

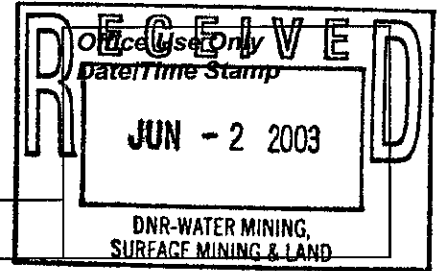
DIVISION OF MINING, LAND & WATER  
WATER RESOURCES SECTION



Alaska Department of  
**NATURAL  
RESOURCES**

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**APPLICATION FOR RESERVATION OF WATER**

**Instructions**

- Complete one application per stream segment or water body – **Incomplete applications will not be accepted**
- Attach map(s) indicating all sections from the beginning to the end of stream segment or for all parts of the lake or water body – **Map must include sections lines**
- Submit filing fee of \$500.00 – **Non-refundable**
- Attach extra pages for each section, as needed

Native Village of Eklutna (Tribe)		Marc Lamoreaux	
Business Name		Contact Person	
26339 Eklutna Village Rd.	Chugiak	AK	99567
Mailing Address	City	State	Zip Code
(907) 688-6020	(907) 688-6021	ave@mtaonline.net	
Phone Number	Fax Number	E-mail Address	

Location of Proposed Reservation of Water 25 miles NE of Anchorage, AK

Name of the Stream or Water Body in which Water is Proposed to be Reserved Eklutna River, Segment 3

Meridian	Township	Range	Section	Quarter Sections	
				SE ¼	NE ¼
Seward	T16N	R1W	25	SE ¼	NE ¼
Seward	T16N	R1W	25	NW ¼	¼
Seward	T16N	R1W	26	NE ¼	¼
Seward	T16N	R1W	23	SE ¼	¼
				¼	¼
				¼	¼
				¼	¼
				¼	¼
				¼	¼
				¼	¼

**Water Quantity**

Water requested to be reserved – **Check one**

- To maintain a specific instream flow rate, measured in cubic feet per second
- To maintain a specific level of surface water, flow or volume, measured in cubic feet or acre feet
- To maintain a specific surface water elevation, measured in relation to a permanent benchmark

Quantify the specific amount of water requested to be reserved. Identify and quantify, as appropriate; flow rates, quantities, surface water elevations, depths, etc., as they relate to the daily duration and months of the year during which the reservation is proposed. Include any flow release schedules from projects upstream of the proposed reservation that would apply.

See Attachment 3A.

**Methodology and Monitoring**

Attach and submit with this application documentation or reports showing facts to support the following:

- (a) The need for the proposed reservation of water, including reasons why the reservation is being requested.
- (b) Identify and describe the methodology, data, and data analysis used to substantiate the need for and the quantity of water requested for the proposed reservation of water, including:
  1. Name and description of method used
  2. Who conducted the study and analysis
  3. Schedule of when data collection and analysis occurred
  4. Type(s) of instrument(s) used to collect and analysis data
  5. Description of data and how the data was collected, including when applicable, (A) selection of stream reach, study site and transect selection, (B) flow, survey, elevation, and depth measurements, (C) pertinent physical, biological, water chemistry and socio-economic data
  6. Description of how data was analyzed, and
  7. Maps, photos, aerial photos, calculations, and any other documents supporting this application

If there are provisions for monitoring this proposed reservation of water, include the following:

- (a) Description of monitoring equipment (such as gauging stations, staff gages, weirs)
- (b) Location of monitoring equipment
- (c) Provisions for payment of monitoring
- (d) Reporting system

The information presented in this application is true and correct to the best of my knowledge.

by: Lee Stephen  
Signature

5/29/03  
Date

Lee Stephen  
Name (please print)

CEO  
Title

Describe the location of the point or points defining the boundary of the proposed reservation of water by river mile index, river mile, geographical or cultural landmark, etc., on the stream or water body.

Segment 3 is Eklutna River, from its confluence with Thunderbird Creek, downstream to its mouth at Knik Arm, Cook Inlet. It is approximately 3 miles in length. The USGS map attached - Anchorage (B-7) NE Quadrangle, Alaska - shows the mouth of the Eklutna River as located before the 1996 flood, during which the river reverted to its original mouth location. The channel had been diverted around 1980 to keep the river water out of the gravel mining operation by the (formerly) federally owned Alaska Railroad. The current channel and mouth are indicated on the map.

Attach a US Geological Survey map at 1:63,360 scale, or 1:250,000 scale if 1:63,360 scale is unavailable for the area, clearly identifying the following for the proposed reservation of water:

1. Sections, townships, range and meridians
2. The stream or water body in which the reservation of water is proposed
3. Specific point or points defining the boundary of the proposed reservation of water
4. Permanent, temporary or planned locations of water measurement devices (such as gauging stations, weirs, staff gages)
5. Permanent, temporary or planned bench marks

#### Water Use

Identify the purpose(s) of the proposed reservation of water by checking the appropriate box(es).

- Protection of fish and wildlife habitat, migration, and propagation  
 Recreation and park purposes  
 Navigation and transportation purposes  
 Sanitary and water quality purposes

Describe in detail the purpose(s) of the proposed reservation, including, when appropriate; species and life stage, type of recreation, vehicle, or water quality parameter, or other relevant information.

