

OVERVIEW: Small scale mining permits on Interior Alaska streams.

Small Scale Mining Permits are issued by Alaska Department of Fish and Game's (ADFG) Habitat Division from its Fairbanks office. ADFG publishes lists of streams approved for these over-the-counter permits on its website, however, the stream location information formats are difficult to visualize (Meridian, Township, Range and Section or mile markers). This factsheet describes the methods used to convert the ADFG lists of small scale mining streams into geospatial data. These data can then be represented on maps and compared to other digital datasets in a geographic information system (GIS).

ADFG Mining Website: https://www.adfg.alaska.gov/index.cfm?adfg=uslicense.mining_ssm_permits

The screenshot shows the Alaska Department of Fish and Game website. The main heading is "Mining Small Scale Mining Permits". There are tabs for "Overview", "Best Practices", "Apply for a Permit", and "Small Scale Mining Permits". The "Small Scale Mining Permits" tab is selected. The content under this tab states: "Fish Habitat Permits for Small Scale Mining are issued by the Division of Habitat for:" followed by a bulleted list of activities: "Use of a suction dredge with an intake diameter of six inches or less and powered by an engine 18 horsepower or less" and "Use of a sluice box and small water pump (18 horsepower or less) to process material gathered with hand tools (commonly referred to as 'high banking')". Below this, it says "Permits can be obtained at our Anchorage, Fairbanks, Palmer, and Soldotna offices and are generally issued over-the-counter. We have also developed regional General Permits for some areas in Southcentral Alaska." A section titled "Permit application forms and General Permits are listed by region and available for download below:" contains a table for "Interior Alaska" with links to "Fairbanks Small Scale Mining Application (PDF 290 kB)", "Steese Highway Area List (PDF 44 kB)", "Dalton Highway Area List (PDF 46 kB)", and "Fortymile Area List (PDF 66 kB)".

Extract from list of Steese Highway Area Streams:

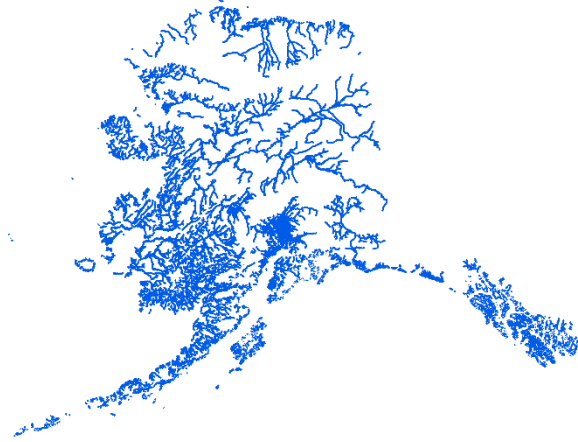
Stream Name	Location	Anadromous Waters Catalog Number	Dates Permitted	Type [#]
Chatanika River	Downstream of Faith Creek	334-40-11000-2490-3151-4020	5/16 to 7/10	871
Chatanika River	Upstream of MP 69	334-40-11000-2490-3151-4020	5/16 to 10/15	871
Poker Creek	Sections 25 & 36, T4N, R1E, FM	334-40-11000-2490-3151-4020-5165	5/16 to 10/15	871
Poker Creek	Remainder (not listed above)		5/16 to 10/15	841

Methods

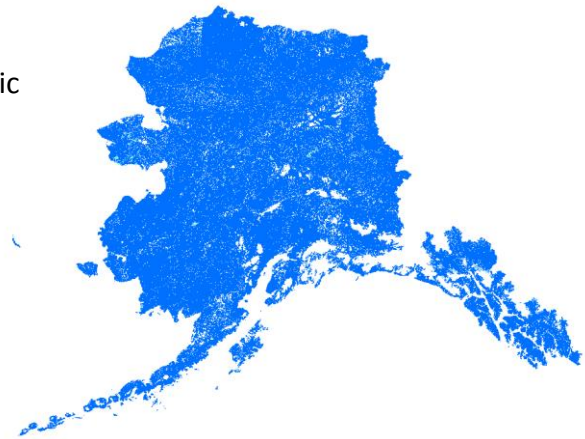
1) Download pdf files of streams.



2) Use ADF&G's Anadromous Waters Catalog to select streams by AWC code



3) Use US Geological Survey National Hydrographic Dataset (NHD) to select remaining streams

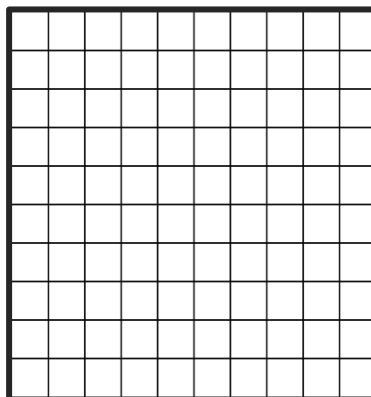


4) Intersect streams with Meridian, Township, Range, and Section grid and Alaska Department of Transportation and Public Facilities roads dataset to delineate stream locations described on ADFG lists.

