DATA SUMMARY

The following data tables are a summary of existing ADEC monitoring information. Statistical reference is not possible with so few sampling events. However, existing data can identify long term trends.

In comparing results from the original baseline study and the following monitoring studies by ADEC only one sampling location is similar, Cosgrove's Farm. A future monitoring recommendation is to establish a fourth sampling location at an original baseline site, down river at the Charles Forck residence.

TABLE 1

CLEARWATER CREEK
ADEC DATA

	J.LaPerriere BASELINE RANGE	CLEARWATER CREEK COSGROVE FARM 1982-1986	Jun-90	Apr-91	Aug-91	CLEARWATER CREEK N.FORK 1982-86	Jun-90	Aug-91	CLEARWATER CREEK S.FORK 1982-1986	Jun-90	Aug-91	ADEC CRITERIA Water Quality Standards 18 AAC 70
ALKALINITY as CaCO3	100 - 120	70-120	92	91.1	121.3	89 - 150	139	142	83 - 133	120	124.5	Must be 20 or more
CHEMICAL OXYGEN DEMAND	1 - 50	<1 - 14				<1-41			<1 - 14			
FECAL COLIFORM		0 - 23	10		10	0 - 13	<10	<10	0 - 13	<10	<10	Not > 20 FC / 100 ML
COLOR (UNITS)		<5 - 10	<5	35	<5	5 - 10	5	<5	5 - 10	5	<5	Not > 5 Color Units
DISSOLVED OXYGEN	9 - 13	7.9 - 11.9	12.1			7.9 - 12	12.1		8 - 12.5	12.3		Must be >7 mg/L
HARDNESS as CaCO3	100 - 180	143 - 210	73.4		138.6	166 - 233	75.9	164.3	147 - 235	72	142.6	
pH (units)	7.5 - 7.8	7.9 - 8.1	7.8		8.16	7.4 - 8.2	8.1	8.1	6.9 - 8.2	7.6	8.1	Between 6.5 & 8.5
CONDUCTIVITY (umhos/cm)	194 - 300	176 - 197	255	260	198	200 - 232	303	192	185 - 197	289	185	
POTASSIUM (K)	1.32 - 1.92	1.84 - 2.84	8.1	2.2	1.709	1.58 - 2.68	7.8	1.78	2.0 - 2.98	7.7	2.14	
SETTLEABLE SOLIDS			<0.1	<0.2	<0.2	0	<0.1	<0.2	0	<0.1	<0.2	
TANNINS/LIGNINS		0.04 - 0.77	<50	1	0.1		<50	0.2		<50	0.1	
TEMPERATURE (C)	0 - 7.5	2.5 - 7	7		4.1	1.9 - 8	7	4	2.2 - 8	7	3.8	Not > 13C
TOTAL DISSOLVED SOLIDS	82 - 212	170 - 203	197	151	204	179 - 214	230	230	173 - 207	196	216	Not > 500 mg/L
TOTAL SUSPENDED SOLIDS	0.3 - 8.3	<0.1 - 2	6	2.2	<1	<0.1 - 6.5	6	<1	<0.1 - 2.5	6	<1	
TURBIDITY (NTU)	0 - 2.2	0.1 - 0.04	0.1	1.23	0.12	0.08 - 4.5	0.1	0.1	0.2 - 1.17	0.2	0.07	Not > 5 NTU above natural
VOLATILE ORGANICS ug/L		<0.2				<0.2			<0.2			
BENZENE												<5 ug/L
TOLUENE												
XYLENE												
PESTICIDE (MCPA) ug/L					<249			<249		<249		
2,4 D ug/L		<0.05 - <1.0	1		1.2	<0.5	1	<1.2	<0.5	1	<1.2	100 ug/L
2, 4, 5 T ug/L		<0.008 - <1	0.4		0.02	<0.01	0.4	<0.20	<0.008 - <1.0	0.4	<0.20	10 ug/L
ORTHOPHOSPHATE	0.006 - 0.017	<0.01 - 0.02	<0.01		<0.01	0.01 - 0.02	0.01	<0.01	<0.01 - 0.03	0.01	<0.01	
TOTAL PHOSPHORUS	no - 0.018	0.02 - 0.06				0.02 - 0.05			0.01 - 0.03			
DISSOLVED TOTAL PHOSPHORUS	0.002 - 0.028											
SILICA	7 - 18											
METALS												
NICKEL			0.048	<0.015	<0.017		<0.015	<0.017		<0.015	<0.017	Not > 0.074 - 0.183
ZINC			<5	<0.002	<0.002		<5	<0.002		<5	<0.002	Not > .047 mg/L
COPPER			<1	<0.006	<0.007		<1	<0.007		<1	<0.007	Not > 0.009 - 0.025
LEAD			<0.05	<0.001	<0.001		<0.05	<0.001		<0.05	<0.001	Not > 0.002 - 0.009
CADMIUM			<0.01	<0.0001	<0.004		<0.01	<0.004		<0.01	<0.004	Not > 0.033 - 0.002
IRON		0.04 - <0.2	0.239	0.07	<0.008	<0.2 - 0.32	0.08	<0.008	0.07 - 0.2	0.224	<0.008	Not > 1.0 mg/L

