State of Alaska
Department of Fish and Game
Sportfish Division

Nomination Form
Anadromous Waters Catalog

Region: Southcentral

USGS Quad(s): ILIAMNA A-4, A-5

Anadromous Waters Catalog Number of Water Body: 243-20-10020 (-2040)

Name of Water Body: Paint River and Lake Fork Paint River ☑ USGS Name ☐ Local Name

☑ Addition ☐ Deletion ☑ Correction ☐ Backup Information

For Office Use

Nomination #: **21-860**

Revision Year: 2022

Revision to: ☑ Atlas ☑ Catalog

Revision Code: A-1, A-2, C-7, C-9

James J Hasbrouck, Fisheries Scientist	9/20/2021 Date
Habitat Operations Manager	9/20/21 Date
AWC Project Biologist	8/11/2021 Date
GIS Analyst	9/29/2021 Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
coho salmon	09/04/2020			✓	✓
coho salmon	09/20/2017			✓	✓

~Extend upper extent of existing AWC stream #243-20-10020 "Paint River" with COHO salmon PRESENT.

~Adjust mouth point location, extend lower extent of existing AWC stream #243-20-10020 down to approx location of MLLW (purple line).

~Add new AWC stream #243-20-10020-2040 "Lake Fork Paint River" with COHO salmon PRESENT.

~Adjust location of stream point to better corresponding with location of [redacted]ft Falls & Fish Ladder which is upper extent of CHp,Pp at this time.

40

Comments:

Nomination based on conversations with Cook Inlet Aquaculture Ass. biologist Andy Wizik and reports provided to our office. Observations were made from a fixed wing overflight.
Coordinates (Lat,Long): Upper(59.2075,-154.5068) Lower(59.1575,-154.2459)

Name of Observer (please print): Josh Brekken

Signature: 10.3.161.27 (Web Nomination) Date: 07/08/2021

Agency: ADF&G

Address: 333 Raspberry Road
Anchorage, AK 99518

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.

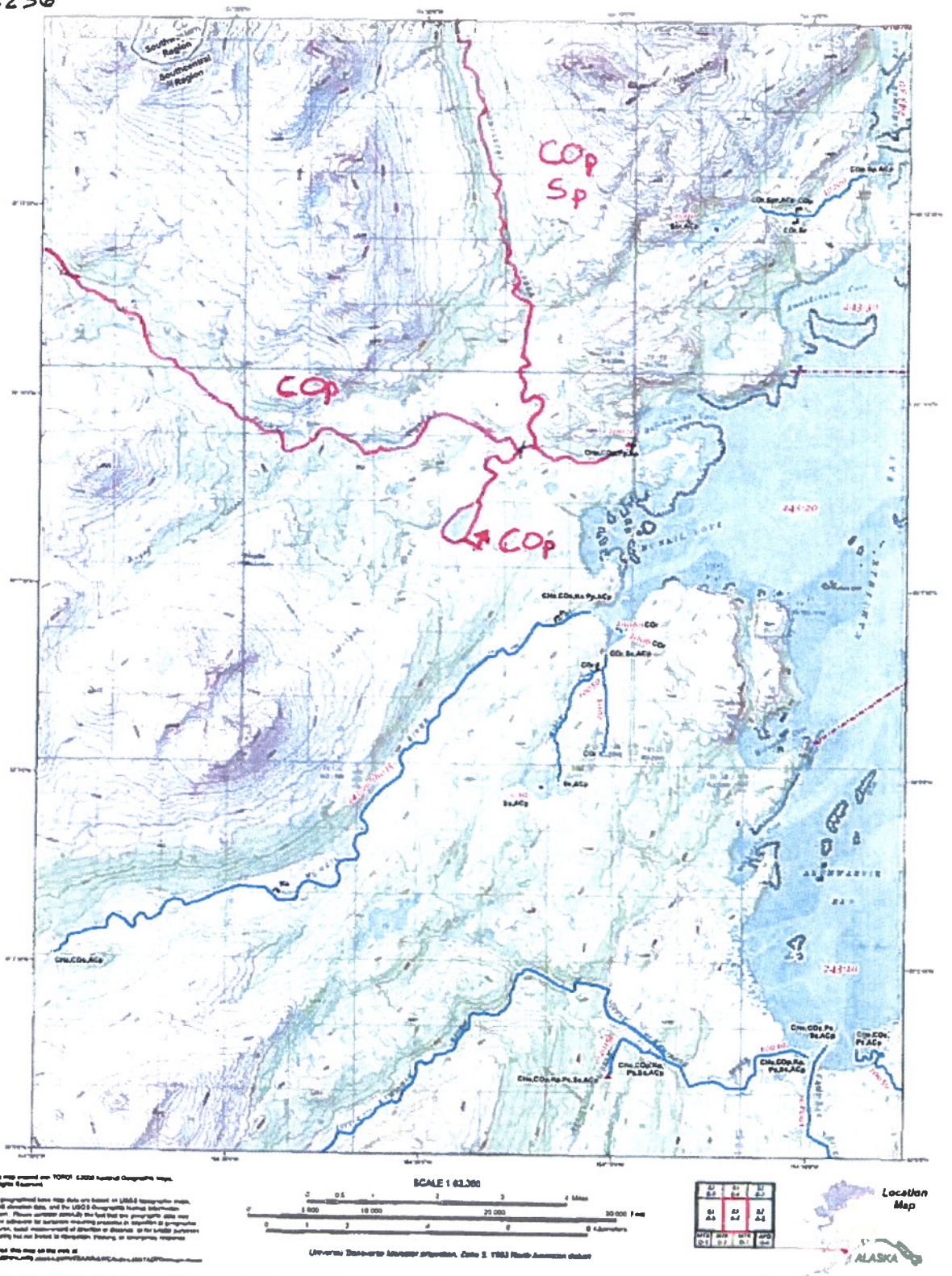
Signature of Area Biologist: _____ Date: _____ Revision 3/16

