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

Nomination Form
Anadromous Waters Catalog

Region: ARC

USGS Quad(s): SOL ~~6-5~~ B-6, C-6

AWC Number of Water Body: 333-10-11650-2001 and 333-10-11500-0010

Name of Water body: Bonanza Channel ☑ USGS Name ☐ Local Name

☑ Addition ☐ Deletion ☐ Correction ☐ Backup Information

For Office Use

Nomination #: 22-002	Adam Reimer	8/22/2022
	Fisheries Scientist	Date
Revision Year: 2023	[signature]	8/25/22
Revision to: Atlas ____ Catalog ____ Both ____	Habitat Operations Manager	Date
	[signature]	6/10/2022
	AWC Project Biologist	Date
Revision Code: B-1	[signature]	8/24/2022
	GIS Analyst	Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
least cisco	06 August 2021			✓	☑
					☐
					☐
					☐
					☐

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

Juvenile least cisco (Coregonus sardinella) captured in beach seine. Report of collections under ARP SF2021-193, including GPS coordinates, accompanies this form.

~Add new species LEAST CISCO PRESENT to existing AWC Lake #333-10-11500-0010 "*Safety Sound".

~Add new species LEAST CISCO PRESENT to existing AWC Lake #333-10-11650-2001 "*Bonanza Channel".

Name of Observer (please print): Stephen T Grabacki FP-C

Signature: [signature] Date: 04 October 2021

Agency: FISHEYE Consulting

Address: PO Box 100506

Anchorage, Alaska 99510-0506

This certifies that in my best professional judgment and belief the above information is evidence that this waterbody should be included in or deleted from the Anadromous Waters Catalog

Signature of Area Biologist: _____ Date _____ Revision 11/13

Name of Area Biologist (please print)

Aquatic Resource Permit SF2021-193

IPOP – BONANZA CHANNEL

FISHERIES BASELINE SAMPLING 2021

Principal Investigator: Stephen T. Grabacki FP-C
President, and Certified Fisheries Professional
FISHEYE Consulting, Anchorage
(907) 230-2866 fisheyecon@gmail.com

1 INTRODUCTION

This document reports the results of baseline fisheries sampling for a proposed gold dredging project in Bonanza Channel, Alaska. FISHEYE Consulting (FISHEYE) set nine wire-mesh minnow traps at selected locations within the claim area on 29-30 July 2021. A beach seine was used at three locations in early August.

All fishes were identified to species when possible (Table 1), measured to fork or total length (as appropriate for each species), and released in apparent good condition.

Table 1 – Species of Fishes Captured During Sampling

Fish	Species
Threespine stickleback	*Gasterosteus aculeatus*
Sandlance	*Ammodytes hexapterus*
Starry flounder	*Platichthys stellatus*
Least cisco	*Coregonus sardinella*
Sculpin	(not identified to species)

2 BACKGROUND

IPOP proposes to dredge for placer gold in its claim blocks in Bonanza Channel. FISHEYE is one member of IPOP's multidisciplinary team of scientific consultants. Stephen T. Grabacki, FISHEYE's Certified Fisheries Professional, led the fisheries investigation under the stipulations of Aquatic Resource Permit (ARP)

SF2021-193. He performed the minnow trap task, and Mac Shoulders and David Eilers (who are named on the ARP) conducted the beach seine task.

3 METHODS

FISHEYE selected the fish sampling stations with the intent of obtaining a brief "snapshot-style" understanding of fish distribution and relative abundance in IPOP's Bonanza Channel claims area.

Within Bonanza Channel, there are no apparent aquatic habitat features which could differentiate one portion of the channel from another. Therefore, FISHEYE arrayed the sampling stations to cover the entire length of the claim area, at roughly equal intervals along the shoreline – six traps along the northern shore, one trap in mid-channel, and two traps along the southern shore.

The minnow traps were baited with commercially-cured salmon roe, which was enclosed in perforated plastic bags. The traps were securely tethered to shore and were allowed to soak overnight. As required by the ARP, FISHEYE labeled all minnow traps with tags that stated the permitee name, telephone number, and permit number.

This sampling method measured "catch per unit of fishing effort" (CPUE), which estimates the relative abundance (as vs. absolute abundance) of the fish. That is, these data are useful for comparisons among sites, months, and years. CPUE in minnow traps is expressed as fish per day (where a "day" is defined as 24 hours).

