

State of Alaska
 Department of Fish and Game
 Nomination for Waters
 Important to Anadromous Fish

AWC Volume SE SC SW W AR IN USGS Quad NOME C-2

Anadromous Water Catalog Number of Waterway 333-10-10900

Name of Waterway AURORA CREEK USGS name X Local name _____

Addition X Deletion _____ Correction _____ Backup Information _____

For Office Use

Nomination # <u>94 347</u>	<u>Ayott</u>	<u>10/7/93</u>
Revision Year: <u>1994</u>	Regional Supervisor	Date
Revision to: Atlas _____ Catalog _____	<u>EO Wein</u>	<u>1/26/94</u>
Both <u>X</u>	<u>J. Inoue</u>	<u>2/18/94</u>
Revision Code: <u>A-E</u>	Drafted	Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Migration	Anadromous
<u>Dolly Varden</u>	<u>8/8/93</u>		<u>✓</u>		<u>✓</u>

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 any other information such as: specific stream reaches observed as spawning or rearing habitat; locations, types, and heights of any barriers; etc.

Comments: 8.2 miles from Teller Rd. via Oregon Creek trail. Two Dolly Varden (120mm, 150mm) collected from pool adjacent to old mine cabin. Numerous spring seeps. Creek channel 8-10 ft wide, approx 10 cfs, 2% gradient, cobble substrate.

Name of Observer (please print) ROBERT F. McLEAN
 Date: 10/6/93 Signature: Robert F. McLean
 Address: ADF&G - HER 1300 College Rd FAIRBANKS

ALASKA DEPT. OF FISH & GAME
 NOV 08 1993
 REGION II HABITAT AND RESTORATION DIVISION

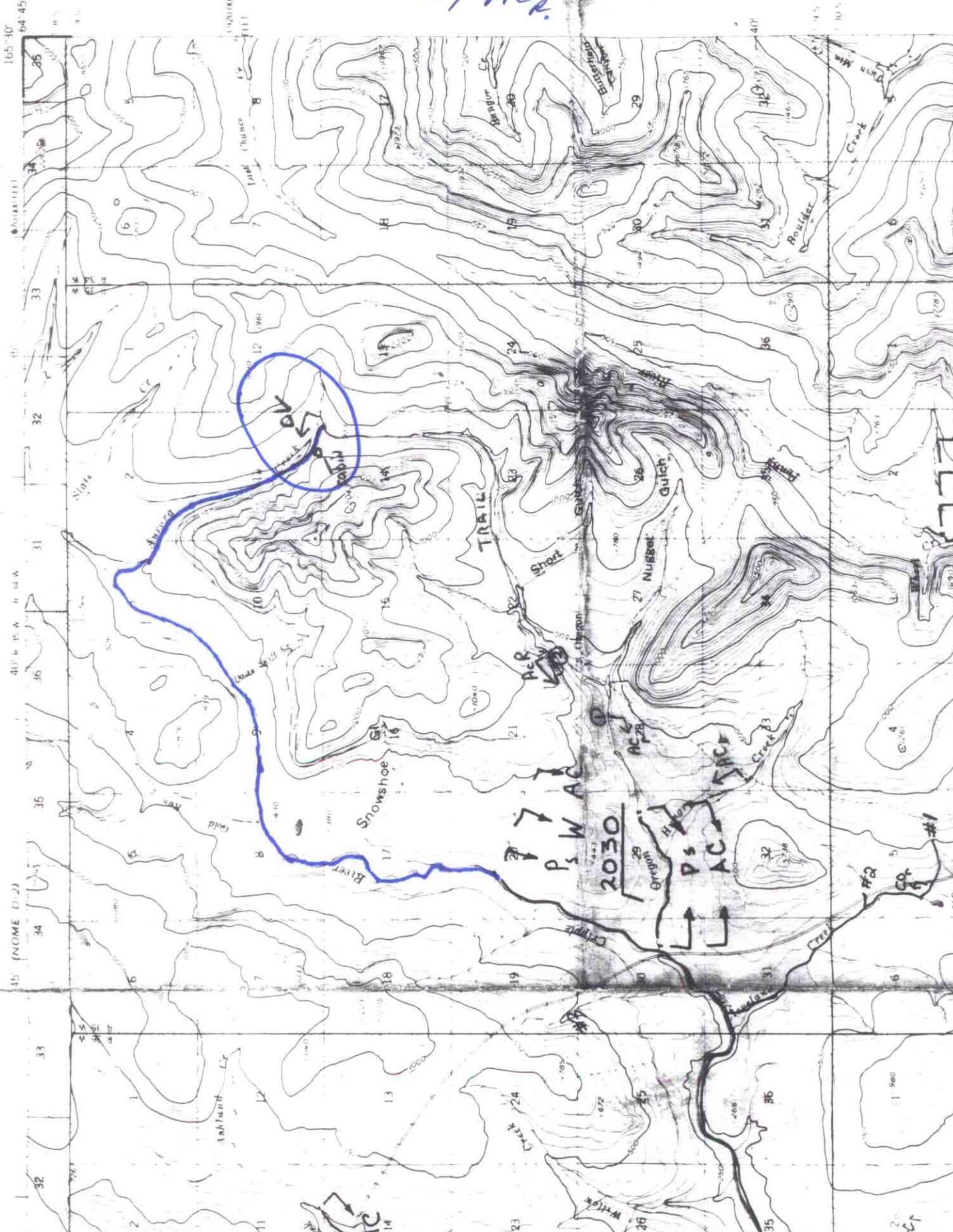
This certifies that in my best professional judgement and belief the above information is evidence that this waterbody should be included in or deleted from the Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes per AS 16.05.870.

