

Appendix: Wrangell

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



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)
TS	threespine stickleback
LP	lamprey
	Lifestage
s	spawning
r	rearing
p	presence
	Sampling
EF	electrofishing
VI	visual observation
HN	handnet
RS	route survey
MT	minnow trap
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.

WRANGELL SURVEYS

The City and Borough of Wrangell, population 2,406, is located on the northwest tip of Wrangell Island (Figure 1). It is near the mouth of the Stikine River, a historic trade route to the Canadian Interior.¹

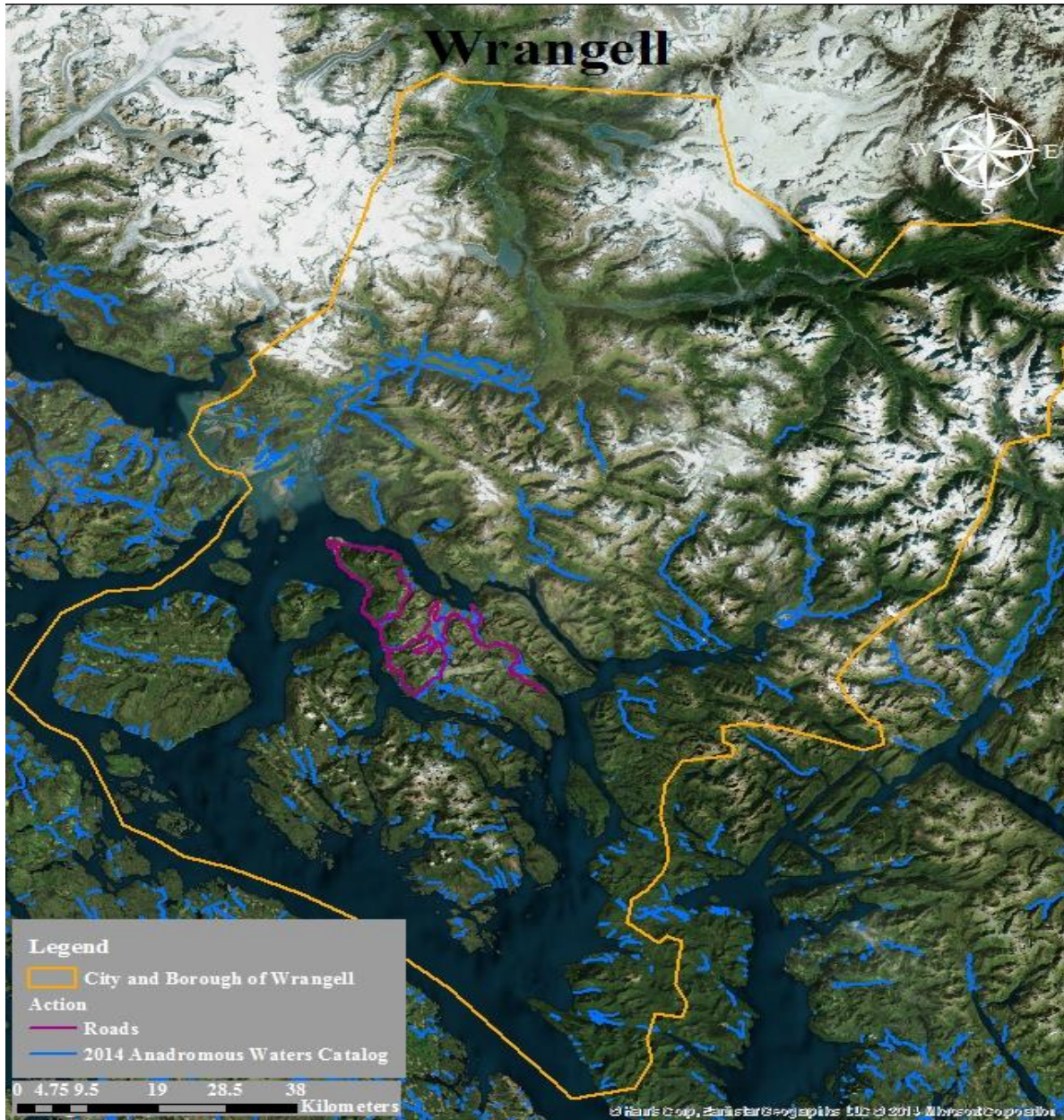


Figure 1.—Wrangell survey map.

¹ State of Alaska Department of Commerce, Community, and Economic Development, Division of Community and Regional Affairs database. Available from: <http://www.commerce.state.ak.us/cra/DCRAExternal/Community/Details/7dc49d03-4394-46d6-a4f2-850b79e3f2b8>. (Accessed June 24, 2015).

Wrangell

107-40-10537-2006**ADDITION****Water body name:** Warehouse Creek**Survey date:** 4/28/2010**Water body number:** 107-40-10537-2006**Species & Lifestage:** CO**Watershed:** Bradfield River**MTR:** C065S090E **Quad:** Bradfield Canal A-5**Findings:** Set baited minnow traps overnight in an uncataloged stream and captured juvenile coho salmon and Dolly Varden char (Table 1).**Recommendations:** Add stream to the AWC (Figure 1).**Nomination:** 10-796

Table 1.–107-40-10537-2006 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
6	56.2160	-131.4977	Culvert outlet pool.	MT	8 CO, 1 DV
13	56.2152	-131.4974	50' upstream of the 48' culvert.	MT	

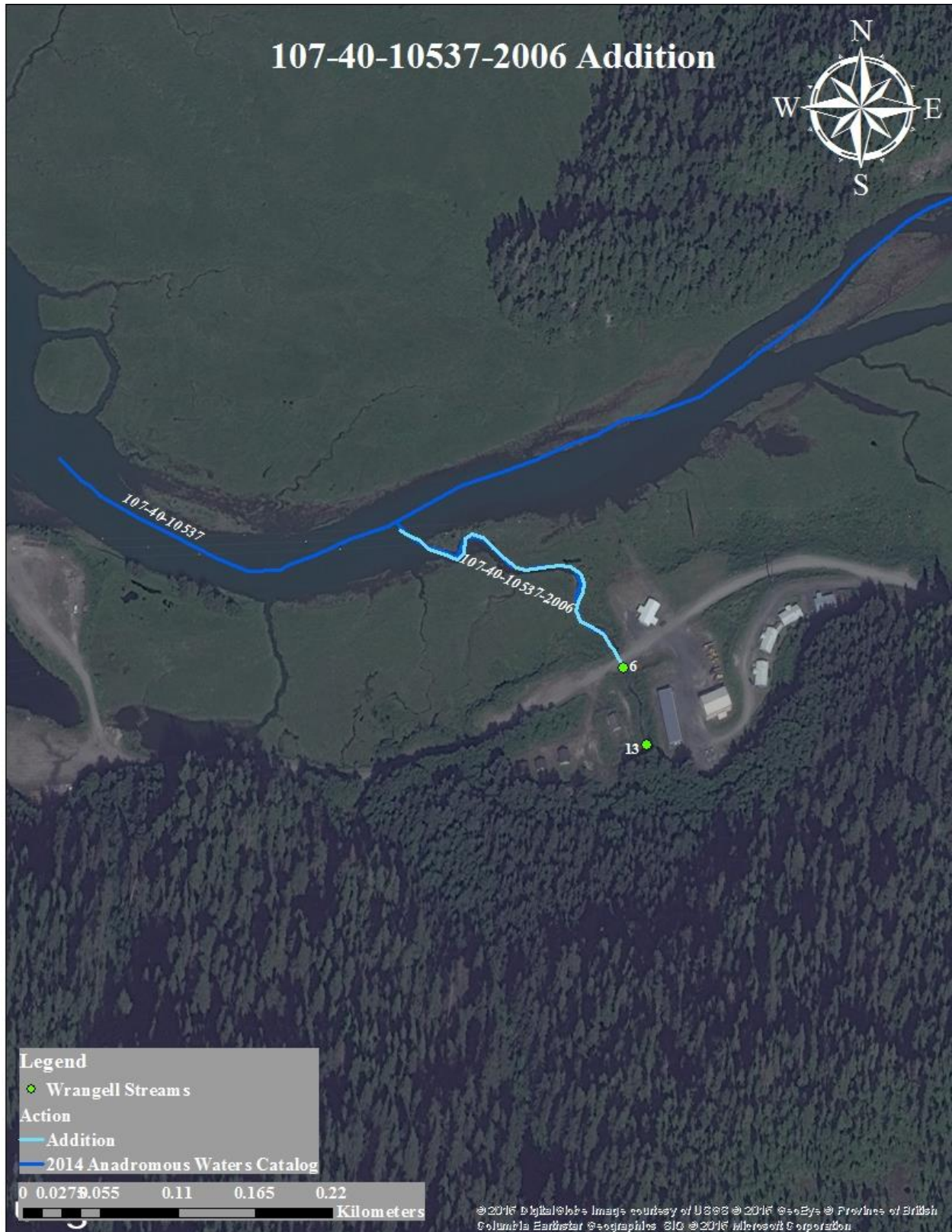


Figure 1.—107-40-10537-2006 addition map.

Wrangell

107-40-10537-2008**CORRECTION**

Water body name: Tailrace Creek
Water body number: 107-40-10537-2008
Watershed: Bradfield River

Survey date: 9/30/2010
Species & Lifestage: CHp, COr, Pp

MTR: C065S090E **Quad:** Bradfield Canal A-5

Findings: Conducted a foot survey of Tailrace Creek using a GPS (Table 1). The upper extent of anadromy is incorrect.

Recommendations: Reduce the upper extent of anadromy (Figure 1).

Nomination: 10-797

Table 1.–107-40-10537-2008 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
1	56.2168	-131.4887	Top of tailrace.		
2	56.2180	-131.4919	End of tailrace.		

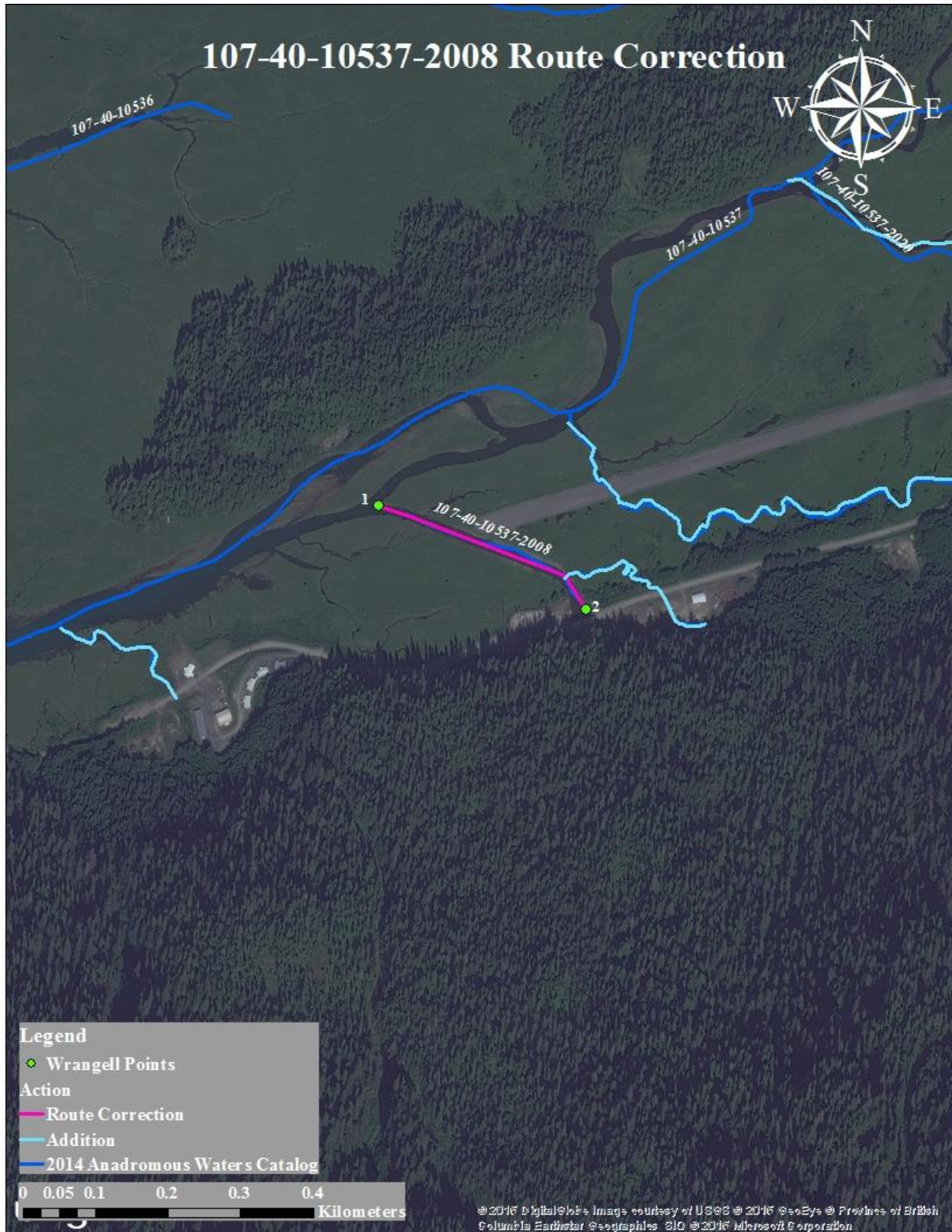


Figure 1.—107-40-10537-2008 route correction map.

Wrangell

107-40-10537-2010**ADDITION****Water body name:****Survey date:** 4/28/2010**Water body number:** 107-40-10537-2010**Species & Lifestage:** CO**Watershed:** Bradfield River**MTR:** C065S090E **Quad:** Bradfield Canal A-5**Findings:** We set baited minnow traps overnight in this stream and captured juvenile coho salmon and Dolly Varden char (Table 1).**Recommendations:** Add stream to the AWC (Figure 1).**Nomination:** 10-799

Table 1.–107-40-10537-2010 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
1	56.2185	-131.4786	50' upstream of a 18" culvert.	MT	1 CO
2	56.2187	-131.4785	Culvert outlet.	MT	28 CO
3	56.2184	-131.4792	100' downstream of trap 2.	MT	6 CO
4	56.2184	-131.4792	100' upstream of a culvert.	MT	1 CO, 1 DV

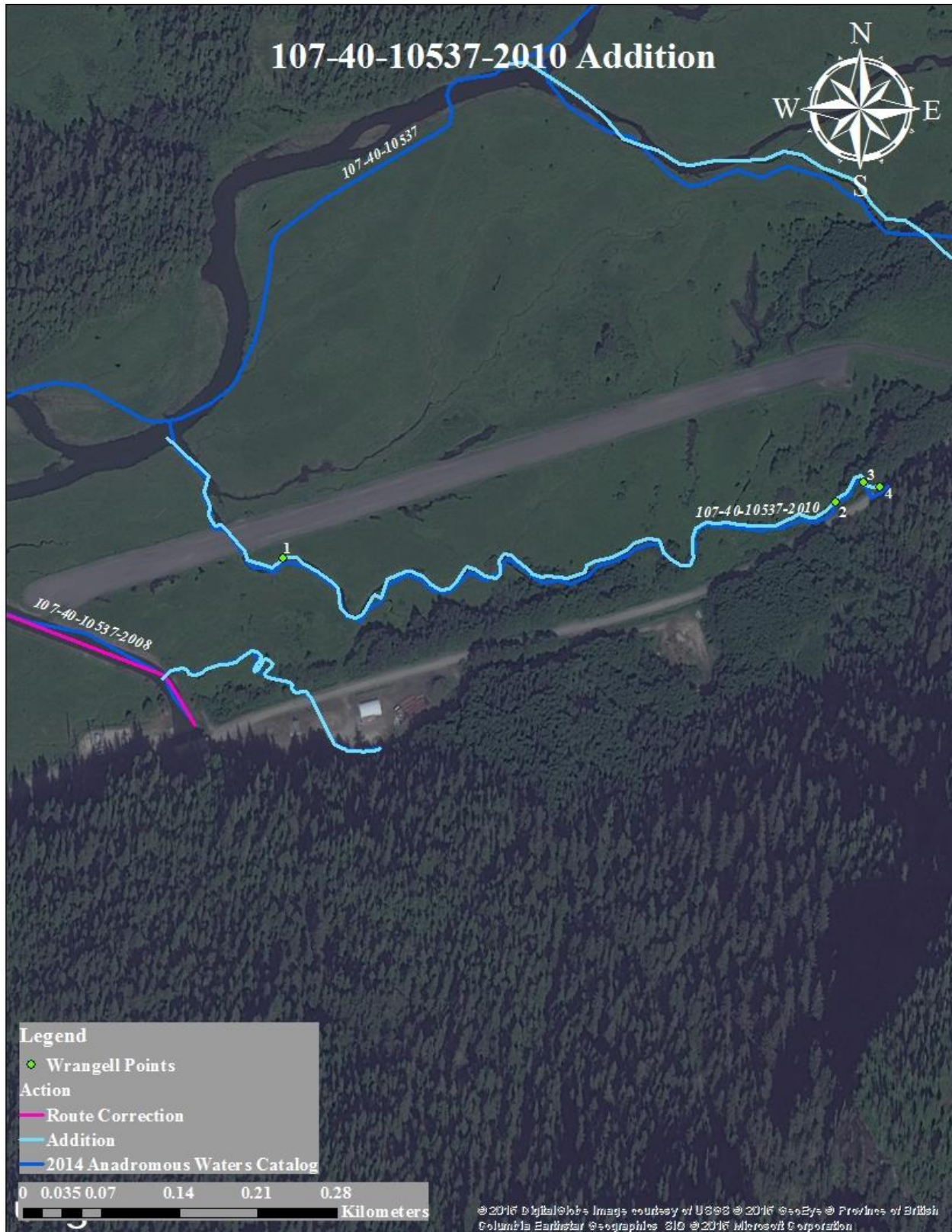


Figure 1.—107-40-10537-2010 addition map.

Wrangell

107-40-10537-2020**ADDITION****Water body name:** Schwartz Creek**Survey date:** 4/28/2010**Water body number:** 107-40-10537-2020**Species & Lifestage:** CO**Watershed:** Bradfield River**MTR:** C065S090E **Quad:** Bradfield Canal A-5**Findings:** We set baited minnow traps overnight in this stream and captured juvenile coho salmon and Dolly Varden char (Table 1).**Recommendations:** Add stream to the AWC (Figure 1).**Nomination:** 10-761

Table 1.–107-40-10537-2020 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
1	56.2200	-131.4752	Downstream of culvert	MT	2 CO, 2 DV
2	56.2201	-131.4758	Downstream of culvert	MT	1 DV
3	56.2199	-131.4744	Upstream of culvert	MT	8 CO, 2 DV

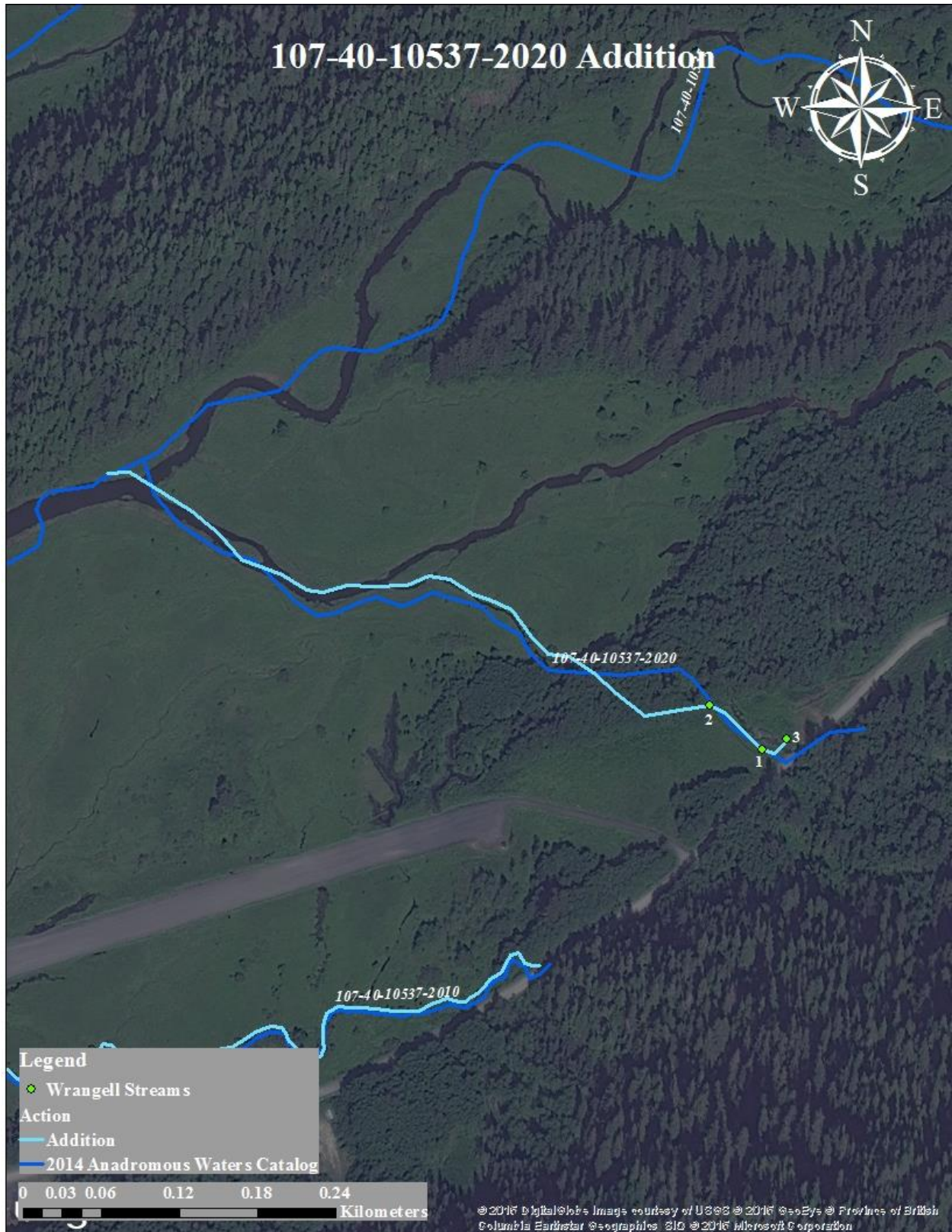


Figure 1.—107-40-10537-2020 addition map.

Wrangell

107-40-10537-2008-3005**ADDITION****Water body name:****Survey date:** 4/28/2010**Water body number:** 107-40-10537-2008-3005**Species & Lifestage:** COr, DVr**Watershed:** Bradfield River**MTR:** C065S090E **Quad:** Bradfield Canal A-5**Findings:** We set baited minnow traps overnight in this stream and captured juvenile coho salmon and Dolly Varden char (Table 1).**Recommendations:** Add stream to the AWC (Figure 1).**Nomination:** 10-798

Table 1.–107-40-10537-2008-3005 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
15	56.2165	-131.4864	Near upper extent.	MT	5 CO
16	56.2172	-131.4884	At confluence with Tailrace Creek.	MT	7 CO, 1 DV

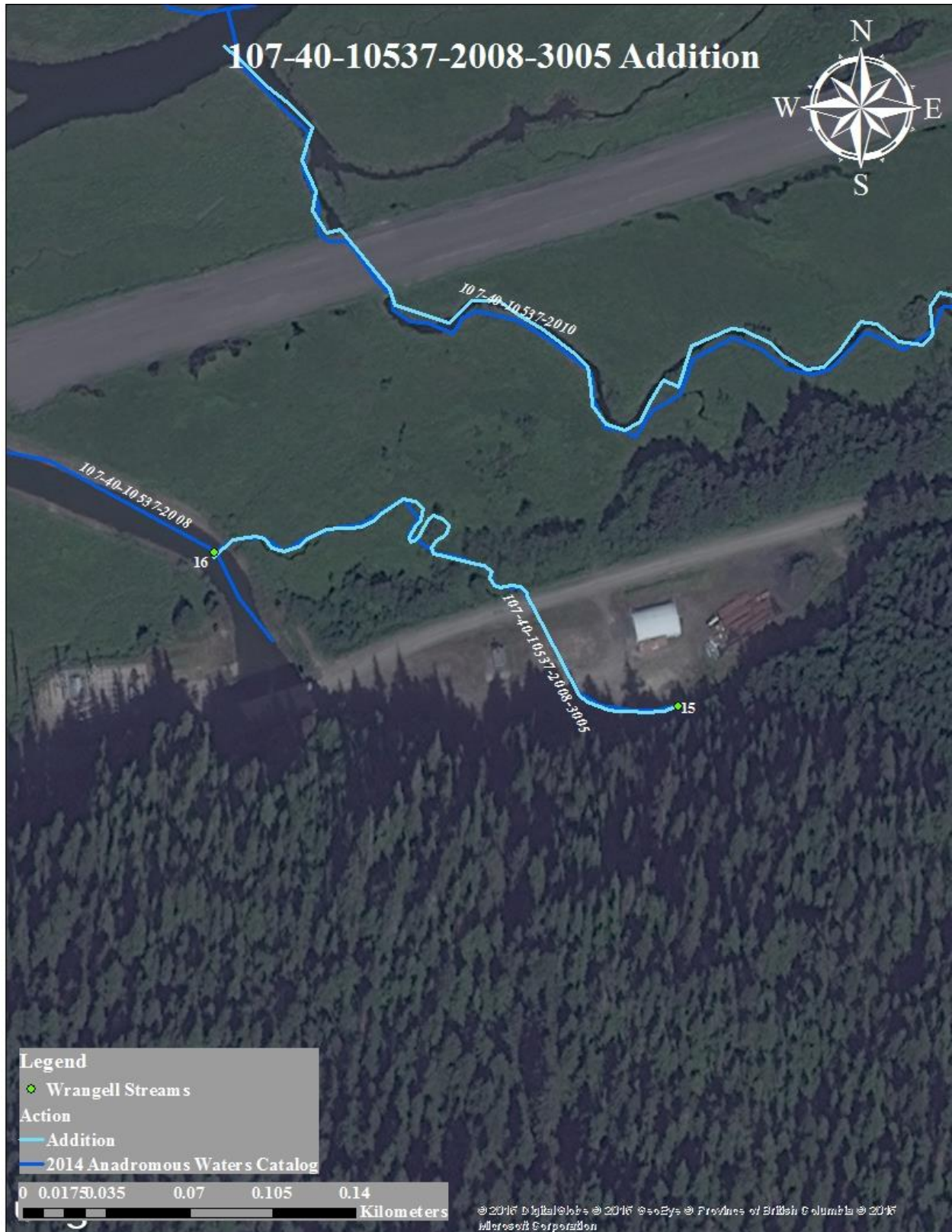


Figure 1.—107-40-10537-2008-3005 addition map.