The beach seine was a 50 ft x 4 ft x ¼ inch knotless mesh. The seine was operated in several deployments, each approximately 3,500 sq ft. Two techniques were used:

- In the first technique, the net starts out fully extended on the shoreline. One pole would remain still while the deep pole was slowly pulled in a half circle until extended on the opposite side of the stationary pole. Then both poles were brought together, and the net gathered.
- The second technique was further from shore where the net was fully expanded perpendicular to shore and both ends walked at a slow pace to cover approximately 75 linear ft, then the poles brought together, and the net brought to shore.

The locations of beach seine sites (GPS):

- Site 1 – 64.517528, -164.559904. Four continuous deployments heading west along southern shore of island; all using the half-circle technique.
- Site 2 – 64.518075, -164.568688. Two continuous deployments heading north along the western shore of island; first using half-circle technique next to shore, second using second technique approximately 60 ft from shore for shallow end.
- Site 3 – 64.523155, -164.565794. Four continuous deployments heading west along the northern shore. First using half-circle technique and remaining three deployments using the second technique approximately 50 ft from shore for shallow end.

4 RESULTS

The minnow traps captured 50 threespine stickleback in 19 hours of soak-time, for an equivalent CPUE of 63.2 fish per day in the nine traps, or 6.92 fish per trap per 24-hour day (Table 2).

Table 2 – Locations of Minnow Traps, Number of Fish Captured in Each Trap, and Size Ranges

Station	N Lat.	W Long.	Number of Fish	Fork Length (mm)	Comments
Trap 1	64.51218	-164.60027	12	72-86	
Trap 2	64.51696	-164.59259	26	62-90	
Trap 3	64.51962	-164.58405	2	82-84	
Trap 4	64.52042	-164.57739	0	---	trap damaged
Trap 5	64.52265	-164.57061	7	71-84	
Trap 6	64.52414	-164.56310	1	88	
Trap 7	64.52167	-164.56141	0	---	not in water
Trap 8	64.52098	-164.55584	2	83-86	
Trap 9	64.51804	-164.55617	0	---	

Notes –

- trap 1: two fish had red areas on abdomen
- trap 2: one fish had damaged tail; one fish was unusually plump
- trap 5: one fish had damaged tail

- trap 6: fish was unusually slim, with sunken belly
- trap 7: water level dropped a lot overnight

Most of the fish were 70-89 mm in fork length (Figure 1).

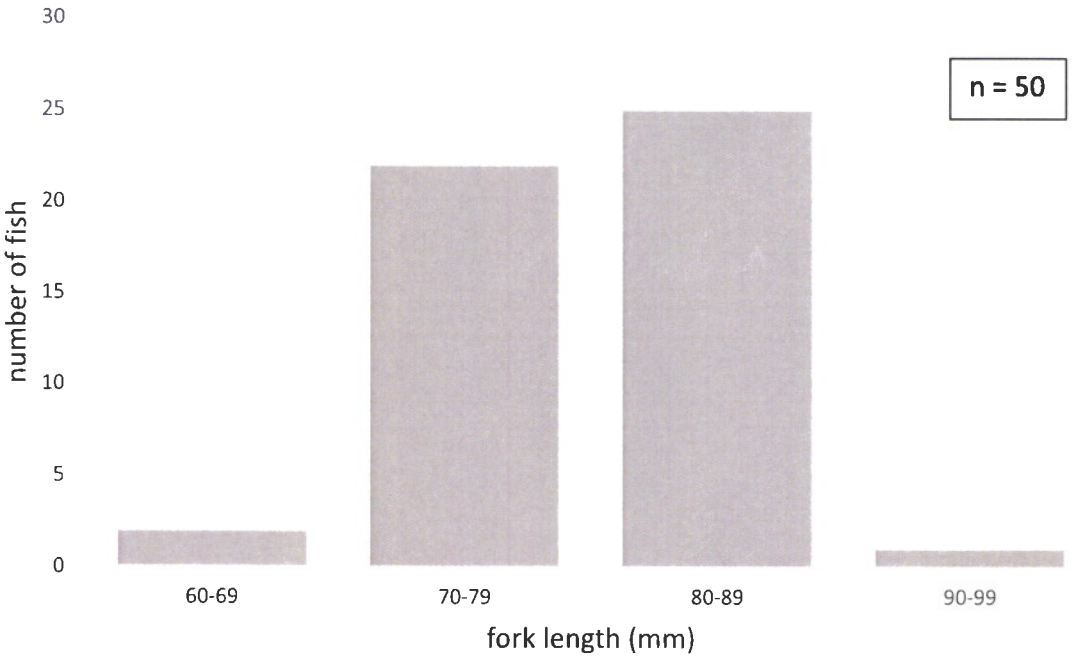


Figure 1 – Fork Lengths of Threespine Stickleback

The minnow traps captured no other species of fish. One fish – possibly a Dolly Varden char (*Salvelinus malma*), roughly 20 cm fork length – was observed jumping while the boat was moving between stations.

