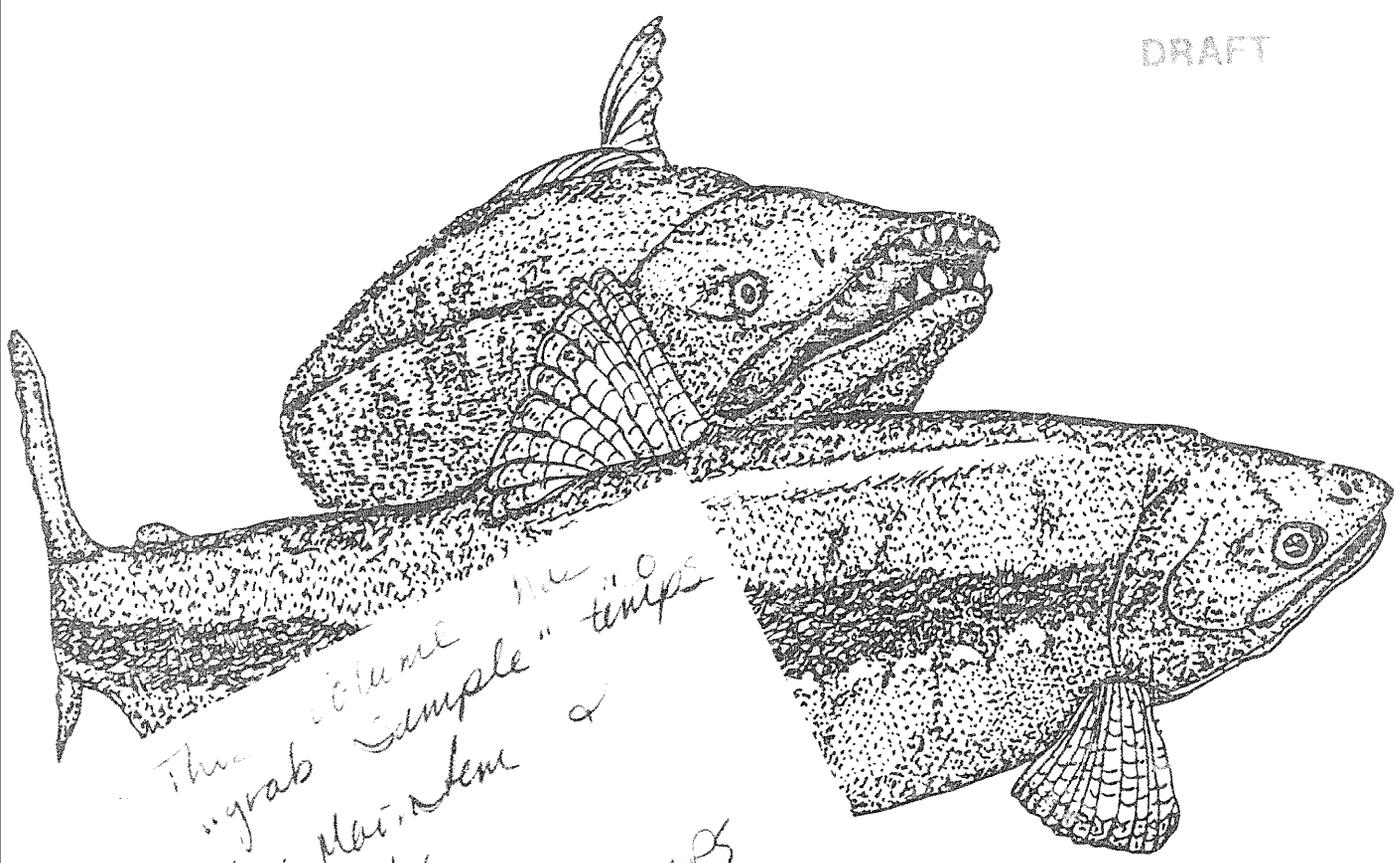


DRAFT



This volume is "0
"grab sample" temps
for maintenance &
also air temps

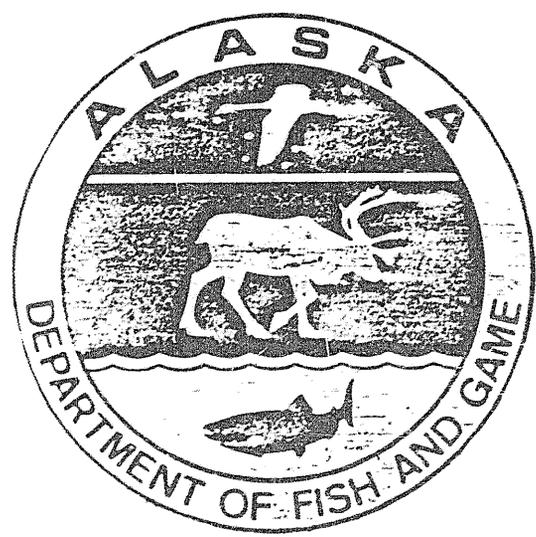
ALASKA HYDRO AQUATIC STUDIES
PHASE II BASIC DATA REPORT

Volume 4: Aquatic
Instream *not used*

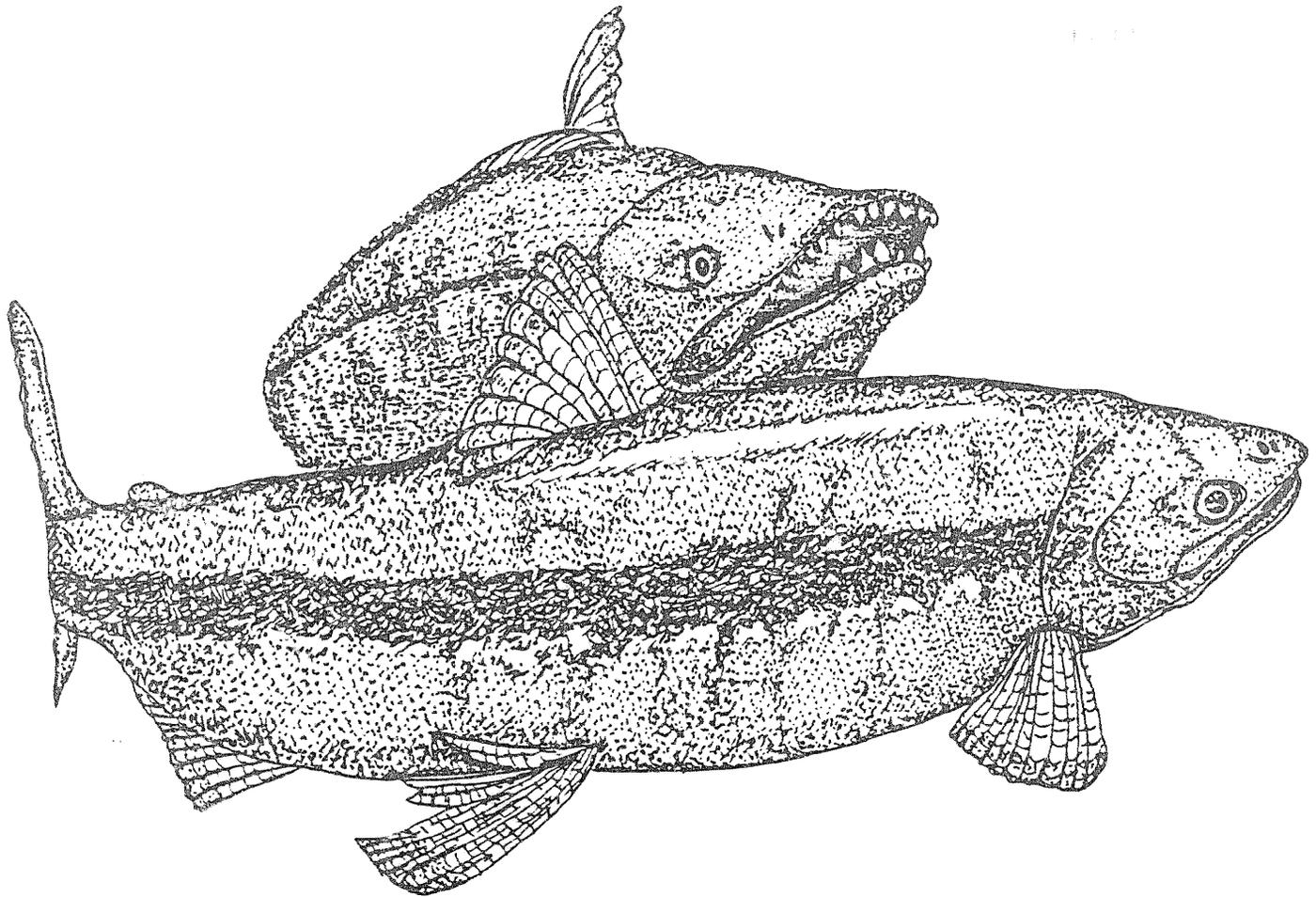
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A9

ARCTIC
ANCHORAGE, AK 99501

-by-



ALASKA DEPARTMENT OF FISH AND GAME
Susitna Hydro Aquatic Studies
2207 Spenard Road
Anchorage, Alaska 99503
1983



SUSITNA HYDRO AQUATIC STUDIES
PHASE II BASIC DATA REPORT

Volume 4: Aquatic Habitat and
Instream Flow Studies 1982

Appendix D
Appendix E



ARCTIC

Al.

707

ANCHORAGE, AK 99501

-by-

ALASKA DEPARTMENT OF FISH AND GAME
Susitna Hydro Aquatic Studies
2207 Spenard Road
Anchorage, Alaska 99503
1983

Listing of Dissolved Gas Decay Data

(Discharge listed x 10000 cfs- Saturometer(Sat.) readings in %Hg)

River Miles	Above Mouth	Below Mouth	O.C. % Saturation	Discharge	Sat.	Temp.	Date	Year	Free Barometer
161.7		-10.7	101.08	14.8	751	11.4	8.12	81	732
161.7		-10.7	101.08	14.8	784	11.4	8.12	81	732
161.7		-10.7	101.08	14.8	789	11	8.11	81	732
149		-10.7	108.72	14.8	811	10.2	8.12	81	741
148.5		-10.7	108.31	14.8	812	10.2	8.12	81	741
161.3		-10.2	100.66	32.3	715	10.3	8.05	81	701
159.9		-8.8	110.20	32.3	783	10.2	8.05	81	702
157.6		-8.5	111.18	32.3	790	10.4	8.05	81	702
155.6		-4.5	113.18	32.3	804	10.4	8.05	81	702
151.3		-2	105.36	32.3	750	10.1	8.05	81	703
150.6		.5	114.99	32.3	818	10.6	8.05	81	703
149		2.1	116.96	32.3	833	10.6	8.05	81	704
146.5		4.6	113.82	32.3	812	10.6	8.05	81	705
102.5		48.6	100.61	34.2	737	9	8.20	81	724
120		31.1	103.31	34.2	752	8.3	8.20	81	720
130.6		20.5	107.13	41.3	779	8	8.21	81	720
136.5		14.6	108.49	41.3	791	8	8.21	81	722
	Slough 20		106.97	41.3	780	8	8.21	81	722
138.3		12.8	108.91	41.3	794	8	8.21	81	722
149.8		1.3	101.56	14.2	742	7.3	9.10	81	723
148.5		2.6	107.68	14.3	784	7.1	9.11	81	721
146.5		4.6	107.13	14.3	780	7.2	9.11	81	721
139.3		11.8	103.80	14.3	757	7.1	9.11	81	722
138.3		12.8	102.96	14.3	752	7.1	9.11	81	723
136.5		14.6	103.22	14.3	754	7.3	9.11	81	723
148.5		2.6	109.10	14.1	793	6.9	9.12	81	720
146.5		4.6	108.13	14.1	786	6.9	9.12	81	720
142.2		8.9	107.13	14.1	780	7.1	9.12	81	721
139.3		11.8	104.20	14.1	760	7.6	9.12	81	722
138.3		12.8	102.95	14.1	751	7.6	9.12	81	722
136.5		14.6	102.67	14.1	749	7.7	9.12	81	722
139.3		11.8	102.92	13.2	761	7.2	9.13	81	732
138.3		12.8	102.10	13.2	755	7.1	9.13	81	732
136.5		14.6	102.92	13.2	761	7.1	9.13	81	732
135.6		15.5	103.06	13.2	762	7.2	9.13	81	732
130.6		20.5	102.71	12.7	753	6.6	9.14	81	726
133.4		17.7	102.98	12.7	755	6.7	9.14	81	726
134.9		16.2	101.89	12.7	747	6.6	9.14	81	726
136.5		14.6	101.21	12.7	742	6.4	9.14	81	726
149.6		1.5	110.88	16	826	7.7	9.02	82	1318
149		2.1	110.61	16	824	7.8	9.02	82	1327
148.5		2.6	109.12	16	813	7.9	9.02	82	1335
147.2		3.9	108.98	16	812	7.8	9.02	82	1348
146.5		4.6	108.98	16	812	7.8	9.02	82	1352
145.9		5.2	108.58	16	809	7.9	9.02	82	1406
144.8		6.3	108.04	16	805	7.9	9.02	82	1418
138.2		12.9	106.08	16	791	8.1	9.02	82	1537
137.3		13.8	106.21	16	792	8.2	9.02	82	1545
136.9		14.2	106.07	16	791	8.2	9.02	82	1550
136.3		14.8	105.80	16	789	8.3	9.02	82	1558
	Gold Creek		100.31	16	748	7.9	9.02	82	1633
144.5		6.6	108.17	16	806	7.9	9.02	82	1422
143.9		7.2	107.36	16	800	7.9	9.02	82	1428
143.2		7.9	106.76	16	796	8.1	9.02	82	1439
142.3		8.8	107.22	16	799	8	9.02	82	1447
141.8		9.3	107.09	16	798	7.9	9.02	82	1452
141		10.1	106.76	16	796	8.1	9.02	82	1503
140.6		10.5	106.76	16	796	8.1	9.02	82	1511
140.1		11	106.63	16	795	8.1	9.02	82	1513
139.7		11.4	106.75	16	796	8.2	9.02	82	1518
139.4		11.7	106.19	16	792	8.4	9.02	82	1524
138.5		12.6	105.93	16	790	8.2	9.02	82	1534
144.5		6.6	111.51	32.5	834	7.8	9.16	82	1347
149.6		1.5	113.00	32.5	845	7.8	9.16	82	1245
146.8		4.3	111.92	32.5	837	7.6	9.16	82	1320
146.5		4.6	111.78	32.5	836	7.6	9.16	82	1328
145.5		5.6	111.78	32.5	836	7.8	9.16	82	1338
144.8		6.3	111.38	32.5	833	7.8	9.16	82	1345
143.2		7.9	110.97	32.5	830	7.8	9.16	82	1401
141.8		9.3	110.16	32.5	824	7.7	9.16	82	1421
140.5		10.6	109.62	32.5	820	7.7	9.16	82	1429
139.7		11.4	109.49	32.5	819	7.7	9.16	82	1443
139.4		11.7	109.35	32.5	818	7.7	9.16	82	1447
138.2		12.9	109.35	32.5	818	7.7	9.16	82	1501
137.4		13.7	108.95	32.5	815	7.7	9.16	82	1507
136.3		14.8	108.41	32.5	811	7.7	9.16	82	1517
	Gold Creek		100.42	16	751	5.7	9.16	82	1545

Dissolved gas analytical methods Appendix.

From Bouck, 1982.

The following formula were used to calculate the various components of the dissolved gas values presented in this report.

Data: Saturatedometer or Tensionometer Readings (mm Hg.) - S
Barometric pressure (mm Hg.) - B
Water temperature (Cent.) - T
Dissolved Oxygen - Initial study (mg./l.) - DO
Bunsen Solubility Coefficient for oxygen - b
(Table lookup value from Weiss, 1970)
Water vapor pressure value - w
(Table lookup values from Weast, 1976)

Total Dissolved gas saturation = $100 \times (S-B)/B$

Total Dissolved gas saturation less water vapor = $100 \times (S-B-w)/B$
(Value reported in this report as Total Dissolved Gas
Supersaturation)

Oxygen pressure = $(DO \times .7 \text{ ml/l.} / b \times 1000\text{ml/l.}) \times 760 \text{ mm Hg.}$

Oxygen % saturation = $\text{Oxygen pressure} \times 100 / (B-w) \times .2095$

Nitrogen pressure = $9877 \times (S - \text{Oxygen pressure} - w)$

Nitrogen saturation (N%) = $\text{Nitrogen pressure} \times 100 / ((.78) \times (B-w))$

References:

Weast, R.C. editor. 1976. Handbook of Chemistry and
Physics, 57th edition. CRC Press, Cleveland, Ohio.

Weiss, R.F. 1970 Solubility of nitrogen and oxygen water and seawater.
Deep - Sea Research 17: 721-735

Appendix Table 4-D-3

REGRESSION ANALYSIS
 FINAL TOTAL DATA FILE
 DATE OF ANALYSIS: 11/11/77
 ANALYSIS OF VARIANCE TABLE

NAME	MEAN	STD. DEV.
HILE	9.636	2.552
Q	21,943.051	9,150,670
CO	7.196	5.737
TEMP	8.092	1.004
SATZ	7.852	2.929
DEF. VAR. LMSAT	1.964	0.515

F TO ENTER = 0, F TO REMOVE = 0, TOLERANCE = 0.0000

DEPENDENT VARIABLE: LMSAT

VAR.	REGRESSION COEFFICIENT	STD. ERROR	F(1, 54)	PARTIAL R ²
HILE	-0.0642	0.0034	346.703	0.8609
Q	0.0000	0.0000	109.406	0.6614
CONSTANT:	1.9280			

STD. ERROR OF EST. = 0.1893
 R SQUARED = 0.8696
 MULTIPLE R = 0.9323

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO
REGRESSION	13.3874	2	6.6937	186.7367
RESIDUAL	2.0074	54	0.0358	
TOTAL	15.3947	56		

HEADER DATA FOR: F:DCASSUM LABEL: FINAL TOTAL DATA FILE
 NUMBER OF CASES: 59 NUMBER OF VARIABLES: 6

OBSERVED	CALCULATED	RESIDUAL	STANDARDIZED RESIDUALS	HILE	Q	CO	TEMP	SATZ	LMSAT		
1	2.105	2.267	-0.162	0	1.30	14200.00	0.00	7.30	8.21	2.11	
2	2.251	2.308	-0.057	0	1.50	16000.00	10.08	7.70	9.50	2.25	
3	2.219	2.326	-0.106	0	1.50	16600.00	10.27	12.00	9.20	2.22	
4	2.565	2.799	-0.234	0	1.50	32500.00	13.86	7.80	13.00	2.56	
5	2.175	2.234	-0.059	0	2.10	14800.00	0.00	10.23	8.80	2.17	
6	2.219	2.769	-0.050	0	2.10	16000.00	10.08	7.80	9.20	2.22	
7	2.814	2.754	0.059	0	2.10	32300.00	0.00	10.60	16.67	2.81	
8	2.208	2.237	-0.029	0	2.60	16000.00	10.08	7.90	9.10	2.21	
9	2.024	2.187	-0.159	0	2.60	14300.00	0.00	7.10	7.60	2.03	
10	2.120	2.202	-0.073	0	2.60	14800.00	0.00	10.20	8.40	2.13	
11	2.197	2.181	0.017	0	11	2.60	14100.00	0.00	6.90	9.00	2.20
12	2.186	2.134	0.052	0	12	3.90	16000.00	10.08	7.80	8.90	2.19
13	2.477	2.619	-0.142	0	13	4.30	32500.00	13.86	7.60	11.90	2.48
14	1.953	2.058	-0.105	0	14	4.60	14300.00	0.00	7.20	7.05	1.95
15	2.460	2.600	-0.140	0	15	4.60	32500.00	13.86	7.60	11.70	2.46
16	2.608	2.594	0.014	0	16	4.60	32300.00	0.00	10.30	13.57	2.61
17	2.084	2.052	0.032	0	17	4.60	14100.00	0.00	6.90	3.04	2.08
18	2.166	2.109	0.077	0	18	4.60	16000.00	10.08	7.90	8.90	2.19
19	2.140	2.070	0.070	0	19	5.20	16000.00	10.08	7.90	8.50	2.14
20	2.460	2.536	-0.076	0	20	5.60	32500.00	13.86	7.80	11.70	2.46
21	2.079	2.000	0.080	0	21	6.30	16000.00	10.08	7.90	8.00	2.08
22	2.425	2.491	-0.066	0	22	6.30	32500.00	13.86	7.80	11.50	2.42
23	2.442	2.471	-0.029	0	23	6.60	32500.00	13.86	7.80	11.50	2.44
24	2.079	1.981	0.099	0	24	6.60	16000.00	10.08	7.90	8.00	2.08
25	1.988	1.942	0.046	0	25	7.20	16000.00	10.08	7.90	7.30	1.99
26	2.389	2.388	0.001	0	26	7.90	32500.00	13.86	7.80	10.90	2.39
27	1.917	1.897	0.020	0	27	7.90	16000.00	10.08	8.10	6.80	1.92
28	1.974	1.839	0.135	0	28	8.80	16000.00	10.08	8.00	7.20	1.97
29	1.954	1.776	0.178	0	29	8.90	14100.00	0.00	7.10	7.06	1.95
30	1.946	1.807	0.139	0	30	9.30	16000.00	10.08	7.90	7.00	1.95
31	2.313	2.298	0.014	0	31	9.30	32500.00	13.86	7.70	10.10	2.31
32	1.917	1.756	0.161	0	32	10.10	16000.00	10.08	8.10	6.80	1.92
33	1.917	1.730	0.187	0	33	10.50	16000.00	10.08	8.10	6.80	1.92
34	2.262	2.215	0.047	0	34	10.60	32500.00	13.86	7.70	9.60	2.26
35	1.887	1.698	0.189	0	35	11.00	16000.00	10.08	8.10	6.60	1.89
36	1.917	1.673	0.244	0	36	11.40	16000.00	10.08	8.20	6.80	1.92
37	2.241	2.163	0.077	0	37	11.40	32500.00	13.86	7.70	9.40	2.24
38	1.825	1.653	0.171	0	38	11.70	16000.00	10.08	8.40	6.20	1.82
39	2.230	2.144	0.086	0	39	11.70	32500.00	13.86	7.70	9.30	2.23
40	1.421	1.590	-0.170	0	40	11.80	14100.00	0.00	7.60	4.14	1.42
41	1.324	1.596	-0.272	0	41	11.80	14300.00	0.00	7.10	3.76	1.32
42	1.792	1.595	0.196	0	42	12.60	16000.00	10.08	6.20	6.00	1.79
43	2.171	2.335	-0.164	0	43	12.80	41300.00	0.00	8.00	6.77	2.17
44	1.068	1.526	-0.458	0	44	12.80	14100.00	0.00	7.60	2.91	1.07
45	1.099	1.532	-0.433	0	45	12.80	14300.00	0.00	7.10	3.00	1.10
46	1.808	1.576	0.232	0	46	12.90	16000.00	10.08	8.10	6.10	1.81
47	2.230	2.067	0.163	0	47	12.90	32500.00	13.86	7.70	9.30	2.23
48	2.186	2.016	0.170	0	48	13.70	32500.00	13.86	7.70	8.90	2.19
49	1.825	1.518	0.308	0	49	13.80	16000.00	10.08	8.20	6.20	1.82
50	1.808	1.493	0.315	0	50	14.20	16000.00	10.08	8.20	6.10	1.81
51	1.160	1.417	-0.257	0	51	14.60	14300.00	0.00	7.30	3.19	1.16
52	0.963	1.411	-0.447	0	52	14.60	14100.00	0.00	7.70	2.67	0.96
53	2.123	2.220	-0.096	0	53	14.80	41300.00	0.00	8.00	8.36	2.12
54	2.116	1.945	0.171	0	54	14.80	32500.00	13.86	7.70	8.30	2.12
55	1.224	1.472	-0.248	0	55	14.80	16600.00	10.27	11.00	3.40	1.22
56	1.758	1.454	0.304	0	56	14.80	16000.00	10.08	8.30	5.80	1.76
57	1.964	1.841	0.103	0	57	20.50	41300.00	0.00	6.00	7.00	1.95
58	1.185	0.750	0.235	0	58	31.10	34200.00	0.00	8.30	3.27	1.18
59	-0.511	-0.173	-0.338	0	59	48.60	14200.00	0.00	9.00	-0.80	-0.51

----- REGRESSION ANALYSIS -----

HEADER DATA FOR: F:DCASH11 LABEL: DGAS DATA FROM 11.8 TO 48.6
 NUMBER OF CASES: 20 NUMBER OF VARIABLES: 6

----- FIVE RIVER DATA RESIDUAL ANALYSIS BY LNSAT SORT -----

INDEPENDENT VARIABLE	MEAN	STD. DEV.
MILE	16.525	8.663
Q	23,580.000	10,931.000
CO	5.112	5.925
TEMP	8.040	0.829
SATS	5.386	2.525
DEPENDENT VARIABLE LNSAT	1.535	0.643

ENTER = 0 , F TO REMOVE = 0 TOLERANCE = 0.0000

DEPENDENT VARIABLE: LNSAT

INDEPENDENT VARIABLE	REGRESSION COEFFICIENT	STD. ERROR	F(1, 17)	PARTIAL R ²
MILE	-0.0705	0.0052	73.691	0.8125
Q	0.0000	0.0000	31.769	0.6514
CONSTANT	1.8346			

STD. ERROR OF EST. = 0.2849
 R SQUARED = 0.8242
 MULTIPLE R = 0.9079

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO
REGRESSION	6.4719	2	3.2359	39.8617
RESIDUAL	1.3800	17	0.0812	
TOTAL	7.8519	19		

HEADER DATA FOR: F:DCASH11 LABEL: DGAS DATA FROM 11.8 TO 48.6
 NUMBER OF CASES: 20 NUMBER OF VARIABLES: 6

	OBSERVED	CALCULATED	RESIDUAL -2.0	STANDARDIZED RESIDUALS	2.0
1	-0.511	-0.336	-0.175		
2	0.963	1.323	-0.360	*	
3	1.068	1.450	-0.382	*	
4	1.099	1.457	-0.358	*	
5	1.160	1.330	-0.170		
6	1.185	0.897	0.288		
7	1.224	1.400	-0.177		
8	1.324	1.528	-0.203		
9	1.421	1.520	-0.099		
10	1.758	1.378	0.379		*
11	1.792	1.533	0.258		*
12	1.808	1.512	0.296		*
13	1.825	1.421	0.388		*
14	1.825	1.449	0.376		*
15	1.946	1.904	0.041		*
16	2.116	1.983	0.133		*
17	2.123	2.320	-0.197		*
18	2.171	2.447	-0.276		*
19	2.186	2.061	0.125		*
20	2.230	2.117	0.113		*

	MILE	Q	CO	TEMP	SATS	LNSAT
1	48.60	34200.00	0.00	9.00	0.60	-0.51
2	14.60	14100.00	0.00	7.70	2.62	0.96
3	17.80	14100.00	0.00	7.60	2.91	1.07
4	12.80	14300.00	0.00	7.10	3.00	1.10
5	14.60	14300.00	0.00	7.30	3.19	1.16
6	31.10	34200.00	0.00	8.30	3.27	1.18
7	14.80	16800.00	10.27	11.00	3.40	1.22
8	11.80	14300.00	0.00	7.10	3.76	1.32
9	11.80	14100.00	0.00	7.60	4.14	1.42
10	14.80	16000.00	10.08	8.30	5.80	1.76
11	12.60	16000.00	10.08	8.20	6.00	1.79
12	12.90	16900.00	10.08	8.10	6.10	1.81
13	14.20	16000.00	10.08	8.20	6.10	1.81
14	13.80	16000.00	10.08	8.20	6.20	1.82
15	20.50	41300.00	0.00	8.00	7.00	1.95
16	14.80	32500.00	13.86	7.70	8.30	2.12
17	14.60	41300.00	0.00	8.00	8.36	2.12
18	12.80	41300.00	0.00	8.00	8.77	2.17
19	13.70	32500.00	13.86	7.70	8.90	2.19
20	12.40	32500.00	13.86	7.70	9.30	2.23

F-STATISTION TEST = 0.8380

Appendix Table 4-D-3 (Continued)

4-D-4

----- REGRESSION ANALYSIS -----
 HEADER DATA FOR: F:DCASSUM LABEL: FINAL TOTAL DATA FILE
 NUMBER OF CASES: 59 NUMBER OF VARIABLES: 6

 TOTAL DATA REGRESSION ANALYSIS SORTED BY LMSAT(DEPENDENT)

INDEX	NAME	MEAN	STD. DEV.
1	MILE	9.636	7.552
2	Q	21,981.051	9,130.670
3	CO	7.396	5.737
4	TEMP	8.092	1.004
5	SATZ	7.853	2.929
DEP. VAR.: LMSAT		1.964	0.515

F TO ENTER = 0, F TO REMOVE = 0, TOLERANCE = 0.0000

DEPENDENT VARIABLE: LMSAT

VAR.	REGRESSION COEFFICIENT	STD. ERROR	F(1, 56)	PARTIAL R ²
MILE	-0.0642	0.0034	346.703	0.8609
Q	0.0000	0.0000	109.406	0.6814
CONSTANT:	1.9280			

STD. ERROR OF EST. = 0.1893
 R SQUARED = 0.8696
 MULTIPLE R = 0.9325

HEADER DATA FOR: F:DCASSUM LABEL: FINAL TOTAL DATA FILE
 NUMBER OF CASES: 59 NUMBER OF VARIABLES: 6

			STANDARDIZED RESIDUALS		MILE	Q	CO	TEMP	SATZ	LMSAT	
OBSERVED	CALCULATED	RESIDUAL -2.0	0	2.0							
1	-0.511	-0.173	-0.335		1	46.60	34200.00	0.09	9.00	6.60	-0.51
2	0.963	1.411	-0.447	*	2	14.60	14100.00	0.00	7.70	2.62	0.96
3	1.068	1.526	-0.458	*	3	12.80	14100.00	0.00	7.60	2.91	1.07
4	1.099	1.532	-0.433	*	4	12.80	14300.00	0.00	7.10	3.00	1.10
5	1.160	1.417	-0.237		5	14.60	14300.00	0.00	7.30	3.19	1.16
6	1.185	0.950	0.235		6	31.10	34200.00	0.00	8.30	3.27	1.18
7	1.224	1.472	-0.248		7	14.80	16600.00	10.77	11.00	3.40	1.22
8	1.224	1.596	-0.272		8	11.80	14300.00	0.00	7.10	3.76	1.32
9	1.421	1.590	-0.170		9	11.80	14100.00	0.00	7.60	4.14	1.42
10	1.758	1.454	0.304		10	14.80	16000.00	10.08	8.30	5.80	1.76
11	1.792	1.595	0.196		11	12.60	16000.00	10.08	8.20	6.00	1.79
12	1.808	1.493	0.315		12	14.70	16000.00	10.08	8.20	6.10	1.81
13	1.808	1.526	0.282		13	12.90	16000.00	10.08	8.10	6.10	1.81
14	1.825	1.453	0.371		14	11.70	16000.00	10.08	8.40	6.20	1.82
15	1.825	1.518	0.306		15	13.80	16000.00	10.08	8.20	6.20	1.82
16	1.857	1.698	0.159		16	11.00	16000.00	10.08	8.10	6.60	1.89
17	1.917	1.897	0.020		17	7.90	16000.00	10.08	8.10	6.30	1.92
18	1.917	1.756	0.161		18	10.10	16000.00	10.08	6.20	6.80	1.92
19	1.917	1.673	0.244		19	11.40	16000.00	10.08	6.10	6.80	1.92
20	1.917	1.730	0.187		20	10.50	16000.00	10.08	6.10	7.00	1.95
21	1.946	1.807	0.139		21	9.30	16000.00	10.08	7.90	7.00	1.95
22	1.946	1.841	0.105		22	20.50	41300.00	0.00	8.00	7.00	1.95
23	1.953	2.058	-0.105		23	6.50	14300.00	0.00	7.70	7.05	1.95
24	1.954	1.776	0.178		24	8.90	14100.00	0.00	7.10	7.06	1.95
25	1.974	1.839	0.135		25	8.80	16000.00	10.08	8.00	7.20	1.97
26	1.988	1.942	0.046		26	7.70	16000.00	10.08	7.90	7.30	1.99
27	2.028	2.187	-0.159		27	2.60	14300.00	0.00	7.10	7.60	2.03
28	2.079	1.981	0.099		28	6.60	16000.00	10.08	7.90	6.00	2.08
29	2.079	2.000	0.080		29	6.30	16000.00	10.08	7.90	6.00	2.08
30	2.084	2.052	0.032		30	4.60	14100.00	0.00	6.90	6.04	2.08
31	2.105	2.267	-0.162		31	1.30	14200.00	0.00	7.30	5.71	2.11
32	2.116	1.945	0.171		32	14.80	32500.00	13.86	7.70	8.30	2.12
33	2.123	2.220	-0.096		33	14.80	41300.00	0.00	5.00	8.36	2.12
34	2.128	2.202	-0.073		34	2.60	14800.00	0.00	10.70	6.40	2.13
35	2.140	2.070	0.070		35	3.20	16000.00	10.08	7.90	8.50	2.14
36	2.171	2.335	-0.164		36	12.80	41300.00	0.00	6.00	6.77	2.17
37	2.175	2.234	-0.059		37	2.10	14800.00	0.00	10.23	8.80	2.17
38	2.186	2.109	0.077		38	4.60	16000.00	10.08	7.80	8.90	2.19
39	2.186	2.154	0.032		39	3.90	16000.00	10.08	7.80	8.90	2.19
40	2.186	2.016	0.170		40	13.70	32500.00	13.86	7.70	8.90	2.19
41	2.197	2.181	0.017		41	7.60	14100.00	0.00	6.90	9.00	2.20
42	2.208	2.237	-0.029		42	7.60	16000.00	10.08	7.90	9.10	2.21
43	2.219	2.326	-0.106		43	1.50	16600.00	10.27	12.00	9.20	2.22
44	2.219	2.269	-0.050		44	7.10	16000.00	10.08	7.80	9.20	2.22
45	2.230	2.067	0.163		45	12.90	32500.00	13.86	7.70	9.30	2.23
46	2.230	2.144	0.086		46	11.70	32500.00	13.86	7.70	9.30	2.23
47	2.241	2.163	0.077		47	11.40	32500.00	13.86	7.70	9.40	2.24
48	2.231	2.308	-0.077		48	6.50	16000.00	10.08	7.70	9.50	2.25
49	2.262	2.215	0.047		49	10.60	32500.00	13.86	7.70	9.60	2.26
50	2.313	2.298	0.014		50	9.30	32500.00	13.86	7.70	10.10	2.31
51	2.389	2.388	0.001		51	7.90	32500.00	13.86	7.80	10.90	2.39
52	2.475	2.491	-0.016		52	6.30	32500.00	13.86	7.80	11.30	2.42
53	2.447	2.471	-0.029		53	6.60	32500.00	13.86	7.80	11.50	2.44
54	2.460	2.536	-0.076		54	5.60	32500.00	13.86	7.80	11.70	2.46
55	2.460	2.600	-0.140		55	4.60	32500.00	13.86	7.60	11.70	2.46
56	2.477	2.619	-0.143		56	4.30	32500.00	13.86	7.60	11.90	2.46
57	2.565	2.789	-0.224		57	1.50	32500.00	13.86	7.80	13.00	2.56
58	2.608	2.594	0.014		58	4.60	32300.00	0.00	10.60	13.57	2.61
59	2.814	2.754	0.059		59	2.10	32300.00	0.00	10.60	16.67	2.81

DURBIN-WATSON TEST = 0.8346

Appendix Table 4-D-3

----- REGRESSION ANALYSIS -----
 HEADER DATA FOR: F:\DCASHM1 LABEL: GAS DATA FROM MILE 0 TO 11.8
 NUMBER OF CASES: 39 NUMBER OF VARIABLES: 6

RESIDUAL ANALYSIS OF UPPER RIVER SORTED BY LMSAT

INDEX	NAME	MEAN	STD. DEV.
1	MILE	6.103	3.427
2	Q	21,164.103	8,125.930
3	CO	8.566	5.341
4	TEMP	8.119	1.092
5	SATZ	9.118	2.250
6	LMSAT	2.184	0.228

F TO ENTER = TO REMOVE = 0 TOLERANCE = 0.0000

DEPENDENT VAR: LMSAT

VAR.	REGRESS	COEFFICIENT	STD. ERROR	F(1, 36)	PARTIAL R ²
MILE	-0.0373		0.0029	162.347	0.8185
Q	0.0000		0.0000	390.234	0.9155
CONSTANT:	1.8955				

STD. ERROR OF EST. = 0.0612
 R SQUARED = 0.9318
 MULTIPLE R = 0.9653

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO
REGRESSION	1.8416	2	0.9208	746.0647
RESIDUAL	0.1347	36	0.0037	
TOTAL	1.9763	38		

HEADER DATA FOR: F:\DCASHM1 LABEL: GAS DATA FROM MILE 0 TO 11.8
 NUMBER OF CASES: 39 NUMBER OF VARIABLES: 6

			STANDARDIZED RESIDUALS			OBSERVED							
	OBSERVED	CALCULATED	RESIDUAL	-2.0	0	2.0	MILE	Q	CO	TEMP	SATZ	LMSAT	
1	1.825	1.849	-0.025				1	11.70	16000.00	10.05	2.40	6.20	1.82
2	1.887	1.875	0.012				2	11.00	16000.00	10.08	8.10	6.60	1.89
3	1.917	1.909	0.008				3	10.10	16000.00	10.06	6.10	6.80	1.92
4	1.917	1.861	0.056				4	11.40	16000.00	10.06	8.20	6.80	1.92
5	1.917	1.894	0.023				5	10.50	16000.00	10.06	8.10	6.80	1.92
6	1.917	1.991	-0.074				6	7.90	16000.00	10.03	8.10	6.80	1.92
7	1.946	1.939	0.007				7	9.30	16000.00	10.08	7.90	7.00	1.95
8	1.953	2.072	-0.119				8	4.60	14300.00	0.00	7.20	7.05	1.95
9	1.954	1.907	0.047				9	8.90	14100.00	0.00	7.10	7.08	1.95
10	1.974	1.957	0.017				10	6.80	16000.00	10.08	8.00	7.20	1.97
11	1.988	2.017	-0.029				11	7.20	16000.00	10.08	7.90	7.30	1.99
12	2.028	2.147	-0.119				12	2.60	14300.00	0.00	7.10	7.60	2.03
13	2.079	2.051	0.028				13	6.20	16000.00	10.08	7.90	8.00	2.08
14	2.079	2.039	0.040				14	6.60	16000.00	10.08	7.90	8.00	2.08
15	2.084	2.068	0.016				15	4.60	14100.00	0.00	6.90	8.04	2.08
16	2.105	2.193	-0.088				16	1.30	14200.00	0.00	7.30	8.27	2.11
17	2.128	2.159	-0.031				17	2.60	14800.00	0.00	10.20	6.40	2.13
18	2.140	2.092	0.049				18	5.20	16000.00	10.06	7.90	8.50	2.14
19	2.175	2.178	-0.003				19	2.10	14800.00	0.00	10.20	8.80	2.17
20	2.186	2.114	0.072				20	4.60	16000.00	10.08	7.90	8.90	2.19
21	2.186	2.140	0.046				21	3.90	16000.00	10.08	7.80	8.90	2.19
22	2.197	2.142	0.055				22	2.40	14100.00	0.00	6.80	9.00	2.20
23	2.208	2.188	0.020				23	2.60	16000.00	10.08	7.90	9.10	2.21
24	2.219	2.244	-0.025				24	1.50	16600.00	10.27	12.00	9.20	2.22
25	2.219	2.207	0.012				25	2.10	16000.00	10.08	7.80	9.20	2.22
26	2.230	2.251	-0.021				26	11.70	32500.00	13.86	7.20	9.30	2.23
27	2.241	2.263	-0.022				27	11.40	32500.00	13.86	7.20	9.40	2.24
28	2.251	2.229	0.022				28	1.50	16000.00	10.08	7.20	9.50	2.25
29	2.262	2.292	-0.031				29	10.60	32500.00	13.86	7.20	9.60	2.26
30	2.313	2.341	-0.028				30	8.30	32500.00	13.86	7.20	10.10	2.31
31	2.389	2.393	-0.004				31	7.90	32500.00	13.86	7.80	10.50	2.39
32	2.425	2.452	-0.027				32	6.30	32500.00	13.86	7.80	11.30	2.42
33	2.442	2.441	0.001				33	6.40	32500.00	13.86	7.80	11.50	2.44
34	2.460	2.516	-0.056				34	6.40	32500.00	13.86	7.60	11.70	2.46
35	2.460	2.479	-0.019				35	7.40	32500.00	13.86	7.80	11.70	2.46
36	2.477	2.527	-0.050				36	6.30	32500.00	13.86	7.60	11.90	2.46
37	2.565	2.631	-0.066				37	1.50	32500.00	13.86	7.80	13.00	2.56
38	2.608	2.514	0.094				38	6.60	32300.00	0.00	10.60	13.57	2.61
39	2.814	2.604	0.210				39	2.10	32300.00	0.00	10.60	16.67	2.81