Name of Area Biologist (please print):

Suluk puk Creek
59.1352
154.3236

Upstream Extent
Paint River (Lakes Fork)
59.2075
154.5068

Dunuletalk Creek
59.2944
154.3043



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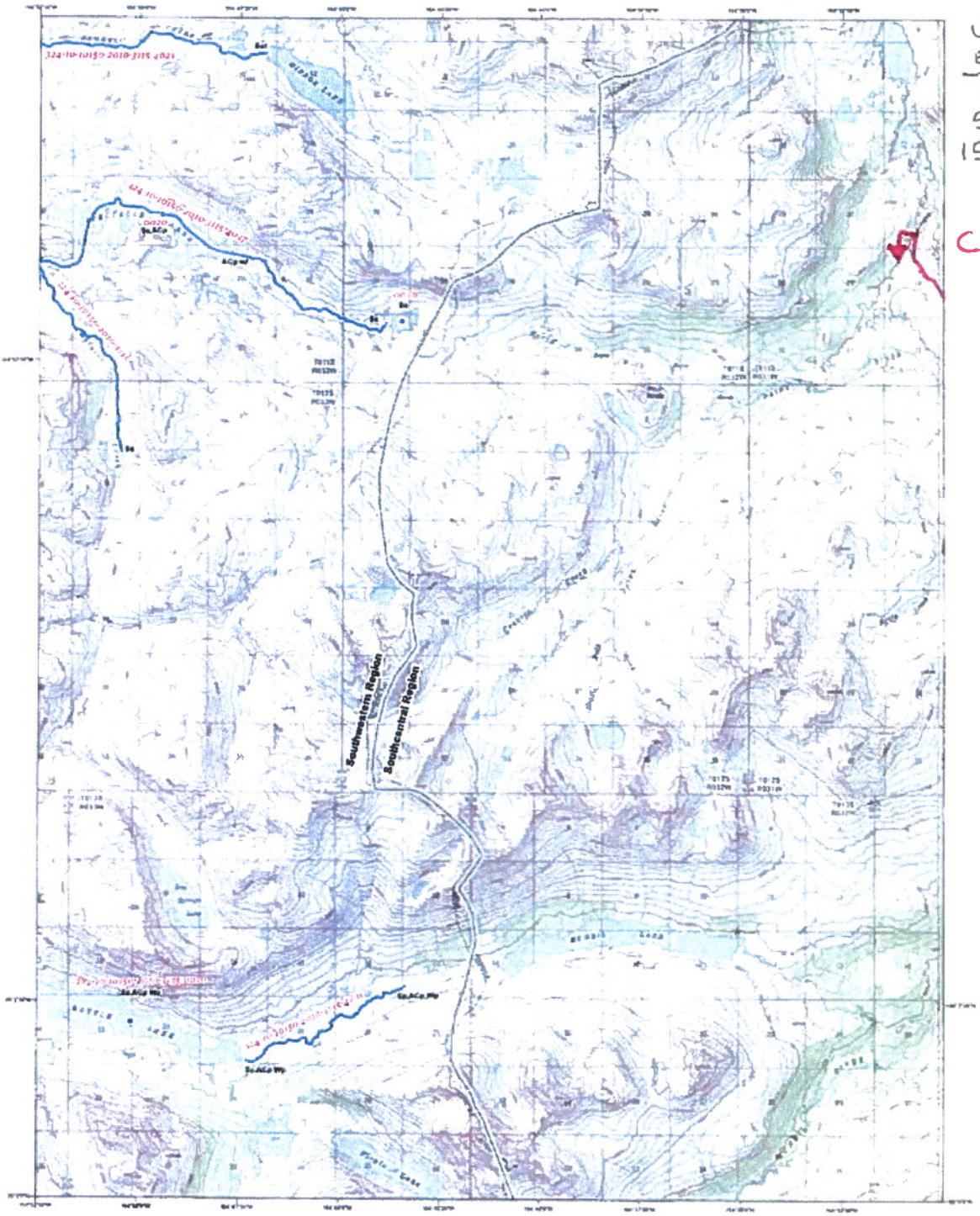
Location Map

ALASKA

Anadromous Waters Atlas
Quad No. 068 (IL1)
Iliamna
A-4



Upstream Extent
COp
59.2075
154.5068

COp

SCALE 1:63,360

Universal Transverse Mercator projection, Zone 3. 1983 North American datum.
National geodetic vertical datum of 1929

Location Map

ALASKA

- Lower/Upper Points of Stream
- Mid-stream Species Begin/End Point
- Short Stream (Under 660 feet)
- Lake
- Barrier
- Anadromous Streams
- Anadromous Areas
- AWC Stat Area
- Regional Boundary

Waters important to Anadromous Fish are listed pursuant to AS 16.05.871. Specified species distribution and life functions reflect known data. Actual distributions and uses may extend beyond specified limits. Migration upstream and/or downstream is assumed for specified stream reaches.

