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 MT. FAIRWEATHER D-2

Anadromous Water Catalog Number of Waterway 114-75-10960

Name of Waterway Vivid Creek (NW Outlet) USGS name ✓ Local name ___

Addition ___ Deletion ___ Correction ✓ Backup Information ___

For Office Use

Nomination # 95 275

Revision Year: ___

Revision to: Atlas ___ Catalog ___ Both X

Revision Code: A-Z

Regional Supervisor — Date: 12-30-94

Drafted — Date: 1/5/95

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Migration	Anadromous
Please see attachment.	SEE ATTACHED				
CHUM	"				
COHO	"				
SOCKEYE	"				

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: ___

RECEIVED
JAN 04 1995
STATE OF ALASKA
FISH & GAME
HABITAT & RESTORATION

Name of Observer (please print) Chad Soiseth

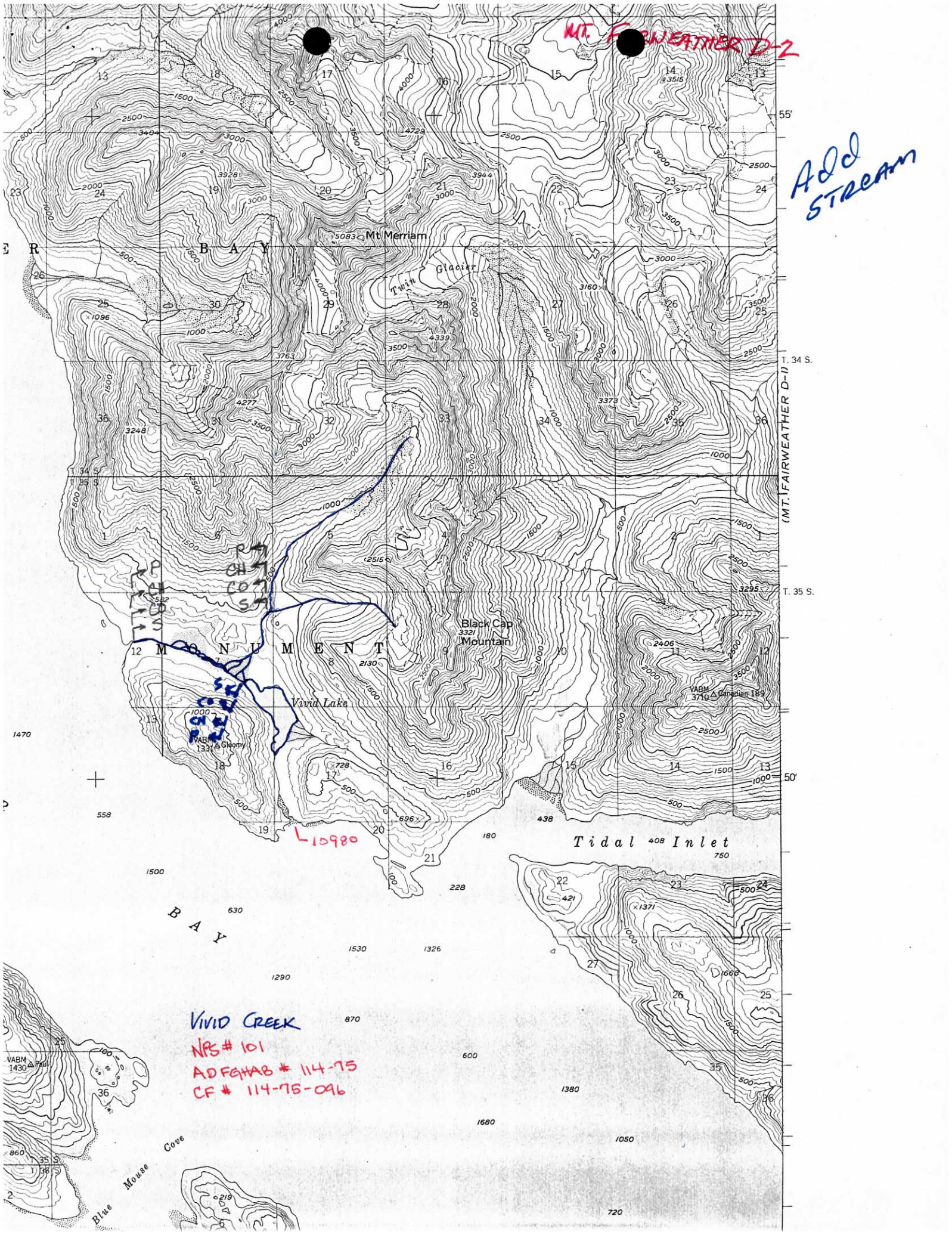
Date: 14 Dec. 1994 Signature: Chad Soiseth