DURBIN-WATSON TEST = 1.3747

----- REGRESSION ANALYSIS -----
 HEADER DATA FOR: F:DGASHIN LABEL: DGAS DATA FROM 11.8 TO 48.6
 NUMBER OF CASES: 20 NUMBER OF VARIABLES: 6

RESIDUAL PLOT OF SORTED DATA BELOW RIVER MILE 11.8

INDEX	NAME	MEAN	STD.DEV.
1	MILE	16.525	8.663
2	Q	23,580.000	10,931.000
3	CO	5.112	5.925
4	TEMP	8.040	0.829
5	SATZ	5.386	2.525
DEP. VAR.: LNSAT		1.535	0.643

F TO ENTER = 0 , F TO REMOVE = 0 , TOLERANCE = 0.0000

DEPENDENT VARIABLE: LNSAT

VAR.	REGRESSION COEFFICIENT	STD. ERROR	F(1, 17)	PARTIAL r ²
MILE	-0.0705	0.0082	73.691	0.8125
Q	0.0000	0.0000	31.769	0.6514
CONSTANT:	1.8346			

STD. ERROR OF EST. = 0.2849
 R SQUARED = 0.8242
 MULTIPLE R = 0.9079

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO
REGRESSION	6.4719	2	3.2359	39.8617
RESIDUAL	1.3800	17	0.0812	
TOTAL	7.8519	19		

HEADER DATA FOR: F:DGASHIN LABEL: DGAS DATA FROM 11.8 TO 48.6
 NUMBER OF CASES: 20 NUMBER OF VARIABLES: 6

	OBSERVED	CALCULATED	RESIDUAL	STANDARDIZED RESIDUALS		MILE	Q	CO	TEMP	SATZ	LNSAT
1	1.324	1.528	-0.203	*	2.0	11.80	14300.00	0.00	7.10	3.76	1.32
2	1.421	1.520	-0.099	*		11.80	14100.00	0.00	7.60	4.14	1.42
3	1.792	1.533	0.258			12.60	16000.00	10.08	8.20	6.00	1.79
4	1.099	1.457	-0.358	*		12.80	14300.00	0.00	7.10	3.00	1.10
5	2.171	2.447	-0.276	*		12.80	41300.00	0.00	8.00	8.77	2.17
6	1.068	1.450	-0.382	*		12.80	14100.00	0.00	7.60	2.91	1.07
7	2.230	2.117	0.113			12.90	32500.00	13.86	7.70	9.30	2.23
8	1.808	1.512	0.296	*		12.90	16000.00	10.08	8.10	6.10	1.81
9	2.186	2.061	0.125	*		13.70	32500.00	13.86	7.70	8.90	2.19
10	1.825	1.449	0.376	*		13.80	16000.00	10.08	8.20	6.20	1.82
11	1.808	1.421	0.388	*		14.20	16000.00	10.08	8.20	6.10	1.81
12	0.963	1.323	-0.360	*		14.60	14100.00	0.00	7.70	2.62	0.96
13	1.160	1.330	-0.170	*		14.60	14300.00	0.00	7.30	3.19	1.16
14	2.123	2.320	-0.197	*		14.60	41300.00	0.00	8.00	8.36	2.12
15	1.758	1.378	0.379	*		14.80	16000.00	10.08	8.30	5.80	1.76
16	2.116	1.983	0.133	*		14.80	32500.00	13.86	7.70	8.30	2.12
17	1.224	1.400	-0.177	*		14.80	16600.00	10.27	11.00	3.40	1.22
18	1.946	1.904	0.041	*		20.50	41300.00	0.00	8.00	7.00	1.95
19	1.185	0.897	0.288	*		31.10	34200.00	0.00	8.30	3.27	1.18
20	-0.511	-0.336	-0.175	*		48.60	34200.00	0.00	9.00	0.60	-0.51

WILCOXON TEST = 1.6759

Appendix Table 4-D-3

4-D-7

Appendix Table 4-D-3

REGRESSION ANALYSIS
 HEADER DATA FOR F:DCASSUM LABEL: FINAL TOTAL DATA FILE
 NUMBER OF CASES: 59 NUMBER OF VARIABLES: 6

FINAL DATA SUMMARY STATISTICS

INDEX	NAME	MEAN	STD. DEV.
1	MILE	8.634	7.552
2	Q	21,943.051	4,130,620
3	CO	7.396	5.137
4	TEMP	8.092	1.004
5	SATZ	7.453	2.929
6	DEF. VAR. LASAT	1.964	0.513

F TO ENTER = 0, F TO REMOVE = 0, TOLERANCE = 0.0000

DEPENDENT VARIABLE: LASAT

VAR.	REGRESSION COEFFICIENT	STD. ERROR	F(1, 56)	PARTIAL R ²
MILE	-0.0642	0.0034	346.703	0.8609
Q	0.0000	0.0000	109.406	0.6614
CONSTANT	1.9280			

STD. ERROR OF EST. = 0.1893
 R SQUARED = 0.8696
 MULTIPLE R = 0.9325

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO
REGRESSION	13.3874	2	6.6937	186.7367
RESIDUAL	2.0074	56	0.0358	
TOTAL	15.3947	58		

HEADER DATA FOR: F:DCASSUM LABEL: FINAL TOTAL DATA FILE
 NUMBER OF CASES: 59 NUMBER OF VARIABLES: 6

	OBSERVED	CALCULATED	RESIDUAL	STANDARDIZED RESIDUALS		MILE	Q	CO	TEMP	SATZ	LASAT
1	1.068	1.526	-0.458	<	1	12.00	14100.00	0.00	7.60	2.91	1.07
2	0.963	1.411	-0.447	<	2	14.60	14100.00	0.00	7.70	2.62	0.96
3	2.086	2.052	0.032		3	4.60	14100.00	0.00	6.90	0.04	2.08
4	2.197	2.181	0.017		4	2.60	14100.00	0.00	6.90	9.00	2.20
5	1.421	1.590	-0.170		5	11.80	14100.00	0.00	7.60	4.14	1.42
6	1.954	1.776	0.178		6	8.90	14100.00	0.00	7.10	7.06	1.95
7	2.105	2.267	-0.162		7	1.30	14200.00	0.00	7.30	6.21	2.11
8	1.953	2.056	-0.103		8	4.60	14300.00	0.00	7.20	7.05	1.93
9	1.099	1.532	-0.433	<	9	12.80	14300.00	0.00	7.10	3.00	1.10
10	2.028	2.187	-0.159		10	2.60	14300.00	0.00	7.10	7.60	2.03
11	1.324	1.596	-0.272		11	11.80	14300.00	0.00	7.10	2.76	1.32
12	1.160	1.417	-0.257		12	14.60	14300.00	0.00	7.30	3.19	1.16
13	2.178	2.107	0.071		13	2.60	14800.00	0.00	10.20	8.40	2.13
14	2.175	2.234	-0.059		14	2.10	14800.00	0.00	10.20	8.80	2.17
15	1.917	1.730	0.187		15	10.50	16000.00	10.08	8.10	6.80	1.97
16	1.917	1.673	0.244		16	11.40	16000.00	10.08	8.20	6.80	1.97
17	2.219	2.269	-0.050		17	7.10	16000.00	10.08	7.80	9.20	2.22
18	1.917	1.756	0.161		18	10.10	16000.00	10.08	8.10	6.90	1.97
19	2.186	2.109	0.077		19	4.60	16000.00	10.08	7.80	6.90	2.19
20	1.825	1.518	0.306		20	13.80	16000.00	10.08	8.20	6.20	1.82
21	2.079	2.000	0.080		21	6.30	16000.00	10.08	7.90	6.00	2.05
22	1.792	1.595	0.196		22	12.60	16000.00	10.08	8.20	6.00	1.79
23	2.251	2.306	-0.055		23	1.50	16000.00	10.08	7.70	9.50	2.25
24	2.079	1.981	0.099		24	6.60	16000.00	10.08	7.90	6.00	2.08
25	1.968	1.942	0.026		25	7.20	16000.00	10.08	7.90	7.30	1.99
26	1.140	2.070	-0.930		26	5.20	16000.00	10.08	7.90	8.50	2.14
27	1.917	1.897	0.020		27	7.90	16000.00	10.08	8.10	6.80	1.92
28	1.974	1.839	0.135		28	8.80	16000.00	10.08	8.00	7.20	1.97
29	2.206	2.237	-0.031		29	2.60	16000.00	10.08	7.90	9.10	2.21
30	1.946	1.807	0.139		30	9.30	16000.00	10.08	7.90	7.00	1.95
31	1.825	1.653	0.171		31	11.70	16000.00	10.08	8.40	6.20	1.82
32	1.808	1.576	0.232		32	12.90	16000.00	10.08	8.10	6.10	1.81
33	1.808	1.493	0.315		33	14.20	16000.00	10.08	8.20	6.10	1.81
34	2.186	2.154	0.032		34	3.90	16050.00	10.08	7.80	6.90	2.19
35	1.887	1.698	0.189		35	11.00	16000.00	10.08	8.10	6.60	1.89
36	1.758	1.454	0.304		36	14.80	16000.00	10.08	8.30	5.80	1.76
37	1.724	1.472	-0.248		37	14.80	16600.00	10.27	11.00	3.40	1.72
38	2.219	2.326	-0.106		38	1.50	16600.00	10.27	12.00	9.20	2.22
39	2.814	2.754	0.059		39	2.10	32300.00	0.00	10.60	16.67	2.81
40	2.608	2.594	0.014		40	4.60	32300.00	0.00	10.60	13.57	2.61
41	2.241	2.163	0.077		41	11.40	32500.00	13.86	7.70	9.40	2.24
42	2.267	2.215	0.052		42	10.60	32500.00	13.86	7.70	9.60	2.26
43	2.565	2.799	-0.234		43	1.50	32500.00	13.86	7.80	13.00	2.56
44	2.460	2.600	-0.140		44	4.60	32500.00	13.86	7.60	11.70	2.46
45	2.313	2.298	0.014		45	9.30	32500.00	13.86	7.70	10.10	2.31
46	2.230	2.144	0.086		46	11.70	32500.00	13.86	7.70	9.30	2.23
47	2.230	2.067	0.163		47	12.90	32500.00	13.86	7.70	9.30	2.23
48	2.186	2.016	0.170		48	11.70	32500.00	13.86	7.70	8.90	2.19
49	2.460	2.536	-0.076		49	5.60	32500.00	13.86	7.80	11.70	2.46
50	2.477	2.619	-0.143		50	4.30	32500.00	13.86	7.60	11.90	2.46
51	2.425	2.491	-0.066		51	6.30	32500.00	13.86	7.80	11.30	2.42
52	2.442	2.471	-0.029		52	5.60	32500.00	13.86	7.80	11.50	2.44
53	2.116	1.945	0.171		53	14.80	32500.00	13.86	7.70	8.30	2.12
54	2.389	2.388	0.001		54	7.90	32500.00	13.86	7.80	10.90	2.39
55	-0.511	-0.173	-0.338	<	55	48.60	34200.00	0.00	9.00	0.60	-0.51
56	1.185	0.950	0.235		56	31.10	34200.00	0.00	8.30	3.27	1.18
57	2.171	2.335	-0.164		57	12.80	41300.00	0.00	8.00	8.77	2.17
58	1.946	1.841	0.105		58	20.50	41300.00	0.00	8.00	7.00	1.95
59	2.123	2.270	-0.147		59	14.60	41300.00	0.00	8.00	8.36	2.12

Appendix Table 4-D-3 (Continued)

REGRESSION ANALYSIS
 TABLE 4-D-3 (CONTINUED)
 NUMBER OF VARIABLES: 6
 REGRESSION EQUATION TO FIVE-FIELD II

INDEX	NAME	MEAN	STD. DEV.
1	MILE	8.103	1.427
2	Q	21,164.103	8,125.930
3	CO	8.366	5.341
4	TEMP	8.119	1.092
5	SATZ	9.118	2.750
DEF. VAR.:	LNSAT	2.184	0.228

F TO ENTER = 0, F TO REMOVE = 0, TOLERANCE = 0.0000

DEPENDENT VARIABLE: LNSAT

VAR.	REGRESSION COEFFICIENT	STD. ERROR	F(1, 36)	PARTIAL R ²
MILE	-0.0373	0.0029	162.347	0.819
Q	0.0000	0.0000	390.234	0.916
CONSTANT:	1.8955			

STD. ERROR OF EST. = 0.061
 R SQUARED = 0.9318
 MULTIPLE R = 0.9653

ANALYSIS OF VARIANCE TABLE

SOURCE	SUM OF SQUARES	D.F.	MEAN SQUARE	F RATIO
REGRESSION	1.8416	2	0.9208	246.085
RESIDUAL	0.1347	36	0.0037	
TOTAL	1.9763	38		

HEADER DATA FOR: F:DCASHIL -- LABEL: GAS DATA FROM MILE 0 TO 11.8
 NUMBER OF CASES: 39 NUMBER OF VARIABLES: 6

		STANDARDIZED RESIDUALS			MILE	Q	CO	TEMP	SATZ	LNSAT		
OBSERVED	CALCULATED	RESIDUAL	-2.0	0	2.0							
1	2.105	2.193	-0.088			1	1.30	14200.00	0.00	7.30	6.21	2.11
2	2.219	2.244	-0.025			2	1.50	16600.00	10.27	12.00	9.20	2.22
3	2.251	2.229	0.022			3	1.50	16000.00	10.08	7.70	9.50	2.25
4	2.565	2.431	-0.066			4	1.50	32500.00	13.86	7.80	13.00	2.56
5	2.219	2.207	0.012			5	2.10	16000.00	10.06	7.60	9.20	2.22
6	2.814	2.604	0.210			6	2.10	32300.00	0.00	10.60	16.67	2.81
7	2.177	2.178	-0.001			7	2.10	14800.00	0.00	10.23	8.80	2.17
8	2.277	2.188	0.020			8	2.60	16000.00	10.08	7.90	9.10	2.21
9	2.029	2.147	-0.119			9	2.60	14300.00	0.00	7.10	7.60	2.03
10	2.157	2.142	0.055			10	2.60	14100.00	0.00	6.90	9.00	2.20
11	2.122	2.159	-0.031			11	2.60	14800.00	0.00	10.20	8.40	2.13
12	2.186	2.140	0.046			12	1.90	16000.00	10.08	7.80	6.90	2.19
13	2.477	2.527	-0.050			13	4.30	32500.00	13.86	7.60	11.90	2.46
14	2.084	2.068	0.017			14	4.60	14100.00	0.00	6.90	6.04	2.06
15	1.953	2.072	-0.119			15	4.60	14300.00	0.00	7.20	7.05	1.95
16	2.608	2.511	0.097			16	4.60	32300.00	0.00	10.60	13.57	2.61
17	2.460	2.516	-0.056			17	4.60	32500.00	13.86	7.60	11.70	2.46
18	2.166	2.114	0.072			18	4.60	16000.00	10.08	7.80	8.90	2.19
19	2.140	2.092	0.049			19	5.20	16000.00	10.08	7.90	6.50	2.14
20	2.460	2.479	-0.019			20	5.60	32500.00	13.86	7.80	11.70	2.46
21	2.079	2.051	0.028			21	6.30	16000.00	10.08	7.90	8.00	2.08
22	2.425	2.452	-0.028			22	6.30	32500.00	13.86	7.80	11.30	2.42
23	2.442	2.441	0.001			23	6.60	32500.00	13.86	7.30	11.50	2.44
24	2.079	2.039	0.040			24	6.60	16000.00	10.08	7.90	8.00	2.08
25	1.988	2.017	-0.029			25	7.20	16000.00	10.08	7.90	7.30	1.99
26	1.917	1.991	-0.074			26	7.90	16000.00	10.08	8.10	6.80	1.92
27	2.389	2.393	-0.004			27	7.90	32500.00	13.86	7.80	10.90	2.39
28	1.974	1.957	0.017			28	8.30	16000.00	10.08	8.00	7.20	1.97
29	1.954	1.907	0.047			29	8.90	14100.00	0.00	7.10	7.06	1.95
30	1.946	1.939	0.007			30	9.30	16000.00	10.08	7.90	7.00	1.95
31	2.313	2.341	-0.028			31	9.30	32500.00	13.86	7.70	10.10	2.31
32	1.917	1.909	0.006			32	10.10	16000.00	10.06	8.10	6.60	1.92
33	1.917	1.894	0.023			33	10.50	16000.00	10.06	8.10	6.60	1.92
34	2.262	2.292	-0.031			34	10.60	32500.00	13.86	7.70	9.40	2.26
35	1.887	1.875	0.012			35	11.00	16000.00	10.06	8.10	6.60	1.89
36	1.917	1.861	0.056			36	11.40	16000.00	10.06	8.20	6.80	1.92
37	2.241	2.263	-0.022			37	11.40	32500.00	13.86	7.70	9.40	2.24
38	1.925	1.849	-0.025			38	11.70	16000.00	10.06	8.40	6.20	1.82
39	2.210	2.251	-0.021			39	11.70	32500.00	13.86	7.70	9.30	2.23

DURBIN-WATSON TEST = 2.4466

Table 4-D-4 Water Quality.

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements				
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm
<u>MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS</u>												
5.0	Susitna River		S14N07W05DDB	820605	--	--		8.7	9.5	82	7.1	77
5.0	Susitna River		S14N07W05DDB	820528	0935	9.5		6.1	--	--	--	--
5.5	Susitna River		S14N07W05ADB	820528	1000	9.5		6.3	11.9	96	6.8	78
8.5	Susitna River		S15N07W22ACA	820526	--	10.6		6.2	11.9	95	6.6	70
11.0	Susitna River		S15N07W10DCC	820526	--	10.6		6.3	11.3	91	6.3	71
15.0	Susitna River		S16N07W35BDD	820606	1450	10.0		7.6	10.2	87	7.1	69
16.5	Susitna River		S16N07W35BDD	820601	1630	16.5		11.2	6.4	61	6.7	102
16.5	Susitna River		S16N07W22DCD	820528	1215	14.5		6.8	12.0	98	6.8	73
18.2	Susitna River		S16N07W15CDB	820601	1530	17.5		11.2	7.5	69	6.8	100
18.3	Susitna River		S16N07W15CDB	820526	--	14.5		6.9	10.9	90	6.8	82
19.5	Susitna River		S16N07W09DDD	820601	1430	20.0		10.0	7.9	70	6.7	72
21.4	Susitna River		S16N07W04CAC	820601	1400	21.0		10.2	8.2	73	6.7	72
22.8	Susitna River		S16N07W04BBA	820530	1015	14.7		6.3	12.2	100	7.0	64
24.8	Susitna River		S17N07W28ADD	820530	0945	14.7		6.1	11.3	91	6.9	81
25.5	Susitna River		S17N07W22CAA	820531	1615	25.5		11.1	10.3	95	7.1	95
25.8	Susitna River		S17N07W22DCD	820601	1130	18.6		9.3	10.7	94	7.0	72
25.9	Susitna River		S17N07W22DDA	820531	1200	16.5		9.3	10.8	95	6.7	73
26.0	Susitna River		S17N07W22DAA	820531	1030	14.0		8.5	11.1	95	7.1	96
26.3	Susitna River		S17N07W23CAB	820531	1300	22.0		8.8	10.9	94	7.1	66
28.0	Susitna River		S17N07W13DBB	820605	1300	13.0		7.9	11.0	93	7.2	63
31.1	Susitna River		S17N06W18BAA	820605	1345	12.0		7.9	11.5	97	7.2	64
31.8	Susitna River		S17N06W05ABA	820605	1415	12.5		8.2	10.6	90	7.2	67
35.5	Susitna River		S18N06W15CCC	820607	1445	12.0		7.1	12.3	102	7.0	51
36.7	Susitna River		S18N06W15BDB	820530	1430	12.5		6.4	12.0	97	6.9	70
40.6	Deshka River Mouth		S19N06W35BDA	821203	1200	--	--	-0.3	15.6	--	6.3	53
40.6	Deshka River Mouth		S19N06W35BDA	821203	1200	--	--	-0.2	14.8	--	6.5	101
40.6	Deshka River Mouth		S19N06W35BDA	821203	1200	--	--	-0.3	15.0	--	6.6	63
40.6	Deshka River Mouth		S19N06W35BDA	821203	1200	--	--	-0.3	12.2	--	6.7	51
41.3	Susitna River		S19N06W25CCD	820604	1315	16.0	--	8.3	10.8	92	7.1	46
41.4	Susitna River		--	820603	1230	11.5	--	6.8	10.4	85	7.2	66
42.7	Susitna River		S19N06W25AAB	820529	0955	9.5	--	6.1	12.0	96	6.8	53
44.0	Susitna River		S19N05W20CAC	820603	--	17.5	--	8.3	12.4	104	7.5	41
47.0	Susitna River		--	820602	1600	--	--	9.2	11.5	100	7.2	61
49.0	Susitna River		S20N05W34CCD	820524	1115	9.5	--	6.1	12.2	99	6.9	65
49.2	Susitna River		S20N05W34BDD	820529	1130	9.5	--	5.0	12.1	94	6.8	65
53.0	Susitna River		S20N05W16BDB	820529	--	--	--	--	12.0	--	6.9	46
<u>DESIGNATED FISH HABITAT SITES</u>												
73.1	Lower Goose 2 Slough Lower		S23N04W30BBB	820830	1620	--	--	8.7	--	--	--	50
73.1	Q Station		S23N04W30BBB	820915	1330	--	--	7.3	--	--	--	90
73.1	Lower Goose 2		S23N09W30BBB	820830	1400	--	8.4	8.4	--	--	--	34
73.1	Creek Q Station		S23N09W30BBB	820915	1330	15.0	7.2	7.3	--	--	--	28

4-D-16

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
73.1	Creek Q Station		S23N09W30BBB	821001	1030	4.6	3.8	3.7	--	--	--	204	
73.1	Lower Goose 2 Slough, Upper Q Station		S23N09W30BBB	821001	1305	5.0	5.2	5.3	--	--	--	204	
DESIGNATED FISH HABITAT SITES													
73.1	Goose 2 Slough	1	S23N04W30BBB	820610	1330	12.6	5.8	--	--	--	--	3	
73.1	Goose 2 Slough	7	S23N04W30BBB	820610	1330	12.6	7.0	--	--	--	--	45	
73.1	Goose 2 Slough	4	S23N04W30BBB	820610	1345	12.6	8.0	--	--	--	--	49	
73.1	Goose 2 Slough	1	S23N04W30BBB	820625	1420	22.9	--	10.4	1.0	98	7.1	27	6
73.1	Goose 2 Slough	6	S23N04W30BBB	820625	1440	22.9	--	12.8	10.3	97	7.4	80	88
73.1	Goose 2 Slough	7	S23N04W30BBB	820625	1435	22.9	--	12.3	10.7	100	7.3	73	95
73.1	Goose 2 Slough	1	S23N04W30BBB	820713	1520	--	--	11.6	10.6	97	6.8	32	14
73.1	Goose 2 Slough	1	S23N04W30BBB	820713	1320	22.7	--	11.3	10.6	96	7.6	107	110
73.1	Goose 2 Slough	1	S23N04W30BBB	820713	1355	--	--	11.1	10.6	95	27	107	100
73.1	Goose 2 Slough	1	S23N04W30BBB	820728	1255	19.2	--	9.5	--	--	--	28	18
73.1	Goose 2 Slough	1	S23N04W30BBB	820728	1320	19.2	--	10.2	--	--	--	86	110
73.1	Goose 2 Slough	1	S23N04W30BBB	820728	1315	19.2	--	10.2	--	--	--	76	120
73.1	Goose 2 Slough	1	S23N04W30BBB	820811	1420	21.6	--	10.4	10.6	95	7.4	31	2
73.1	Goose 2 Slough	1	S23N04W30BBB	820825	1340	15.2	--	9.8	--	--	--	31	6
73.1	Goose Creek 2 Slough	6	S23N04W30BBB	820825	1600	15.0	--	10.5	8.7	78	6.7	113	99
73.1	Goose Creek 2 Slough	1	S23N04W30BBB	820913	1315	8.4	--	6.2	--	--	--	--	5
73.1	Goose Creek 2 Slough	9	S23N04W30BBB	820913	--	8.4	--	7.4	--	--	--	--	18
73.1	Goose Creek 2 Slough	3	S23N04W30BBB	820913	1245	8.4	--	6.0	--	--	--	71	26
73.1	Goose Creek 2 Slough	1	S23N04W30BBB	820928	1405	--	--	4.7	--	--	--	30	14
73.1	Goose Creek 2 Slough	9	S23N04W30BBB	820928	1430	--	--	5.5	--	--	--	179	22
73.1	Goose Creek 2 Slough	3	S23N04W30BBB	820928	1330	--	--	4.7	--	--	--	68	19

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
<u>MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS</u>													
77.0	Susitna River		S23N04W06ADD	82104	1130	-1.1	--	0.2	--	--	7.6	126	--
77.4	Susitna River		S23N04W06CBB	821014	1130	-1.2	--	0.4	--	--	7.6	131	--
<u>DESIGNATED FISH HABITAT SITES</u>													
78.7	Whitefish Slough		S23N05W01BBC	820916	1020	10.2	9.2	9.3	--	--	--	14	--
	Q Site Main Tributary												
78.7	Whitefish Slough Mouth		S23N05W01BBC	820916	1020	13.2	10.1	10.2	--	--	--	19	--
78.7	Whitefish Slough Mouth		S23N05W01BBC	821002	1515	--	--	10.7	--	--	6.1	33	--
78.7	Whitefish Slough	2	S23N05W01BBC	820712	1420	14.9	--	16.3	8.4	86	6.8	101	46
78.7	Whitefish Slough	2	S23N05W01BBC	820728	1745	15.8	--	16.4	--	--	--	27	18
78.7	Whitefish Slough	3	S23N05W01BBC	820728	1735	15.8	--	10.2	--	--	--	91	120
78.7	Whitefish Slough	2	S23N05W01BBC	820811	1620	21.4	--	15.9	10.7	108	7.3	51	--
78.7	Whitefish Slough	3	S23N05W01BBC	820811	1640	21.4	--	9.5	11.2	98	7.6	89	86
78.7	Whitefish Slough	2	S23N05W01BBC	820825	1700	17.0	--	14.3	8.3	81	6.8	121	25
78.7	Whitefish Slough	3	S23N05W01BBC	820825	1710	17.0	--	9.7	11.3	100	6.5	--	11
78.7	Whitefish Slough	2	S23N05W01BBC	820915	1315	14.3	--	9.2	--	--	--	--	--
78.7	Whitefish Slough	3	S23N05W01BBC	820915	1320	14.3	--	7.6	--	--	--	--	--
78.7	Whitefish Slough	2	S23N05W01BBC	820929	--	--	--	6.1	--	--	--	44	23
78.7	Whitefish Slough	3	S23N05W01BBC	820929	1710	--	--	4.5	12.5	96	5.2	109	55
83.1	Rabideux Creek Slough	1	S24N05W16AAC	820626	1145	21.7	--	16.6	9.3	95	6.8	37	2
83.1	Rabideux Creek Slough	2	S24N05W16AAC	820626	1230	21.7	--	17.2	9.1	95	7.1	44	3
83.1	Rabideux Creek Slough	8	S24N05W16AAC	820729	1329	21.7	--	15.5	9.1	91	7.4	82	85
83.1	Rabideux Creek Slough	1	S24N05W16AAC	820626	1320	13.5	--	13.1	8.9	85	6.2	--	2
83.1	Rabideux Creek Slough	2	S24N05W16AAC	820729	1515	--	--	13.5	9.3	89	6.6	27	4
83.1	Rabideux Creek Slough	7	S24N05W16AAC	820729	1600	--	--	13.0	9.1	85	6.4	40	10
83.1	Rabideux Creek Slough	1	S24N05W16AAC	820812	1155	--	--	12.6	10.0	94	6.0	27	--
83.1	Rabideux Creek Slough	2	S24N05W16AAC	820812	1140	--	--	12.6	10.0	94	6.4	29	--
83.1	Rabideux Creek Slough	3	S24N05W16AAC	820812	1530	--	--	9.8	11.0	97	7.5	83	--
83.1	Rabideux Creek Slough	1	S24N05W16AAC	820826	1330	19.8	--	14.2	11.0	106	7.1	52	3
83.1	Rabideux Creek Slough	2	S24N05W16AAC	820826	1613	19.0	--	15.6	9.2	85	7.2	69	9
83.1	Rabideux Creek Slough	3	S24N05W16AAC	820826	1632	19.0	--	12.2	9.6	89	7.5	85	13
83.1	Rabideux Creek Slough	1	S24N05W16AAC	820914	--	8.7	--	--	--	--	--	--	2
83.1	Rabideux Creek Slough	2	S24N05W16AAC	820914	1415	11.2	--	8.3	--	--	--	23	3
83.1	Rabideux Creek Slough	3	S24N05W16AAC	820914	1600	9.4	--	6.5	--	--	--	61	160
83.1	Rabideux Creek Slough	3	S24N05W16AAC	820929	1740	--	--	6.0	11.1	89	6.3	29	7
83.1	Rabideux Creek Slough	1	S24N05W16AAC	820929	1630	--	--	6.1	10.6	85	5.8	29	3
83.1	Rabideux Creek Slough	2	S24N05W16AAC	820929	1645	--	--	5.1	11.8	92	6.5	96	41

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp°C	Water (Mercury) Temp°C	HydroLab Measurements					
								Water Temp°C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
DESIGNATED FISH HABITAT SITES													
83.1	Rabideux Creek Free Flowing Q Site		S24N05W16ADC	820913	1400	--	7.5	7.6	12.0	100	6.2	30	--
83.1	Rabideux Creek Free Flowing Q Site		S24N05W16ADC	821002	1400	6.8	5.2	5.2	11.9	94	6.2	31	--
83.1	Rabideux Creek		S24N05W16ADC	820913	1800	--	7.8	--	--	--	--	27	--
83.1	Rabideux Creek		S24N05W16ADC	821002	1640	6.6	5.4	5.5	12.0	95	6.1	35	--
85.7	Sunshine Creek	Side Ch. 1	S24N05W14BAB	820609	1455	16.0		10.8	--	--	--	--	1
85.7	Sunshine Creek	Side Ch. 2	S24N05W14BAB	820609	1600	16.0		11.5	--	--	--	--	2
85.7	Sunshine Creek	Side Ch. 3	S24N05W14BAB	820609	1645	16.0		7.2	--	--	--	--	4
85.7	Sunshine Creek	Side Ch. -	S24N05W14BAB	820610	--	--	--	--	--	--	--	--	1
85.7	Sunshine Creek	Side Ch. 1	S24N05W14BAB	820624	1520	--	--	16.2	9.7	99	6.7	50	2
85.7	Sunshine Creek	Side Ch. 2	S24N05W14BAB	820624	1642	27.1		16.4	9.7	99	6.8	55	2
85.7	Sunshine Creek	Side Ch. 3	S24N05W14BAB	820624	1630	--		12.1	10.8	100	7.4	74	45
85.7	Sunshine Creek	Side Ch. 2	S24N05W14BAB	820712	1700	21.4		14.0	10.1	98	6.7	59	100
85.7	Sunshine Creek	Side Ch. 4	S24N05W14BAB	820712	1720	21.3		11.3	10.6	97	7.1	93	3
85.7	Sunshine Creek	Side Ch. 1	S24N05W14BAB	820727	1430	--		13.0	--	--	--	--	3
85.7	Sunshine Creek	Side Ch. 2	S24N05W14BAB	820727	1245	15.2		12.4	--	--	--	--	--
85.7	Sunshine Creek	Side Ch. 1	S24N05W14BAB	820810	1415	14.0		11.8	10.5	97	6.8	43	--
85.7	Sunshine Creek	Side Ch. 3	S24N05W14BAB	820810	1730	10.5		10.5	10.7	95	7.2	81	--
85.7	Sunshine Creek	Side Ch. 1	S24N05W14BAB	820824	1324	14.0		12.8	10.7	101	--	55	< 1
85.7	Sunshine Creek	Side Ch. 2	S24N05W14BAB	820824	1222	14.0		12.3	9.4	88	6.7	63	5
85.7	Sunshine Creek	Side Ch. 3	S24N05W14BAB	820824	1648	16.3		12.5	--	--	6.7	--	--
85.7	Sunshine Creek	Side Ch. 6	S24N05W14BAB	820824	1428	17.0		12.4	5.9	55	6.7	125	67
85.7	Sunshine Creek	Side Ch. 1	S24N05W14BAB	820912	1435	9.4		7.8	13.4	110	7.2	27	1
85.7	Sunshine Creek	Side Ch. 2	S24N05W14BAB	820912	1625	9.8		8.1	13.1	110	7.3	47	9
85.7	Sunshine Creek	Side Ch. 3	S24N05W14BAB	820912	1615	9.4		7.4	13.8	114	7.3	71	48
85.7	Sunshine Creek	Side Ch. 9	S24N05W14BAB	820912	1410	9.4		6.1	6.6	53	6.9	136	1
85.7	Sunshine Creek	Side Ch. 1	S24N05W14AAB	820930	1435	--	--	6.0	11.2	90	5.6	45	8
85.7	Sunshine Creek	Side Ch. 2	S24N05W14AAB	820930	1445	--	--	6.0	11.2	90	5.6	45	4
85.7	Sunshine Creek	Side Ch. 3	S24N05W14AAB	820930	1510	--	--	6.2	10.8	87	6.3	48	4

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidi NTU
<u>DESIGNATED FISH HABITAT SITES</u>													
85.7	Sunshine Creek Q Station		S24N05W14AAB	820805	1830	--	15.0	15.1	9.5	94	6.4	56	--
85.7	Sunshine Creek Q Station		S24N05W14AAB	820918	1552	--	--	7.9	--	--	--	39	--
85.7	Sunshine Creek Mouth		S24N05W14AAB	820901	1220	--	11.5	11.5	9.9	91	6.6	45	--
85.7	Sunshine Creek Mouth		S24N05W14AAB	821004	1100	--	3.6	3.6	11.8	89	6.4	57	--
85.7	Sunshine Creek Q Station		S24N05W14AAB	820901	1645	--	--	9.9	10.8	95	7.1	111	--
85.7	Sunshine Creek Q Station		S24N05W14AAB	820918	1543	12.0	6.3	6.3	--	--	--	90	--
<u>MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS</u>													
85.7	Sunshine Slough		S24N05W14AAB	820525	--	--	--	6.4	11.4	92	7.1	54	--
<u>DESIGNATED FISH HABITAT SITES</u>													
88.4	Birch Creek Slough	1	S25N05W25DCC	820604	1755	--	--	13.1	11.4	108	7.0	72	1
88.4	Birch Creek Slough	7	S25N05W25DCC	820604	1845	--	--	11.6	11.6	106	7.0	95	6
88.4	Birch Creek Slough	4	S25N05W25DCC	820604	1645	13.8	--	9.2	12.8	108	7.2	138	5
88.4	Birch Creek Slough	1	S25N05W25DCC	820623	1250	18.9	--	15.3	10.1	100	6.9	60	2
88.4	Birch Creek Slough	6	S25N05W25DCC	820623	1245	18.9	--	9.3	11.9	102	7.2	60	3
88.4	Birch Creek Slough	7	S25N05W25DCC	820623	1312	18.9	--	13.1	11.1	105	7.0	101	2
88.4	Birch Creek Slough	1	S25N05W25DCC	820711	1200	15.9	--	16.0	9.3	94	6.8	70	38
88.4	Birch Creek Slough	6	S25N05W25DCC	820711	1155	15.9	--	9.8	10.6	94	6.6	165	76
88.4	Birch Creek Slough	7	S25N05W25DCC	820711	1250	16.0	--	14.2	10.0	97	6.6	104	60
88.4	Birch Creek Slough	1	S25N05W25DCC	820726	1345	19.0	--	14.9	10.5	104	6.7	57	3
88.4	Birch Creek Slough	6	S25N05W25DCC	820726	1330	18.7	--	8.7	10.9	94	6.4	150	32
88.4	Birch Creek Slough	7	S25N05W25DCC	820726	1230	18.4	--	12.1	10.1	94	6.4	70	22
88.4	Birch Creek Slough	1	S25N05W25DCC	820809	1245	17.8	--	15.0	--	--	7.1	--	4
88.4	Birch Creek Slough	4	S25N05W25DCC	820809	1230	17.8	--	8.7	--	--	7.7	--	6
88.4	Birch Creek Slough	5	S25N05W25DCC	820809	1220	17.8	--	--	--	--	--	--	40
88.4	Birch Creek Slough	1	S25N05W25DCC	820823	1632	18.0	--	14.5	9.6	94	6.8	85	1
88.4	Birch Creek Slough	2	S25N05W25DCC	820823	1900	17.8	--	14.3	8.5	83	6.7	94	2
88.4	Birch Creek Slough	3	S25N05W25DCC	820823	1915	17.8	--	11.6	10.6	98	7.3	106	82
88.4	Birch Creek Slough	1	S25N05W25DCC	820911	1725	8.8	--	9.7	13.4	116	7.1	81	2
88.4	Birch Creek Slough	2	S25N05W25DCC	820911	1830	8.9	--	9.7	12.0	105	7.4	89	2
88.4	Birch Creek Slough	3	S25N05W25DCC	820911	1845	8.9	--	8.0	13.3	112	7.4	104	3
88.4	Birch Creek Slough	6	S25N05W25DCC	820911	1500	8.8	--	--	--	--	--	--	4
88.4	Birch Creek Slough	1	S25N05W25DCC	820928	1115	4.4	--	5.2	10.9	85	5.5	77	7
88.4	Birch Creek Slough	2	S25N05W25DCC	820928	1115	4.4	--	5.2	10.9	85	5.5	77	7
88.4	Birch Creek Slough	3	S25N05W25DCC	820928	1115	4.4	--	4.7	11.5	90	6.7	88	21

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Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	Hydrolab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidi NTU
<u>DESIGNATED FISH HABITAT SITES</u>													
88.4	Birch Creek Q Station		S25N05W25DDC	820805	1607	16.2	17.2	17.4	9.2	97	6.6	54	
88.4	Birch Creek Q Station		S25N05W25DDC	820903	1220	--	11.0	11.9	--	--	--	63	
88.4	Birch Creek Q Station		S25N05W25DDC	820919	1140	5.6	8.5	8.5	--	--	--	55	
88.4	Birch Creek Q Station		S25N05W25DDC	821003	1340	5.8	6.2	6.1	11.4	92	6.6	69	
88.4	Birch Creek Slough Lower Q Station		S25N05W25DDC	820805	1607	16.2	--	15.4	9.9	99	6.8	92	
88.4	Birch Creek Slough Lower Q Station		S25N05W25DDC	820903	1130	--	7.8	9.7	--	--	--	105	
88.4	Birch Creek Slough Lower Q Station		S25N05W25DDC	820919	1100	5.6	5.6	7.4	--	--	--	88	
88.4	Birch Creek Slough Lower Q Station		S25N05W25DDC	821003	1515	--	--	5.5	11.3	90	6.7	120	
88.4	Birch Creek Slough		S25N05W25DDC	820919	1215	--	5.3	5.3	--	--	--	152	
<u>MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS</u>													
89.2	Birch Creek Mouth		S25N05W25DCC	820624	--	--	--	15.3	10.0	99	6.8	50	
91.5	Trapper Creek Mouth		S25N05W15DBA	820605	--	--	--	10.0	--	--	--	--	
<u>DESIGNATED FISH HABITAT SITES</u>													
101.2	Whiskers Creek Slough	1	S26N05W03ADB	820603	1835	16.0		10.4	--	--	--		3
101.2	Whiskers Creek Slough	4	S26N05W03ADB	820603	1900	16.0		6.9	--	--	--		36
101.2	Whiskers Creek Slough	2	S26N05W03ADB	820603	1800	16.0		10.8	--	--	--		2
101.2	Whiskers Creek Slough	7	S26N05W03ADB	820603	1820	16.0		9.4	--	--	--		13
101.2	Whiskers Creek Slough	1	S26N05W03ADB	820604	1340	--		9.5	12.5	109	6.8	27	--
101.2	Whiskers Creek Slough	4	S26N05W03ADB	820604	1250	--		7.2	13.3	108	7.2	66	60 --
101.2	Whiskers Creek Slough	2	S26N05W03ADB	820604	1215	--		8.6	12.2	104	6.2	28	--
101.2	Whiskers Creek Slough	7	S26N05W03ADB	820604	1200	13.5		8.6	13.0	110	6.7	44	--
101.2	Whiskers Creek Slough	4	S26N05W03ADB	820621	1630	--		9.4	11.4	100	7.3	69	--
101.2	Whiskers Creek Slough	1	S26N05W03ADB	820621	1440	15.8		11.4	10.7	106	7.4	25	2
101.2	Whiskers Creek Slough	9	S26N05W03ADB	820621	1405	15.0		11.2	10.9	99	6.6	26	3
101.2	Whiskers Creek Slough	7	S26N05W03ADB	820621	1410	15.8		9.7	11.1	97	7.0	50	42
101.2	Whiskers Creek Slough	1	S26N05W03ADB	820710	1130	16.1		12.2	9.3	86	6.1	20	3
101.2	Whiskers Creek Slough	7	S26N05W03ADB	820710	1220	16.1		12.4	9.2	86	6.2	43	7
101.2	Whiskers Creek Slough	9	S26N05W03ADB	820710	1205	16.1		11.5	8.8	81	6.5	93	41