SPECIES CODES

CO	coho salmon	AC	Arctic Char	LV	river lamprey
CH	chum salmon	AL	Arctic lamprey	OL	longfin smelt
PI	chinook salmon (king)	AR	Arctic cisco	OM	rainbow smelt
P	pink salmon	BC	broad whitefish	OU	eulachon
S	sockeye salmon	BW	Bering cisco	PC	Pacific lamprey
		CT	cutthroat trout	SF	trout-perch (grayling)
LIFE STAGE CODES		DV	Dolly Varden	SH	steelhead trout
p	Present	GS	green sturgeon	SM	smelt, unidentified
m	Migration	HW	Humpback whitefish	ST	sturgeon, unidentified
r	Rearing	LB	western brook lamprey	W	whitefish, unidentified
s	Spawning	LC	least cisco	WS	white sturgeon
		LP	lamprey, unidentified		

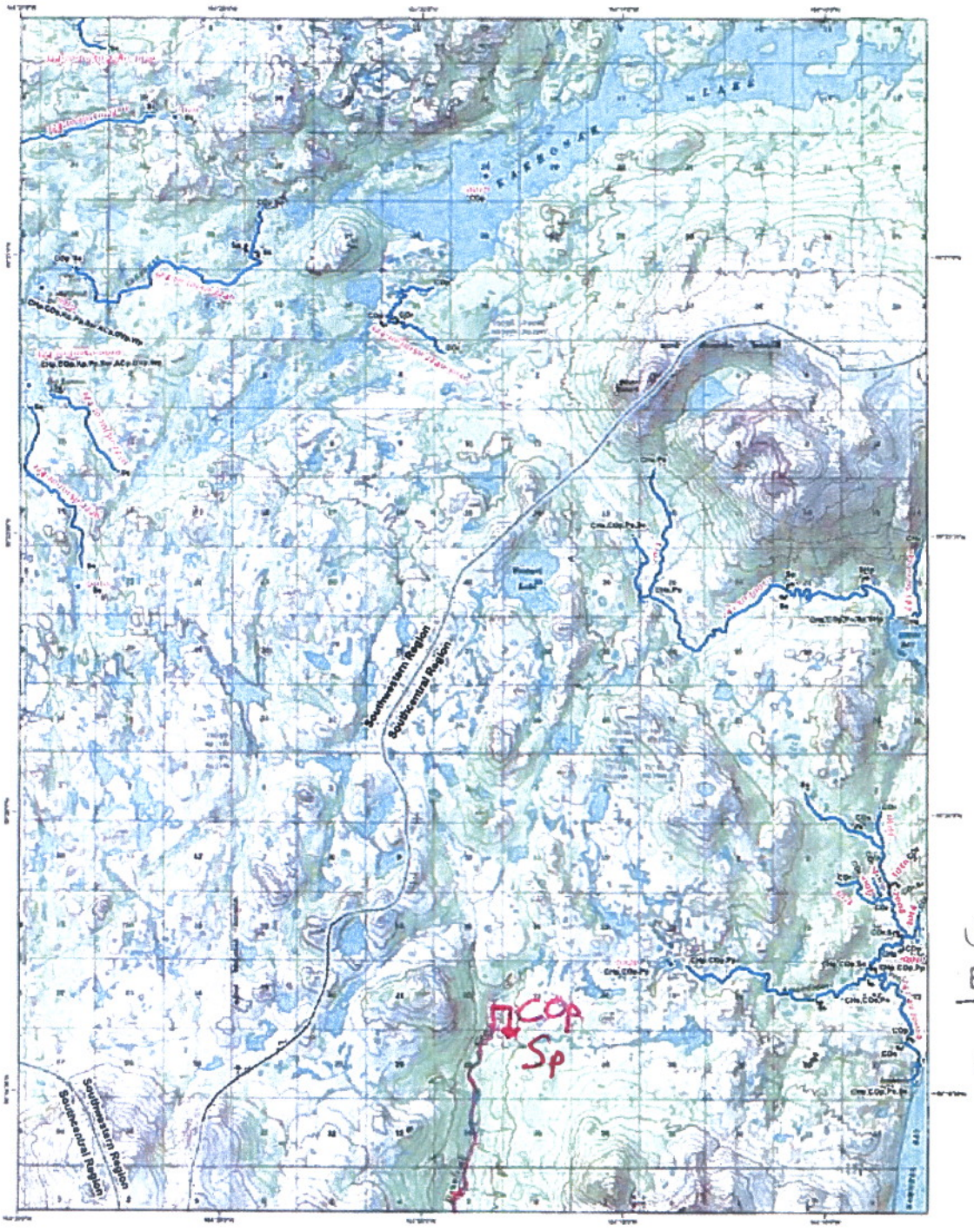
Prepared by State of Alaska Department of Fish and Game

Anadromous Waters Atlas

Quad No. 068 (ILI)

Iliamna

A- 5



Upstream Extent COP

59.2944
154.3043

SCALE 1:63,360

Location Map

ALASKA

- Lower/Upper Point of Stream
- Stream Begin/End Point
- Short Stream (Under 656 feet)
- Lake
- Barrier
- Anadromous Stream
- Anadromous Areas
- AWC Stat Area
- Regional Boundary

Waters important to Anadromous Fish are listed pursuant to AS 16.05.871. Specified species distribution and life functions reflect known data. Actual distribution and use may extend beyond specified limits. Migration upstream and/or downstream is assumed to specified stream reaches.