Several reaches of Eklutna River Segment 3 provide spawning habitat for all five Alaska salmon species, although only two red salmon were observed in 2002. The ponds in the lower river old gravel beds provide excellent smolt habitat for kings and coho, with three year classes of coho abundant. and osmoregulation for adults, which hold there after entering the river. Dolly varden are common, and rainbow trout and burbot also occur in this segment. (See attached Eklutna River Fish Periodicity Charts and 2002 Fish Counts.) These fish are traditional and trust resources of the Native Village of Eklutna Tribe.

Is the water currently being used for the purpose(s) applied for?

- Yes  
 No If no, when will use for this purpose begin? Specify approximate date \_\_\_\_\_

Attachment 3A  
NATIVE VILLAGE OF EKLUTNA  
APPLICATION OF RESERVATION OF WATER  
LOWER EKLUTNA RIVER  
(SEGMENT 3 of Eklutna Reservation Complex)

Water Quantity

A reservation of 100% of the remaining flow in lower Eklutna River, Segment 3 (of the Eklutna River Reservation Complex) is requested. Monthly means in cfs, for ice free months, are presented in the attached – 2002 Eklutna River Discharges at Three Sites, under Station 15280200 Eklutna River at Old Glenn. These are calculated as the mean of the daily means for each month. Five years of similar data are suggested by USGS to minimally represent discharge variability between years. 2002 was a dry Summer, although the Spring snow melt seemed more representative, so some of the figures presented may be low relative to longer-term averages. With little previous gauging history, we do not know how representative the data presented are of an average year.

Methodology and Monitoring

a) The need for the proposed reservation of water, including reasons why the reservation is being requested:

Eklutna River salmonids are a public resource, and a trust resource for the Native Village of Eklutna Tribe, representing Dena'ina Athabascan Natives who have relied on these natural resources since time immemorial. A reservation of 100% of remaining Lower Eklutna River flows is requested.

This river section has diverse habitats. The upper reach, from the confluence Thunderbird Creek to the New Glenn Highway, is used as spawning habitat by all five Alaska salmon species, with enough depth for good king salmon spawning habitat. There are also several good spawning areas below the railroad tracks. The various salmon species hold in the ponds, in the old gravel mines just above the Knik Arm wetlands, after entering the river system, possibly for osmoregulation, and until river conditions are good to continue upstream for spawning. With 1000 chum salmon in a single pond, maximal river cfs are probably beneficial to maintain water quality in this pond habitat. The juveniles also depend on this habitat. Increased flows would be desirable to increase potential pond salmon habitat, providing cool and oxygenated water to more pond area, while decreased flows would decrease it. This application, and the two associated applications, should not be interpreted to lock in, or further legitimize the diversion of 100% of Eklutna River water at the Eklutna Lake dam.

b) Identify and describe the methodology, data, and data analysis used to substantiate the need for and the quantity of water requested for the proposed reservation of water, including:  
1. Name and description of method used, 2. Who conducted the study and analysis, 3. Schedule of when data collection and analysis occurred, 4. Type(s) of instrument(s) used to

collect and analyze data, 5. Description of data and how the data was collected, including when applicable, (A) selection of stream reach, study site and transect section, (B) flow, survey, elevation and depth measurements, (C) pertinent physical, biological, water chemistry, and socio-economic data, and 6. Description of how data was analyzed, (a) description of monitoring equipment, (b) location of monitoring equipment, (c) provisions for payment of monitoring, and (d) reporting system:

USGS standard stream-gauging methods were followed by USGS Hydrologist (Ron Rickman), now Anchorage Field Office Supervisory Hydrologist. A USGS automated stage gauge was maintained in Eklutna River at the Old Glenn Highway Bridge. Discharge measurements made as needed by Mr. Rickman were correlated with gauge readings, to provide a continuous discharge record. USGS was paid from the BIA Water Resources management grant, under subcontract MOA with NVE, and with matching USGS funds.

The study site selected was on the Eklutna River at the Old Glenn Highway Bridge, to capture the lower Eklutna River discharge. Flow measurement transects were selected according to USGS protocols.

Discharge data for this application is presented in the attached 2002 Eklutna River Complex at Three Sites (in CFS) Excel data table, under the first two columns of data – Station 15280200. Daily mean discharges were averaged to provide monthly mean discharges for the reservation application. USGS and NVE also took one winter low discharge measure at this site using USGS ice methods, rendering a reading of 21.7 cfs on 1/17/03.

Fish periodicity and fish count data tables are attached. These were obtained by walking the river section with data sheets and recording observations of adult fish according to protocols developed for a USF&WS project. The results of this study are confidential to protect the timing, location, and numbers of these sensitive salmon runs. We request that these periodicity tables also not be distributed widely. Actual observations were supplemented by an ADF&G Sport Fisheries Biologist, by comparison with similar local rivers, and best professional judgment (as noted). Minnow trapping was conducted in this section, as described in the attached Native Village of Eklutna 2002 Minnow Trapping Report.

#### Bibliography of USGS standard stream-gauging and discharge measurement techniques

Buchanan, T.J., and Somers, W.P., 1969, Stage measurement at gaging stations: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, chap. A7.

Buchanan, T.J., and Somers, W.P., 1969, Discharge measurements at gaging stations: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, chap. A8, 65p.

Carter, R.W. and Davidian, J., 1969, General procedure for gaging streams: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, chap. A6.

Kennedy, E.J., 1969, Computation of continuous records of streamflow: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, chap. A13.

Kennedy, E.J., 1969, Levels at streamflow gaging stations: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, chap. A19.

Smoot, G.F., and Novak, C.E., 1968, Calibration and maintenance of vertical-axis current meters: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 8, chap. B2, 15p.

