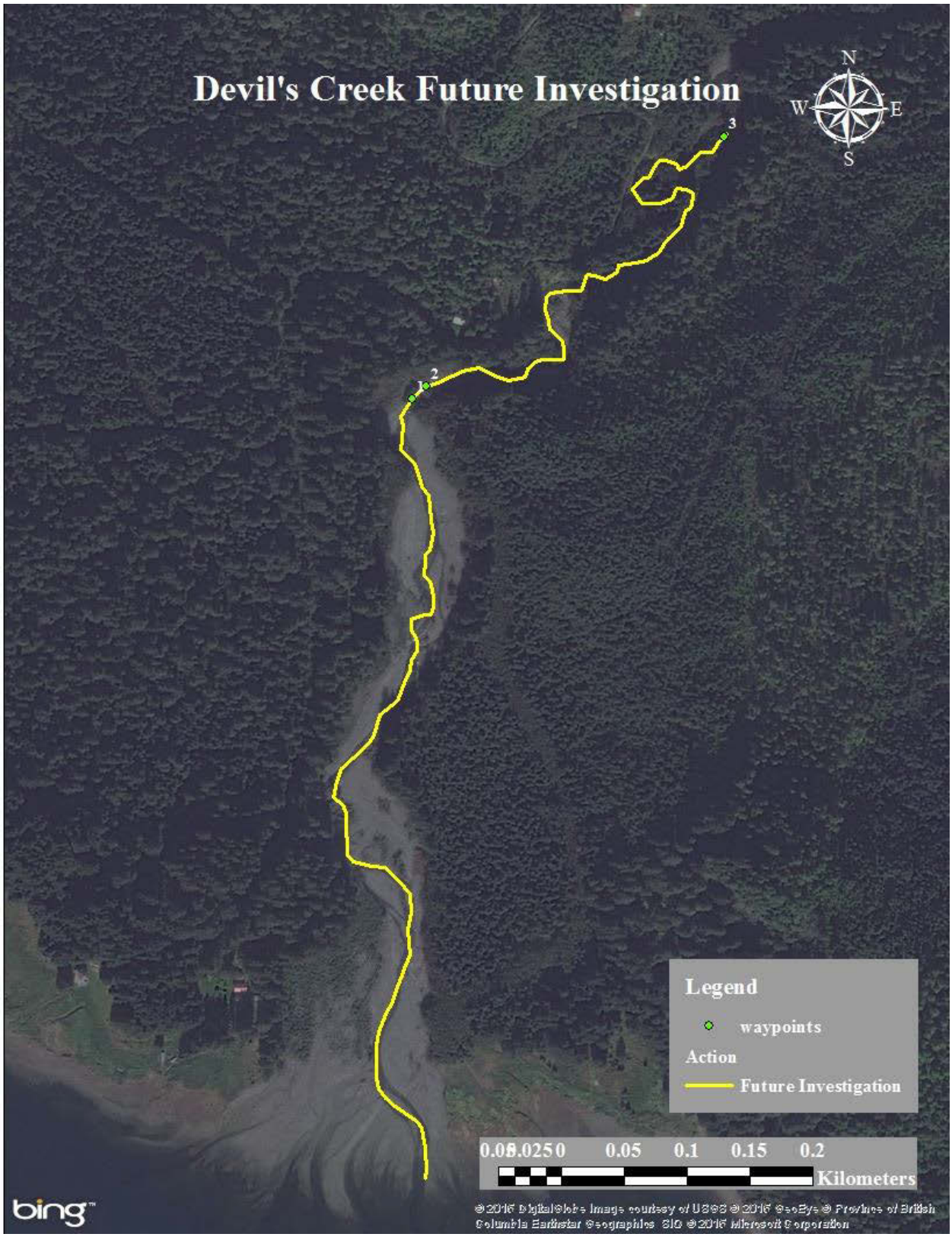

Figure 1.–Devil's Creek future investigation map.

Excursion Inlet

EXCURSION INLET STREAMS REQUIRING FUTURE INVESTIGATION

Table 1.–Start points of Excursion Inlet streams requiring future investigation.