Wrangell

107-40-10538**CORRECTION****Water body name:** Hidden Creek**Survey date:** 4/28/2010**Water body number:** 107-40-10538**Species & Lifestage:** CHp, COp, Pp**Watershed:** Bradfield River**MTR:** C065S090E **Quad:** Bradfield Canal A-5**Findings:** There is a 30' bedrock falls chute 600' upstream from tidewater; this is a barrier to upstream salmon migration (Table 1).**Recommendations:** Correct the upper extent of Hidden Creek (Figure 1).**Nomination:** 10-760

Table 1.–107-40-10538 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
20	56.2161	-131.5079	30' barrier falls chute.		

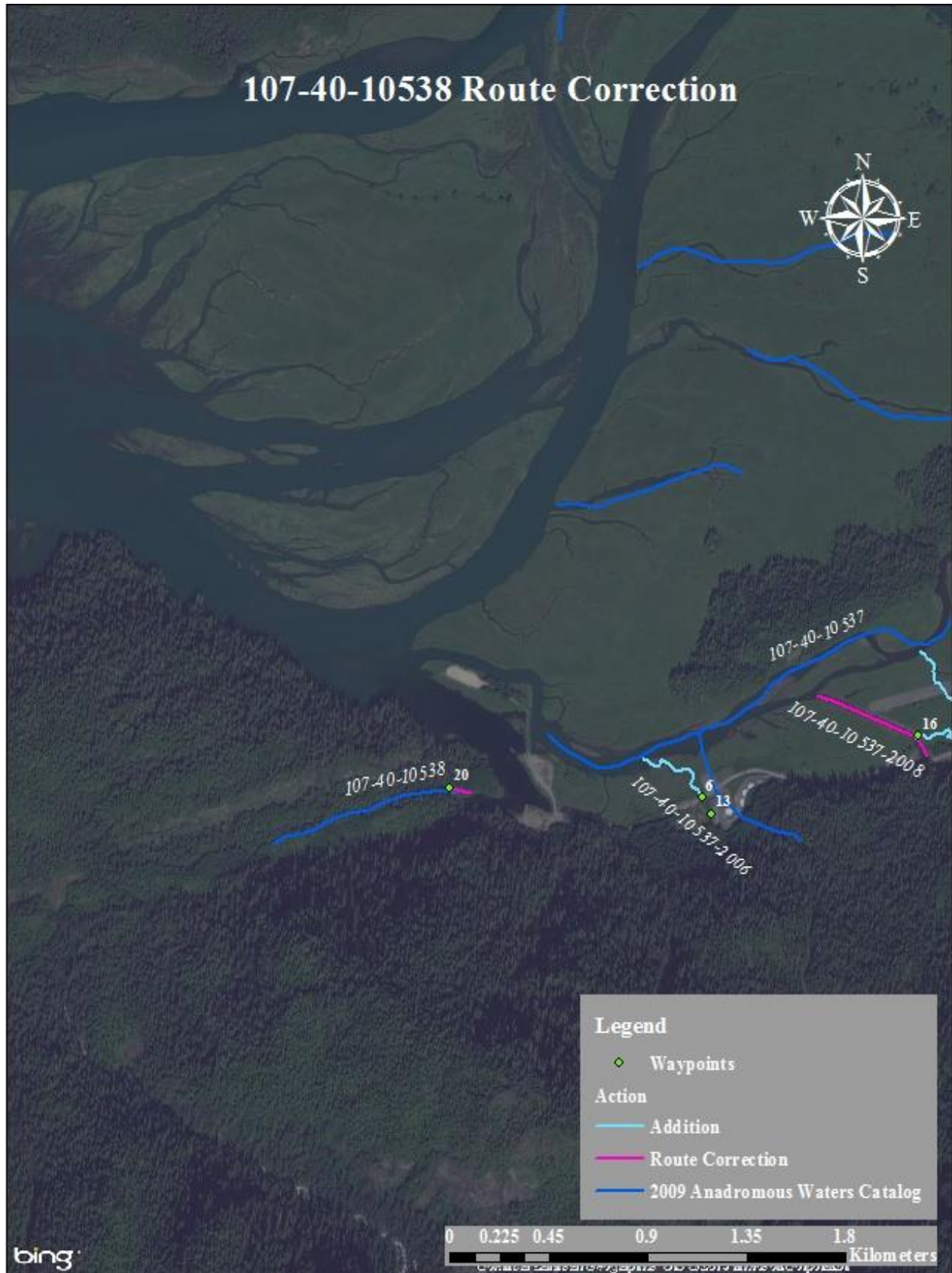


Figure 1.-107-40-10538 route correction map.

Wrangell

107-40-10780**CORRECTION****Water body name:** Earl West Creek**Survey date:** 9/23/2014**Water body number:** 107-40-10780**Species & Lifestage:** COp, Pp, SHp**Watershed:** Salamander Creek-Frontal Eastern Passage**MTR:** C064S085E **Quad:** Petersburg B-1**Findings:** We surveyed stream number 107-40-10780 using a backpack electrofisher and GPS (Table 1). We caught Dolly Varden char and cutthroat trout (Figure 1-4).**Recommendations:** Update the AWC route to reflect the field verified route (Figure 5). Add Dolly Varden char and cutthroat trout presence.**Nomination:** 16-513

Table 1.–107-40-10780 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
96	56.3399	-132.1358	Mouth of EWC mainstem, large substrate.		
95	56.3360	-132.1329	Tributary entering river right.		
167	56.3321	-132.1314	Tributary on river left.		
166	56.3274	-132.1296	Confluence of east branch and the mainstem of EWC.		
174	56.3264	-132.1296	Confluence of west branch and the mainstem of EWC.		
73	56.3181	-132.1304	Tributary on river right.	EF	No Fish
75	56.3180	-132.1304	Second tributary on river right.	EF	No Fish
82	56.3175	-132.1316	Stream fans out below large wood on river left.		
83	56.3169	-132.1329	Bedrock feature on river right.		
84	56.3147	-132.1356	Drainage entering on river right.		
85	56.3143	-132.1371	Backwatered stretch, beavers starting to dam river right.		
86	56.3134	-132.1388	Tributary on river left, grassy and backwatered.		
87	56.3127	-132.1398	Old beaver dam. Attempted to E-fish small slough.	EF	No Fish
88	56.3120	-132.1391	Tributary on river left. Trout observed about 15in long.	VI	1 Unknown
89	56.3122	-132.1396	Beaver dam. Walking back to road.		
6	56.2986	-132.1411	Photos.		
7	56.2982	-132.1401	Small tributary enters on river left.		
8	56.2980	-132.1400	Set minnow trap in small tributary at base of a 1.5-2 ft drop. CT: 65-78 mm.	MT	3 CT

Table 1.–Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
64	56.2979	-132.1394	E-Fished EWC mainstem.	EF	No Fish
65	56.2976	-132.1391	E-Fished EWC mainstem in two pools.	EF	No Fish
9	56.2974	-132.1389	Photos.		
10	56.2967	-132.1376	Confluence of EWC and tributary enters on river left. Setting minnow trap 5 at confluence pool.	MT	2 CT
66	56.2965	-132.1381	Tributary on river left. E-fishing pools heading upstream.		
67	56.2960	-132.1385	Shocked small side channel, visual ID of a fish.		
68	56.2960	-132.1386	Small tributary on river left, shocked mouth.	EF	No fish
69	56.2958	-132.1386	Tributary on river right, about half the flow of the main channel.		
70	56.2957	-132.1387	Moderate gradient, large substrate. No E-fishing above this waypoint.	EF	No fish
71	56.2952	-132.1395	12% gradient over 24 yards.		
72	56.2949	-132.1399	Leaving stream, back to road. Future Investigation, resident fish likely. SWCA surveyed in 2010.		
11	56.2963	-132.1365	Set trap 6 at the base of a 6 ft falls.	MT	No Fish
13	56.2961	-132.1364	Upper extent: Bedrock chute, 10-12 ft falls with no jump pool. Three 5-6 ft falls immediately upstream.		
12	56.2960	-132.1360	Barrier falls complex.		



Figure 1.—View upstream at portion of fish barrier.



Figure 2.—View downstream of bedrock chute fish barrier.

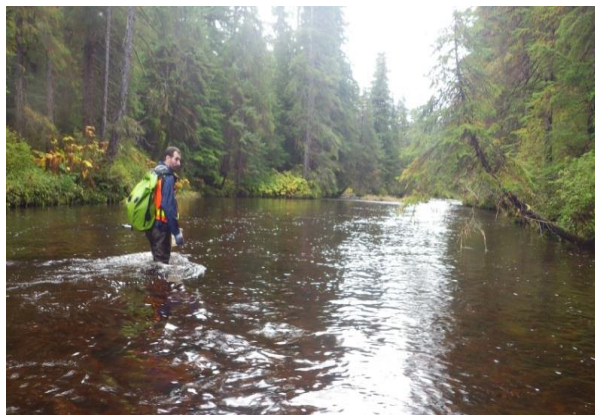


Figure 3.—Johnny Zutz walks upstream in wide low gradient section of Earl West Creek.



Figure 4.—Johnny Zutz in beaver pond area of Earl West Creek.

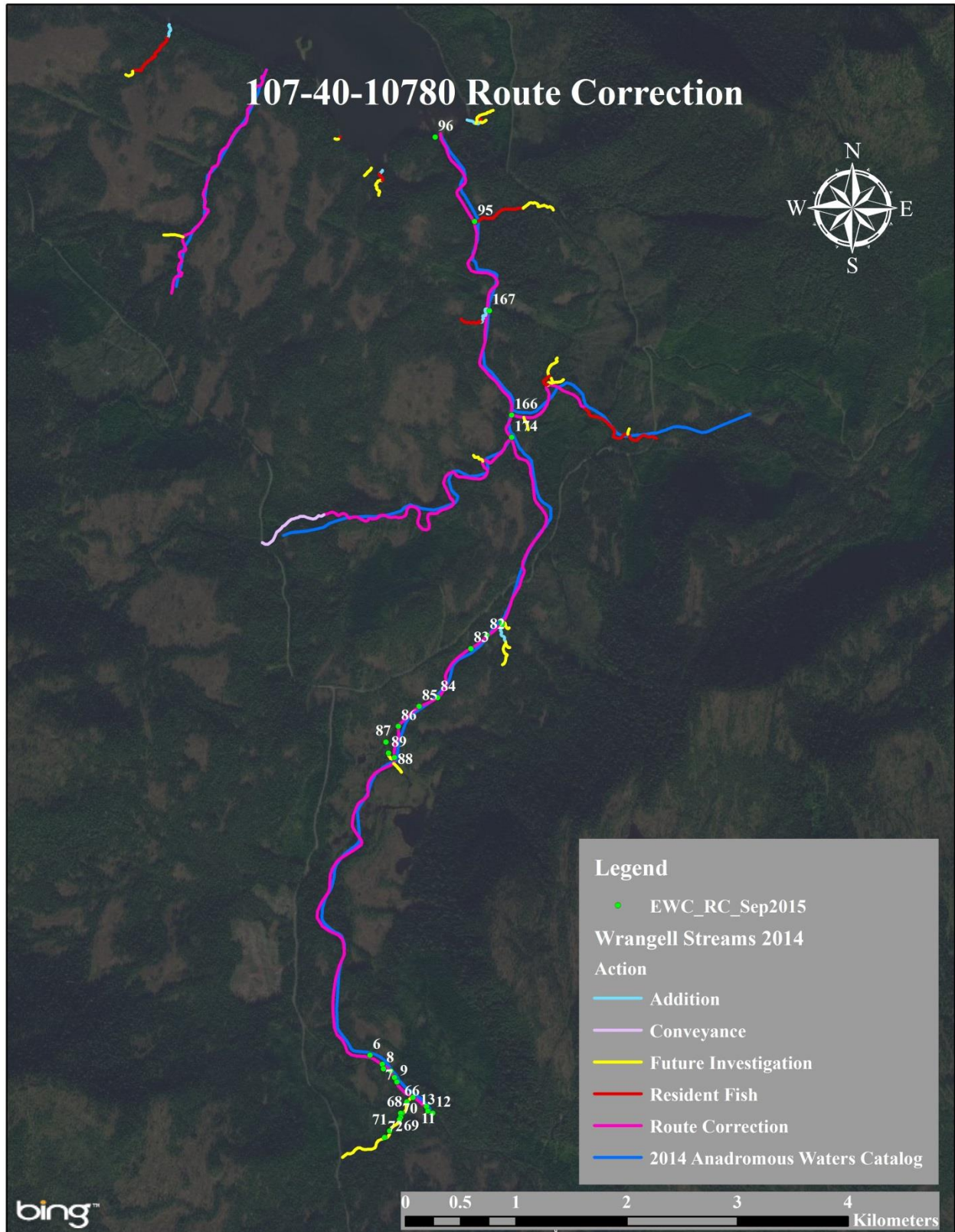


Figure 5.—107-40-10780 route correction map.

Wrangell

107-40-10780 TRIBUTARY 1

Water body name:

Water body number:

Watershed: Salamander Creek-Frontal Eastern Passage

MTR: C064S085E **Quad:** Petersburg B-1

Findings: We surveyed this tributary to stream number 107-40-10780 using a backpack electrofisher and GPS (Table 1). We caught juvenile coho salmon (Figure 1, 2).

Recommendations: Add stream to the AWC and include rearing coho salmon (Figure 3).

Nomination: 16-516

ADDITION

Survey date: 9/26/2014

Species & Lifestage:

Table 2.—107-40-10780 tributary 1 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
168	56.3322	-132.1316	Tributary on river left.	EF	1 CO
169	56.3321	-132.1318		EF	2 CO
170	56.3317	-132.1320	Stream is intermittently subterranean upstream of this point.	EF	2 CO
171	56.3316	-132.1321		EF	1 CO
172	56.3315	-132.1329	Falls just above this point may be barrier to juvenile fish.	EF	1 CO
173	56.3317	-132.1337	End survey as it is becoming difficult to E-fish.		



Figure 1.—Johnny Zutz at the confluence of Earl West Creek and tributary.



Figure 2.—Low gradient undercut bank habitat at WP 170.

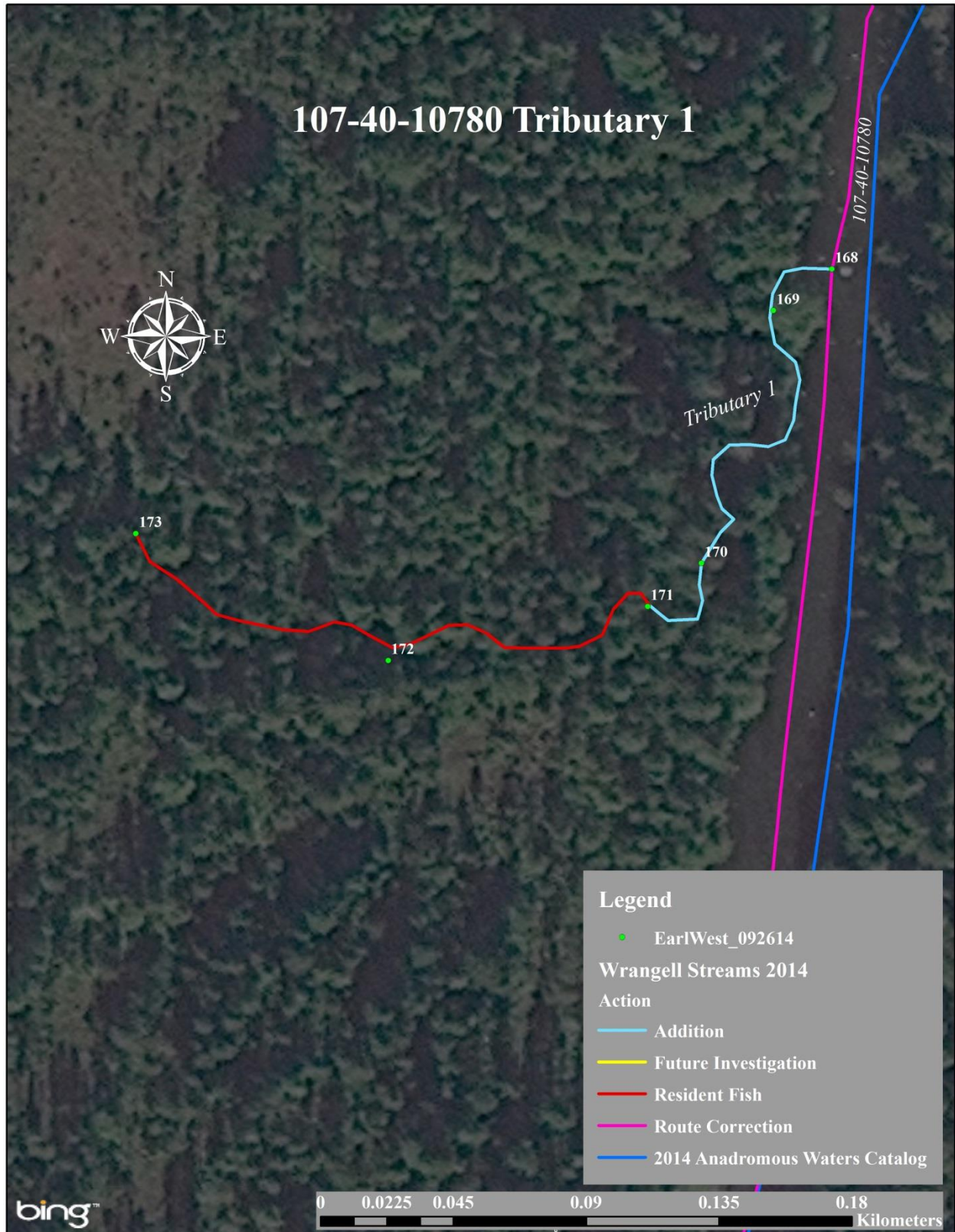


Figure 3.—107-40-10780 tributary 1 addition map.

107-40-10780 TRIBUTARY 2

ADDITION

Water body name:

Survey date: 9/24/2014

Water body number:

Species & Lifestage:

Watershed: Salamander Creek-Frontal Eastern Passage

MTR: C064S085E **Quad:** Petersburg B-1

Findings: We surveyed two uncataloged tributaries to stream number 107-40-10780 using a backpack electrofisher and GPS (Table 1). We caught juvenile coho salmon and cutthroat trout in the second stream (Figures 1-4).

Recommendations: Add this stream to the AWC and include coho rearing and cutthroat trout presence (Figure 5).

Nomination: 16-515

Table 3.–107-40-10780 tributary 2 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
73	56.3181	-132.1304	Tributary entering Earl West Creek on river right. E-fishing pools going upstream.	EF	No Fish
74	56.3178	-132.1298	Base of cascade falls. 24 % gradient over 25 yards to top of falls, more falls above. Returning to mainstem. No fish caught in this tributary.	EF	No Fish
75	56.3180	-132.1304	Second tributary entering Earl West Creek on river right.	EF	No Fish
76	56.3175	-132.1305	1 CT about 35 and visual on 2 more unknown salmonids.	EF	1 CT
77	56.3172	-132.1301	Undercut bank. Upstream of this waypoint a tributary enters on river right.	EF	1 CO
78	56.3169	-132.1298	End survey of side channel. Back to Tributary 2.	EF	1 CO
80	56.3166	-132.1300	Falls here are a possible barrier to juvenile fish.		
81	56.3162	-132.1304	Shocked several pools above small falls. Gradient 15 % over 9 yds.	EF	No Fish



Figure 1.—Undercut bank at WP 77.



Figure 2.—Tributary on river right upstream of WP 77.



Figure 3.—Coho salmon captured at WP 77.



Figure 4.—Small falls at waypoint 80 that may be a barrier to juvenile salmon.

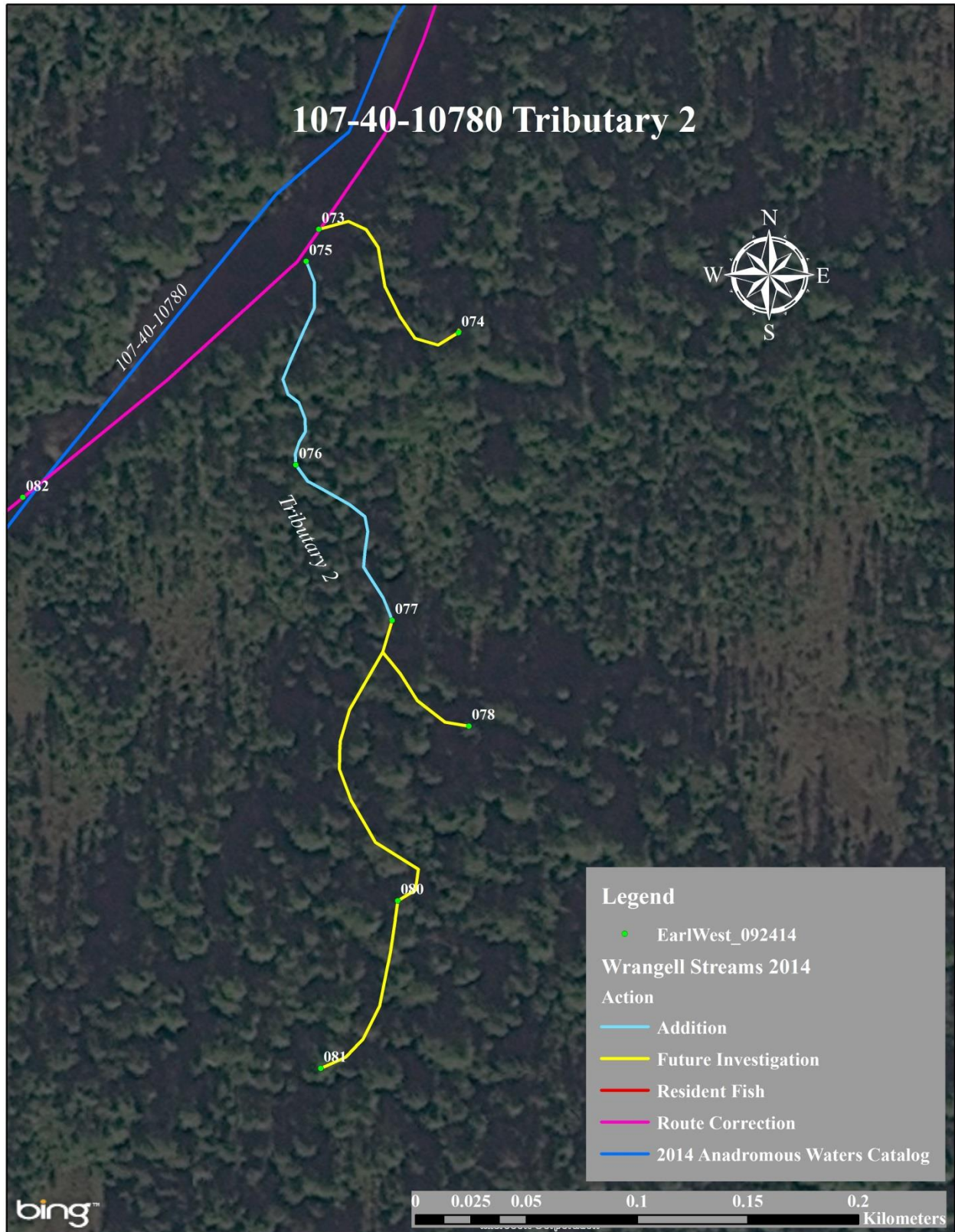


Figure 5.—107-40-10780 tributary 2 addition map.

Wrangell

Wrangell

107-40-10780-2003**CORRECTION****Water body name:****Survey date:** 9/26/2014**Water body number:** 107-40-10780-2003**Species & Lifestage:** COp**Watershed:** Salamander Creek-Frontal Eastern Passage**MTR:** C064S085E **Quad:** Petersburg B-1

Findings: We surveyed stream number 107-40-10780-2003 using a backpack electrofisher and GPS (Table 1). We started at the road and surveyed downstream until we reached the confluence with Earl West Creek (Figure 1, 2). We caught Dolly Varden char and cutthroat trout but no coho salmon. Problems with our backpack electrofisher resulted in a poor sampling effort. We encountered barriers to fish passage, including a falls at WP 146 (Figure 3, 4).

Recommendations: Update the AWC route to reflect the field verified route and shorten the stream to the falls barrier (Figure 5). Add Dolly Varden char and cutthroat trout presence.