EKLUTNA PERIODICITY TABLE 3

Lower Eklutna River - From confluence with Thunderbird Creek downstream to Knik Arm, Cook Inlet

King Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Smolt					XXXXXX							
Adult Passage					XXXXX	XXX						
Spawning							XXXX	XXXX				
Incubation	XXXX	XXXX	XXXX				XXXX	XXXX	XXXX	XXXX	XXXX	XXXX
Rearing	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Based on Eklutna 2002 data and Ship Creek

Coho Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Smolt					XXXXXX							
Adult Passage							XXX	XXXX	XXXX	XX		
Spawning								XXXX	XXXX	XXXX	X	
Incubation	XXXX	XXXX	XXXX	XXXX	XX			XXXX	XXXX	XXXX	XXXX	XXXX
Rearing	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Based on Eklutna 2002 data and Ship Creek

Pink Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Smolt				XXXX	XXXX							
Adult Passage							XX	XXXX	XX			
Spawning								XXXX	XX			
Incubation	XXXX	XXXX	XXXX	XXXX				XXXX	XXXX	XXXX	XXXX	XXXX
Rearing				XXXX	XXXX							

Based on Eklutna 2002 data and Ship Creek

Chum Salmon	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Smolt				XX	XXXX	XX						
Adult Passage						X	XXXX	XXXX	XXXX			
Spawning							XX	XXXX	XXXX	XX		
Incubation	XXXX	XXXX	XXXX	XXXX	XX		XX	XXXX	XXXX	XXXX	XXXX	XXXX
Rearing				XX	XXXX	X						

Based on Eklutna 2002 data and Ship Creek

Dolly Varden	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Spawning								XX	XXXX	XX		
Incubation	XXXX	XXXX	XXXX	XXXX	XX			XX	XXXX	XXXX	XXXX	XXXX
Rearing	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Based on Ship Creek

Rainbow Trout	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Spawning				XX	XXXX	XX						
Incubation				XX	XXXX	XXXX	XXXX	XX				
Rearing	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

Based on Ship Creek

Burbot	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Spawning	XX	XXXX	XXXX									
Incubation	XX	XXXX	XXXX	XXXX	XXXX							
Rearing	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX	XXXX

With help from interior burbot biologists.

Two Red Salmon were seen in this stretch on 8/29/02. This may be a relict run, as there are Kokenai in Eklutna Lake.

**SUPPLEMENTAL DATA ATTACHMENTS**

NATIVE VILLAGE OF EKLUTNA  
2002 MINNOW TRAPPING REPORT  
Alaska Department of Fish and Game  
Fish Resource Permit # SF002-070

Most of these sets were in the main pond in the lower Eklutna River, in a depression just above the Knik Arm tidal wetlands, left by gravel mining around 1980. This pond has river, tidal, and groundwater influences. Traps were 16" long by 7" in diameter at the ends, with open-tip cones at each end, and .5 mm wire mesh. These were baited with salmon eggs preserved in salt and vinegar.

5/22/02 – 3 Chum Fry caught with dip net.

5/28/02 – 7 minnow traps set. Caught:

1. – 3 dolly varden, ~ 6" long
2. – 1 dolly varden ~ 6"
3. – 30 sticklebacks  
    30 coho fry and smolt, 5cm – 16cm.  
    1 burbot, 15 cm.
4. – 50 sticklebacks  
    13 coho smolts, 9 to 11.5 cm.
5. – 1 dolly varden ~5"  
    2 coho smolt, ~7cm
6. – 30 sticklebacks
7. – 50 sticklebacks  
    3 coho, ~ 7cm.

Two coho smolt were sacrificed for intensive observation and dissection to substantiate species ID.

Traps 6 and 7 were set in "raised ponds" associated with the former river channel, and now often isolated from the river. There was concern that smolt were being trapped here while the ponds evaporated. The preponderance of sticklebacks in these sets alleviated these concerns.

Sets 1, 2, and 5 were in the river channel.

6/3/02

1. – 17 sticklebacks  
    15 coho smolt  
    3 king smolt: 102 mm, 90 mm, 68 mm
2. – 39 sticklebacks  
    ~ 20 coho, from 69 to 133 mm.  
    11 king smolt, 124, 125 mm
3. – 37 sticklebacks  
    18 coho smolt, 69-110 mm.
4. – 25 sticklebacks  
    2 coho, 72, 115 mm



5. – 10 sticklebacks  
9 coho, 69 to 129 mm.

Dan Bosch, ADFG Sport Fish Biologist, accompanied me on this trip. He says there were three coho age class years present.

7/24/02

1. – Zip (set in river)
2. – Zip (“)
3. – 20 sticklebacks  
27 coho smolt  
10 king smolt  
all salmon 1.5 to 4”
4. – 68 sticklebacks  
35 coho smolt  
12 king salmon smolt  
salmon 2” to 4”
5. – 4 sticklebacks (set in river at pond mouth)
6. – 1 stickleback (“)

9/17/02

1. – 15 sticklebacks  
5 dolly varden  
30 coho smolt, 3 to 9 cm
2. – 4 sticklebacks  
5 dolly varden  
30 coho smolt, 3-9 cm
3. – 2 sticklebacks  
18 coho. 3 to 11 cm
4. – 14 coho, 3 to 7 cm
5. – 30 coho  
4 king  
4 to 8 cm.
6. – 8 coho  
2 kings  
4 to 8 cm.