Address: NATIONAL PARK SERVICE
GLACIER BAY NATIONAL PARK
& PRESERVE
~~P.O. BOX 140~~
GUSTAVUS, AK 99826-0140

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: Mike Bethe 12/30/94

Rev. 7/93


MT. FAIRWEATHER D-2
Add STREAM
Mt Merriam
Twin Glacier
Black Cap Mountain
Vivid Lake
MONUMENT
BAY
Tidal Inlet
(MT. FAIRWEATHER D-1)
T. 34 S.
T. 35 S.
55'
50'
VABM 3710 Canadian 189
VABM 1331 Gloomy
VABM 1430 Paul
Blue Mouse Cove
10980
VIVID CREEK
NPS # 101
ADFGHAB # 114-75
CF # 114-75-096

Adfghabno	Npsno	Strmkm	Date	Species	Li	No_live	No_dead	Source
114-75	101.0		07/03/66			0	0	Huneke and
114-75	101.0	0-0.2	08/07/70			0	0	Woll 1970
114-75-10980	101.0		08/28/92			0	0	Kondzela 1992
114-75	101.0	0-2.0	08/23/70	GAAC	A	6	0	Woll 1970
114-75	101.0		08/26/77	GAAC	A	Stickleback	0	Milner 1983c
114-75	101.0	0-1.0	09/07/84	GAAC	A	2	0	Selig and
114-75	101.0		08/16/89	GAAC	A	0	0	Blackie 1989
114-75	101.0	0-1.0	09/07/84	ONCL	J	CT 71	0	Selig and
114-75	101.0	0-2.0	08/23/70	ONGO	S	18	0	Woll 1970
114-75	101.0		08/26/77	ONGO	S	2000	0	Milner 1978
114-75	101.0		08/12/89	ONGO	S	0	0	Prather and
114-75	101.0		08/16/89	ONGO	S	1201	28	Blackie 1989
114-75	101.0		08/01/90	ONGO	S	2	0	Schroeder
114-75	101.0		08/22/90	ONGO	S	20	0	Kondzela 1990
114-75	101.0		08/29/90	ONGO	S	26	9	Schroeder
114-75-10980	101.0	1.6	09/05/90	ONGO	S	47	7	ADF&G 1993
114-75	101.0		09/05/90	ONGO	S	47	7	Schroeder
114-75	101.0		09/19/90	ONGO	S	6	3	Schroeder
114-75	101.0		08/05/91	ONGO	S	PS 509	0	Schroeder
114-75	101.0		08/16/91	ONGO	S	4100	0	Schroeder
114-75	101.0		09/13/91	ONGO	S	239	66	Schroeder
114-75	101.0		08/26/92	ONGO	S	200	0	Kondzela 1992
114-75	101.0		08/29/92	ONGO	S	250	0	Milner 1994
114-75	101.0		09/03/93	ONGO	S	5000	2000	Kondzela 1993
114-75	101.0		09/03/94	ONGO	S	100	0	Kondzela 1994
114-75	101.0		/ /	ONKE		0	0	USNPS 1963
114-75	101.0		/ /	ONKE	S	0	0	Prather and
114-75	101.0		08/23/76	ONKE	S	0	0	Nigro and
114-75	101.0		08/26/77	ONKE	S	50	0	Milner 1978
114-75	101.0	0-1.0	09/07/84	ONKE	S	1903	350	Selig and
114-75	101.0		08/16/89	ONKE	S	22	0	Blackie 1989
114-75	101.0		08/22/90	ONKE	S	283	12	Kondzela 1990
114-75	101.0		08/29/90	ONKE	S	480	35	Schroeder
114-75-10980	101.0	1.6	09/05/90	ONKE	S	388	86	ADF&G 1993
114-75	101.0		09/05/90	ONKE	S	CS 386	86	Schroeder
114-75	101.0		09/17/90	ONKE	S	166	88	Schroeder
114-75	101.0		09/19/90	ONKE	S	309	186	Schroeder
114-75	101.0		07/25/91	ONKE	S	976	0	Schroeder
114-75	101.0		08/05/91	ONKE	S	520	0	Schroeder
114-75	101.0		08/16/91	ONKE	S	600	0	Schroeder
114-75	101.0		09/13/91	ONKE	S	543	49	Schroeder
114-75	101.0		08/26/92	ONKE	S	200	0	Kondzela 1992
114-75	101.0		08/29/92	ONKE	S	200	0	Milner 1994