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	Hydrolab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
DESIGNATED FISH HABITAT SITES													
101.2	Whiskers Creek Slough	1	S26N05W03ADB	820725	1210	--		10.5	--	--	--	18	40
101.2	Whiskers Creek Slough	9	S26N05W03ADB	820725	1215	12.8		10.5	--	--	--	18	42
101.2	Whiskers Creek Slough	7	S26N05W03ADB	820725	1300	--		10.4	--	--	--	--	72
101.2	Whiskers Creek Slough	1	S26N05W03ADB	820726	1740	18.2		11.9	9.9	92	5.8	21	--
101.2	Whiskers Creek Slough	9	S26N05W03ADB	820726	1740	18.2		11.9	9.9	92	5.8	19	--
101.2	Whiskers Creek Slough	7	S26N05W03ADB	820726	1720	18.2		11.7	9.8	90	6.1	24	--
101.2	Whiskers Creek Slough	1	S26N05W03ADB	820807	1530	14.4		12.2	9.8	89	6.7		41
101.2	Whiskers Creek Slough	2	S26N05W03ADB	820807	1500	14.4		12.2	--	--	6.7		3
101.2	Whiskers Creek Slough	3	S26N05W03ADB	820807	1450	14.4		12.4	10.0	93	6.8		5
101.2	Whiskers Creek Slough	1	S26N05W03ADB	820822	1320	17.0		10.7	7.9	71	6.7	31	6
101.2	Whiskers Creek Slough	2	S26N05W03ADB	820822	1208	16.0		11.8	9.3	85	6.7	30	2
101.2	Whiskers Creek Slough	3	S26N05W03ADB	820822	1154	15.0		11.6	10.9	100	6.8	46	31
101.2	Whiskers Creek Slough	9	S26N05W03ADB	820822	1342	20.0		10.7	8.6	78	6.6	64	3
101.2	Whiskers Creek Slough	9	S26N05W03ADB	820909	1630	11.8		8.4	6.4	55	7.1	68	--
101.2	Whiskers Creek Slough	1	S26N05W03ADB	820909	1500	13.0		9.3	13.0	112	7.1	27	5
101.2	Whiskers Creek Slough	2	S26N05W03ADB	820909	1445	13.0		9.8	12.9	112	7.3	27	5
101.2	Whiskers Creek Slough	3	S26N05W03ADB	820909	1445	13.0		9.5	13.3	115	7.0	49	21
101.2	Whiskers Creek Slough	1	S26N05W03ADB	820928	1700	4.4		4.5	--	--	--	24	2
101.2	Whiskers Creek Slough	9	S26N05W03ADB	820928	1710	4.4		--	--	--	--	--	2
101.2	Whiskers Creek Slough	3	S26N05W03ADB	820928	1700	4.4		4.5	--	--	--	24	2
101.2	Whiskers Creek Q Station		S26N05W03AAC	820816	1700	--	11.6	11.5	10.4	96	6.2	25	
101.2	Whiskers Creek Q Station		S26N05W03AAC	820903	1800	--		9.4	--	--	5.8	26	
101.2	Whiskers Creek Q Station		S26N05W03AAC	820920	1705	--		7.5	--	--	--	14	
101.2	Whiskers Creek Slough		S26N05W03AAC	820816	1630	--	9.8	9.8	8.3	72	6.3	79	
101.2	Whiskers Creek Slough		S26N05W03AAC	820903	1730	--		8.2	--	--	6.3	89	
101.2	Whiskers Creek Slough		S26N05W03AAC	820920	1530	--		6.7	--	--	--	88	
101.2	Whiskers Creek Slough		S26N05W03ADB	821002									
101.2	Transect 1		S26N05W03ADB	821002	1145	--	--	4.3	12.1	93	6.3	29.0	
101.2	Transect 2		S26N05W03ADB	821002	1120	--	--	3.3	8.9	67	6.3	81.0	
101.2	Transect 3		S26N05W03ADB	821002	1115	7.6	--	3.5	8.4	63	6.0	67.0	
101.2	Transect 4		S26N05W03ADB	821002	1130	--	--	4.1	12.0	91	6.3	27.0	

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Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidi NTU
DESIGNATED FISH HABITAT SITES													
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	821011	1810	--	--	--	--	--	--	--	8
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	821009	1700	--	--	--	--	--	--	--	9
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	821010	1815	--	--	--	--	--	--	--	8
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	821008	1250	--	--	--	--	--	--	--	10
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	821007	1630	--	--	--	--	--	--	--	10
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	821006	1350	--	--	--	--	--	--	--	12
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	821005	1830	--	--	--	--	--	--	--	14
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	821003	1300	--	--	--	--	--	--	--	18
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	821002	1000	--	--	--	--	--	--	--	18
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820907	1100	--	--	--	--	--	--	--	39
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820908	1100	--	--	--	--	--	--	--	37
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820906	1830	--	--	--	--	--	--	--	48
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820821	1800	--	--	--	--	--	--	--	162
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820828	1000	--	--	--	--	--	--	--	140
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820828	1135	--	--	--	--	--	--	--	140
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820929	1010	--	--	--	--	--	--	--	36
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	821001	1900	--	--	--	--	--	--	--	23
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820930	1400	--	--	--	--	--	--	--	28
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820824	1700	--	--	--	--	--	--	--	146
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820820	1400	--	--	--	--	--	--	--	162
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820827	1220	--	--	--	--	--	--	--	162
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820928	0800	--	--	--	--	--	--	--	48
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820912	0830	--	--	--	--	--	--	--	39
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820825	1900	--	--	--	--	--	--	--	202
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820909	1005	--	--	--	--	--	--	--	36
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820814	1155	--	--	--	--	--	--	--	142
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820826	1820	--	--	--	--	--	--	--	190
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820905	1045	--	--	--	--	--	--	--	48
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820911	1300	--	--	--	--	--	--	--	49
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820927	1030	--	--	--	--	--	--	--	60
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820926	1630	--	--	--	--	--	--	--	76
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820910	1010	--	--	--	--	--	--	--	47
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820815	1645	--	--	--	--	--	--	--	199
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820925	0900	--	--	--	--	--	--	--	102
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820817	1300	--	--	--	--	--	--	--	288
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820913	1110	--	--	--	--	--	--	--	35
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820816	1915	--	--	--	--	--	--	--	232
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820924	1430	--	--	--	--	--	--	--	156
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820923	1650	--	--	--	--	--	--	--	178
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820914	1150	--	--	--	--	--	--	--	65
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820922	0925	--	--	--	--	--	--	--	284
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820920	1430	--	--	--	--	--	--	--	154
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820921	1005	--	--	--	--	--	--	--	182

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Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
DESIGNATED FISH HABITAT SITES													
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820918	1024	--	--	--	--	--	--	--	268
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820915	0915	--	--	--	--	--	--	--	73
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820917	1315	--	--	--	--	--	--	--	128
103.0	Talkeetna Fishwheel	-	S27N05W26DDD	820916	1015	--	--	--	--	--	--	--	134
111.5	Gash Creek Side Channel	1	S28N05W24ADA	820607	1150	9.4	--	5.6	14.4	114	6.6	31	2
111.5	Gash Creek Side Channel	3	S28N05W24ADA	820607	1205	9.4	--	6.1	14.2	114	6.8	49	10
111.5	Gash Creek Side Channel	1	S28N05W24ADA	820722	1605	--	--	10.0	11.4	102	6.7	--	--
111.5	Gash Creek Side Channel	4	S28N05W24ADA	820722	1610	--	--	12.4	10.7	100	7.0	--	--
111.5	Gash Creek Q Station		S28N05W24ADA	820818	1328	--	--	10.5	10.5	94	6.7	94	--
112.3	Slough 6A	2	S28N05W13CAC	820606	1425	--	--	8.8	12.8	110	6.8	66	4
112.3	Slough 6A	3	S28N05W13CAC	820606	1435	--	--	7.6	13.9	115	7.2	79	16
112.3	Slough 6A	2	S28N05W13CAC	820620	1240	10.0	--	11.1	12.5	114	6.6	60	4
112.3	Slough 6A	3	S28N05W13CAC	820620	1210	10.0	--	8.2	11.2	95	7.3	75	31
112.3	Slough 6A	2	S28N05W13CAC	820709	1150	19.0	--	15.0	9.6	95	6.8	82	40
112.3	Slough 6A	3	S28N05W13CAC	820709	1050	19.0	--	13.7	9.8	94	6.7	113	150
112.3	Slough 6A	2	S28N05W13CAC	820723	1100	11.4	--	10.4	8.9	80	6.3	50	--
112.3	Slough 6A	3	S28N05W13CAC	820723	1055	11.4	--	10.9	10.7	97	6.8	94	26
112.3	Slough 6A	2	S28N05W13CAC	820807	--	--	--	--	--	--	--	--	4
112.3	Slough 6A	3	S28N05W13CAC	820807	--	--	--	--	--	--	--	--	120
112.3	Slough 6A	2	S28N05W13CAC	820821	1433	20.2	--	11.7	8.9	82	6.7	61	4
112.3	Slough 6A	3	S28N05W13CAC	820821	1405	19.8	--	13.4	10.3	99	7.1	31	110
112.3	Slough 6A	2	S28N05W13CAC	820910	1245	14.3	--	8.1	11.9	100	7.8	49	4
112.3	Slough 6A	3	S28N05W13CAC	820910	1315	14.3	--	8.2	13.4	112	7.7	116	51
112.3	Slough 6A	2	S28N05W13CAC	820925	1355	6.8	--	4.9	--	--	--	28	3
112.3	Slough 6A	3	S28N05W13CAC	820925	1350	6.8	--	5.0	--	--	--	--	60
112.3	Slough 6A Mouth		S28N05W13CAC	820921	1040	8.8	6.2	6.3	--	--	--	41	--
ADULT ANADROMOUS FISH INVESTIGATIONS													
112.3	Slough 6A		S28N05W13CAC3	821002									
112.3	Transect 1		S28N05W13CAC3	821002	1400	5.1	--	4.3	11.1	85	6.1	57	
112.3	Transect 2		S28N05W13CAC3	821002	1420	--	--	4.6	10.6	82	4.3	58	
112.3	Transect A		S28N05W13CAC3	821002	1432	--	--	4.4	12.7	98	6.0	52	
DESIGNATED FISH HABITAT SITES													
113.6	Lane Creek Slough	6	S28N05W12ADD	820607	1430	14.0	--	6.5	10.9	89	6.9	67	--
113.6	Lane Creek Slough	1	S28N05W12ADD	820607	1435	14.0	--	4.4	14.5	110	7.1	26	3

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Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements				
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm
<u>ADULT ANADROMOUS FISH INVESTIGATIONS</u>												
113.6	Lane Creek Slough		S28N04W07BCB3	821002								
113.6	Transect 1		S28N04W07BCB3	821002	1459	5.0	--	5.3	10.2	80	5.7	80.0
113.6	Transect 2		S28N04W07BCB3	821002	1514	--	--	5.0	9.4	74	5.7	74.0
113.6	Transect 3		S28N04W07BCB3	821002	1526	--	--	5.6	8.9	71	5.5	56.0
<u>MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS</u>												
114.4	Susitna River		S28N04W06CAB	820909	1615	16.2	--	10.6	13.4	120	7.5	85
114.4	Susitna River		S28N04W06CAB	820909	1615	16.2	--	10.5	14.0	125	6.9	79
<u>DESIGNATED FISH HABITAT SITES</u>												
120.7	Mainstem Curry	3	S29N04W10BCD	820608	1515	--	--	--	--	--	--	--
120.7	Mainstem Curry	8	S29N04W10BCD	820623	1530	--	--	11.2	11.1	101	7.5	79
120.7	Mainstem Curry	3	S29N04W10BCD	820623	1545	--	--	11.8	11.5	106	7.7	77
120.7	Mainstem Curry	8	S29N04W10BCD	820707	1115	21.8	--	13.4	9.8	94	6.5	114
120.7	Mainstem Curry	3	S29N04W10BCD	820707	1125	--	--	13.1	10.1	95	7.2	113
120.7	Mainstem Curry	4	S29N04W10BCD	820728	1830	16.2	--	12.1	8.5	79	7.5	112
120.7	Mainstem Curry	3	S29N04W10BCD	820728	1830	16.2	--	12.3	9.0	84	7.6	113
<u>ADULT ANADROMOUS FISH INVESTIGATIONS</u>												
125.2	Slough 8A	-	S30N03W20DCC									
125.2	Transect 1	-	S30N03W20DCC	820826	1643	20.8	--	14.5	10.3	101	7.0	153.0
125.2	Transect 1	-	S30N03W20DCC	820906	1530	--	--	8.3	10.9	93	7.0	126.0
125.2	Transect 2	-	S30N03W20DCC	820906	1514	--	--	7.3	10.3	85	6.9	119.0
125.2	Transect 3	-	S30N03W20DCC	820826	1632	--	--	13.1	8.4	80	6.9	142.0
125.2	Transect 3	-	S30N03W20DCC	820906	1506	--	--	7.4	9.6	80	6.9	120.0
125.2	Transect 4	-	S30N03W20DCC	820826	1610	--	--	11.5	9.5	87	6.8	145.0
125.2	Transect 4	-	S30N03W20DCC	820906	1459	--	--	7.2	10.5	87	6.8	120.0

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidi NTU
125.2	Transect 5	-	S30N03W20DCC	820822	1345	18.5	--	12.4	9.0	84	6.7	111.0	--
125.2	Transect 5	-	S30N03W20DCC	820826	1550	--	--	16.3	10.5	107	6.7	117.0	--
125.2	Transect 5	-	S30N03W20DCC	820906	1439	--	--	7.8	11.0	92	6.7	98.0	--
125.2	Transect 6	-	S30N03W20DCC	820822	1400	21.0	--	12.8	--	--	--	104.0	--
125.2	Transect 6	-	S30N03W20DCC	820826	1543	--	--	15.2	10.3	100	6.8	107.0	--
125.2	Transect 6	-	S30N03W20DCC	820906	1435	--	--	7.7	10.8	90	6.6	92.0	--
125.2	Transect 6	-	S30N03W20DCC	821003	1249	--	--	3.4	--	--	6.3	53.0	--
125.2	Transect 7	-	S30N03W20DCC	820826	1533	--	--	15.6	10.4	104	6.9	101.0	--
125.2	Transect 7	-	S30N03W20DCC	820906	1419	12.0	--	7.7	10.8	90	6.5	93.0	--
125.2	Transect 8	-	S30N03W20DCC	821003	1240	--	--	2.9	--	--	6.5	53.0	--
125.2	Transect 9	-	S30N03W20DCC	821003	1230	--	--	2.8	--	--	6.5	35.0	--
125.2	Transect 10	-	S30N03W20DCC	821003	1225	--	--	2.6	--	--	6.4	34.0	--
125.2	Transect 11	-	S30N03W20DCC	821003	1215	--	--	2.4	--	--	5.6	58.0	--
125.2	Transect 12	-	S30N03W20DCC	821003	1205	--	--	4.0	--	--	6.6	93.0	--
125.2	Transect 13	-	S30N03W20DCC	821003	1200	--	--	4.2	10.3	79	6.5	65.0	--
125.2	Transect 14	-	S30N03W20DCC	821003	1150	--	--	5.1	8.8	69	6.5	140.0	--
125.2	Transect 15	-	S30N03W20DCC	821003	1136	--	--	3.3	10.8	80	6.9	132.0	--
125.2	Transect 16	-	S30N03W20DCC	821003	1056	4.2	--	2.6	10.5	77	6.7	124.0	--
DESIGNATED FISH HABITAT SITES													
125.3	Slough 8A	4	S30N03W30BCD	820608	1700	--	--	7.7	10.6	89	6.5	86	34
125.3	Slough 8A	6	S30N03W30BCD	820608	1615	--	--	7.7	10.3	86	6.4	96	--
125.3	Slough 8A	3	S30N03W30BCD	820608	1600	--	--	7.9	10.4	87	6.4	96	32
125.3	Slough 8A	1	S30N03W30BCD	820623	0945	15.0	--	7.4	11.6	96	7.1	131	2
125.3	Slough 8A	2	S30N03W30BCD	820623	1210	--	--	8.9	11.8	98	7.4	128	2
125.3	Slough 8A	3	S30N03W30BCD	820623	1130	--	--	9.3	10.7	93	7.3	123	9
125.3	Slough 8A	1	S30N03W30BCD	820712	1330	11.9	--	10.1	8.6	76	6.9	158	16
125.3	Slough 8A	2	S30N03W30BCD	820712	1320	11.9	--	10.3	8.7	78	6.9	168	--
125.3	Slough 8A	3	S30N03W30BCD	820712	1230	11.9	--	11.0	9.9	89	7.5	121	200
125.3	Slough 8A	1	S30N03W30BCD	820728	1200	18.0	--	7.6	8.6	72	6.8		< 1
125.3	Slough 8A	2	S30N03W30BCD	820728	1700	21.0	--	10.1	8.9	79	6.7		< 1
125.3	Slough 8A	3	S30N03W30BCD	820728	1800	21.3	--	12.3	8.8	82	7.3		68
125.3	Slough 8A	1	S30N03W30BCD	820811	1320	--	--	10.5	--	--	--		1
125.3	Slough 8A	2	S30N03W30BCD	820811	1345	17.8	--	10.5	--	--	--		2
125.3	Slough 8A	3	S30N03W30BCD	820811	1520	--	--	12.1	--	--	--		148
125.3	Slough 8A	1	S30N03W30BCD	820821	1510	--	--	12.1	9.7	90	7.0		1
125.3	Slough 8A	2	S30N03W30BCD	820821	1420	18.0	--	14.0	10.6	101	7.1		< 1
125.3	Slough 8A	3	S30N03W30BCD	820821	1650	--	--	13.3	10.1	96	7.8		88
125.3	Slough 8A	1	S30N03W30BCD	820907	1350	13.2	--	8.8	10.9	94	6.7		2
125.3	Slough 8A	2	S30N03W30BCD	820907	1325	13.2	--	9.1	10.7	93	6.7		1
125.3	Slough 8A	3	S30N03W30BCD	820907	1425	--	--	9.4	10.5	92	7.2		22
125.3	Slough 8A	1	S30N03W30BCD	820924	1300	8.2	--	4.2	11.1	84	6.9		< 1

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Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					Turbidity NTU
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	
125.3	Slough 8A	2	S30N03W30BCD	820924	1355	--	--	4.3	11.1	85	6.9		2
125.3	Slough 8A	3	S30N03W30BCD	820924	1545	--	--	4.7	12.8	99	7.5	130	81
<u>MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS</u>													
128.6	Susitna River	-	S30N03W16BCA	820907	1200	12.0	-	8.8	12.3	105	7.1	106	--
128.6	Susitna River	-	S30N03W16BCA	820907	1200	12.0	--	8.8	12.3	105	7.4	104	--
128.6	Susitna River	-	S30N03W16BCA	820907	1200	12.0	--	9.1	12.1	104	7.7	112	--
128.6	Susitna River	-	S30N03W16BCA	820907	1200	12.0	--	8.8	11.8	101	7.7	116	--
<u>DESIGNATED FISH HABITAT SITES</u>													
129.2	Slough 9	3	S30N03W16BDC	820622	1200	17.0	--	10.1	12.2	108	7.4	93	52
129.2	Slough 9	4	S30N03W16BDC	820622	1030	14.8	--	9.0	12.9	110	7.5	87	33
129.2	Slough 9	6	S30N03W16BDC	820622	1130	16.0	--	9.2	13.4	115	7.3	91	48
129.2	Slough 9	3	S30N03W16BDC	820610	1315	--	--	7.3	10.9	91	6.8	78	13
129.2	Slough 9	4	S30N03W16BDC	820610	1200	12.1	--	7.1	11.2	93	6.7	81	47
129.2	Slough 9	6	S30N03W16BDC	820610	1315	--	--	7.3	10.9	91	6.8	68	15
129.2	Slough 9	3	S30N03W16BDC	820713	1445	--	--	12.5	10.7	101	7.7	113	99
129.2	Slough 9	4	S30N03W16BDC	820713	1240	17.4	--	11.9	10.4	96	7.5	122	43
129.2	Slough 9	3	S30N03W16BDC	820727	1930	--	--	10.1	9.6	85	7.4	--	--
129.2	Slough 9	4	S30N03W16BDC	820727	1700	20.2	--	10.7	9.5	86	7.5	--	--
129.2	Slough 9	1	S30N03W16BDC	820810	1100	--	--	7.3	--	--	--	--	4
129.2	Slough 9	2	S30N03W16BDC	820810	1120	10.2	--	7.4	--	--	--	--	2
129.2	Slough 9	3	S30N03W16BDC	820810	1115	--	--	8.0	--	--	--	--	34
129.2	Slough 9	1	S30N03W16BDC	820821	1730	18.5	--	12.7	9.8	93	7.7	--	2
129.2	Slough 9	3	S30N03W16BDC	820821	1735	--	--	14.5	9.5	93	7.8	--	25
129.2	Slough 9	1	S30N03W16BDC	820907	1615	13.2	--	9.0	10.8	93	7.0	--	4
129.2	Slough 9	3	S30N03W16BDC	820907	1625	13.2	--	10.4	10.3	92	7.9	--	3
129.2	Slough 9	1	S30N03W16BDC	820923	1150	6.5	--	5.2	11.2	88	7.0	--	5
129.2	Slough 9	2	S30N03W16BDC	820923	1145	6.5	--	4.9	8.9	88	7.1	--	5
129.2	Slough 9	3	S30N03W16BDC	820923	1145	--	--	5.4	11.6	92	7.0	--	28
<u>ADULT ANADROMOUS FISH INVESTIGATIONS</u>													
129.2	Slough 9	-	S30N03W16BDC										
129.2	Transect 1	-	S30N03W16BDC	820820	--	--	--	--	--	--	--	--	--
129.2	Transect 1	-	S30N03W16BDC	820918	1845	--	--	6.1	--	--	--	107	--
129.2	Transect 2	-	S30N03W16BDC	820918	1940	--	--	5.9	--	--	--	63	--
129.2	Transect 3	-	S30N03W16BDC	820820	1545	23.5	--	14.4	9.5	93	7.2	129	--
129.2	Transect 3	-	S30N03W16BDC	820905	1914	--	--	8.1	10.9	92	6.8	114	--
129.2	Transect 3	-	S30N03W16BDC	820918	1828	--	--	6.1	--	--	--	110	--
129.2	Transect 4	-	S30N03W16BDC	820820	1610	--	--	12.0	9.2	85	6.9	142	--
129.2	Transect 5	-	S30N03W16BDC	820820	1615	--	--	12.5	9.2	86	6.9	137	--

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
129.2	Transect 6	-	S3ON03W16BDC	820918	1805	--	--	6.0	--	--	--	117	--
129.2	Transect 7	-	S3ON03W16BDC	820820	1620	--	--	8.7	8.2	71	6.7	158	--
129.2	Transect 7	-	S3ON03W16BDC	820905	1828	--	--	4.0	8.9	68	6.6	175	--
129.2	Transect 7	-	S3ON03W16BDC	820918	1805	--	--	3.5	--	--	--	183	--
129.2	Transect 8	-	S3ON03W16BDC	820820	1635	--	--	11.8	9.5	87	6.8	127	--
129.2	Transect 9	-	S3ON03W16BDC	820820	1645	--	--	11.3	8.9	81	6.9	117	--
129.2	Transect 9	-	S3ON03W16BDC	820905	1651	--	--	8.2	10.3	87	6.8	106	--
129.2	Transect 9	-	S3ON03W16BDC	820918	1758	--	--	6.1	--	--	--	112	--
129.2	Transect 10	-	S3ON03W16BDC	820905	1550	--	--	8.2	10.0	85	6.7	110	--
129.2	Transect 10	-	S3ON03W16BDC	820918	1752	--	--	6.1	--	--	--	113	--
129.2	Transect 11	-	S3ON03W16BDC	820820	1705	--	--	9.6	7.5	66	6.6	149	--
129.2	Transect 11	-	S3ON03W16BDC	820905	1246	--	--	8.4	11.0	93	7.0	173	--
129.2	Transect 11	-	S3ON03W16BDC	820918	1734	--	--	6.1	11.1	89	7.2	117	--
129.2	Transect 12	-	S3ON03W16BDC	820905	1336	--	--	8.5	10.2	87	6.8	150	--
129.2	Transect 12	-	S3ON03W16BDC	820918	1740	--	--	6.1	--	--	--	126	--
129.2	Transect 13	-	S3ON03W16BDC	820918	1705	--	--	6.2	9.8	79	7.0	128	--
129.2	Transect A	-	S3ON03W16BDC	820820	1555	--	--	8.3	9.2	78	6.9	90	--
129.2	Transect A	-	S3ON03W16BDC	820918	1920	--	--	5.9	--	--	--	53	--
129.2	Transect B	-	S3ON03W16BDC	820820	1825	--	--	10.8	8.6	78	6.7	172	--
129.2	Transect C	-	S3ON03W16BDC	820905	1119	12.7	--	5.5	9.0	71	6.6	169	--
129.2	Transect C	-	S3ON03W16BDC	820918	1700	9.6	--	5.6	7.3	58	6.4	150	--
129.2	Slough 9B, Transect C	-	S3ON03W09DCC1	821004	1500	--	--	3.3	9.2	69	6.6	163	--
MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS													
129.8	Susitna River	-	S3ON03W09DAB	820914	1600	7.6	--	7.2	6.4	53	7.4	113	--
DESIGNATED FISH HABITAT SITES													
131.1	4th of July Creek Mouth	1	S3ON03W03DAC	820608	1540	--	--	6.7	11.4	93	6.2	21	< 1
131.1	4th of July Creek Mouth	3	S3ON03W03DAC	820608	1535	--	--	6.7	11.3	92	6.3	21	< 1
131.1	4th of July Creek Mouth	1	S3ON03W03DAC	820624	1010	18.0	--	9.1	12.5	108	7.2	25	< 1
131.1	4th of July Creek Mouth	3	S3ON03W03DAC	820624	1035	18.0	--	9.5	11.9	104	7.0	21	5
131.1	4th of July Creek Mouth	1	S3ON03W03DAC	820712	1930	12.6	--	11.5	9.9	91	7.1	26	< 1
131.1	4th of July Creek Mouth	3	S3ON03W03DAC	820712	1950	12.6	--	11.0	9.9	90	7.1	54	90
131.1	4th of July Creek Mouth	1	S3ON03W03DAC	820727	1415	20.0	--	10.6	10.0	90	7.3	--	1
131.1	4th of July Creek Mouth	3	S3ON03W03DAC	820727	1400	--	--	10.6	10.0	90	6.4	--	5
131.1	4th of July Creek Mouth	1	S3ON03W03DAC	820810	1730	--	--	10.8	--	--	--	--	1
131.1	4th of July Creek Mouth	3	S3ON03W03DAC	820810	1725	--	--	10.8	--	--	--	--	7
131.1	4th of July Creek Mouth	1	S3ON03W03DAC	820822	1305	--	--	12.0	10.2	94	6.8	--	2
131.1	4th of July Creek Mouth	3	S3ON03W03DAC	820822	1255	18.1	--	12.1	7.2	67	6.3	--	9
131.1	4th of July Creek Mouth	1	S3ON03W03DAC	820908	1250	12.4	--	9.0	10.9	94	6.7	--	--

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp°C	Water (Mercury) Temp°C	Hydrolab Measurements					
								Water Temp°C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
131.1	4th of July Creek Mouth	3	S30N03W03DAC	820908	1240	12.4	--	8.9	11.2	96	6.7	--	--
131.1	4th of July Creek Mouth	1	S30N03W03DAC	820924	1830	--	--	5.6	12.2	97	6.7	15	1
131.1	4th of July Creek Mouth	3	S30N03W03DAC	820924	1820	6.8	--	5.6	12.0	95	6.8	--	16
<u>MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS</u>													
131.3	Susitna River	-	S30N03W03DAD	820908	1300	13.0	--	10.2	12.8	112	8.7	74	--
131.3	Susitna River	-	S30N03W03DAD	820908	1300	13.0	--	10.2	12.8	112	8.7	74	--
131.3	Susitna River	-	S30N03W03DAD	820908	1300	11.8	--	9.5	13.9	120	7.0	92	--
131.3	Susitna River	-	S30N03W03DAD	820908	1300	11.8	--	8.6	12.9	110	7.9	124	--
131.3	Susitna River	-	S30N03W03DAD	820908	1300	11.8	--	8.5	12.5	106	7.9	132	--
131.3	Susitna River	-	S30N03W03DAD	820908	1300	11.8	--	9.3	13.1	112	8.0	33	--
<u>ADULT ANADROMOUS FISH INVESTIGATIONS</u>													
133.0	Slough 9A		S30N03W36DAA3										
133.0	Transect 1		S30N03W36DAA3	821003	1300	--	--	5.0	11.3	89	6.9	161	--
133.0	Transect 2		S30N03W36DAA3	821003	1215	11.8	--	3.9	10.2	77	6.9	136	--
133.0	Transect A		S30N03W36DAA3	821003	1200	11.8	--	3.6	11.1	84	6.9	121	--
133.8	Transect 1	-	S31W03W36AAC4	821003	1500	3.0	--	5.0	9.0	70	7.0	183	--
133.8	Transect 2	-	S31W03W36AAC4	821003	1530	--	--	6.5	9.4	76	7.2	226	--
133.8	Transect 3	-	S31W03W36AAC4	821003	1600	--	--	5.5	10.5	83	7.4	205	--
133.8	Transect A	-	S31W03W36AAC4	821003	1630	--	--	4.2	8.9	68	6.9	175	--
<u>DESIGNATED FISH HABITAT SITES</u>													
133.8	Slough 10	2	S31N03W36AAC	820608	1005	--	--	5.8	7.9	63	6.1	144	<1
133.8	Slough 10	3	S31N03W36AAC	820608	1000	--	--	5.2	8.9	70	6.1	132	4
135.3	Slough 11	1	S31N02W19DDD	820604	1200	17.4	--	7.2	10.4	86	5.8	208	<1
135.3	Slough 11	2	S31N02W19DDD	820604	1040	17.4	--	5.3	9.2	74	6.3	211	<1
135.3	Slough 11	3	S31N02W19DDD	820604	1045	17.4	--	5.1	10.0	89	6.7	204	--
135.3	Slough 11	1	S31N02W19DDD	820621	1010	10.2	--	6.3	12.1	98	7.2	222	--
135.3	Slough 11	2	S31N02W19DDD	820621	1045	10.2	--	6.0	11.3	91	7.1	224	20
135.3	Slough 11	3	S31N02W19DDD	820621	1040	10.2	--	6.4	12.5	101	6.9	197	5
135.3	Slough 11	1	S31N02W19DDD	820714	0845	14.0	--	5.6	12.9	102	7.2	230	--
135.3	Slough 11	2	S31N02W19DDD	820714	0830	14.0	--	6.0	10.1	81	7.1	230	--
135.3	Slough 11	3	S31N02W19DDD	820714	0845	14.0	--	10.4	11.4	102	7.6	133	49
135.3	Slough 11	1	S31N02W19DDD	820729	1020	12.0	--	11.6	9.7	89	7.8	--	3
135.3	Slough 11	2	S31N02W19DDD	820729	0950	12.0	--	6.1	9.8	89	7.1	--	1
135.3	Slough 11	3	S31N02W19DDD	820729	1040	12.0	--	5.9	9.6	77	7.2	--	59
135.3	Slough 11	1	S31N02W19DDD	820812	0945	12.0	--	5.6	11.3	90	6.6	--	<1

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
135.3	Slough 11	2	S31N02W19DDD	820812	0940	12.0	--	4.6	10.2	78	6.4	--	< 1
135.3	Slough 11	3	S31N02W19DDD	820812	0935	12.0	--	9.3	10.6	93	7.4	--	38
135.3	Slough 11	1	S31N02W19DDD	820822	1525	--	--	8.2	10.2	87	7.2	--	2
135.3	Slough 11	2	S31N02W19DDD	820822	1515	--	--	8.4	10.3	88	7.3	--	9
135.3	Slough 11	3	S31N02W19DDD	820822	1535	--	--	10.5	10.4	93	7.5	--	30
135.3	Slough 11	1	S31N02W19DDD	820906	1550	12.8	--	6.2	10.3	83	6.8	--	1
135.3	Slough 11	2	S31N02W19DDD	820906	1530	12.8	--	6.1	10.2	83	7.1	--	3
135.3	Slough 11	3	S31N02W19DDD	820906	1540	12.8	--	6.8	10.8	89	7.2	--	22
135.3	Slough 11	1	S31N02W19DDD	820929	1715	7.1	--	4.5	11.4	88	7.2	--	3
135.3	Slough 11	2	S31N02W19DDD	820929	1730	7.1	--	4.3	11.6	89	7.2	--	1
135.3	Slough 11	3	S31N02W19DDD	820929	1830	--	--	4.1	12.2	93	6.9	--	4
135.3	Slough 11	-	S31N02W19DDD	820830	1753	--	--	5.7	--	--	4.0	--	--
135.3	Slough 11	-	S31N02W19DDD	820830	1505	--	6.0	5.4	--	--	--	2.4	--
135.3	Slough 11	-	S31N02W19DDD	820918	1050	--	5.9	4.6	11.1	86	6.6	212	--
<u>ADULT ANADROMOUS FISH INVESTIGATIONS</u>													
135.5	Slough 11		S31N02W19DDD4										
135.5	Transect 1	-	S31N02W19DDD4	820921	1250	--	--	5.0	10.9	85	5.3	214	--
135.5	Transect 2	-	S31N02W19DDD4	820921	1240	--	--	4.9	10.5	82	7.1	210	--
135.5	Transect 3	-	S31N02W19DDD4	820921	1230	--	--	4.7	10.6	82	7.0	215	--
135.5	Transect 3	-	S31N02W19DDD4	821003	0900	7.2	--	3.3	9.1	68	7.0	221	--
135.5	Transect 4	-	S31N02W19DDD4	820921	1220	--	--	4.6	10.2	79	6.9	213	--
135.5	Transect 5	-	S31N02W19DDD4	820921	1210	--	--	4.4	10.5	81	7.0	217	--
135.5	Transect 5	-	S31N02W19DDD4	821003	0910	--	--	3.0	7.1	53	7.0	224	--
135.5	Transect 6	-	S31N02W19DDD4	820921	1200	--	--	4.5	10.4	80	7.0	216	--
135.5	Transect 6	-	S31N02W19DDD4	821003	0920	--	--	3.1	7.7	57	7.1	225	--
135.5	Transect 7	-	S31N02W19DDD4	820921	1150	9.0	--	4.5	10.6	82	7.0	218	--
135.5	Transect 7	-	S31N02W19DDD4	821003	0940	--	--	3.5	8.0	60	7.1	225	--
<u>MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS</u>													
136.0	Susitna River	-	S31N02W19AD	820904	1030	12.2	--	5.8	7.1	56	7.3	79	--
136.0	Susitna River	-	S31N02W19AD	820904	1030	12.2	--	6.1	8.0	64	7.6	80	--
136.0	Susitna River	-	S31N02W19AD	820904	1030	12.2	--	7.5	10.6	88	7.8	108	--
136.9	Susitna River	-	S31N02W17CDA	820906	1325	12.2	--	7.7	10.4	87	7.3	91	--
<u>DESIGNATED FISH HABITAT SITES</u>													
137.7	Slough 16	4	S31N02W17ABD	820604	1500	16.4	--	6.8	11.1	91	6.2	42	3

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
<u>ADULT ANADROMOUS FISH INVESTIGATIONS</u>													
137.7	Slough 16, Transect 1	-	S31N02W17ABD2	821001	1450	--	--	4.9	--	--	--	69	--
137.7	Slough 16, Transect 2	-	S31N02W17ABD2	821001	1415	4.5	--	4.3	--	--	--	70	--
<u>DESIGNATED FISH HABITAT SITES</u>													
138.6	Indian River - Mouth	1	S31N02W09CDA	820604	1645	14.6	--	6.2	10.3	82	6.0	35	3
138.6	Indian River - Mouth	3	S31N02W09CDA	820604	1630	14.5	--	6.5	11.1	90	6.2	35	4
138.6	Indian River - Mouth	1	S31N02W09CDA	820618	1045	--	--	5.9	14.2	113	6.4	32	--
138.6	Indian River - Mouth	3	S31N02W09CDA	820618	1030	--	--	5.6	13.9	110	6.6	36	5
138.6	Indian River - Mouth	1	S31N02W04CDA	820707	1125	23.0	--	9.0	11.3	--	5.8	39	7
138.6	Indian River - Mouth	3	S31N02W04CDA	820707	1115	23.0	--	10.4	11.3	--	6.2	104	100
138.6	Indian River - Mouth	1	S31N02W09CDA	820723	1720	--	--	8.1	10.5	89	6.7		85
138.6	Indian River - Mouth	3	S31N02W09CDA	820723	1750	13.2	--	8.2	10.3	88	6.7		7
138.6	Indian River - Mouth	1	S31N02W09CDA	820806	1640	23.0	--	11.7	11.0	101	6.6	36	<1
138.6	Indian River - Mouth	3	S31N02W09CDA	820806	1655	--	--	11.8	11.2	103	6.7	47	8
138.6	Indian River - Mouth	1	S31N02W09CDA	820819	1515	16.4	--	11.4	10.7	98	7.1		2
138.6	Indian River - Mouth	3	S31N02W09CDA	820819	1610	--	--	11.6	9.7	89	6.9		18
138.6	Indian River - Mouth	1	S31N02W09CDA	820905	1555	16.0	--	8.2	11.0	93	6.8		2
138.6	Indian River - Mouth	3	S31N02W09CDA	820905	1600	16.0	--	8.1	11.1	94	6.9		13
138.6	Indian River - Mouth	1	S31N02W09CDA	820925	1545	10.2	--	5.3	12.6	99	6.8		<1
138.6	Indian River - Mouth	3	S31N02W09CDA	820925	1600	10.2	--	5.2	12.3	96	6.9		16
138.6	Indian R.-Helio Site 1	1	S32N02W28DDC	820606	0850	9.3	--	3.0	11.1	84	6.2	30	3
(TRM2.7)	Indian R.-Helio Site 1	1	S32N02W28DDC	820709	1525	18.6	--	10.4	10.4	97	6.7	35	<1
(TRM2.7)	Indian R.-Helio Site 1	1	S32N02W28DDC	820808	1415	22.2	--	10.1	10.1	95	7.0	42	3
(TRM2.7)	Indian R.-Helio Site 1	1	S32N02W28DDC	820905	1055	11.8	--	6.7	6.7	93	6.5	46	5
(TRM2.7)	Indian River -- Helio Site 2	1	S32N02W11DDC	820607	0950	--	--	2.8	2.8	84	6.3	29	2
(TRM 7.2)	Indian River -- Helio Site 2	1	S32N02W11DDC	820709	1550	19.0	--	9.0	9.0	101	6.7	34	<1
(TRM 7.2)	Indian River -- Helio Site 2	1	S32N02W11DDC	820808	1455	19.0	--	9.7	9.7	94	7.1	39	<1
(TRM 7.2)	Indian River -- Helio Site 2	1	S32N02W11DDC	820905	1145	11.6	--	6.5	6.5	93	6.6	43	4
(TRM 7.2)	Indian River -- Helio Site 2	1	S32N01W04BAB	820607	0915	8.0	--	2.6	2.6	79	6.1	29	<1
(TRM 12.0)	Indian River -- Helio Site 3	1	S32N02W11DDC	820709	1625	19.0	--	8.4	8.4	89	6.8	34	<1
(TRM 12.0)	Indian River -- Helio Site 3	1	S32N02W11DDC	820808	1515	18.4	--	8.6	8.6	89	7.2	42	<1
(TRM 12.0)	Indian River -- Helio Site 3	1	S32N02W11DDC	820905	1215	11.4	--	6.0	6.0	90	6.6	43	4