Nomination: 16-517

Table 1.–107-40-10780-2003 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
136	56.3264	-132.1178	Inlet of East EWC Culvert.		
137	56.3264	-132.1180	Outlet of East EWC Culvert. Begin stream survey; E-fishing downstream towards mouth.		
138	56.3265	-132.1202	Tributary on river right. Goes suterranean after 30 ft. 1 ft wetted width and 1-2 in depth.	EF	No Fish
139	56.3268	-132.1201	End of E-fishing effort in tributary.	EF	No Fish
140	56.3264	-132.1213	Photos.		
141	56.3271	-132.1220	Photos.		
142	56.3274	-132.1233	Top of cascade falls. Tributary on river left.		
143	56.3275	-132.1233	Second cascade falls. 6 ft jump. 3 ft pool is 6 ft away from the base of falls due to bedrock. 5 falls in the series 4-6 ft tall. Gradienet is 22 % over 34 yds downstream.		
144	56.3276	-132.1234	Bottom of cascade falls no 2.		
145	56.3277	-132.1236	Bottom of cascade section.		
146	56.3278	-132.1238	Falls about 100 ft downstream of the last section of cascades. Had to side hill to bypass canyon.		
147	56.3285	-132.1254	Back in stream after detour.		

Table 1.—Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
148	56.3287	-132.1267	Side channel on river right, just downstream of WP 147. Tributary into side channel on river right, 2 ft wide and 5 in deep at confluence.		
149	56.3289	-132.1266	Splits into two channels with similar flow. Visual of several fish but no ID. E-fish up river right channel.	EF	No Fish
150	56.3291	-132.1264	End survey, no fish seen or caught.		
151	56.3289	-132.1263	Survey heading up river left channel as it has a little more flow than river right.	EF	1 DV
152	56.3290	-132.1254	End survey.		
153	56.3288	-132.1267		EF	1 DV, 1 CT
154	56.3288	-132.1268	Tributary to side channel on river right.		
155	56.3288	-132.1269		EF	1 DV, 3 CT
156	56.3292	-132.1265	Deeply incised channel.	EF	1 CT
157	56.3299	-132.1260	Gradient change, starts getting steeper	EF	No Fish
158	56.3300	-132.1259	Ending fishing on this stream, 2 small falls below channel splits just above. Possible barrier to juveniles.		
160	56.3285	-132.1267	Tributary meets medium side channel.		
161	56.3282	-132.1266	Medium side channel hits mainstem.		
162	56.3273	-132.1281		EF	1 CT
163	56.3273	-132.1286	Tributary on river left has a 2 ft drop, creating a fish barrier at current water flows.		
164	56.3271	-132.1284	E-fish upstream in tributary.	EF	No Fish
165	56.3267	-132.1282	Stream goes subterranean. Ending survey of tributary.		
166	56.3274	-132.1296	Confluence of East branch and the mainstem of EWC.		

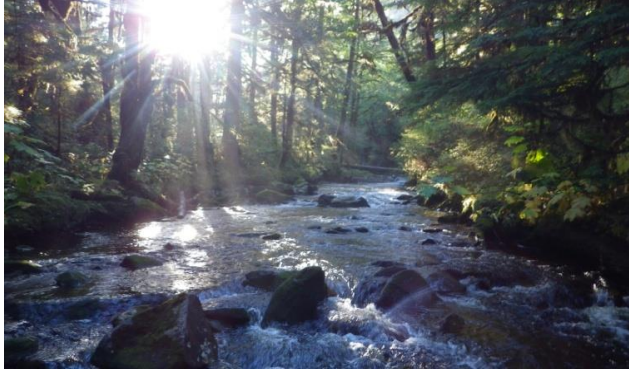


Figure 1.—East Earl West Creek above anadromous fish barrier.

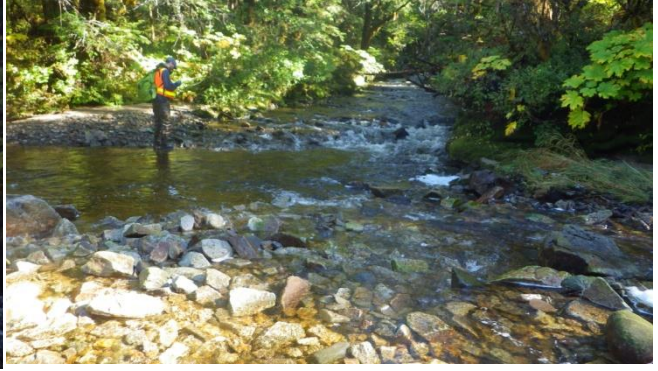


Figure 2.—Johnny Zutz at confluence of East Earl West Creek and Earl West Creek.

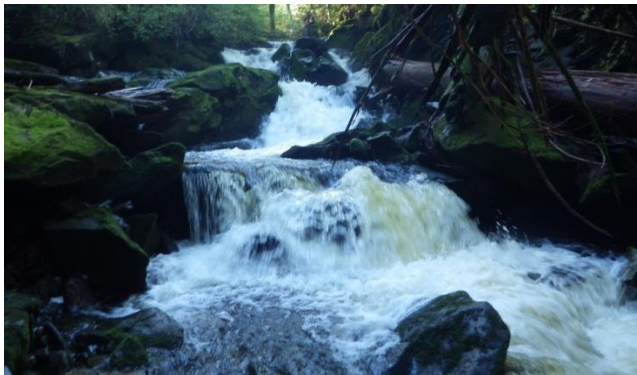


Figure 3.—Upstream portion of fish barrier complex.



Figure 4.—Base of falls complex at waypoint 146.

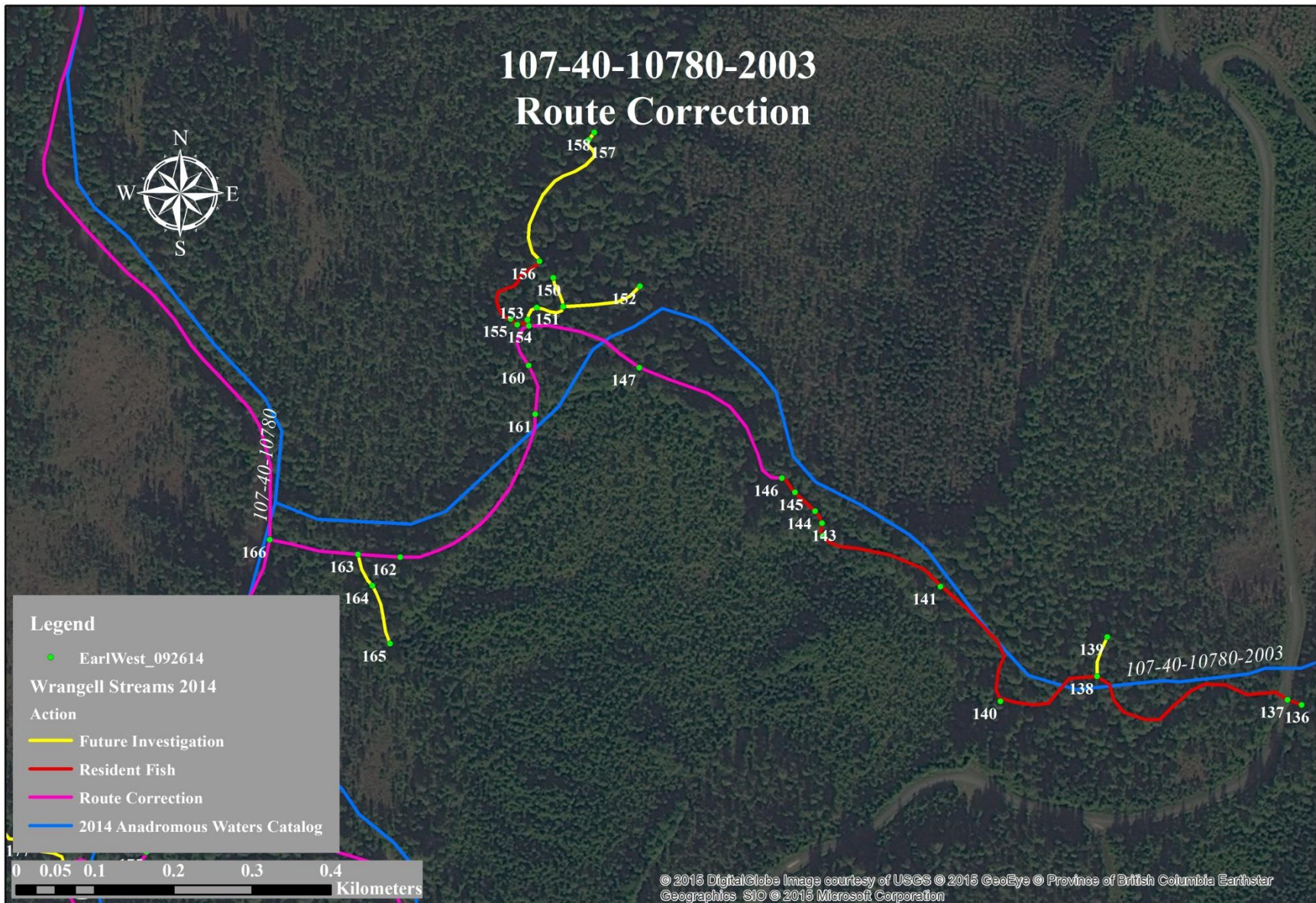


Figure 5.—107-40-10780-2003 route correction map.

Wrangell

107-40-10780-2004**CORRECTION****Water body name:****Survey date:** 9/26/2014**Water body number:** 107-40-10780-2004**Species & Lifestage:** COP**Watershed:** Salamander Creek-Frontal Eastern Passage**MTR:** C064S085E **Quad:** Petersburg B-1**Findings:** We surveyed stream number 107-40-10780-2004 using a backpack electrofisher and GPS (Table 1). We caught juvenile coho salmon and Dolly Varden char (Figure 1-3).**Recommendations:** Update the AWC route to reflect the field verified route and shorten extent (Figure 4). Add coho salmon rearing and Dolly Varden char presence.**Nomination:** 16-518

Table 4.–107-40-10780-2004 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
174	56.3264	-132.1296	Survey EWC West, heading upstream on larger of two adjacent streams.		
175	56.3254	-132.1310			
176	56.3253	-132.1319	Tributary entering on river left.	EF	No Fish
177	56.3255	-132.1323	Tributary flowing out of muskeg.		
178	56.3256	-132.1327	Tributary becomes an incised channel in muskeg. Back to EWC West.	EF	No Fish
179	56.3246	-132.1339	Abandoned Beaver Dam across stream, Flows have broken through center.		
181	56.3247	-132.1348	Possible tributary, some flow about 30' upstream. Did not investigate.		
182	56.3237	-132.1346	Back watered slough.		
183	56.3227	-132.1364			
184	56.3223	-132.1363		VI	1 CO
185	56.3223	-132.1368	Tributary on river right. Trickle flowing out of muskeg.		
186	56.3228	-132.1382			
187	56.3228	-132.1394	Water flowing again. Larger substrate in this area.		
188	56.3229	-132.1403	Slough on river right, side channel flows into this slough and does not directly connect back to the main flow of water.		
189	56.3227	-132.1406		VI	3 CO
190	56.3228	-132.1411	Tributary flows into side channel on river right.		

Wrangell

Table 1.–Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
191	56.3226	-132.1410			
192	56.3226	-132.1415		EF	1 CO, 1 DV
193	56.3227	-132.1418	Tributary on river right.		
194	56.3228	-132.1420	Back to main channel of EWC West.		
195	56.3228	-132.1423	Tributary on river left, and just upstream tributary on river right.	EF	No Fish
196	56.3229	-132.1436	Channel splits. Heading up fork on river right.		
197	56.3229	-132.1436	Tributary on river right.		
198	56.3230	-132.1439	Old log jam. Cause of observed channel split.		
199	56.3230	-132.1441	Gradient change.		
200	56.3229	-132.1448	Base of cascading falls.		
201	56.3229	-132.1452	Bedrock chute falls. About 15 feet tall. End track here for route correction.		
202	56.3228	-132.1468	Even larger barrier.		
23	56.3216	-132.1499	Bridge over West Earl West Creek upstream of cataloged extent.		



Figure 1.—Beaver pond section with former clear cut down to river left stream bank.



Figure 2.—Section of anadromous fish barrier complex.



Figure 3.—Low gradient section of 107-40-10780-2004 with many beaver dams.

107-40-10790**CORRECTION****Water body name:****Survey date:** 9/25/2014**Water body number:** 107-40-10790**Species & Lifestage:** DVp**Watershed:** Salamander Creek-Frontal Eastern Passage**MTR:** C064S085E **Quad:** Petersburg B-1**Findings:** We surveyed stream number 107-40-10790 using a backpack electrofisher and GPS (Table 1). We caught juvenile coho salmon, Dolly Varden char, and cutthroat trout (Figures 1-3).**Recommendations:** Update the AWC route to reflect the field verified route (Figure 4). Add coho salmon rearing and cutthroat trout presence.**Nomination:** 16-514

Table 1.–107-40-10790 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
118	56.3429	-132.1495	Stream 10790. Cannot E-fish mouth due to high tide.		
119	56.3426	-132.1499	Standing at mouth center.		
219	56.3423	-132.1499	Returned to Stream No. 107-40-10790 to E-fish. Problems with the electrofisher on previous survey.	EF	1 CO
220	56.3422	-132.1499	1 CO about 40mm.	EF	1 CO
120	56.3421	-132.1505	E-fisher giving us some trouble.	EF	No Fish
122	56.3410	-132.1511	Tributary on river right.		
123	56.3408	-132.1511	Tributary on river left.		
124	56.3399	-132.1523		EF	1 CT
125	56.3397	-132.1525	Tributary on river right, backwatered with a lots of skunk cabbage.		
126	56.3394	-132.1529	Tributary on river left.	EF	1 DV
127	56.3385	-132.1538	Powerline.		
128	56.3373	-132.1547	Gradient 10% over 25 yds.		
129	56.3367	-132.1546	Gradient 10% over 12 yds.		
130	56.3366	-132.1542	Top of Cascade falls. Looking downstream, 12 % over 14 yds down, then 13 % over next 10 yds.		
131	56.3354	-132.1563	Tributary on river left.		
132	56.3338	-132.1564	Tributary on river right, similar amount of flow. Heading towards AWC upper extent on river left channel.		
133	56.3336	-132.1567	Channel split, not sure which one is a tributary. Heading up river right channel.		

Table 1.–Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
134	56.3329	-132.1572	Incised falls barrier.		
135	56.3328	-132.1573	Top of falls in this reach. Back to road and then 3.5 mile hike to truck.		



Figure 1.–View upstream from the mouth.



Figure 2.– Coho salmon captured at WP 219.



Figure 3.–Base of falls at WP 134.

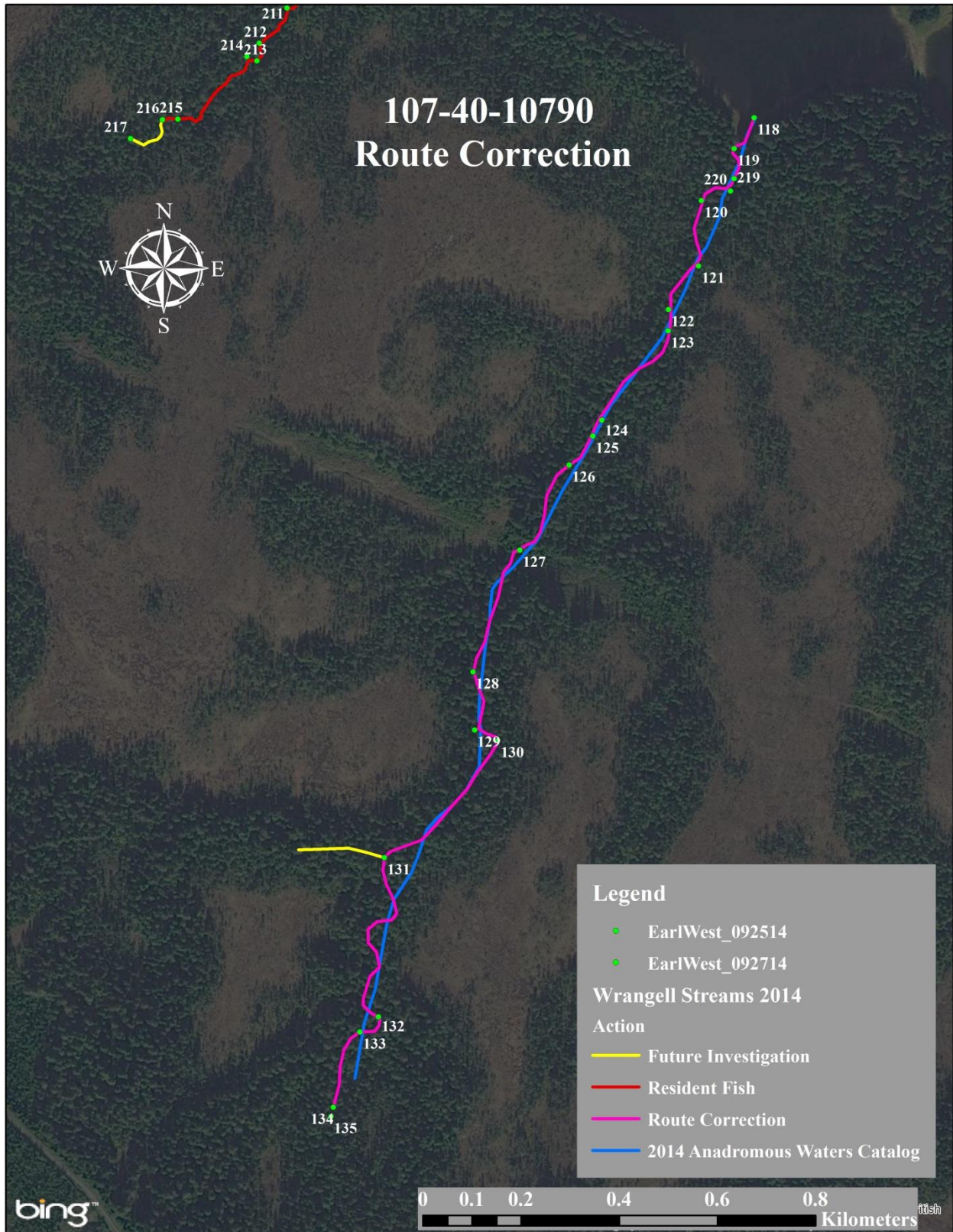


Figure 4.—107-40-10790 route correction map.

Wrangell

Wrangell

107-40-10820 TRIBUTARY 1**ADDITION****Water body name:****Survey date:** 9/27/2014**Water body number:****Species & Lifestage:****Watershed:** Salamander Creek-Frontal Eastern Passage**MTR:** C064S085E **Quad:** Petersburg B-1**Findings:** We surveyed this stream using minnow traps (Table 1). We caught juvenile coho salmon, Dolly Varden char, and cutthroat trout.**Recommendations:** Add this stream to the AWC and include coho salmon rearing and presence for Dolly Varden char and cutthroat trout (Figure 1). The stream course needs to be field verified.**Nomination:** 16-529

Table 1.–107-40-10820 tributary 1 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
32	56.3388	-132.2008	Small stream with 3 ft CMP and 1 ft perch.		
205	56.3387	-132.2008	Tributary to Salamander Creek to the east of bridge and campground. Trap #5 placed downstream of outlet. Fork lengths: CO 70-90 mm and CT 140 mm.	MT	4 CO, 1 CT
251	56.3388	-132.2008	Trap #6 placed upstream of inlet. Fork length: CO 90 mm.	MT	1 CO, 1CT

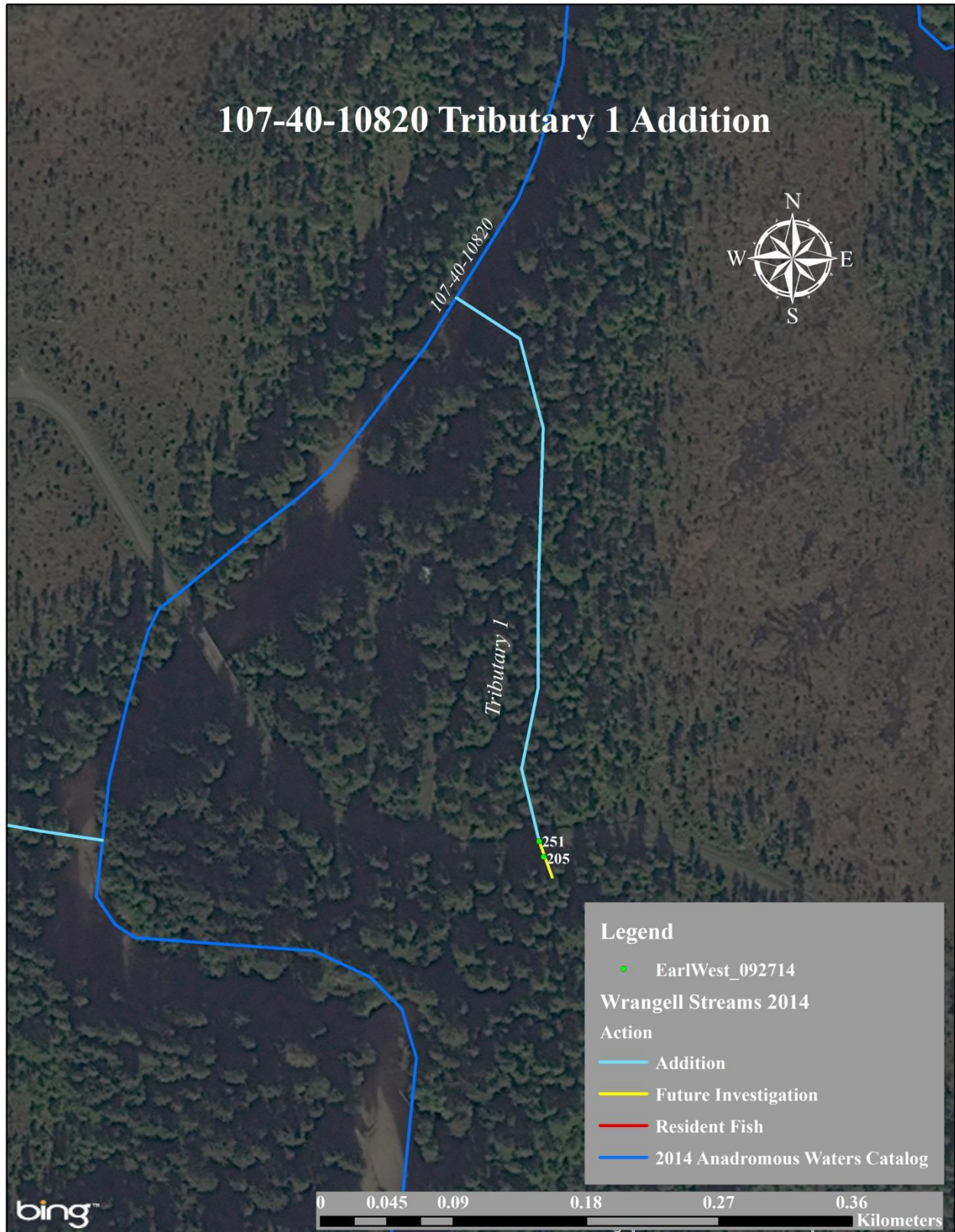


Figure 1.—107-40-10820 tributary 1 addition map.

Wrangell

107-40-10820 TRIBUTARY 2**ADDITION****Water body name:****Survey date:** 9/27/2014**Water body number:****Species & Lifestage:****Watershed:** Salamander Creek-Frontal Eastern Passage**MTR:** C064S085E **Quad:** Petersburg B-1

Findings: We surveyed this stream using a backpack electrofisher, minnow traps, and GPS (Table 1). This stream goes through a shallowly embedded culvert (Figures 1, 2). The stream was difficult to e-fish due to heavy rains the previous day (Figures 3). We caught juvenile coho salmon, Dolly Varden char, and cutthroat trout.

Recommendations: Add this stream to the AWC and include rearing coho salmon and Dolly Varden char and cutthroat trout presence (Figure 5). The stream course downstream of the road needs to be field verified.

Nomination: 16-530

Table 1.–107-40-10820 tributary 2 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
36	56.3400	-132.2052	Set minnow trap 15 at outlet pool in small tannic stream. Observed low gradient, great cover, and lots of potential rearing habitat. Coho 56-95 mm fork length.	MT	20 CO, 18 DV, 2 CT
35	56.3401	-132.2052	Inlet of 36 inch diameter culvert in uncataloged tributary of Salamander Creek.		
257	56.3401	-132.2052	Began E-fishing upstream of culvert in tributary.		
258	56.3428	-132.2052			
259	56.3445	-132.2054	Channel Splits. Heading up river left channel.		
260	56.3456	-132.2060		EF	1 CT
261	56.3457	-132.2063		EF	1 CT
262	56.3458	-132.2066	Channel is no longer well defined due to high flows. Water running through trees above mossy forest floors. Ended survey due to water levels and difficulty in e-fishing.		
33	56.3394	-132.2028	Bridge across Salamander Creek.		
34	56.3394	-132.2076	Trap #2 placed 50 feet upstream of inlet. Fork lengths: CT: 70-95 mm, DV: 70 mm.	MT	4 CT, 1 DV
203	56.3393	-132.2076	Trap #1 placed just downstream of culvert.	MT	2 CT



Figure 1.—Culvert outlet.



Figure 2.—Culvert inlet.



Figure 3.—Section above road with flood flows.