Adfghabno	Npsno	Strmkm	Date	Species	Li	No_live	No_dead	Source
114-75	101.0		09/03/93	ONKE	S	1500	0	Kondzela 1993
114-75	101.0		09/03/94	ONKE	S	2000	0	Kondzela 1994
114-75	101.0		08/26/77	ONKI	J	12	0	Milner 1983c
114-75	101.0		08/26/77	ONKI	F	23	0	Milner 1983c
114-75	101.0	0-1.0	09/07/84	ONKI	F	11	0	Selig and
114-75	101.0		10/18/89	ONKI	S	40	1	Blackie 1989
114-75	101.0		08/22/90	ONKI	J	0	0	Kondzela 1990
114-75	101.0		09/17/90	ONKI	S	1	0	Schroeder
114-75	101.0		09/19/90	ONKI	S	14	0	Schroeder
114-75	101.0	0-2.0	08/23/70	ONNE	S	98	0	Woll 1970
114-75	101.0	0-2.0	08/23/70	ONNE	J	0	0	Woll 1970
114-75	101.0		08/26/77	ONNE	S	300	0	Milner 1978
114-75	101.0		08/26/77	ONNE	J	0	0	Milner 1983c
114-75	101.0	0-1.0	09/07/84	ONNE	S	30	0	Selig and
114-75	101.0		07/31/89	ONNE	S	0	0	Prather and
114-75	101.0		08/12/89	ONNE	S	0	0	Prather and
114-75	101.0		08/16/89	ONNE	S	1479	6	Blackie 1989
114-75	101.0		08/01/90	ONNE	S	121	0	Schroeder
114-75	101.0		08/22/90	ONNE	S	3	0	Kondzela 1990
114-75	101.0		08/29/90	ONNE	S	1	0	Schroeder
114-75-10980	101.0	1.6	09/05/90	ONNE	S	1	0	ADF&G 1993
114-75	101.0		09/05/90	ONNE	S	2	0	Schroeder
114-75	101.0		09/17/90	ONNE	S	1	0	Schroeder
114-75	101.0		07/25/91	ONNE	S	30	0	Schroeder
114-75	101.0		08/16/91	ONNE	S	600	0	Schroeder
114-75	101.0		09/13/91	ONNE	S	413	20	Schroeder
114-75	101.0		08/26/92	ONNE	S	200	0	Kondzela 1992
114-75	101.0		08/29/92	ONNE	S	400	0	Milner 1994
114-75	101.0		09/03/93	ONNE	S	2000	0	Kondzela 1993
114-75	101.0		09/03/94	ONNE	S	200	0	Kondzela 1994
114-75	101.0		/ /	SAMA		0	0	USNPS 1963
114-75	101.0	0-2.0	08/23/70	SAMA	A	1	0	Woll 1970
114-75	101.0		08/26/77	SAMA	J	8	0	Milner 1983c
114-75	101.0		08/26/77	SAMA	F	15	0	Milner 1983c
114-75	101.0	0-1.0	09/07/84	SAMA	F	2	0	Selig and
114-75	101.0	0-1.0	09/07/84	SAMA	A	100	0	Milner 1987
114-75	101.0		08/16/89	SAMA	J	0	0	Blackie 1989
114-75	101.0		08/01/90	SAMA	A	11	0	Schroeder
114-75	101.0		08/22/90	SAMA	J	0	0	Kondzela 1990
114-75	101.0		09/05/90	SAMA	A	0	0	Schroeder
114-75	101.0		09/03/93	SAMA	A	0	0	Kondzela 1993
114-75	101.0	0-2.0	08/23/70	SASP	F	0	0	Woll 1970