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
<u>DESIGNATED FISH HABITAT SITES</u>													
138.8	Slough 16B, Q Site	-	S31N02W17ABC	820902	1140	--	7.2	7.0	--	--	--	56	--
138.8	Slough 16B, Q Site	-	S31N02W17ABC	820915	1500	--	7.8	7.5	11.8	99	6.6	34	--
<u>MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS</u>													
138.9	Susitna River	-	S31N02W09DBD	820906	1220	12.2	--	5.1	9.0	70	7.1	58	--
<u>ADULT ANADROMOUS FISH INVESTIGATIONS</u>													
139.7	Slough 19, Transect 1	-	S31N02W10DBB	821001	1305	4.8	--	4.1	--	--	--	52	--
139.7	Slough 19, Transect 2	-	S31N02W10DBB	821001	1317	--	--	4.0	--	--	--	147	--
139.7	Slough 19, Transect 3	-	S31N02W10DBB	821001	1337	--	--	3.3	--	--	--	111	--
140.0	Slough 19	2	S31N02W10DBB	820605	1250	10.8	--	4.8	9.2	72	6.0	139	< 1
140.0	Slough 19	3	S31N02W10DBB	820605	1245	7.9	--	5.3	7.3	58	6.2	93	22
140.0	Slough 19	1	S31N02W10DBB	820617	1230	--	--	3.9	10.6	81	6.6	107	3
140.0	Slough 19	2	S31N02W10DBB	820617	1245	--	--	5.9	11.6	94	7.0	128	< 1
140.0	Slough 19	3	S31N02W10DBB	820617	1300	--	--	8.6	13.2	112	7.0	84	16
140.0	Slough 19	2	S31N02W10DBB	820707	1245	23.5	--	10.5	8.4	76	6.5	134	2
140.0	Slough 19	3	S31N02W10DBB	820707	1250	23.5	--	13.9	9.4	91	7.0	113	132
140.0	Slough 19	2	S31N02W10DBB	820723	1445	--	--	5.3	8.5	67	6.8		2
140.0	Slough 19	3	S31N02W10DBB	820723	1440	13.4	--	9.8	10.5	93	7.6		24
140.0	Slough 19	1	S31N02W10DBB	820806	--	--	--	--	--	--	--	--	1
140.0	Slough 19	2	S31N02W10DBB	820806	1340	--	--	8.6	--	--	--	128	2
140.0	Slough 19	3	S31N02W10DBB	820806	1330	21.6	--	12.6	--	--	--	119	45
140.0	Slough 19	1	S31N02W10DBB	820819	1130	13.0	--	5.8	9.3	74	7.0		3
140.0	Slough 19	2	S31N02W10DBB	820819	1135	13.0	--	6.2	9.4	76	7.1		6
140.0	Slough 19	3	S31N02W10DBB	820819	1145	13.0	--	11.4	10.6	97	7.7		150
140.0	Slough 19	1	S31N02W10DBB	820904	1515	--	--	8.1	10.1	86	6.7		< 1
140.0	Slough 19	3	S31N02W10DBB	820904	1510	--	--	8.7	11.3	97	7.3		56
140.0	Slough 19	1	S31N02W10DBB	820925	1145	12.0	--	3.9	9.5	72	6.8		< 1
130.0	Slough 19	3	S31N02W10DBB	820925	1215	12.0	--	4.3	11.8	91	7.1		61

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
140.1	Slough 20	9	S31N02W11BBC	820708	1130	--	--	10.4	11.6	104	6.8	96	1
140.1	Slough 20	3	S31N02W11BBC	820724	1600	--	--	7.5	10.2	85	7.1	--	12
140.1	Slough 20	4	S31N02W11BBC	820724	1215	12.1	--	9.3	10.6	93	7.4	--	50
140.1	Slough 20	5	S31N02W11BBC	820724	1525	--	--	7.6	10.3	86	7.1	--	7
140.1	Slough 20	1	S31N02W11BBC	820807	1600	12.2	--	9.2	--	--	--	84	<1
140.1	Slough 20	3	S31N02W11BBC	820807	1610	12.2	--	10.1	--	--	--	92	34
140.1	Slough 20	9	S31N02W11BBC	820807	1620	12.2	--	11.2	--	--	--	74	2
140.1	Slough 20	1	S31N02W11BBC	820820	1815	20.8	--	10.0	11.6	102	8.0	--	<1
140.1	Slough 20	3	S31N02W11BBC	820820	1820	--	--	12.4	10.4	97	7.8	--	46
140.1	Slough 20	1	S31N02W11BBC	820904	1150	12.4	--	6.3	12.4	100	7.1	--	5
140.1	Slough 20	3	S31N02W11BBC	820904	1330	--	--	7.1	12.1	100	7.4	--	12
140.1	Slough 20	1	S31N02W11BBC	820926	1200	7.9	--	4.1	12.8	97	7.3	--	1
140.1	Slough 20	3	S31N02W11BBC	820926	1210	7.9	--	4.1	12.7	96	6.7	--	4
140.1	Slough 20	1	S31N02W11BBC	821010	1650	0.0	--	1.0	15.7	110	7.5	91	2
140.1	Slough 20	3	S31N02W11BBC	821010	1700	0.0	--	0.9	15.2	105	7.6	153	5
140.1	Slough 20, Q Site	-	S31N02W11BBC	820820	1120	--	8.0	7.8	11.7	98	7.3	93	--
140.1	Slough 20, Q Site	-	S31N02W11BBC	820901	1725	--	--	7.8	--	--	--	75	--
140.1	Slough 20, Q Site	-	S31N02W11BBC	820916	1500	--	--	6.4	12.0	97	6.4	72	--
140.1	Slough 20, Tributary Q Site	-	S31N02W11BBC	820901	1612	--	5.5	5.2	8.0	63	5.7	71	--
140.1	Slough 20, Tributary Q Site	-	S31N02W11BBC	820916	1300	--	--	6.1	11.0	89	6.4	48	--
<u>ADULT ANADROMOUS FISH INVESTIGATIONS</u>													
140.1	Slough 20, Transect	1	S31N02W11BBC5	821001	1105	4.5	--	3.2	--	--	6.2	81	--
140.1	Slough 20, Transect	2	S31N02W11BBC5	821001	1145	--	--	4.2	--	--	--	72	--
140.1	Slough 20, Transect	3	S31N02W11BBC5	821001	1203	--	--	4.2	--	--	--	81	--
140.1	Slough 20, Transect	A	S31N02W11BBC5	821001	1104	--	--	3.0	--	--	--	83	--
140.1	Slough 20, Transect	B	S31N02W11BBC5	821001	1205	--	--	4.1	--	--	--	70	--
<u>DESIGNATED FISH HABITAT SITES</u>													
142.0	Slough 21	3	S31N02W02AAA	820606	1136	11.8	--	7.4	5.9	49	6.4	82	24
142.0	Slough 21	4	S31N02W02AAA	820606	1115	11.8	--	7.3	9.5	79	6.0	120	9
142.0	Slough 21	6	S31N02W02AAA	820606	1130	11.8	--	7.2	8.2	68	6.4	141	2

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
142.0	Slough 21	3	S31N02W02AAA	820619	1130	--	--	10.5	10.8	88	6.8	186	3
142.0	Slough 21	4	S31N02W02AAA	820619	1150	--	--	10.1	12.7	104	7.1	115	11
142.0	Slough 21	6	S31N02W02AAA	820619	1146	--	--	9.9	11.4	94	7.2	143	4
142.0	Slough 21	1	S31N02W02AAA	820711	1455	--	--	8.0	5.3	44	7.2	277	2
142.0	Slough 21	3	S31N02W02AAA	820711	1445	--	--	11.4	4.8	44	7.5	151	110
142.0	Slough 21	3	S31N02W02AAA	820725	1530	12.4	--	9.3	10.9	95	7.4	--	39
142.0	Slough 21	4	S31N02W02AAA	820725	1640	--	--	9.0	10.2	88	7.3	--	30
142.0	Slough 21	6	S31N02W02AAA	820725	1620	--	--	9.1	10.2	88	7.1	--	62
142.0	Slough 21	1	S31N02W02AAA	820809	1500	13.8	--	6.7	9.8	80	7.3	--	4
142.0	Slough 21	2	S31N02W02AAA	820809	1505	13.8	--	6.2	10.9	88	7.3	--	2
142.0	Slough 21	3	S31N02W02AAA	820809	1510	13.8	--	8.8	10.9	94	7.4	--	36
142.0	Slough 21	1	S31N02W02AAA	820820	1440	19.0	--	9.3	9.6	84	7.3	--	2
142.0	Slough 21	2	S31N02W02AAA	820820	1515	--	--	10.8	9.8	88	7.4	--	<1
142.0	Slough 21	3	S31N02W02AAA	820820	1500	--	--	12.6	10.3	97	7.8	--	92
142.0	Slough 21	1	S31N02W02AAA	820906	1120	14.8	--	5.2	10.2	80	6.8	--	2
142.0	Slough 21	2	S31N02W02AAA	820906	1100	14.8	--	5.3	10.3	81	6.7	--	2
142.0	Slough 21	3	S31N02W02AAA	820906	1100	14.8	--	6.2	10.6	86	7.2	--	24
142.0	Slough 21	1	S31N02W02AAA	820927	1300	8.2	--	4.7	10.7	83	7.2	--	1
142.0	Slough 21	2	S31N02W02AAA	820927	1245	8.2	--	4.6	11.2	87	7.1	--	1
142.0	Slough 21	3	S31N02W02AAA	820927	1235	8.2	--	4.9	12.8	100	7.5	--	29
142.0	Slough 21	-	S31N02W02AAA	820916	1100	--	--	7.5	11.4	95	7.4	--	--
<u>ADULT ANADROMOUS FISH INVESTIGATIONS</u>													
142.1	Slough 21, Transect 1		S31N02W02AAA11	820904	1323	--	--	5.6	9.3	74	7.2	182	--
142.1	Slough 21, Transect 1		S31N02W02AAA11	820918	1507	--	--	6.0	10.8	87	7.4	121	--
142.1	Slough 21, Transect 2		S31N02W02AAA11	820904	1306	--	--	5.5	9.5	74	7.1	186	--
142.1	Slough 21, Transect 3		S31N02W02AAA11	820904	1258	--	--	5.5	9.3	74	7.2	190	--
142.1	Slough 21, Transect 4		S31N02W02AAA11	820904	1249	--	--	5.4	9.5	75	7.1	190	--
142.1	Slough 21, Transect 4		S31N02W02AAA11	820019	1452	--	--	5.9	11.6	93	7.5	121	--
142.1	Slough 21, Transect 5		S31N02W02AAA11	820903	1730	13.0	--	6.1	5.9	48	6.8	191	--
142.1	Slough 21, Transect 5		S31N02W02AAA11	820904	1241	13.0	--	5.5	10.2	81	7.2	192	--
142.1	Slough 21, Transect 5		S31N02W02AAA11	820918	1415	14.0	--	5.2	9.5	75	7.1	196	--
142.1	Slough 21, Transect 6		S31N02W02AAA11	820904	1341	12.6	--	5.6	10.3	82	7.2	199	--
142.1	Slough 21, Transect 6		S31N02W02AAA11	820918	1540	--	--	4.8	9.2	72	7.1	198	--
142.1	Slough 21, Transect 6		S31N02W02AAA11	821001	1200	--	--	4.2	--	--	--	201	--
142.1	Slough 21, Transect 7		S31N02W02AAA11	821001	1300	--	--	3.5	--	--	--	196	--
142.1	Slough 21, Transect 8		S31N02W02AAA11	821001	1230	--	--	3.7	--	--	--	199	--
142.1	Slough 21, Transect 9		S31N02W02AAA11	821001	1330	--	--	3.4	--	--	--	202	--
142.1	Slough 21, Transect 10		S31N02W02AAA11	821001	1430	--	--	4.4	--	--	--	238	--

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
142.1	Slough 21, Transect A		S31N02W02AAA11	820904	1332	--	--	7.7	11.1	93	7.6	135	--
142.1	Slough 21, Transect B		S31N02W02AAA11	820904	1315	--	--	7.1	8.3	69	7.2	185	--
142.1	Slough 21, Transect C		S31N02W02AAA11	820918	1526	--	--	6.0	11.7	94	7.6	114	--
142.1	Slough 21, Transect D		S31N02W02AAA11	821001	1400	--	--	3.4	--	--	--	148	--
<u>DESIGNATED FISH HABITAT SITES</u>													
144.3	Slough 22	3	S32N02W32BBC	820607	1520	--	--	6.5	10.8	88	6.4	52	25
144.3	Slough 22	4	S32N02W32BBC	820607	1500	--	--	6.7	10.9	89	6.3	55	8
144.3	Slough 22	3	S32N02W32BBC	820619	1835	--	--	9.9	12.9	113	7.2	58	27
144.3	Slough 22	4	S32N02W32BBC	820619	1815	--	--	9.6	13.1	114	7.4	55	9
144.3	Slough 22	6	S32N02W32BBC	820619	1830	--	--	10.6	13.2	117	7.2	66	13
144.3	Slough 22	3	S32N02W32BBC	820710	1205	4.4	--	11.2	10.8	98	6.7	106	130
144.3	Slough 22	4	S32N02W32BBC	820710	1200	4.4	--	10.5	9.3	83	6.8	141	84
144.3	Slough 22, ADF&G Transect-	-	S32N01W32BBD	820831	1150	10.6	9.0	8.7	11.3	--	6.4	41	--
144.3	Slough 22, ADF&G Transect-	-	S32N01W32BBD	820915	1715	--	7.4	7.1	12.9	106	7.3	90	--
144.3	Slough 22, Q Site	-	S32N01W32BBD	820918	1500	11.6	6.2	5.7	12.5	100	7.4	100	--
<u>ADULT ANADROMOUS FISH INVESTIGATIONS</u>													
144.3	Slough 22, Transect 1	-	S32N01W32BBC7	820930	1434	--	--	5.1	11.4	89	6.7	84	--
144.3	Slough 22, Transect 2	-	S32N01W32BBC7	820930	1456	--	--	5.6	11.1	88	6.6	73	--
144.3	Slough 22, Transect 3	-	S32N01W32BBC7	820930	1400	--	--	5.7	10.9	87	6.8	78	--
144.3	Slough 22, Transect 4	-	S32N01W32BBC7	820930	1357	--	--	5.6	12.0	95	6.9	49	--
144.3	Slough 22, Transect 5	-	S32N01W32BBC7	820930	1300	9.0	--	4.5	10.2	79	6.5	106	--
144.3	Slough 22, Transect 4	-	S32N01W32BBC7	820930	1450	--	--	5.0	12.7	99	6.5	34	--
144.3	Slough 22, Transect B	-	S32N01W32BBC7	820930	1340	--	--	5.6	12.0	95	6.9	45	--
<u>MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS</u>													
148.2	Susitna River	-	S32N01W26DCA	820905	1300	13.0	--	7.5	9.9	82	8.6	96	--
<u>DESIGNATED FISH HABITAT SITES</u>													
148.8	Portage Creek Mouth	1	S32N01W25CAC	820606	1030	--	--	2.9	11.7	86	6.2	46	8
148.8	Portage Creek Mouth	1	S32N01W25CAC	820710	1600	--	--	7.6	11.6	97	7.0	66	8
148.8	Portage Creek Mouth	3	S32N01W25CAC	820710	1615	--	--	8.1	11.4	96	7.0	70	44
148.8	Portage Creek Mouth	9	S32N01W25CAC	820710	1610	--	--	7.6	10.4	87	7.0	84	7
148.8	Portage Creek Mouth	1	S32N01W25CAC	820726	1700	14.8	--	6.4	11.2	91	7.1		9
148.8	Portage Creek Mouth	3	S32N01W25CAC	820726	1720	--	--	6.8	11.0	90	7.1		100

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	Hydrolab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
148.8	Portage Creek Mouth	1	S32N01W25CAC	820808	1640	--	--	9.7	10.8	95	7.5		< 1
148.8	Portage Creek Mouth	3	S32N01W25CAC	820808	1645	19.9	--	9.7	10.6	93	7.4		14
148.8	Portage Creek Mouth	1	S32N01W25CAC	820905	1010	11.3	--	5.8	12.3	98	6.7		< 1
148.8	Portage Creek Mouth	3	S32N01W25CAC	820905	1015	11.3	--	5.9	12.1	97	6.8		4
148.8	Portage Creek Mouth	1	S32N01W25CAC	820928	1400	5.4	--	3.1	12.7	94	7.1		< 1
148.8	Portage Creek (TRM 46) Helio Site	1	S32N01E08CBA	820607	1615	8.0	--	2.4	11.0	81	6.4	48	4
148.8	Portage Creek (TRM 46) Helio Site 1	1	S32N01E08CBA	820709	1730	19.0	--	8.7	11.6	100	6.6	61	< 1
148.8	Portage Creek (TRM 9.2) Helio Site 2	1	S33N01E26DDC	820607	1135	--	--	2.4	11.5	84	6.3	44	1
148.8	Portage Creek (TRM 9.2) Helio Site 2	1	S33N01E26DDC	820709	1750	18.5	--	8.0	10.7	91	6.9	55	2
148.8	Portage Creek (TRM 15.5) Helio Site 3	1	S22N08W28BAB	820607	1210	--	--	1.7	11.5	82	6.4	37	3
148.8	Portage Creek (TRM 15.5) Helio Site 3	1	S22N08W28BAB	820709	1800	18.5	--	6.0	12.0	96	6.7	36	< 1
<u>IMPOUNDMENT STUDY</u>													
152.4	Cheechako Creek Mouth		S32N01E33CCE	820808	1555			10.8	10.4	98	7.2	23	
152.4	Cheechako Creek Mouth		S32N01E33CCE	820806	1525			11.6	9.8	94	7.0	30	
152.4	Cheechako Creek Mouth		S32N01E33CCE	820811	1430	17.0		9.4	11.1	100	7.0	22	< 1
161.4	Devil Creek Mouth		S32N02E34AAC	820822	0930	9.6		7.4	11.2	97	7.3	57	
176.7	Fog Creek Mouth		S31N04E16DBB	820505	1530	4.7		1.1	13.2	97	7.4		
176.7	Fog Creek Mouth		S31N04E16DBB	820516	1345	11.0		0.4	13.5	97	7.5	37	4
176.7	Fog Creek Mouth		S31N04E16DBB	820528	1630	6.0		3.5	11.8	93	7.1	63	3
176.7	Fog Creek Mouth		S31N04E16DBB	820621	1130	10.8		4.5	11.6	94	6.9	50	2
176.7	Fog Creek Mouth		S31N04E16DBB	820718	1130	14.8		7.5	11.5	100	7.2	65	< 1
176.7	Fog Creek Mouth		S31N04E16DBB	820815	1300	15.8		9.4	12.9	118	8.1	99	< 1
176.7	Fog Creek Mouth		S31N04E16DBB	820912	1155	8.1		3.6	12.4	108	7.5	83	< 1
176.7	Susitna River		S31N04E16DBB	820621	1135	10.8		7.3	10.7	93	7.0	84	66
176.7	50 ft. Above Fog Creek Susitna River		S31N04E16DBB	820718	1140	14.6		8.6	10.6	94	7.2	92	36
176.7	50 ft. Above Fog Creek Susitna River		S31N04E16DBB	820815	1315	15.8		9.7	9.0	83	7.2	110	85
176.7	50 ft. Above Fog Creek Susitna River		S31N04E16DBB	820912	1150	8.1		5.7	11.0	91	7.4	128	24
181.3	Tsusena Creek Mouth		S32N04E36ADB	820505	1500	4.7		1.4	14.0	104	7.3	--	--
181.3	Tsusena Creek Mouth		S32N04E36ADB	820515	1705	7.8		0.3	13.8	100	7.4	121	5
181.3	Tsusena Creek Mouth		S32N04E36ADB	820528	1420	7.0		2.6	12.2	94	6.9	96	< 1
181.3	Tsusena Creek Mouth		S32N04E36ADB	820619	1140	18.2		5.3	11.4	95	7.0	33	2

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
181.3	Tsusena Creek Mouth		S32N04E36ADB	820718	1430	15.8		7.9	11.6	103	7.2	57	<1
181.3	Tsusena Creek Mouth		S32N04E36ADB	820728	1600			9.9	11.3	105	7.2	61	
181.3	Tsusena Creek Mouth		S32N04E36ADB	820816	1210	15.8		7.9	13.6	120	7.7	97	<1
181.3	Tsusena Creek Mouth		S32N04E36ADB	820912	1415	10.2		5.9	11.6		7.4	87	<1
181.3	Susitna River		S32N04E36ADB	820619	1200	18.8		8.8	10.2	93	7.2	73	38
	50 ft above Tsusena												
181.3	Susitna River		S32N04E36ADB	820718	1440	16.6		11.0	10.3	99	7.5	122	140
	50 ft above Tsusena												
181.3	Susitna River		S32N04E36ADB	820816	1200	15.8		10.3	12.6	118	8.1	119	150
	50 ft above Tsusena												
181.3	Susitna River		S32N04E36ADB	820912	1410	10.2		6.2	11.7	100	7.5	127	25
	50 ft above Tsusena												
186.7	Deadman Creek Mouth		S32N05E26CDB	820505	1430	4.8		0.8	14.2	104	7.3		
186.7	Deadman Creek Mouth		S32N05E26CDB	820516	1245			0.5	13.8	100	7.4	61	7
186.7	Deadman Creek Mouth		S32N05E26CDB	820528	1330	5.8		0.9	12.7	94	7.0	53	2
186.7	Deadman Creek Mouth		S32N05E26CDB	820619	1330	17.8		6.1	11.2	95	7.0	28	7
186.7	Deadman Creek Mouth		S32N05E26CDB	820718	1010	10.6		9.6	11.1	103	7.5	59	1
186.7	Deadman Creek Mouth		S32N05E26CDB	820816	1645	16.8		13.9	11.5	100	7.8	66	<1
186.7	Deadman Creek Mouth		S32N05E26CDB	820911	1225	9.1		6.6	11.7	100	7.1	66	<1
186.7	Susitna River, 50 ft		S32N05E26CDB	820619	1315	17.8		8.7	10.2	93	7.3	80	38
	Above Deadman Creek												
186.7	Susitna River, 50 ft		S32N05E26CDB	820718	1000	10.6		9.0	10.7	98	8.1	136	135
	Above Deadman Creek												
186.7	Susitna River, 50 ft		S32N05E26CDB	820816	1650	16.8		10.8	11.6	110	7.9	146	140
	Above Deadman Creek												
186.7	Susitna River, 50 ft		S32N05E26CDB	820911	1220	9.1		5.8	11.5	97	7.4	136	33
	Above Deadman Creek												
186.7	Watana Creek Mouth		S32N06E25CCA	820505	1420	4.8		0.1	14.1	102	7.5		
186.7	Watana Creek Mouth		S32N06E25CCA	820517	1200	8.0		1.9	13.1	100	7.4	82	17
186.7	Watana Creek Mouth		S32N06E25CCA	820525	2130	4.7		2.2	10.1	77	6.7	101	--
186.7	Watana Creek Mouth		S32N06E25CCA	820526	1620	11.5		4.9	11.3	93	7.1	104	25
186.7	Watana Creek Mouth		S32N06E25CCA	820620	1800	12.8		5.7	11.7	99	7.0	63	8
186.7	Watana Creek Mouth		S32N06E25CCA	820623	1830	21.8		11.9	9.9	97	7.4	108	7
186.7	Watana Creek Mouth		S32N06E25CCA	820624	1800	24.1		12.7	9.6	99	7.4	114	--
186.7	Watana Creek Mouth		S32N06E25CCA	820628	0915	18.2		8.5	10.4	94	7.4	103	--
194.1	Watana Creek Mouth		S32N06E25CCA	820718	1700	13.8		9.8	10.8	102	7.6	151	20
194.1	Watana Creek Mouth		S32N06E25CCA	820726	0950	15.0		7.0	12.1	105	7.2	122	8
194.1	Watana Creek Mouth		S32N06E25CCA	820729	1200	8.0		9.1	11.0	100	7.6	163	--
194.1	Watana Creek Mouth		S32N06E25CCA	820811	0700	4.8		6.2	12.5	105	7.3	169	--
194.1	Watana Creek Mouth		S32N06E25CCA	820812	0800	6.4		4.0	12.8	104	7.5	191	<1
194.1	Watana Creek Mouth		S32N06E25CCA	820813	0740	--		5.4	11.9	99	7.5	195	--
194.1	Watana Creek Mouth		S32N06E25CCA	820814	0700	9.6		8.3	11.0	100	7.6	194	--
194.1	Watana Creek Mouth		S32N06E25CCA	820815	0730	7.0		7.0	12.2	105	7.6	200	--

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
194.1	Watana Creek Mouth		S32N06E25CCA	820816	0720	9.0		6.0	13.7	115	8.0	206	--
194.1	Watana Creek Mouth		S32N06E25CCA	820817	0820	6.8		6.8	10.4	90	7.4	184	9
194.1	Watana Creek Mouth		S32N06E25CCA	820818	0700	5.9		5.9	11.9	100	7.3	186	--
194.1	Watana Creek Mouth		S32N06E25CCA	820819	0730	1.6		5.1	12.5	104	7.4	188	--
194.1	Watana Creek Mouth		S32N06E25CCA	820820	0730	7.6		6.0	12.0	101	7.5	191	--
194.1	Watana Creek Mouth		S32N06E25CCA	820821	0650	8.4		6.5	11.5	99	7.4	191	--
194.1	Watana Creek Mouth		S32N06E25CCA	820822	0730	2.8		5.4	11.7	98	7.5	198	--
194.1	Watana Creek Mouth		S32N06E25CCA	820823	0740	11.4		8.0	10.1	90	7.5	202	--
194.1	Watana Creek Mouth		S32N06E25CCA	820824	0700	8.4		7.1	11.3	99	7.5	206	--
194.1	Watana Creek Mouth		S32N06E25CCA	820825	0730	7.1		7.7	11.0	97	7.2	211	--
194.1	Watana Creek Mouth		S32N06E25CCA	820826	0645	6.4		6.6	11.4	99	7.4	212	--
194.1	Watana Creek Mouth		S32N06E25CCA	820909	0730	4.8		5.1	11.8	98	7.1	164	--
194.1	Watana Creek Mouth		S32N06E25CCA	820910	0730	3.6		4.7	11.9	97	7.2	172	--
194.1	Watana Creek Mouth		S32N06E25CCA	820911	0730	1.8		3.1	13.2	102	7.2	176	--
194.1	Watana Creek Mouth		S32N06E25CCA	820912	0800	4.8		3.0	13.2	104	7.2	183	--
194.1	Watana Creek Mouth		S32N06E25CCA	820913	0730	9.6		3.9	12.5	100	7.3	169	--
194.1	Watana Creek Mouth		S32N06E25CCA	820914	0730	6.4		4.7	12.1	100	7.0	118	--
194.1	Watana Creek Mouth		S32N06E25CCA	820915	0745	9.6		5.0	11.8	98	7.2	104	--
194.1	Watana Creek Mouth		S32N06E25CCA	820916	0800	5.8		5.3	11.4	95	7.3	105	--
194.1	Watana Creek Mouth		S32N06E25CCA	820917	0730	3.2		4.0	12.4	100	7.2	124	--
194.1	Watana Creek Mouth		S32N06E25CCA	820918	0745	3.0		3.6	12.7	100	7.1	134	--
194.1	Watana Creek Mouth		S32N06E25CCA	820919	0745	7.1		4.6	10.4	85	7.2	147	--
194.1	Watana Creek Mouth		S32N06E25CCA	820920	0745	4.2		3.8			7.3	147	--
194.1	Watana Creek, 2 Mile Study Section		S32N07E17BAD	820626	1600	26.0		10.9	9.9	95	7.4	96	--
194.1	Watana Creek, 2 Mile Study Section		S32N07E17BAD	820729	1300	14.5		9.0	11.4	105	7.2	142	--
194.1	Watana Creek, 2 Mile Study Section		S32N07E17BAD	820825	1240			8.5	11.1	102	7.6	184	--
194.1	Watana Creek, East Fork		S33N07E34CCA	820825	1200	9.1		8.1	10.7	98	7.6	80	--
194.1	Watana Creek, West Fork		S33N07E34CCA	820825	1235	9.6		8.2	11.2	102	7.7	193	--
194.1	Susitna River, 50 ft Above Watana Creek		S32N06E25CCA	820623	1000	17.0		10.6	10.3	98	7.2	92	48
194.1	Susitna River, 50 ft Above Watana Creek		S32N06E25CCA	820726	1010	16.0		9.0	11.5	105	6.8	117	150
194.1	Susitna River, 50 ft Above Watana Creek		S32N06E25CCA	820812	1030	12.4		9.1	10.8	99	7.5	136	100
194.1	Susitna River, 50 ft Above Watana Creek		S32N06E25CCA	820915	1645	13.0		8.2	10.7	96	7.6	128	100
206.8	Mainstem-50 above Kosina Creek		S31N08E15BAB	820627	1100	21.0		13.0	09.5	095	07.4	108	130
206.8	Mainstem-50 above Kosina Creek		S31N08E15BAB	820726	1055	17.6		09.4	11.0	102	07.3	116	130

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	HydroLab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
206.8	Mainstem-50 above Kosina Creek		S31N08E15BAB	820812	1130	13.2		9.5	10.0	98	7.2	133	80
206.8	Mainstem-50 above Kosina Creek		S31N08E15BAB	820914	1330	11.8		6.3	11.3	97	7.3	134	28
206.8	Kosina Creek Mouth		S31N08E15BAB	820504	1630	4.7		1.8	14.1	108	7.2	--	--
206.8	Kosina Creek Mouth		S31N08E15BAB	820504	1800			1.5	14.1	107	7.1	--	--
206.8	Kosina Creek Mouth		S31N08E15BAB	820505	1130	4.3		0.8	14.1	104	7.6	--	--
206.8	Kosina Creek Mouth		S31N08E15BAB	820505	1230			1.1	13.5	100	7.5	--	--
206.8	Kosina Creek Mouth		S31N08E15BAB	820505	1630			1.4	13.8	104	7.6	--	--
206.8	Kosina Creek Mouth		S31N08E15BAB	820505	1930	0.4		1.0	14.0	104	7.5	--	--
206.8	Kosina Creek Mouth		S31N08E15BAB	820513	1200	2.8		0.6	13.4	97	7.4	69	--
206.8	Kosina Creek Mouth		S31N08E15BAB	820515	1200	7.8		1.5	12.6	94	7.3	79	2
206.8	Kosina Creek Mouth		S31N08E15BAB	820516	1200			1.2	13.2	98	7.5	68	
206.8	Kosina Creek Mouth		S31N08E15BAB	820526	1400	12.0		2.3	11.8	91	6.8	43	2
206.8	Kosina Creek Mouth		S31N08E15BAB	820623	1200	21.0		9.0	10.1	93	7.3	37	3
206.8	Kosina Creek Mouth		S31N08E15BAB	820627	1030	20.1		10.0	9.9	94	7.1	39	
206.8	Kosina Creek Mouth		S31N08E15BAB	820726	1205	17.3		11.2	11.0	106	7.3	68	<1
206.8	Kosina Creek Mouth		S31N08E15BAB	820812	1130	13.2		8.4	11.0	100	7.3	70	<1
206.8	Kosina Creek Mouth		S31N08E15BAB	820914	1335	11.8		6.8	11.9	104	7.2	62	1
208.5	Jay Creek Mouth		S31N08E13BBC	820505	1315	4.8		0.3	13.9	100	7.8		
208.5	Jay Creek Mouth		S31N08E13BBC	820516	1100	10.0		0.6	13.4	98	7.6	77	14
208.5	Jay Creek Mouth		S31N08E13BBC	820529	1000	10.0		2.9	12.0	94	7.1	60	37
208.5	Jay Creek Mouth		S31N08E13BBC	820624	1600	27.2		12.1	9.9	98	8.1	103	19
208.5	Jay Creek Mouth		S31N08E13BBC	820726	1125	19.2		8.1	11.7	105	8.0	158	2
208.5	Jay Creek Mouth		S31N08E13BBC	820812	1200	14.4		6.9	11.3	99	7.7	178	<1
208.5	Jay Creek Mouth		S31N08E13BBC	820915	1510	15.8		8.2	10.7	97	7.9	120	3
208.7	Upper Jay Creek Slough		S31N08E13BCD	820529	1430	10.6		5.6	4.8	59	6.8	452	1
208.7	Upper Jay Creek Slough		S31N08E13BCD	820624	1620	27.2		13.6	6.3	65	7.0	398	
208.7	Upper Jay Creek Slough		S31N08E13BCD	820726	1110	19.2		7.5	8.7	77	6.7	473	7
208.7	Upper Jay Creek Slough		S31N08E13BCD	820812	1145	14.0		6.6	8.3	72	6.8	396	4
208.7	Upper Jay Creek Slough		S31N08E13BCD	820915	1455	15.8		8.7	9.9	91	7.1	401	3
208.7	Mainstem - 50 Feet Above Upper Jay Creek Slough		S31N08E13BCD	820529	1515	10.2		5.3	10.8	91	7.0	89	42
208.7	Mainstem - 50 Feet Above Upper Jay Creek Slough		S31N08E13BCD	820624	1615	27.2		13.9	9.6	99	7.5	96	46
208.7	Mainstem - 50 Feet Above Upper Jay Creek Slough		S31N08E13BCD	820726	1120	19.3		9.0	11.0	101	7.7	115	130
208.7	Mainstem - 50 Feet Above Upper Jay Creek Slough		S31N08E13BCD	820812	1145	14.0		9.4	11.5	98	7.0	139	140
208.7	Mainstem - 50 Feet Above Upper Jay Creek Slough		S31N08E13BCD	820915	1450	15.0		8.0	10.7	96	7.7	124	98
231.3	Upper Goose Creek Mouth		S30N11E32DBC	820505	1345	4.9		0.5	13.3	100	7.4		
231.3	Upper Goose Creek Mouth		S30N11E32DBC	820514	0800	2.5		0.2	13.8	100	7.1	47	1

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	Hydrolab Measurements					
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm	Turbidity NTU
231.3	Upper Goose Creek Mouth		S30N11E32DBC	820618	1430	11.0		6.1	11.2	97	6.8	34	2
231.3	Upper Goose Creek Mouth		S30N11E32DBC	820627	1200	22.3		12.0	9.6	96	7.2	46	--
231.3	Upper Goose Creek Mouth		S30N11E32DBC	820621	1630	17.0		14.0	10.0	104	7.3	65	<1
231.3	Upper Goose Creek Mouth		S30N11E32DBC	820728	1500			14.8	9.7	103	7.3	77	--
231.3	Upper Goose Creek Mouth		S30N11E32DBC	820818	1645	17.2		13.0	9.7	100	7.4	69	<1
231.3	Upper Goose Creek Mouth		S30N11E32DBC	820910	1425	10.6		6.6	11.2	98	7.2	68	<1
231.3	Mainstem - 50 Feet Above Upper Goose Creek		S30N11E32DBC	820514	0930	2.5		0.1	13.5	98	7.3	10	14
231.3	Mainstem - 50 Feet Above Upper Goose Creek		S30N11E32DBC	820514	1200	3.5		0.2	13.0	94	7.2	83	66
231.3	Mainstem - 50 Feet Above Upper Goose Creek		S30N11E32DBC	820618	1440	11.0		7.1	10.6	95	7.0	95	33
231.3	Mainstem - 50 Feet Above Upper Goose Creek		S30N11E32DBC	820630	1245	22.0		11.4	9.6	94	7.4	93	--
231.3	Mainstem - 50 Feet Above Upper Goose Creek		S30N11E32DBC	820721	1640	17.0		12.4	10.4	105	7.5	116	125
231.3	Mainstem - 50 Feet Above Upper Goose Creek		S30N11E32DBC	820728	1500			11.2	10.5	102	7.7	124	--
231.3	Mainstem - 50 Feet Above Upper Goose Creek		S30N11E32DBC	820818	1650	17.2		8.7	10.3	95	6.6	113	110
231.3	Mainstem - 50 Feet Above Upper Goose Creek		S30N11E32DBC	820910	1440	10.6		6.0	11.4	99	7.2	138	32
233.4	Oshetna River Mouth		S30N11E34CCD	820505	1400	4.9		0.1	14.3	105	7.7	--	--
233.4	Oshetna River Mouth		S30N11E34CCD	820527	1400	10.8		3.4	11.4	92	7.2	56	5
233.4	Oshetna River Mouth		S30N11E34CCD	820627	1135	19.6		8.7	10.2	94	7.3	50	42
233.4	Oshetna River Mouth		S30N11E34CCD	820719	1650	23.0		14.4	6.6	101	7.5	99	6
233.4	Oshetna River Mouth		S30N11E34CCD	820728	1440			13.9	10.2	106	7.5	115	--
233.4	Oshetna River Mouth		S30N11E34CCD	820820	1805	19.2		12.8	10.4	106	7.8	114	2
233.4	Oshetna River Mouth		S30N11E34CCD	820909	1540	10.2		7.2	11.0	98	7.4	128	<1
233.4	Mainstem - 50 Feet Above Oshetna River		S30N11E34CCD	820527	1405	11.0		4.7	11.1	93	7.1	59	36
233.4	Mainstem - 50 Feet Above Oshetna River		S30N11E34CCD	820627	1130	19.6		13.4	9.5	99	7.6	122	140
233.4	Mainstem - 50 Feet Above Oshetna River		S30N11E34CCD	820719	1645	23.0		12.6	10.2	104	7.5	128	140
233.4	Mainstem - 50 Feet Above Oshetna River		S30N11E34CCD	820728	1445			11.6	10.5	103	7.7	125	--
233.4	Mainstem - 50 Feet Above Oshetna River		S30N11E34CCD	820820	1810	19.2		10.5	10.4	100	7.7	122	110
233.4	Mainstem - 50 Feet Above Oshetna River		S30N11E34CCD	820909	1550	10.2		6.3	11.1	96	6.7	144	43
	Sally Lake, West End		S32N07E29	820623	1500			16.9	8.0	90	7.3	111	--

Table 4-D-4 (Continued).