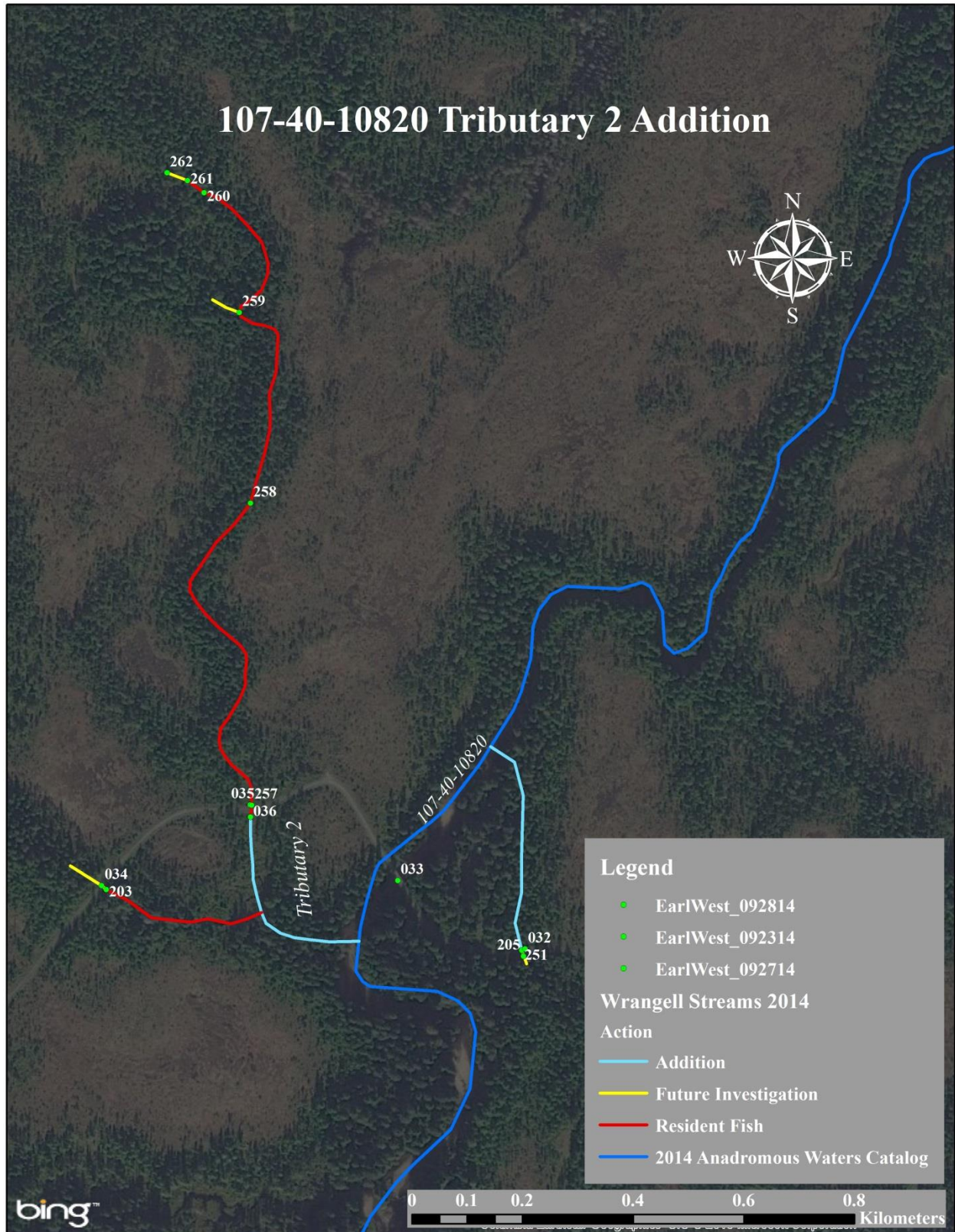


Figure 5.—107-40-10820 tributary 2 addition map.

Wrangell

107-40-10820-2012 TRIBUTARY 1**ADDITION****Water body name:****Survey date:** 9/27/2014**Water body number:****Species & Lifestage:****Watershed:** Salamander Creek-Frontal Eastern Passage**MTR:** C064S085E **Quad:** Petersburg B-1**Findings:** We surveyed this stream using minnow traps (Table 1). We caught juvenile coho salmon, Dolly Varden char and cutthroat trout.**Recommendations:** Add this stream to the AWC and include coho salmon rearing and presence for Dolly Varden char and cutthroat trout (Figure 1). The stream course needs to be field verified.**Nomination:** 16-531

Table 1.–107-40-10820-2012 tributary 1 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
204	56.3362	-132.2158	Tributary to Salamander. Trap #3 placed 10 feet below outlet. Coho fork length about 60 mm.	MT	1 CO, 7 CT, 2 DV
250	56.3363	-132.2156	Trap #4 placed just above inlet. Coho fork lengths about 80 mm.	MT	2 CO, 2 DV, 1 CT

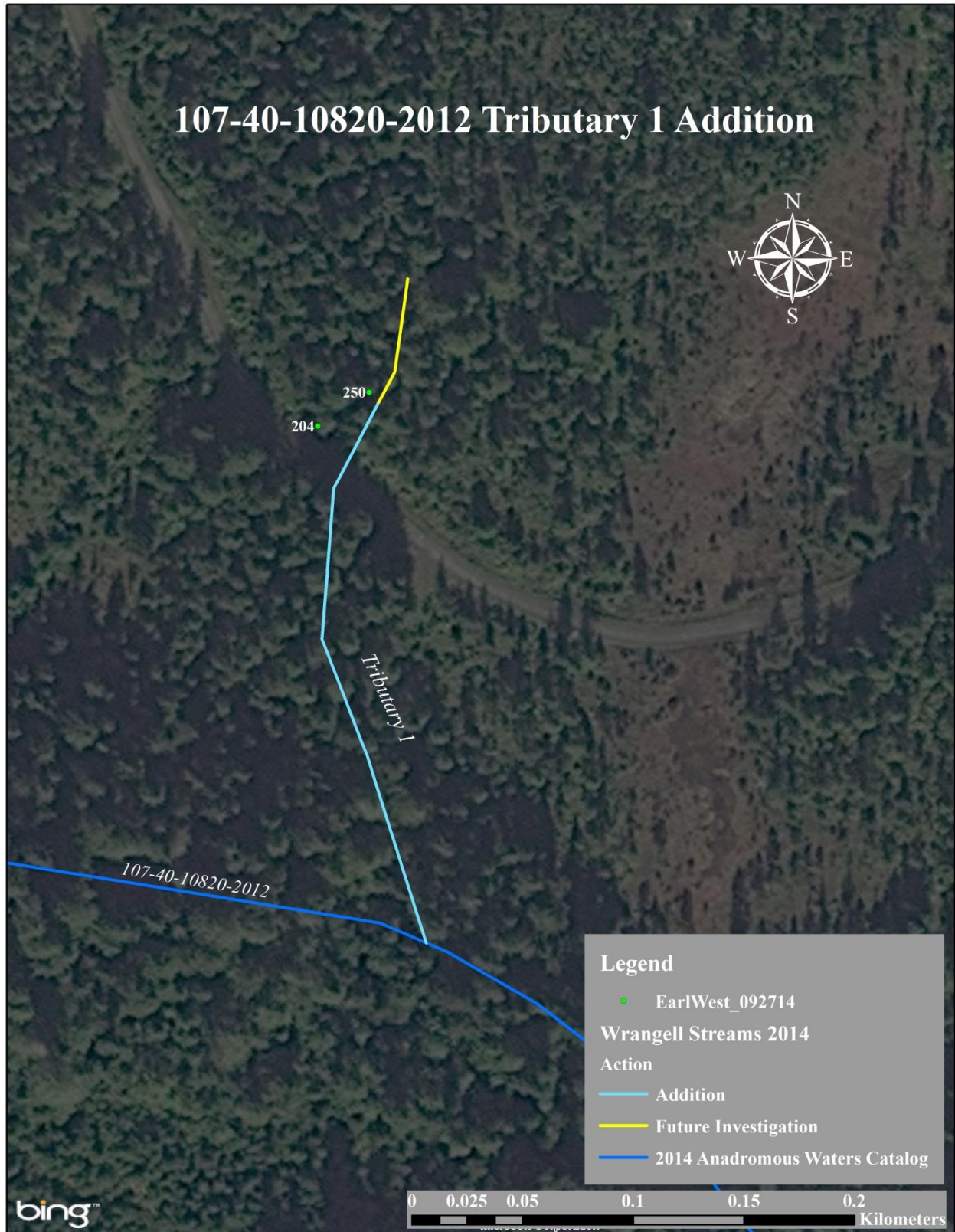


Figure 1.-107-40-10820-2012 tributary 1 addition map.

Wrangell

108-10-10050**CORRECTION****Water body name:** Pat Creek**Survey date:** 8/11/2013**Water body number:** 108-10-10050**Species & Lifestage:** COp, CHp, Pp, Sp, CTp, DVp**Watershed:** Anita Bay-Frontal Zimovia Strait**MTR:** C064S084E **Quad:** Petersburg B-1

Findings: We surveyed Pat Creek using a backpack electrofisher and GPS (Table 1). We found that the current track for Pat Creek is incorrect. There is a 30' barrier waterfall on this creek which is the upper extent of anadromy (Figure 1). The current catalog extends far past the waterfall.

Recommendations: Update the stream route in the AWC (Figure 2).

Nomination: 13-598

Table 1.–108-10-10050 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
446	56.3516	-132.3322	On Pat Creek, above lake. Very low flows, standing on a dry, disconnected bridge in mainstem.		
447	56.3512	-132.3312	Confluence of tributary and Pat Creek.		
450	56.3516	-132.3310	Back on mainstem here.		
451	56.3521	-132.3301	Tributary entering on river right. 2 CO between 45-50mm.	EF	2 CO
480	56.3518	-132.3290	Tons of schooling CO in Pat Creek.	VL	CO
481	56.3539	-132.3241	Confluence of possible tributary/side channel branch.		
482	56.3545	-132.3229	Confluence of tributary and West Fork Pat Creek.		
483	56.3544	-132.3223	Upstream of confluence. Round cobbles and gravels.	EF	No Fish
484	56.3544	-132.3222	Big smolty CO about 85mm in submerged wood.	EF	1 CO
485	56.3544	-132.3220	Confluence of 3 tributaries into West Fork Pat Creek tributary.	EF	1 DV
486	56.3544	-132.3220	On island between side channels. Only one of those tributaries was a tributary (far river left)		
487	56.3544	-132.3220	At diversion of side channels. 1 CO about 65mm.	EF	1 CO
488	56.3541	-132.3214	Confluence of West Fork Pat Creek tributary and other tributary. 3 CT about 65mm.	EF	3 CT

Table 1.—Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
489	56.3541	-132.3213	2 big smolty CO about 65mm in slow murky tributary.	EF	2 CO
490	56.3542	-132.3211	Schooling CO in murk. EF'd 1 CO about 35mm for ID.	EF	CO
491	56.3540	-132.3210	Murky tributary entering river right.		
492	56.3539	-132.3208	Large cobbles, some gravel. 2 CO between 40-60mm and 1 DV about 50mm.	EF	2 CO, 1 DV
493	56.3536	-132.3207	Cobbles, wide riffle.	EF	CO
494	56.3534	-132.3206	In large pool below rooty log jam 2 CO between 50-65mm.	EF	2 CO
495	56.3529	-132.3202	Calm side pool. This creek appears to be Pat Creek. 2 CO about 65mm.	EF	2 CO
496	56.3524	-132.3202	Tributary entering on river left.		
502	56.3523	-132.3202	Back at Pat Creek.		
503	56.3517	-132.3185	Above boulder/cobble blowout. Stream changed course, dry on river right	EF	No Fish
504	56.3514	-132.3180	Deep, clear pool. Boulder, cobbles substrate. Many CO between 30-50mm.	EF	CO
505	56.3511	-132.3159	Boulder/cobble substrate. Gradient increasing. 1 CT about 50mm.	EF	1 CT
506	56.3513	-132.3154	Cobbles, boulders, some overhanging vegetation. 1 DV about 30mm.	EF	1 DV
507	56.3513	-132.3146	Base of debris jam, streambed drops approximately 6-7 ft. here. Possible side channels.	EF	1 DV
508	56.3514	-132.3133	Boulders and some cobbles. 1 CT about 100mm.	EF	1 CT
509	56.3515	-132.3129	Getting steeper, hope this ends!		
510	56.3518	-132.3121	Just below huge awesome waterfall!		
511	56.3518	-132.3120	Waterfall about 30-35' tall.		



Figure 1.-30-35' waterfall barrier on Pat Creek.

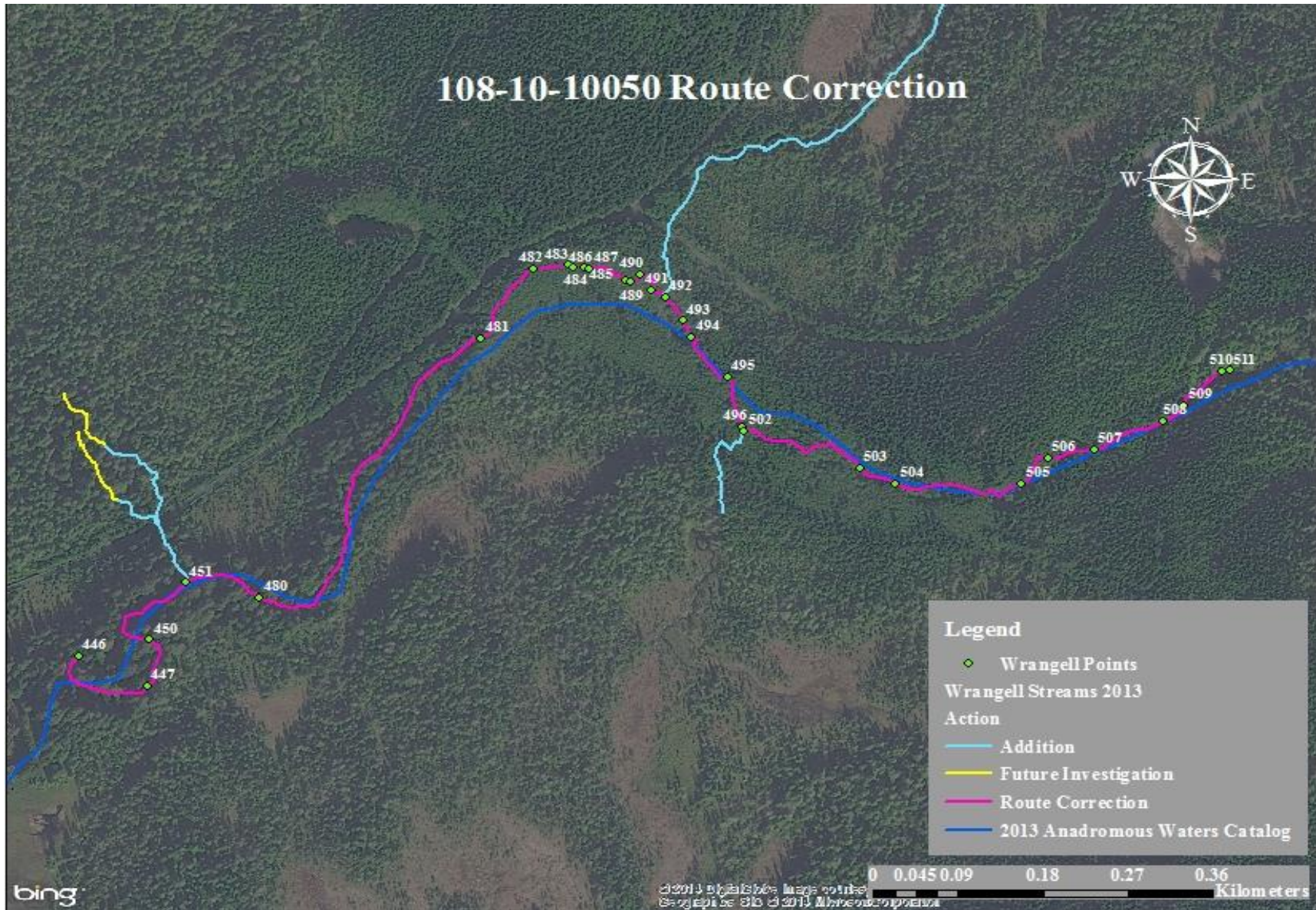


Figure 2.—108-10-10050 route correction map.

Wrangell

108-10-10050-2031**ADDITION****Water body name:****Survey date:** 8/11/2013**Water body number:** 108-10-10050-2031**Species & Lifestage:** CO**Watershed:** Anita Bay-Frontal Zimovia Strait**MTR:** C064S084E **Quad:** Petersburg B-1**Findings:** We surveyed this tributary to Pat Creek using a backpack electrofisher and GPS (Table 1). We captured coho salmon, Dolly Varden char, and cutthroat trout. We ended the survey at a small rooty cascade with low flow.**Recommendations:** Add stream to the AWC (Figure 1).**Nomination:** 13-599

Table 1.–108-10-10050-2031 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
451	56.3521	-132.3301	Tributary entering on river right. 2 CO between 45-50mm.	EF	2 CO
452	56.3523	-132.3302	Small pool at base of little riffle. 3 CO about 50mm.	EF	3 CO
453	56.3524	-132.3301	In large calm pool near road. Multiple CO about 50mm.	EF	CO, 1 CT
454	56.3525	-132.3302	In pool at outlet of culvert under Pat Creek Rd. 1 CT about 50mm, 2 CO between 45-65mm.	EF	CT, 2 CO
455	56.3526	-132.3302	Outlet of culvert under Pat Creek Rd.		
456	56.3528	-132.3302	Inlet of culvert on Pat Creek Rd. Tributary entering on river right. 1 DV and 1 CT about 50mm.	EF	1 DV, 1 CT
457	56.3528	-132.3302	In small riffle above confluence 1 CO about 40mm, 1 CT about 35mm.	EF	1 CO, 1 CT
458	56.3529	-132.3303	2 CT between 50-85mm.	EF	2 CT
459	56.3529	-132.3302	In long rooty pool. 1 CO about 65mm and 1 CT about 50mm.	EF	1 CO, 1 CT
460	56.3531	-132.3301	In long riffle, intermittent pools, gravel substrate. 2 CO between 50mm and 2 CT about 35mm.	EF	2 CO, 2 CT
461	56.3532	-132.3301	Under rooty tree/undercut bank. 1 CO about 75mm.	EF	
462	56.3533	-132.3300	Undercut bank with large gravel substrate. 2 CO about 50mm and 1 CT.	EF	1 CT, 2 CO

Table 1.—Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
463	56.3533	-132.3301	Gravel run. 1 CT about 110mm.	EF	1 CT
464	56.3534	-132.3301	Large, flat gravel substrate. 1 CT about 75mm.	EF	1 CT
465	56.3534	-132.3302	Shallow, broad pool, overhanging log. 1 DV about 50mm.	EF	1 DV
466	56.3535	-132.3303	Undercut bank, flat gravel substrate, mossy logs. 1 CO about 35mm, 1 CT about 80mm and 1 DV.	EF	1 CO, 1 CT, 1 DV
467	56.3536	-132.3304	Under large log. 1 CO about 50mm and 1 DV.	EF	1 CO, 1 DV
468	56.3536	-132.3306	Larger flat cobbles/gravels. Reduced flows. 1 CO about 40mm.	EF	1 CO
469	56.3537	-132.3308	Large, flat cobbles, water reducing. 1 CO about 50mm and 1 DV about 75mm.	EF	1 CO, 1 DV
470	56.3539	-132.3310	Low flows, flat cobble substrate. 2 CT about 55mm.	EF	2 CT
471	56.3543	-132.3312	Top of snagged rooty cascade. No spawning gravels here. Good resident CT habitat. 4 CT between 30-75mm.	EF	4 CT
472	56.3544	-132.3312	At base of bedrock gradient increase. End of electrofishing. 1 CT about 120mm.	EF	1 CT

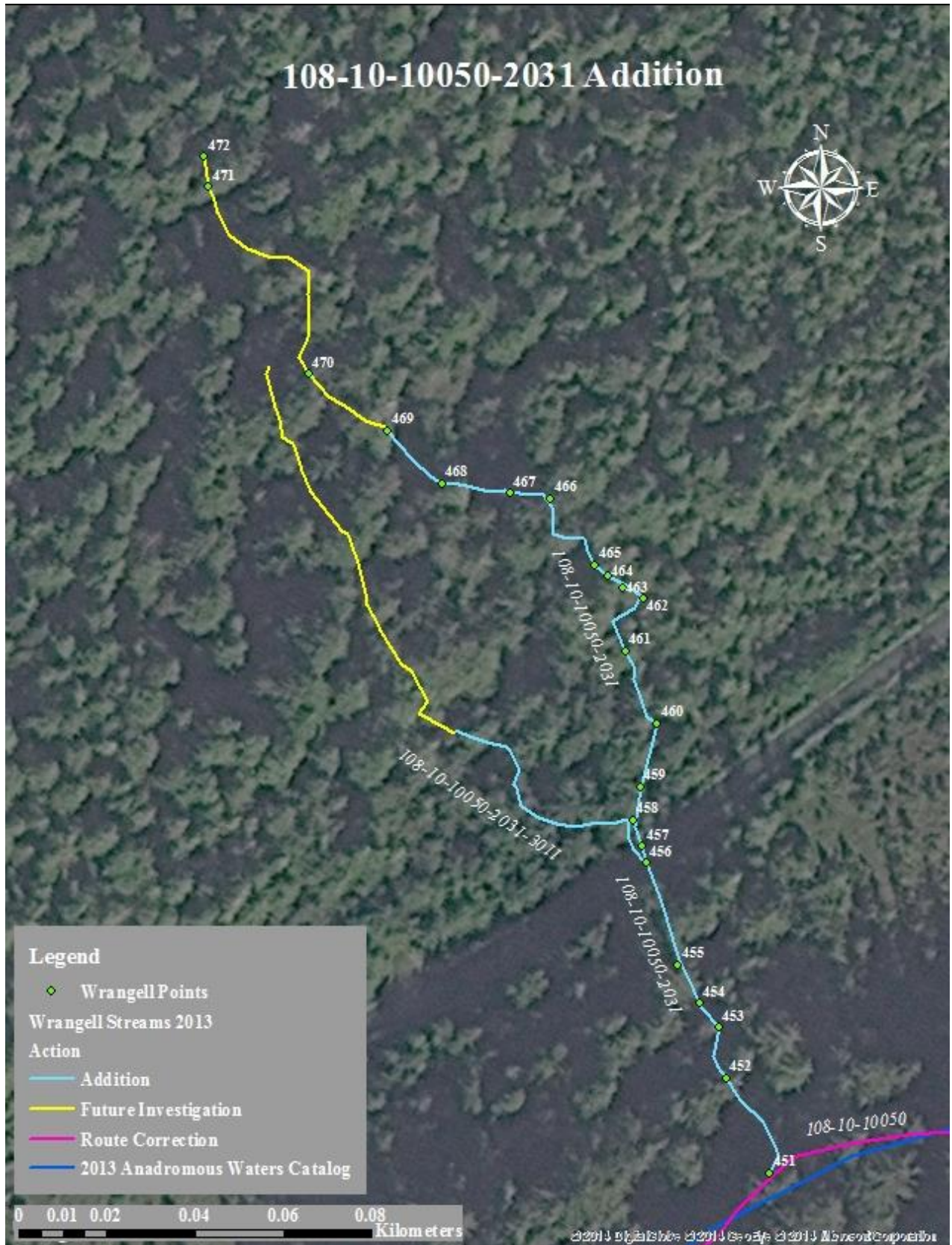


Figure 1.—108-10-10050-2031 addition map.