SPECIES CODES

CO coho salmon
CM chum salmon
K chinook salmon (king)
P pink salmon
S sockeye salmon

LIFESTAGE CODES

p Present
m Migration
r Rearing
s Spawning

AC Arctic char
AL Arctic lamprey
AW Arctic cisco
BC broad whitefish
BW Bering cisco
DT dolly varden
GS green sturgeon
HW humpback whitefish
LC lake cisco
LF lamprey, undifferentiated
LV river lamprey
OL longfin smelt
RB rainbow trout
SM pond smelt
SU suckers
PC Pacific lamprey
PF Pacific (American) herring
SH steelhead trout
SM smelt, undifferentiated
ST sturgeon, undifferentiated
W whitefish, undifferentiated
WS white sturgeon

Produced by State of Alaska Department of Fish and Game

Anadromous Waters Atlas

Quad No. 068 (ILI)

Iliamna
B-4

40610 Kalifornsky Beach Road
Kenai, Alaska 99611

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Paint River Aerial Salmon Survey
By
Andy Wizik
9/26/2017

On Wednesday September 20, I flew a salmon survey of the Paint River Watershed with Jose de Creeft of Northwind Aviation to observe the number and distribution of salmon that had made it up the Paint River Fish Ladder and into the various streams attached to Paint River. We flew the entire mainstem of Paint River and the lakes fork including Upper and Lower Paint lakes as well as the first 3.5 miles of the Paint River Rapid Fork. We also flew Dunuletak and Selukpuk creeks and the perimeter of Selukpuk Lake (Figure 1).

Figure 1: Flight path for the 2017 Paint River salmon survey (yellow line)

We began our survey at the mouth of the river veering to the south to follow Selukpuk Creek, which flows from Selukpuk Lake to Paint River. We noted 1 salmon near the confluence of the creek and the mainstem of Paint River with an additional 15 in the creek near the outflow of Selukpuk Lake. We then flew over the lake where we counted an additional 27 salmon. After surveying the lake we followed the creek above the lake for approximately a mile and saw 2

salmon just above the lake. After flying approximately a mile above the lake, the creek had dwindled to a trickle and we abandoned the search to head for the Paint River mainstem (Figure 2). Visibility was excellent and all of the salmon counted in Selukpuk Creek and Selukpuk Lake appeared to be coho based on their size and coloration.

Figure 2: Selukpuk Creek and Lake (white markers indicate locations and counts of salmon)

We did not see any fish as we ascended the mainstem of Paint River until we turned and followed the westerly rapid fork where we were only able to count 1 coho salmon. After following the rapid fork for approximately 3.5 miles and not seeing any fish, we returned to the mainstem and followed the northerly lakes fork up to Upper and Lower Paint lakes. Between the fork and the lakes we counted another 41 coho salmon in the river but did not see any salmon in the lower or upper lakes (Figure 3).

Figure 3: Rapid Fork and Lakes Fork of Paint River (white markers indicate locations and counts of salmon)

After flying over Paint lakes we flew around the mountains seperating the lakes from Dunutelak Creek to survey the creek downstream from the north to the south. On the upper section of Dunutelak Creek we counted 68 coho and 5 sockeye salmon. We also counted 2 coho salmon on the lower section of the creek and an additional coho salmon in the beaver sloughs near the confluence of Dunutelak Creek and the mainstem of Paint River (Figure 4). Visibility was good on the creek but the undercut banks of Dunutelak Creek and the dark water of the beaver sloughs may have been concealing more fish.

Figure 4: Salmon locations and counts on Dunuletak Creek (white markers indicate locations and counts of coho salmon; red marker indicates sockeye salmon)

Although the conditions for flying and spotting salmon were ideal, areas such as the beaver slough on the southern end of Dunutelak Creek and some side sloughs below Paint lakes were difficult to see because of extensive networks of small side channels with undercut banks. However, it is encouraging to see that salmon have been pioneering into most of the tributaries in the Paint River watershed.

One of the challenges moving forward will be to acquire otolith samples from some of the adults that have made it into Paint River for stable isotope and otolith mark analysis. During the flight I tried to find places where a crew could be dropped off for sampling on Paint River, Dunuletak Creek, and Selukpuk Creek. Selukpuk Creek seems to be the easiest for sampling because the lake is large enough to land an airplane and the creek could easily be floated back to the fish ladder in a couple of hours. This site will most likely be the only spot we can collect otoliths during the 2017 field season because it does not require any difficult logistics. If we have time, and the weather cooperates during our trip to close the ladder in early October, we hope to attempt a sampling trip. Accessing the Lakes Fork of Paint River requires us to land on Lower

Paint Lake and portage around the falls going into Paint River. While that part appears to be achieveable, the river below the lakes has several swift sections that should be more thoroughly scouted before attempting to raft downstream. Dunutelak Creek also has some challenging white water and the additional challenge of access. Because there is no lake or pond at the headwaters of the creek that is large enough to land a float plane, we would need to land on an unnamed lake approximately 2 miles from the navigable portion of the creek. We would then need to hike pack rafts 2 miles across a gravel hillside to access the creek and collect samples (Figure 5).