River Mile	Site	Zone	Geographic Code	Date	Time	Air Temp °C	Water (Mercury) Temp °C	Hydrolab Measurements				
								Water Temp °C	D.O. (mg/l)	D.O. (% Sat.)	pH	Spec. Cond. umhos/cm
	Sally Lake, West End		S32N07E29	820729	1240	15.2		16.0	8.1	89	7.5	122
	Sally Lake, West End		S32N07E29	820819	1600	18.8		15.7	7.5	82	7.5	114
	Sally Lake, West End		S32N07E29	820822	1330	20.6		17.4	8.0	91	7.7	113
	Sally Lake, West End		S32N07E29	820908	1710	9.8		11.3	7.6	75	7.0	113

Appendix Table 4-D-5

Dissolved Gas Data-Continued

Hourly Data Record from 08/08/82, Time = 1800
to 10/10/82, Time = 1400 (Zeros indicate no
data collected)

Site location: River Mile 150.5 (Immediately below Devil Canyon)

Legend: % Sat=Percent Saturation Total Dissolved Gas
Q=Gold Creek Discharge (Hourly values-Provisional USGS
Data)
Bar=Barometric Pressure from Talkeetna U.S Weather Bureau
corrected for altitude at river mile 150.5
Temp=Temperature in degrees Centigrade at dissolved gas
monitoring station
Sat=Saturometer Readings at Dissolved Gas Monitoring
Station, River Mile 150.5

% Sat	Q	Bar	Temp	Sat	Date 8/9/82
109.31	16467	735	12	814	
109.24	16257	735	12	814	
109.20	16152	736	11.5	814	
109.14	16205	736	11.5	814	
109.11	16152	736	11.5	814	
109.11	16049	736	11	814	
109.05	16101	737	11	814	

Appendix Table 4-2-5

% Sat	Q	Bar	Temp	Sat Date 8/10/82
109.30	16257	737	11	816
109.30	16309	737	11	816
109.25	16572	737	11	816
109.25	16731	737	11	816
109.25	17053	737	10.5	816
109.19	17161	738	10.5	816
109.46	17323	738	10.5	818
109.42	17433	738	10	818
109.42	17652	738	10	818
109.66	17707	738	10	820
109.66	17763	738	10	820
109.66	17763	738	10	820
109.69	17763	738	10	820
109.69	17707	738	10	820
109.73	17542	738	10	820
109.73	17487	738	10	820
109.46	17433	733	10	818
109.46	17215	738	10	818
109.46	17107	738	10	818
109.46	16999	738	10	818
109.19	16838	738	10	816
109.19	16731	738	10.5	816
109.17	16678	738	10.5	816
109.17	16572	738	10.5	816

% Sat	Q	Bar	Temp	Sat Date 8/11/82
109.17	16414	738	10.5	816
109.17	16414	738	10.5	816
109.17	16414	738	10.5	816
109.17	16467	738	10.5	816
109.17	16519	738	10	816
109.19	16678	738	10	816
109.50	16891	737	10	818
109.50	16999	737	10	818
109.54	17161	737	10	818
109.65	17269	736	10	818
109.61	17323	737	10	818
109.65	17323	736	10	818
109.65	17378	736	10	818
109.69	17269	736	10	818
109.45	17107	736	10	816
109.49	16945	736	10.5	816
109.53	16678	735	10	816
109.3	16572	735	10	814
109.31	16467	735	10	814
109.06	16257	735	10	812
109.10	16152	735	10	812
109.08	15894	735	10	812
109.04	15740	735	10	812
109.04	15638	735	10	812

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 8/12/82
108.77	15487	735	10.5		810
109.04	15536	735	10.5		812
109.04	15536	735	10		812
109.04	15536	735	10.5		812
109.04	15536	735	10		812
108.97	15536	735	10		812
108.97	15486	735	10		812
108.97	15435	735	10		812
108.97	15435	735	10		812
108.97	15435	735	10		812
108.97	15435	735	10		812
108.7	15385	735	10		810
108.42	15284	735	10		808
108.42	15284	735	10		808
108.68	15184	736	10		810
108.68	15134	736	10.5		810
108.40	15084	736	10.5		808
108.37	15035	736	11		808
108.35	14936	736	11		808
108.31	14886	736	11		808
108.26	14788	737	11		808
108.39	14739	736	11		808
108.14	14690	737	11		808
108.09	14641	738	11		808
107.99	14495	738	11		808

% Sat	Q	Bar	Temp	Sat	Date 8/13/82
107.90	14398	739	11		808
108.15	14447	739	10.5		810
108.12	14398	739	10.5		810
108.04	14398	740	10.5		810
108.04	14398	740	10.5		810
107.97	14495	740	10.5		810
108.24	14592	740	10.5		812
108.24	14592	740	10		812
108.28	14544	740	10		812
108.31	14592	740	10		812
108.31	14592	740	10		812
108.35	14495	740	10		812
108.61	14544	738	10		812
108.42	14544	739	10.5		812
108.19	14350	739	10.5		810
108.15	14302	739	10.5		810
108.19	14159	739	11		810
107.92	13921	739	11		808
107.92	13827	739	11.5		808
107.88	13687	739	11.5		808
107.58	13640	739	11.5		806
107.81	13501	740	11.5		808
107.77	13455	740	12		808
107.70	13409	740	12		808

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat Date 8/14/82
111.52	13409	715	12	808
107.62	13409	741	11.5	808
107.62	13455	741	12	808
107.62	13501	741	12	808
107.86	13547	741	11.5	810
107.82	13640	741	11.5	810
107.82	13827	741	11.5	810
107.82	13921	741	11.5	810
107.86	13969	741	11.5	810
108.16	14111	741	11.5	812
108.24	14159	740	11.5	812
108.24	14206	740	11.5	812
108.31	14302	740	11.5	812
108.35	14350	740	12	812
108.42	14398	739	12	812
108.50	14302	739	12	812
108.27	14254	738	12	810
108.30	14159	738	12.5	810
108.03	13874	738	12.5	808
108.03	13687	738	13	808
108.07	13640	738	13	808
107.80	13501	738	13	806
107.80	13271	738	13	806
107.80	13134	738	13	806

% Sat	Q	Bar	Temp	Sat Date 8/15/82
107.80	13180	738	13	806
107.80	13180	738	13	806
107.80	13225	738	13	806
107.82	13271	738	13	806
107.91	13409	737	13	806
107.91	13455	737	13	806
107.98	13640	737	13	806
108.02	13780	736	13	806
108.26	13874	737	13	808
108.26	13969	737	13	808
108.49	14111	737	13	810
108.49	14111	737	12.5	810
108.22	14111	737	12.5	808
108.26	14111	737	12.5	808
108.56	14111	736	12.5	810
108.56	14063	736	12.5	810
108.29	14063	736	12.5	808
108.56	13969	736	12.5	810
108.29	13921	736	13	808
108.22	13874	737	12.5	808
108.16	13827	737	12.5	808
108.14	13780	737	12.5	808
108.07	13780	738	12.5	808
108.23	13780	739	12.5	810

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat Date 8/16/82
108.19	13687	739	12.5	810
108.15	13827	739	12.5	810
108.12	13969	739	12.5	810
108.35	14254	740	12.5	812
108.31	14398	740	12.5	812
108.55	14495	740	12.5	814
108.47	14739	741	12.5	814
108.43	14886	741	12	814
108.43	14936	741	12	814
108.40	15035	741	12	814
108.67	15035	741	12	816
108.63	15084	741	12	816
108.67	15084	741	11.5	816
108.67	15134	741	12	816
108.70	15084	741	12	816
108.67	15084	741	12	816
108.63	15134	741	12.5	816
108.59	15234	742	12.5	816
108.52	15284	742	12.5	816
108.48	15334	742	12	816
108.69	15385	743	12	818
108.66	15435	743	12	818
108.62	15435	743	12	818
108.62	15486	743	12	818

% Sat	Q	Bar	Temp	Sat Date 8/17/82
108.62	15486	743	11.5	818
108.91	15536	743	11.5	820
108.64	15536	743	11.5	818
108.89	15587	743	11.5	820
108.89	15587	743	11.5	820
108.89	15740	743	11.5	820
108.93	15740	743	11	820
108.96	15740	743	11	820
108.96	15689	743	10.5	820
108.69	15791	743	10.5	818
108.73	15791	743	10	818
109.00	15791	743	10	820
108.69	15740	743	10	818
108.86	15842	742	10.5	818
108.90	15740	741	10.5	818
108.97	15791	741	10.5	818
108.99	15791	741	10.5	818
108.72	15842	741	11	816
108.99	15740	741	11	818
108.70	15638	741	11	816
108.69	15638	741	10.5	816
108.96	15587	741	11	818
108.67	15740	741	11	816
108.65	15689	741	11	816

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat Date 8/18/82
108.65	15638	741	11	816
108.65	15740	741	11	816
108.65	15740	741	11	816
108.92	15689	741	11	818
108.92	15740	741	11	818
108.79	15791	742	10.5	818
108.77	15791	742	10.5	818
108.77	15740	742	10.5	818
108.71	15638	743	10.5	818
108.68	15536	743	10	818
108.66	15435	743	10	818
108.62	15334	743	10	818
108.77	15234	742	10	818
108.62	15084	743	9.5	818
108.64	15035	743	9.5	818
108.62	14985	743	9.5	818
108.60	14739	743	9.5	818
108.31	14739	744	10	816
108.26	14641	744	10	816
108.24	14592	744	10	816
108.20	14544	744	10	816
108.17	14447	745	10	816
107.80	14447	747	10	816
108.06	14447	745	10	816

% Sat	Q	Bar	Temp	Sat Date 8/19/82
108.02	14116	746	10	816
108.25	14211	746	10.5	818
108.29	14245	746	10.5	818
108.18	14273	746	10	818
108.18	14230	746	10	818
108.07	14317	747	10	818
108.07	14379	747	10	818
108.30	14408	747	10	820
108.26	14490	748	9.5	820
108.26	14456	748	10	820
108.30	14515	747	10	820
108.30	14510	747	10	820
108.30	14534	747	10	820
108.30	14568	747	10	820
108.52	14485	746	10	820
108.35	14360	747	10.5	820
108.10	14273	747	10.5	818
108.10	14192	747	10.5	818
108.07	14144	747	11	818
108.05	14101	747	11	818
108.40	13898	745	11	818
107.97	13818	748	11	818
107.97	13757	748	11	818
107.90	13710	748	11	818

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat Date 8/20/82
107.90	13594	748	11	818
107.88	13547	748	10.5	818
107.88	13594	748	10.5	818
108.11	13594	749	10.5	820
108.11	13547	749	10.5	820
108.04	13547	749	10.5	820
108.04	13640	749	10.5	820
108.00	13594	749	10	820
108.04	13640	749	10	820
108.04	13640	749	9.5	820
108.08	13733	749	10	820
108.11	13547	749	10	820
108.15	13501	748	10	820
107.92	13455	748	10	818
107.97	13363	748	10	818
107.73	13317	748	10.5	816
107.73	13271	748	11	816
107.74	13134	748	11	816
107.76	13089	747	11	816
107.74	12953	748	11	816
107.44	12819	748	11	814
107.44	12685	748	11	814
107.42	12596	748	11	814
107.42	12596	748	11	814

% Sat	Q	Bar	Temp	Sat Date 8/21/82
107.62	12552	748	11	816
107.62	12552	748	11	816
107.62	12552	748	11.5	816
107.58	12508	749	11.5	816
107.58	12552	749	11.5	816
107.58	12552	749	11.5	816
107.58	12596	749	11.5	816
107.58	12685	749	11.5	816
107.88	12641	748	11.5	818
107.65	12685	748	11.5	816
107.69	12730	748	11.5	816
107.73	12819	748	11	816
107.73	12774	748	11.5	816
108.10	12774	747	11.5	818
107.87	12819	747	11.5	816
107.91	12774	746	11.5	816
107.95	12730	746	12	816
107.71	12596	746	12	814
107.71	12552	746	12	814
107.41	12464	746	12	812
107.41	12333	746	12	812
107.41	12246	746	12	812
107.34	12160	747	12.5	812
107.28	12073	747	12	812

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat Date 8/22/82
107.53	11860	747	12	814
107.25	11775	747	12	812
107.21	11775	748	12	812
107.17	11733	748	12	812
107.42	11733	748	12	814
107.39	11775	748	12	814
107.35	11860	748	11.5	814
107.39	12030	748	11.5	814
107.65	12030	748	11.5	816
107.65	12073	748	11.5	816
107.69	12160	748	11.5	816
107.73	12246	748	11.5	816
107.80	12290	747	11.5	816
107.87	12290	747	11.5	816
107.64	12333	746	11.5	814
107.95	12333	746	11.5	816
107.71	12333	746	11.5	814
107.75	12333	746	12	814
107.75	12203	746	12	814
107.48	12030	746	12	812
107.43	11945	746	12	812
107.43	11945	746	12	812
107.39	11733	746	12	812
107.39	11691	746	12	812

% Sat	Q	Bar	Temp	Sat Date 8/23/82
107.36	11649	747	12	812
107.05	11607	747	12	810
107.32	11523	747	11.5	812
107.32	11523	747	11.5	812
107.34	11523	747	11.5	812
107.34	11565	747	11	812
107.37	11649	746	11	812
107.37	11649	746	11	812
107.37	11691	746	11	812
107.68	11733	746	11	814
107.48	11775	746	11.5	812
107.79	11817	745	11.5	814
107.86	11945	745	11.5	814
107.93	11988	744	11.5	814
108.01	11988	744	11.5	814
107.78	12030	744	12	812
107.78	12030	744	12	812
107.81	12030	743	12	812
107.54	12030	743	12	810
107.54	11902	743	12	810
107.54	11902	743	12	810
107.56	11860	743	12	810
107.53	11775	743	12	810
107.24	11733	744	12	808

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat Date 8/24/82
107.18	11649	744	12	808
107.45	11733	744	12.5	810
107.45	11733	744	12.5	810
107.43	11775	744	12.5	810
107.43	11988	744	12	810
107.43	11902	744	12	810
107.43	11860	744	12	810
107.70	11945	744	12	812
107.40	12030	744	12	810
107.67	12030	744	12	812
107.67	12030	744	12	812
107.67	12160	744	12	812
107.67	12160	744	12	812
107.70	12160	744	11.5	812
107.74	12116	744	12	812
107.74	12073	744	12	812
107.74	12073	744	12	812
107.74	12030	744	12	812
107.47	11988	744	12	810
107.45	11945	744	12	810
107.38	11860	744	12	810
107.36	11775	745	12	810
107.36	11649	745	12	810
107.32	11565	745	12	810

% Sat	Q	Bar	Temp	Sat Date 8/25/82
107.32	11733	745	12	810
107.32	11775	745	12	810
107.32	11649	745	12	810
107.32	11649	745	12	810
107.32	11775	745	12	810
107.36	11902	745	12	810
107.59	11902	745	12	812
107.59	12030	745	11.5	812
107.56	12116	745	11.5	812
107.56	12377	745	11.5	812
107.86	12421	745	11.5	814
107.90	12421	745	12	814
107.93	12552	744	11.5	814
107.97	12641	744	12	814
108.05	12641	744	12	814
108.06	12819	743	12	814
108.03	12953	744	12	814
108.01	12998	744	12	814
107.99	13089	744	12	814
107.99	13089	744	12	814
107.99	13089	744	12	814
107.99	12998	744	12	814
107.95	13089	744	12	814
107.95	13044	744	12	814

Appendix Table 4-0-5

% Sat	Q	Bar	Temp	Sat Date 8/26/82
107.95	13089	744	12	814
107.95	13089	744	12	814
107.99	13089	744	12	814
107.99	13180	744	12	814
107.99	13271	744	12	814
108.03	13363	744	11.5	814
108.03	13409	744	11.5	814
108.06	13363	743	11.5	814
108.10	13501	743	11.5	814
108.10	13640	743	11.5	814
108.21	13640	742	11	814
107.94	13687	742	11	812
108.29	13640	742	11	814
108.09	13687	741	11	812
108.20	13780	741	11	812
108.28	13733	740	11.5	812
108.35	13732	740	11.5	812
108.12	13687	739	11.5	810
108.14	13640	739	11.5	810
107.87	13594	739	11.5	808
108.12	13409	739	11.5	810
107.88	13455	739	11.5	808
108.14	13501	739	11.5	810
107.88	13455	739	12	808

% Sat	Q	Bar	Temp	Sat Date 8/27/82
107.92	13317	739	12	808
107.92	13317	739	11.5	808
107.92	13317	739	11.5	808
107.92	13409	739	11.5	808
107.92	13455	739	11	808
108.19	13594	739	11	810
108.19	13640	739	11	810
108.19	13733	739	11	810
108.19	13874	739	11	810
107.89	13921	741	10.5	810
108.30	13959	738	10.5	810
108.12	14016	739	10.5	810
108.14	14063	739	10.5	810
108.51	14159	737	10.5	810
108.62	14206	736	11	810
108.44	14206	735	11	808
108.46	14159	735	11	808
108.19	14063	735	11	806
108.23	13921	735	11	806
108.19	13827	735	11	806
80.416	13780	989	11	806
107.86	13687	736	11	804
80.194	13547	990	11	804
80.194	13455	990	11	804

Appendix Table 4-0-5

% Sat	Q	Bar	Temp	Sat Date 8/28/82
107.86	13225	736	10.5	804
107.86	13134	736	10.5	804
107.86	13134	736	10.5	804
107.86	13044	736	10.5	804
107.32	13089	739	10.5	804
108.08	13044	736	10.5	806
108.08	13044	736	10.5	806
108.08	13044	736	10	806
108.45	12998	733	10	806
108.45	13044	733	9.5	806
108.15	13089	735	9.5	806
108.15	12998	735	9.5	806
108.19	13044	735	9.5	806
108.23	12998	735	10	806
107.95	12953	735	10	804
107.99	12953	735	10	804
107.99	12908	735	10.5	804
107.99	12819	735	10.5	804
107.65	12685	735	11	802
107.61	12552	735	11	802
107.55	12421	736	11	802
107.52	12290	736	11	802
107.44	12160	737	11	802
107.60	12116	737	11	804

% Sat	Q	Bar	Temp	Sat Date 8/29/82
107.56	12073	738	11	804
107.53	12030	738	11	804
107.49	12030	738	11	804
107.45	12073	738	11	804
107.61	12116	739	11	806
107.58	12203	739	11	806
107.50	12333	740	10.5	806
107.50	12464	740	10.5	806
107.74	12552	740	10.5	808
107.70	12685	740	10	808
107.66	12730	741	10	808
107.93	12774	741	10	810
107.93	12819	741	10	810
107.97	12819	740	10	810
108.04	12819	740	10	810
107.81	12819	740	10	808
107.77	12774	740	10	808
107.77	12596	740	10	808
107.81	12508	740	10.5	808
107.81	12464	740	10.5	808
107.54	12290	740	10.5	806
107.61	12290	739	10.5	806
107.65	12160	739	10.5	806
107.69	12073	739	10.5	806

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat Date 8/30/82
107.49	11945	738	10.5	804
107.53	11860	738	10	804
107.56	11817	738	10	804
107.56	11775	738	10.5	804
107.56	11817	738	10	804
107.64	11775	737	10	804
107.68	11860	737	10	804
107.44	11902	737	10	802
107.79	11902	736	10	804
107.82	11945	736	10	804
107.94	12073	735	10	804
107.94	12160	735	10	804
107.72	12290	735	10	802
107.76	12333	734	10	802
107.79	12377	734	9.5	802
107.87	12421	734	10	802
107.91	12421	733	9.5	802
107.63	12464	733	9.5	800
107.67	12421	733	9.5	800
107.67	12421	733	9.5	800
107.73	12421	733	9.5	800
107.73	12333	733	9.5	800
107.47	12290	733	9.5	798
107.51	12203	732	9.5	798

% Sat	Q	Bar	Temp	Sat Date 8/31/82
107.55	12116	732	9.5	798
107.58	12030	732	9.5	798
107.31	11988	732	9.5	796
107.62	11988	732	9.5	798
107.62	12030	732	9.5	798
107.73	12116	731	9.5	798
107.73	12290	731	9.5	798
107.40	12333	733	9.5	798
107.81	12685	730	9.5	798
107.85	12819	730	9.5	798
107.85	13134	730	9.5	798
107.92	13134	730	9	798
107.96	13547	729	9	798
108.00	13594	729	9	798
108.03	13640	729	9	798
108.09	13874	728	9	798
108.09	14159	728	9	798
108.11	14398	728	9	798
108.09	14495	728	9	798
108.05	14592	729	9	798
108.03	14739	729	9	798
107.72	14739	729	9	796
107.98	14837	729	9	798
107.96	14936	729	9	798

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 8/32/82
108.23	15084	729	9	800	
108.23	15385	729	9	800	
108.23	15486	729	9	800	
108.23	15638	729	8.5	800	
108.51	15842	729	8.5	802	
108.39	15945	730	8.5	802	
108.36	16101	730	8.5	802	
108.55	16257	731	8.5	804	
108.52	16414	731	8.5	804	
108.48	16519	731	8.5	804	
108.71	16572	732	8.5	806	
108.71	16678	732	8.5	806	
108.68	16731	732	8.5	806	
108.97	16731	732	8.5	808	
108.95	16731	732	8.5	808	
108.95	16731	732	8.5	808	
108.87	16731	732	8.5	808	
108.86	16678	733	8.5	808	
108.80	16625	733	9	808	
108.72	16678	733	9	808	
108.65	16625	734	9	808	
108.61	16625	734	9	808	
108.85	16678	734	9	810	
108.81	16785	735	9	810	

% Sat	Q	Bar	Temp	Sat	Date 9/1/82
108.81	16838	735	9	810	
109.04	16891	735	9	812	
109.00	16945	735	9	812	
108.99	16999	735	9	812	
108.99	17269	735	9	812	
109.18	17433	736	8.5	814	
109.18	17707	736	8.5	814	
109.45	17985	736	8.5	816	
109.42	18209	736	8.5	816	
109.69	18435	736	8.5	818	
109.73	18549	736	8.5	818	
109.74	18720	736	8.5	818	
110.05	18892	735	8.5	820	
109.86	18892	735	8.5	818	
109.90	18835	735	8.5	818	
109.90	18606	735	8.5	818	
109.90	18435	735	9	818	
109.88	18265	735	9	818	
109.86	18097	735	9	818	
109.55	17929	735	9	816	
109.47	17707	736	9	816	
109.43	17433	736	9	816	
109.40	17433	736	9	816	
109.36	17378	736	9	816	

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 9/2/82
109.32	17269	737	9	816	
109.32	17161	737	9	816	
109.03	17053	737	9	814	
108.99	16945	737	8.5	814	
108.99	16731	737	8.5	814	
108.90	16519	738	8.5	814	
109.58	16414	733	8	814	
109.56	16205	733	8	814	
108.75	16101	739	8	814	
108.73	16101	739	8	814	
108.73	16049	739	8	814	
108.73	15945	739	8	814	
109.00	15842	739	8	816	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
108.50	15284	739	8.5	812	
108.42	15035	739	8.5	812	
108.41	14936	739	9	812	
108.58	14985	740	9	814	
108.55	14936	740	9	814	
108.24	14739	740	9	812	
108.47	14641	741	9	814	

% Sat	Q	Bar	Temp	Sat	Date 9/3/82
108.43	14495	741	9	814	
108.40	14495	741	9	814	
108.40	14398	741	8.5	814	
108.40	14350	741	8.5	814	
108.36	14398	741	8.5	814	
108.36	14495	741	8.5	814	
108.29	14544	742	8.5	814	
108.29	14641	742	8.5	814	
108.52	14788	742	8.5	816	
108.56	14837	742	8.5	816	
108.56	14837	742	8	816	
108.56	14837	742	8	816	
108.56	14886	742	8	816	
108.56	14936	742	8.5	816	
108.59	14936	742	8.5	816	
108.63	14936	741	8.5	816	
108.63	14985	741	8.5	816	
108.40	14985	741	8.5	814	
108.40	14985	741	8.5	814	
108.36	14936	741	9	814	
108.40	14936	741	9	814	
108.40	14837	741	8.5	814	
108.40	14690	741	8.5	814	
108.43	14592	741	8.5	814	

Appendix Table H-D-5

% Sat	Q	Bar	Temp	Sat	Date 9/4/82
108.43	14788	741	8.5	814	
108.47	14788	741	8.5	814	
108.47	14690	741	8.5	814	
108.47	14690	741	8.5	814	
108.47	14641	741	8	814	
108.51	14690	740	8.5	814	
108.55	14690	740	8	814	
108.55	14641	740	8	814	
108.62	14641	740	8	814	
108.39	14641	739	8	812	
108.69	14544	739	8	814	
108.73	14641	739	8	814	
108.52	14690	739	8	812	
108.63	14641	738	8	812	
108.69	14592	737	8	812	
108.49	14544	737	8	810	
108.53	14495	737	8	810	
108.60	14495	736	8.5	810	
108.64	14447	736	8.5	810	
108.40	14398	736	8.5	808	
108.50	14350	735	8.5	808	
108.54	14302	735	8.5	808	
108.65	14254	734	8.5	808	
108.72	14111	733	8.5	808	

% Sat	Q	Bar	Temp	Sat	Date 9/5/82
108.56	14063	733	8.5	806	
108.64	14016	732	8.5	806	
108.75	14016	731	8	806	
108.63	14016	730	8	804	
108.74	14016	730	8	804	
108.58	13969	729	8	802	
108.70	13969	728	8	802	
108.89	13874	727	8	802	
108.92	13969	727	8	802	
108.72	13921	726	8	800	
108.84	13827	725	7.5	800	
108.95	13733	725	7.5	800	
109.07	13733	724	8	800	
108.91	13733	723	8	798	
109.02	13687	722	8	798	
108.90	13547	721	8	796	
109.01	13455	720	8.5	796	
108.93	13409	719	8.5	794	
109.00	13271	719	8.5	794	
109.04	13134	718	8.5	794	
108.75	13089	719	8.5	792	
108.51	12998	718	8.5	790	
108.58	12908	718	8.5	790	
108.70	12774	717	8	790	

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 9/6/82
108.74	12685	717	8	790	
108.38	12596	717	8	788	
108.42	12464	717	8	788	
108.38	12464	717	8	788	
108.38	12333	717	8	788	
108.38	12203	717	8	788	
108.42	12203	717	8	788	
108.42	12160	717	8	788	
108.42	12203	717	8	788	
108.42	12160	717	8.5	788	
108.42	12203	717	8.5	788	
108.14	12160	717	8.5	786	
108.14	12073	717	8.5	786	
108.14	11945	717	8.5	786	
108.14	11860	717	8.5	786	
108.10	11860	717	8.5	786	
108.03	11817	718	9	786	
107.95	11775	718	9	786	
107.87	11691	719	8.5	786	
107.80	11649	719	8.5	786	
107.68	11607	720	8.5	786	
107.87	11565	721	9	788	
107.79	11440	721	9	788	
107.73	11440	722	9	788	

% Sat	Q	Bar	Temp	Sat	Date 9/7/82
108.01	11398	722	9	790	
108.01	11398	722	9	790	
108.01	11357	722	9	790	
108.01	11357	722	9	790	
108.01	11386	722	9	790	
107.77	11427	725	8.5	792	
107.70	11469	726	8.5	792	
107.86	11469	726	8.5	794	
107.79	11427	727	9	794	
107.75	11469	727	9	794	
107.99	11548	727	9	796	
108.22	11543	728	9	798	
108.22	11674	728	9	798	
108.28	11758	727	9.5	798	
108.02	11716	727	9.5	796	
108.00	11674	727	9.5	796	
108.02	11758	727	9.5	796	
108.00	11800	727	9.5	796	
107.99	11758	727	9.5	796	
108.24	11678	727	9.5	798	
107.95	11594	728	9.5	796	
107.91	11678	728	9.5	796	
107.87	11678	728	9.5	796	
107.84	11762	728	9.5	796	

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 9/8/82
107.80	11762	729	9	796	
107.80	11762	729	9	796	
107.80	11716	729	9	796	
108.07	11843	729	9	798	
108.07	11843	729	9	798	
108.00	11971	729	9	798	
107.96	12056	729	9	798	
107.92	12186	730	9	798	
107.88	12229	730	9	798	
107.85	12359	730	8.5	798	
107.81	12359	730	9	798	
108.08	12491	730	8.5	800	
108.08	12619	730	8.5	800	
108.08	12841	730	8.5	800	
108.10	12931	730	8.5	800	
108.10	12976	730	8.5	800	
108.10	13111	730	8.5	800	
108.10	13248	730	8.5	800	
108.08	13294	730	8.5	800	
108.06	13432	731	8.5	800	
108.05	13570	731	8.5	800	
108.01	13617	731	8.5	800	
108.28	13757	731	8.5	802	
108.24	13851	731	8.5	802	

% Sat	Q	Bar	Temp	Sat	Date 9/9/82
108.21	13851	731	8.5	802	
108.21	13898	731	8.5	802	
108.48	14040	731	8.5	804	
108.48	14087	731	8.5	804	
108.48	14135	731	8	804	
108.44	14182	732	8	804	
108.44	14278	732	8	804	
108.44	14278	732	8	804	
108.44	14326	732	8	804	
108.44	14321	732	8	804	
108.71	14418	732	8	806	
108.75	14418	731	8	806	
108.52	14563	731	8	804	
108.59	14563	731	8.5	804	
108.67	14563	730	8.5	804	
108.71	14612	730	8.5	804	
108.71	14709	730	8.5	804	
108.67	14709	730	8.5	804	
108.67	14807	730	8.5	804	
108.63	14807	730	8.5	804	
108.59	14807	731	8	804	
108.59	14807	731	8	804	
108.55	14852	731	8	804	
108.55	14852	731	8	804	

% Sat	Q	Bar	Temp	Sat	Date 9/10/82
108.75	14852	731	8	806	
108.75	14852	731	8	806	
108.71	14802	732	8	806	
108.71	14802	732	8	806	
108.64	14753	732	8	806	
108.64	14753	732	8	806	
108.64	14607	732	7.5	806	
108.60	14558	732	7.5	806	
108.91	14461	732	7.5	808	
108.84	14461	733	7.5	808	
108.84	14360	733	7.5	808	
108.80	14317	733	7.5	808	
108.84	14264	733	7.5	808	
108.80	14168	733	7.5	808	
108.80	14120	733	7.5	808	
108.80	13978	733	7.5	808	
108.76	13884	733	7.5	808	
108.76	13837	733	7.5	808	
108.53	13837	733	7.5	806	
108.41	13841	734	7.5	806	
108.69	13841	734	7.5	808	
108.38	13841	734	7.5	806	
108.61	13747	734	7.5	808	
108.57	13701	734	7.5	808	

% Sat	Q	Bar	Temp	Sat	Date 9/11/82
108.57	13701	734	7.5	808	
108.57	13701	734	7.5	808	
108.61	13701	734	7.5	808	
108.57	13747	734	7	808	
108.57	13701	734	7	808	
108.30	13701	734	7	806	
108.30	13794	734	7	806	
108.34	13794	734	7	806	
108.34	13794	734	7	806	
108.31	13841	736	7	808	
108.04	13841	736	7	806	
108.11	13794	736	7	806	
108.35	13747	736	7	808	
108.35	13701	736	7	808	
108.31	13696	736	7	808	
108.27	13603	736	7	808	
108.20	13556	737	6.5	808	
108.91	13510	732	6.5	808	
109.07	13464	733	6.5	810	
109.07	13418	733	6.5	810	
108.23	13418	739	6.5	810	
108.15	13376	739	6.5	810	
108.35	13330	740	6.5	812	
108.20	13330	741	6.5	812	

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 9/12/82
108.13	13515	741	6.5	812	
108.29	13422	742	6.5	814	
108.25	13381	742	6.5	814	
108.17	13330	743	6.5	814	
108.17	13381	743	6	814	
108.08	13289	743	6.5	814	
108.08	13335	743	6	814	
108.08	13381	743	6	814	
108.31	13198	744	6	816	
108.31	13243	744	6	816	
108.31	13198	744	6	816	
108.31	13152	744	6	816	
108.33	13016	743	6	816	
108.33	13016	743	6.5	816	
108.44	13062	743	6.5	816	
108.21	12881	742	6.5	814	
108.25	12926	742	6.5	814	
108.25	12926	742	6.5	814	
108.25	12926	742	6.5	814	
108.09	12971	741	6.5	812	
108.26	12971	740	6.5	812	
108.26	12926	740	6.5	812	
108.31	12926	740	6.5	812	
108.29	12881	740	6.5	812	

% Sat	Q	Bar	Temp	Sat	Date 9/13/82
108.35	12881	740	6.5	812	
108.41	12837	739	6.5	812	
108.48	12881	739	6.5	812	
108.57	13016	738	6.5	812	
108.30	13198	738	6.5	810	
108.45	13427	737	6.5	810	
108.30	13752	738	6.5	810	
108.53	14082	737	6.5	810	
108.56	14515	736	6	810	
108.64	14906	736	6	810	
108.64	15304	736	6	810	
108.87	15760	736	6	812	
109.08	16330	735	6	812	
109.19	16859	734	6	812	
109.27	17128	733	6	812	
109.25	17509	734	6.5	812	
109.17	17785	734	6.5	812	
109.08	18007	735	6.5	812	
109.22	18237	736	6.5	814	
109.13	18412	737	6.5	814	
109.27	18537	737	7	816	
109.33	18726	738	6.5	818	
109.41	18818	739	7	818	
109.54	18933	739	7	820	

Appendix Table 4-0-5

% Sat	Q	Bar	Temp	Sat	Date 9/14/82
109.54	18991	739	7	820	
109.54	19107	739	7	820	
109.81	19229	739	7	822	
109.81	19287	739	7	822	
109.81	19463	739	7	822	
109.71	19581	741	7	824	
109.65	19758	742	7	824	
109.61	19812	742	7	824	
109.79	19877	743	7	826	
109.77	19991	743	7	826	
110.04	20170	743	7	828	
110.06	20231	743	7	828	
110.10	20291	742	7	828	
110.13	20527	742	7	828	
110.21	20588	742	7	828	
110.36	20772	741	7	828	
110.15	20833	740	7	826	
110.05	21018	739	7	824	
110.07	21329	739	7	824	
110.12	21585	739	7	824	
110.36	21794	739	7	826	
110.36	22465	739	7	826	
110.63	22789	739	7	828	
110.59	23116	739	7	828	

% Sat	Q	Bar	Temp	Sat	Date 9/15/82
110.63	23847	739	7	828	
110.66	24388	739	7	828	
111.07	25215	738	7	830	
111.20	25705	737	7	830	
111.20	26489	737	7	830	
111.16	27434	737	7	830	
111.43	27656	737	7	832	
111.80	28252	736	7	834	
111.88	29238	736	7	834	
112.19	29934	736	7	836	
112.54	30090	735	7	838	
112.54	30482	733	7	836	
112.73	30958	732	7.5	836	
112.81	31037	732	8	836	
112.85	31277	731	8	836	
112.7	31599	731	8	834	
112.68	31599	731	8.5	834	
112.62	31438	731	8	834	
112.7	31037	731	8	834	
112.64	30246	731	8	834	
112.73	30403	730	8	834	
112.85	30561	730	8	834	
112.7	30561	729	9	832	
112.7	30561	729	9	832	

Appendix Table 4.1-5

% Sat	Q	Bar	Temp	Sat	Date 9/16/82
112.93	30799	727	9	832	
112.54	30878	730	8.5	832	
112.46	31277	730	9	832	
112.38	31599	731	8.5	832	
112.66	31761	731	8.5	834	
112.66	31680	733	8.5	836	
112.77	31923	734	8.5	838	
112.93	32167	734	8	840	
112.85	32908	735	8	840	
113.04	33157	735	8	842	
112.97	32908	736	8	842	
112.85	33241	737	8	842	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
113.29	33074	739	8.5	848	
113.25	32991	739	8.5	848	
113.48	32908	740	8.5	850	
113.41	33074	740	8.5	850	
113.60	33241	741	8.5	852	
113.56	33408	741	8.5	852	
113.25	33408	741	8.5	850	

% Sat	Q	Bar	Temp	Sat	Date 9/17/82
113.52	33241	741	8.5	852	
113.52	33241	741	8	852	
113.21	33074	741	8	850	
113.25	33157	741	8	850	
113.52	33074	741	8	852	
113.52	33074	741	7.5	852	
113.25	32908	741	7.5	850	
113.21	32908	741	7.5	850	
113.21	32660	741	7.5	850	
113.29	32495	741	7.5	850	
113.25	32495	741	7.5	850	
113.29	32331	741	7.5	850	
113.06	32167	741	7.5	848	
113.06	32004	741	7.5	848	
113.14	31842	740	7.5	848	
112.90	31761	740	7.5	846	
113.02	31599	739	7.5	846	
112.83	31357	739	7.5	844	
112.87	31277	738	7.5	844	
112.67	31117	738	7.5	842	
112.79	30958	737	7.5	842	
112.48	30561	737	7.5	840	
112.44	30325	738	7.5	840	
112.44	30246	738	7	840	

Appendix - Table 4-B-5

% Sat	Q	Bar	Temp	Sat	Date 9/18/82
112.44	29934	738	7.5	840	
112.17	29778	738	7	838	
112.25	29315	737	7	838	
112.29	29238	737	7	838	
112.99	28704	736	6.5	836	
112.17	28252	736	6.5	836	
111.90	28177	736	6.5	834	
111.90	27878	736	6.5	834	
111.63	27508	736	6.5	832	
111.63	27214	736	6.5	832	
111.67	27068	736	6	832	
111.39	26995	736	6	830	
111.43	26777	735	6	830	
111.51	26202	735	6.5	830	
111.31	25832	734	6.5	828	
111.41	25811	734	6.5	828	
111.25	25579	733	6.5	826	
111.29	25579	733	6.5	826	
111.02	25298	733	6.5	824	
111.02	25020	733	6.5	824	
110.67	24813	733	7	822	
110.63	24744	733	7	822	
110.59	24676	734	7	822	
110.55	24600	734	7	822	

% Sat	Q	Bar	Temp	Sat	Date 9/19/82
110.55	24532	734	7	822	
110.52	24395	734	7	822	
110.79	24327	734	7	824	
110.79	24252	734	7	824	
110.48	24185	734	7	822	
110.44	24049	735	7	822	
110.48	23982	734	6.5	822	
110.48	23914	734	7	822	
110.48	23914	734	6.5	822	
110.44	23847	735	6.5	822	
110.44	23780	735	6.5	822	
110.52	23780	734	7	822	
110.55	23780	734	6.5	822	
110.40	23780	733	6.5	820	
110.40	23847	733	7	820	
110.40	23847	733	7	820	
110.40	23847	733	7	820	
110.40	23914	733	7	820	
110.28	23982	734	7	820	
110.21	24117	734	7	820	
110.17	24252	735	7	820	
110.13	24313	735	7	820	
110.34	24388	735	7	822	
110.31	24518	736	7	822	

Appendix Table 4-B-5

% Sat	Q	Bar	Temp	Sat	Date 9/20/82
110.23	24518	736	7	822	
110.17	24586	736	7	822	
110.41	24443	737	7	824	
110.35	24307	737	7	824	
110.35	24307	737	7	824	
110.29	24171	738	6.5	824	
110.24	24171	738	6.5	824	
110.20	24103	738	6.5	824	
110.20	24029	738	6.5	824	
110.32	24029	739	6.5	826	
110.36	23962	739	6.5	826	
110.36	23901	739	6.5	826	
110.36	23901	739	6.5	826	
110.36	23968	739	6.5	826	
110.36	23968	739	7	826	
110.45	23901	738	7	826	
110.51	23901	738	7	826	
110.56	23767	738	7	826	
110.62	23975	737	7	826	
110.62	24110	737	7	826	
110.60	24178	737	7	826	
110.66	24043	737	7	826	
110.41	24043	737	7	824	
110.74	24043	736	7	826	

% Sat	Q	Bar	Temp	Sat	Date 9/21/82
110.74	24043	736	7	826	
110.74	24110	736	7	826	
110.46	24178	736	7	824	
110.46	24110	736	7	824	
110.46	24103	736	7	824	
110.79	24110	734	6.5	824	
110.83	24171	734	6.5	824	
110.87	24239	734	6.5	824	
110.87	24239	734	6.5	824	
110.79	24313	734	6.5	824	
110.71	24307	735	6.5	824	
110.54	24307	736	6.5	824	
110.54	24382	736	6.5	824	
110.12	24382	739	6.5	824	
110.12	24450	739	6.5	824	
110.46	24518	736	6.5	824	
110.46	24382	736	6.5	824	
110.43	24246	737	6.5	824	
110.35	24313	737	6.5	824	
110.31	24246	737	6.5	824	
110.51	24246	738	7	826	
110.51	24246	738	7	826	
110.47	24178	738	7	826	
110.47	24110	738	7	826	

% Sat	Q	Bar	Temp	Sat	Date 9/22/82
110.47	23975	738	6.5	826	
110.51	23841	738	6.5	826	
110.51	23774	738	6.5	826	
110.47	23700	738	6.5	826	
110.47	23633	738	6.5	826	
110.24	23433	738	6.5	824	
110.01	23301	739	6.5	824	
109.97	23103	740	6	824	
109.93	22907	740	6	824	
110.20	22776	740	6	826	
110.13	22776	740	6	826	
110.13	22452	740	6	826	
110.17	22329	740	6	826	
110.20	22137	740	6	826	
109.9	22073	740	6.5	824	
109.86	21946	740	6.5	824	
109.86	21756	740	6.5	824	
109.84	21566	741	6.5	824	
109.82	21441	741	6.5	824	
109.49	21254	741	6.5	822	
109.44	21068	741	6.5	822	
109.67	21006	742	6.5	824	
109.6	20882	742	6.5	824	
109.33	20698	742	6.5	822	

% Sat	Q	Bar	Temp	Sat	Date 9/23/82
109.33	20576	742	6	822	
109.33	20515	742	6	822	
109.25	20273	743	6	822	
109.25	20207	743	6	822	
109.25	20207	743	6	822	
109.21	20026	743	6	822	
109.21	20086	743	5.5	822	
109.18	19967	743	5.5	822	
109.18	19907	743	5.5	822	
109.18	19967	743	5	822	
109.18	19847	743	5	822	
108.94	19907	743	5	820	
109.29	19728	742	5	822	
109.02	19669	742	5.5	820	
109.02	19551	742	5.5	820	
109.02	19433	742	5.5	820	
108.98	19375	743	5.5	820	
108.98	19200	743	5.5	820	
108.68	19031	743	5.5	818	
108.68	18973	743	5.5	818	
108.94	18916	743	5.5	820	
108.68	18858	743	5.5	818	
108.64	18680	743	5.5	818	
108.60	18630	743	5.5	818	

Appendix - Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 9/24/82
108.64	18114	743	5.5	818	
108.68	18170	743	5	818	
108.71	18058	743	5	818	
108.44	17835	743	5	816	
108.44	17835	743	5	816	
108.44	17774	743	4.5	816	
108.48	17663	742	4.5	816	
108.48	17663	742	4.5	816	
108.52	17553	742	4	816	
108.56	17444	742	4	816	
108.59	17389	742	4	816	
108.43	17334	741	4	814	
108.51	17177	740	4	814	
108.58	17069	740	4.5	814	
108.39	16961	739	4	812	
108.42	16801	739	4.5	812	
108.46	16694	739	4	812	
108.46	16641	739	4.5	812	
108.23	16482	739	4.5	810	
108.23	16377	739	4.5	810	
108.27	16325	738	4.5	810	
108.27	16116	738	4.5	810	
108.27	16007	738	4.5	810	
108.03	15853	738	4.5	808	