Adfghabno	Npsno	Date	Species	Li	No_live	No_dead	Source
114-75-10980	100.0	08/07/70			0	0	Woll 1970
114-75-10980	100.0	08/23/70			0	0	Woll 1970

This info. for south outlet only!

United States Department of the Interior

NATIONAL PARK SERVICE
Glacier Bay National Park and Preserve
P.O. Box 140
Gustavus, Alaska 99826-0140

IN REPLY REFER TO:

RECEIVED
JAN 04 1995
STATE OF ALASKA
FISH & GAME
HABITAT & RESTORATION

14 December 1994

Roger Harding
Alaska Department of Fish and Game
Division of Sport Fish
P.O. Box 240020
Douglas, AK 99824

Dear Mr. Harding,

Enclosed please find information on 9 streams within Glacier Bay National Park and Preserve (GBNPP). We wish to submit this information for your review and propose these streams be included in the Anadromous Waters Catalog (AWC) and associated Atlas.

Over the past 2 years we have conducted an exhaustive search of all pertinent information relating to the distribution and abundance of salmonids and other anadromous and freshwater species in streams throughout GBNPP. Additionally we have developed a comprehensive database of this information. Currently we are nearing final analysis and write-up. The information submitted for the 9 streams currently proposed (8 additions and 1 correction) for anadromous waters designation was extracted from this database. A draft data dictionary documenting and defining field attributes is enclosed to assist in evaluation of the summary queries for each stream system. In addition, we have enclosed photocopies of portions of documents from which this information was obtained. Many of the photocopied documents are portions of larger documents (*i.e.* field notebooks, unpublished surveys, final reports, journal articles *etc.*). We have also enclosed a draft bibliography to provide additional documentation of the original information sources. Photocopies of the original sources in entirety would be superfluous.

Streams are generally referenced using the unique National Park Service (NPS) number and also ADF&G Habitat and Reclamation as well as Commercial Fisheries Division numbers. However, photocopies of the original source documents dated between 1963 and 1966 generally refer to specific streams using an outdated NPS numbering system. These numbers are indicated and may be referenced from map sections associated with the USNPS (1963) document.

We hope the information submitted in this packet will be sufficient for inclusion of these streams in the AWC and Atlas. One of my staff, Chad Soiseth, spoke with Ed Weiss, at the Habitat and Reclamation Division in Anchorage and requested that this information be included in the 1995 revision to the Catalog and Atlas. Ed agreed that this information could be included in the 1995 Catalog and Atlas provided he received it in the Anchorage office by December 20. Ed also pointed out that following your review the nomination forms would require Regional Habitat Biologist Lana Shea's approval. We greatly appreciate your effort in expediting the nomination and approval process. Should you have any questions or require additional information please contact Chad Soiseth or the Chief of Resource Management, Mary Beth Moss. Thank you for your time and attention on this matter.