Figure 5: Proposed path (red line) for accessing Dunuletak Creek

We have a tentative plan to close down the fish ladder during the first week of October. If the weather cooperates and we are able to travel to the site at that time, we should ask to be dropped off at Selukpuk Lake to attempt to collect as many otoliths as possible while floating down to the ladder site (Figure 6). During the summer of 2018 we should continue to scout Paint River and Dunuletak Creek to continue to determine if we can devise a sampling plan using minnow traps to look for the presence of rearing juvenile salmon. Once we have some firsthand experience in navigating these rivers we may be able to embark on more ambitious adult sampling trips during the fall of 2018 and beyond. I do not feel that such a trip would be safe at this time with the unpredictable weather conditions of October, our lack of knowledge of the navigability of the waters, or the time it will take to complete these tasks.

Figure 6: Selukpuk Lake landing zone and proposed route (red line) of sampling float trip

Cook Inlet
AQUACULTURE ASSOCIATION

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2020 Paint River Salmon Survey
By
Andy Wizik
9/8/2020

On Friday, September 4, I flew with Jose DeCreft from Beluga Lake in Homer, AK, to Paint River to conduct a survey of the system in an attempt to determine which areas are being used by the salmon enumerated through the Paint River Fish Ladder weir in 2020.

We left Beluga Lake at 10:00 a.m. arriving overhead at the fish ladder around 11:00 a.m. to find excellent viewing conditions. Skies were mostly clear and the wind was generally below 10 knots, which made spotting salmon in the clear waters of Paint River easy. The survey began at the fish ladder and continued upstream towards the Selukpuk Lake drainage before continuing on to the north and south mainstems of Paint River as well as the Rapid fork of Paint River, finally finishing up on Dunuletak Creek around 1:30 p.m.

We began counting salmon as soon as we passed upstream of the fish ladder noting approximately 500 salmon on the first run from the ladder to Selukpuk Creek. A group of nearly 100 salmon were viewed holding below Selukpuk Creek but no salmon were seen in the creek or Selukpuk Lake. No salmon were seen in the small spring fed tributaries above the lake but the fish holding below the creek still may move into this area as the season progresses. We have seen spawning activity in Selukpuk Creek and Lake during surveys in past years.

No salmon were seen in either of the southern forks (south fork, and Rapids fork) of Paint River nor have we seen them on prior surveys. Both of these branches of Paint River have large boulders, fast water, and apparently little spawning habitat. We did, however, count 351 salmon in groups of varying sizes scattered throughout the mainstem of Paint River including 90 in the lakes fork as far up as 100 yards below Lower Paint Lake. No salmon were seen in Paint Lakes and, due to some motion sickness, we decided to land on Paint Lake for a break (Figure 1).

Figure 1: Taking a break on a sandy beach on the south side of Paint Lake, 9/4/2020.

Following our break on Paint Lake we flew to the headwaters of Dunuletak Creek to complete the survey. From the headwaters to the confluence with the mainstem of Paint River we viewed 575 coho salmon in 11 different groups along the length of the creek. One such group can be seen in Figure 2. In addition to the fish spotted in the creek, a large group of over 100 coho salmon were also seen staged at the base of the creek in Paint River.

Figure 2: Coho salmon (dark spots in center of frame) spotted in Dunuletak Creek, 9/4/2020.

The total estimated number of salmon counted during the survey was 1,716 and all were thought to be coho salmon. The locations and estimated numbers of salmon seen during the survey is shown in Figure 3. The aerial survey number is approximately 65% lower than the known total of 4,980 coho counted through the weir at the fish ladder to this date. This survey was intended to describe the habitat the fish were using and should not be used as a population estimate.

