Table 1. Description of field names included in raw data downloads from the Nearshore Fish Atlas of Alaska. April 2022.

Field name	Description
SiteID	Arbitary number that identifies a unique sampling site in NFAA
RawSite	Original number, code, or name of sampling site used by data collector
Region	One of 5 geographic regions where the sampling site is located; Aleutian Islands, Beaufort Sea, Bering Sea, Chukchi Sea, or Gulf of Alaska
Location	Geographic locations or names that describe where sampling occurred
Lat	Latitude of the sampling site in decimal degrees
Long	Longitude of the sampling site in decimal degrees
Habitat	One of 8 general habitat types used to describe the site; eelgrass, eelgrass-kelp, kelp, surfgrass, sand-gravel, gravel-cobble, bedrock, and not reported
EventID	Arbitrary number that identifies a unique sampling event in NFAA
RawEvent	Original number, code, or name of sampling event used by data collector
Date	Date when sampling event occurred
GearBasic	One of 13 basic gear types used to sample sites; beach seine, by hand, cast net, crab pot, dip net, fyke net, gill net, jig, minnow trap, purse seine, trawl-bottom, trawl-midwater, and trawl-surface
GearSpecific	One of 52 specific gear types used to sample sites; full list and descriptions provided on pages 2-3.
SpCode	One of 230 unique codes for fish taxa captured. If no fish captured, SpCode is NOFISH
Sp_CommonName	Common name associated with SpCode
Sp_ScientificName	Scientific name associated with SpCode
Fam_CommonName	Common family name associated with SpCode
Fam_ScientificName	Scientific family name associated with SpCode
Unmeasured	The number of individuals that were not measured for length; total catch is the sum of the number of unmeasured and the number of lengths
Length_mm	Length in millimeters of an individual fish; total catch is the sum of the count of lengths and the number of unmeasured
LengthType	One of 3 length types; FL (fork length), TL (total length), SL (standard length), or blank if unreported.
LifeStage	One of 7 life stage categories; ADULT, JUV (juvenile), LARV (larva or larvae), SMOLT, YOY (young-of-the-year), LARV-YOY, YOY-JUV, or blank if unreported
FMP	Indicates whether or not the SpCode taxa is federally managed by a Fishery Management Plan in a targeted fishery (e.g., Pacific cod) or is one of 3 spp. listed in the Arctic FMP (i.e., Arctic cod, saffron cod, & snow crab). NOAA Fisheries produces Essential Fish Habitat (EFH) maps for FMP species
FMP_BSAI	Indicates whether or not the SpCode taxa is managed federally by the Bering Sea and Aleutian Islands Groundfish Fishery Management Plan
FMP_GOA	Indicates whether or not the SpCode taxa is managed federally by the Gulf of Alaska Groundfish Fishery Management Plan
FMP_Arctic	Indicates whether or not the SpCode taxa is managed federally by the Arctic Fishery Management Plan
FMP_Salmon	Indicates whether or not the SpCode taxa is managed federally by the Salmon Fishery Management Plan
Temp_C	Water temperature in degrees celsius recorded by data collector at time of sampling
Salinity	Salinity recorded by data collector at time of sampling
TidalStage	One of 5 tidal stages or levels recorded by data collector at time of sampling; EBB, FLOOD, SLACK, HIGH, LOW, or blank if not unreported
ProjectName	Short descriptive name of the project in which data was collected
PointOfContact	One of 10 points of contact associated with projects; information includes organization, name, title, and email
PI	Principle investigator(s) for the project
CiteID	Arbitrary number that identifies a unique citation; full list provided on pages 4-5.
doi	Digital object identifier associated with a citation

Table 2. Description of gear-related field names referenced in raw data downloads from the Nearshore Fish Atlas of Alaska.

GearBasic	GearSpecific	Specifications
beach seine	BSEINE-4FT	37 m long pelagic beach seine with 3.2 mm mesh and 4 ft (1.2 m) depth throughout; floats remain on surface in water deeper than net
	BSEINE-76	155 ft long pelagic beach seine, 12 ft deep in the middle and tapered to 3 ft deep at the end and dyed green. Center panel was 35 ft long and constructed of knotless nylon 1/4 stretch mesh.