Sincerely,

Marvin O. Jensen
Superintendent

Field attributes and data dictionary for an inventory data base: Biological characteristics of stream systems and salmonid distribution and abundance (stream_s.dbf)

DRAFT

(Sept. 1994 version)

Attributes or field names used in the data base are listed below.

adfgcfno (10 chars.)-this Alaska Department of Fish and Game (ADF&G) Commercial Fisheries Division number often corresponds with the ADF&G Habitat Division number (***adfghabno***) below. However, this number is always abbreviated relative to the ***adfghabno***. The first five digits are generally identical to the adfghabno but are followed by a 3 digit number which is a derivation of the 5 digit adfghabno (see below). The suffix of this 3 digit number lacks the stream order identifier and the final digit is omitted. Thus the ***adfgcfno*** for the Bartlett River is 114-70-090. Occasionally, ***adfgcfnos*** differ markedly from ***adfghabnos***.

adfghabno (27 chars.)-this designation is the ADF&G Habitat and Reclamation Division 's numbering system. Some streams, rivers and lakes have a unique identifying number as listed in the Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes (AWC) and associated Atlas. The number begins with a body of saltwater identified by the ADF&G statistical fishing district number in 1982. Each district has a 5 digit number (a 3 digit number and a 2 digit number separated by a hyphen). The first order streams (flowing directly into saltwater and lacking tributaries; this ordering method is easily confused with the universally accepted Strahler (1959) method which orders streams from the headwaters downstream; see stream order definition in the *Field Attributes and Data Dictionary* for physchars.dbf) are identified by a 5 digit number added to the fish district number into which it flows. This second group of five digits is started by the number 1 which signifies a first order or primary stream. For example, the Bartlett River is 114-70-10900 (114-70 identifies the statistical fishing district and 10900 is the first order stream within that district). A second order stream branching from a first order stream is identified using the same base number (114-70-10900) plus a four digit number indicating that specific tributary. In the example for the Bartlett River this number is 2009. Thus the stream number for this second order stream would be 114-70-10900-2009. Third, fourth and higher order streams are numbered in the same way by adding a four digit number for each branch. The first digit for each branch sequence always indicates the stream order. The last digit in the number sequence used to identify second and higher order streams is even numbered if the tributary branches to the right (facing upstream) and odd numbered if it branches to the left. Lakes are designated by a number sequence with a first digit of 0. In the Bartlett River example, a lake occurs along a first order stream. Thus the lake number incorporates the first order stream number (114-70-10900) plus the four digit lake identifier (0010) to give the lake's number as 114-70-10900-0010.

npsno (5 numeric)-each stream has been assigned a unique identifying number which can be referenced from a master set of 1:63,360 scale topographic maps. Assignment of reference numbers to individual streams is part of a redundant system of referencing entries since streams can also be referenced by ADF&G # (both Comm. Fish and Habitat Division), mouth location (UTM's or lat. long.), or stream name.

strmkm (5 characters)-is the extent of survey efforts from the lower section of a survey reach to the upper section surveyed. Distance is measured from the upper limit of the rye grass at the mouth toward the head of a stream.

date (mm/dd/yy)-is the date that the particular survey or research was conducted.

spp (4 characters)-are the species observed in a stream system according to accounts from published and unpublished literature sources. Species designations are by the first two letters of the scientific name (each of genus and species). (see Morrow, J.E. 1980. The freshwater fishes of Alaska. Alaska Northwest Publishing Company, Anchorage, AK. 248 pp.)