Signature of Area Biologist: Robert F. McLean Rev. 7/93

AD2 STREAM
333-10-10900-2098

w/ AC.

NOME (C-2) QUADRANGLE
ALASKA
1:63,360 SERIES (TOPOGRAPHIC)



(NOME D-1)

165° 30' 164° 45'

40' H. S. W. H. 44 W

15 (NOME D-2)

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MEMORANDUM

State of Alaska Department of Fish and Game

To: Lance Trasky
Regional Supervisor
Habitat and Restoration Division

Date: October 25, 1993

File No:

Telephone Number: 451-6192

From: Alvin G. Ott 
Regional Supervisor
Habitat and Restoration Division
Department of Fish and Game

Subject: 1994 Anadromous
Catalog
Nominations

RE: 1994 Anadromous Catalog Nominations -- Justification for Designation of Juvenile Arctic Char (Dolly Varden) within the Seward Peninsula Area as Anadromous.

In response to your past requests, the following justification has been prepared for the record and reflects the factual basis for our determination that Seward Peninsula Arctic char (now classified as Dolly Varden) are predominately anadromous.

Arctic and sub-arctic char populations exhibit a number of life history patterns. This variation is further complicated in that char within a single drainage exhibit considerable "plasticity" in which sympatric and allopatric forms exist with different life history patterns. McCart (1980) describes four life history types. Three of these types (isolated stream residents, residual and anadromous) occupy stream habitats while the fourth type resides in lakes. The lake resident type is generally regarded to be a resident, non-anadromous, population (recent taxonomic clarification regards this morph type as a true Arctic char - other char morph types are now considered to be Dolly Vardens). However, McCart concludes that all three stream morphs cannot be distinguished by meristic characteristics. The only way to distinguish anadromous and non-anadromous populations is to document the life history pattern of the fish in question or examine external characteristics such as parr-marks and coloration. All three stream morphs are identical for the first several years of life and are indistinguishable until either (1) anadromous populations undertake their first sea-ward migration (Age III to V) or (2) stream residents and residual morphs first reach sexual maturity (typically Age VI).

Within this framework, research conducted by Dr. Hans Norbeng of Norway is particularly noteworthy. Dr. Norbeng artificially spawned both resident and anadromous char as separate groups and presented the results of his research at the First International Symposium on Arctic char in 1981. Dr. Norbeng's research demonstrated that both matings between resident adults and matings between anadromous adults produced the same ratio of resident versus anadromous offspring. Regardless of whether resident or anadromous adults were spawned, the offspring produced were 30% small residents, 10% large residents, and 60% anadromous. He concluded that small and large resident char were analogous to precocious individuals in salmon populations and that the life history pattern that develops may be a function of gene ratio.

Based on these findings, we believe that a reasonable basis exists for concluding that a significant percentage of juvenile char collected in mainstem and tributary streams on the