Wrangell

Wrangell

108-10-10050-2031-3011**ADDITION****Water body name:****Survey date:** 8/11/2013**Water body number:** 108-10-10050-2031-3011**Species & Lifestage:** CO**Watershed:** Anita Bay-Frontal Zimovia Strait**MTR:** C064S084E **Quad:** Petersburg B-1**Findings:** We surveyed this tributary to Pat Creek using a backpack electrofisher and GPS (Table 1). We captured rearing coho salmon, Dolly Varden char, and cutthroat trout.**Recommendations:** Add stream to the AWC (Figure 1).**Nomination:** 13-600

Table 1.–108-10-10050-2031-3011 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
456	56.3528	-132.3302	Inlet of culvert on Pat Creek Rd. Tributary entering on river right. 1 DV and 1 CT about 50mm.	EF	1 DV, 1 CT
479	56.3530	-132.3306	Large pool nearing Pat Creek Road.	EF	1 CT
478	56.3531	-132.3308	Cobbles, shallow pool, overhanging vegetation. 2 CO about 40mm.	EF	2 CO
477	56.3532	-132.3309	Shallow riffle, cobbles. Mashed down skunk cabbage indicates recent higher flows. 1 DV and 1 CT about 50mm.	EF	1 DV, 1 CT
476	56.3534	-132.3310	Shallow pool, cobbles. 1 CT about 50mm.	EF	1 CT
475	56.3536	-132.3310	Undercut bank, cobbles, not really any spawning gravel. 2 CT about 130mm.	EF	2 CT
474	56.3538	-132.3311	Large cobble substrate. 2 CT about 50mm.	EF	2 CT
473	56.3539	-132.3311	Top portion of tributary coming in near culvert. Very close to tributary we just did. 1 CT about 80mm.	EF	1 CT

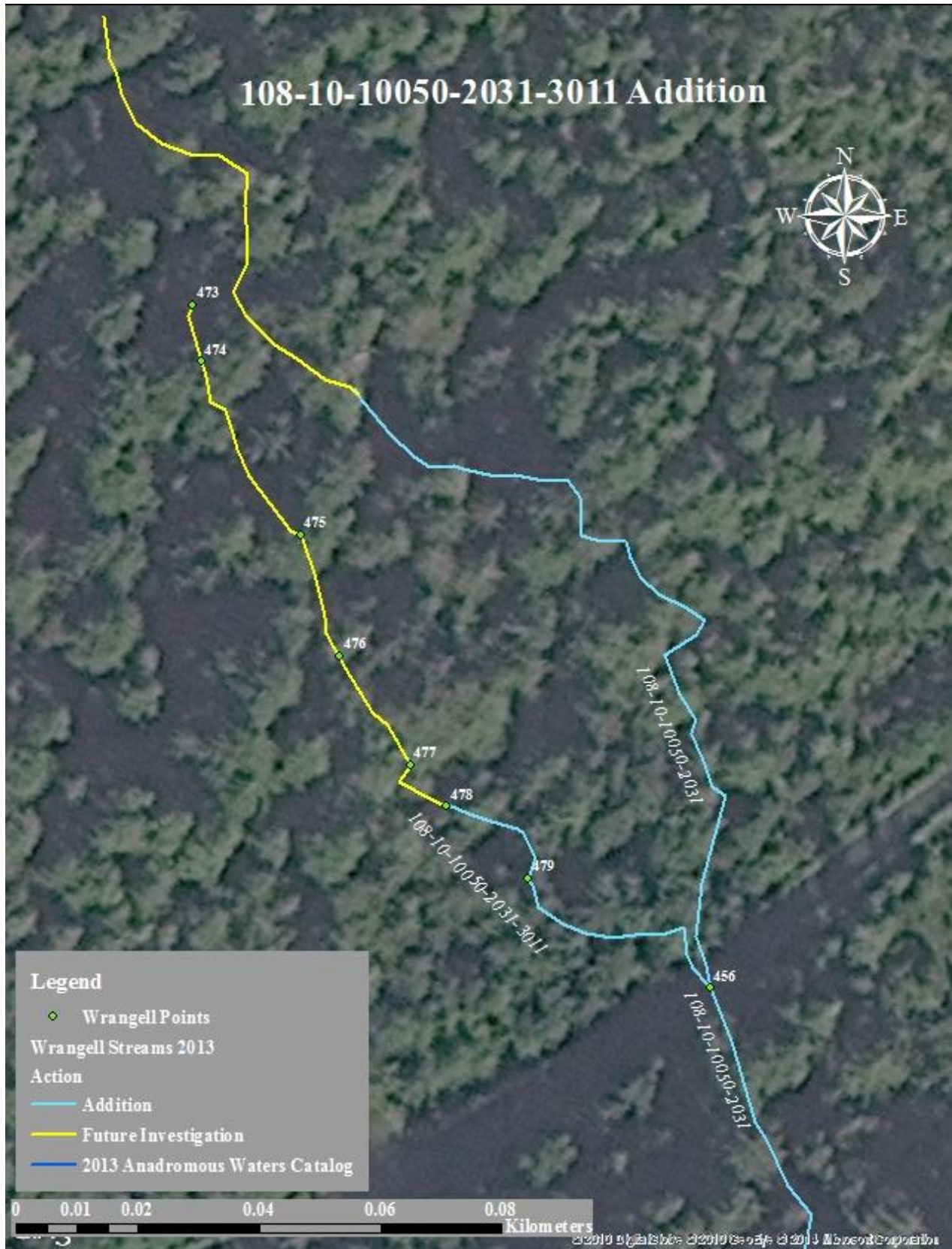


Figure 1.—108-10-10050-2031-3011 addition map.

Wrangell

108-10-10050-2047**ADDITION****Water body name:****Survey date:** 8/12/2013**Water body number:** 108-10-10050-2047**Species & Lifestage:** CO**Watershed:** Anita Bay-Frontal Zimovia Strait**MTR:** C064S084E **Quad:** Petersburg B-1

Findings: We surveyed this tributary to Pat Creek using a backpack electrofisher and GPS (Table 1). There are many beaver dams along this creek slowing the flow, resulting in great coho rearing habitat (Figures 1, 2). We captured coho salmon, Dolly Varden char, and cutthroat trout (Figure 3). We ended the survey when the stream turned to bedrock.

Recommendations: Add this stream to the AWC (Figure 4).

Nomination: 13-601

Table 1.–108-10-10050-2047 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
491	56.3540	-132.3210	Murky tributary entering river right.		
518	56.3543	-132.3207	Outlet of 7 ft. culvert that crosses Forest Service Road.		
519	56.3551	-132.3197		EF	2 CO
520	56.3552	-132.3182	Deep pool with riffles in between.	EF	2 CO
521	56.3554	-132.3165	Old beaver dam, at higher water it is possible for fish to pass.		
522	56.3557	-132.3159			
523	56.3567	-132.3152	Another old beaver dam that has a hole blown out on river left.	EF	No Fish
524	56.3569	-132.3151	Area that was once a beaver pond.	EF	2 CO, 2 CT
525	56.3578	-132.3140	Possible beaver dam or log jam.	EF	2 CO
526	56.3579	-132.3136	Tributary entering river left. Basically half the flow that was in stream up to this point.		
529	56.3582	-132.3139		EF	3 CO
530	56.3586	-132.3138	Another beaver dam. Looks like at higher flows fish could get up on river left.	EF	2 CO
531	56.3592	-132.3141		EF	1 DV
532	56.3595	-132.3141	Another beaver dam.	EF	2 DV, 2 CO
533	56.3605	-132.3142		EF	2 CT, 3 CO
534	56.3613	-132.3136	Tributary entering river right.		
536	56.3614	-132.3131	Tributary entering river right.	HN	1 CO

Table 1.—Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
538	56.3616	-132.3125	Large beaver dam about 5 ft. But there is a way around the dam on river right. Caught 2 CO and 3 CT downstream of the dam and 1 CT just above the dam.	EF	2 CO, 4 CT
539	56.3622	-132.3127	Followed along edge of beaver pond and came to a tributary entering on river right.	EF	1 CO, 1 DV
543	56.3621	-132.3125	Stream enters beaver pond (WPT's 542-543).		
544	56.3627	-132.3098	Tributary entering river right.		
548	56.3630	-132.3088	Beaver dam, low one.		
549	56.3636	-132.3084		VL/HN	4 CO/1 CO
550	56.3640	-132.3075	Down to bedrock shelf.	EF	2 CO, 4 CT
551	56.3643	-132.3073	Calling top. Bedrock and no spawning habitat.	EF	1 DV, 3 CT



Figure 1.—One of many beaver dams.



Figure 2.—A recently created beaver pond.



Figure 3.—One electrofishing pass caught three different size classes of coho salmon.

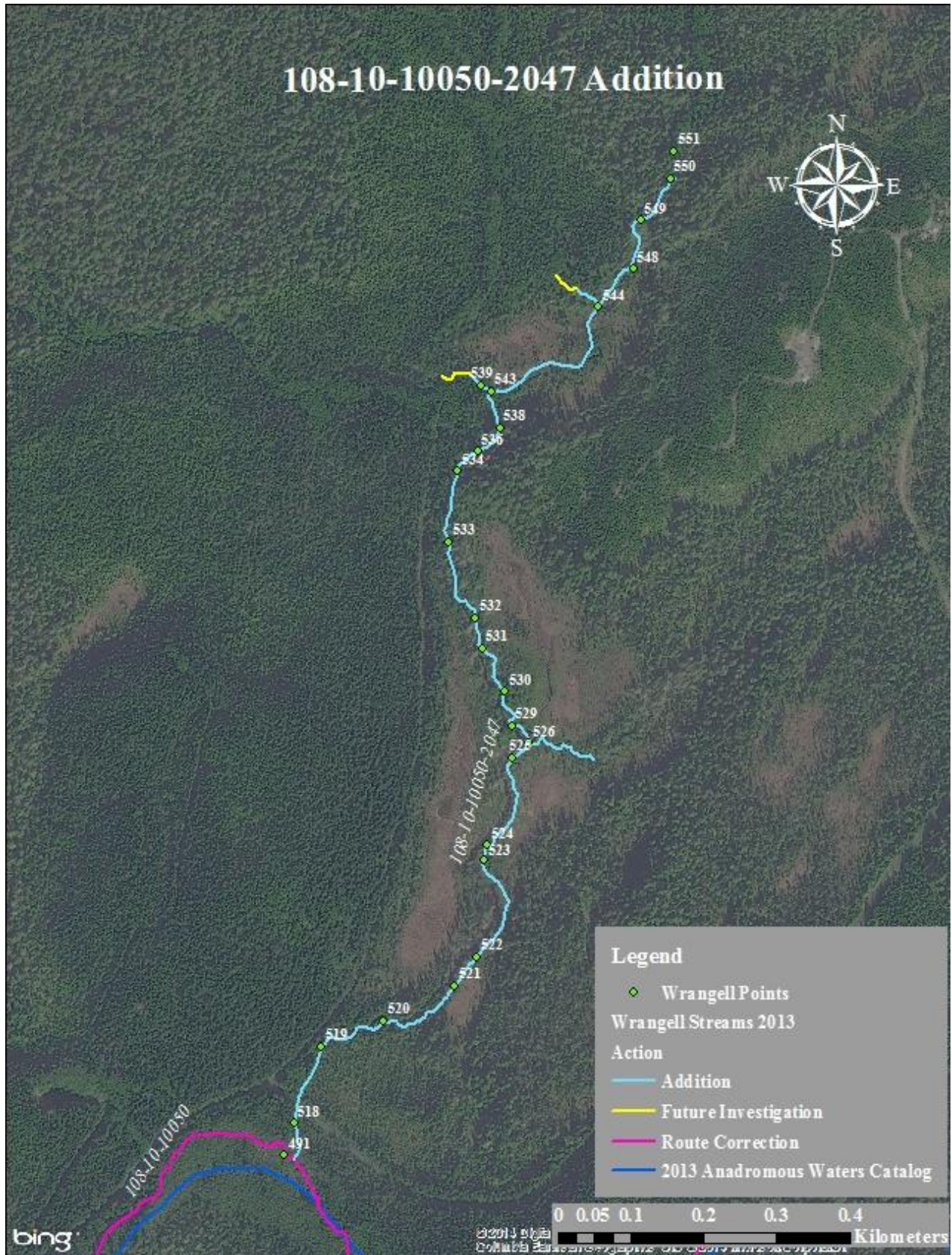


Figure 4.—108-10-10050-2047 addition map.

Wrangell

Wrangell

108-10-10050-2047-3020

ADDITION

Water body name:

Survey date: 8/12/2013

Water body number: 108-10-10050-2047-3020

Species & Lifestage: CO

Watershed: Anita Bay-Frontal Zimovia Strait

MTR: C064S084E **Quad:** Petersburg B-1

Findings: We surveyed this tributary to Pat Creek using a backpack electrofisher and GPS (Table 1). We captured rearing coho salmon and cutthroat trout. We ended this survey at a beaver dam that did not look fish passable (Figure 1).

Recommendations: Add stream to the AWC (Figure 2).

Nomination: 13-602

Table 1.—108-10-10050-2047-3020 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
526	56.3579	-132.3136	Tributary entering river left. Basically half the flow that was in stream up to this point.		
527	56.3579	-132.3134		EF	3 CO, 1 CT
528	56.3575	-132.3123	Beaver dam, does not look very fish passable. Fish caught below dam.	EF	2 CO, 1 CT



Figure 1.—Potential beaver dam barrier on 108-10-10050-2047-3020.

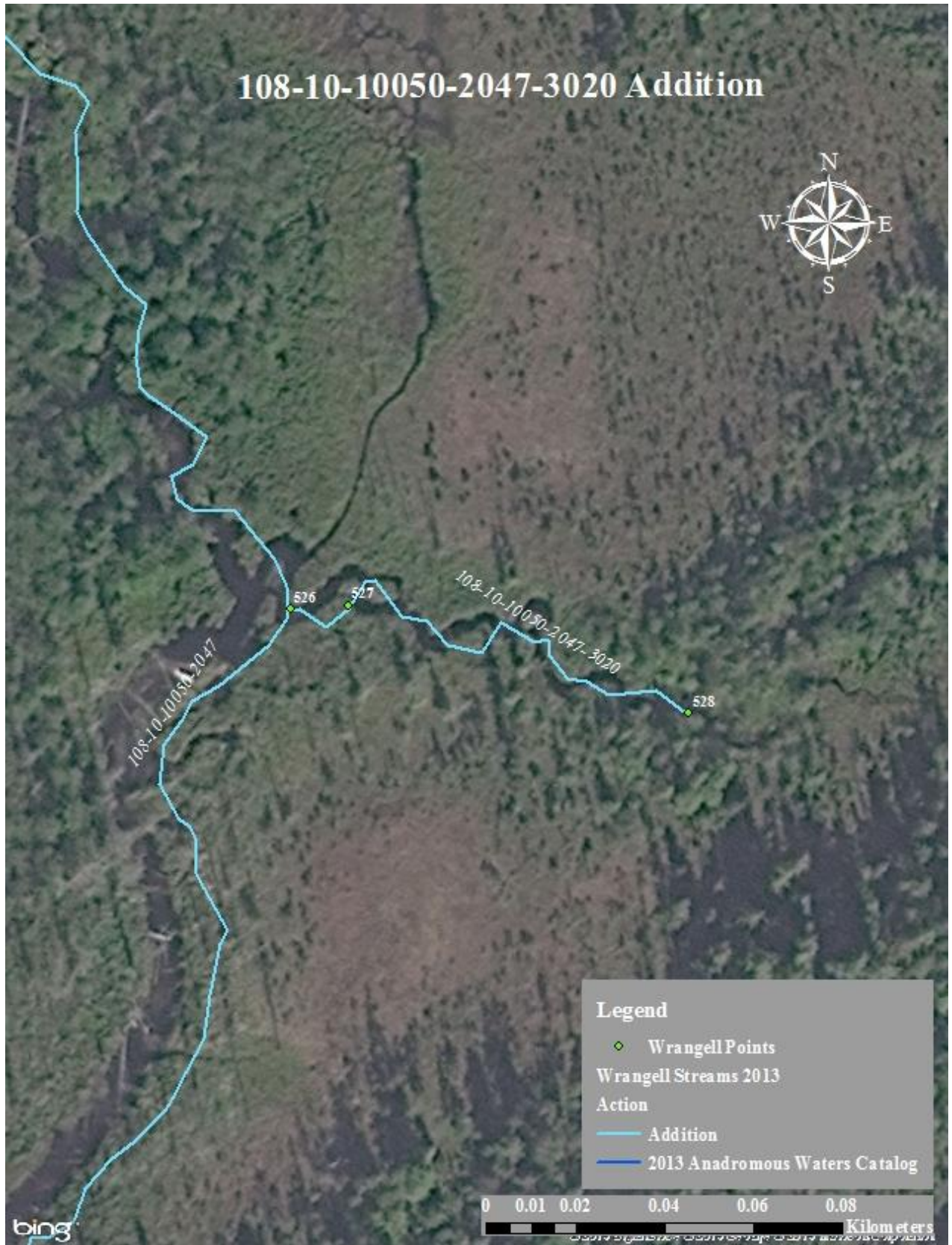


Figure 2.—108-10-10050-2047-3020 addition map.

Wrangell

108-10-10050-2047-3051**ADDITION****Water body name:****Survey date:** 8/11/2013**Water body number:** 108-10-10050-2047-3051**Species & Lifestage:** CO**Watershed:** Anita Bay-Frontal Zimovia Strait**MTR:** C064S084E **Quad:** Petersburg B-1**Findings:** We surveyed this tributary to Pat Creek using a backpack electrofisher and GPS (Table 1). We captured rearing coho salmon, Dolly Varden char, and cutthroat trout. We ended survey at a small cascade falls.**Recommendations:** Add stream to the AWC (Figure 1).**Nomination:** 13-603

Table 1.–108-10-10050-2047-3051 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
543	56.3621	-132.3125	Stream enters beaver pond (WPT's 542-543).		
539	56.3622	-132.3127	Followed along edge of beaver pond and came to a tributary entering on river right.	EF	1 CO, 1 DV
540	56.3623	-132.3128		EF	2 CO, 4 CT
541	56.3624	-132.3132		EF	4 CT, 1 DV
542	56.3624	-132.3134	Calling it the top. Small cascade/falls that would be hard for juveniles to make.	EF	No Fish

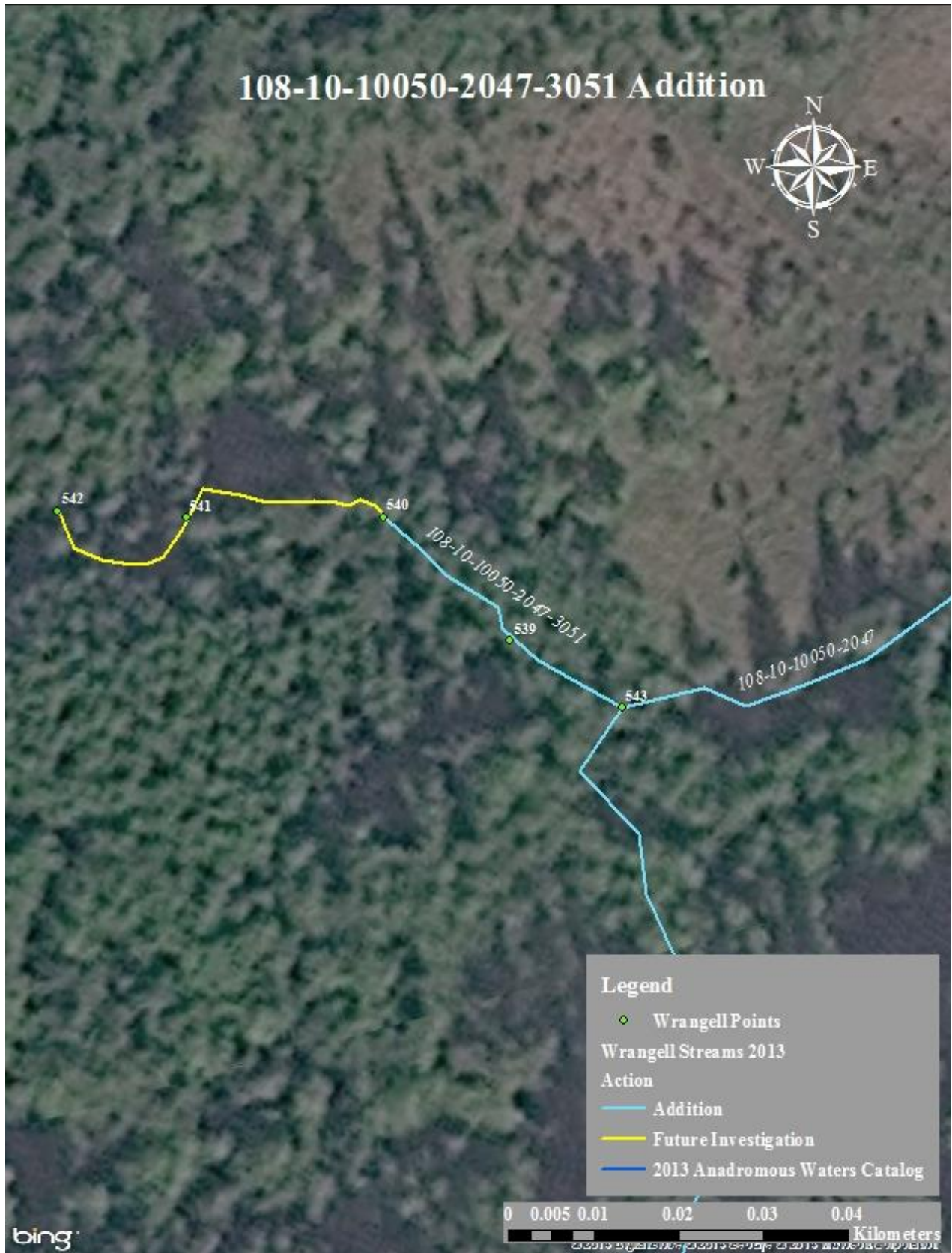


Figure 1.—108-10-10050-2047-3051 addition map.

Wrangell

108-10-10050-2047-3061

ADDITION

Water body name:

Survey date: 8/12/2013

Water body number: 108-10-10050-2047-3061

Species & Lifestage: CO

Watershed: Anita Bay-Frontal Zimovia Strait

MTR: C064S084E **Quad:** Petersburg B-1

Findings: We surveyed this tributary to Pat Creek using a backpack electrofisher and GPS (Table 1). We captured rearing coho salmon and cutthroat trout. We ended the survey due to low flows and increased gradient (Figure 1).

Recommendations: Add stream to the AWC (Figure 2).

Nomination: 13-604

Table 1.—108-10-10050-2047-3061 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
544	56.3627	-132.3098	Tributary entering river right.		
545	56.3628	-132.3098		HN	2 CO
546	56.3630	-132.3101		EF	2 CO
547	56.3632	-132.3105	Calling it the top, low flows that hardly connect and increase in steepness.	EF	5 CT



Figure 1.—Upper extent of 108-10-10050-2047-3061.

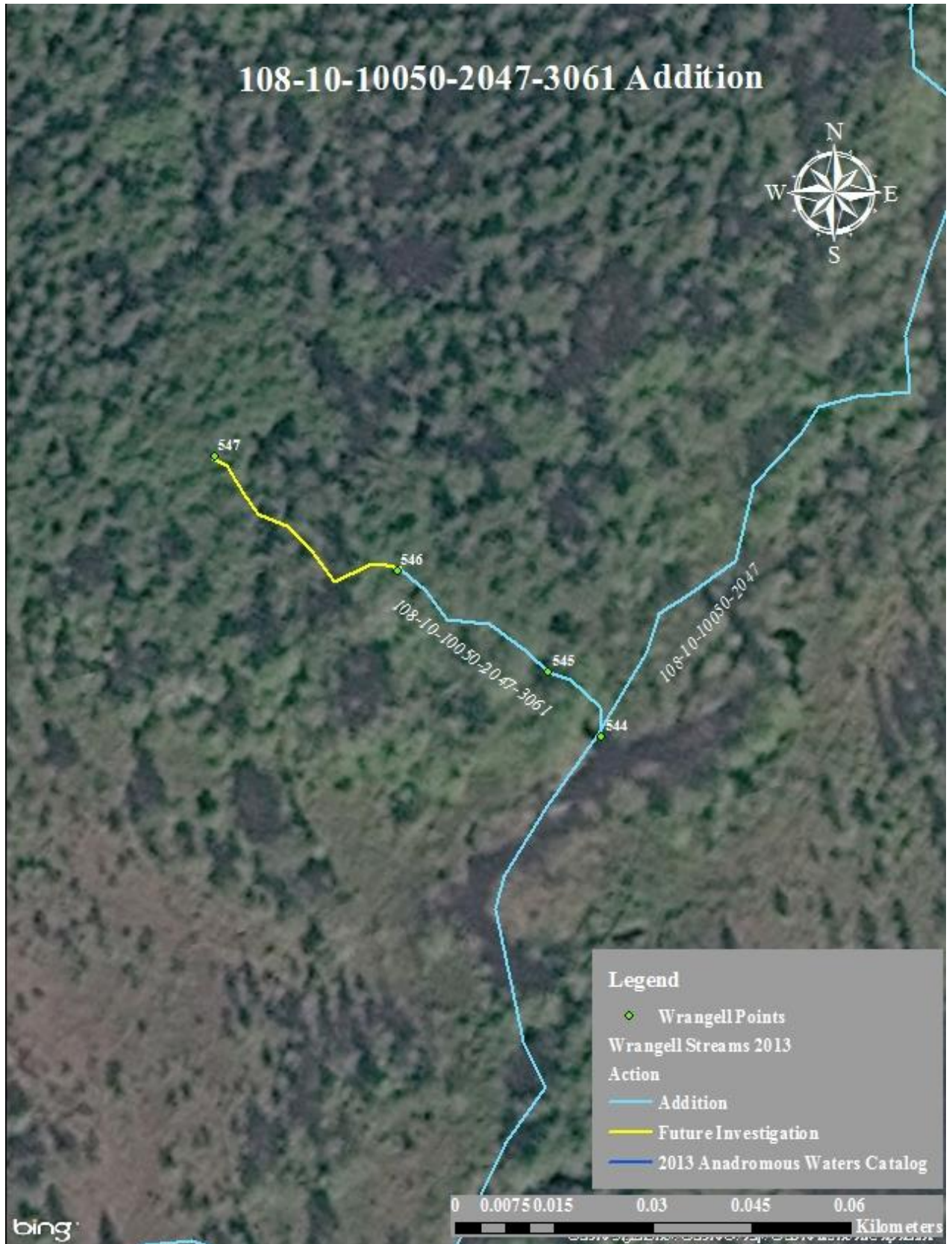


Figure 2.-108-10-10050-2047-3061 addition map.

Wrangell

108-10-10050-2050

ADDITION

Water body name:

Survey date: 8/11/2013

Water body number: 108-10-10050-2050

Species & Lifestage: CO

Watershed: Anita Bay-Frontal Zimovia Strait

MTR: C064S084E **Quad:** Petersburg B-1

Findings: We surveyed this tributary to Pat Creek using a backpack electrofisher and GPS (Table 1). We captured rearing coho salmon. We ended this survey at a series of beaver dams too deep to sample (Figure 1).

Recommendations: Add stream to the AWC (Figure 2).