Common name	Scientific name	Species designation
King or Chinook	*Oncorhynchus tschawytscha*	ONTS
Sockeye or Red	*Oncorhynchus nerka*	ONNE
Pink or Humpy	*Oncorhynchus gorbuscha*	ONGO
Chum or Dogs	*Oncorhynchus keta*	ONKE
Coho or Silver	*Oncorhynchus kisutch*	ONKI
Dolly Varden	*Salvelinus malma*	SAMA
Cutthroat	*Oncorhynchus clarki*	ONCL
Steelhead, rainbow trout	*Oncorhynchus mykiss*	ONMY
Threespine stickleback	*Gasterosteus aculeatus*	GAAC
Aleutian or Coast range sculpin	*Cottus alleuticus*	COAL
Slimy sculpin	*Cottus cognatus*	COCO
Unidentified Cottid spp.		COSP
Pacific staghorn sculpin	*Leptocottus armatus*	LEAR
Eulachon	*Thaleichthys pacificus*	THPA
Pacific lamprey	*Lampetra tridentatus*	LATR
Starry flounder	*Platichthys stellatus*	PLST
Unknown Pacific salmon spp.		SASP
Unknown trout spp.		TRSP
Unknown spp.		UNSP

lifestg (1 character)-is the stage of development observed and reported for each species. A single stage of development or all life stages may have been observed for each species in any stream system. Life stages and definitions are based on Milner (1989) and for salmonids generally include: 1.) fry (F)-small fish or young-of-the-year fish (YOY) generally $\leq$ 30-70 mm total length depending on time of year (*i.e.* May-Oct.), 2.) juveniles (J)-fish in their second summer of life (age 1+ yrs.) and generally > 70 mm, 3.) adults (A)-sexually mature fish, and 4.) spawning adults (S)-adult fish observed to be in breeding or spawning coloration.

no_liv (6 numeric)-is the number of live individuals of each species / life stage observed during a particular visit.

no_dead (6 numeric)-similar to above is the number of dead individuals of each species / life stage observed during a particular visit. Typically this refers to adult Pacific salmon post spawning.

source (40 characters)-is the source (published or unpublished) from which the information was taken. Enter the last name of the primary author (first letter capitalized) followed by the date (yr.) of publication, date the unpublished report was prepared, or the date the survey was conducted.

mthd (1 character)-is the general method used to conduct the survey. Methods include A=fixed wing aircraft, H=helicopter, F=foot, B=boat, S=seine, R=angling, E=electrofishing, D=dip netting, M=minnow trapping, T=trapping (including fyke and hoop traps), G=gill netting, and U=unknown methods.

reliab (1 numeric)-is a measure of the reliability of the data based on what is known about survey methods and procedures for each survey team or surveyor where:

3= highly certain (Considerable sampling data is available and distribution ecology and preferred habitats are generally well documented within a watershed).
2= moderately certain (Some sampling data is available and distribution, preferred habitats, and ecology are documented in similar watersheds).
1= reasonable inference (Little or no sampling data available. Information on species distributions, ecology and preferred habitats documented in similar watersheds. Information may be second hand information or through personal conversation).

Examples: Aerial surveys assume that certain species are present in a stream during counts depending on time of year and thus species is generally inferred with no sampling data to substantiate species determinations (reliab=1). Foot surveys generally allow much more positive identification of species and this is further substantiated when capture information provides "hands-on" evidence of earlier developmental stages (reliab=2). Few workers in GBNP&P, (ADF&G, Milner, and Murrell), exhibit highly certain reliability (reliab=3).

Submitting Stream Survey Information to ADF&G Habitat Division for Anadromous Stream Nomination

December 1994

Background:

The following streams were selected from the biological (stream_s. dbf) database based on the criteria of required documentation of the occurrence of at least two species of anadromous salmonids. We evaluated the amount of information for each stream system and selected eight streams for addition and one stream (Vivid Creek) for correction. The ADF&G Anadromous Waters Catalog (AWC) and Atlas currently list the south outlet rather than the northwest outlet of Vivid Lake. See information below.

Prior to submission:

*We compiled information from ring binders, maps and queried the database for information on each stream and hardcopies (complete file) of all available information were organized by stream into file folders. These files are to be submitted to ADF&G.
*Database summaries (queries) were checked against source documents.
*The known upper and lower boundaries of distribution for each species were indicated on maps of each stream. This is reportedly a fairly strict requirement according to Ed Weiss, ADF&G Habitat and Restoration Biologist overseeing the AWC and Atlas.
*The location, type, and height of any know barrier or obstruction was noted.
*The draft bibliography indicating source documents for proposed Catalog and Atlas streams will be provided to ADF&G. We will also provide a draft of the data dictionary describing the fields in the database to aid in interpretation of the queries.
*The effect of designation on research and stream monitoring was investigated with both the state and Regional Office. We also looked into the possibility of submission being misconstrued by ADF&G as an admission by the NPS that the state has jurisdiction over Park waters (see letter from Ross Kananaugh, ARO).