Summary: 402 sticklebacks, 290 coho salmon juveniles, 42 king salmon juveniles, 3 chum salmon juveniles, 15 dolly varden, and one burbot were trapped over the course of five trapping events. Two coho smolt were sacrificed early in the season for identification.

Submitted by:  
Marc Lamoreaux  
Natural Resources Director  
Native Village of Eklutna

2002 Eklutna Turbidity Data (in NTU)  
 Samples gathered and ESD model 800 meter calibrated and read by Marc Lamoreaux.  
 Thunderbird Creek and "Eklutna Creek" (Eklutna River) samples from just above their confluence.  
 "Eklutna River" samples taken at the Old Glenn Highway.

Date /02	5/17	5/25	5/31	6/3	6/7	6/14	6/18	6/21	6/28	7/3	7/5	7/11	7/22	7/29	8/13	8/19
Eklutna Creek	169.2		181.0		151.8	47.1	31.9	33.7	12.6	6.5	8.5	6.1		11.6	82.5	11.0
Thunderbird Creek						1.3	10.1			4.4	3.1	2.5		2.9	2.8	1.9
Eklutna River	96.4	64.4	46.9	23.2	62.6	9.4	17.7	10.1	4.8		5.6	2.7	2.5	3.3	37.2	4.3
Eklutna Creek Settled			5.9		10.2	2.4		4.0	2.5		2.2	0.9		5.7	12.3	
Date /02	8/23	8/29	8/30	9/6	9/13	9/18	9/27	10/4	10/14	10/25	11/1	11/8	11/22	11/30	12/13	12/20
Eklutna Creek	96.4	10.1	10.7	113.1	8.5	4.0	61.6	81.2	19.3	41.4	21.8	14.2	6.5	82.1	12.0	15.5
Thunderbird Creek	2.5	3.2	1.4	1.9		1.3	1.1	1.0	0.8	1.2	1.1	0.9	0.9	0.6	0.8	1.1
Eklutna River	39.6	4.3	3.7	88.2	4.2	2.4	10.8	17.1	6.4	8.9	4.2	3.6	2.0	*	9.3	
Eklutna Creek Settled				6.4												

Settled samples tested after settling 1 week.

2002 Eklutha River Water Temperature Data (in Degrees Centigrade)  
 Eklutha River, site 15280100, 3/10 mi. above confluence with Thunderbird Creek.

Date /02	5/10	5/17	5/24	5/31	6/7	6/14	6/21	6/28	7/5	7/11	7/29	8/13	8/23	8/30	9/6
Eklutha Creek	5	5	8	8	7	10	13	10	10	10	9	8	8	8	7
Date /02	9/13	9/18	9/27	10/4	10/15	10/25	11/1	11/8	11/22	11/30	12/6	12/13			
Eklutha Creek	12	5	6	4	5	9	2	2	2	3	0	1			

Temperatures taken in the afternoons, exact times available.  
 Measures taken by Marc Lamoreaux with ACU-RITE mercury thermometer, using USGS protocol.

2002 Eklutna River Complex Discharges at Three Sites (in CFS)

Date	Station 15280200 E. River at Old Glenn		Station 15280100 Eklutna River Above Thunderbird			Thunderbird Creek (by Subtraction)	
	USGS Discharge Daily Mean	USGS Month X	NVE Discharge	NVE Month X	USGS Discharge	Discharge	Month X
20020510			15		13		
20020515	36						
20020516	38						
20020517	42		12			30	
20020518	48						
20020519	53						
20020520	61						
20020521	69						
20020522	72						
20020523	69						
20020524	75		13			62	
20020525	82						
20020526	97						
20020527	104						
20020528	91						
20020529	84						
20020530	87						
20020531	87	70	11	13		76	56
20020601	86						
20020602	85						
20020603	77				9		
20020604	74						
20020605	82						
20020606	82						
20020607	79		11			68	
20020608	80						
20020609	76						
20020610	75						
20020611	71						
20020612	70						
20020613	68						
20020614	74		11			63	
20020615	85						
20020616	90						
20020617	90						
20020618	87						
20020619	82						
20020620	81						
20020621	82		8			74	
20020622	80						
20020623	76						
20020624	74						
20020625	73						

20020626	72					
20020627	70					
20020628	71					
20020629	68					
20020630	66	78		10		68
20020701	62					
20020702	61					
20020703	61					
20020704	59					
20020705	58		8		50	
20020706	57					
20020707	55					
20020708	55					
20020709	55					
20020710	56					
20020711	55		8		8	47
20020712	54					
20020713	54					
20020714	53					
20020715	53					
20020716	53					
20020717	51					
20020718	53					
20020719	50					
20020720	52					
20020721	49					
20020722	48					
20020723	49					
20020724	51					
20020725	51					
20020726	50					
20020727	52					
20020728	50					
20020729	48		7		41	
20020730	48					
20020731	48	53		8		46
20020801	46					
20020802	47					
20020803	47					
20020804	49					
20020805	48					
20020806	48					
20020807	50					
20020808	52					
20020809	56					
20020810	52					
20020811	55					
20020812	59					
20020813	66		12		54	
20020814	70					
20020815	76					