Other observations:

(1) Before and during this sampling, there was a strong, sustained wind from the southwest.

(2) The physical habitat is not hospitable to fishes. There is no structure (cobble, woody debris, etc.) and no cover.

(3) The water quality is extremely variable, with wide fluctuations in salinity and depth. These fluctuations are driven by the wind direction, and occur very rapidly, in the space of a few days. The water level dropped so quickly from Thursday July 29 to Friday July 30 that (a) one of our traps was exposed, although we thought we had set it in sufficiently deep water, and

(b) we observed four stickleback that appeared to have been stranded amidst the grass.

The beach seine captured five species of fish (Table 3).

Table 3 – Number of Fish Captured by Beach Seine

Species	Length or Length Range (mm)*	Number of Fish Captured at Each Location		
		Site 1	*Site 2*	*Site 3*
Stickleback	0-20	91	257	649
	20-40	84	0	0
	40-60	4	0	0
	60-80	91	43	15
	> 80	5	0	0
	40-60	1	1	0
Sandlance	40-60	10	0	11
	60-80	1	3	4
Starry flounder	0-25	6	23	104
	85	0	0	2
	95	0	1	1
	140	1	0	0
	155	0	1	0
	170	0	0	1
Least cisco	60-80	1	0	5
	80-100	0	2	6
	244	0	1	0
Sculpin	50	0	0	1

* fork length or total length, as appropriate to each species

Aquatic Resource Permit report of collection activities — Data Submission Form (dsf).

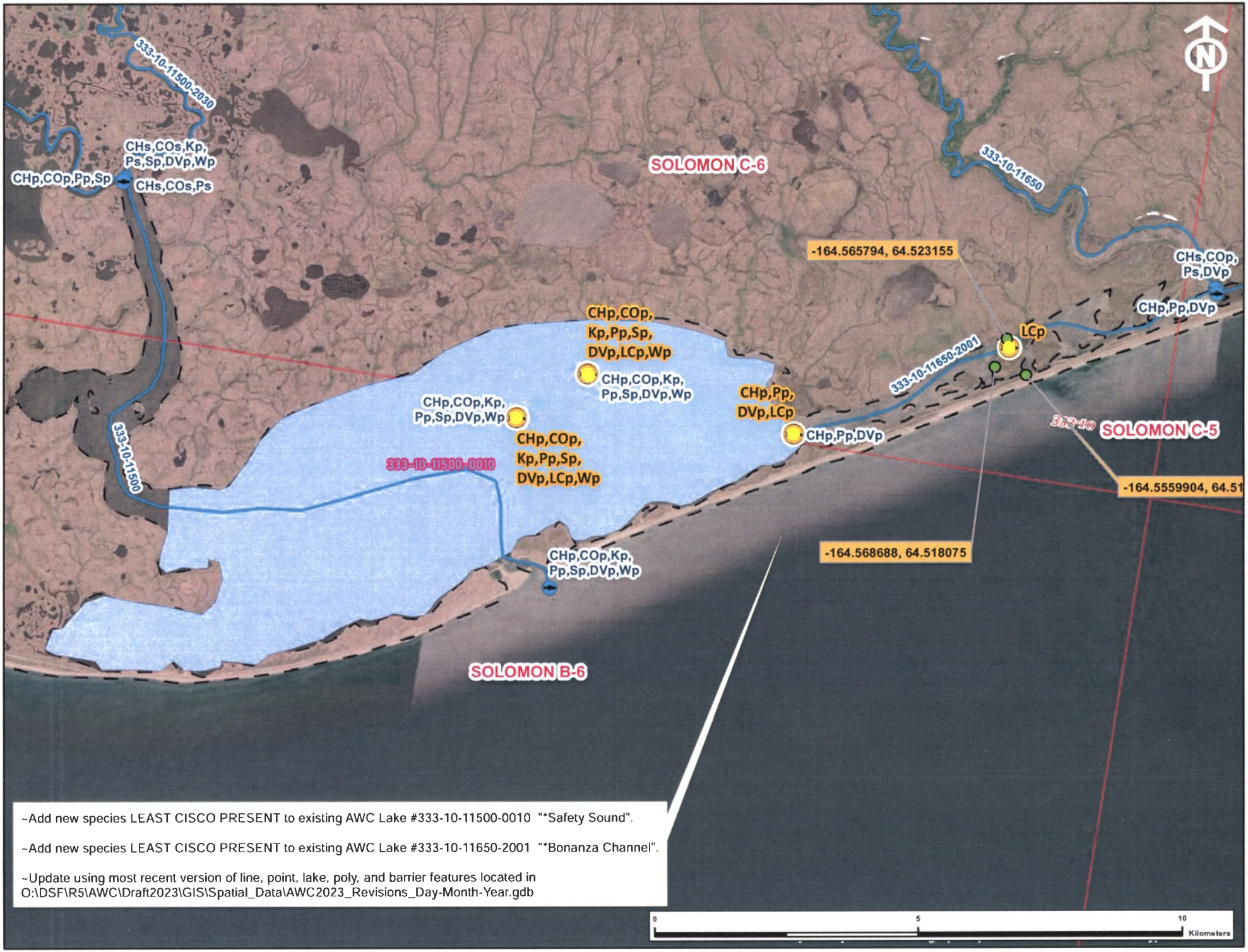
As required by Stipulation #2 of your Aquatic Resource Permit, this data submission form should be filled out as completely as possible and returned to the Permit Coordinator (dfg.dvf.permitcoordinator@alaska.gov) within 30 days of permit expiration. **Include data for ALL fish captured or handled under your permit**, including incidentally caught or non-target species.