	BSEINE-A	35 m long pelagic beach seine with wing mesh of 6 mm; center panel 5.4 m deep and 3 mm mesh; floats remain on surface in water deeper than net
	BSEINE-B	15.2 m long x 2.4 m deep beach seine with 0.95 cm stretched knotless black mesh, Manufactured by Christensen
	BSEINE-C	18 m long pelagic beach seine with wing mesh of 6 mm; center panel 5.5 m deep and 3 mm mesh; floats remain on surface in water deeper than net
	BSEINE-GOA11	29 x 5.5 ft beach seine with three panels: wings with 3.9 mm stretched knotless nylon mesh and ~ 5.5 ft center bag with setback and 2.35 mm stretched knotless nylon mesh. (Ormseth et al. 2017)
	BSEINE-GOA13	57 x 5.5 ft beach seine with three panels: wings with 3.9 mm stretched knotless nylon mesh and 11 ft center bag with 6' setback and 2.35 mm stretched knotless nylon mesh. (Ormseth et al. 2017)
	BSEINE-K	44 m long pelagic beach seine with variable wing mesh from 13 to 6 mm; center panel 3.9 m deep and 3 mm mesh; floats remain on surface in water deeper than net
	BSEINE-NERRa	34 m tapered nylon mesh beach seine; middle section 8 m width x 5 m depth with 3 mm mesh
	BSEINE-NERRb	22.9 m non-tapered nylon mesh beach seine; middle section 7.6 m width x 3 m depth with 3 mm mesh
	BSEINE-S	37 m long beach seine with wing mesh of 28 mm; center panel 2.4 m deep and 6 mm mesh
	BSEINE-small	10-m long × 2.4 m deep beach seine with 0.64 cm stretched knotless white mesh, Manufactured by Memphis Net & Twine
	BSEINE-STD	37 m long pelagic beach seine with variable mesh, 12 ft deep and 3.2 mm mesh at center panel of codend; floats remain on surface in water deeper than net.
	BSEINE-W	15.2 m long x 2.4 m deep beach seine with 1.27 cm stretched knotless white mesh, Manufactured by Memphis Net & Twine
	BSEINE-WCS	3.1x15 m beach seine
by hand	HAND	shovel and bucket
cast net	CAST-USGS	6' diameter, 1/2" mesh
crab pot	POT	Pots had a ~1.2 m2 footprint with pyramid-shaped frames made of metal rebar and covered with ~5cm2 netting. Deployed at depths of 15-66 m, baited with whole herring, and soaked for ~24 hours.
dip net	DIPNET-USGS	1/4" mesh
	DIPNET-WCS	not reported
fyke net	FYKE-vonBiela	Fyke net with 61 m lead net and two 15 m net wings of 2.54 cm stretch mesh. The lead net extended perpendicular from the shoreline and connected to a centrally located, metal-framed fyke net trap with opening 1.5 m wide and 1.2 m height and made from 1.27 cm stretch mesh. The fyke net trap was set away from the shoreline at a water depth of ~1 m and no more than 60 m distance from shore, and the two net wings were angled toward the shoreline from the sides of the trap.
	FYKE-WCS	Fyke net constructed with 3.1 mm stretch mesh, a 91.5 x 122 cm frame made of two rectangular conduit frames, 5 steel hoops, 2 throats, and a 15.2 m lead. The wings are anchored using rebar with the main line attached perpendicular to shore and the wings set at approximately 45˚.
gill net	GILLNET-USGS	20' deep, variable mesh size 1/4" - 3/4"
	GILLNET-WCS	Experimental gill nets consisted of 5 panels, each 25 ft in length, for a total net length of 12 5ft. Stretch measurement of the individual panels were: 1 inch, 1.5 inch, 2 inch, 3 inch, and 4 inch.