% Sat	Q	Bar	Temp	Sat	Date 9/25/82
107.99	15699	738	4.5	808	
107.99	15699	738	4.5	808	
108.03	15597	738	4.5	808	
108.07	15496	738	4.5	808	
108.03	15440	738	4.5	808	
108.07	15491	738	4.5	808	
107.84	15390	738	4	806	
107.87	15486	737	4	806	
107.91	15385	737	4	806	
107.95	15284	737	4	806	
107.98	15284	737	4	806	
108.02	15239	736	4	806	
108.08	15189	736	4	806	
108.08	15089	736	4	806	
107.88	14990	735	4	804	
107.92	14990	735	4	804	
107.99	14891	735	4.5	804	
108.03	14891	734	4.5	804	
108.07	14793	734	4.5	804	
108.07	14646	734	4.5	804	
107.87	14549	734	4.5	802	
107.92	14452	733	4.5	802	
107.91	14355	733	4.5	802	
107.94	14398	733	5	802	

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Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 9/26/82
107.20	14398	738	5	802	
107.20	14350	738	5	802	
107.91	14302	733	5	802	
107.94	14297	733	5	802	
107.94	14249	733	5	802	
107.98	14202	733	5	802	
107.98	14197	733	5	802	
107.98	14197	733	5	802	
107.94	14197	733	5	802	
107.91	14197	733	5	802	
107.83	14245	734	5	802	
107.79	14297	734	5	802	
107.76	14293	734	5	802	
107.95	14249	735	5	804	
107.68	14149	735	5	802	
107.61	14154	735	5	802	
107.53	14106	736	5.5	802	
107.73	14106	736	5.5	804	
107.68	14154	737	5.5	804	
107.60	14011	737	5	804	
107.53	14011	738	5	804	
107.45	13964	738	5	804	
107.65	13964	739	5	806	
107.59	13964	739	5	806	

% Sat	Q	Bar	Temp	Sat	Date 9/27/82
107.48	13964	740	5.5	806	
107.43	13964	740	5.5	806	
107.64	13964	741	5.5	808	
107.57	13964	741	5.5	808	
107.57	14006	741	5.5	808	
107.50	14054	742	5.5	808	
107.40	14101	742	5.5	808	
107.40	14149	742	5.5	808	
107.54	14197	743	5.5	810	
107.49	14197	744	5.5	810	
107.43	14245	744	5	810	
107.67	14149	744	5	812	
107.67	14197	744	5	812	
107.70	14197	744	5.5	812	
107.70	14249	744	5.5	812	
107.70	14106	744	5.5	812	
107.63	14106	745	5.5	812	
107.63	14106	745	5.5	812	
107.63	14059	745	5.5	812	
107.61	14106	745	5.5	812	
107.63	14011	745	5	812	
107.61	13921	745	5	812	
107.61	13921	745	5	812	
107.61	13827	745	5	812	

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Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 9/28/82
107.61	13733	745	5	812	
107.61	13640	745	5	812	
107.34	13594	745	5	810	
107.34	13594	745	5	810	
107.34	13547	745	5	810	
107.62	13455	743	5	810	
107.65	13317	743	4.5	810	
107.48	13271	742	4.5	808	
107.55	13225	741	4.5	808	
107.62	13134	741	4	808	
107.74	13089	740	4	808	
107.58	12998	739	4	806	
107.58	12819	739	4	806	
107.63	12774	739	4	806	
107.67	12690	739	4	806	
107.44	12645	739	4	804	
107.55	12513	738	4	804	
107.64	12421	737	4	804	
107.44	12377	737	4	802	
107.44	12377	737	4	802	
107.40	12421	737	4	802	
107.17	12464	737	4	800	
107.17	12513	737	4	800	
107.17	12513	737	4	800	

% Sat	Q	Bar	Temp	Sat	Date 9/29/82
107.17	12513	737	4	800	
107.24	12425	736	4	800	
107.26	12513	736	4	800	
107.37	12557	735	4	800	
107.37	12557	735	4	800	
107.52	12557	734	4	800	
107.32	12601	734	4	798	
107.40	12601	733	4	798	
107.47	12596	733	4	798	
107.58	12552	732	4	798	
107.66	12464	731	4	798	
107.35	12469	732	4	796	
107.65	12425	730	4	796	
107.70	12381	729	4	796	
107.49	12294	729	4	794	
107.54	12250	728	4	794	
107.56	12250	728	4	794	
107.29	12207	728	4.5	792	
107.29	12116	728	4	792	
107.29	12160	728	4	792	
107.05	12203	728	4	790	
107.05	12203	728	4	790	
107.05	12246	728	4	790	
107.05	12333	728	4	790	

Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 9/30/82
107.05	12290	728	4	790	
107.09	12333	728	4	790	
107.12	12464	728	4	790	
107.12	12508	728	4	790	
107.12	12592	728	4	790	
107.12	12681	728	4	790	
107.09	12725	728	4	790	
107.05	12721	728	4	790	
107.25	12721	729	4	792	
106.90	12632	729	4	790	
107.14	12632	729	4	792	
107.10	12588	730	4	792	
107.10	12632	730	4	792	
107.37	12632	730	4	794	
107.34	12632	730	4	794	
107.03	12632	730	4	792	
106.95	12632	731	4	792	
107.19	12721	731	4	794	
107.11	12632	731	4	794	
107.08	12552	732	4	794	
107.35	12641	732	4	796	
107.27	12641	732	4	796	
107.24	12685	732	4	796	
107.16	12596	733	4	796	

% Sat	Q	Bar	Temp	Sat	Date 10/1/82
107.13	12508	733	4	796	
107.09	12464	733	4	796	
107.01	12377	734	4	796	
106.98	12377	734	4	796	
106.94	12464	734	4	796	
107.14	12464	735	4	798	
106.83	12421	735	4	796	
107.10	12377	735	4	798	
107.10	12377	735	4	798	
107.06	12333	735	4	798	
107.03	12290	736	4	798	
107.03	12290	736	4	798	
107.03	12290	736	4	798	
107.30	12073	736	3.5	800	
107.30	12116	736	3.5	800	
107.39	12160	735	4	800	
107.12	12160	735	4	798	
107.12	12160	735	4	798	
107.12	12116	735	4	798	
107.12	12073	735	4	798	
107.14	12160	735	4	798	
107.14	12160	735	3.5	798	
107.14	12160	735	3.5	798	
107.14	12246	735	3.5	798	

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Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 10/2/82
106.87	12160	735	4	796	
107.14	12030	735	4	798	
106.90	11945	735	4	796	
106.94	11860	734	4	796	
106.94	11902	734	4	796	
106.98	11988	734	4	796	
106.98	11817	734	4	796	
107.01	11733	734	4	796	
107.05	11817	734	4	796	
107.05	11817	734	4	796	
107.09	11860	733	4	796	
107.09	11775	733	4	796	
107.13	11733	733	4	796	
107.16	11649	733	4	796	
106.96	11649	732	4	794	
107.00	11607	732	4	794	
107.00	11565	732	4	794	
107.00	11565	732	4	794	
107.04	11565	732	4	794	
107.04	11607	732	4	794	
107.08	11607	732	4	794	
106.80	11565	732	4	792	
106.84	11565	731	4	792	
106.88	11523	731	4	792	

% Sat	Q	Bar	Temp	Sat	Date 10/3/82
106.88	11440	731	4	792	
106.88	11398	731	4	792	
106.91	11398	731	3.5	792	
106.91	11398	731	4	792	
106.91	11357	731	3.5	792	
106.95	11316	731	3.5	792	
106.71	11316	730	3.5	790	
106.71	11275	730	3.5	790	
106.71	11234	730	3.5	790	
106.71	11193	730	3.5	790	
107.03	11111	730	3.5	792	
107.06	11193	730	3.5	792	
107.06	11152	730	3.5	792	
107.10	11070	730	3.5	792	
106.86	11070	729	3.5	790	
106.94	11111	729	3.5	790	
106.94	11070	729	4	790	
106.94	11070	729	3.5	790	
106.66	11070	729	3.5	788	
106.90	11070	729	3.5	790	
106.64	10949	729	3.5	788	
106.64	10989	729	3.5	788	
106.63	10989	729	3.5	788	
106.90	11030	729	3.5	790	

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Appendix - Table 4-6-5

% Sat	Q	Bar	Temp	Sat	Date 10/4/82
106.88	11070	729	3.5	790	
106.64	10989	729	3.5	788	
106.94	10949	729	3.5	790	
106.68	10909	729	3	788	
106.68	10869	729	3	788	
106.68	10788	729	3	788	
106.68	10828	729	3	788	
106.68	10788	729	3	788	
106.68	10788	729	3	788	
106.68	10828	729	2.5	788	
106.68	10909	729	2.5	788	
106.70	10949	729	2.5	788	
106.74	10869	728	2.5	788	
106.77	10828	728	2.5	788	
106.77	10788	728	2.5	788	
106.87	10709	727	2.5	788	
106.59	10551	727	3	786	
106.57	10551	728	3	786	
106.57	10551	728	3	786	
106.57	10551	728	2.5	786	
106.59	10551	727	2.5	786	
106.61	10511	727	2.5	786	
106.65	10472	727	2.5	786	
106.69	10472	727	2.5	786	

% Sat	Q	Bar	Temp	Sat	Date 10/5/82
106.69	9971.	727	2.5	786	
106.69	9971.	727	2.5	786	
106.41	9971.	727	2.5	784	
106.41	9933.	727	2.5	784	
106.41	9933.	727	2.5	784	
106.51	9971.	724	2.5	782	
106.58	9971.	724	2.5	782	
106.62	9971.	724	2.5	782	
106.7	9971.	723	2.5	782	
106.77	9895.	723	2	782	
106.61	9858.	722	2	780	
106.68	9783.	721	2	780	
106.79	9745.	720	2	780	
106.57	9708.	720	2	778	
106.63	9745.	720	2.5	778	
106.63	9745.	720	2.5	778	
106.63	9671.	720	2.5	778	
106.59	9634.	720	2.5	778	
106.61	9634.	720	2.5	778	
106.33	9708.	720	2.5	776	
106.33	9671.	720	2.5	776	
106.33	9597.	720	2	776	
106.37	9597.	720	2	776	
106.41	9560.	719	2	776	

Appendix Table 4-0-5

% Sat	Q	Bar	Temp	Sat	Date 10/6/82
106.41	9560.	719	2	776	
106.45	9560.	719	2	776	
106.48	9486.	719	1.5	776	
106.24	9413.	719	1.5	774	
106.24	9376.	719	1.5	774	
106.24	9124.	719	1.5	774	
106.20	9088.	719	1.5	774	
106.17	9124.	719	1.5	774	
106.17	9159.	719	1.5	774	
106.20	9124.	719	1	774	
106.28	9124.	718	1	774	
106.13	9124.	719	1	774	
106.13	9195.	719	1	774	
106.17	9086.	719	1.5	774	
106.15	9052.	719	1	774	
106.13	9017.	719	1.5	774	
106.09	8946.	720	1.5	774	
106.04	8911.	720	1.5	774	
105.72	8911.	720	1.5	772	
105.67	8875.	721	1.5	772	
105.63	8875.	721	1.5	772	
105.59	8840.	721	1.5	772	
105.83	8805.	721	1.5	774	
105.79	8805.	722	1	774	

% Sat	Q	Bar	Temp	Sat	Date 10/7/82
105.79	8840.	722	1	774	
105.79	8840.	722	1	774	
105.76	8840.	722	1	774	
105.72	8840.	722	1	774	
105.72	8840.	722	1	774	
105.83	8840.	721	1	774	
105.79	8840.	722	.5	774	
105.79	8805.	722	.5	774	
105.72	8840.	722	.5	774	
105.61	8805.	723	.5	774	
105.52	8805.	724	1	774	
105.40	8770.	724	1	774	
105.29	8770.	725	1	774	
105.53	8770.	725	1	776	
105.44	8805.	726	1	776	
105.64	8805.	726	1	778	
105.59	8736.	727	1	778	
105.51	8736.	727	1	778	
105.24	8736.	727	1	776	
105.48	8736.	728	1	778	
105.51	8736.	727	1	778	
105.48	8701.	728	.5	778	
105.13	8666.	728	.5	776	
105.02	8632.	729	0	776	

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Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 10/8/82
105.22	8666.	729	0	778	
105.15	8632.	730	0	778	
105.07	8597.	730	0	778	
105.00	8563.	731	0	778	
105.13	8597.	732	0	780	
104.82	8632.	732	0	778	
104.98	8597.	733	0	780	
104.91	8597.	733	0	780	
105.07	8597.	734	0	782	
105.04	8563.	734	0	782	
105.27	8563.	735	0	784	
105.27	8632.	735	0	784	
105.05	8632.	736	0	784	
105.34	8632.	734	0	784	
105.38	8597.	734	0	784	
105.42	8597.	734	0	784	
105.20	8563.	733	.5	786	
105.91	8494.	732	.5	786	
105.78	8494.	731	.5	784	
105.86	8528.	731	.5	784	
106.00	8528.	730	.5	784	
105.84	8528.	729	.5	782	
105.64	8528.	728	0	780	
105.71	8563.	728	0	780	

% Sat	Q	Bar	Temp	Sat	Date 10/9/82
105.79	8563.	727	0	780	
105.51	8563.	727	0	778	
105.51	8563.	727	0	778	
105.51	8563.	727	0	778	
105.48	8632.	728	0	778	
105.44	8666.	728	0	776	
105.13	8632.	728	0	776	
105.09	8666.	728	0	776	
105.09	8632.	728	0	776	
105.33	8666.	729	0	778	
105.29	8666.	729	.5	778	
105.53	8666.	729	.5	780	
105.49	8666.	729	.5	780	
105.46	8701.	730	.5	780	
105.42	8701.	730	.5	780	
103.41	8701.	744	.5	780	
103.55	8701.	743	.5	780	
105.31	8736.	731	.5	780	
105.27	8770.	731	.5	780	
105.27	8805.	731	.5	780	
105.31	8805.	731	.5	780	
105.31	8805.	731	.5	780	
105.27	8736.	731	.5	780	
105.27	8770.	731	.5	780	

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Appendix Table 4-D-5

% Sat	Q	Bar	Temp	Sat	Date 10/10/82
105.55	8840.	731	.5	782	
105.55	8875.	731	.5	782	
105.55	8911.	731	.5	782	
105.55	8946.	731	.5	782	
105.47	8946.	731	.5	782	
105.44	8911.	732	.5	782	
105.09	8875.	732	.5	780	
105.33	8875.	732	.5	782	
105.22	8875.	733	.5	782	
105.38	8875.	734	.5	784	
105.31	8840.	734	.5	784	
105.47	8805.	735	.5	786	
105.43	8736.	735	1	786	
105.40	8736.	736	1	786	

Appendix Table 4-D-6. Summary of provisional water quality data for sloughs 8A, 9, 16B, 19, 21, and mainstem Susitna River at Gold Creek, collected by ADF&G and USGS in June, July, and September, 1981, and in January and February, 1982.

Parameter	Date ^a	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Physical and Field Parameters^b							
*Water Temperature °C	June	15.5	14.2	14.0	5.5	10.7	12.4
	July	11.2	10.9	9.0	9.8	11.3	10.5
	September	3.5	5.6	4.8	1.8	2.4	0.4
	January	0.5	0.5	1.5	2.0	1.5	0.0
	March	0.5	0.5	2.0	1.0	1.5	0.0
Air Temperature °C	June	21.0	20.1	---	---	23.0	---
	July	16.0	14.0	15.5	---	---	---
	September	8.0	7.5	---	3.0	---	---
	January	---	---	---	---	---	---
	March	---	---	---	---	-11.0	---
Streamflow (discharge) cfs	June	6.4	2.9	0.7	0.2	3.2	1,780.0
	July	551.0	714.0	503.0	0.0	142.0	42,500.0
	September	2.8	1.5	0.3	<0.1	0.43	8,540.0
	January	---	---	---	---	---	---
	March	---	---	---	---	---	1,520.0
*Specific Conductance (field) umho ⁵ /cm	June	140	145	71	146	226	---
	July	117	124	72	127	130	119
	September	135	113	64	150	205	172
	January	193	121	59	148	221	260
	March	142	143	59	129	196	266

^aSloughs and mainstem Susitna River were sampled on 2 or 3 consecutive days in each month (except January) as follows.

	Susitna River at Gold Creek					
	8A	9	16B	19	21	Gold Creek
June	25	24	23	23	24	23
July	21	21	22	22	22	21
September	30	30	28	29	29	28
January	20	20	20	20	20	20
March	31	30	30	30	30	30

^bParameters marked with an * are averages of transect point measurements (see methods).

--- indicates data not available.

Appendix Table 4-D-6 (Continued).

<u>Parameter</u>	<u>Date</u>	<u>Slough 8A</u>	<u>Slough 9</u>	<u>Slough 16B</u>	<u>Slough 19</u>	<u>Slough 21</u>	<u>Susitna River at Gold Creek</u>
<u>Physical and Field Parameters - Cont'd</u>							
Specific Conductance (lab) umho ³ /cm	June	153	158	70	146	226	141
	July	118	124	71	129	131	114
	September	132	113	64	130	205	170
	January	193	121	59	148	221	260
	March	142	143	59	129	196	266
*Dissolved Oxygen mg/l	June	10.8	10.6	10.8	9.4	10.7	10.8
	July	11.4	11.4	11.7	10.4	11.3	11.7
	September	12.1	11.3	11.5	9.5	10.3	---
	January	7.0	11.7	6.6	7.7	9.0	15.8
	March	10.2	10.9	7.3	9.6	9.8	14.2
*Dissolved Oxygen (%) saturation	June	108	103	107	76	98	104
	July	104	105	102	90	105	104
	September	94	93	88	98	76	---
	January	49	82	47	57	65	110
	March	72	77	59	70	72	99
*pH (field)	June	6.9	6.8	6.4	6.5	7.0	7.4
	July	---	---	---	---	---	7.7
	September	7.6	7.4	7.1	7.3	7.7	6.5
	January	6.5	6.6	6.0	6.0	6.7	7.5
	March	6.6	7.0	6.4	6.5	7.4	6.7
pH (lab)	June	7.4	7.5	7.2	7.2	7.6	7.5
	July	7.6	7.7	7.3	7.0	7.7	7.7
	September	7.4	6.7	6.6	7.2	7.0	7.2
	January	7.2	7.3	6.9	7.1	7.6	7.6
	March	7.2	7.1	7.1	7.2	7.3	7.5
Alkalinity (field) mg/l CaCO ₃	June	---	39	24	50	62	---
	July	41	39	24	52	47	35
	September	43	34	26	62	62	---
	January	62	34	24	39	62	82
	March	43	39	23	46	61	78

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Appendix Table 4-D-6 (Continued).

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Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
<u>Physical and Field Parameters - Cont'd</u>							
Alkalinity (lab) mg/1 CaCO ₃	June	47	33	24	52	63	45
	July	41	39	24	52	47	35
	September	42	36	26	62	61	44
	January	64	36	30	53	63	83
	March	46	42	27	50	64	82
Turbidity NTU	June	0.9	0.6	0.5	0.4	0.4	100.0
	July	130.0	130.0	43.0	2.5	150.0	170.0
	September	1.1	0.6	0.6	0.5	0.5	5.5
	January	0.4	0.5	0.5	0.3	0.5	0.7
	March	0.1	0.1	0.1	0.1	0.1	0.1
Sediments, suspended mg/1	June	1	2	1	1	5	327
	July	220	417	107	8	356	680
	September	1	1	1	2	4	44
	January	1	2	0	1	0	2
	March	7	3	6	1	6	8
Sediments, discharge suspended tons/day	June	0.02	0.02	0.0	0.0	0.04	1,570.0
	July	327.0	804.0	145.0	0.0	136.0	78,000.0
	September	0.01	0.0	0.0	0.0	0.0	1,020.0
	January	---	---	---	---	---	---
	March	---	---	---	---	---	33.0
Solids, residue at 180°C mg/1	June	88	100	51	94	137	79
	July	70	75	41	81	78	74
	September	82	69	42	95	119	101
	January	111	73	38	78	114	152
	March	92	93	42	80	124	160
Solids, sum of constituents mg/1	June	93	91	47	90	130	83
	July	61	68	43	89	68	65
	September	71	71	48	94	120	80
	January	120	76	---	92	130	165
	March	86	83	43	85	127	160

Appendix Table 4-D-6 (Continued).

<u>Parameter</u>	<u>Date</u>	<u>Slough 8A</u>	<u>Slough 9</u>	<u>Slough 16B</u>	<u>Slough 19</u>	<u>Slough 21</u>	<u>Susitna River at Cold Creek</u>
<u>Physical and Field Parameters - Cont'd</u>							
Solids, dissolved tons/day	June	1.5	0.8	0.1	0.1	1.1	380.0
	July	104.0	145.0	55.7	0.0	29.9	8,490.0
	September	0.62	0.3	< 0.1	< 0.1	0.1	2,330.0
	January	---	---	---	---	---	---
	March	---	---	---	---	---	657.0
Solids, dissolved tons/acre-foot	June	0.12	0.14	0.07	0.13	0.19	0.11
	July	0.10	0.10	0.06	0.11	0.11	0.10
	September	0.11	0.09	0.06	0.13	0.16	0.14
	January	0.15	0.10	0.05	0.11	0.16	0.21
	March	0.13	0.13	0.06	0.11	0.17	0.22
Suspended sediment (%) less than 0.062 mm sieve diameter	June	---	---	---	---	---	70 -
	July	89	55	56	---	85	49
	September	---	---	---	---	---	81
	January	---	---	---	---	---	---
	March	---	---	---	---	---	---
<u>Major Constituents</u>							
Hardness mg/a CaCO ₃	June	57	56	32	69	83	57
	July	48	50	30	61	54	51
	September	54	45	30	72	77	60
	January	79	47	34	67	87	120
	March	60	52	26	58	82	100
Hardness, non-carbonate mg/l CaCO ₃	June	10.0	17.0	8.0	19.0	21.0	12
	July	7.0	11.0	6.0	9.0	7.0	16
	September	11.0	11.0	4.0	10.0	15.0	16
	January	17.0	13.0	10.0	14.0	25.0	33
	March	15.0	13.0	3.0	12.0	21.0	19
Bicarbonate, incremental titration mg/l CaCO ₃	June	---	---	---	---	---	---
	July	---	---	---	---	---	---
	September	53	42	32	75	75	---
	January	---	---	---	---	---	---
	March	---	---	---	---	---	---

4-D-73

Appendix Table 4-D-6 (Continued).

<u>Parameter</u>	<u>Date</u>	<u>Slough 8A</u>	<u>Slough 9</u>	<u>Slough 16B</u>	<u>Slough 19</u>	<u>Slough 21</u>	<u>Susitna River at Gold Creek</u>
<u>Major Constituents - Cont'd</u>							
Carbonate, incremental titration mg/1 CaCO ₃	June	---	---	---	---	---	---
	July	---	---	---	---	---	---
	September	0	0	0	0	0	---
	January	---	---	---	---	---	---
	March	---	---	---	---	---	---
Calcium, dissolved mg/1 Ca	June	18	18	10	23	27	19
	July	16	17	10	20	18	16
	September	17	14	9	24	25	15
	January	26	15	11	22	29	39
	March	19	17	8	19	27	33
Magnesium, dissolved mg/1 Mg	June	2.8	2.7	1.6	2.7	3.9	2.2
	July	1.9	1.9	1.3	2.6	2.1	1.7
	September	2.8	2.4	1.6	3.0	3.5	1.9
	January	3.4	2.3	1.6	3.0	3.5	4.6
	March	3.1	2.4	1.5	2.6	3.6	4.5
Sodium, dissolved mg/1 Na	June	6.8	8.2	2.5	2.5	12.0	4.2
	July	3.0	3.0	1.8	1.8	3.4	3.4
	September	6.1	5.6	2.6	3.0	11.0	7.4
	January	11.0	5.7	2.9	4.3	12.0	15.0
	March	6.2	7.2	2.1	2.2	11.0	17.0
Sodium, (%)	June	20	24	14	7	23	14
	July	12	11	11	6	12	13
	September	19	21	15	8	23	21
	January	23	20	15	12	23	22
	March	18	23	14	7	22	26
Sodium, adsorption ratio	June	0.4	0.5	0.2	0.1	0.6	0.3
	July	0.2	0.2	0.1	0.1	0.2	0.2
	September	0.4	0.4	0.2	0.2	0.5	0.4
	January	0.5	0.4	0.2	0.2	0.6	0.6
	March	0.4	0.5	0.2	0.1	0.5	0.8

4-D-74

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
<u>Nutrients - Cont'd</u>							
Nitrogen, total mg/1 NO ₃	June	8.5	8.4	4.1	10.0	4.2	2.4
	July	3.4	3.5	3.3	9.3	2.9	2.3
	September	7.4	7.3	2.9	9.0	4.9	2.7
	January	5.8	7.9	2.9	7.0	4.2	1.9
	March	5.7	6.4	3.3	7.6	4.3	1.9
Nitrogen, dissolved mg/1 N	June	1.8	1.6	1.0	2.0	1.0	0.5
	July	---	0.7	---	2.2	0.7	0.6
	September	1.5	1.7	0.6	1.9	1.0	0.6
	January	1.3	1.6	0.6	1.2	0.9	0.4
	March	1.2	1.2	0.6	1.5	0.8	0.4
Nitrogen, total organic mg/1 N	June	0.53	0.82	0.50	0.88	0.37	0.34
	July	0.40	0.54	0.31	0.45	0.44	0.10
	September	---	0.41	0.17	0.44	0.18	0.28
	January	---	---	0.18	0.50	---	0.18
	March	0.24	0.41	---	0.43	0.30	0.21
Nitrogen, dissolved organic mg/1 N	June	0.45	0.51	0.55	0.62	0.49	0.34
	July	0.44	0.48	---	0.41	0.43	0.21
	September	0.36	0.44	0.10	0.49	0.19	0.34
	January	0.22	0.39	0.15	0.14	0.20	0.15
	March	0.20	0.16	---	0.22	---	0.19
Nitrogen, dissolved ammonia mg/1 N	June	0.07	0.11	0.10	0.10	0.09	0.08
	July	0.10	0.13	0.13	0.32	0.14	0.24
	September	0.15	0.14	0.16	0.13	0.11	0.09
	January	0.15	0.08	0.09	0.08	0.08	0.09
	March	0.07	0.07	<0.06	0.08	<0.06	0.07
Nitrogen, dissolved ammonia mg/1 NH ₄	June	0.09	0.14	0.13	0.13	0.12	0.10
	July	0.13	0.17	0.17	0.41	0.18	0.31
	September	0.19	0.18	0.21	0.17	0.14	0.12
	January	0.19	0.10	0.12	0.10	0.10	0.12
	March	0.09	0.09	0.08	0.10	0.08	0.09

4-D-75

Appendix Table 4-D-6 (Continued).

<u>Parameter</u>	<u>Date</u>	<u>Slough 8A</u>	<u>Slough 9</u>	<u>Slough 16B</u>	<u>Slough 19</u>	<u>Slough 21</u>	<u>Susitna River at Gold Creek</u>
<u>Major Constituents - Cont'd</u>							
Potassium, dissolved mg/1 K	June	1.5	1.4	0.9	1.0	2.1	2.0
	July	1.6	1.6	0.9	1.6	1.9	1.6
	September	1.1	0.9	0.9	1.1	2.1	1.5
	January	2.1	1.0	0.8	1.2	2.0	2.1
	March	1.3	1.1	0.8	1.1	2.1	2.2
Chloride, dissolved mg/1 Cl	June	9.1	16.0	1.3	0.9	20.0	5.6
	July	2.9	2.9	0.9	0.6	3.7	12.0
	September	7.7	6.9	1.5	0.9	17.0	11.0
	January	14.0	9.6	1.1	3.5	20.0	24.0
	March	10.0	13.0	1.2	1.1	17.0	27.0
Sulfate, dissolved mg/1 SO ₄	June	11.0	9.0	4.7	13.0	14.0	17.0
	July	1.0	11.0	6.0	14.0	3.1	1.0
	September	6.0	5.0	5.0	9.0	10.0	< 5.0
	January	11.0	5.0	5.0	11.0	12.0	17.0
	March	8.0	6.0	0.0	13.0	13.0	13.0
Fluoride, dissolved mg/1 F	June	0.0	0.1	0.1	0.1	0.1	0.0
	July	0.0	0.0	0.1	0.0	0.0	0.1
	September	0.1	0.1	0.1	0.1	0.1	0.1
	January	0.1	0.1	0.1	0.1	0.1	0.1
	March	0.1	0.1	0.1	0.1	0.1	0.1
Silica, dissolved mg/1 SiO ₂	June	9.7	11.0	10.0	10.0	11.0	5.5
	July	6.6	6.6	6.2	10.0	6.6	6.2
	September	0.0	10.0	10.0	10.0	11.0	6.1
	January	10.0	11.0	11.0	10.0	11.0	12.0
	March	11.0	11.0	11.0	10.0	12.0	13.0
<u>Nutrients</u>							
Nitrogen, total mg/1 N	June	1.9	1.9	0.9	2.3	0.94	0.5
	July	0.8	0.8	0.8	2.1	0.2	0.5
	September	1.7	1.7	0.7	2.0	1.1	0.6
	January	1.3	1.8	0.7	1.6	1.0	0.4
	March	1.3	1.4	0.7	1.7	1.0	0.4

4-D/76

Appendix Table 4-D-6 (Continued).

<u>Parameter</u>	<u>Date</u>	<u>Slough 8A</u>	<u>Slough 9</u>	<u>Slough 16B</u>	<u>Slough 19</u>	<u>Slough 21</u>	<u>Susitna River at Gold Creek</u>
<u>Nutrients - Cont'd</u>							
Nitrogen, total ammonia mg/1 N	June	0.08	0.10	0.09	0.07	0.10	0.14
	July	0.15	0.18	0.15	0.26	0.13	0.33
	September	---	0.15	0.16	0.19	0.20	0.17
	January	<0.07	<0.07	0.12	0.09	<0.07	0.08
	March	0.12	0.08	<0.06	0.08	0.06	0.06
Nitrogen, ammonia + dissolved organics mg/1 N	June	0.52	0.62	0.65	0.72	0.58	0.42
	July	0.54	0.61	---	0.73	0.57	0.45
	September	0.51	0.58	0.26	0.62	0.30	0.43
	January	0.37	0.47	0.24	0.22	0.28	0.24
	March	0.27	0.23	0.24	0.30	0.22	0.26
Nitrogen, ammonia + total suspended organics mg/1 N	June	0.09	0.30	0.00	0.23	0.00	0.06
	July	0.01	0.11	---	0.00	0.00	0.00
	September	0.07	0.00	0.07	0.01	0.08	0.02
	January	0.05	0.21	0.06	0.37	0.03	0.02
	March	0.09	0.26	0.14	0.21	0.14	0.01
Nitrogen, ammonia + total organics mg/1 N	June	0.61	0.92	0.59	0.95	0.47	0.48
	July	0.55	0.72	0.46	0.71	0.57	0.43
	September	0.58	0.56	0.33	0.63	0.38	0.45
	January	0.42	0.68	0.30	0.59	0.31	0.26
	March	0.36	0.49	0.38	0.51	0.36	0.27
Nitrogen, total nitrate and nitrate mg/1 N	June	1.3	1.0	0.33	1.3	0.5	0.1
	July	0.2	0.1	0.3	1.4	0.1	0.1
	September	1.1	1.1	0.3	1.4	0.7	0.2
	January	0.9	1.1	0.4	1.0	0.6	0.2
	March	0.9	1.0	0.4	1.2	0.6	0.2
Nitrogen, dissolved nitrate and nitrite mg/1 N	June	1.3	1.0	0.4	1.3	0.4	0.1
	July	---	0.1	0.3	1.5	0.1	0.1
	September	1.0	1.1	0.3	1.3	0.7	0.2
	January	0.9	1.1	0.4	1.0	0.6	0.2
	March	0.9	1.0	0.4	1.2	0.6	0.2

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Appendix Table 4-D-6 (Continued).

<u>Parameter</u>	<u>Date</u>	<u>Slough 8A</u>	<u>Slough 9</u>	<u>Slough 16B</u>	<u>Slough 19</u>	<u>Slough 21</u>	<u>Susitna River at Gold Creek</u>
<u>Nutrients - Cont'd</u>							
Phosphorus, total mg/1 P	June	0.05	0.01	0.01	0.01	<0.01	0.12
	July	0.27	0.48	0.14	0.01	0.38	0.02
	September	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
	January	<0.01	<0.01	<0.01	0.02	0.01	0.01
	March	0.01	0.01	0.01	0.01	0.01	0.01
Phosphorus, total mg/1 PO ₄	June	0.2	<0.1	<0.1	<0.1	<0.1	0.4
	July	0.8	1.5	0.4	<0.1	1.2	0.1
	September	---	---	---	---	---	0.1
	January	---	---	---	0.1	<0.1	0.1
	March	<0.1	<0.1	<0.1	<0.1	<0.1	---
Phosphorus, dissolved mg/1 P	June	0.03	0.01	0.01	0.01	<0.01	0.02
	July	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	September	0.01	<0.01	<0.01	<0.01	<0.01	0.01
	January	<0.01	<0.01	<0.01	0.02	0.04	0.01
	March	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Carbon, dissolved organic mg/1 C	June	1.9	2.1	1.4	1.3	2.0	2.8
	July	13.0	9.0	3.3	6.2	6.0	18.0
	September	1.5	1.7	1.9	2.2	1.1	---
	January	1.4	1.3	0.5	0.7	0.5	---
	March	1.4	0.7	0.7	1.4	1.1	1.6
Carbon, total suspended organics mg/1 C	June	---	0.2	---	0.2	0.2	0.9
	July	0.2	0.5	0.0	0.0	0.3	---
	September	0.1	0.1	0.1	0.1	0.1	---
	January	0.0	0.0	0.0	0.0	0.0	---
	March	0.0	0.0	0.0	0.1	0.1	0.1
<u>Trace Metals</u>							
Arsenic, total ug/1 As	June	1	1	1	2	2	6
	July	2	5	4	1	5	7
	September	2	1	1	2	2	---
	January	2	2	1	2	2	---
	March	1	1	2	1	2	2

4-D-78

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
<u>Trace Metals - Cont'd</u>							
Arsenic, total suspended ug/1 As	June	0	0	0	1	1	5
	July	0	3	2	0	3	5
	September	1	0	0	1	1	---
	January	1	1	0	1	1	---
	March	---	0	1	0	1	0
Arsenic, dissolved ug/1 As	June	2	1	1	1	1	1
	July	2	2	2	1	2	2
	September	1	1	1	1	1	---
	January	1	1	1	1	1	---
	March	< 1	1	1	1	1	2
Barium, total recoverable ug/1 Ba	June	0	0	0	0	100	200
	July	200	200	100	100	300	300
	September	100	200	100	100	100	---
	January	100	100	<100	100	100	---
	March	< 100	< 100	< 100	< 100	< 100	100
Barium, suspended recoverable ug/1 Ba	June	0	0	0	0	100	200
	July	200	200	70	50	300	300
	September	100	200	100	100	0	---
	January	0	---	---	---	0	---
	March	---	---	---	---	---	40
Barium, dissolved ug/1 Ba	June	90	0	0	0	0	0
	July	40	40	30	50	40	0
	September	0	0	0	0	100	---
	January	100	< 100	< 100	< 100	100	---
	March	29	27	14	29	47	60
Cadmium, total recoverable ug/1 Cd	June	0	0	2	0	1	0
	July	0	0	0	1	0	5
	September	0	0	0	0	1	---
	January	< 1	< 1	< 1	< 1	< 1	---
	March	< 1	< 1	< 1	< 1	< 1	< 1

4-D-79

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
<u>Trace Metals - Cont'd</u>							
Cadmium, suspended recoverable ug/1 Co	June	---	0	2	0	0	---
	July	---	---	---	---	---	4
	September	0	0	0	0	1	---
	January	---	---	---	---	---	---
	March	---	---	---	---	---	---
Cadmium, dissolved ug/1 Cd	June	1	0	0	0	5	<1
	July	<1	<1	<1	<1	<1	1
	September	0	0	1	0	0	---
	January	<1	1	1	1	<1	---
	March	<3	<3	<3	<3	<3	<3
Chromium, total recoverable ug/1 Cr	June	0	10	0	0	0	40
	July	30	30	20	20	40	30
	September	0	10	10	10	10	---
	January	10	<1	10	<10	<10	---
	March	10	<1	10	10	<10	10
Chromium, suspended recoverable ug/1 Cr	June	0	10	0	0	0	---
	July	20	20	10	10	30	40
	September	0	10	10	10	10	20
	January	---	---	---	---	---	---
	March	---	---	---	---	---	---
Chromium, dissolved ug/1 Cr	June	10	0	0	0	0	0
	July	10	10	10	10	10	10
	September	0	0	0	0	0	---
	January	<10	1	<10	<10	<10	---
	March	<10	<3	<10	<10	<10	<10
Cobalt, total recoverable ug/1 Co	June	2	0	0	0	2	8
	July	5	6	2	0	7	11
	September	0	0	0	0	1	---
	January	2	1	1	1	<1	---
	March	1	1	2	2	1	1

4-D-80

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
<u>Trace Metals - Cont'd</u>							
Cobalt, suspended recoverable ug/1 Co	June	---	0	0	0	1	---
	July	---	---	---	---	---	11
	September	0	0	0	0	1	---
	January	0	0	0	---	---	---
	March	---	---	---	---	---	0
Cobalt, dissolved ug/1 Co	June	<3	0	0	0	1	<3
	July	<3	<3	<3	<3	<3	0
	September	0	0	0	0	0	---
	January	2	2	1	<1	2	---
	March	<1	<1	<1	<1	<1	1
Copper, total recoverable ug/1 Cu	June	3	2	4	2	2	31
	July	20	23	10	3	23	190
	September	6	4	5	4	4	---
	January	4	2	1	2	1	---
	March	2	1	2	8	6	2
Copper, suspended recoverable ug/1 Cu	June	1	1	1	0	0	27
	July	12	20	4	0	0	190
	September	5	3	3	2	18	---
	January	3	0	0	0	3	---
	March	1	0	1	7	0	1
Copper, dissolved ug/1 Cu	June	2	1	3	2	2	4
	July	8	3	6	7	5	5
	September	1	1	2	2	1	---
	January	1	2	2	2	1	---
	March	1	1	1	1	1	1
Iron, total recoverable ug/1 Fe	June	20	40	50	40	60	15,000
	July	13,000	16,000	5,800	220	18,000	19,000
	September	20	90	280	260	100	---
	January	20	140	20	10	10	---
	March	10	30	40	30	10	40

4-D-8/

Appendix Table 4-D-6 (Continued).

<u>Parameter</u>	<u>Date</u>	<u>Slough 8A</u>	<u>Slough 9</u>	<u>Slough 16B</u>	<u>Slough 19</u>	<u>Slough 21</u>	<u>Susitna River at Gold Creek</u>
<u>Trace Metals - Cont'd</u>							
Iron, suspended recoverable ug/1 Fe	June	10	0	0	0	40	15,000
	July	13,000	16,000	5,700	140	18,000	19,000
	September	10	60	260	250	90	---
	January	0	80	0	0	0	---
	March	0	20	30	20	0	30
Iron, dissolved ug/1 Fe	June	10	60	50	60	20	90
	July	48	110	52	79	97	120
	September	10	30	20	10	10	---
	January	40	60	20	30	20	---
	March	12	14	9	15	11	15
Lead, total recoverable ug/1 Pb	June	0	5	3	3	15	18
	July	3	3	3	3	2	47
	September	4	1	1	2	4	---
	January	2	1	<1	1	<1	---
	March	<1	1	5	6	9	3
Lead, suspended recoverable ug/1 Pb	June	0	5	3	3	15	18
	July	0	1	3	2	0	47
	September	2	0	0	0	0	---
	January	1	0	---	0	---	---
	March	---	---	4	---	---	0
Lead, dissolved ug/1 Pb	June	0	0	0	0	0	0
	July	3	2	0	1	5	0
	September	2	3	4	3	5	---
	January	1	2	1	1	1	---
	March	1	<1	1	<1	<1	3
Manganese, total recoverable ug/1 Mn	June	10	10	10	0	0	250
	July	230	290	100	20	300	320
	September	0	0	10	10	0	---
	January	10	20	10	10	20	---
	March	10	10	<10	10	<10	10

4-D-82

Appendix Table 4-D-6 (Continued).