ADF&G Aquatic Resource Permit #: SF2021-193

The area biologist was contacted on: TIME/DATE (FILL IN) 7/26/2021 12:10

**Click on cell headers (rows 8/7) for description of data to be entered. **Choose from cell drop downs where present. ***Scroll right to see all data columns. ****See Instructions worksheet and Cell Drop Down List worksheet for further details.

Location ID (optional)	Latitude (decimal degrees)	Longitude (decimal degrees)	Datum	Coordinate determination method	Name of water body	Date	Observer name (the first and last name of the person handling fish)	Fish collection method	Species	Life stage	***Fill in only if data was collected, otherwise leave blank.*** Length (mm) or estimate or (mm)	Length method	Weight (g)	Sex	Age	Age method (sample type)	ADF&G OCL	Additional count (1)	Disposition (1)	Additional count (2)	Disposition (2)	Anesthesia/ Sedative Used (Leave blank if none used)	Comments
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		86 Fork							IDed and Released				
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		78 Fork							IDed and Released				
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		85 Fork							IDed and Released				
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		84 Fork							IDed and Released				
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		72 Fork							IDed and Released				
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		79 Fork							IDed and Released				
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		81 Fork							IDed and Released				
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		82 Fork							IDed and Released				
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		82 Fork							IDed and Released				
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		83 Fork							IDed and Released				
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		85 Fork							IDed and Released				
1	64.51218	-164.60027	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		80 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		77 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		73 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		75 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		77 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		77 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		80 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		79 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		82 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		79 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		85 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		74 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		75 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		77 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		85 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		86 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		89 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		74 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		81 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		89 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		72 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		79 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		79 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		90 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		79 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		84 Fork							IDed and Released				
2	64.51696	-164.59259	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		62 Fork							IDed and Released				
3	64.51962	-164.58405	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		84 Fork							IDed and Released				
3	64.51962	-164.58405	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		82 Fork							IDed and Released				
5	64.52265	-164.57061	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		71 Fork							IDed and Released				
5	64.52265	-164.57061	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		81 Fork							IDed and Released				
5	64.52265	-164.57061	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		79 Fork							IDed and Released				
5	64.52265	-164.57061	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		75 Fork							IDed and Released				
5	64.52265	-164.57061	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		84 Fork							IDed and Released				
5	64.52265	-164.57061	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		75 Fork							IDed and Released				
5	64.52265	-164.57061	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		80 Fork							IDed and Released				
6	64.52414	-164.5631	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		88 Fork							IDed and Released				
8	64.52092	-164.55584	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		86 Fork							IDed and Released				
8	64.52092	-164.55584	WGS84	GPS	Bonanza Channel	7/30/2021	Stephen Grabacki	Minnow Trap	threespine stickleback	adult		93 Fork							IDed and Released				
Case Study	64.517528	-164.5559904	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	threespine stickleback	juvenile	0-20	Fork						91	IDed and Released				