jig	JIG	not reported
	JIG-GOA	Jigging was performed using line-counter trolling reels and a variety of tackle depending on which species were anticipated in the catch (Ormseth et al. 2017)
	JIG-SSL	Hand-jigging with rod and reel at depths of 5 to 115 m. Three people jigged for 15 minutes at each site, one person with a 6-hook herring jig, and two people with 170 g dart lures. Captured fish were placed in a holding tank until jigging was finished at each site, and then each fish was identified, measured for length, and released. (Thedinga et al. 2006)
	JIG-USGS	variable hook size: 3-10
	JIG-WCS	hand and line

GearBasic	GearSpecific	Specifications
minnow trap	MINNOW	not reported
purse seine	PSEINE-ABL	The purse seine was 20 ft deep and 150 ft long with a sweep mesh size of 1 ¼ in and a bunt mesh of 1/8 in knotless netting (i.e., the portion of the net where fish were concentrated was 1/8 in mesh. The diameter of the net when fully deployed was 48 ft, resulting in a sampling footprint of 1,800 ft2. (Ormseth et al. 2017)
	PSEINE-USGS	150 ft long and 20 ft deep purse sine. Two panels: 100' panel 1/8" mesh, 50' panel 1 1/4" mesh
trawl-bottom	TRAWL-1m	1m beam trawl with 1 mm mesh size towed for ~10 min.
	TRAWL-3m	3m plumb staff beam trawl described in Gunderson and Ellis (1986)
	TRAWL-B	The beam trawl was a 3.1 m bottom trawl based on the original design of Gunderson and Ellis (1986) and modified by Abookire and Rose (2005).
	TRAWL-NE	400-mesh eastern trawl with 364 kg, Nor-Eastern Astoria V trawl doors, 3.2 cm mesh in the cod end, 8.9 cm in the intermediate and 10.2 cm in the body and wings
	TRAWL-O	Small otter trawl net was 5.2 m long and included a 1.7-m long codend of 3.2-mm stretch mesh protected by an outer skirt of 29-mm stretch mesh. The mouth of the net was 2.6 m wide, 1.2 m deep, and connected to two weighted otter doors (33 cm by 61 cm) – one per side. The doors were attached to a 6.3-m long bridle of 1.3-cm braided line, which was tied to the boat with a 1.6-cm polypropylene tow line. This "shrimp try-net" can be towed by a skiff or larger vessel.
	TRAWL-PSB	3 m plumb staff beam trawl with 7 mm mesh in the body of the net and 4 mm mesh in the codend liner following methods described by Norcross et al. (2013)
trawl-midwater	TRAWL-A	Aluette midwater trawl is 20 m long with 5 x 3.5 m mouth opening, 10 m foot-head ropes, and 1.6 cm nylon mesh at the headrope decreasing to 0.4 cm at the codend. Manufactured by Innovative Net Systems
	TRAWL-MH	Modified herring trawl with 37 m2 mouth opening, 30 m long, and variable mesh from 5cm - 6 mm with 3 mm codend liner
	TRAWL-MMM	Small, fine-mesh otter trawl deployed at midwater for verification of acoustic sign. Net was 25 ft wide and 12 ft. high, with a 4mm knotless mesh liner. The 3/8-in Spectra single warp was attatched via a 90 ft. V-bridle to the two 40lb 2x4 ft plywood and steel doors that were connected to the net with 24 ft dandlines. For midwater use, this net had 50 lbs of lead weight attached to each end of the footrope at the point where the dandylines attached. Tow duration depended on the intensity and distribution of acoustic backscatter. (Ormseth et al. 2017)
trawl-surface	TRAWL-AMOD	Aluette midwater trawl modified to fish at the surface by attaching buoys to the head ropes. Net is 20 m long with 5 x 3.5 m mouth opening, 10 m foot-head ropes, and 1.6 cm nylon mesh at the headrope decreasing to 0.4 cm at the codend. Manufactured by Innovative Net Systems
	TRAWL-M	Mamou surface trawl is 15 m long with 12 m foot-head ropes. Nylon mesh is 1.6 cm at the headrope decreasing to 0.4 cm at the codend. Manufactured by Innovative Net Systems. (Miller et al. 2016)
	TRAWL-MMS	Small, fine-mesh otter trawl deployed at surface for verification of acoustic sign. Net was 25 ft wide and 12 ft high, with a 4mm knotless mesh liner. The 3/8-in Spectra single warp was attatched via a 90 ft. V-bridle to the two 40lb 2x4 ft plywood and steel doors that were connected to the net with 24 ft dandlines. For surface use, 15 lbs of lead weight were attached to each end of the footrope at the point where the dandylines attached, and large inflatable buoys were attached to the headrope. Tow duration depended on the intensity and distribution of the acoustic backscatter. (Ormseth et al. 2017)
	TRAWL-N	Nordic 264 rope trawl with 3-m doors and a 1.2-cm mesh liner in the cod end that fishes approximately 11 m deep with a width of 14.3 m.