NOTES:

1) mg/L unless otherwise specified
2) < means undetectable, the number adjacent to < is the detection limit
3) The ADEC crtieria for Nickel, Copper, Lead, and Cadmium are based on the Creek hardness range of 72 - 235 mg/L as CaCO3.
4) For some metals, the detection limits were not always low enough to compare with Alaska Water Quality Standards.

TABLE 2

WATER SAMPLING ADJACENT TO CLEARWATER CREEK
ADEC DATA

	FIREBREAK N.FORK Apr-83	RHOADS CREEK Jun-84	SAWMILL CREEK ROAD Apr-83 - Jun 84		JACK WARREN & DICKSON RD. Apr-83	REMINGTON & CLEARWATER RD. CULVERT APR-91	RAPESEED WAY GRAVEL PIT
ALKALINITY as CaCO3	19.6				19.9		
CHEMICAL OXYGEN DEMAND	99			134	84		
FECAL COLIFORM	2				179	> 6000	
COLOR (UNITS)			250	100	1300		
DISSOLVED OXYGEN				6.5			
HARDNESS as CaCO3	32			52			
pH (units)	6.7			6.5	5.9		
CONDUCTIVITY (umhos/cm)	52.3			107	52		
POTASSIUM (K)	5.5			16	8.9	5.3	7.632
SETTLEABLE SOLIDS							
TANNINS/LIGNINS	12	22	18	12	9		
TEMPERATURE (C)	12.5			5			
TOTAL DISSOLVED SOLIDS				158	104		
TOTAL SUSPENDED SOLIDS				14	167		
TURBIDITY (NTU)			7.8	0.47	440		
VOLATILE ORGANICS ug/L							
BENZENE						<0.2	
TOLUENE						<0.3	
XYLENE						<0.6	
PESTICIDE (MCPA) ug/L							<249
2,4 D ug/L						<1.2	<1.2
2,4,5 T ug/L						<0.20	<0.2
ORTHOPHOSPHATE							
TOTAL PHOSPHORUS	0.07						
DISSOLVED TOTAL PHOSPHORUS							
SILICA							
METALS							
NICKEL							<0.017
ZINC							<0.002
COPPER							<0.007
LEAD							<0.002
CADMIUM							<0.004
IRON	0.21	45.7		0.76	9.4		0.771

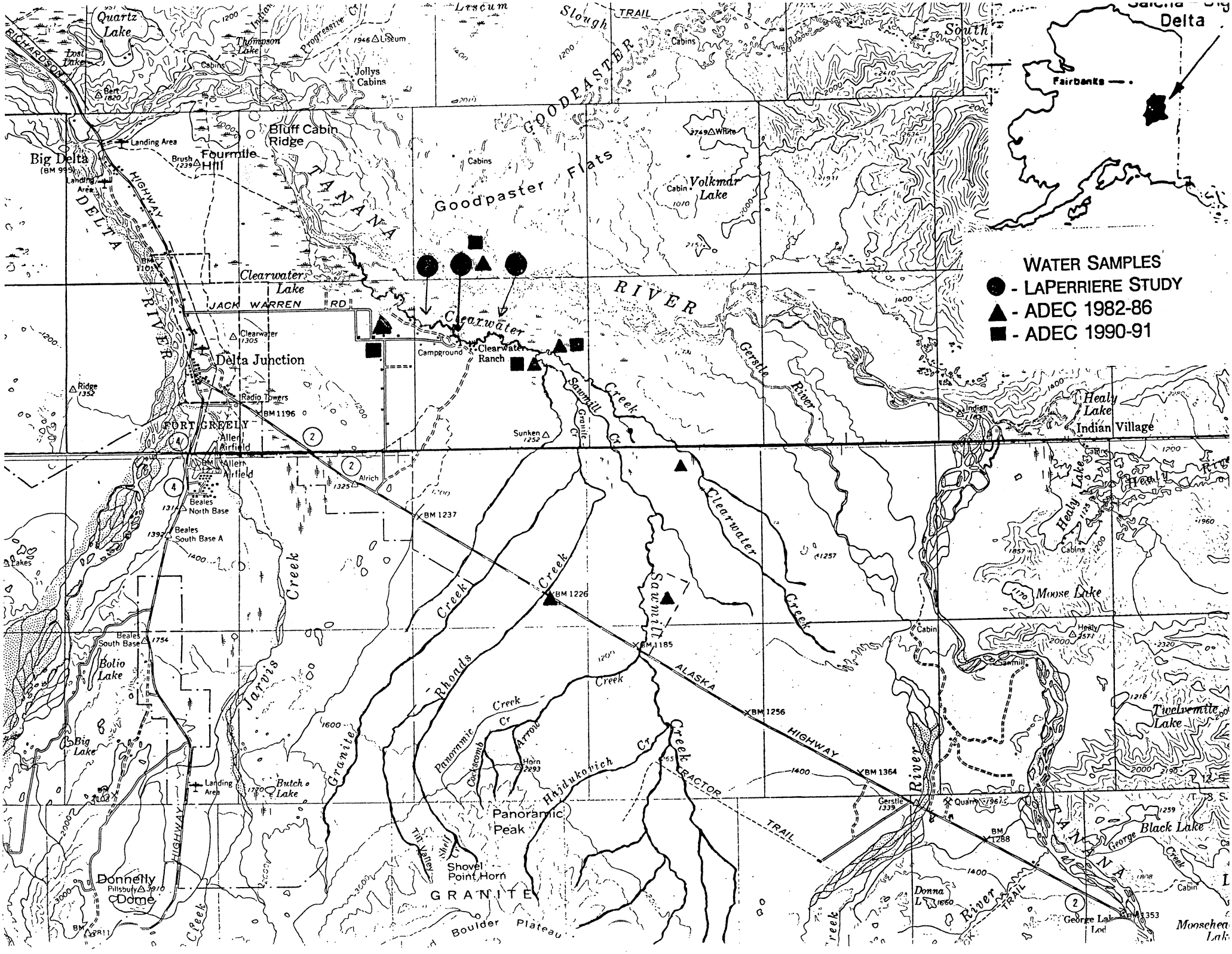
NOTES:
1) mg/L unless otherwise specified
2) < means undetectable, the number adjacent to < is the detection limit