Case Study	64.517528	-164.5559904	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	threespine stickleback	juvenile	20-40	Fork						84	IDed and Released				
Case Study	64.517528	-164.5559904	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	threespine stickleback	juvenile	40-60	Fork						5	IDed and Released				
Case Study	64.517528	-164.5559904	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	threespine stickleback	juvenile	60-80	Fork						91	IDed and Released				
Case Study	64.517528	-164.5559904	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	threespine stickleback	juvenile	>80	Fork						5	IDed and Released				
Waypoint 5	64.518075	-164.568658	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	threespine stickleback	juvenile	0-20	Fork						257	IDed and Released				
Waypoint 5	64.518075	-164.568688	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	threespine stickleback	juvenile	40-60	Fork						1	IDed and Released				
Waypoint 5	64.518075	-164.568688	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	threespine stickleback	adult	60-80	Fork						43	IDed and Released				
Waypoint 5	64.523155	-164.565794	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	threespine stickleback	juvenile	0-20	Fork						549	IDed and Released				
Waypoint 5	64.523155	-164.565794	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	threespine stickleback	adult	60-80	Fork						15	IDed and Released				
Case Study	64.517528	-164.5559904	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	Pacific Sandlance	juvenile	40-60	Fork						10	IDed and Released				
Case Study	64.517528	-164.5559904	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	Pacific Sandlance	juvenile	60-80	Fork						1	IDed and Released				
Waypoint 5	64.518075	-164.568688	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	Pacific Sandlance	juvenile	40-60	Fork						0	IDed and Released				
Waypoint 5	64.518075	-164.568688	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	Pacific Sandlance	juvenile	60-80	Fork						3	IDed and Released				
Waypoint 5	64.523155	-164.565794	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	Pacific Sandlance	juvenile	40-60	Fork						11	IDed and Released				
Waypoint 5	64.523155	-164.565794	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	Pacific Sandlance	juvenile	60-80	Fork						4	IDed and Released				
Case Study	64.517528	-164.5559904	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	Pacific Sandlance	juvenile	0-25	Total						6	IDed and Released				
Case Study	64.517528	-164.5559904	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	starry flounder	juvenile		140 Total							IDed and Released				
Waypoint 5	64.518075	-164.568688	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	starry flounder	juvenile	0-25	Total						23	IDed and Released				
Waypoint 5	64.518075	-164.568688	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	starry flounder	juvenile		95 Total							IDed and Released				
Waypoint 5	64.518075	-164.568688	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	starry flounder	juvenile		155 Total							IDed and Released				
Waypoint 5	64.523155	-164.565794	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	starry flounder	juvenile		Total							IDed and Released				
Waypoint 5	64.523155	-164.565794	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	starry flounder	juvenile	0-25	Total						104	IDed and Released				
Waypoint 5	64.523155	-164.565794	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	starry flounder	juvenile		85 Total						2	IDed and Released				
Waypoint 5	64.523155	-164.565794	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	starry flounder	juvenile		95 Total							IDed and Released				
Case Study	64.517528	-164.5559904	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	least cisco	juvenile	60-80	Fork						1	IDed and Released				
Waypoint 5	64.518075	-164.568688	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	least cisco	juvenile	80-100	Fork						2	IDed and Released				
Waypoint 5	64.518075	-164.568688	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	least cisco	juvenile		244 Fork							IDed and Released				
Waypoint 5	64.523155	-164.565794	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	least cisco	juvenile	60-80	Fork						5	IDed and Released				
Waypoint 5	64.523155	-164.565794	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	least cisco	juvenile	80-100	Fork						6	IDed and Released				
Waypoint 5	64.523155	-164.565794	WGS84	GPS	Bonanza Channel	8/6/2021	Macnamara Shoulders	Seine	sculpin-unspecified	juvenile		50 Total							IDed and Released				



~Add new species LEAST CISCO PRESENT to existing AWC Lake #333-10-11500-0010 "*Safety Sound".

~Add new species LEAST CISCO PRESENT to existing AWC Lake #333-10-11650-2001 "*Bonanza Channel".

~Update using most recent version of line, point, lake, poly, and barrier features located in O:\DSF\R5\AWC\Draft2023\GIS\Spatial_Data\AWC2023_Revisions_Day-Month-Year.gdb