Nomination: 13-605

Table 1.–108-10-10050-2050 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
496	56.3524	-132.3202	Tributary entering on river left.		
497	56.3522	-132.3203	In broad braided network. 3 CO about 70mm.	EF	3 CO
498	56.3522	-132.3208	In murky tributary. 3 CO about 70mm.	EF	3 CO
499	56.3518	-132.3209	Emerging into beaver pond area, tall grass dams.	EF	1 CO
500	56.3515	-132.3211	Beaver pond too deep and large to EF beyond.	EF	No Fish
501	56.3516	-132.3210	Below first series of dams.	EF	1 CO



Figure 1.–Beaver dam on 108-10-10050-2050.

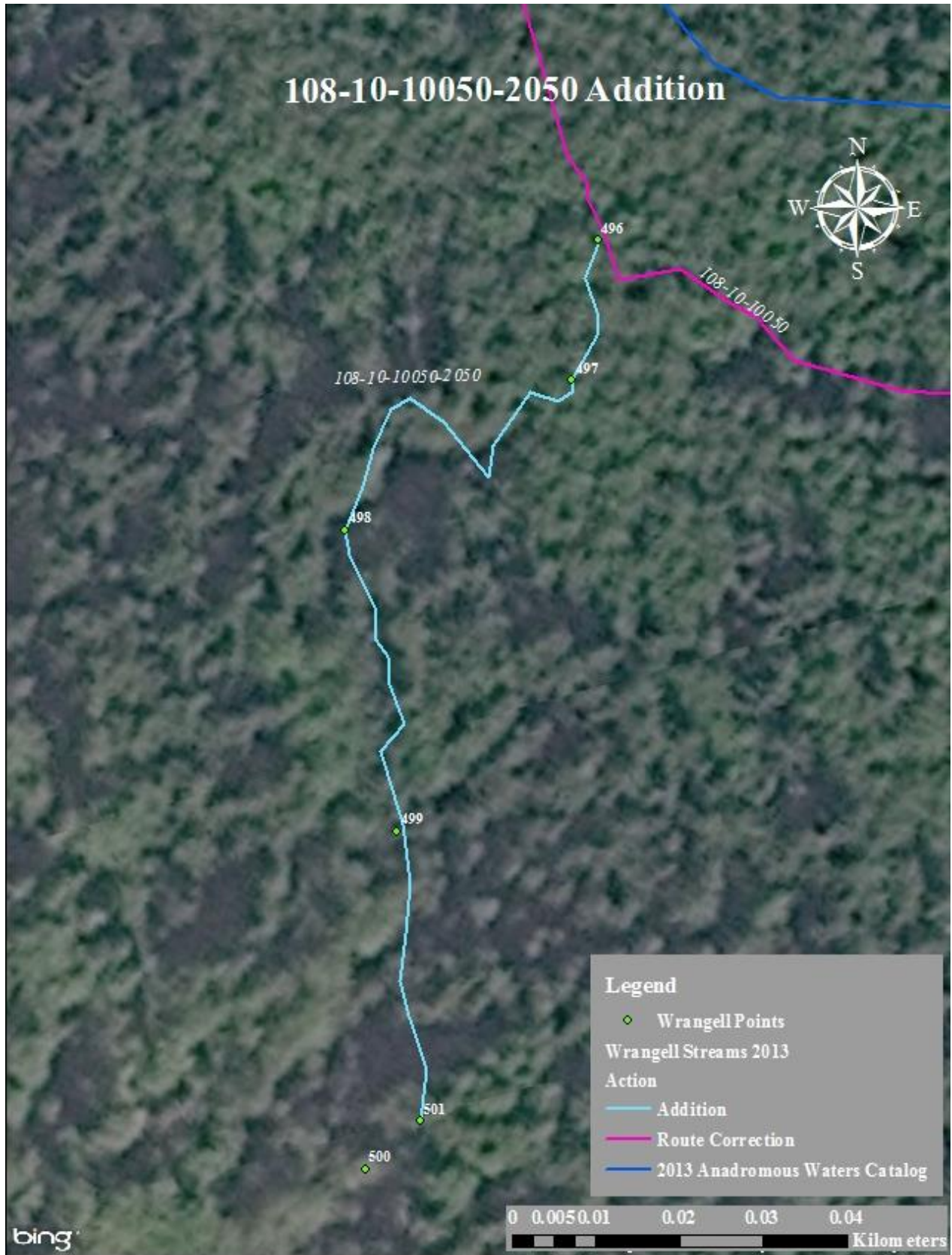


Figure 2.—108-10-10050-2050 addition map.

Wrangell

108-10-10100**CORRECTION****Water body name:** McCormack Creek**Survey date:** 8/13/2013**Water body number:** 108-10-10100**Species & Lifestage:** COp, CHp, Ps**Watershed:** Anita Bay-Frontal Zimovia Strait**MTR:** C064S084E **Quad:** Petersburg B-1

Findings: We surveyed McCormack Creek with a backpack electrofisher and found the stream route differs from the AWC (Table 1). Pink salmon were observed spawning in McCormack Creek which is only documented for pink salmon presence. We stopped surveying when substrate was large cobble and the gradient increased (Figure 1).

Recommendations: Correct the current route in the AWC and add spawning pink salmon (Figure 2).

Nomination: 13-606

Table 1.–108-10-10100 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
568	56.3110	-132.3476	Intertidal zone with creek and ocean. Many adult P seen throughout the creek.	VL	P
567	56.3121	-132.3402	Adult P in pool in lower portion of river.	VL	P
554	56.3118	-132.3376	Bridge over McCormack Creek.		
555	56.3121	-132.3330	Substrate is primarily bedrock and cobbles.		
556	56.3115	-132.3282	Substrate turns into primarily cobbles and gradient flattens out.		
557	56.3100	-132.3206	Tributary entering river left. Small mossy boulders forming a cascade into step pools.		
559	56.3092	-132.3131	Tributary entering river left.	EF	2 CT
562	56.3090	-132.3070	Tributary entering river left.		
566	56.3092	-132.3037	Stop tracking here. Probably above anadromy. Boulder and cobble substrate. Increased gradient.		



Figure 1.—Upper McCormack Creek.

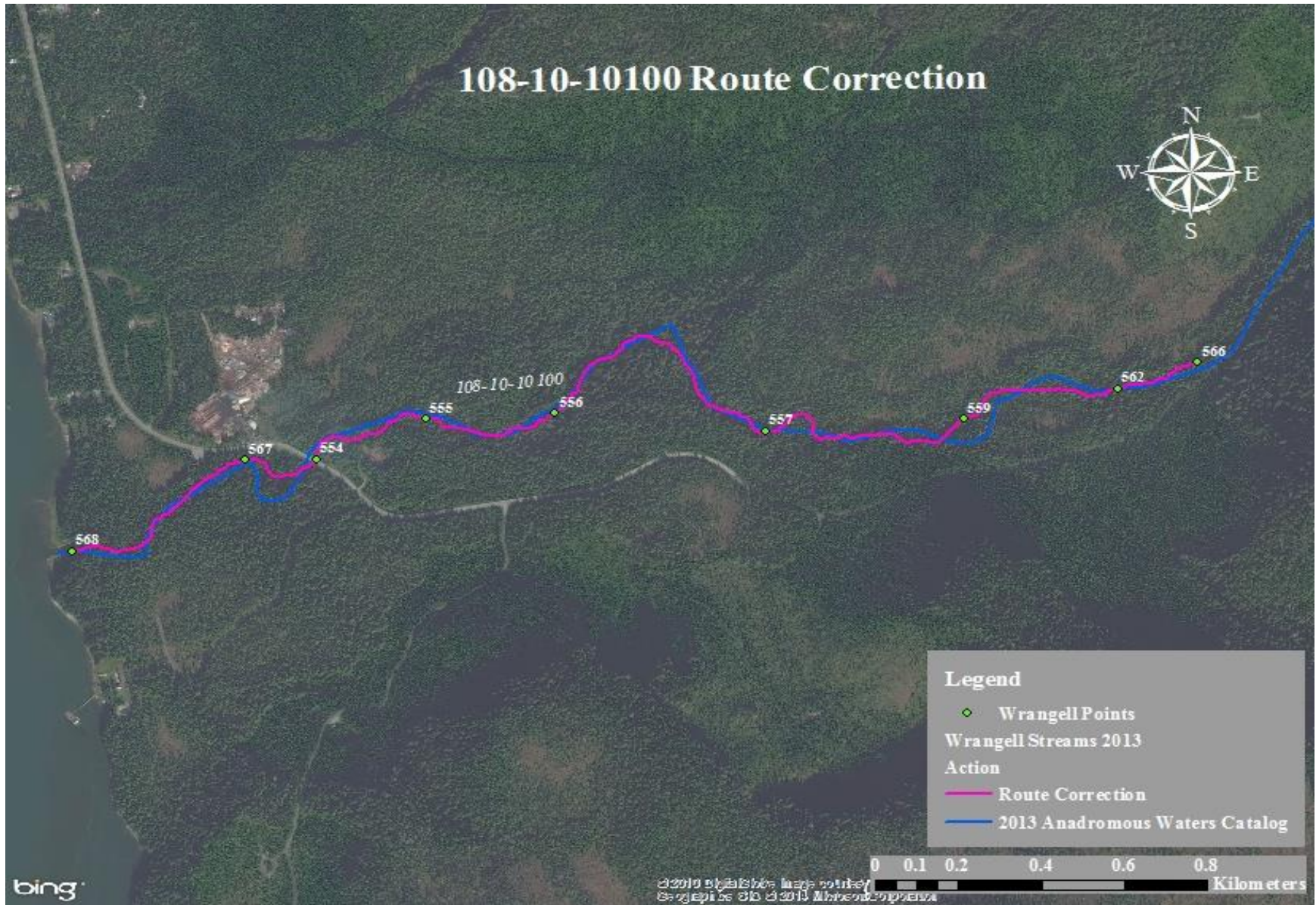


Figure 2.—108-10-10100 route correction map.

Wrangell

Wrangell

108-40-10275

ADDITION

Water body name:

Survey date: 8/14/2013

Water body number: 108-40-10275

Species & Lifestage: CO

Watershed: Salamander Creek-Frontal Eastern Passage

MTR: C062S084E **Quad:** Petersburg B-2

Findings: We surveyed this uncataloged stream using a backpack electrofisher and GPS (Table 1). We captured rearing coho salmon and cutthroat trout. The stream bed is perched above the upstream side of the culvert with an intake line going through and there is a steep channel barrier above the culvert (Figures 1, 2).

Recommendations: Add stream to the AWC (Figure 3).

Nomination: 13-608

Table 1.–108-40-10275 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
635	56.4702	-132.3390	Intertidal zone where creek meets ocean.		
634	56.4700	-132.3391	Pocket dial.		
633	56.4700	-132.3391	Caught in shallow pool just above intertidal zone.	EF	2 CO, 1 CT
632	56.4696	-132.3394		EF	2 CT
631	56.4695	-132.3397	Outlet of perched pipe with rocks below. Steep stream below.		
630	56.4694	-132.3396	Streambed perched above the culvert. Pipe at steep gradient and intake line running through pipe.		
629	56.4694	-132.3396	Steep channel; barrier. Above culvert.		



Figure 1.–Perched stream with intake line.

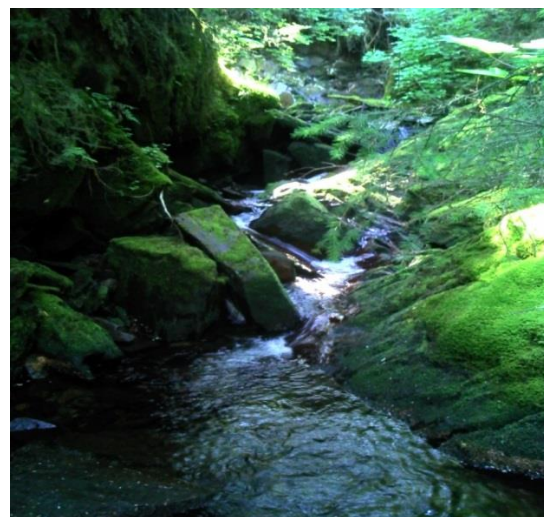


Figure 2.–Channel barrier.



Figure 3.—108-40-10275 addition map.

Wrangell

108-40-10278**ADDITION****Water body name:****Survey date:** 8/15/2013**Water body number:** 108-40-10278**Species & Lifestage:** CO**Watershed:** Ohmer Creek-Frontal Sumner Strait**MTR:** C062S083E **Quad:** Petersburg B-2**Findings:** We surveyed this uncataloged stream using a backpack electrofisher and GPS (Table 1). We captured rearing coho salmon and Dolly Varden char.**Recommendations:** Add stream to the AWC (Figure 1).**Nomination:** 13-623

Table 1.–108-40-10278 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
628	56.4819	-132.3932	Mouth of stream into saltwater.		
643	56.4818	-132.3924		EF	2 CO, 2 DV
642	56.4818	-132.3917		EF	2 DV
627	56.4818	-132.3915	Outlet of steam. Upstream of cuvert.		
641	56.4819	-132.3911	Electrofishing down.		



Figure 1.—108-40-10278 addition map.

Wrangell

108-40-10282**ADDITION****Water body name:** Playground Creek**Survey date:** 8/14/2013**Water body number:** 108-40-10282**Species & Lifestage:** CO**Watershed:** Anita Bay-Frontal Zimovia Strait**MTR:** C062S083E **Quad:** Petersburg B-1

Findings: We surveyed this creek along the Zimovia Highway using a backpack electrofisher and GPS (Table 1). We captured rearing coho salmon, Dolly Varden char, and cutthroat trout. The upper extent is a waterfall; the stream passes through a cemetery and a playground before entering the ocean.

Recommendations: Add stream to the AWC (Figure 1).**Nomination:** 13-597

Table 1.–108-40-10282 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
606	56.4536	-132.3830	Outlet of Playground creek culvert.		
607	56.4535	-132.3828	Above inlet of large culvert. 2 CO between 50-55mm.	EF	2 CO
608	56.4534	-132.3828	Next to large stump. Cobble gravel. 2 CO about 50mm.	EF	2 CO
609	56.4533	-132.3826	Overhanging vegetation, cobbles, fuzz periphyton rocks. 2 CO between 45-50mm.	EF	2 CO
610	56.4531	-132.3824	In deep still pool, cobbles. 2 CO between 50-65mm.	EF	2 CO
611	56.4528	-132.3821	Saw multiple more CO. Below battery of two culverts. 2 CO about 50mm.	EF	2 CO
612	56.4528	-132.3820	At outlet of pipes. 1 CO about 60mm.	EF	1 CO
613	56.4528	-132.3817	Above pipe inlet. 1 CO about 65mm.	EF	1 CO
614	56.4527	-132.3817	Cobbles, boulders along roadside. 1 CO about 50mm and 1 CT about 75mm.	EF	1 CO, 1 CT
615	56.4527	-132.3816	2 CO about 50mm.	EF	2 CO
616	56.4526	-132.3816	Cobbles, road on river left. 2 CO between 45-50mm.	EF	2 CO
617	56.4525	-132.3815	At 90 degree turn near cemetery. 3 CT between 35-80mm.	EF	3 CT
618	56.4523	-132.3815	At cemetery corner. 3 CT between 40-65mm.	EF	3 CT
619	56.4523	-132.3812	In deep, calm pool. 4 CO between 40-60mm.	EF	4 CO

Table 1.—Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
620	56.4522	-132.3809	1 CO about 40mm, 1 DV about 60mm and 3 CT between 30-70mm.	EF	1 CO, 1 DV, 3 CT
621	56.4523	-132.3809	2 CO between 40-45 and 1 CT about 35mm.	EF	2 CO, 1 CT
622	56.4523	-132.3806	2 CO between 40-50mm and 2 CT about 55mm.	EF	2 CO, 2 CT
623	56.4523	-132.3800	3 CT between 50-80mm and 1 DV about 100mm.	EF	3 CT, 1 DV
624	56.4524	-132.3798	Waterfall is in sight!	EF	1 CT, 1 DV
625	56.4524	-132.3797	2 CT between 50-100mm.	EF	2 CT
626	56.4525	-132.3794	Waterfall.		



Figure 1.—108-40-10282 addition map.

Wrangell

Wrangell

108-40-10286**ADDITION****Water body name:****Survey date:** 8/14/2013**Water body number:** 108-40-10286**Species & Lifestage:** CO**Watershed:** Anita Bay-Frontal Zimovia Strait**MTR:** C063S084E **Quad:** Petersburg B-1

Findings: We surveyed this creek along Zimovia Highway using a backpack electrofisher and GPS (Table 1). We captured rearing coho salmon and Dolly Varden char. This stream flows through a homeowner's property and abuts the house's foundation. There is a small bridge over the creek allowing access to another building on the other side of the creek. The survey ended when the gradient became steeper and the substrate was cobble and boulders.

Recommendations: Add stream to the AWC (Figure 1).**Nomination:** 13-596

Table 1.–108-40-10286 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
589	56.4200	-132.3538	Mouth of tiny creek near RV park.	EF	No Fish
590	56.4200	-132.3539	1 CO about 65mm.	EF	1 CO
591	56.4200	-132.3539	In mellow pool, riprap, grassy bans. 3 CO between 45-60mm.	EF	3 CO
592	56.4201	-132.3540	Under dry log. 1 CO about 50mm.	EF	1 CO
593	56.4201	-132.3541	1 CO about 40mm.	EF	1 CO
594	56.4202	-132.3542	Below culvert. 1 CO about 45mm.	EF	1 CO
595	56.4206	-132.3542	Above culvert. 1 CO about 45mm.	EF	1 CO
596	56.4206	-132.3542	2 Smolty CO about 60mm and ready to head out.	EF	2 CO
597	56.4206	-132.3542	Below red house. Stream flows under their porch. 1 CO about 60mm.	EF	1 CO
598	56.4206	-132.3542	1 CO about 60mm.	EF	1 CO
599	56.4207	-132.3541	Under bridge by red house. 2 CO between 45-65mm.	EF	2 CO
600	56.4208	-132.3541	Next to house foundation. 1 CO about 55mm.	EF	1 CO
601	56.4208	-132.3540	Just upstream from house. Boulders, cobbles. 1 CO about 50mm.	EF	1 CO
602	56.4209	-132.3540	1 CO about 60mm.	EF	1 CO
603	56.4210	-132.3539	Mossy boulders, cobbles, steep grade. 1 CO about 50mm and 3 DV about 80mm.	EF	1 CO, 3 DV

Table 1.-Continued.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
604	56.4212	-132.3537	Have not captured a CO in several attempts. This is the upper limit of habitat.	EF	No Fish



Figure 1.—108-40-10286 addition map.

Wrangell

Wrangell

108-40-10290**ADDITION****Water body name:****Survey date:** 8/10/2013**Water body number:** 108-40-10290**Species & Lifestage:** CO**Watershed:** Anita Bay-Frontal Zimovia Strait**MTR:** C063S084E **Quad:** Petersburg B-2**Findings:** We surveyed this stream using a backpack electrofisher and GPS (Table 1). We captured rearing coho salmon and cutthroat trout.**Recommendations:** Add stream to the AWC (Figure 1).**Nomination:** 13-609

Table 1.–108-40-10290 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
435	56.4132	-132.3409	Outlet of double culvert under Zimovia Highway. Perched now at low tide, but might not be at high tide. 2 CO caught in pool below culvert.	EF	2 CO
436	56.4133	-132.3406	Inlet of double culvert.		
437	56.4136	-132.3403		EF	1 CT
438	56.4138	-132.3400	We only caught CT up to this point. A short section goes under a root wad and disappears for ~ 10 ft. Ending survey here.	EF	CT



Figure 1.—108-40-10290 addition map.

Wrangell

108-40-10291**ADDITION****Water body name:****Survey date:** 8/11/2013**Water body number:** 108-40-10291**Species & Lifestage:** CO**Watershed:** Anita Bay-Frontal Zimovia Strait**MTR:** C063S084E **Quad:** Petersburg B-2**Findings:** We surveyed this stream using a backpack electrofisher and GPS (Table 1). We captured rearing coho salmon and cutthroat trout. The outlet of the culvert is perched about 4'.**Recommendations:** Add stream to the AWC (Figure 1).**Nomination:** 13-607

Table 1.–108-40-10291 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
430	56.4118	-132.3413	Mouth of creek into ocean.		
429	56.4119	-132.3411	Small pool under log.	EF	3 CO
428	56.4118	-132.3405	Lots of big CT present.	EF	3 CT
427	56.4117	-132.3400	Outlet of culvert under Shoemaker Loop. Culvert is perched ~ 4 ft.	EF	2 CT

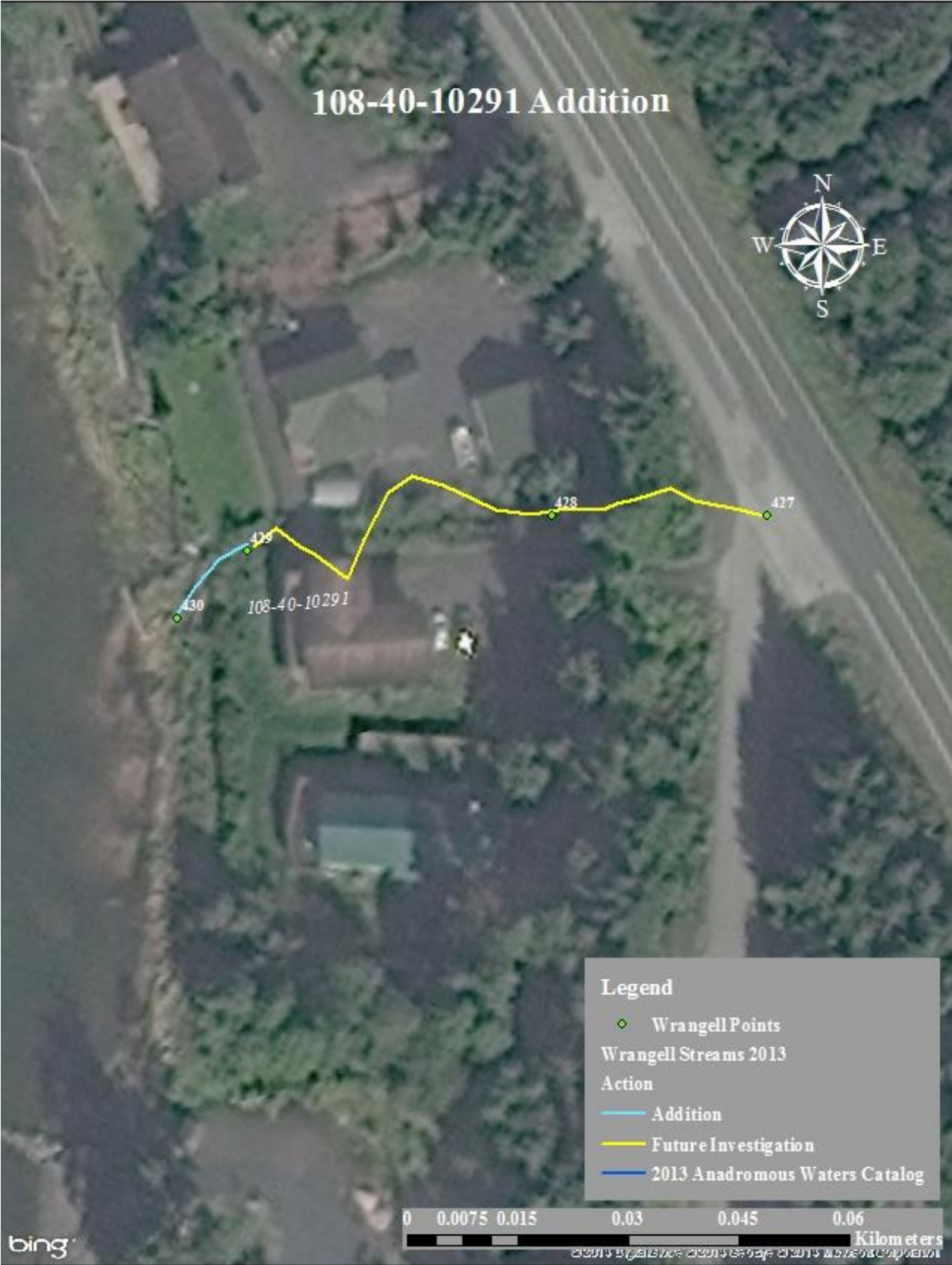


Figure 1.—108-40-10291 addition map.

Wrangell

EASTERN PASSAGE STREAM 1

ADDITION

Water body name:

Survey date: 9/27/2014

Water body number:

Species & Lifestage:

Watershed: Salamander Creek-Frontal Eastern Passage

MTR: C064S085E **Quad:** Petersburg B-1

Findings: We surveyed this stream using a backpack electrofisher and GPS (Table 1). We caught juvenile coho salmon, Dolly Varden char, and cutthroat trout (Figure 1, 2).

Recommendations: Add this stream to the AWC and include rearing coho salmon and presence for Dolly Varden char and cutthroat trout (Figure 3).