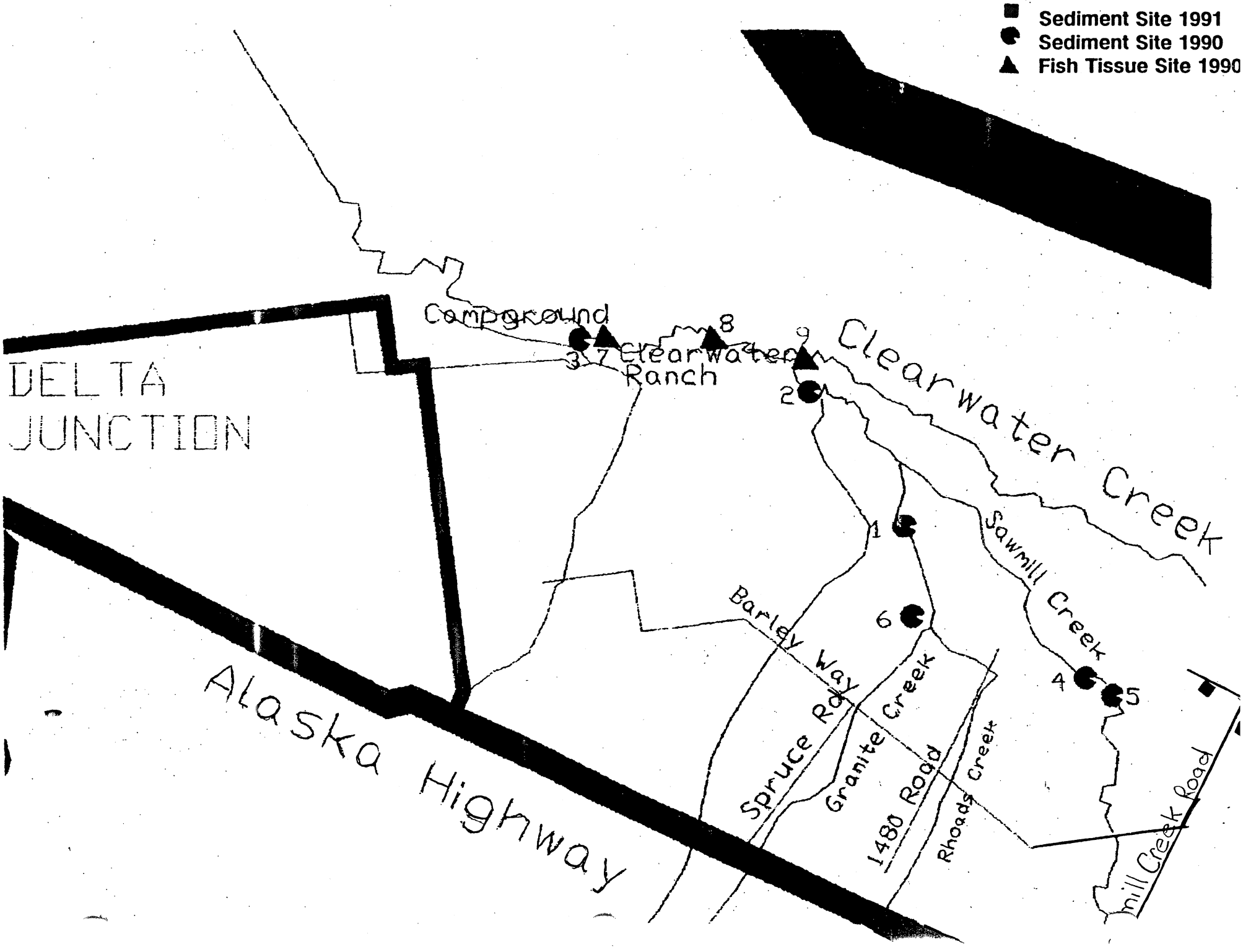
TABLE 3

SEDIMENT AND FISH TISSUE SAMPLING
ADEC DATA

	SAWMILL CREEK ROAD CULVERT Aug-9	RAPESEED WAY GRAVEL PIT Aug-91	GRANITE CR DRAINAGE June-90 #1	CLEARWATER S. FORK June-90 #2	CLEARWATER CAMPGROUND June-90 #3	SAWMILL CR DRAINAGE June-90 #4	SAWMILL CR DRAINAGE June-90 #5	GRANITE CR DRAINAGE June-90 #6	FISH TISSUE June-90 #7	FISH TISSUE June-90 #8	FISH TISSUE June-90 #9
POTASSIUM (mg/dry K	3135	2630									
HERBICIDE (ug/dry Kg)											
MCPP	<100	<100	<1500	<1100	<800	<1000	<800	<800	<30,000	<30,000	<30,000
MCPA	<100	<100									
2,4,5-TP	<0.5	<0.5	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0
2,4,5-T	<0.5	<0.5	<5.0	<1.5	<2.0	<30	<2.0	<2.0	<10	<10	<10
DINOSEB			<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0
DICAMBA	<0.5	<0.5	<2.0	<1.0	<1.0	<3.5	<1.0	<1.0	<5.0	<5.0	<5.0
2,4-D	<0.5	<0.5	<5.0	<3.5	<8.0	<8.0	<8.0	<2.5	<45	<45	<45
2,4-DB	<0.5	<0.5	<300	<20	<190	<30	<15	<15	<1500	<1500	<1500
DALPON	<2	<2	<150	<110	<80	<80	<80	<80	<1400	<1400	<1400
METALS (mg/dry Kg)											
NICKEL	28.7	30.4									
ZINC	74.1	68.3									
COPPER	38.1	38.1									
LEAD	0.5	0.5									
CADMIUM	1.6	1.4									
IRON	33408.4	31638									

NOTES:
1) < means undetectable, the number adjacent to < is the detection limit
2) # number designates location on sediment / fish tissue map


WATER SAMPLES
- LAPERRIERE STUDY
- ADEC 1982-86
- ADEC 1990-91
Delta
Fairbanks
Quartz Lake
Thompson Lake
Jollys Cabins
Bluff Cabin Ridge
Fourmile Hill
Big Delta
Landing Area
Brush
Goodpaster Flats
Volkmar Lake
Clearwater Lake
JACK WARREN RD
Clearwater
Campground
Clearwater Ranch
Delta Junction
Radio Towers
FORT GREELY
Allen Airfield
Beales North Base
Beales South Base A
Alrich
Sunken
Sawmill Cr
Granite Cr
Gerstle River
Healy Lake
Indian Village
Moose Lake
Twelvemile Lake
Black Lake
Bolio Lake
Big Lake
Butch Lake
Jarvis Creek
Rhoads Creek
Panoramic Creek
Cockscomb Cr
Arrow Creek
Hajdukovich Cr
Panoramic Peak
Shovel Point Horn
GRANITE
Boulder Plateau
Donnelly Dome
Pillsbury
Horn
Gerstle
Quarry
Donna L
George Lake
Moosehead Lake
ALASKA HIGHWAY
TRACTOR TRAIL
DELTA RIVER
TANANA RIVER
GOODPASTER
RICHARDSON HIGHWAY
BM 1196
BM 1237
BM 1226
BM 1185
BM 1256
BM 1364
BM 1288
BM 1353


Sediment Site 1991
Sediment Site 1990
Fish Tissue Site 1990
DELTA JUNCTION
Alaska Highway
Campground
Clearwater Ranch
Clearwater Creek
Sawmill Creek
Barley Way
Spruce Rd
Granite Creek
1480 Road
Rhoads Creek
Mill Creek Road
1
2
3
4
5
6
7
8
9