



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

Nomination Form  
Anadromous Waters Catalog

M E

Region Southeast USGS Quad(s) Craig A-3

Anadromous Waters Catalog Number of Waterway 103-40-10580-2024-3012

Name of Waterway Unnamed tributary 5 to Kasook Lake  USGS Name  Local Name  
 Addition  Deletion  Correction  Backup Information

For Office Use

Nomination # <u>14-506</u>	<u>[Signature]</u> Fisheries Scientist	<u>4/25/14</u> Date
Revision Year: <u>2015</u>	<u>[Signature]</u> Habitat Operations Manager	<u>4/25/14</u> Date
Revision to: Atlas <input type="checkbox"/> Catalog <input type="checkbox"/> Both <input checked="" type="checkbox"/>	<u>[Signature]</u> AWC Project Biologist	<u>3/29/14</u> Date
Revision Code: <u>A-2d</u>	<u>[Signature]</u> Cartographer	<u>5/19/14</u> Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
Coho Salmon	June 13, 2013		X	X	<input checked="" type="checkbox"/>
Cutthroat Trout	June 13, 2013			X	<input type="checkbox"/>
					<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 attached supplemental information.  
 This application was prepared by Cathy Needham, who may be reached at 907-723-4436 or cathy@kaienvironmental.com  
Add new streams 103-40-10580-2024 & 2024-3012 w/coho salmon REARING  
 ALASKA DEPT. OF FISH & GAME  
 JAN 08 2014

Name of Observer (please print): Tony Sanderson  
 Signature: [Signature] Date: 1-7-14  
 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 \_\_\_\_\_

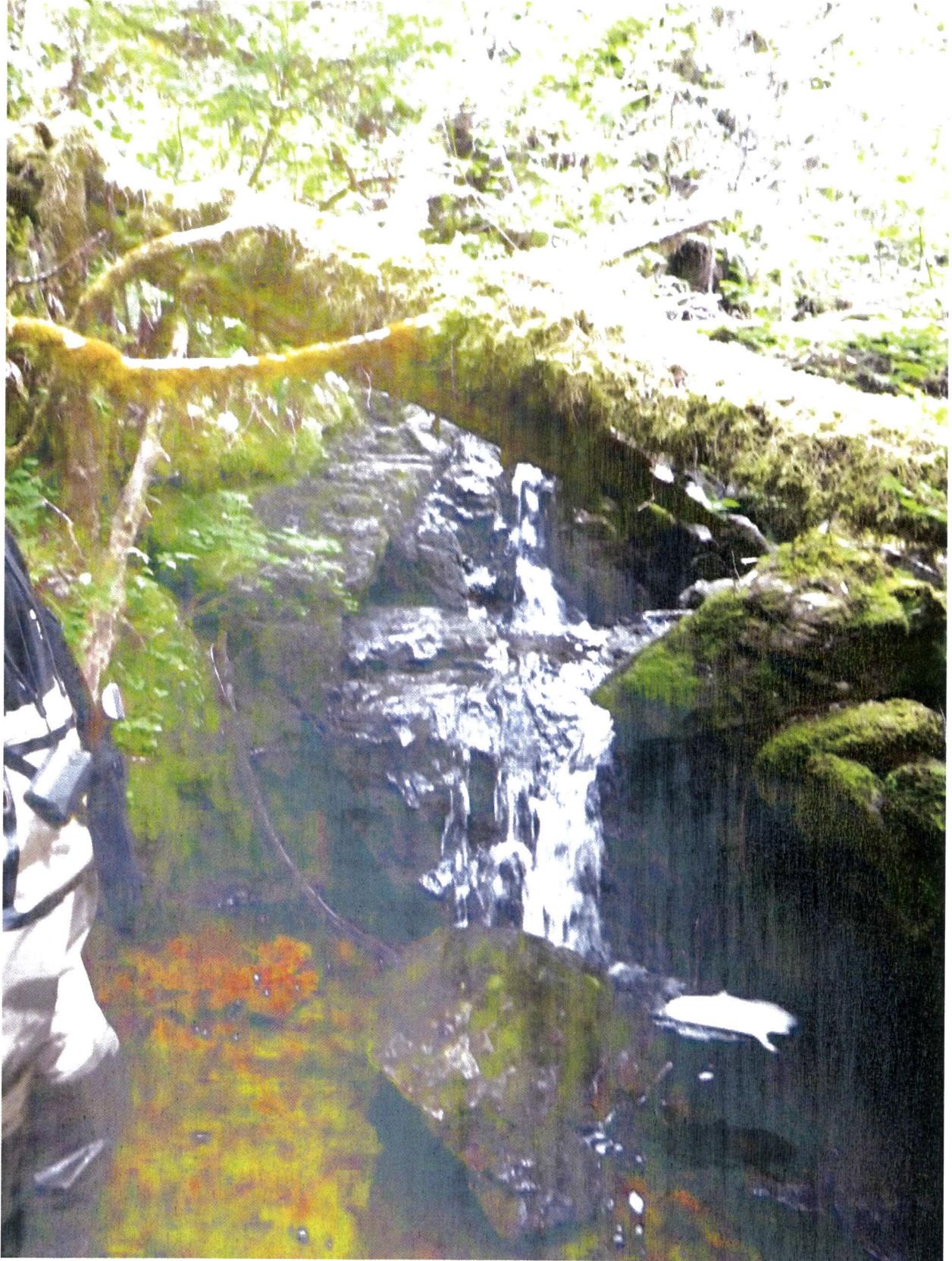
## Supplemental information for Kasook Lake Unnamed Tributary