<u>Parameter</u>	<u>Date</u>	<u>Slough 9A</u>	<u>Slough 9</u>	<u>Slough 16B</u>	<u>Slough 19</u>	<u>Slough 21</u>	<u>Susitna River at Gold Creek</u>
<u>Trace Metals - Cont'd</u>							
Manganese, suspended recoverable ug/1 Mn	June	0	10	10	0	0	250
	July	220	280	90	10	290	310
	September	0	0	10	0	0	---
	January	0	10	---	0	10	---
	March	6	5	---	6	---	7
Manganese, dissolved ug/1 Mn	June	10.0	0.0	0.0	0.0	0	4
	July	8.0	10.0	7.0	9.0	8	10
	September	0.0	0.0	0.0	10.0	0	---
	January	10.0	< 0.1	< 10.0	< 10.0	10	---
	March	4.0	< 0.1	3.0	4.0	3	3
Mercury, total recoverable ug/1 Hg	June	0.1	0.1	0.1	0.1	0.2	0.4
	July	0.1	0.1	0.1	0.0	0.2	0.3
	September	0.1	0.0	0.0	0.0	0.0	---
	January	< 0.1	< 0.1	< 0.1	< 0.1	0.1	---
	March	0.1	0.1	0.1	0.1	0.1	0.1
Mercury, suspended recoverable ug/1 Hg	June	0.1	0.1	0.1	0.1	0.2	0.4
	July	0.0	0.1	0.1	0.0	0.2	0.1
	September	0.1	0.0	0.0	0.0	0.0	---
	January	---	---	---	---	---	---
	March	---	---	---	---	---	---
Mercury, dissolved ug/1 Hg	June	0.0	0.0	0.0	0.0	0.0	0.0
	July	0.1	0.0	0.1	0.0	0.0	0.2
	September	0.0	0.0	0.0	0.0	0.0	---
	January	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	---
	March	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Nickel, total recoverable ug/1 Ni	June	3	2	2	1	6	23
	July	14	18	6	2	18	22
	September	1	0	7	3	4	36
	January	1	2	< 1	< 1	< 1	---
	March	1	< 1	2	2	1	2

4-D-83

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
<u>Trace Metals - Cont'd</u>							
Nickel, suspended recoverable ug/1 Ni	June	2	2	1	0	1	23
	July	12	18	6	0	17	29
	September	1	0	7	3	4	29
	January	---	1	---	---	---	---
	March	0	---	1	1	0	1
Nickel, dissolved ug/1 Ni	June	1	0	1	1	5	0
	July	2	0	0	3	1	<1
	September	0	0	0	0	0	7
	January	<1	1	<1	<1	<1	---
	March	2	<1	1	1	1	1
Selenium, total ug/1 Se	June	0	0	0	1	1	<1
	July	0	0	0	0	0	0
	September	0	0	0	0	0	1
	January	<1	<1	<1	1	1	---
	March	1	<1	<1	<1	<1	<1
Selenium, total suspended ug/1 Se	June	0	0	0	0	1	0
	July	0	0	0	0	0	0
	September	0	0	0	0	0	0
	January	---	---	---	---	---	---
	March	---	---	---	---	---	---
Selenium, dissolved ug/1 Se	June	0	0	0	1	0	0
	July	1	0	0	1	0	0
	September	0	0	0	1	1	---
	January	<1	<1	<1	<1	<1	---
	March	<1	<1	<1	1	1	<1
Silver, total recoverable ug/1 Ag	June	0	0	1	0	0	0
	July	0	0	0	1	0	0
	September	0	0	0	0	0	---
	January	<1	<1	<1	<1	<1	---
	March	<1	<1	<1	<1	<1	<1

4-D-84

Appendix Table 4-D-6 (Continued).

<u>Parameter</u>	<u>Date</u>	<u>Slough 8A</u>	<u>Slough 9</u>	<u>Slough 16B</u>	<u>Slough 19</u>	<u>Slough 21</u>	<u>Susitna River at Gold Creek</u>
<u>Trace Metals - Cont'd</u>							
Silver, suspended recoverable ug/l Ag	June	0	0	1	0	0	0
	July	0	0	0	1	0	0
	September	0	0	0	0	0	---
	January	---	---	---	---	---	---
	March	---	---	---	---	---	---
Silver, dissolved ug/l Ag	June	0	0	0	0	0	0
	July	0	0	0	0	0	0
	September	0	0	0	0	0	---
	January	<1	<1	<1	1	<1	---
	March	<1	<1	1	<1	<1	1
Zinc, total recoverable ug/l Zn	June	20	40	10	10	10	60
	July	80	60	20	10	60	120
	September	20	30	30	10	20	---
	January	20	10	20	10	10	---
	March	10	10	40	30	20	10
Zinc, suspended recoverable ug/l Zn	June	10	30	0	0	10	50
	July	80	30	10	0	40	110
	September	10	10	0	10	0	---
	January	10	0	10	0	0	---
	March	0	---	---	20	---	---
Zinc, dissolved ug/l Zn	June	7	10	10	10	0	6
	July	4	35	10	10	17	14
	September	10	20	30	0	20	5
	January	10	20	10	10	10	---
	March	<12	<12	<12	12	<12	<12

4-D-85

Appendix Table 4-D-7. Temperature (°C), specific conductance (µmhos/cm), and depth (ft) collected at specified locations in Slough 8A, October 5, 1982.

Location ^a	Depth	Temperature			Specific Conductance
		Surface	Intra-gravel	Substrate/Water ^b	
Transect 1L	-	-	-	2.9	101
Transect 2L	-	-	-	3.0	98
Transect 3L	-	-	-	3.9	136
Transect 4L	-	-	-	3.4	112
Transect 5L	-	-	-	3.2	107
Transect 6L	-	-	-	4.2	131
Transect 7L	-	-	-	3.8	137
Transect 8L	-	-	-	3.3	114
Transect 9L	-	-	-	2.4	116
Transect 10L	-	-	-	2.7	104
Transect 11L	-	-	-	3.9	147
Transect 1M	-	-	-	2.8	89
Transect 2M	-	-	-	2.8	89
Transect 3M	-	-	-	3.4	108
Transect 4M	-	-	-	2.7	91
Transect 5M	-	-	-	2.6	86
Transect 6M	-	-	-	2.5	88
Transect 7M	-	-	-	2.5	86
Transect 8M	-	-	-	2.4	84
Transect 9M	-	-	-	2.1	85
Transect 10M	-	-	-	2.2	85
Transect 11M	-	-	-	2.2	86
Transect 1R	-	-	-	2.8	90
Transect 2R	-	-	-	2.7	88
Transect 3R	-	-	-	2.8	83
Transect 4R	-	-	-	2.8	83
Transect 5R	-	-	-	3.1	80
Transect 6R	-	-	-	3.2	83
Transect 7R	-	-	-	3.1	89
Transect 8R	-	-	-	3.0	62
Transect 9R	-	-	-	2.8	56
Transect 10R	-	-	-	3.2	44
Transect 11R	-	-	-	3.3	57
Pool L	-	-	-	4.2	152
Pool M	-	-	-	4.4	133
Pool R	-	-	-	4.1	132
Channel L	-	-	-	2.6	88
Channel M	-	-	-	2.2	85
Channel R	-	-	-	2.4	84

Appendix Table 4-D-7 (Continued).

Location ^a	Depth	Temperature			Specific Conductance
		Surface	Intra-gravel	Substrate/Water ^b	
Side Channel	-	3.4	-	-	218
Side Channel	-	3.1	-	-	115
Spawning A	-	3.4	4.1	-	133
Spawning A	-	2.5	3.9	-	123
Spawning B	-	2.6	3.1	-	110
Spawning B	-	2.4	2.5	-	110
Spawning B	-	2.1	2.1	-	112
Spawning C	-	2.9	4.9	-	117
Spawning C	-	2.7	4.6	-	111
Spawning C	-	2.7	4.4	-	113

^aRefer to Figure ____ for schematic drawing of Slough 8A.

^bTemperature readings obtained at substrate/water interface.

Appendix Table 4-D-8. Temperature (°C), specific conductance (umhos/cm), and depth (ft) collected at specified locations in Slough 9, October 4 and 5, 1982.

Location ^a	Depth	Temperature			Specific Conductance
		Surface	Intra-gravel	Substrate/Water ^b	
Pool A	0.10	3.9	4.1	-	229
Pool A	0.10	3.9	4.5	-	230
Pool A	0.10	3.1	4.6	-	233
Pool A	0.10	2.7	4.0	-	194
Pool A	0.10	2.7	3.9	-	202
Pool A	0.10	2.7	3.8	-	200
Upwelling A	0.10	2.9	3.9	-	---
Upwelling A	0.10	3.9	3.9	-	---
Upwelling A	0.10	3.5	3.9	-	---
Upwelling A	0.10	3.2	4.2	-	---
Upwelling A	0.10	4.7	4.7	-	---
Upwelling A	0.10	3.3	3.8	-	---
Upwelling A	0.10	3.7	3.6	-	---
Upwelling A	0.10	2.0	4.3	-	---
Upwelling A	0.20	1.8	4.0	-	---
Upwelling A	0.20	2.0	3.7	-	---
Transect B1	--	-	-	-	78
Transect B2	--	-	-	-	93
Transect B3	--	-	-	-	99
Transect B4	--	-	-	-	103
Transect B5	--	-	-	-	198
Transect A1	--	-	-	-	72
Transect A2	--	-	-	-	96
Transect A3	--	-	-	-	99
Transect A4	--	-	-	-	103
Transect A5	--	-	-	-	149
Transect C1	--	-	-	-	65
Transect C2	--	-	-	-	68
Transect C3	--	-	-	-	76
Transect C4	--	-	-	-	75
Transect C5	--	-	-	-	74
Transect C1'	--	-	-	-	78
Transect C2'	--	-	-	-	81
Transect C3'	--	-	-	-	87
Transect C4'	--	-	-	-	84
Transect C5'	--	-	-	-	81
Transect 1-2:L	--	3.1	2.9	3.0	101
Transect 1-2:L	--	3.1	3.2	3.2	99

Appendix Table 4-D-8 (Continued).

Location ^a	Depth	Temperature			Specific Conductance
		Surface	Intra-gravel	Substrate/Water ^b	
Transect 1-2:L	-	3.2	2.8	3.0	103
Transect 1-2:L	-	3.2	2.7	3.0	98
Transect 1-2:L	-	3.1	3.0	3.1	103
Transect 1-2:L	-	3.0	2.5	2.6	108
Transect 1-2:L'	-	-	2.8	2.9	115
Transect 1-2:L'	-	-	3.2	3.4	111
Transect 1-2:L'	-	-	2.8	3.8	114
Transect 1-2:L'	-	-	2.9	3.6	113
Transect 1-2:L'	-	-	3.3	3.9	117
Transect 1-2:L'	-	-	3.6	3.6	118
Transect 5-6:01L	-	1.5	-	-	140
Transect 5-6:02L	-	1.8	-	-	136
Transect 5-6:03L	-	1.7	-	-	138
Transect 5-6:04L	-	1.8	-	-	132
Transect 5-6:05L	-	1.9	-	-	136
Transect 5-6:06L	-	1.9	-	-	134
Transect 5-6:07L	-	1.9	-	-	132
Transect 5-6:08L	-	1.8	-	-	122
Transect 5-6:09L	-	1.9	-	-	121
Transect 5-6:10L	-	2.2	-	-	132
Transect 5-6:01M	-	1.6	-	-	92
Transect 5-6:02M	-	1.6	-	-	92
Transect 5-6:03M	-	1.6	-	-	90
Transect 5-6:04M	-	1.6	-	-	91
Transect 5-6:05M	-	1.6	-	-	95
Transect 5-6:06M	-	1.6	-	-	89
Transect 5-6:07M	-	1.6	-	-	94
Transect 5-6:08M	-	1.6	-	-	90
Transect 5-6:09M	-	1.6	-	-	102
Transect 5-6:10M	-	1.6	-	-	89
Transect 5-6:01R	-	1.4	-	-	88
Transect 5-6:02R	-	1.5	-	-	90
Transect 5-6:03R	-	1.5	-	-	89
Transect 5-6:04R	-	1.4	-	-	90
Transect 5-6:05R	-	1.3	-	-	90
Transect 5-6:06R	-	1.2	-	-	90
Transect 5-6:07R	-	1.3	-	-	89
Transect 5-6:08R	-	1.5	-	-	88
Transect 5-6:09R	-	1.5	-	-	87
Transect 5-6:10R	-	1.5	-	-	88

Appendix Table 4-D-8 (Continued).

<u>Location^a</u>	<u>Depth</u>	<u>Temperature</u>			<u>Specific Conductance</u>
		<u>Surface</u>	<u>Intra-gravel</u>	<u>Substrate/Water^b</u>	
Transect 6-7 L	-	-	-	-	131
Transect 7 L	-	-	-	-	142
Transect 7-8 L	-	-	-	-	136
Transect 8 L	-	-	-	-	128
Transect 8-9 L	-	-	-	-	122
Transect 9 L	-	-	-	-	131
Transect 9-10L	-	-	-	-	132
Transect 10L	-	-	-	-	133
Mid-slough	-	3.2	-	-	153
Tributary B	-	2.2	-	-	70
Tributary B'	-	2.3	-	-	69
Tributary B''	-	1.8	-	-	39
Pool C	-	3.0	-	-	137
Pool C	-	3.2	-	-	121
Pool C	-	3.0	-	-	124
Pool C	-	2.4	-	-	119

^aRefer to Figure ____ for schematic drawing of Slough 9.

^bTemperature readings obtained at substrate/water interface.

Appendix Table 4-D-9. Temperature (°C), specific conductance (umhos/cm), and depth (ft) collected at specified locations in Slough 9B, October 4, 1982.

<u>Location</u>	<u>Depth</u>	<u>Temperature</u>			<u>Specific Conductance</u>
		<u>Surface</u>	<u>Intra-gravel</u>	<u>Substrate/Water^a</u>	
Mouth	1.95	3.1	3.4	3.6	---
Mouth	1.86	1.5	3.9	3.9	---
Mouth	2.20	1.7	3.6	3.6	---
Mouth	2.40	3.2	3.7	4.0	---
Mouth	2.35	2.9	3.8	4.0	---
Mid-slough	1.70	2.5	4.3	4.4	---
Mid-slough	1.20	3.2	3.9	3.9	---
Mid-slough	1.40	2.9	3.6	3.6	---
Mid-slough	1.20	2.9	3.7	3.7	---
Mid-slough	1.25	2.9	3.8	3.7	---
Upwelling B	0.25	4.3	3.6	3.7	---
Upwelling B	0.35	4.4	3.7	3.8	---
Upwelling B	0.60	4.0	3.7	3.7	---
Upwelling B	0.50	4.3	3.7	3.7	---
Upwelling B	0.60	4.0	3.8	3.8	---
Upwelling B	0.40	4.3	4.0	4.0	---
Upwelling B	0.10	3.9	3.9	3.9	---

^aTemperature readings obtained at substrate/water interface.

Appendix Table 4-D-10. Temperature (°C), specific conductance (umhos/cm), and depth (ft) collected at specified locations in Slough 11, October 3, 1982.

Location		Depth	Temperature			Specific Conductance
			Surface	Intra-gravel	Substrate/Water ^a	
At mouth by staff gage	LB	0.10	5.6	5.7	5.6	---
	M	0.10	5.6	5.5	5.5	---
	RB	0.10	5.6	5.6	5.6	---
Adjacent to redd C03	LB	1.65	5.5	5.9	5.8	---
	M	1.50	5.3	4.6	5.1	---
	RB	0.40	5.3	4.2	4.9	---
R & M tag line (upwelling)	LB	0.40	5.4	4.9	5.2	---
	M	0.75	5.0	4.4	4.6	---
	RB	0.40	4.2	3.9	4.1	---
Adjacent to redd C09	LB	1.76	4.7	3.7	3.8	---
	M	1.95	4.7	3.9	4.3	---
	RB	0.90	4.6	4.0	4.3	---
Above deep hole	LB	1.00	5.2	4.4	4.4	---
	M	2.85	5.1	4.5	4.5	---
	RB	0.85	5.3	4.9	5.2	---
Upper pool; old redd	LB	0.95	5.3	4.2	4.4	---
	M	2.10	5.2	4.1	4.2	---
	RB	0.75	5.3	5.1	5.6	---

^aTemperature readings obtained at substrate/water interface.

Appendix Table 4-D-11. Temperature (°C), specific conductance (umhos/cm), and depth (ft) collected at specified locations in Slough 21, October 1-2, 1982.

<u>Location</u>	<u>Depth</u>	<u>Temperature</u>			<u>Specific Conductance</u>
		<u>Surface</u>	<u>Intra-gravel</u>	<u>Substrate/Water^a</u>	
Transect 4-5:01L	-	-	3.6	-	---
Transect 4-5:02L	-	-	3.2	-	---
Transect 4-5:03L	-	-	3.4	-	---
Transect 4-5:04L	-	-	3.5	-	---
Transect 4-5:05L	-	-	3.3	-	---
Transect 4-5:06L	-	-	3.3	-	---
Transect 4-5:01R	-	-	3.1	-	---
Transect 4-5:02R	-	-	3.1	-	---
Transect 4-5:03R	-	-	3.1	-	---
Transect 4-5:04R	-	-	3.0	-	---
Transect 4-5:05R	-	-	3.0	-	---
Transect 4-5:06R	-	-	3.0	-	---
Upwelling L	-	-	3.1	-	---
Upwelling L	-	-	3.2	-	---
Upwelling R	-	-	2.9	-	---
Upwelling R	-	-	2.9	-	---
Upwelling R	-	-	3.3	-	---
Upwelling R	-	-	3.4	-	---

^aTemperature readings obtained at substrate/water interface.

Appendix Table 4-D-12. Surface and intragravel temperatures (°C) and related data (ft) collected along study transects in Slough 8A, October 5, 1982.

Transect	Distance ^a	Depth	Temperature			Comments
			Surface	Intragravel	Substrate/Water ^b	
3	10.0	0.82	3.7	3.8	-	Gravel
3	26.0	1.10	3.4	3.8	-	Gravel
3	42.0	0.95	3.3	3.8	-	Rubble/gravel
3	58.0	0.70	2.7	3.7	-	Rubble
3	74.0	0.55	2.7	4.2	-	Rubble/gravel
3	82.0	0.40	2.8	4.7	-	Rubble/gravel
4	42.0	0.15	3.2	3.2	-	Rubble
4	58.0	1.70	2.6	2.8	-	Rubble/gravel
4	74.0	1.70	2.7	3.3	-	Cobble/rubble
4	84.0	0.70	2.7	3.4	-	Rubble/gravel
7	30.0	0.20	4.1	3.4	-	Rubble
7	46.0	0.44	2.5	4.0	-	Cobble
7	62.0	0.60	2.4	3.5	-	Rubble/gravel
7	78.0	0.20	2.9	4.3	-	Gravel/cobble
7	94.0	0.20	3.2	4.4	-	Rubble/cobble
9	40.0	0.15	0.9	1.5	-	Gravel
9	56.0	0.55	2.1	2.0	-	Cobble
9	72.0	0.45	2.0	1.9	-	Cobble
9	88.0	0.70	2.2	2.1	-	Cobble
9	114.0	0.20	2.7	2.7	-	Cobble

^aDistance (ft) from left bank head pin (facing upstream).

^bTemperature readings obtained at the substrate/water interface.

Appendix Table 4-D-13. Surface and intragravel temperatures, (°C) and related data (ft) collected along study transects in Slough 9, October 4-5, 1982.

Transect	Distance ^a	Depth	Temperature			Comments
			Surface	Intragravel	Substrate/Water ^b	
2	28.0	0.20	2.1	2.8	-	----
2	44.0	0.40	1.5	2.7	-	----
2	60.0	0.70	1.5	2.5	-	----
2	76.0	0.30	1.6	3.2	-	Silt
4	50.0	0.10	3.4	3.3	-	Pool
4	66.0	0.05	4.2	4.2	-	Silt
4	82.0	0.15	1.6	3.7	-	Riffle
4	98.0	0.20	1.4	2.7	-	Riffle
4	114.0	0.20	1.3	1.9	-	Riffle
4	130.0	0.10	1.7	2.4	-	Riffle
6	100.0	0.10	2.1	3.4	-	Silt
6	116.0	0.35	1.7	3.0	-	Gravel
6	132.0	1.05	1.5	2.7	-	Rubble
6	148.0	0.25	1.4	3.3	-	Rubble
8	66.0	1.20	1.7	3.8	-	Silt
8	82.0	2.10	1.6	3.0	-	Silt
8	98.0	1.90	1.5	2.7	-	Silt

^aDistance (ft) from left bank head pin (facing upstream).

^bTemperature readings obtained at the substrate/water interface.

Appendix Table 4-D-14. Surface and intragravel temperatures (°C) and related data (ft) collected along study transects in Slough 21, October 1-2, 1982.

Transect	Distance ^a	Depth	Temperature			Comments
			Surface	Intragravel	Substrate/Water ^b	
3	25.2	0.02	4.1	3.3	4.1	----
3	30.0	0.44	4.0	3.1	4.0	----
3	33.5	--	-	3.1	-	Upwelling
3	34.0	0.78	3.9	3.2	3.9	----
3	42.0	0.62	3.8	3.1	3.6	----
3	46.0	1.08	3.8	2.9	3.7	Upwelling
3	50.0	0.70	3.8	3.1	3.5	----
3	52.0	--	-	3.0	-	Upwelling
3	54.0	1.20	3.8	3.0	3.8	----
3	58.0	1.06	3.8	3.1	3.8	----
3	62.0	1.02	3.7	3.2	3.7	----
3	64.0	--	-	2.9	-	Upwelling/redd
3	66.0	0.84	3.7	3.0	3.8	----
3	70.0	1.00	3.8	3.0	3.8	----
3	74.0	0.92	3.8	3.2	3.8	----
3	78.0	0.76	3.9	2.9	3.8	----
3	82.0	0.98	3.8	3.1	3.8	----
3	86.0	0.86	3.8	3.0	3.8	Upwelling
3	89.0	--	-	2.9	-	Upwelling
3	90.0	0.50	3.8	2.9	3.8	Upwelling
3	94.0	0.05	4.1	3.4	4.1	Upwelling
4	56.0	0.01	4.7	3.3	4.7	----
4	60.0	0.20	4.2	3.2	4.2	----
4	64.0	0.34	3.9	3.1	4.0	----
4	68.0	0.74	3.9	3.1	3.9	----
4	72.0	1.00	3.8	3.1	3.8	----
4	76.0	1.20	3.8	3.1	3.8	----
4	80.0	1.66	3.8	2.9	3.8	----
4	84.0	2.30	3.8	2.9	3.8	----
4	88.0	2.22	3.8	3.0	3.8	----
4	92.0	0.64	3.8	3.9	-	----
4	96.0	0.30	3.8	3.1	3.6	----
4	98.0	0.02	4.1	3.5	4.1	----
5	73.5	--	-	3.2	-	----
5	78.0	0.46	3.4	3.3	3.4	----
5	82.0	0.66	3.5	3.1	3.5	----
5	86.0	0.60	3.5	3.0	3.5	----
5	90.0	0.48	3.5	3.0	3.5	----
5	94.0	0.68	3.5	3.0	3.5	----
5	98.0	0.54	3.5	3.0	3.5	----
5	106.0	0.20	3.6	3.0	3.6	----
5	110.0	0.46	3.6	3.0	3.6	----

Appendix Table 4-D-14 (Continued).

Transect	Distance ^a	Depth	Temperature			Comments
			Surface	Intragravel	Substrate/Water ^b	
5	114.0	0.42	3.6	3.1	3.6	-----
5	117.2	--	-	3.1	-	-----
8	8.0	0.48	3.8	4.2	4.0	-----
8	12.0	0.80	3.9	4.1	4.0	-----
8	16.0	0.94	4.0	4.1	4.1	-----
8	20.0	0.94	4.0	4.1	4.1	-----
8	24.0	0.90	4.0	4.2	4.2	-----
8	28.0	1.00	4.1	4.2	4.3	-----
8	32.0	1.24	4.0	3.9	4.0	-----
8	36.0	1.60	4.1	3.9	4.1	-----
8	40.0	1.60	4.1	3.8	4.1	-----
8	44.0	1.48	4.0	3.7	4.0	-----
8	48.0	1.42	4.0	3.9	4.2	-----
8	52.0	1.78	4.0	3.7	3.8	-----
8	56.0	2.00	3.9	3.3	3.6	-----
8	60.0	2.10	3.9	3.3	3.6	-----
8	64.0	1.96	3.7	3.3	3.4	-----
8	68.0	1.90	3.7	3.3	3.6	-----
8	72.0	1.72	3.7	3.3	3.7	-----
8	76.0	1.52	3.8	3.2	3.6	-----
8	80.0	1.36	3.7	3.2	3.8	-----
8	84.0	1.62	3.7	3.3	3.8	-----
8	88.0	1.56	3.7	3.3	3.9	-----
8	92.0	1.40	3.8	3.2	3.7	-----
8	96.0	0.94	3.8	3.4	4.0	-----
8	100.0	1.10	3.8	3.2	3.4	-----
8	104.0	0.50	3.8	3.6	4.1	-----
8	108.0	0.98	3.8	3.5	3.9	-----
8	112.0	1.22	3.8	3.3	3.7	-----
8	116.0	1.50	3.7	3.5	3.7	-----
8	120.0	0.26	3.9	3.9	3.9	-----

^aDistance from left bank head pin (facing upstream).

^bTemperature readings obtained at the substrate/water interface.

Headpin, Cross Section, and Thalweg Tables

The following data consist of headpin and cross sectional elevations obtained at study transects (reported in feet) during 1982, from five sites: Chum Channel, Rabideaux Slough, and sloughs 8A, 9, and 21. Thalweg profile data is also presented for sloughs 8A, 9, 11, and 21. Presentation of tables is ordered by slough with one table of head pin data for each slough, one table of cross sectional data for each transect within each slough (number of transects differed between sloughs) and one table of thalweg elevations. Transects in each slough were oriented perpendicular to the direction of water flow and had limits defined by two head pins located on left and right banks of the slough channel (looking upstream).

Table Headings

Table headings for head pin (Bench Mark, Elevation, True Elevation, and Comments) and cross sectional data (Station, Elevation, True Elevation, and Comments and Substrate) are defined as follows.

- 1) Bench Mark is the location (i.e., head pin, nail in tree base, or ground) which is assigned an arbitrary elevation (usually 100.00 ft) from which relative elevations were determined.
- 2) Station is the measured distance from the head pin at the left bank (station 0.0 feet) to the point where an elevation was determined.

- 3) Elevation is the relative height (in feet), at a particular station or bench mark, referenced from a convenient temporary bench mark (elevation arbitrarily defined) in the immediate vicinity of survey.

- 4) True Elevation is the elevation of a bench mark or station (referenced from R&M survey data) defined as feet above mean sea level. (The true elevation of the head pin and cross section in Chum Channel are estimated from USGS topographic maps.)

- 5) Comments and/or Comments and Substrate primarily refer to unique or important characteristics at a station and are expressed in abbreviated forms indicated below.

Table abbreviations are as follows.

TRM	- temporary bench mark
LBHP "X"	- left bank head pin for transect number "X"
RBHP	- right bank head pin
GB	- ground beside the head pin previously listed
LWS	- left bank water surface
RWS	- right bank water surface
LWE	- left bank waters edge
RWE	- right bank waters edge
SI	- silt (very fine particles)
SA	- sand (fine particles)
GR	- gravel (0.5" - 3" diameters)
RU	- rubble (3" - 5" diameters)
CO	- cobble (5" - 10" diameters)
BO	- boulder (10" - diameter and above)

Note: 1) Water surface and waters edge are generally the same point. However, in situations where a bank is steeply inclined or where it is undercut, they may differ.

2) In Slough 21, high and low values for water surface and waters edge are reported for values obtained at two discharges and are noted under the Comments heading of the cross section tables.

Table headings for thalweg tables are defined as follows.

- 1) Point refers to a station where an elevation was determined and are numbered from downstream up.
- 2) Distance is the linear measurement between two points (or stations).
- 3) Station is the upstream (positive) or downstream (negative) distance referenced from the mouth of a slough. The mouth is assigned the station 0+00 (note that this definition differs from that used in cross section tables).
- 4) Thalweg Elevation is the elevation of the lowest point in a cross section at a particular station.

- 5) Depth is the distance from the water surface to the substrate at the point where the thalweg elevation was surveyed.

- 6) WSE is the water surface elevation.

- 7) Comments refers to unique or important characteristics of the stream channel at a particular station.

Table 4-E-1. Head pin elevations in Chum Channel, surveyed July 30, 1982 (see pages E-1, -2, for definitions of terms).

<u>Bench Mark</u>	<u>Elevation (ft)</u>	<u>Estimated True Elevation (ft)^a</u>
TBM	100.00	180.00
LBHP 1	95.28	175.28
RBHP 1	95.83	175.83
LBHP 2	96.04	176.04
RBHP 2	94.66	174.66
LBHP 3	95.98	175.98
RBHP 3	95.02	175.02
LBHP 4	95.67	175.67
RBHP 4	96.96	176.96
LBHP 5	96.45	176.45
RBHP 5	96.05	176.05
LBHP 6	96.54	176.90
RBHP 6	96.73	176.73
LBHP 7	96.59	176.59
RBHP 7	96.64	176.64
LBHP 8	95.61	175.61
RBHP 8	96.65	176.65

^aEstimated for the TBM from a USGS topographical map to be approximately 180.00 feet. The estimated true elevation for each headpin was based on this estimate.

Table 4-E-2. Cross section elevations in transect 1 of Chum Channel surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 1	95.28	175.28	--
0.0 GB	94.72	174.72	SI
14.0	94.25	174.25	SI
17.3	93.42	173.42	SI
38.6	92.95	172.95	SA
68.3 LWS, LWE	92.10	172.10	GR
85.0	91.64	171.64	GR
112.0	91.94	171.94	SA
128.0	92.03	172.03	SA
148.0 RWS, RWE	92.07	172.07	SA
173.8	91.97	171.97	SI
220.5	93.24	173.24	SI
231.9 GB	95.27	175.27	SI
231.9 RBHP 1	95.84	175.84	--

Table 4-E-3. Cross section elevations in transect 2 of Chum Channel surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 1	96.04	176.04	--
0.0 GB	95.43	175.43	SI
4.0	95.20	175.20	SI
11.5	93.87	173.87	SI
38.1	93.39	173.39	SI
62.5	93.11	173.11	SA
84.4	92.30	172.30	SA
89.0	92.16	172.16	SA
113.0	92.16	172.16	GR
129.0	92.10	172.10	GR
145.0	91.89	171.89	GR
159.0	91.96	171.96	GR
186.8	92.20	172.20	GR
209.0	92.51	172.51	GR
231.3	92.89	172.89	SA
249.2	93.09	173.09	SA
270.0	93.47	173.47	SI
276.3	93.98	173.98	SI
296.8 GB	94.17	174.17	SI
296.8 RBHP 2	94.66	174.66	--

Table 4-E-4. Cross section elevations in transect 3 of Chum Channel surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 3	95.98	175.98	--
0.0 GB	95.55	175.55	SI
3.3	94.83	174.83	SI
7.2	94.71	174.71	SI
23.5	94.02	174.02	SI
29.0	93.15	173.15	SI
39.3	92.32	172.31	SA
48.0	91.72	171.72	GR
59.0	91.32	171.32	GR
77.0	91.39	171.39	GR
97.0	91.67	171.67	GR
115.6	92.31	172.31	GR
133.0	92.94	172.94	SA
138.4	93.41	173.41	SA
143.6	94.71	174.71	SA
151.2 GB	94.46	174.46	SI
151.2 RBHP 3	95.03	175.03	--

Table 4-E-5. Cross section elevations in transect 4 of Chum Channel surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 4	95.67	175.67	--
0.0 GB	95.18	175.18	SI
12.5	93.41	173.41	SI
28.1	92.32	172.32	SA
38.0	91.51	171.51	GR
50.0	91.20	171.20	GR
70.0	91.47	171.47	GR
93.5	92.33	172.33	GR
112.2	93.25	173.25	Vegetation
121.5	93.60	173.60	Soil
134.3 GB	95.37	175.37	Soil
134.3 RBHP 4	95.96	176.96	--

Table 4-E-6. Cross section elevations in transect 5 of Chum Channel surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 5	96.45	176.45	--
0.0 GB	95.23	175.23	SI
8.5	93.89	173.89	SI
11.6	93.79	173.79	SA
36.2	92.35	172.35	GR
48.0	91.69	171.69	GR
57.0	91.53	171.53	GR
72.0	92.34	172.34	GR
128.3	93.77	173.77	SA
135.0	93.96	173.96	SA
148.0	95.35	175.35	SI
153.7 GB	95.43	175.43	SI
153.7 RBHP 5	96.05	176.05	--

Table 4-E-7. Cross section elevations in transect 6 of Chum Channel surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 6	96.59	176.90	--
0.0 GB	95.91	175.91	SI
5.6	93.64	173.64	SI
31.9	92.35	172.35	SA
44.5	91.66	171.66	SA
57.0	91.77	171.77	GR
69.5	92.19	172.19	GR
80.5	92.36	172.36	GR
108.5	93.05	173.05	SA
133.3	93.98	173.98	SI
146.0 GB	96.23	176.23	SI
146.0 RBHP 6	96.74	176.74	--

Table 4-E-8. Cross section elevations in transect 7 of Chum Channel surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 7	96.59	176.59	--
0.0 GB	96.09	176.09	SI
7.7	95.60	175.60	SI
12.2	92.64	172.64	SI
13.3	92.36	172.36	SI
18.8	90.44	170.44	SI
27.6	92.36	172.36	SI
35.5	92.67	172.67	SI
48.5	92.48	172.48	SA
62.0	92.11	172.11	GR
79.0	92.19	172.19	GR
104.6	92.50	172.50	GR
141.6	92.96	172.96	SA
160.4	95.06	175.06	SI
164.2 GB	96.19	176.19	SI
164.2 RBHP 7	96.66	176.66	--

Table 4-E-9. Cross section elevations in transect 8 of Chum Channel surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 8	95.61	175.61	--
0.0 GB	94.93	174.93	SI
7.8	94.76	174.76	SI
61.3	93.68	173.68	SI
92.9	92.66	172.66	SA
105.6	92.38	172.38	GR
127.4	92.44	172.44	GR
151.0	92.57	172.57	GR
174.5	92.46	172.46	GR
200.8	92.76	172.76	SA
210.0	92.91	172.91	SA
234.0	94.85	174.85	SI
245.7 GB	96.19	176.19	SI
245.7 RBHP 8	96.66	176.66	--

Table 4-E-10. Head pin elevations in Rabideaux Slough, surveyed August 10, 1982 (see pages E-1, -2, for definitions of terms).

<u>Bench Mark</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>
TBM	100.00	263.08
LBHP 0	98.57	261.65
RBHP 0	94.16	257.24
LBHP 1	98.64	261.72
RBHP 1	94.06	257.14
LBHP 2	98.56	261.64
RBHP 2	91.98	255.06
LBHP 3	98.40	261.48
RBHP 3	94.76	257.84
LBHP 4	98.51	261.59
RBHP 4	96.28	259.36
LBHP 5	98.28	261.36
RBHP 5	95.20	258.28
LBHP 6	98.58	261.66
RBHP 6	96.06	259.14
LBHP 7	98.61	261.69
RBHP 7	94.14	257.22

Table 4-E-11. Cross section elevations in transect 0 of Rabideux Slough surveyed August 10, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 0	98.57	261.65	RU
3.7	98.26	261.34	RU
4.1	95.13	258.21	RU
6.7	94.05	257.13	RU
9.1	93.94	257.02	RU
11.0 LWS, LWE	90.50	253.58	RU
14.3	88.75	251.83	RU
19.1	86.77	249.85	RU
21.3	85.47	248.55	RU
24.7	84.65	247.73	RU
27.4	85.49	248.57	RU
31.0	86.77	249.85	RU
35.4	87.76	250.84	RU
42.0	88.75	251.83	RU
50.0	89.64	252.72	RU
57.0	89.80	252.88	SI
64.0	89.63	252.71	SI
73.0	90.02	253.01	SI
78.2 RWS, RWE	90.86	253.94	SI
82.6	92.65	255.73	SI
86.0	93.22	256.30	SI
87.0	93.08	256.16	SI

Table 4-E-12. Cross section elevations in transect 1 of Rabideux Slough surveyed August 10, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 1	98.64	261.72	--
0.0 GB	98.41	261.49	--
4.6	98.13	261.21	High bank
8.8	93.18	256.21	Vegetation
11.8 LWS, LWE	90.89	253.97	--
13.1	88.89	251.97	SI
15.6	88.25	251.33	GR RU
17.5	87.88	250.96	GR RU
23.0	87.65	250.73	GR RU
27.9	86.74	249.82	GR RU
32.0	86.15	249.23	GR RU
40.0	87.84	250.92	GR RU
48.0	89.66	252.74	GR RU
51.0 RWS, RWE	90.89	253.97	GR RU
64.0	92.15	255.23	--
100.3 GB	93.65	256.73	--
100.3 RBHP 1	94.01	257.09	--

Table 4-E-13. Cross section elevations in transect 2 of Rabideux Slough surveyed August 10, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 2	98.55	261.63	--
0.0 GB	98.28	261.36	--
3.9	97.95	261.03	High bank
6.5	93.08	256.16	Vegetation
10.0 LWS, LWE	90.88	253.96	SI
15.0	88.92	252.00	SI
20.0	88.45	251.53	SI
25.0	87.99	251.07	SI
32.0	89.24	252.32	GR
27.0	90.04	253.12	GR
40.0 RWS, RWE	90.89	253.97	GR
72.5 GB	91.72	254.80	GR
72.5 RBHP 2	91.92	255.00	GR

Table 4-E-14. Cross section elevations in transect 3 of Rabideux Slough surveyed August 10, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 3	98.40	261.48	Vegetation
0.0 GB	98.15	261.23	Vegetation
4.6	96.96	260.04	Vegetation
7.0	94.63	257.71	High bank
9.2 LWS, LWE	91.01	254.09	SI
16.0	89.71	252.79	SI
25.0	90.62	253.70	SI
32.4	90.71	253.79	SI GU
33.3 RWS, RWE	91.01	254.09	SI GU
37.2	91.96	255.04	SI GU
41.6	91.95	255.03	GR RU
47.3	92.73	255.81	SI
51.2	94.62	257.70	SI
56.3 GB	94.52	257.60	SI
56.3 RBHP 3	94.75	257.83	SI

Table 4-E-15. Cross section elevations in transect 4 of Rabideux Slough surveyed August 10, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 4	98.51	261.59	Vegetation
0.0 GB	98.11	261.19	Vegetation
10.0	97.02	260.10	High bank
11.8	89.92	253.00	Vegetation
15.0	93.60	256.68	SI
26.0 LWS, LWE	91.0	254.08	SI
28.9 RWS, RWE	90.05	253.13	GR RU
33.0	91.20	254.28	De-watered
37.2 LWS, LWE	90.98	254.06	Main channel
41.0	90.79	253.87	GR RU (SI)
46.0	90.67	253.75	GR RU (SI)
51.2	90.63	253.71	GR RU (SI)
53.6 RWS, RWE	90.91	253.99	GR
56.0	91.44	254.52	GR
58.9	92.53	255.61	GR SI
63.0	94.29	257.37	SI
72.9 GB	95.91	258.99	--
72.9 RBHP 4	96.27	259.35	--

Table 4-E-16. Cross section elevations in transect 5 of Rabideux Slough surveyed August 10, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 5	98.28	261.36	Vegetation
0.0 GB	98.04	261.12	Vegetation
3.0	97.49	260.57	Vegetation
7.0	95.42	258.50	High bank
12.5	91.09	254.17	SI
17.0	91.36	254.44	GR
27.0	91.65	254.73	GR RU
37.7 LWS, LWE	91.05	254.13	GR RU
39.7	90.90	253.98	GR SA
46.0	90.61	253.69	GR SI
49.7 RWS, RWE	91.01	254.09	SA SI
57.6	92.68	255.76	SA SI
61.4	94.59	257.67	SA SI
65.7 GB	94.71	257.79	SA SI
65.7 RBHP 5	95.19	258.27	SA SI

Table 4-E-17. Cross section elevations in transect 6 of Rabideux Slough surveyed August 10, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 6	98.58	261.66	Vegetation
0.0 GB	99.53	262.61	Vegetation
3.4	97.61	260.69	Vegetation
6.0	95.26	258.34	Vegetation
8.2 LWS, LWE	91.15	254.23	Vegetation
15.2	89.53	252.61	RU
27.4 RWS, RWE	91.10	254.18	SA GR
35.0	93.60	256.68	SA
41.9	93.61	256.99	SA
43.3	93.40	256.48	SA
49.0 GB	95.72	258.80	SA
49.0 RBHP 6	96.05	259.13	SA

Table 4-E-18. Cross section elevations in transect 7 of Rabideux Slough surveyed August 10, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 7	98.61	261.69	Vegetation
0.0 GB	98.11	261.19	Vegetation
7.0	97.52	260.60	Vegetation
9.0	98.04	261.12	Vegetation
10.6	93.18	256.26	SA
13.7	91.50	254.58	GR
18.3 LWS, LWE	91.25	254.33	GR
21.0	90.97	254.05	GR
24.0	90.96	254.04	GR
28.5 RWS, RWE	91.26	254.34	GR
33.4	91.55	254.63	GR
34.8	91.87	254.95	GR
39.5	92.32	255.40	GR
43.0	93.06	256.14	SA
44.3	93.50	256.58	SA
49.3	93.51	256.59	SA
61.3 GB	93.89	256.97	SA
61.2 RBHP 7	94.13	257.21	SA

Table 4-E-19. Head pin elevations in Slough 8A surveyed August 23, 1982 (see pages E-1, -2 for definitions of terms).