Stream listing:

The streams for consideration are listed below by ADF&G Habitat and Restoration Division statistical unit number (ADF&GHAB#), National Park Service number (NPS#), and stream name if applicable. The status of our evaluation was listed along with a brief summary of the available information.

Ed - Would these qualify for mouths of streams?

ADF&GHAB#	NPS#	Stream Name	Status
114-60	165	Unnamed	Not submitted to ADF&G

Three sources of information exist for this stream. However, only a single survey conducted by Selig in August of 1982 provides evidence of spawning anadromous salmonids. On 28 August 323 chum and 22 pink salmon were observed spawning in this system. According to Selig "the spawning was confined to the intertidal area and slightly above, as the water volume decreased as the stream entered the woods, forking into even smaller branches". Because spawning appears to be confined to the intertidal zone and rearing or spawning salmonids were not documented to occur higher up in the watershed it seems unlikely that this stream would meet the requirements.

114-60	161	Dog Hole Zay Head	Submitted

Two records of 50 and 5 pink salmon in 1963 and 1982, respectively, exist for this system. Four records of 10-400 chum salmon from 1960-1982 exist. One record in 1964 of 125 salmon (no species indicated) exists. Records indicating location along stream reach indicate that salmon were observed "just above the intertidal zone".

114-60-10200 166.5 Unnamed Not Submitted

Inadequate information.

d - would this qualify for mouth of stream up to barrier?

114-70 300 Wolf Creek Not submitted.

Two records of 48 and 350 chum salmon in 1969 and 1984, respectively, exist for this stream. One record of a single coho salmon fry was also reported on 1 Sept. 1984. A series of falls or cascades 7-10 ft. in height and approximately 300-450 yards above tidal influence presents a potential barrier to anadromous fish passage upstream. Reports of chum salmon were all below the barrier.

114-70 369.0 York Creek Not Submitted

Inadequate information.

114-71 203 SW Berg Bay Not submitted.

Three hundred pink salmon were reported in August of 1959 by Mattson et al. (1959) with no location given. Huneke and Owens reported 30-40 chum salmon in August of 1966 but reported no location.

?

114-73 227 Oystercatcher Creek *Undecided*

The 1975 Up-Bay ranger (Unknown 1975) reported 300-400 pink salmon in the first 1/4 mile of this system on 21 August 1975. Chris Kondzela (19901) reported < 100 pink salmon present in the mouth and intertidal section of this stream on 22 August 1990. Based on information by Woll (1970), this stream may support an anadromous run of Dolly Varden.

114-73 216 Wood Creek Submitted

Chum salmon were first reported in 1961 with sporadic and poorly quantified reports in 1962 and 1969. A dozen pink and chum salmon were reported by Cornelius and Haeker (1969) in the lower tidal influenced portion of this system in early September 1969. Kondzela (1990) reported 32 pink and 28 chum salmon in the intertidal area of this stream on 5 September 1990.. A 20 ft. falls ca. 300 yards upstream (just below outlet of lower pond) may possibly restrict or limit fish passage to Wood Lake.

114-75 101 NW Vivid Lake Stream Submitted as correction.