20021006	61						
20021007	70						
20021008	66						
20021009	65						
20021010	64						
20021011	65						
20021012	64						
20021013	63						
20021014	63						
20021015	64		10			54	
20021016	64						
20021017	64						
20021018	66						
20021019	67						
20021020	68						
20021021	70						
20021022	70						
20021023	68						
20021024	68						
20021025	69		9			60	
20021026	70						
20021027	67						
20021028	67						
20021029	67						
20021030	66						
20021031	65	66		10			56
20021101	63		9			54	
20021102	60						
20021103	57						
20021104	56						
20021105	55						
20021106	55						
20021107	52						
20021108	48		8			40	
20021109	49						
20021110	68						
20021111	74						
20021112	46						
20021113	51						
20021114	44						
20021115	43						
20021116	41						
20021117	43						
20021118	43						
20021119	39						
20021120	38						
20021121	38						
20021122	37		9			28	
20021123	37						
20021124	37						
20021125	36						

20021126	36						
20021127	35						
20021128	34						
20021129	36						
20021130	37	46	11	9		26	37
20021201	34						
20021202	33						
20021203	33						
20021204	32						
20021205	32						
20021206	31						
20021207	30						
20021208	30						
20021209	30						
20021210	30						
20021211	29						
20021212	27						
20021213	29		9			20	
20021214	35						
20021215	28	31		9			20

20020816		76						
20020817		74						
20020818		69						
20020819		69						
20020820		73						
20020821		70						
20020822		71						
20020823		70		9			61	
20020824		76						
20020825		80						
20020826		72						
20020827		68						
20020828		65						
20020829		66						
20020830		68		7		7	61	
20020831		70	63		9			59
20020901		69						
20020902		69						
20020903		67						
20020904		65						
20020905		65						
20020906		76		11			65	
20020907		71						
20020908		70						
20020909		74						
20020910		77						
20020911		77						
20020912		76						
20020913		73		7			66	
20020914		70						
20020915		68						
20020916		66						
20020917		64						
20020918		63						
20020919		61						
20020920		59		7			52	
20020921		57						
20020922		55						
20020923		54						
20020924		53						
20020925		53				7		
20020926		57						
20020927		57		8			49	
20020928		55						
20020929		55						
20020930		56	64		8			58
20021001		71						
20021002		73						
20021003		63						
20021004		63		10			53	
20021005		62						



Water Resources

Data Category:  Geographic Area:

# Daily Streamflow for Alaska

## USGS 15280000 EKLUTNA C NR PALMER AK

Available data for this site

<p>Municipality Of Anchorage County, Alaska          Hydrologic Unit Code 19020402          Latitude 61°24'15", Longitude 149°08'30" NAD27          Drainage area 119.00 square miles          Gage datum 856.53 feet above sea level NGVD29</p>	<p><b>Output formats</b></p> <p><input type="button" value="Tab-separated data file"/></p> <p><input type="button" value="Graph"/></p> <p><input type="button" value="Reselect output format"/></p>
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DATES: 01/01/1946 to 12/31/1954

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(374.2 cfs)  
 Summer 60% 206.5  
 Winter 30% 103.2

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Water Resources

Data Category:  Geographic Area:

# Calendar Year Streamflow Statistics for Alaska

USGS 15280000 EKLUTNA C NR PALMER AK

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Municipality Of Anchorage County, Alaska Hydrologic Unit Code 19020402 Latitude 61°24'15", Longitude 149°08'30" NAD27 Drainage area 119.00 square miles Gage datum 856.53 feet above sea level NGVD29	<b>Output formats</b> <input type="button" value="HTML table of all data"/> <input type="button" value="Tab-separated data"/> <input type="button" value="Reselect output format"/>
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Year	Annual mean streamflow, in ft <sup>3</sup> /s	Year	Annual mean streamflow, in ft <sup>3</sup> /s	Year	Annual mean streamflow, in ft <sup>3</sup> /s
1947	322	1952	307	1957	111
1948	298	1953	479	1958	28.8
1949	324	1954	346	1959	2.09
1950	309	1955	112	1960	.000
1951	388	1956	81.5	1961	.000

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 0.88 0.66

Water Resources

Data Category:  Geographic Area:

# Monthly Streamflow Statistics for Alaska

USGS 15280000 EKLUTNA C NR PALMER AK

Available data for this site

Municipality Of Anchorage County, Alaska Hydrologic Unit Code 19020402 Latitude 61°24'15", Longitude 149°08'30" NAD27 Drainage area 119.00 square miles Gage datum 856.53 feet above sea level NGVD29	<b>Output formats</b> <input type="button" value="HTML table of all data"/> <input type="button" value="Tab-separated data"/> <input type="button" value="Reselect output format"/>
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YEAR	Monthly mean streamflow, in ft <sup>3</sup> /s											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1946										175	146	143
1947	99.4	86.4	90.2	86.2	77.3	462	1,095	893	388	284	133	136
1948	123	149	127	120	144	508	958	871	157	132	131	134
1949	119	112	75.0	87.4	112	427	833	936	713	195	121	134
1950	133	125	120	111	93.4	501	979	898	409	72.8	126	125
1951	122	69.5	56.5	46.9	99.8	373	1,301	989	1,097	191	138	141
1952	162	122	125	81.0	45.5	296	959	831	365	354	201	120
1953	131	126	129	123	133	897	1,671	1,402	608	205	137	141
1954	140	115	94.0	99.1	139	550	985	1,025	485	212	141	140
1955	120	68.9	.000	.000	.000	.000	189	705	252	2.74	.000	.000
1956	.000	.000	.000	.000	.000	.000	.000	635	337	.71	.000	.000
1957	.000	.000	.000	.000	.000	.000	10.4	779	524	11.4	.20	.000
1958	.000	.000	.000	.000	.000	.000	.000	330	8.40	.000	.000	.000
1959	.000	.000	.000	.000	.000	.000	.000	12.7	12.3	.000	.000	.000
1960	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
1961	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
1962	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
Mean of monthly streamflows	128.7 71.8	113.1 60.9	102.1 51.0	44.3 47.2	105.5 52.8	501.75 251	1097.6 561	480.6 644	527.75 335	262.3 115	141.6 79.6	135.2 75.9