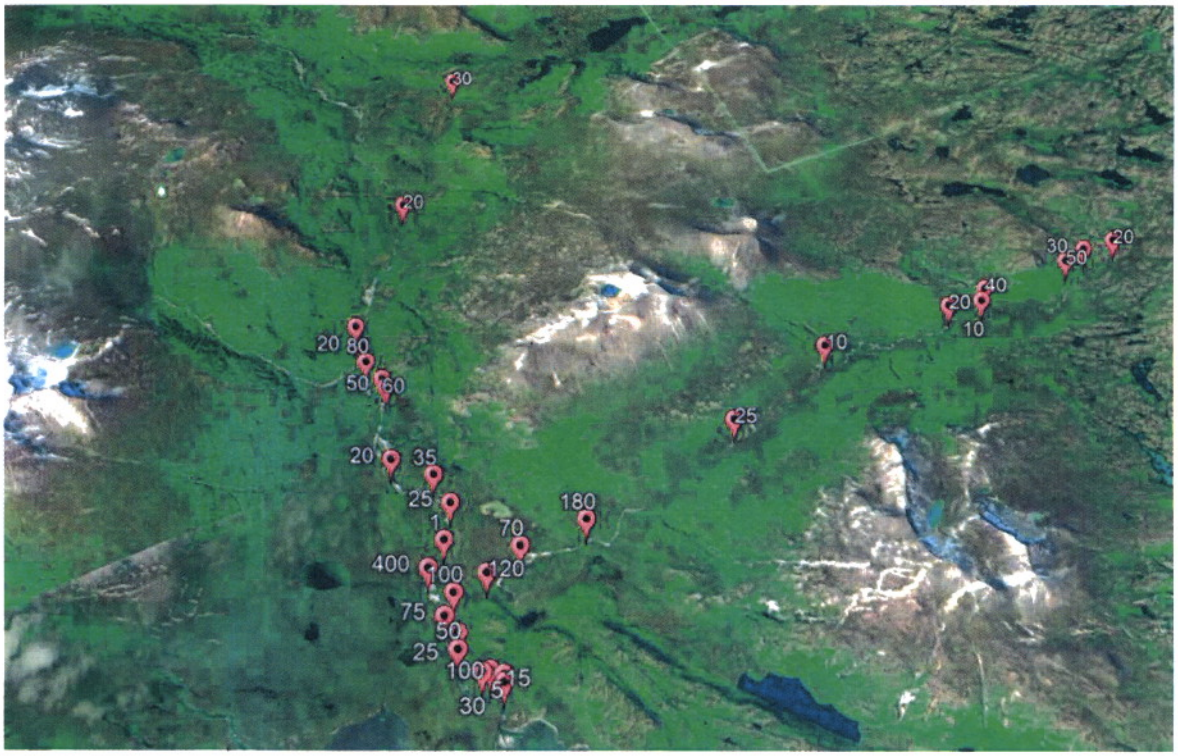
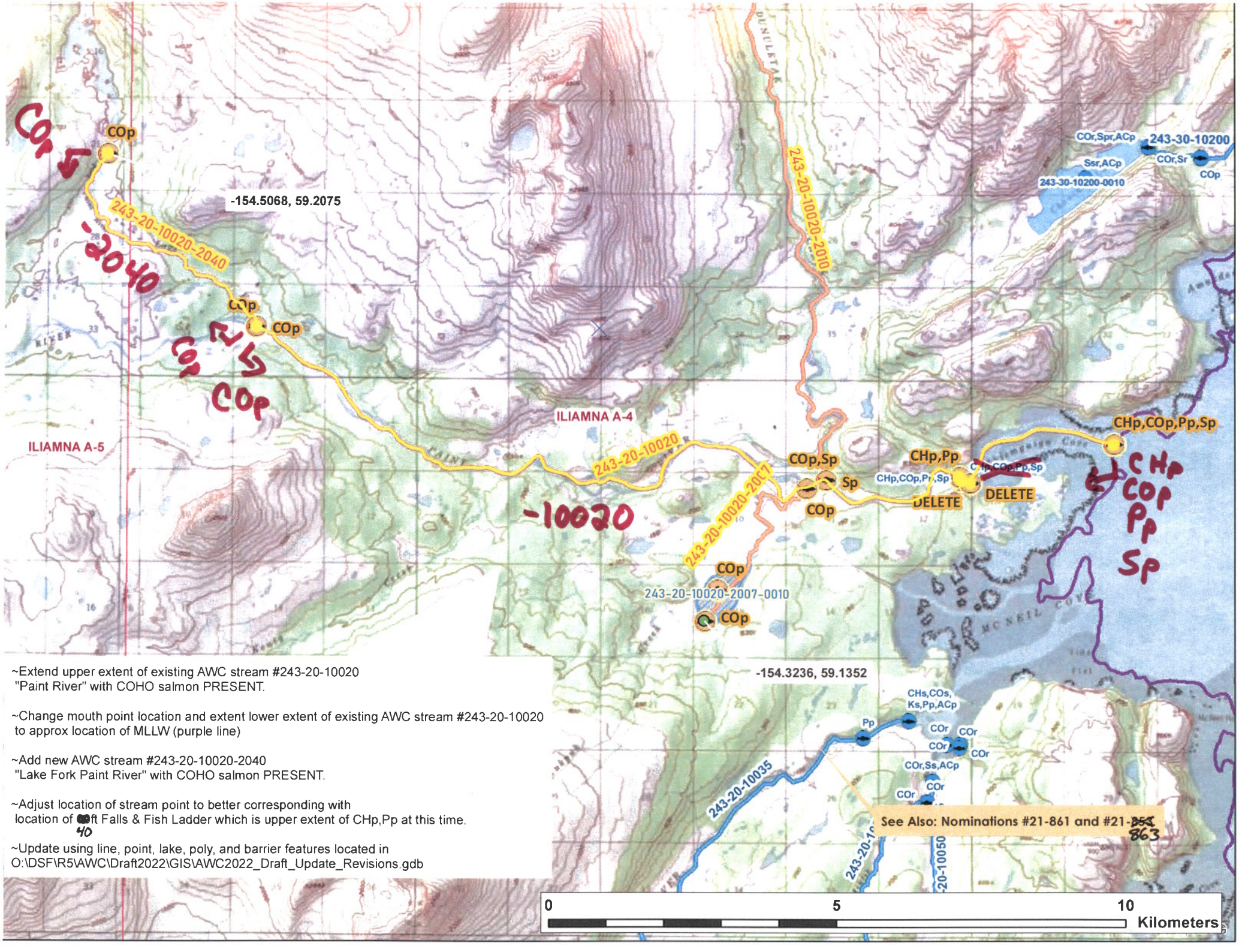


Figure 3: A map of the Paint River system with aerial salmon counts noted, 9/4/2020.