The southern outlet has been designated in the Catalog and Atlas. However, this tributary channel is narrow, steep and extremely shallow and no observations of anadromous species exist. Almost all observations of salmonids in the Vivid Lake system have been restricted to the northwest outlet. Seventy-one juvenile cutthroat trout and one adult were reported by Selig and Heacox (1984). Seventeen records of adult pink salmon (ranging from 2-7,000 spawners) from 1970-1994 exist. Twenty records ranging from 22-2,200 adult chum salmon exist for the years 1976-1994. Seven records of up to 40 fry, juvenile or adult coho salmon exist from 1977-1990. Twenty-one records of juvenile and adult sockeye salmon for 1970-1994 exist in the database. Lake access is currently restricted during low discharge-base flow periods due to the phenomenon of isostatic rebound (Kondzela 1993, 1994, Milner pers. comm.). Milner (1992) indicates that the lake is accessible only during periods of high discharge. Dr. Milner further suggests that the sockeye run will not be sustained when lake access is finally severed, however, spawning currently may occur in the stream and fry may migrate into the lake during periods of increased flow. Kondzela and Milner were contacted regarding accessibility and extent of anadromous species distribution in the stream. A barrier (waterfall or series of cascades) ca. 0.8 km upstream of lake prohibits fish passage further upstream (Blackie 1989).

114-77 303 Nunatak Creek Submitted

Nineteen records of pink salmon between 1975 and 1994 ranging from tens to thousands of spawners have been reported. Twelve records of 2-750 chum salmon exist for 1985-1994. Eight records of fry, juvenile and spawning adult coho salmon (in low numbers) between 1977 and 1985 are evident. Thirteen records of juvenile and adult sockeye exist between 1975 and 1994. Numbers of live spawning adult sockeye range from 6-200. Apparently salmon occur in a side channel as well as in the main channel upstream above the lake(s) and in the inlet channel to the lower lake (ca. 0-1.5 km above the upper extent of the intertidal zone. According to Milner and Kondzela (pers. comm.) pink and chum salmon occur up to the lower lake and sockeye have been documented to occur in both lakes and in the inlet to the lower lake.

114-77 331.0 Unnamed Not Submitted

Inadequate information.

114-77 336 Wolf Point Creek Submitted

Fourteen records of pink salmon between 1989 and 1994 ranging from 3 to more than 2,500 spawners are evident. Ten records of chum salmon (ranging from 1 to 44 live spawners) exist for the period 1989-1994. Seven records of 2-19 adult sockeye exist for 1993 and 1994. A barrier (waterfalls) below proglacial Lake Lawrence (Muir Glacier Remnant) prohibits salmonid access to the lake (Blackie 1989, Milner 1992, Kondzela 1994). Two sections of falls ca. 20-30 ft. in height occur in the reach ca. 20 m directly below the outlet to Lawrence Lake (Milner, pers. comm.). All salmonid species are distributed up to the base of the first falls.

114-77 308 Gull Creek Submitted.

Thirteen records of 5 to more than 1,200 adult pink salmon from 1989 to 1994 exist. Fifteen records of 5 to 400 adult sockeye spawners exist for 1991-1993. According to Milner (pers. comms.), the inlet streams to Gull Lake have been dry during the last two summers (1993, 1994). Both species occur up to and in the lake during the spawning period. Pinks have been reported to aggregate along the east side and sockeye along the west shore (Kondzela, pers. comm.). Salmonid distribution in the mainstem above the lake is currently unknown.

116-11 2 Unnamed Submitted

Twelve to sixteen hundred adult pink salmon were reported within this system on 10 and 21 August, 1983, respectively. Adult pink salmon were observed from the mouth to ca. 800 yards upstream. Seventeen YOY and two 1+ age cohos were caught among 5 minnow traps fished for 1 hour on 21 Aug. 1983 approximately 700 yards upstream of the mouth.

116-11 4 Unnamed Not Submitted

Inadequate information.

116-11 6 Dixon River Submitted

Eight records of 1-18 juvenile coho salmon exist for 1974. Four records of 1-34 juvenile and adult sockeye salmon exist. The limited existing information on this system is restricted to Murrell (1975). This system is a turbid meltwater system with probably little hydrological control on discharge by the associated lake basins. Lake basins are small and located in sub-basins. Several tributary streams are fed directly by Brady Glacier meltwaters.