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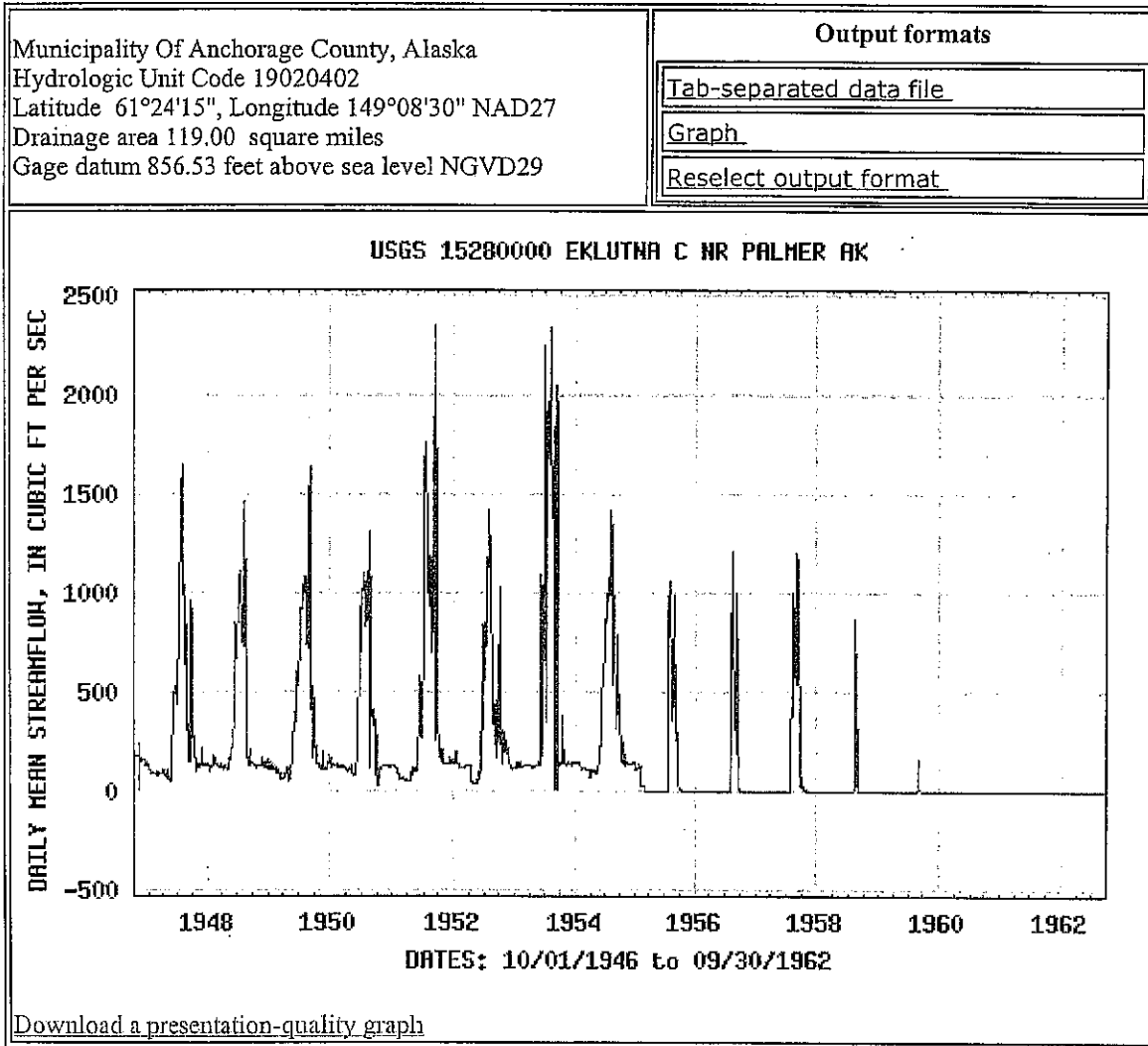
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# Daily Streamflow for Alaska