With coho salmon presence now confirmed in the mainstem of Paint River, lakes fork, Dunuletak Creek, and Selukpuk Creek (previous survey), colonization of the system by straying salmon appears to be progressing into most areas of the drainage. In subsequent years, juvenile salmon sampling should be conducted to determine critical rearing habitat areas and document the reproduction of the salmon colonizing the stream. Additionally, the lack of salmon in Paint Lakes raises questions as to whether salmon can make it past the falls below the lake (Figure 4). By surveying Paint Lakes for juvenile salmon we could determine if any reproduction has taken place in the lake. Adults that may have been missed during the survey could potentially be detected via their offspring by minnow trapping the lake in the future. If it is determined that salmon are not reaching the lakes, a plan could be made to alter the falls to open up salmon spawning and rearing habitat in upper and lower Paint Lakes.

Figure 4: The falls below Paint Lakes, 9/4/2020.



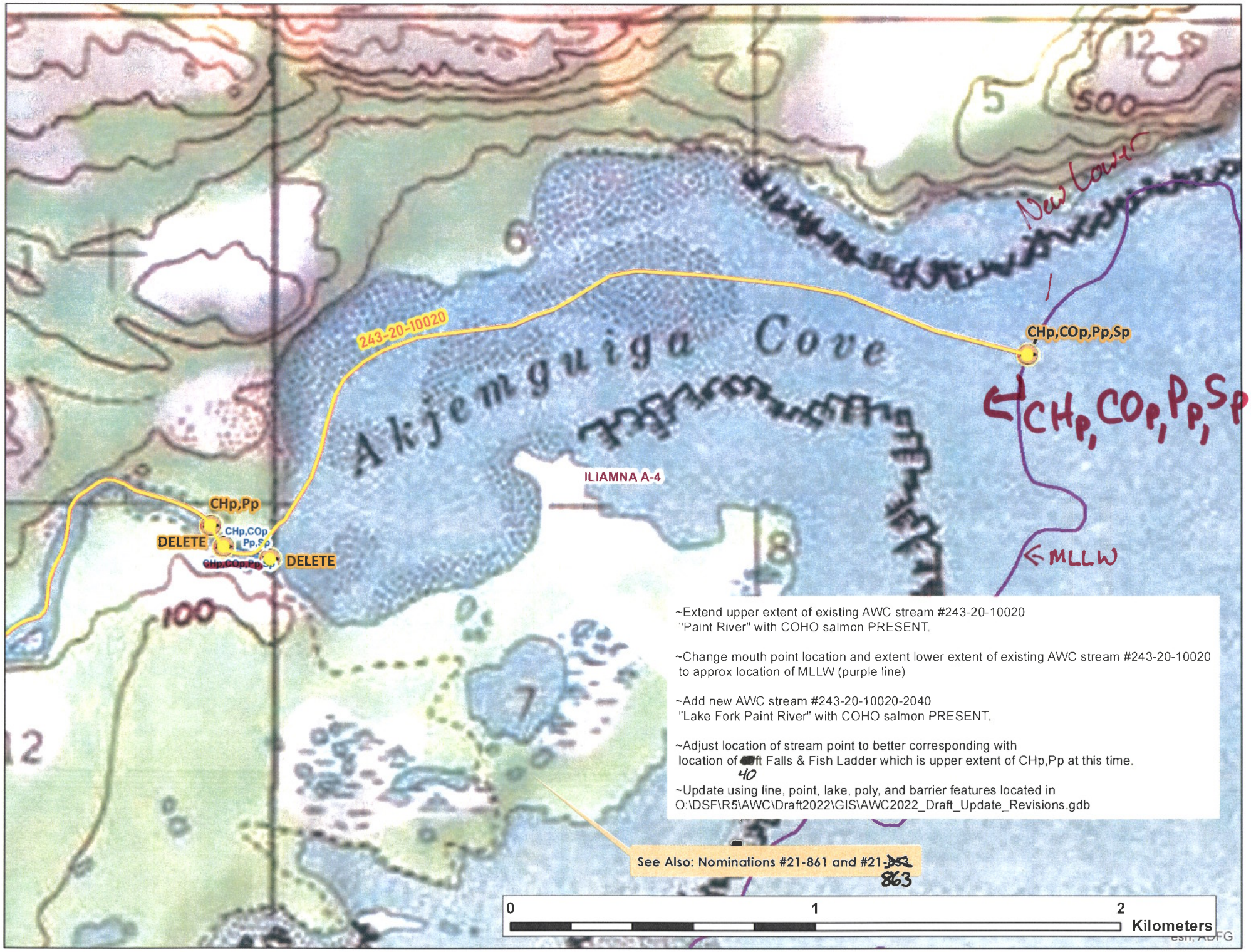
~Extend upper extent of existing AWC stream #243-20-10020
"Paint River" with COHO salmon PRESENT.

~Change mouth point location and extent lower extent of existing AWC stream #243-20-10020
to approx location of MLLW (purple line)

~Add new AWC stream #243-20-10020-2040
"Lake Fork Paint River" with COHO salmon PRESENT.