Waypoint	Latitude	Longitude
1	58.4091	-135.4012
2	58.4830	-135.4770

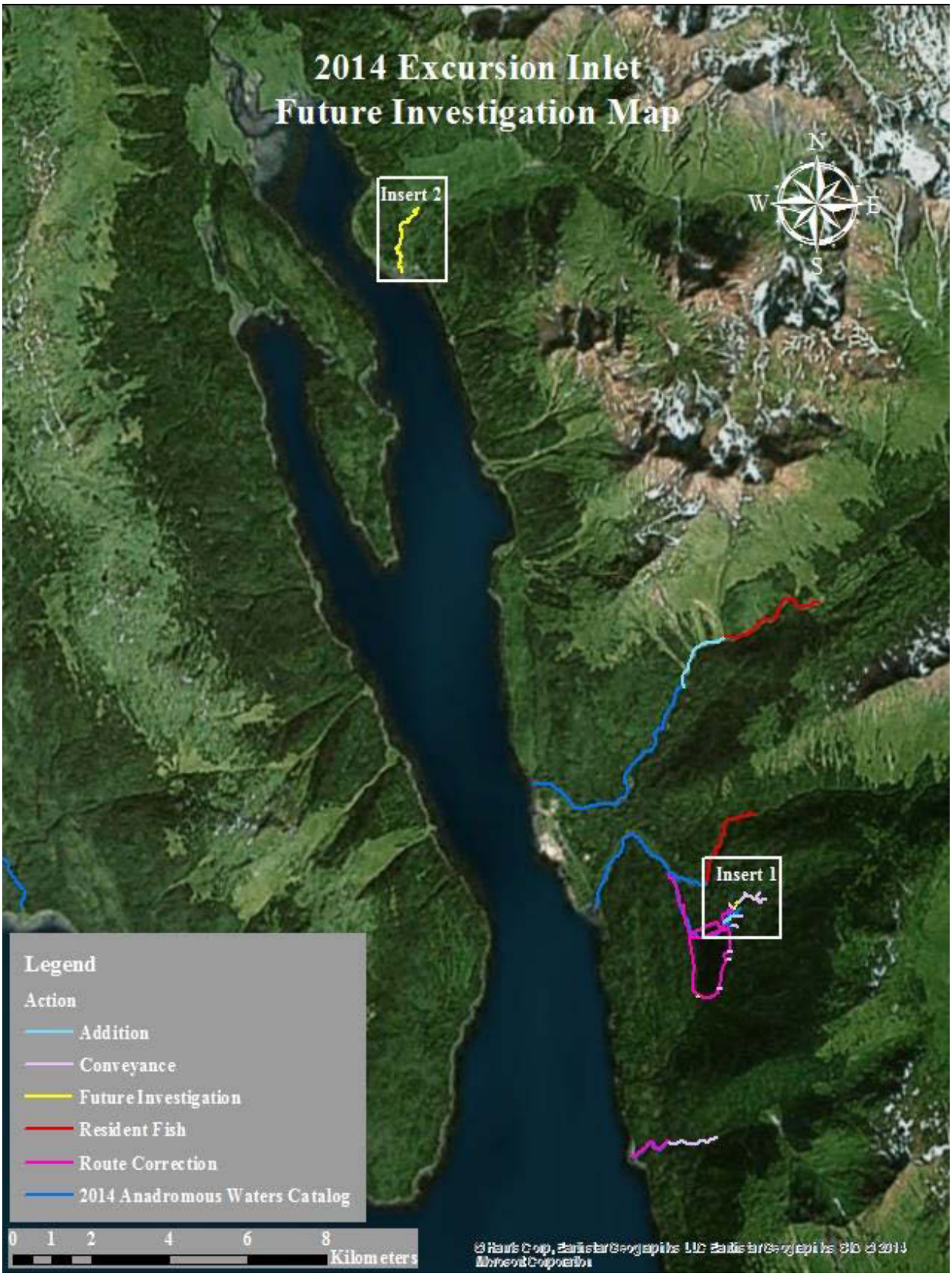

Figure 1.–2014 Excursion Inlet index future investigation map.