Seven baited minnow traps were set in a tributary on the eastern shore of Kasook Lake (see attached figure for tributary location). Traps were soaked for 2-6 hours at GPS points 160, 163, 170, 182, 203, 204, and 205. Trap #160 contained 1 coho (65mm). Trap #163 contained 1 cutthroat (118mm), 3 coho (65mm, 75mm, 65mm). Trap #170 contained 1 coho (70mm) and 2 cutthroat (136mm, 125mm). Trap #182 contained 1 cutthroat (97mm). Trap #203 contained 2 coho (90mm, 74mm). Trap #204 contained 2 coho (74mm, 65mm). Trap #205 contained 3 cutthroat (74mm, 112mm, 73mm), 1 coho (80mm) and 4 Dolly Varden (80mm, 90mm, 98mm, 78mm). An ADFG fish trapping permit datasheet is attached to this nomination packet for further details.

Stream mapping and survey data was collected by the Hydaburg Cooperative Association Stream Survey crew for the tributary on June 13, 2013. The tributary has not been previously catalogued in the State of Alaska Anadromous Waters Catalog, however trapping data indicate the reach is used as rearing habitat for coho salmon and that cutthroat trout were also documented as present.

Unnamed tributary 5 to Kasook Lake contained six reaches (reach numbers correspond to a master dataset; see attached figure for locations). The main channel of this tributary encompasses reaches 9, 10, 11 and 12. Reach 9 was classified as FPS (Low Gradient Floodplain). Reach 10 contained a beaver dam (see attached figure), and the reach was classified as PAB (Beaver Dam/Pond Channel). The beaver dam was 1.63 meters high with a gradient of 23%. Fish traps #170 and #182 were above the beaver dam, so the structure was not considered an impediment. Reach 11 was classified as MMS (Moderate Gradient/Mixed Control). Reach 12 was classified as HCL (High Gradient, Low Incision). A waterfall was documented at the top of Reach 12 (see attached figure). The waterfall had a height of 1.82 meters with a 30.2% gradient and 0.3 meter pool depth (see photo below). The waterfall was considered a barrier for fish. Stream survey data taken for the main channel of Unnamed Tributary 5 are included in the following table:

	Reach 9	Reach 10	Reach 11	Reach 12
<b>Average stream gradient</b>	0.85	1.3	2.6	5.7
<b>Average bankfull width</b>	3.9	3.0	2.6	2.7
<b>Average channel bed width</b>	3.9	3.8	2.5	2.5
<b>Average incision depth</b>	0.55	0.82	0.62	0.60
<b>Bank composition</b>	Mixed Alluvial/Bedrock	Organic	Alluvial	Mixed Alluvial/Bedrock
<b>Dominant substrate</b>	Very Course Gravel	Sand/Silt	Small Cobble	Small Cobble
<b>Sub-dominant substrate</b>	Course Gravel and Small Cobble	Organic	Very Course Gravel and Large Cobble	Large Cobble and Very Course Gravel
<b>Large wood count</b>	30	114	29	14
<b>Key wood count</b>	1	11	10	10
<b>Macro-pool count</b>	9	19	15	11



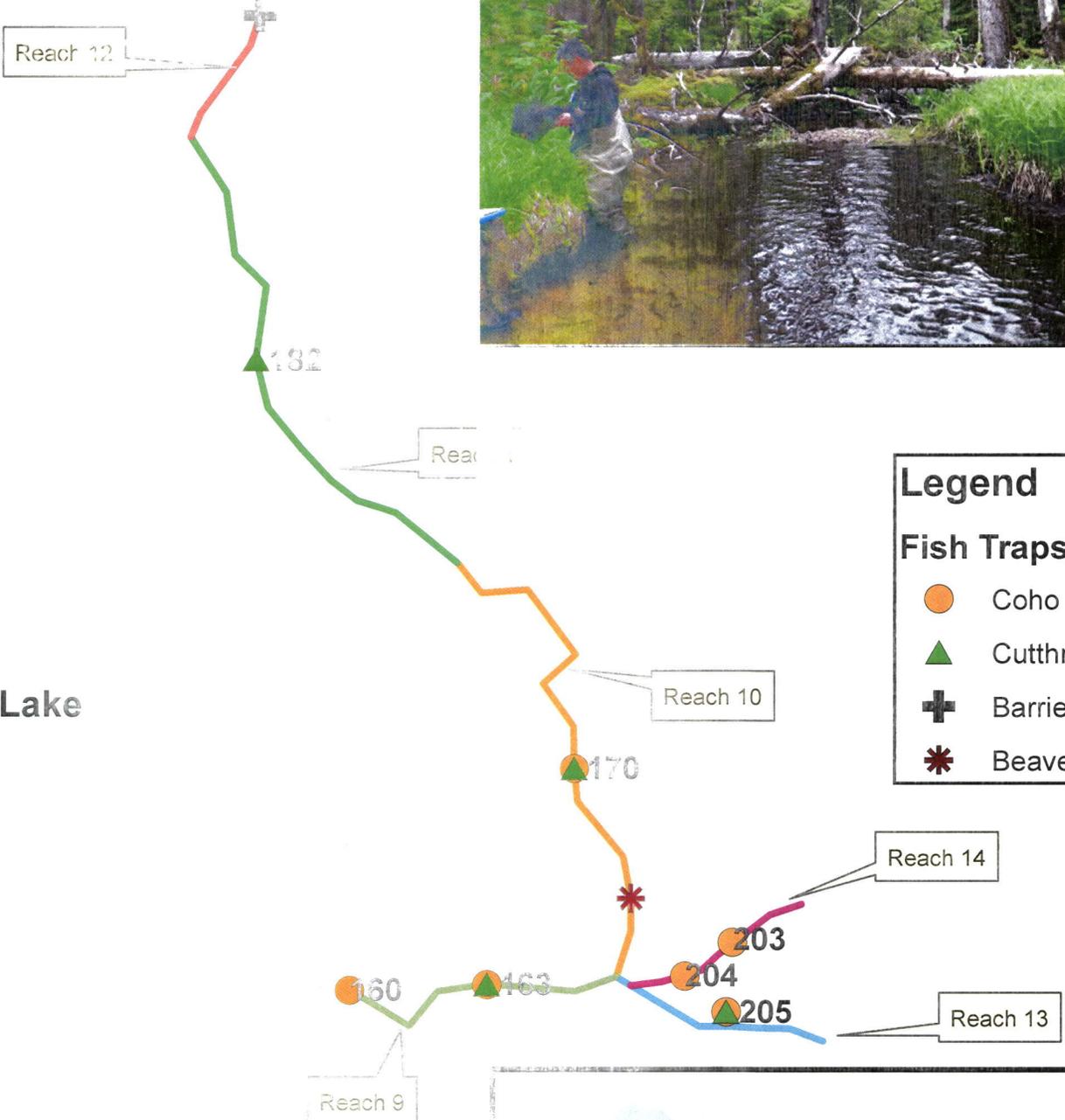
Reach 13 of Unnamed tributary 5 was classified as HCL (High Gradient/Low Incision). The gradient in the upper portion of the reach was 14%, and no additional fish trapping or stream mapping data was taken. Reach 14 was classified as MCS (Moderate Gradient Small Contained). No barrier was documented at the upper portion of the reach, other than gradient was becoming steeper with the upper portion of the reach being measured at 7% and increasing. Stream survey data taken for reaches 13 and 14 of Unnamed Tributary 5 can be found in the following table:

	<b>Reach 13</b>	<b>Reach 14</b>
<b>Average stream gradient</b>	7.4	4.4
<b>Average bankfull width</b>	2.5	2
<b>Average channel bed width</b>	2.1	2.9
<b>Average incision depth</b>	0.37	0.28
<b>Bank composition</b>	Alluvial	Mixed Alluvial/Bedrock
<b>Dominant substrate</b>	Very Course Gravel	Very Course Gravel
<b>Sub-dominant substrate</b>	Course Gravel and Small Cobble	Small Cobble and Course Gravel
<b>Large wood count</b>	36	19
<b>Key wood count</b>	8	5
<b>Macro-pool count</b>	18	7

# Kasook Lake Unnamed Tributary 5 June 11-13, 2013



Kasook Lake



### Legend

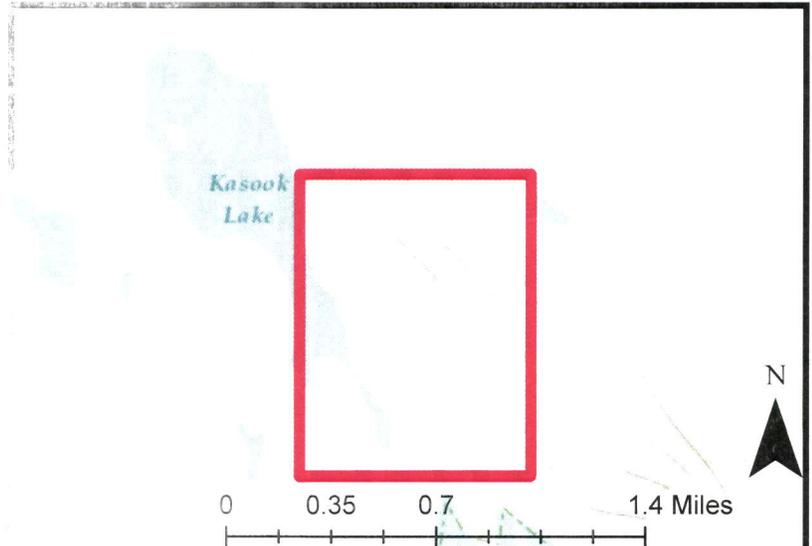
#### Fish Traps

- Coho Salmon
- ▲ Cutthroat Trout
- + Barrier Falls
- ✱ Beaver Dam

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Numbered reaches mapped by  
Hydaburg Cooperative Association



Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey,

add new stream 103-40-10580-2024 &  
103-40-10580-2024-3012  
w/coho salmon rearing  
use norms\needham\kasook\_arc.shp & arc2015 for hydro