~Adjust location of stream point to better corresponding with
location of [redacted]ft Falls & Fish Ladder which is upper extent of CHp,Pp at this time.
40

~Update using line, point, lake, poly, and barrier features located in
O:\DSF\R5\AWC\Draft2022\GIS\AWC2022_Draft_Update_Revisions.gdb


243-20-10020
Akjemguiga Cove
ILIAMNA A-4
CHp,COp,Pp,Sp
New Lower
CHp,COp,Pp,Sp
MLLW
CHp,Pp
CHp,COp
Pp,Sp
DELETE
DELETE
~Extend upper extent of existing AWC stream #243-20-10020
"Paint River" with COHO salmon PRESENT.
~Change mouth point location and extent lower extent of existing AWC stream #243-20-10020
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40
~Update using line, point, lake, poly, and barrier features located in
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See Also: Nominations #21-861 and #21-~~853~~ 863
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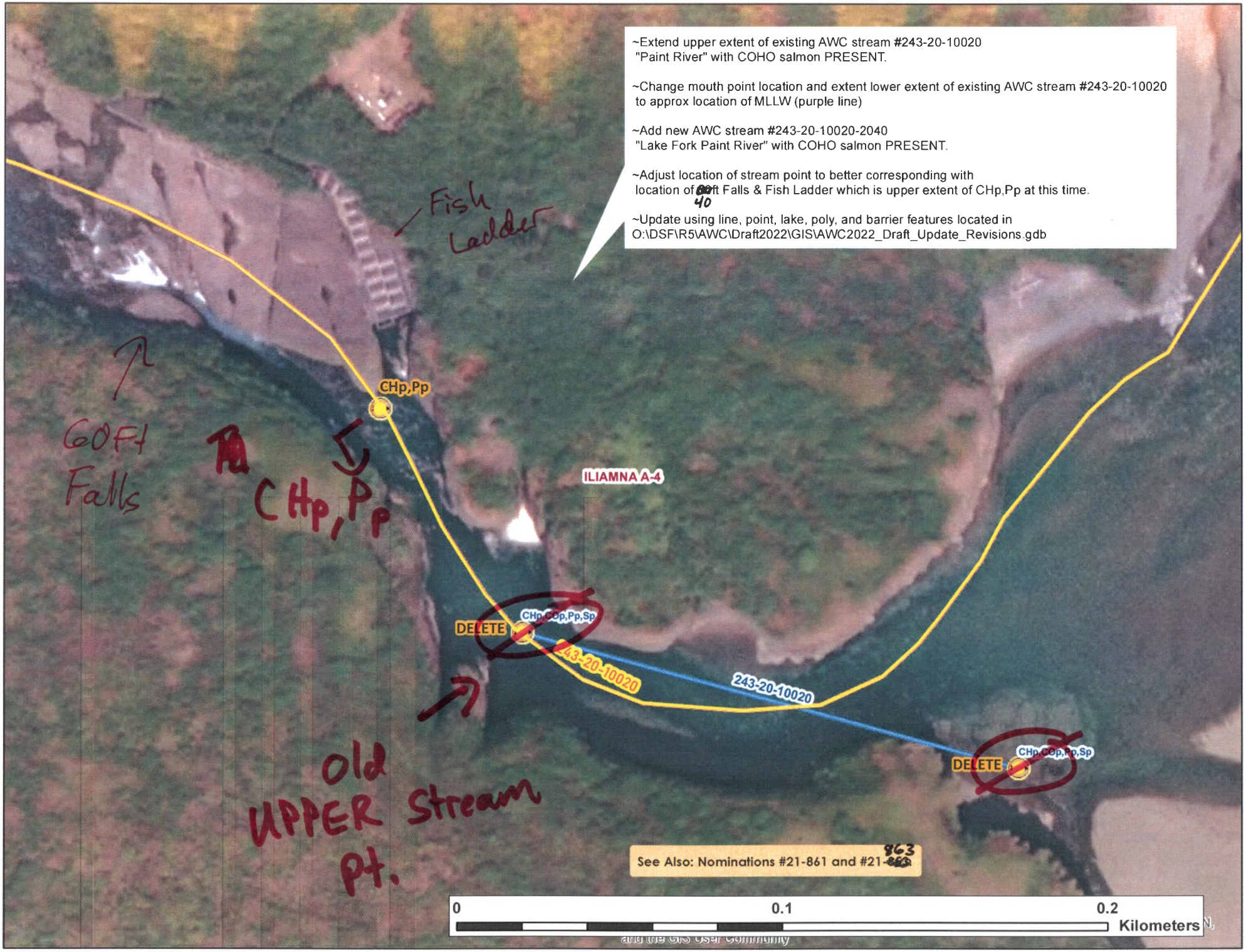
1
2
Kilometers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"Paint River" with COHO salmon PRESENT.
~Change mouth point location and extent lower extent of existing AWC stream #243-20-10020
to approx location of MLLW (purple line)
~Add new AWC stream #243-20-10020-2040
"Lake Fork Paint River" with COHO salmon PRESENT.
~Adjust location of stream point to better corresponding with
location of 60ft Falls & Fish Ladder which is upper extent of CHp,Pp at this time.
40
~Update using line, point, lake, poly, and barrier features located in
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Fish Ladder
60Ft Falls
CHp, Pp
CHp,Pp
ILIAMNA A-4
DELETE
CHp,COp,Pp,Sp
243-20-10020
243-20-10020
DELETE
CHp,COp,Pp,Sp
old UPPER Stream pt.
See Also: Nominations #21-861 and #21-863
863
0
0.1
0.2
Kilometers
and the GIS User Community