Excursion Inlet

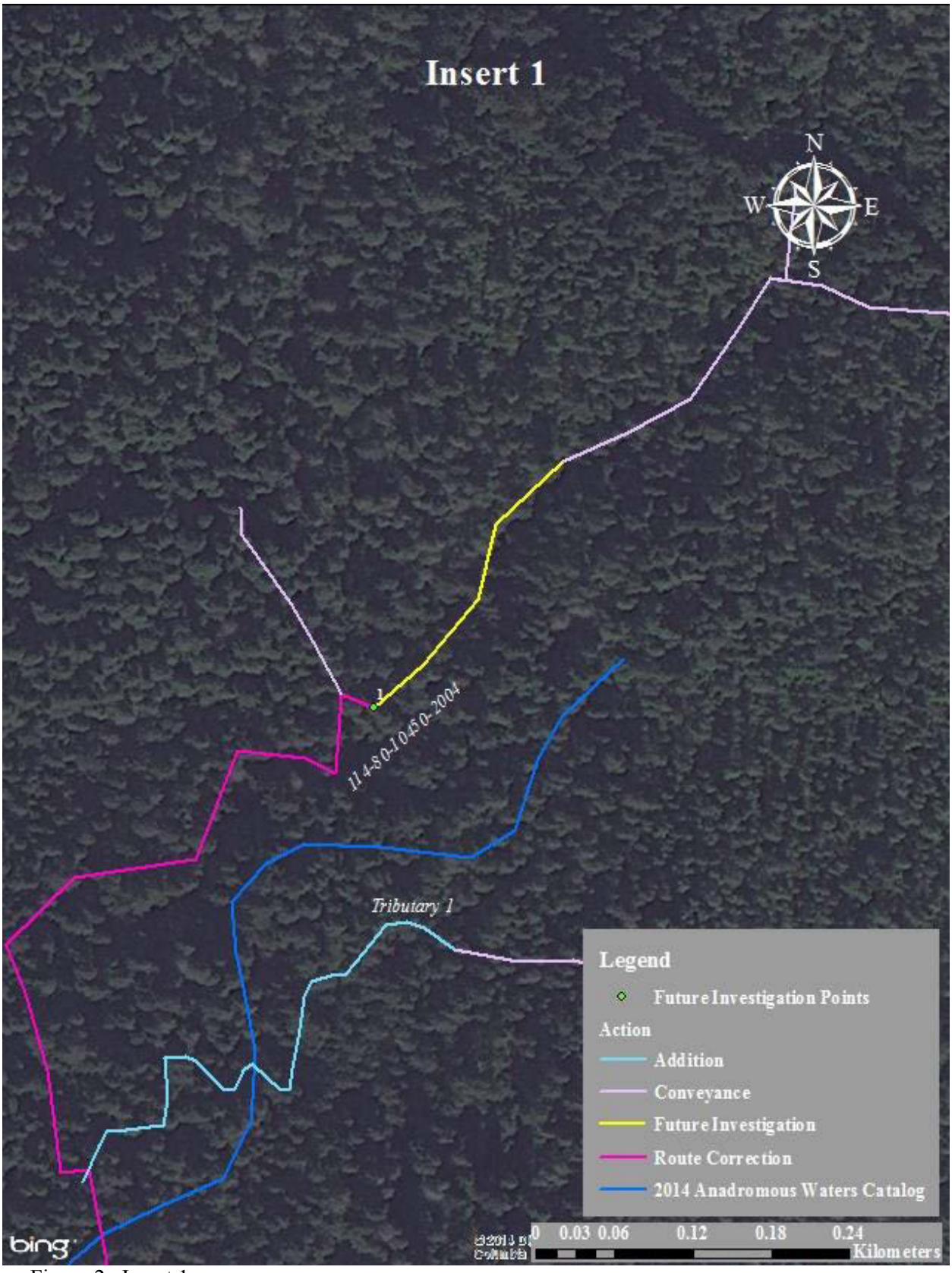

Figure 2.–Insert 1 map.

Excursion Inlet

Figure 3.–Insert 2 map.