Table 3. Full citations associated with fieldname CiteID in raw data downloads from Nearshore Fish Atlas of Alaska.

CiteID	Citation
1	Johnson, S.W., A.D. Neff, J.F. Thedinga, M.R. Lindeberg, & J.M. Maselko. 2012. Atlas of nearshore fishes of Alaska: A synthesis of marine surveys from 1998 to 2011. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-239, 261 p.
2	Thedinga, J.F., S.W. Johnson, and D.J. Csepp. 2006. Nearshore fish assemblages in the vicinity of two Steller sea lion haul-outs in southeastern Alaska. Pages 269-284 in Sea Lions of the World. Alaska Sea Grant College Program Report AK-SG-06-01.
3	Johnson, S.W., J.F. Thedinga, A.D. Neff, P.M. Harris, M.R. Lindeberg, & S.D. Rice. 2010. Fish assemblages in nearshore habitats of Prince William Sound, Alaska. Northwest Science 84:266-280. DOI: https://doi.org/10.3955/046.084.0306
4	Thedinga, J.F., S.W. Johnson, & A.D. Neff. 2011. Diel differences in fish assemblages in nearshore eelgrass and kelp habitats in Prince William Sound, Alaska. Environmental Biology of Fishes 90:61-70. DOI: https://doi.org/10.1007/s10641-010-9718-6
5	Harris, P.M., A.D. Neff, S.W. Johnson, and J.F. Thedinga. 2008. Eelgrass habitat and faunal assemblages in the City and Borough of Juneau, Alaska. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-182, 46 p.
6	Harris, P.M., A.D. Neff, & S.W. Johnson. 2012. Changes in eelgrass habitat & faunal assemblages associated with coastal development in Juneau, Alaska. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-240, 47 p.
7	Miller, K., Huettmann F., Norcross B., and Lorenz M. 2014. Multivariate random forest models of estuarine-associated fish and invertebrate communities. Mar. Ecol. Prog. Ser. 500:159-174. DOI: https://doi.org/10.3354/meps10659
8	Miller, K. B., Huettmann F., and Norcross B. L. 2015. Efficient spatial models for predicting the occurrence of subarctic estuarine-associated fishes: implications for management. Fish. Manage. Ecol. 22:501-517. DOI: https://doi.org/10.1111/fme.12148
9	Neff, A.D. 2012. Nearshore faunal assemblages of the eastern Beaufort Sea, Alaska. USACE report. 15 p.
10	Castellote, M., K.M. Stafford, A.D. Neff, and W. Lucey. 2015. Acoustic monitoring and prey association for beluga, Delphinapterus leucas, and harbor porpoise, Phocoena phocoena, off two river mouths in Yakutat Bay, Alaska. Marine Fisheries Review 77(1):1-10. DOI: dx.doi.org/10.7755/MFR.77.1.1
11	Neff, A.D. 2016. Nearshore faunal assemblages in the vicinity of Yakutat, Alaska. USACE project report. 45 p.
12	Neff, A.D. 2017. Nearshore marine biota in the vicinity of Cape Blossom in Kotzebue Sound, Alaska. USACE project report. 15 p.
13	Neff, A.D. 2018. Marine biota in Iliuliuk Bay, Alaska. USACE project report. 25 p.
14	Miller, K., Shaftel R., and Bogan D. 2020. Diets and prey items of juvenile Chinook (Oncorhynchus tshawytscha) and coho (O. kisutch) salmon on the Yukon Delta. NOAA Technical Memorandum NMFS-AFSC-410 54. DOI: https://doi.org/10.25923/rjxv-v629
15	Howard, K., Miller K., and Murphy J. M. 2017. Estuarine fish ecology of the Yukon River Delta 2014-2015. Fisheries Data Series No. 17-16. Alaska Department of Fish and Game, Division of Sport Fish and Commercial Fish.