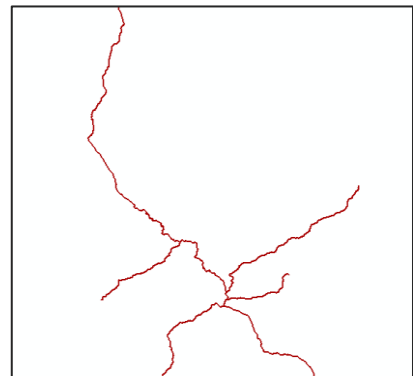
Streams



MTRS grid



Roads



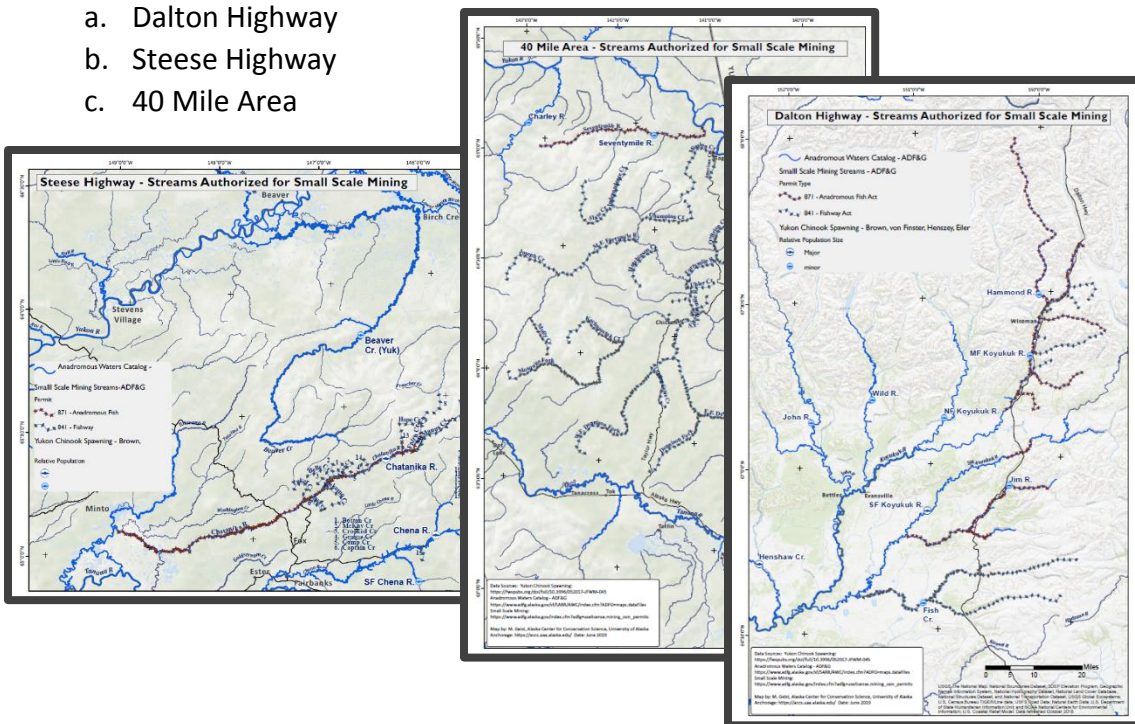
RESULTS

- 1) GIS dataset of 104 stream segments covering the 40 Mile River area along with the Dalton and Steese Highway area streams listed for small scale mining
 - a. Dataset includes attributes from ADF&G list including
 - i. Stream name
 - ii. Location description (MTRS, road mile post, etc.)
 - iii. Anadromous Waters Catalog stream code (if applicable)
 - iv. Permit type (Anadromous stream or
 - v. Permit dates
 - b. Dataset includes GIS calculated length in kilometers

- 2) Summary table of authorized streams for small scale mining

Area	Permit Type		Total Kilometers
	871 - Anadromous Fish Act	841 - Fishway Act	
Dalton Highway	331.75	298.37	630.12
Steese Highway	726.26	301.74	1028.00
Fortymile	131.68	1224.55	1356.23
Total (kilometers)	1189.69	1824.67	3014.35

- 3) Overview Maps of the authorized streams, 11"x17" pdfs
 - a. Dalton Highway
 - b. Steese Highway
 - c. 40 Mile Area



CONTACT

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Project website: <https://accscatalog.uaa.alaska.edu/dataset/historic-mining-footprint>