Nomination: 16-519

Table 1.—Eastern Passage stream 1 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
234	56.3497	-132.1735	E-fished first pool in small stream. No fish. Moving to next stream.	EF	No Fish
239	56.3500	-132.1756	Mouth of last large stream inside state forest boundary.		
240	56.3499	-132.1761		EF	2 CO
241	56.3497	-132.1764		EF	1 CT
242	56.3495	-132.1767		EF	1 CO
243	56.3490	-132.1774		EF	1 CO
244	56.3481	-132.1775		EF	1 CO
245	56.3480	-132.1776		EF	1 CO
246	56.3480	-132.1779	Also captured 1 sculpin.	EF	1 DV, 1 CT
247	56.3467	-132.1804	Tributary on river left.		
248	56.3453	-132.1798	Powerlines overhead.		
249	56.3451	-132.1798	End survey, no fish since WP 246.	EF	No Fish

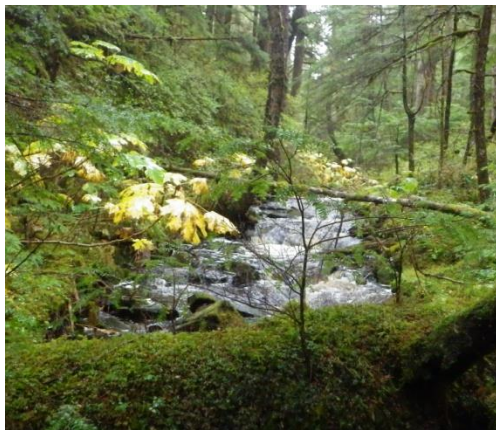


Figure 1.—Looking upstream at WP 240.



Figure 2.—Juvenile coho captured at WP 245.

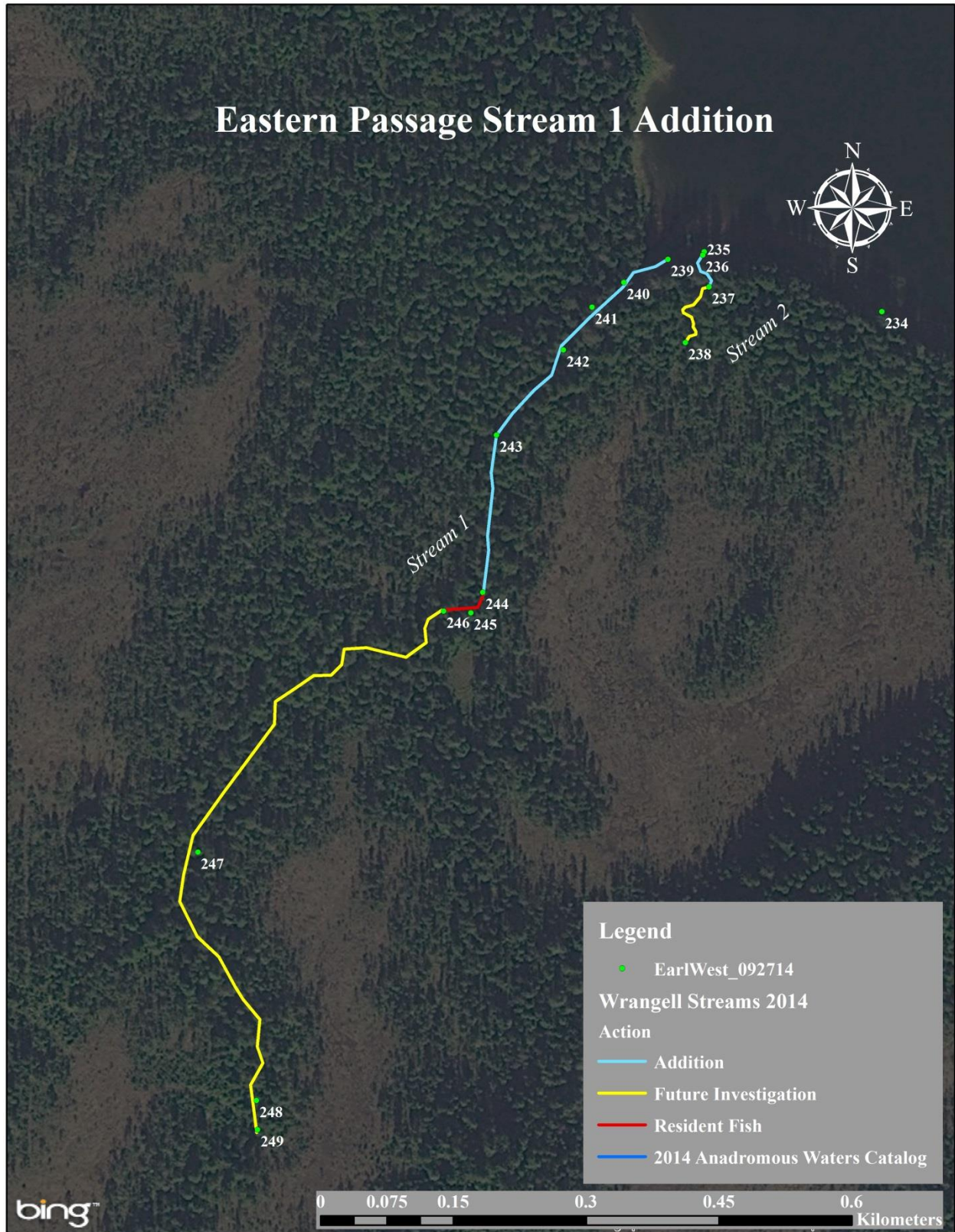


Figure 3.—Eastern Passage stream 1 addition map.

Wrangell

EASTERN PASSAGE STREAM 2

ADDITION

Water body name:

Survey date: 9/27/2014

Water body number:

Species & Lifestage:

Watershed: Salamander Creek-Frontal Eastern Passage

MTR: C064S085E **Quad:** Petersburg B-1

Findings: We surveyed this stream using a backpack electrofisher and GPS (Table 1). We caught juvenile coho salmon and Dolly Varden char (Figures 1, 2).

Recommendations: Add this stream to the AWC and include rearing coho salmon and Dolly Varden char presence (Figure 3).

Nomination: 16-520

Table 1.–Eastern Passage stream 2 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
235	56.3500	-132.1753	Stream next to larger stream, but not a tributary based on topography.		
236	56.3500	-132.1753		EF	3 DV
237	56.3498	-132.1752		EF	2 CO
238	56.3495	-132.1755	End survey due to lack of fish.	EF	No Fish



Figure 1.–Near the mouth looking downstream.



Figure 2.–Cascades upstream of WP 237.



Figure 3.—Eastern Passage stream 2 addition map.

Wrangell

EASTERN PASSAGE STREAM 3

ADDITION

Water body name:

Survey date: 9/27/2014

Water body number:

Species & Lifestage:

Watershed: Salamander Creek-Frontal Eastern Passage

MTR: C064S085E **Quad:** Petersburg B-1

Findings: We surveyed this stream using a backpack electrofisher and GPS (Table 1). We caught juvenile coho salmon, Dolly Varden char, and cutthroat trout (Figures 1, 2).

Recommendations: Add this stream to the AWC and include coho rearing and presence of Dolly Varden char and cutthroat trout (Figure 3).

Nomination: 16-523

Table 1.–Eastern Passage stream 3 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
221	56.3487	-132.1671	E-fish heading upstream from tidewater.		
222	56.3485	-132.1673		EF	1 CO
223	56.3480	-132.1678		EF	1 CO
224	56.3480	-132.1681		EF	2 CO
225	56.3478	-132.1680	Tributary on river right.		
226	56.3478	-132.1681	E-fish stream tributary on river right.	EF	1 CO
227	56.3474	-132.1680	End survey of tributary. Back to mainstem.	EF	No Fish
228	56.3476	-132.1683		EF	1 CO
229	56.3476	-132.1684	About 25 ft upstream gradient changes. 15% over 15 yds and then 14% over 12 yds. 1 CO about 110mm.	EF	1 CO
230	56.3474	-132.1686		EF	1 CO
231	56.3473	-132.1688	Gradient is 22% over 10 yds, upstream.	EF	1 DV
233	56.3472	-132.1695	End survey due to gradient and lack of coho.	EF	1 CT



Figure 1.–Mouth of stream.



Figure 2.–Juvenile coho salmon caught at WP 230.

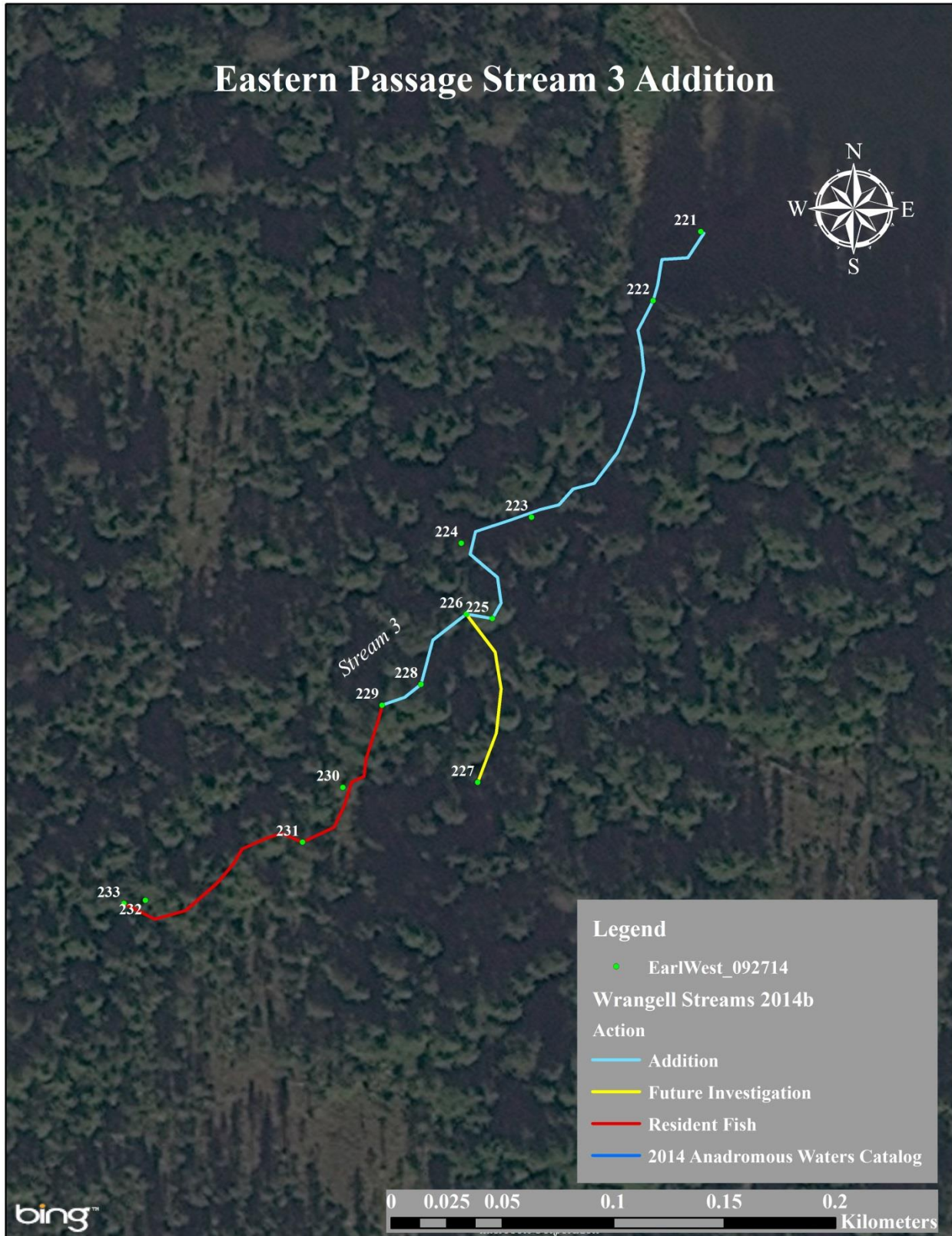


Figure 3.—Eastern Passage stream 3 addition map.

Wrangell

EASTERN PASSAGE STREAM 4

ADDITION

Water body name:

Survey date: 9/27/2014

Water body number:

Species & Lifestage:

Watershed: Salamander Creek-Frontal Eastern Passage

MTR: C064S085E **Quad:** Petersburg B-1

Findings: We surveyed this stream using a backpack electrofisher and GPS (Table 1). We caught juvenile coho salmon, Dolly Varden char, and cutthroat trout (Figures 1-4).

Recommendations: Add this stream to the AWC and include rearing coho salmon and presence for Dolly Varden char and cutthroat trout (Figure 5).

Nomination: 16-525

Table 1.–Eastern Passage stream 4 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
207	56.3450	-132.1574	Mouth of uncataloged stream.		
208	56.3445	-132.1574		EF	2 CO
209	56.3443	-132.1575		EF	2 CO
210	56.3441	-132.1578	Grade change.		
211	56.3440	-132.1581		EF	1 DV
212	56.3437	-132.1586	Photos.		
213	56.3435	-132.1586		EF	1 CO
214	56.3435	-132.1588		EF	1 CT
215	56.3429	-132.1601	Photos.		
216	56.3429	-132.1603		EF	1 CT
217	56.3427	-132.1609	End survey due to lack of fish.	EF	No Fish



Figure 1.—Coho salmon caught at WP 213.



Figure 2.—Cutthroat trout caught at WP 216.



Figure 3.—Stream mouth.



Figure 4.—Stream at waypoint 209.

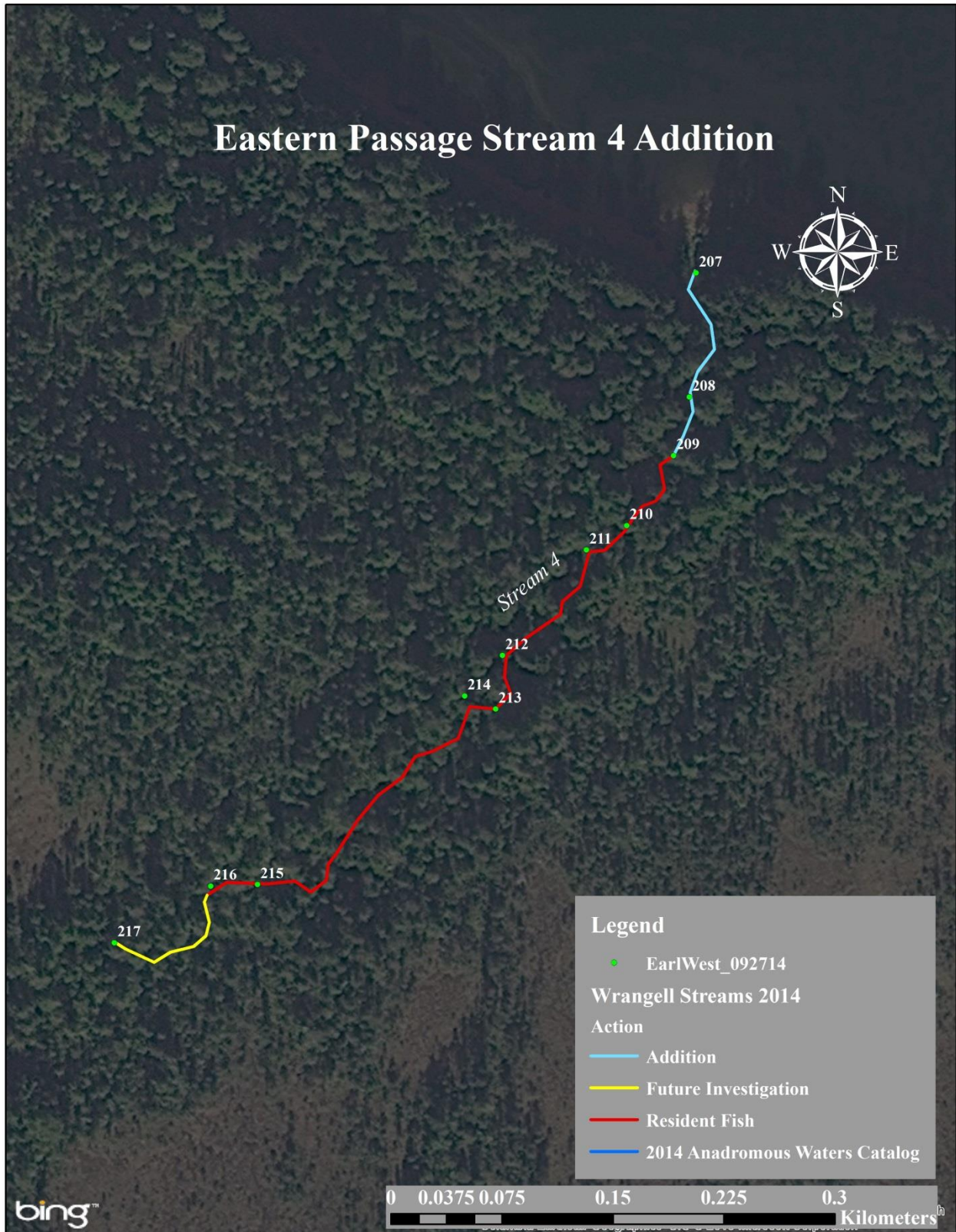


Figure 5.—Eastern Passage stream 4 addition map.

Wrangell

Wrangell

EASTERN PASSAGE STREAM 5

Water body name:

Water body number:

Watershed: Salamander Creek-Frontal Eastern Passage

MTR: C064S085E **Quad:** Petersburg B-1

Findings: We surveyed this stream using a backpack electrofisher and GPS (Table 1). We caught juvenile coho salmon and Dolly Varden char (Figures 1, 2).

Recommendations: Add this stream to the AWC and include rearing coho salmon and Dolly Varden char presence (Figure 3).

Nomination: 16-526

ADDITION

Survey date: 9/25/2014

Species & Lifestage:

Table 1.–Eastern Passage stream 5 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
107	56.3384	-132.1401	Small stream into cove.		
108	56.3383	-132.1402		EF	1 DV
109	56.3382	-132.1403		EF	1 CO
110	56.3380	-132.1401		EF	1 CO, 1 DV
111	56.3373	-132.1404	E-fished up to WP 111. Stopped here due to lack of fish, never encountered a barrier.	EF	No Fish
112	56.3385	-132.1410	Small Creek "foam creeklet".		
113	56.3382	-132.1416	Higher gradient. Stopping here and heading back to beach.	EF	No Fish
114	56.3388	-132.1413	ATV trail to beach.		
115	56.3399	-132.1435	E-fish going upstream in another uncataloged stream.		
116	56.3398	-132.1436	E-fish side channel on river left.	EF	1 CT
117	56.3398	-132.1440	Shoot gradient to top of upper falls, 15% over 28 yds. Gets steeper above. 6-9 ft wetted width.		

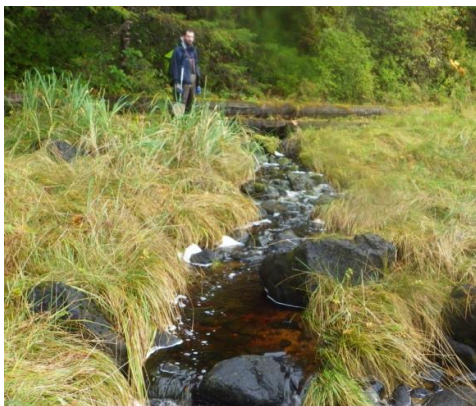


Figure 1.–Johnny Zutz near the mouth.



Figure 2.–Juvenile coho salmon caught at WP 110.



Figure 3.—Eastern Passage stream 5 addition map.

Wrangell

EASTERN PASSAGE STREAM 6

ADDITION

Water body name:

Survey date: 9/25/2014

Water body number:

Species & Lifestage:

Watershed: Salamander Creek-Frontal Eastern Passage

MTR: C064S085E **Quad:** Petersburg B-1

Findings: We surveyed this stream using a backpack electrofisher and GPS (Table 1). We caught juvenile coho salmon and Dolly Varden char (Figures 1-4). We did not catch coho salmon in the mainstem above waypoint 99.

Recommendations: Add this stream to the AWC and include rearing coho salmon and Dolly Varden char presence (Figure 5).

Nomination: 16-527

Table 1.–Eastern Passage stream 6 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
97	56.3407	-132.1332	Uncataloged stream to the east of Earl West Creek. 5 ft wetted width in intertidal.	EF	No Fish
98	56.3406	-132.1330		EF	1 CO
99	56.3406	-132.1327		EF	2 CO
100	56.3405	-132.1325	Tributary on river left. E-fishing up tributary.		
101	56.3406	-132.1322	Stream difficult to E-fish because of small pools and heavy tree fall over channel. Moderate gradient.	EF	1 DV
102	56.3407	-132.1322		EF	2 CO
103	56.3406	-132.1321		EF	1 CO, 1 DV
104	56.3407	-132.1317	Channel undefined with moderate gradient. Ending survey of tributary. Heading back to mainstem.	EF	No Fish
105	56.3411	-132.1311	E-fish up to WP 105. Heading back down mainstem to intertidal area.	EF	No Fish
106	56.3407	-132.1324	Channel splits; heading down river right channel	EF	No Fish



Figure 1.—Looking upstream at WP 97.



Figure 2.—Coho salmon caught at WP 98.



Figure 3.—Looking upstream at WP 99.



Figure 4.—Ended survey of tributary at WP 104.

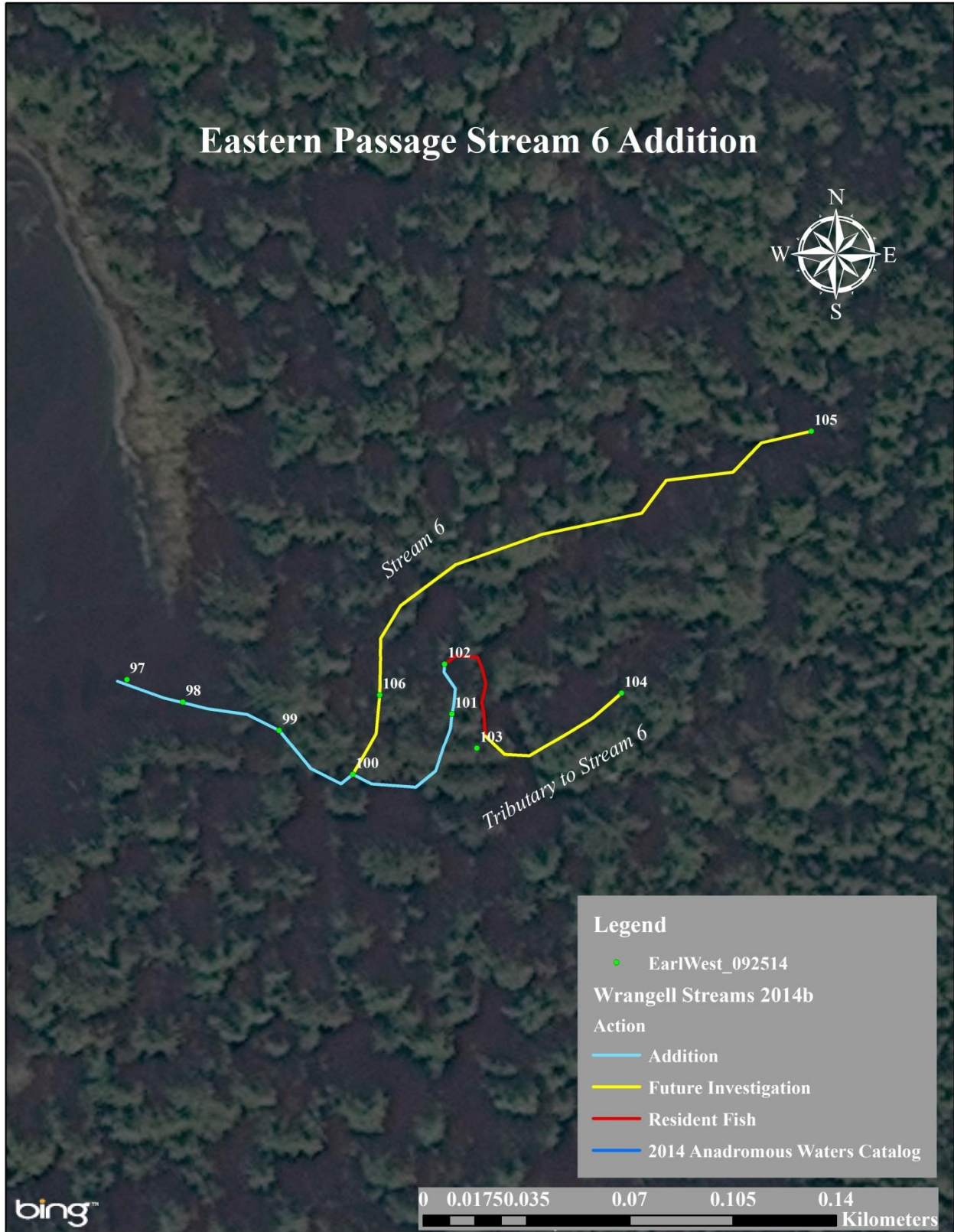


Figure 5.—Eastern Passage stream 6 addition map.

Wrangell

Wrangell

EASTERN PASSAGE TRIBUTARY TO STREAM 6

ADDITION

Water body name:

Survey date: 9/25/2014

Water body number:

Species & Lifestage:

Watershed: Salamander Creek-Frontal Eastern Passage

MTR: C064S085E **Quad:** Petersburg B-1

Findings: We surveyed this tributary to stream 6 using a backpack electrofisher and GPS (Table 1). We caught juvenile coho salmon and Dolly Varden char (Figures 1, 2). We did not catch coho salmon in the mainstem above waypoint 99.

Recommendations: Add this stream to the AWC and include coho salmon rearing and Dolly Varden char presence (Figure 3).