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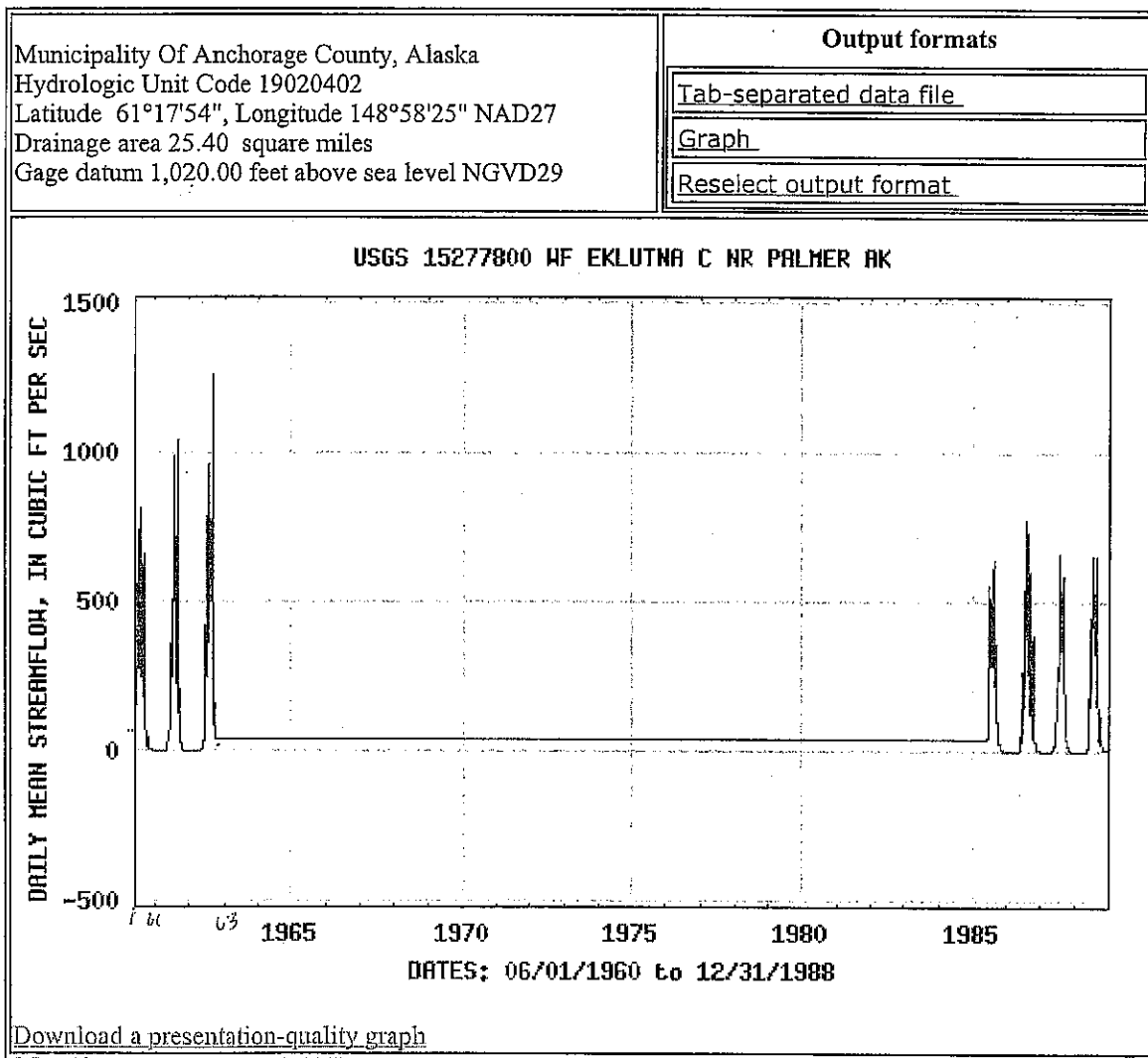
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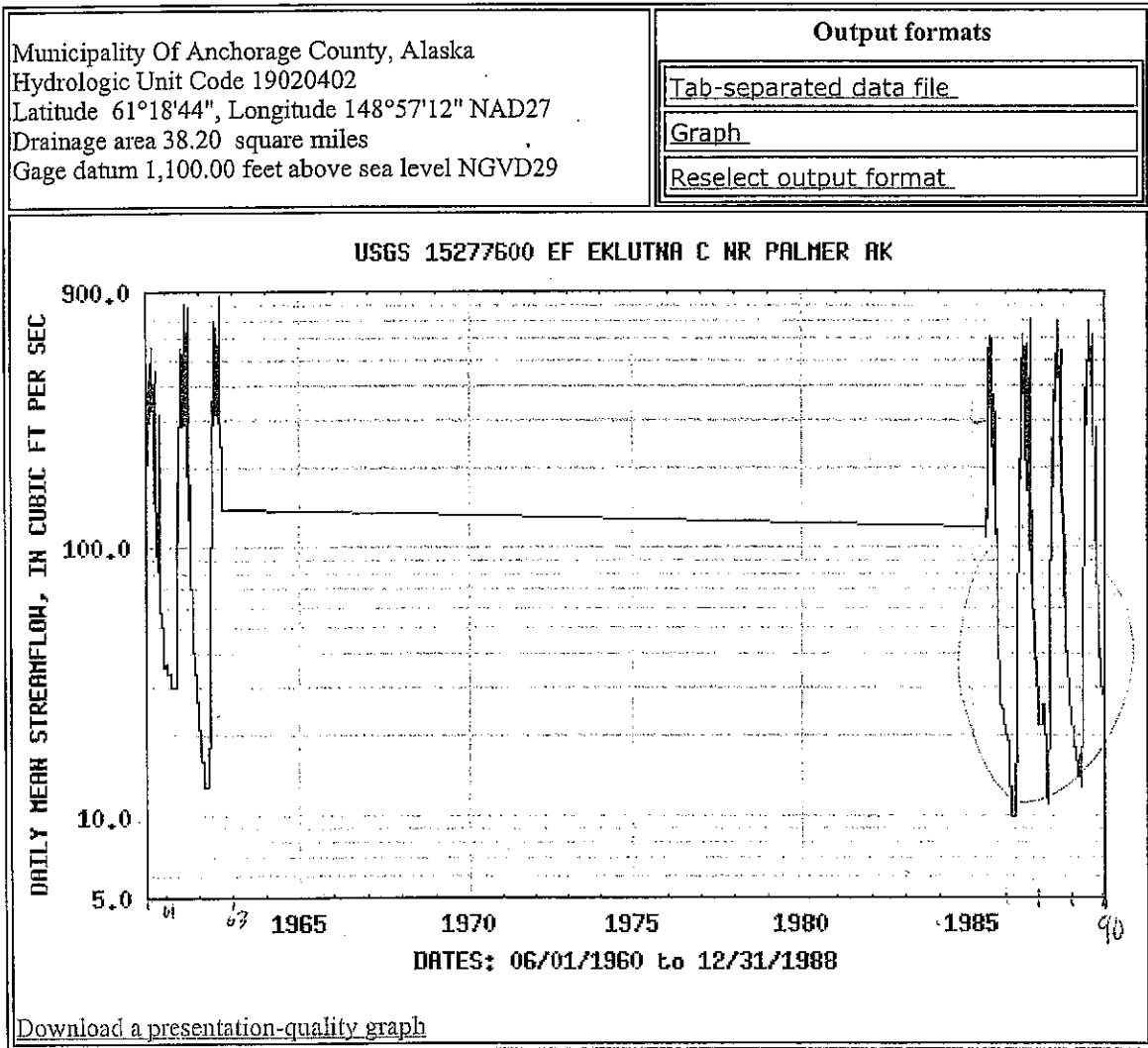
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Data Category:  Geographic Area:

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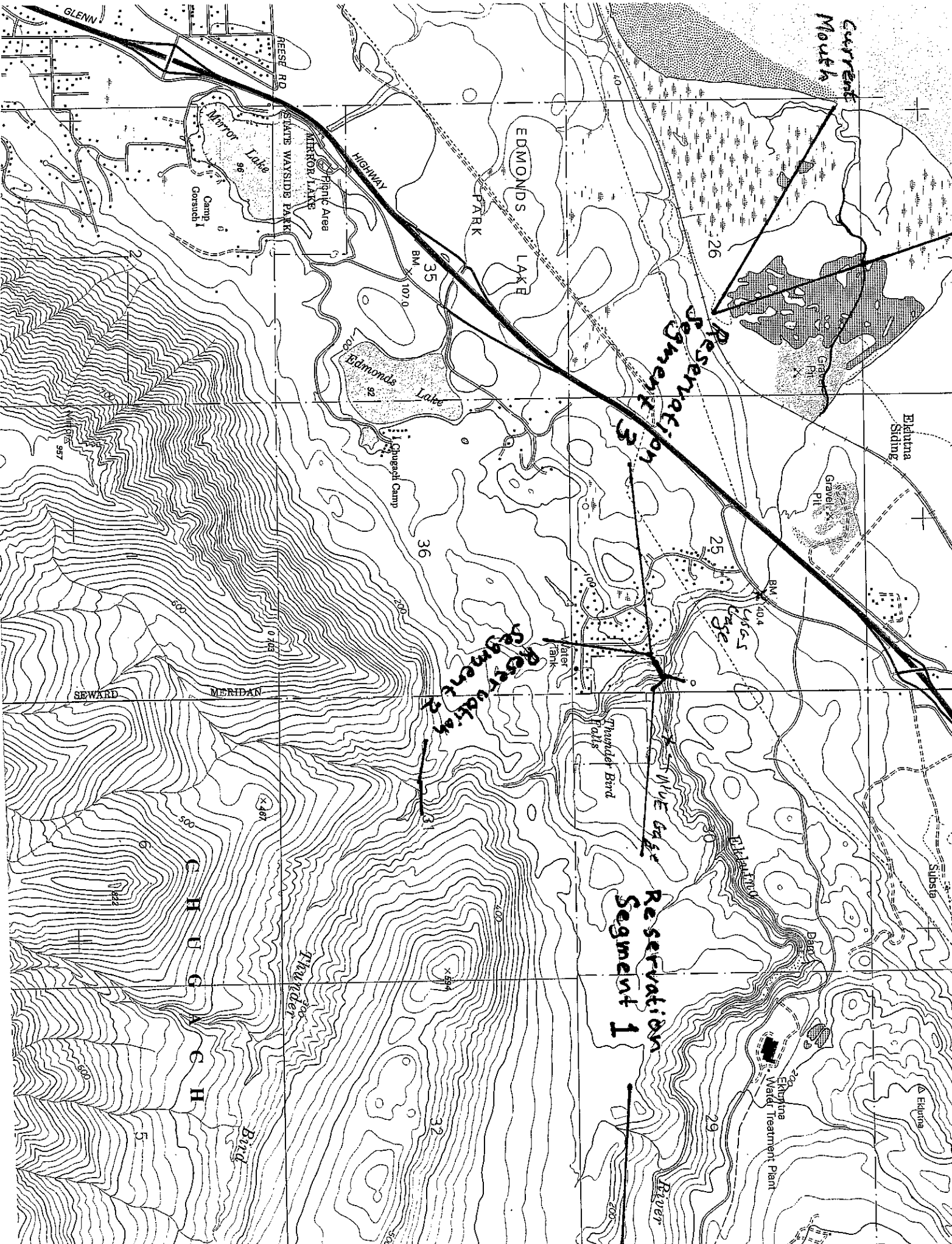


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Current Mouth

Reservation Segment 3

Reservation Segment 2

Reservation Segment 1

GLENN

RESESE RD

HIGHWAY

EDMONDS LAKE

Mirror Lake  
Camp 1  
Goruch

Picnic Area  
MIRROR LAKE

STATE WAYSIDE PARK

PARK

Edmonds Lake

Goruch Camp

Gravel Pit

Ekintna Sliding

Thunder Falls

Thunder Bend

Thunder Lake

Ekintna Water Treatment Plant

Ekintna

Substa

SEWARD

MERIDAN

CHUBGACH

Bird

River