16	Miller, K., Neff D., Howard K., and Murphy J. M. 2016. Spatial distribution, nutritional status and community composition of juvenile Chinook salmon and other fishes in the Yukon River estuary. NOAA Technical Memorandum NMFS AFSC-2985. DOI: http://doi.org/10.7289/V5/TM-AFSC-334
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21	Arimitsu, M. L., Piatt, J. F., Heflin, B., von Biela, V. R., & Schoen, S. K. (2018). Monitoring long-term changes in forage fish distribution, abundance and body condition. Exxon Valdez Oil Spill Restoration Project Final Report (Restoration Project 16120)
22	Arimitsu, M. L., & Piatt, J. F. (2008). Forage fish and their habitats in the Gulf of Alaska and Aleutian Islands: Pilot study to evaluate the opportunistic use of the U.S. Fish and Wildlife refuge support vessel for long-term studies (Issue January).
23	Stanek, A., von Biela, V. R. and Brown, R. J., 2022, Fish communities of the Beaufort Sea, Alaska, across three decades, 1988-2019 (ver. 1.1, April 2022): U.S. Geological Survey data release. DOI: https://doi.org/10.5066/P9120X5B.
24	Tibbles, M., & Robards, M. D. (2018). Critical trophic links in southern Chukchi Sea lagoons. Food Webs, 17, e00099. DOI: https://doi.org/10.1016/j.fooweb.2018.e00099

CiteID	Citation
25	Fraley, K. M., Robards, M. D., Rogers, M. C., Vollenweider, J., Smith, B., Whiting, A., & Jones, T. (2021). Freshwater input and ocean connectivity affect habitats and trophic ecology of fishes in Arctic coastal lagoons. Polar Biology, 44(7), 1401-1414. DOI: https://doi.org/10.1007/s00300-021-02895-4
26	Fraley, K. M., Robards, M. D., Vollenweider, J., Whiting, A., Jones, T., & Rogers, M. C. (2021). Energy Condition of Subsistence-Harvested Fishes in Arctic Coastal Lagoons. Marine and Coastal Fisheries, 13(6), 665-672. DOI: https://doi.org/10.1002/mcf2.10188
27	Beaudreau AH†, Bergstrom CA†, Whitney EJ, Duncan DH, Lundstrom NC (2022) Seasonal and interannual variation in high latitude estuarine fish community structure along a glacial to non glacial watershed gradient in Southeast Alaska. Environmental Biology of Fishes. DOI: https://doi.org/10.1007/s10641-022-01241-9. †=co-lead authors
28	Arimitsu, M. L., Piatt, J. F., Madison, E. N., Conaway, J. S., & Hillgruber, N. (2012). Oceanographic gradients and seabird prey community dynamics in glacial fjords. Fisheries Oceanography, 21, 148–169. DOI: https://doi.org/10.1111/j.1365-2419.2012.00616.x
29	Arimitsu, M. L., Piatt, J. F., & Mueter, F. J. (2016). Influence of glacier runoff on ecosystem structure in Gulf of Alaska fjords. Marine Ecology Progress Series, 560, 19–40. DOI: https://doi.org/10.3354/meps11888
30	Arimitsu, M. L., Litzow, M. A., Piatt, J. F., Robards, M. D., Abookire, A. A., & Drew, G. S. (2003). Inventory of Marine and Estuarine Fishes in Southeast and Central Alaska National Parks. In Program (Issue May).
31	Blackburn, J.E. 1979. Pelagic and demersal fish assessment in the lower Cook Inlet estuary system. Pages 289-446 in Environmental Assessment of the Alaskan Continental Shelf. Annual reports of principle investigators for the year ending March 1979. Volume IV. Receptors - Fish, Littoral, Benthos. Outer Continental Shelf Environmental Assessment Program.