Nomination: 16-528

Table 1.–Tributary to Eastern Passage stream 6 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
100	56.3405	-132.1325	Tributary on river left. E-fishing up tributary.		
101	56.3406	-132.1322	Stream difficult to E-fish because of small pools and heavy tree fall over channel. Moderate gradient.	EF	1 DV
102	56.3407	-132.1322		EF	2 CO
103	56.3406	-132.1321		EF	1 CO, 1 DV
104	56.3407	-132.1317	Channel undefined with moderate gradient. Ending survey of tributary. Heading back to mainstem.	EF	No Fish

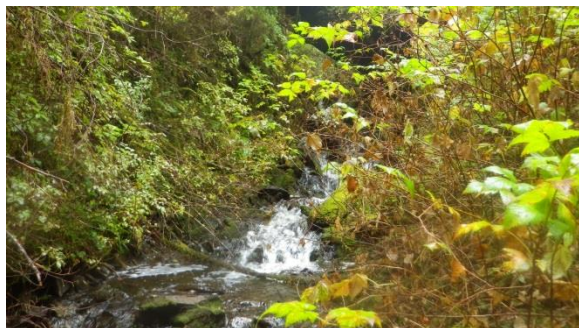


Figure 1.–Ended survey of tributary at WP 104.



Figure 2.–Coho salmon caught at WP 102.

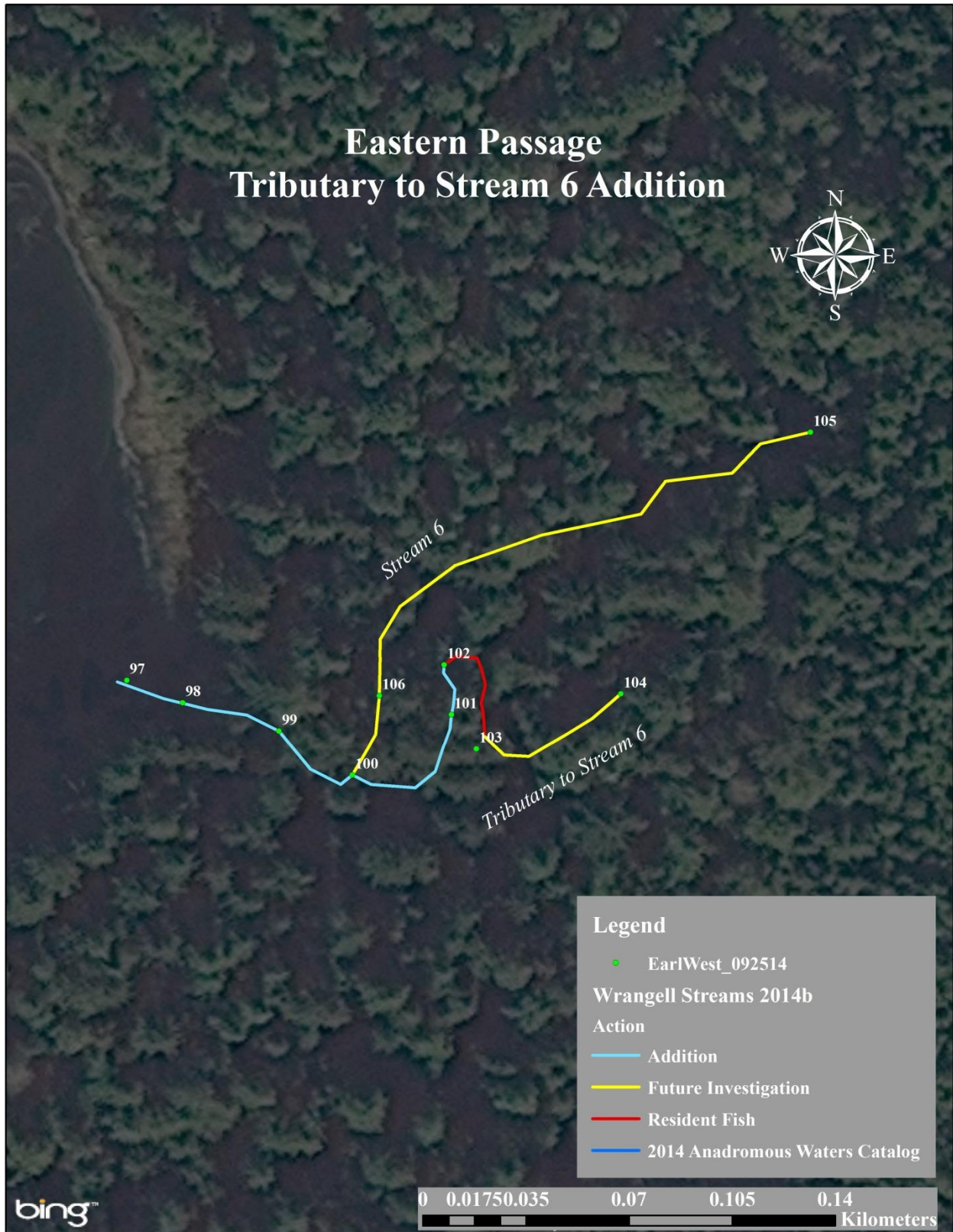


Figure 3.—Eastern Passage tributary to stream 6 addition map.

Wrangell

ZAREMBO ISLAND STREAM 1

ADDITION

Water body name:

Survey date: 8/21/2003

Water body number:

Species & Lifestage:

Watershed: Macnamara Point-Frontal Clarence Strait

MTR: C064S079E **Quad:** Petersburg B-4

Findings: Dennis Reed (USFS Fish Biologist) reported capturing 70 rearing coho salmon with minnow traps from WPT 1 downstream to the mouth (Table 1).

Recommendations: Add stream and rearing coho salmon to the AWC (Figure 1).

Nomination: Pending

Table 1.-Zarembo Island stream 1 survey data.

Waypoint	Latitude	Longitude	Notes	Sample Effort	Sample Results
1	56.3140	-133.0130	Dennis Reed (USFS Fish Biologist) reported the capturing of 70 rearing CO.	MT	70 CO

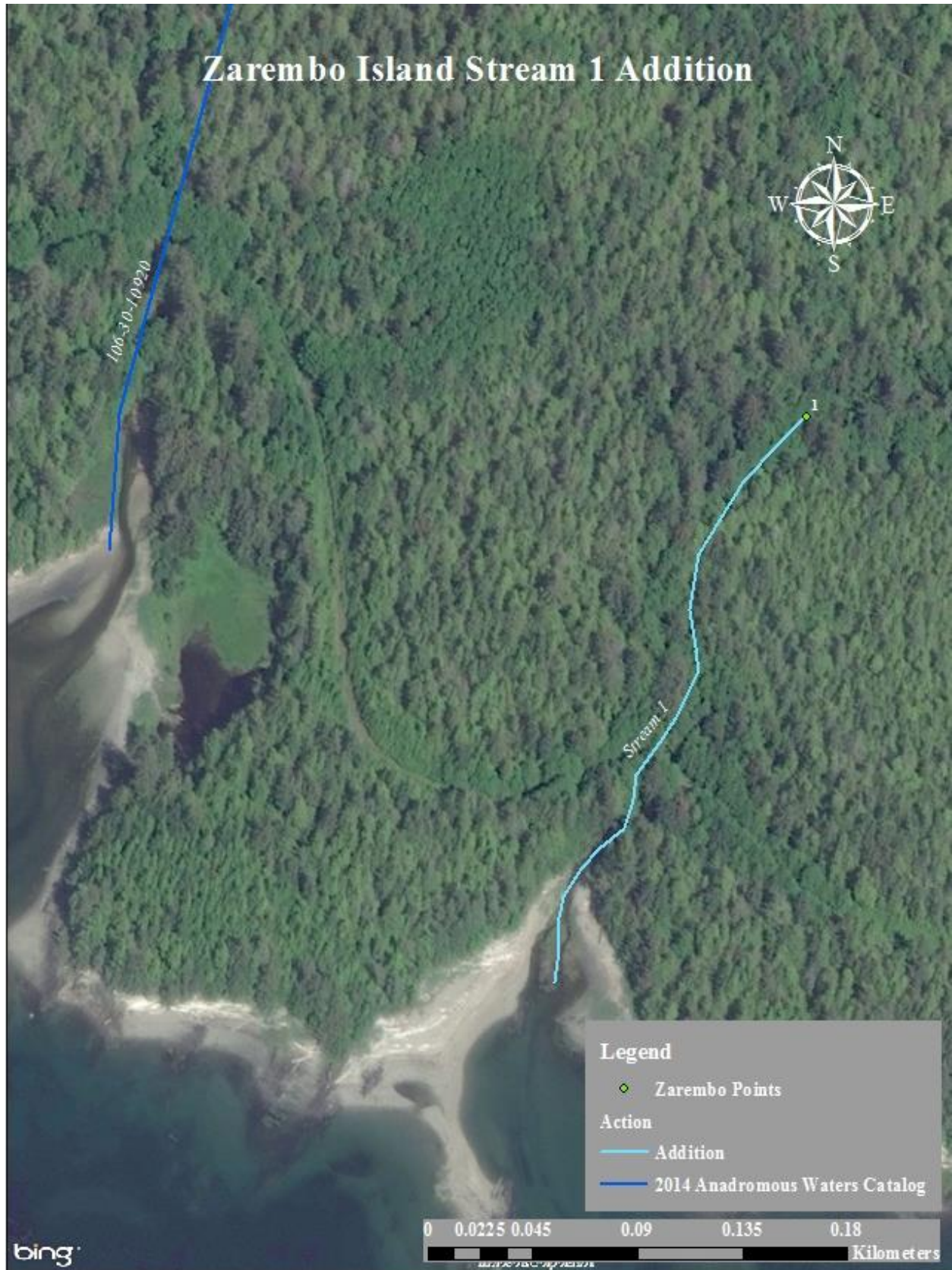


Figure 1.—Zarembo Island stream 1 addition map.

Wrangell

WRANGELL STREAMS REQUIRING FUTURE INVESTIGATION

Table 1.—Start points of Wrangell streams requiring future investigation.

Waypoint	Latitude	Longitude
1	56.3407	-132.1322
2	56.3405	-132.1325
3	56.3285	-132.1267
4	56.3253	-132.1319
5	56.3169	-132.1298
6	56.3382	-132.1402
7	56.3385	-132.1410
8	56.3354	-132.1563
9	56.3476	-132.1684
10	56.3498	-132.1752
11	56.3481	-132.1775
12	56.3388	-132.2008
13	56.3401	-132.2052
14	56.3393	-132.2076
15	56.3363	-132.2156
16	56.3531	-132.3308
17	56.3537	-132.3308
18	56.3623	-132.3128
19	56.3630	-132.3101
20	56.4419	-132.3411
21	56.4132	-132.3409
22	56.4209	-132.3540
23	56.4523	-132.3806
24	56.4818	-132.3915
25	56.4700	-132.3391

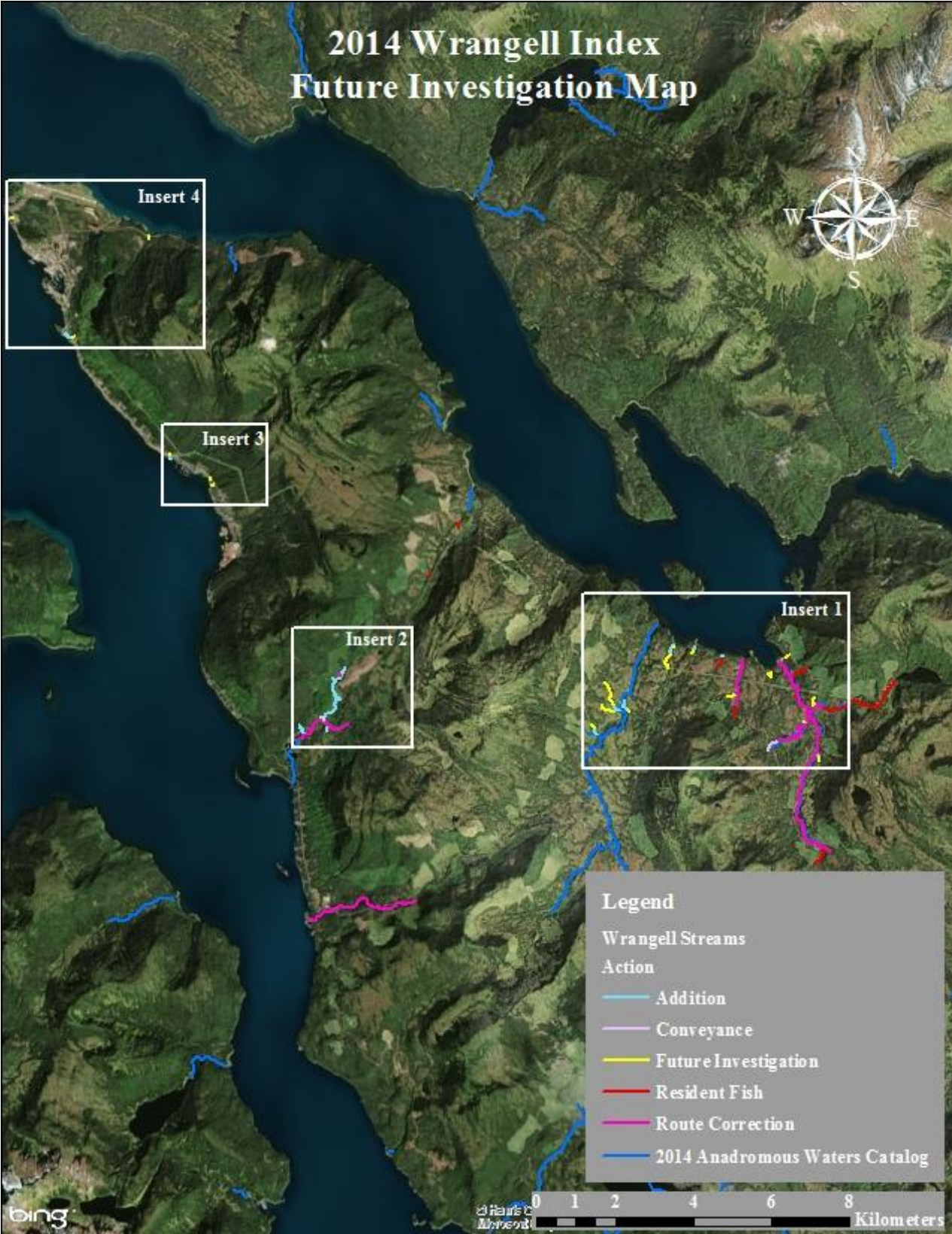


Figure 1.-2014 Wrangell index future investigation map.

Wrangell

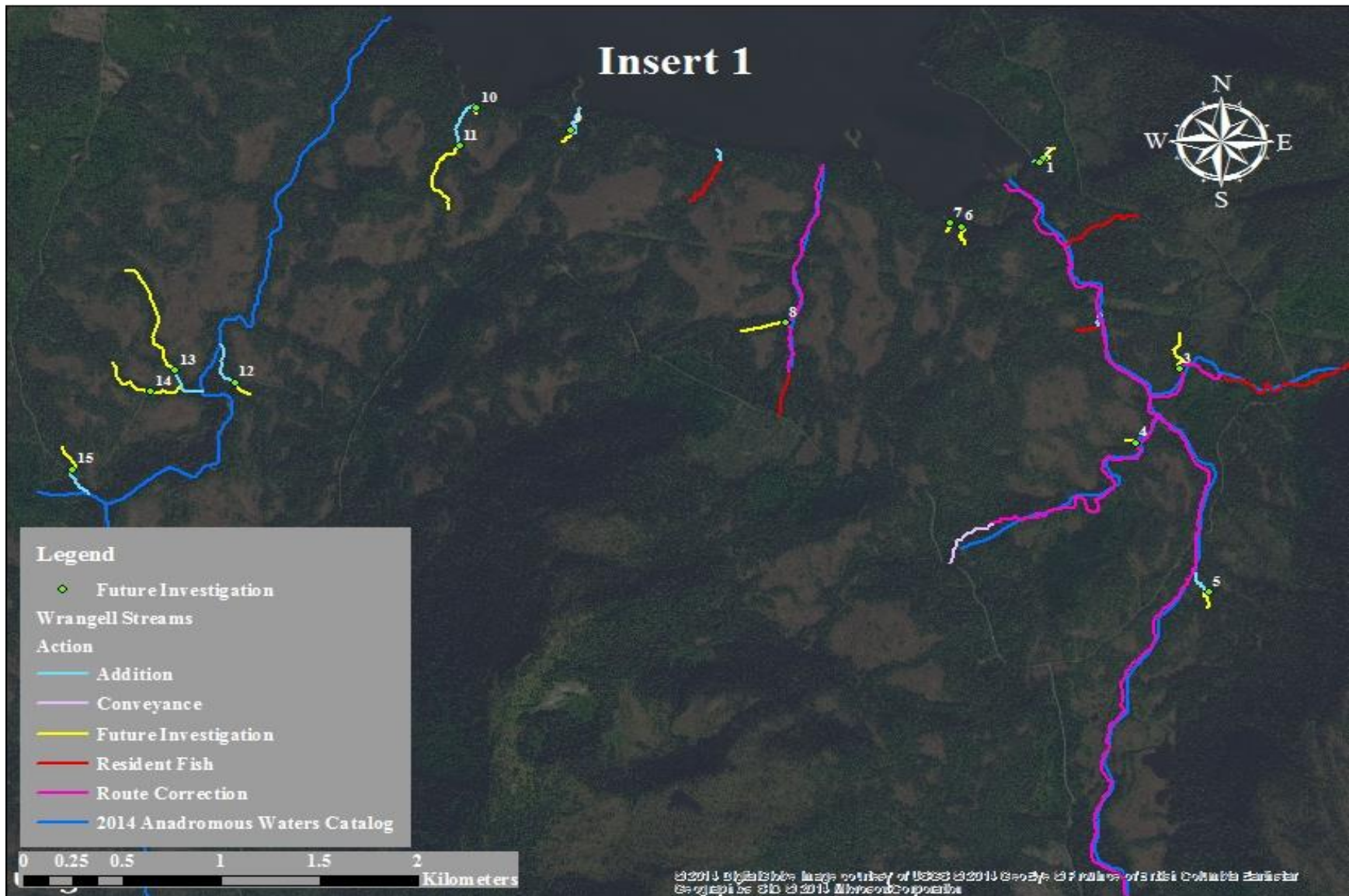


Figure 2.–Insert 1 map.

Wrangell

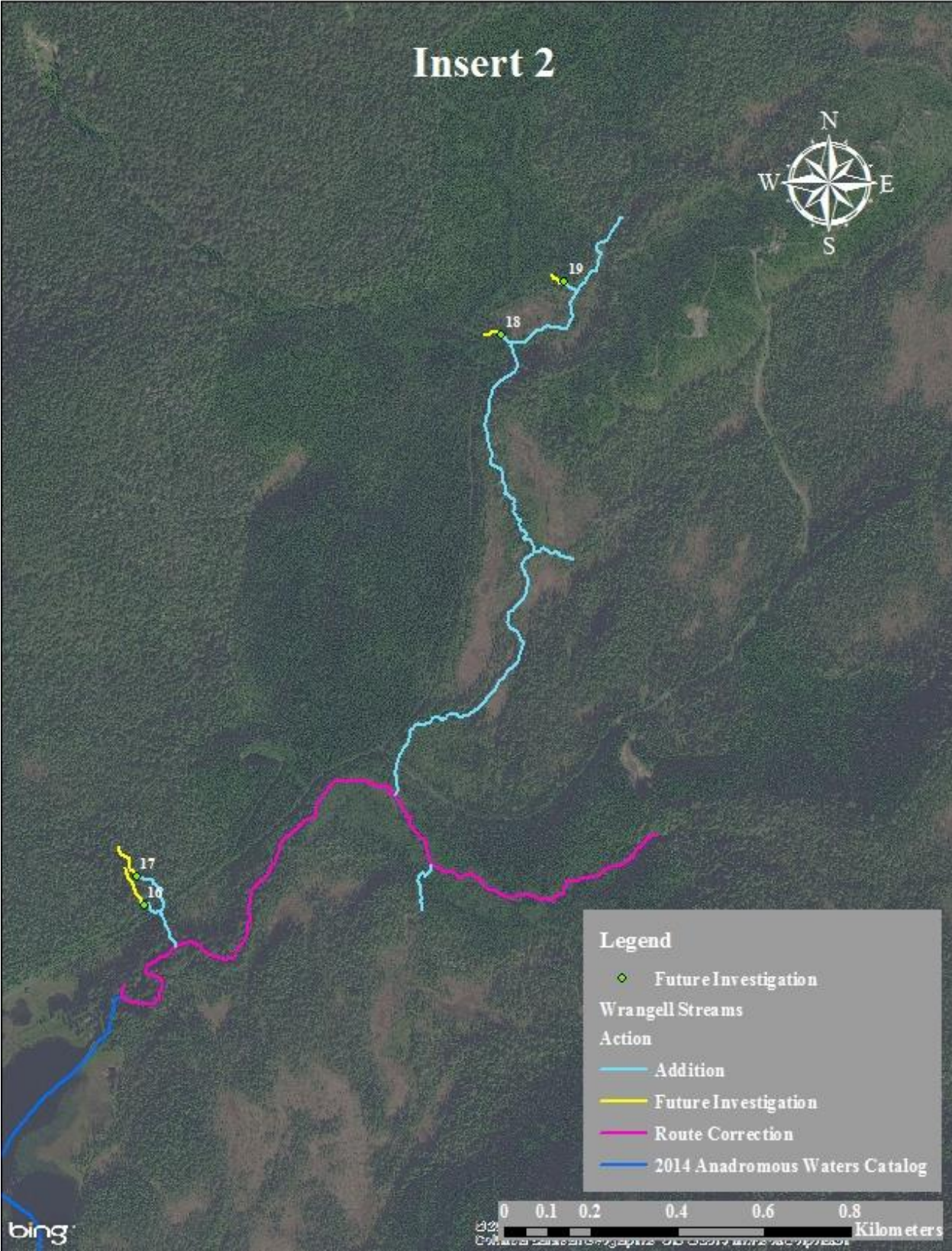


Figure 3.–Insert 2 map.

Wrangell

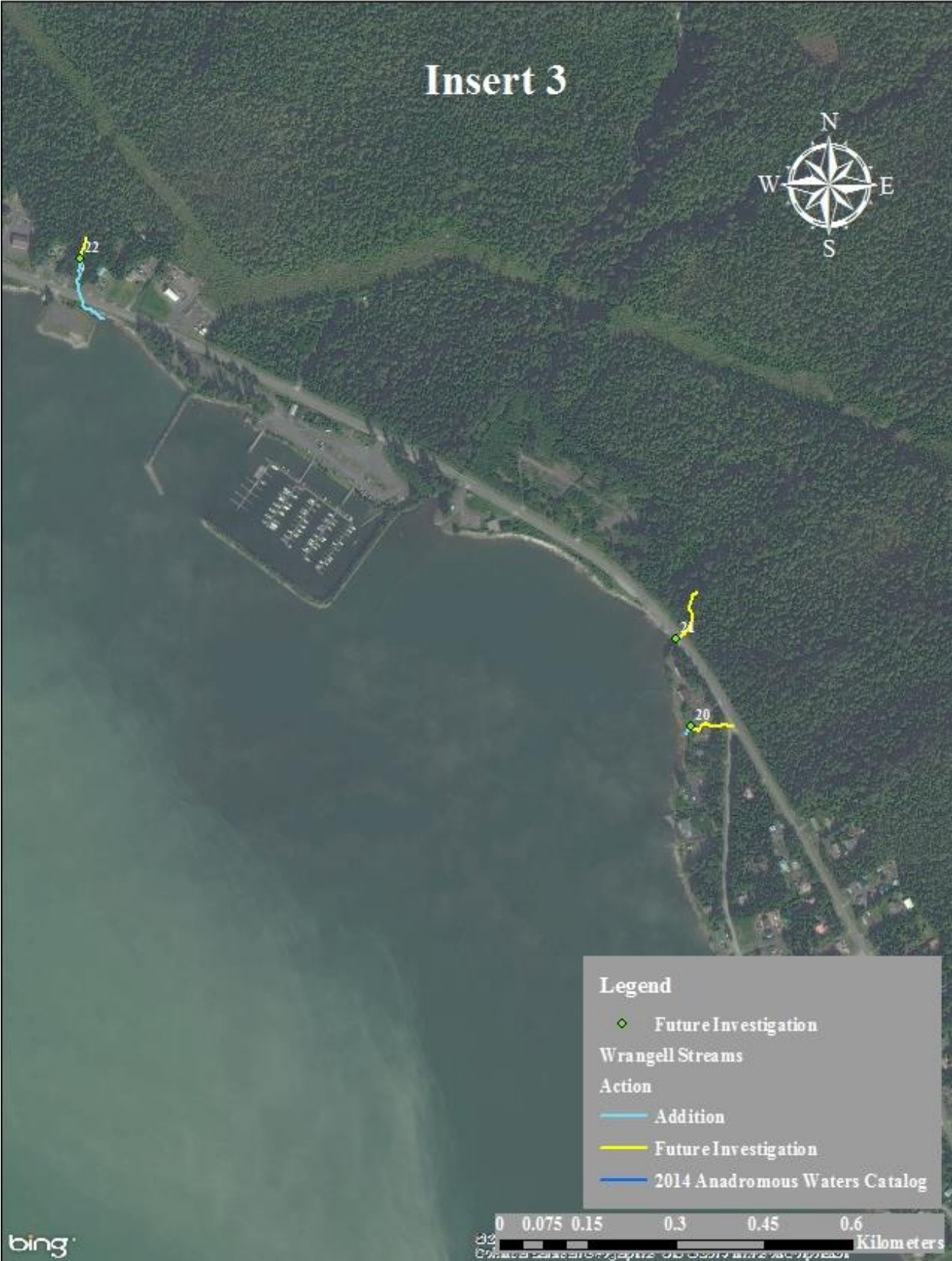


Figure 4.–Insert 3 map.

Wrangell



Figure 5.—Insert 4 map.

Wrangell