<u>Bench Mark</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>
LBHP 1	105.48	573.03
RBHP 1 (WP ^a)	100.72	568.27
LBHP 2	105.90	573.45
RBHP 2	100.95	568.50
LBHP 3	100.62	568.17
RBHP 3	100.86	568.41
LBHP 4	100.00	567.55
RBHP 4	100.83	568.38
LBHP 5	102.05	569.60
RBHP 5	101.67	569.22
LBHP 6	101.47	569.02
RBHP 6	102.13	569.68
LBHP 7	101.02	568.57
RBHP 7	102.43	569.98
LBHP 8	101.09	568.64
RBHP 8	102.38	569.93
LBHP 9	101.47	569.02
RBHP 9	103.31	570.86
LBHP 10	103.08	570.63
RBHP 10	106.60	574.15
LBHP 11	102.55	570.10
RBHP 11	107.44	574.99

^aWorking pin

Table 4-E-20. Cross section elevations in transect 1 of Slough 8A surveyed August 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 1	105.48	573.03	--
0.0 GB	105.08	572.63	Vegetation ^a
2.1	104.93	572.48	Vegetation ^b
3.2	104.12	571.67	Vegetation ^c
3.9	101.44	568.99	Cut bank
10.7 LWS, LWE	97.90	565.45	SA SI
13.2	97.16	564.71	SA SI
28.0	96.48	564.03	SA SI
58.6	96.52	564.07	SA SI
80.2	97.18	564.73	SA SI
93.0 RWS, RWE	97.93	565.48	SA SI
99.2	98.83	566.38	Vegetation ^a
101.9	99.81	567.36	Vegetation ^b
107.7	100.43	567.98	High bank
110.7 RBWP 1	100.73	568.28	Vegetation ^b
110.7 GB	100.37	567.92	Vegetation ^b
117.2	99.46	567.01	Vegetation ^b
122.2	98.53	567.08	Vegetation ^b
127.4	98.89	566.44	Vegetation ^c
131.4	99.97	567.52	Vegetation ^c
162.4	99.28	566.83	Vegetation ^c
169.0	100.27	567.82	Vegetation ^c
172.1 GB	100.90	568.45	Vegetation ^d
172.1 RBHP 1	101.04	568.59	Vegetation ^d

^aVegetation of undetermined type.

^bVegetation dominated by horsetail.

^cVegetation dominated by sedges.

^dVegetation dominated by willows.

Table 4-E-21. Cross section elevations in transect 2 of Slough 8A surveyed August 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 2	105.90	573.45	Vegetation
0.0 GB	105.41	572.96	Vegetation
2.3	104.89	572.44	Vegetation
3.3	101.21	568.76	Cut bank
10.0	99.59	561.14	Vegetation
20.0	98.73	566.28	Vegetation
24.2 LWS, LWE	97.94	565.49	RU CO
28.7	97.37	564.92	RU CO
44.0	96.69	564.24	RU CO
53.0	96.27	563.82	RU CO
67.1	96.18	563.73	CO SI
78.5	96.72	564.27	CO SI
89.4	97.11	564.66	CO SI
92.0 RWS, RWE	97.92	565.47	SA
97.6	98.80	566.35	Vegetation
111.5 GB	100.71	588.26	Vegetation
111.5 RBHP 2	100.97	568.52	Vegetation

Table 4-E-22. Cross section elevations in transect 3 of Slough 8A surveyed August 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 3	100.62	568.17	--
0.0 GB	100.55	568.10	--
5.5	99.92	567.47	Vegetation
8.4	98.69	566.24	Cut bank
9.0 LWS, LWE	97.96	565.51	Cut bank
9.1	97.63	565.18	RU CO
10.9	97.12	564.67	RU CO
24.9	97.00	564.55	RU CO
42.8	97.18	564.73	RU CO
46.9	97.94	565.49	RU CO
50.6	98.05	565.60	RU CO
54.9	97.94	565.49	GR RU
63.9	97.37	564.92	GR RU
77.0	97.56	565.11	GR RU
82.1 RWS, RWE	97.98	565.53	Vegetation
83.9	98.71	566.26	Cut bank
90.0	99.86	567.41	Vegetation
107.3 GB	100.61	568.16	Vegetation
107.3 RBHP 3	100.88	568.43	Vegetation

Table 4-E-23. Cross section elevations in transect 4 of Slough 8A surveyed by R & M Consultants (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 GB (LBHP 4)	100.82	568.37	CO RU
5.0	100.40	567.95	CO RU
14.0	99.10	566.65	High bank
15.0 LWS, LWE	98.09	565.64	--
24.0	96.90	564.45	CO RU
34.0	96.50	564.05	CO RU
43.0	96.80	564.35	CO RU
56.0 RWS, RWE	98.49	566.04	--
73.0	111.80	579.35	CO RU
90.0	99.60	567.15	CO RU
100.0 GB (RBHP 4)	100.01	567.56	CO RU

Table 4-E-24. Cross section elevations in transect 5 of Slough 8A surveyed August 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 5	102.05	569.60	Vegetation
0.0 GB	101.81	569.36	Vegetation
11.6	99.79	567.34	SA
17.2 LWS, LWE	98.44	566.49	SA
26.4	94.28	561.83	CO SI
31.2	93.78	561.33	CO SI
36.4	93.68	561.23	CO SI
39.3	94.00	561.55	CO SI
49.2	96.34	563.89	CO SI
54.8	97.03	564.58	RU SI
58.8	96.95	564.50	RU SI
66.3	97.61	565.16	RU CO
80.4	98.40	565.95	RU CO
80.5 RWS, RWE	98.47	566.02	Vegetation
80.6	98.62	566.17	Cut bank
82.4	98.89	566.44	Vegetation
83.9	99.32	566.87	Vegetation
86.4	99.52	567.07	Vegetation
99.8	100.41	567.96	Vegetation
115.2 GB	101.31	568.86	Vegetation
115.2 RBHP 5	101.69	569.24	Vegetation

Table 4-E-25. Cross section elevations in transect 6 of Slough 8A surveyed August 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 6	101.47	569.02	--
0.0 GB	101.25	568.80	Vegetation
27.9	98.98	566.53	Cut bank
28.1 LWS	98.48	566.03	RU CO
28.1 LWE	98.34	565.89	RU CO
33.2	98.33	565.88	RU CO
37.9	98.10	565.65	RU CO
41.9	98.06	565.61	RU CO
54.7	98.24	565.79	RU CO
68.2	97.94	565.49	RU CO
73.7	98.32	565.87	RU CO
81.9	98.25	565.80	RU CO
86.6 LWS, LWE	98.51	566.06	RU CO
87.7	99.13	566.68	Vegetation
93.7	99.59	567.14	Vegetation
95.8	98.92	566.47	SI CO
97.1	98.70	566.25	SI CO
98.2	98.83	566.38	SI CO
98.8	99.21	566.76	Vegetation
100.5	99.25	566.80	Vegetation
102.3	100.04	567.59	Vegetation
104.6	100.43	567.98	Vegetation
119.2 GB	101.85	569.40	Vegetation
119.2 RBHP 6	102.15	569.70	Vegetation

Table 4-E-26. Cross section elevations in transect 7 of Slough 8A surveyed August 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 7	101.02	568.57	--
0.0 GB	100.74	568.29	--
16.3	100.09	567.64	--
19.1	99.52	567.07	Vegetation
23.1	99.11	566.66	Vegetation
28.0 LWS, LWE	98.78	566.33	GR RU
34.7	98.48	566.03	GR RU
46.4	98.61	566.16	GR RU
55.9	98.43	565.98	GR RU
62.0	98.13	566.00	GR RU
67.2	98.59	566.14	GR RU
69.1	98.34	565.89	GR RU
73.7	98.63	566.18	GR RU
81.0	98.38	565.93	GR RU
92.2	98.53	566.08	GR RU
98.7 RWS, RWE	98.74	566.29	GR RU
99.3	99.27	566.82	Vegetation
101.8	99.66	567.21	Vegetation
120.3 GB	102.19	569.74	Vegetation
120.3 RBHP 7	102.44	569.99	Vegetation

Table 4-E-27. Cross section elevations in transect 8 of Slough 8A surveyed August 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 8	101.09	568.64	--
0.0 GB	100.81	568.36	Vegetation
4.9	100.27	567.82	Vegetation
6.6	99.54	567.09	Vegetation
9.3	99.44	566.99	Vegetation
11.3	100.04	567.59	Vegetation
16.0	100.17	567.72	Vegetation
23.5	99.23	566.78	Vegetation
24.2 LWE	99.09	566.64	GR RU
24.2 LSE	99.07	566.62	GR RU
26.5	98.81	566.36	GR RU
33.7	98.90	566.45	GR RU
42.1	99.06	566.61	GR RU
44.0	99.18	566.73	GR RU
47.4	99.01	566.56	GR RU
51.1	98.87	566.42	GR RU
53.4	98.95	566.50	GR RU
58.1	98.97	566.52	GR RU
62.6	98.77	566.32	GR RU
73.3	98.29	565.84	GR RU
85.0	98.65	566.20	GR RU
89.5	98.85	566.40	GR RU
94.0	98.96	566.51	GR RU
95.9 RWS, RWE	99.06	566.61	GR RU
103.2	99.23	566.78	GR RU
106.4	99.77	567.32	Vegetation
111.8	100.85	568.40	Vegetation
118.0	102.00	569.55	Vegetation

Table 4-E-27. (Continued).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
122.3 GB	102.21	569.76	Vegetation
122.3 RBHP 8	102.40	569.95	Vegetation

Table 4-E-28. Cross section elevations in transect 9 of Slough 8A surveyed August 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 9	101.46	569.01	--
0.0 GB	101.30	568.85	Vegetation
3.6	100.24	567.79	Vegetation
5.4	100.44	567.99	Vegetation
6.5	100.91	568.46	Vegetation
9.9	100.61	568.16	Vegetation
33.3 LWS, LWE	99.93	567.48	GR RU
44.6	99.49	567.04	GR RU
48.5	99.60	567.15	GR RU
56.2	99.14	566.69	GR RU
64.8	99.29	566.84	GR RU
66.2	99.57	567.12	GR RU
67.8	99.31	566.86	GR RU
74.5	99.03	566.58	GR RU
80.8	98.59	566.14	GR RU
89.0	98.95	566.50	GR RU
95.3	99.17	566.72	GR RU
103.0	99.25	566.80	GR RU
104.9 RWS, RWE	99.66	567.21	GR RU
105.7	100.01	567.56	Vegetation
106.1	100.45	568.00	Vegetation
109.7	100.91	568.46	Vegetation
120.2	101.25	568.80	Vegetation
121.4	101.75	569.30	Vegetation
127.5 GB	102.63	570.18	Vegetation
127.5 RBHP 9	103.33	570.88	Vegetation

Table 4-E-29. Cross section elevations in transect 10 of Slough 8A surveyed August 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 10	103.07	570.62	--
0.0 GB	102.84	570.39	Vegetation
3.2	102.50	570.05	Vegetation
12.9	100.79	568.34	Vegetation
15.0	101.30	568.85	Vegetation
19.7	101.18	568.73	Vegetation
20.1	100.37	567.87	Vegetation
25.0 LWS, LWE	99.64	567.19	SI
27.8	99.27	566.82	GR RU
43.4	98.95	566.50	RU CO
48.4	99.26	566.81	GR SA
50.8	99.40	566.95	GR SA
68.9	98.74	566.29	RU CO
97.0	99.65	567.20	RU CO
101.3 RWS, RWE	100.23	567.78	RU CO
109.0	102.37	569.92	Vegetation
109.8	103.28	570.83	--
116.2 GB	106.35	573.90	--
116.2 RBHP 10	106.59	574.14	--

Table 4-E-30. Cross section elevations in transect 11 of Slough 8A surveyed August 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 11	102.55	570.10	--
0.0 GB	102.32	569.87	Vegetation
24.9	101.14	568.69	Vegetation
26.3	100.42	567.97	Vegetation
27.5	100.12	567.67	Vegetation
34.1 LWS, LWE ^a	99.65	567.20	SA GR
34.3	99.63	567.18	RU CO
38.8	99.38	566.93	RU CO
40.0 RWS, RWE	99.64	567.19	RU CO
41.7	99.89	567.44	RU CO
42.8 LWS, LWE ^b	99.65	567.20	RU CO
44.5	99.21	566.76	RU CO
47.7	99.55	567.10	RU CO
47.7	99.65	567.20	RU CO
47.9	100.14	567.69	Vegetation
51.2	100.49	568.04	Vegetation
53.0	100.23	567.78	RU CO
58.3	99.65	567.20	RU CO
63.2	99.42	566.97	RU CO
65.1	99.57	567.12	RU CO
68.5	99.52	567.07	SA
69.3 RWS, RWE	99.65	567.20	SA
70.1	99.64	567.19	SA
71.0 LWS, LWE ^c	99.65	567.20	SA
74.4	99.18	566.73	SA CO
80.8	98.15	565.70	RU CO
84.1	97.92	565.47	RU CO
98.0 RWS, RWE	99.65	567.20	RU CO

Table 4-E-30. (Continued).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
99.6	100.34	567.89	RU CO
105.2	102.22	569.77	RU CO
113.0	102.60	570.15	Vegetation
118.0	104.35	571.90	Vegetation
119.6	105.80	573.35	Vegetation
120.7	107.11	574.66	Vegetation
121.4 GB	107.21	574.76	Vegetation
121.4 RBHP 11	107.45	575.00	Vegetation

^aStations 34.1 and 40.0 are edges of small channel.

^bStations 42.8 and 69.3 are edges of larger channel.

^cStations 71.0 and 98.0 are edges of small channel.

Table 4-E-31. Data (ft) for streambed (thalweg) profile of Slough 8A, 1982 (see pages E-3, -4 for definitions of terms).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
1		-3 + 74	558.60	1.05	559.65	Riffle
	74					
2		-3 + 00	559.40	0.35	559.75	Top riffle
	75					
3		-2 + 25	558.95	0.85	559.80	Backwater
	75					
4		-1 + 50	558.40	1.40	559.80	Backwater
	50					
5		-1 + 00	557.85	2.05	559.90	Backwater
	63					
6		-0 + 37	559.40	0.50	559.90	Backwater
	37					
7		0 + 00	558.50	1.45	559.95	Mouth
	133					
8		1 + 33	556.95	3.00	559.95	Pool
	6					
9		1 + 39	559.30	0.70	560.00	Head pool
	50					
10		1 + 89	559.95	0.20	560.15	Top pool
	113					
11		3 + 02	560.60	0.35	560.95	Top riffle
	107					
12		4 + 09	559.70	1.25	560.95	Pool
	74					
13		4 + 83	560.40	0.55	560.95	Pool
	114					
14		5 + 97	560.05	0.90	560.95	Pool
	151					
15		7 + 48	560.05	0.90	560.95	Pool
	112					
16		8 + 60	560.15	0.80	560.95	Pool
	53					
17		9 + 13	559.70	1.25	560.95	Pool
	144					
18		10 + 57	560.55	0.40	560.95	Pool
	22					
19		10 + 79	560.75	0.20	560.95	Top pool
	18					
20		10 + 97	561.15	0.20	561.35	Top riffle
	37					
21		11 + 34	560.85	0.55	561.40	Run
	43					
22		11 + 77	561.05	0.45	561.50	Run
	43					
23		12 + 20	561.00	0.55	561.55	Run

Table 4-E-31. (Continued).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
24	40	12 + 60	561.50	0.20	561.70	Btm. riffle
25	20	12 + 80	562.05	0.60	562.65	Btm. pool
26	72	13 + 52	562.05	0.65	562.70	Pool
27	24	13 + 76	562.40	0.30	562.70	Pool
28	7	13 + 83	562.40	0.40	562.80	Run
29	41	14 + 24	562.15	0.70	562.85	Run
30	15	14 + 39	562.60	0.40	563.00	-
31	36	14 + 75	562.80	0.35	563.15	-
32	47	15 + 22	563.00	0.40	563.40	-
33	123	16 + 45	563.50	0.20	563.70	-
34	244	18 + 89	563.60	0.30	563.90	-
35	10	18 + 99	563.50 ^b	2.00 ^b	565.50	Top dam
36	156	20 + 55	563.00 ^b	2.50 ^b	565.50	-
37	150	22 + 05	559.50 ^b	4.00 ^b	565.50	Rt. bank
38	269	24 + 74	563.50 ^b	2.00 ^b	565.50	Pool
39	132	26 + 06	562.50 ^b	3.00 ^b	565.50	Pool
40	208	28 + 14	564.00 ^b	2.00 ^b	565.75	Water edge
41	111	29 + 25	563.75 ^b	2.00 ^b	565.75	-
42	90	30 + 15	564.55	1.23	565.78	-
43	132	31 + 47	564.05	2.31	566.36	-
44	89	32 + 36	561.25	5.13	566.35	-
45	66	33 + 02	565.60	0.76	566.35	-
46	41	33 + 43	565.70	0.79	566.45	-

Table 4-E-31. (Continued).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
47	103	34 + 46	565.85	0.95	566.80	-
48	176	36 + 22	566.15	1.29	567.45	-
49	113	37 + 35	566.30	1.16	567.45	-
50	88	38 + 23	565.45	1.98	567.45	-
52	50	38 + 73	566.60	0.43	567.05	Btm. riffle
53	131	40 + 04	568.40	0.16	568.60	Top riffle
54	185	41 + 89	567.80	0.82	568.60	Top pool
55	44	42 + 33	568.35	0.56	568.90	Top riffle
56	140	43 + 73	568.25	0.84	569.10	Top pool
57	45	44 + 18	569.10	0.64	569.75	Top riffle
58	69	44 + 87	567.80	1.95	569.75	Pool
59	67	45 + 54	569.15	0.60	569.75	Top pool
60	35	45 + 89	569.15	0.64	569.80	Btm. riffle
61	71	46 + 60	570.15	0.58	569.75 ^b	Top riffle
62	159	48 + 19	570.05	0.79	570.80	Pool
63	151	49 + 70	569.60	1.27	570.85	Pool
64	178	51 + 48	570.55	0.32	570.85	Riffle
65	116	52 + 64	570.20	0.74	570.90	-
66	340	56 + 04	567.90 ^b	3.00 ^b	567.95	On ice
67	331	59 + 35	567.90 ^b	3.00 ^b	567.50	On ice
68	291	62 + 26	570.40	0.50	570.90	-
69	178	64 + 04	570.95	0.35	571.30	-
70	178	65 + 82	571.90	--	--	- ^c

Table 4-E-31. (Continued).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
71	365	69 + 47	571.25	0.97	572.25	-
72	217	71 + 64	573.80	--	--	No water ^c
73	290	74 + 54	573.70	0.24	573.95	-
74	170	76 + 24	573.15	--	--	No water ^c
75	293	79 + 17	575.35	--	--	No water ^c
76	339	82 + 56	576.45	--	--	Head ^c
77	120	83 + 76	575.05	--	--	No water ^c
78	975	93 + 51	576.15	--	--	No water ^c
79	1012	103 + 63	579.20	--	--	No water ^c
80	300	106 + 63	580.25	--	--	No water ^c

^aWater surface elevation.

^bEstimated value.

^cNo water at time of survey.

Table 4-E-32. Head pin elevations in Slough 9 surveyed August 23, 1982 (see pages E-1, -2 for definitions of terms).

<u>Bench Mark</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>
LBHP 1	110.21	600.69
RBHP 1	97.56	598.04
LBHP 2	102.70	603.18
RBHP 2	97.96	598.44
LBHP 3	104.12	604.60
RBHP 3	94.42	594.90
LBHP 4	102.94	603.42
RBHP 4	94.94	595.42
LBHP 5	100.31	600.79
RBHP 5	96.10	596.58
LBHP 6	99.96	600.44
RBHP 6	98.36	598.84
LBHP 7	98.46	598.94
RBHP 7	99.64	600.12
LBHP 8	98.38	598.86
RBHP 8	102.66	603.14
LBHP 9	98.46	598.94
RBHP 9	99.50	599.98
LBHP 10	100.58	601.06
RBHP 10	100.98	601.46

Table 4-E-33. Cross section elevations in transect 1 of Slough 9 surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 1	100.21	600.69	--
0.0 GB	99.85	600.33	--
3.3	100.06	600.54	High bank
5.6	97.77	598.25	Bank step
7.7	94.70	595.18	Low bank
15.2	93.31	593.79	SI CO
20.3 LWS, LWE	91.93	592.41	--
24.3	91.19	591.67	CO
31.4	91.19	591.67	CO
38.3	91.10	591.58	CO
44.0	91.19	591.67	CO
51.2	91.11	591.59	CO SI
59.1	91.23	591.71	SA CO
70.0	91.36	591.84	SA
78.9 LWS, RWE	90.88	591.36	SI
107.7	92.19	592.67	CO
120.0	92.91	593.39	CO SA
134.0	94.12	594.60	CO SA
145.5	93.66	594.14	CO
160.2	94.35	594.83	CO
176.2	94.56	595.04	CO
185.2	94.93	595.41	Vegetation
191.2	95.81	596.29	SA/Vegetation ^a
198.3	95.93	596.41	SA/Vegetation ^a
205.6 GB	97.24	597.72	--
205.6 RBHP 1	97.56	598.04	--

^aVegetation = Willow

Table 4-E-34. Cross section elevations in transect 2 of Slough 9 surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 2	102.69	602.69	--
0.0 GB	102.55	603.03	--
4.1	102.08	602.56	High bank
12.4	94.72	595.20	Low bank
23.6	92.62	593.10	SI (bank)
28.0 LWS, LWE	92.05	592.53	--
32.2	91.47	591.95	CO
39.5	91.51	591.99	CO
51.3	91.37	591.85	CO
66.1	91.45	591.93	CO
89.0 LWS, RWE	92.03	592.51	--
137.7	94.42	594.90	CO (on HP3)
137.7	94.16	594.64	CO (GB HP3)
151.5	94.91	595.39	CO (on HP4)
151.5	94.63	595.11	CO (GB HP4)
181.5	96.06	596.54	CO (on HP5)
181.5	95.80	596.28	CO (GB HP5)
205.8	96.35	596.83	Vegetation
223.7 GB	97.55	598.03	--
223.7 RBHP 2	97.95	598.43	--

Table 4-E-35. Cross section elevations in transect 3 of Slough 9 surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 3	104.72	605.20	--
0.0 GB	104.26	604.74	--
1.2	104.00	604.48	High bank
2.5	101.12	601.60	Bank step
14.2	99.38	599.86	Bank step
17.0	96.14	596.62	Low bank
24.0	95.12	595.60	Bank
24.7	93.45	593.93	CO SI
34.0 LWS, LWE	92.80	593.28	--
45.0	92.65	593.13	CO SI
57.7	92.26	592.74	CO SI
63.0	92.12	592.60	CO SI
69.0	92.31	592.79	CO SI
78.0	92.59	593.07	CO SI
90.7	92.56	593.04	CO SI
103.0	92.60	593.08	CO SI
117.1	92.68	593.16	CO SI
127.8 LWS, RWE	92.80	593.28	--
136.7	92.98	593.46	CO SA
149.4	93.22	593.70	CO SA
169.0	93.76	594.24	CO SA
190.0	94.34	594.82	CO SA
205.7 GB	94.06	594.54	--
205.7 RBHP 3	94.42	594.90	--

Table 4-E-36. Cross section elevations in transect 4 of Slough 9 surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 4	102.94	603.42	--
0.0 GB	102.49	602.97	--
3.5	101.86	602.34	High bank
5.0	98.22	598.70	Bank step
8.0	98.18	598.66	Low bank
15.5	96.46	596.94	Vegetation
16.5	94.91	595.39	CO
50.0 LWS, LWE ^a	92.23	592.71	SA GR
60.5	92.04	592.52	SA GR
67.3 RWS, RWE	92.19	592.67	GR SA
69.3 LWS, LWE ^b	92.19	592.67	SA GR
80.0	92.26	592.74	GR SA
90.0	92.23	592.71	GR
100.0	92.26	592.74	GR
110.0	92.41	592.89	GR
125.0 RWS, RWE	92.48	592.96	--
140.0	92.61	593.09	GR CO
150.0	92.64	593.12	GR CO
170.0	93.01	593.49	GR CO
190.0	93.45	593.93	GR CO
210.0	93.94	594.42	GR CO
238.3 GB	94.56	595.04	--
238.3 RBHP 4	94.94	595.42	--

^aStations 50.0 and 67.3 are edges of small channel.

^bStations 69.3 and 125.0 are edges of larger channel.

Table 4-E-37. Cross section elevations in transect 5 of Slough 9 surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 5	100.28	600.76	--
0.0 GB	100.04	600.52	--
4.7	98.46	598.94	High bank
8.1	95.54	596.02	Low bank
20.2	93.76	594.24	CO
36.0 LWS, LWE ^a	92.26	592.74	--
45.0	91.77	592.25	CO
58.0 RWS, RWE	92.25	592.73	--
85.3	93.04	593.52	SI
98.4	92.94	593.42	CO
111.0 LWS, LWE ^b	92.78	593.26	--
118.5	92.59	593.07	RU CO
131.5	92.45	592.93	RU CO
144.2	92.29	592.77	RU CO
166.4 RWS, RWE	92.81	593.28	--
184.8	93.56	594.04	CO
209.9	94.33	594.81	CO
236.4	95.03	595.51	CO
264.8	95.39	595.87	CO
283.7 GB	95.78	596.26	--
283.7 RBHP 5	96.07	596.55	--

^aStations 36.0 and 58.0 are edges of small channel.

^bStations 111.0 and 166.4 are edges of larger channel.

Table 4-E-38. Cross section elevations in transect 6 of Slough 9 surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 6	99.96	600.44	--
0.0 GB	99.83	600.31	--
2.4	99.05	599.53	High bank
4.4	97.38	597.86	Bank step
14.4	94.49	594.97	Low bank
15.8 LWS, LWE ^a	93.10	593.58	--
23.0	92.85	593.33	CO
28.7	92.68	593.16	CO
34.8 RWS, RWE	92.84	593.32	--
59.3	93.21	593.69	CO SI
81.0	93.68	594.16	CO SI
97.4 LWS, LWE ^b	93.18	593.66	--
106.1	92.89	593.37	CO
118.8	92.37	592.85	CO
130.3	91.70	592.18	CO
137.4	92.34	592.82	CO
145.5	92.35	592.83	CO
149.4 RWS, RWE	92.86	593.34	--
150.8	93.42	593.34	CO
157.4	94.15	594.63	CO
164.5	94.46	594.94	CO
170.2	95.39	595.87	CO
174.2	97.16	597.64	CO
181.1 GB	98.19	598.67	--
181.1 RBHP 6	98.36	598.84	--

^aStations 15.0 and 34.8 are edges of small channel.

^bStations 97.4 and 149.4 are edges of larger channel.

Table 4-E-39. Cross section elevations in transect 7 of Slough 9 surveyed by R & M Consultants (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 GB (LBHP 7)	99.62	600.10	SA
7.0	98.65	599.13	SA/High bank
10.0	95.15	595.63	SA
15.0 LWS, LWE	92.48	592.96	SA
26.0	91.98	592.46	SA
37.0	91.88	592.36	GR RU
49.0	92.08	592.56	GR RU
59.0	92.18	592.66	GR RU
72.0	92.18	592.66	SA
85.0	92.38	592.86	SA
100.0	92.68	593.16	SA
113.0	92.88	593.36	SA
135.0 RWS, RWE	93.48	593.96	SA
161.0	93.75	594.23	SA
169.0	98.25	598.73	SA/High bank
170.0 GB (LBHP 7)	97.46	598.94	SA

Table 4-E-40. Cross section elevations in transect 8 of Slough 9 surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 8	98.41	598.89	SA
0.0 GB	98.18	598.66	High bank
7.3	96.40	596.88	Vegetation
8.5	94.25	594.73	SA
26.0	94.32	594.80	SA
40.0	93.85	594.33	SA
51.2 LWS, LWE	92.90	593.38	--
64.0	91.52	592.00	SA SI
76.0	91.07	591.55	SA SI
89.0	90.50	590.98	SA SI
97.0	90.61	591.09	SA SI
104.0	91.29	591.77	BO SI
110.4 RWS, RWE	92.89	593.37	--
116.0	95.09	595.57	BO SI
119.0	98.83	599.31	BO
120.6	97.62	598.10	BO
123.6	98.42	598.90	BO
127.1	102.71	603.19	Vegetation
129.8 GB	102.25	602.73	--
129.8 RBHP 8	102.68	603.16	--

Table 4-E-41. Cross section elevations in transect 9 of Slough 9 surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 9	98.45	598.93	--
0.0 GB	98.26	598.74	--
2.2	97.71	598.19	High bank
3.0	95.76	596.24	Low bank/SA
10.0	93.86	594.34	CO
28.0	94.21	594.69	CO
44.0	93.64	594.12	CO
56.4 LWS, LWE	92.85	593.33	--
74.2	91.58	592.06	SA SI
88.0	91.41	591.89	SA SI
100.0	91.51	591.99	SA SI
106.0	91.43	591.91	SA SI
113.0	90.42	590.90	SA SI
115.4	89.72	590.20	BO
122.0	91.58	592.06	BO
123.7 RWS, RWE	92.83	593.31	--
128.2	95.34	595.82	BO SA
131.0	95.50	595.98	BO SA
133.1	96.93	597.41	BO SA
139.0 GB	99.29	599.77	--
139.0 RBHP 9	99.47	599.95	--

Table 4-E-42. Cross section elevations in transect 10 of Slough 9 surveyed August 11, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 10	100.54	601.02	SA
0.0 GB	100.23	600.71	SA
4.8	99.89	600.37	SA
7.9	98.74	599.22	Vegetation
16.1	94.45	594.93	SA (bar)
25.0	94.57	595.05	SA (bar)
36.0	93.09	593.57	SA (bar)
41.6 LWS, LWE	92.84	593.32	--
59.0	91.34	591.82	SA
66.0	90.56	591.04	SA
76.0	89.45	589.93	SA
85.0	89.86	590.34	SA
92.0	89.49	589.97	SA
96.0	91.64	592.12	BO
99.6 RWS, RWE	92.85	593.33	--
106.0	94.30	594.78	BO
119.2	97.90	598.38	BO
126.8 GB	100.71	601.19	--
126.8 RBHP 10	100.94	601.42	--

Table 4-E-43. Data (ft) for streambed (thalweg) profile of Slough 9
 (see pages E-3, -4 for definitions of terms).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>MSE^a</u>	<u>Comments</u>
1	62	-8 + 76	588.10	1.11	589.20	--
2	65	-8 + 14	588.00	1.22	589.20	--
3	142	-7 + 49	588.40	0.83	589.25	--
4	53	-6 + 07	589.00	0.62	589.60	--
5	96	-5 + 54	588.90	0.88	589.80	--
6	82	-4 + 58	589.45	0.45	589.85	--
7	145	-3 + 77	589.60	0.34	589.95	--
8	206	-2 + 32	589.20	0.77	589.95	--
9	26	-0 + 26	588.05	1.96	589.95	--
10	274	0 + 00	588.30	1.67 ^b	589.95 ^b	Mouth
11	245	2 + 74	588.45	1.58	590.00	--
12	7	5 + 19	587.85	2.07	589.95	--
13	114	5 + 26	589.80	0.18	589.00	--
14	98	6 + 40	589.80	0.38	590.20	--
15	143	7 + 38	591.00	0.25	591.25	--
16	146	8 + 81	591.85	0.22	592.00	--
17	105	10 + 27	591.70	0.42	592.10	--
18	300	11 + 32	591.20	0.93	592.15	--
19	215	14 + 32	591.50	0.67	592.15	--
20	290	16 + 47	591.40	0.90 ^b	592.30 ^b	1982/TR-1 ^c
21	168	19 + 37	591.80	0.70 ^b	593.50 ^b	1982/TR-2 ^c
22	28	21 + 05	591.80	0.80 ^b	592.60 ^b	1982/TR-3 ^c
23		21 + 33	592.40	0.30 ^d	592.70 ^d	1982/TR-4 ^c

Table 4-E-43. (Continued).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
24	41	21 + 74	592.10	--- ^d	-- ^d	1982/TR-5 ^c
25	91	22 + 65	592.00	1.30 ^d	597.30 ^d	1982/TR-6 ^c
26	116	23 + 81	592.40	0.90 ^d	593.30 ^d	1982/TR-7 ^c
27	187	25 + 68	590.80	2.60 ^d	593.40 ^d	1982/TR-8 ^c
28	138	27 + 06	590.00	3.40 ^d	593.40 ^d	1982/TR-9 ^c
29	158	28 + 64	589.80	3.70	593.50 ^d	1982/TR-10 ^c
30	152	30 + 16	591.85	1.25	593.10	--
31	123	31 + 39	592.75	0.40	593.15	--
32	94	32 + 33	593.65	0.48	594.15	--
33	124	33 + 57	594.40	0.42	594.80	--
34	173	35 + 30	595.10	0.20	595.30	--
35	294	38 + 24	596.10	0.20	596.30	--
36	290	41 + 14	597.00	0.35	597.30	--
37	184	42 + 98	597.10	0.20	597.30	--
38	202	45 + 00	597.35	0.20	597.55	--
39	183	46 + 83	598.25	0.10	598.35	--
40	145	48 + 28	599.85	0.35	600.20	--
41	295	51 + 23	600.20	0.20	600.40	--
42	241	53 + 64	601.20	--	--	-- ^d
43	177	55 + 41	600.85	--	--	-- ^d
44	168	57 + 09	601.65	--	--	-- ^d
45	248	59 + 57	602.40	--	--	-- ^d
46	145	61 + 02	602.60	--	--	-- ^d

Table 4-E-43. (Continued).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
47	149	62 + 51	604.60	--	--	Head ^d

^aWater surface elevation.

^bEstimated value.

^cData surveyed on August 25, 1982.

^dNo water present at time of survey.

Table 4-E-44. Data (ft) for streambed (thalweg) profile of Slough 11, 1982 (see pages E-3, -4 for definitions of terms).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
1		-7 + 09	662.80	1.70	664.50	Below mouth
	165					
2		-5 + 44	664.00	0.52	664.50	Below mouth
	300					
3		-2 + 44	665.30	0.50	665.80	Below mouth
	115					
4		-1 + 29	665.15	1.03	666.15	Below mouth
	129					
5		0 + 00	665.45	0.85	666.30	Mouth
	171					
6		1 + 71	666.00	0.37	666.35	Top pool
	137					
7		3 + 08	667.90	0.49	668.40	Top riffle
	212					
8		5 + 20	667.55	0.90 ^b	668.45 ^b	Top pool
	72					
9		5 + 92	668.30	0.33	668.65	Top riffle
	235					
10		8 + 27	668.25	0.45	668.70	Top pool
	124					
11		9 + 51	668.95	0.55	669.50	Top riffle
	157					
12		11 + 08	669.25	0.43	669.70	Top pool
	94					
13		12 + 02	670.00	0.44	670.45	Top riffle
	325					
14		15 + 27	669.80	0.91	670.70	At R & M well
	79					
15		16 + 06	670.50	0.21	670.70	Top pool
	35					
16		16 + 41	670.75	0.30	671.05	Top riffle
	218					
17		18 + 59	669.65	1.32	671.00	Pool
	139					
18		19 + 98	671.05	0.27	671.30	Top pool
	51					
19		20 + 49	673.15	0.24	673.35	Top riffle
	117					
20		21 + 66	673.55	Ice	673.55	Pool
	300					
21		24 + 66	673.05	0.51	673.55	Top pool
	56					
22		25 + 22	674.30	0.28	674.55	Top riffle
	241					
23		27 + 63	674.40	0.25	674.65	Top pool

Table 4-E-44. (Continued).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
24	48	28 + 11	675.15	0.25	675.40	Top riffle
25	300	31 + 11	675.45	--	--	Pool ^c
26	300	34 + 11	675.35	--	--	Top pool ^c
27	302	37 + 13	677.30	--	--	- ^c
28	128	38 + 41	682.80	--	--	Channel ^c
29	154	39 + 95	679.75	--	--	Channel ^c
30	100	40 + 95	682.55	--	--	Mound ^c
31	190	42 + 85	680.70	--	--	Mound ^c
32	211	44 + 96	680.25	--	--	Btm. pool ^c
33	106	46 + 02	680.40	--	--	Top pool ^c
34	68	46 + 70	682.80	--	--	Mound ^c
35	177	48 + 47	681.35	--	--	Btm. pool ^c
36	139	49 + 86	681.35	--	--	Top pool ^c
37	123	51 + 09	684.60	--	--	Head ^c

^aWater surface elevation.

^bEstimated value.

^cNo water present at time of survey.

Table 4-E-45. Head pin elevations in Slough 21 surveyed September 2, 1982 (see pages E-1, -2 for definitions of terms).

<u>Bench Mark</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>
LBHP 1	98.33	748.72
RBHP 1	100.02	750.41
LBHP 2	99.04	749.43
RBHP 2	98.85	749.24
LBHP 3	97.09	747.48
RBHP 3	99.57	749.96
LBHP 4	98.19	748.58
RBHP 4	99.89	750.28
LBHP 5	97.91	748.30
RBHP 5	100.76	751.15
LBHP 6	97.86	748.25
RBHP 6	100.77	751.16
LBHP 7	97.51	747.90
RBHP 7	100.24	750.63
LBHP 8	101.10	751.49
RBHP 8	100.57	750.96

Table 4-E-46. Cross section elevations in transect 1 of Slough 21 surveyed September 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 1	98.33	748.72	--
0.0 GB	98.17	748.56	GR RU
1.5	97.92	748.31	SA CO
80.2	95.00	745.39	SA
99.7 LWS, LWE	94.10	744.49	Low bank
127.7	92.54	742.93	SA CO
134.9	92.27	742.66	SA
149.9	91.90	742.29	SA BO
154.0	91.58	741.97	SA BO
166.0	92.19	742.58	BO CO
184.0	92.56	742.95	CO SA
192.0	92.32	742.71	CO SA
207.0 RWS, RWE	93.14	743.53	CO SA
230.0	94.09	744.48	CO SA
251.0	94.85	745.24	Vegetation
268.0	97.39	747.78	--
270.6 GB	99.56	749.95	--
270.6 RBHP 1	100.02	750.41	--

Table 4-E-47. Cross section elevations in transect 2 of Slough 21 surveyed September 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 2	99.04	749.43	--
0.0 GB	98.65	749.04	GR SA
5.0	97.83	748.22	GR SA
17.0	97.86	748.25	GR SA
27.3	96.86	747.25	SA RU
52.7 LWS, LWE	94.14	744.53	RU SA
67.5	93.17	743.56	CO RU
73.4	93.06	743.45	CO RU
87.8	93.91	744.30	CO RU
131.0	94.44	744.83	CO RU
144.4	93.75	744.14	CO RU
203.8	93.33	743.72	BO RU
210.2	93.13	743.52	BO RU
214.6	93.05	743.44	BO RU
231.6	93.46	743.85	BO RU
243.7	93.83	744.22	SI CO
259.8	93.86	744.25	SI CO
256.2 LWS, RWE	94.14	744.53	--
260.3	95.65	746.04	Soil
261.8	96.80	747.19	Soil
264.0	95.80	746.19	Soil
272.5	96.20	746.59	Soil
274.0	97.32	747.71	Soil
284.2 GB	98.60	748.99	Soil
284.2 RBHP 2	98.84	749.23	Soil

Table 4-E-48. Cross section elevations in transect 3 of Slough 21 surveyed by September 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 3	97.09	747.48	--
0.0 GB	96.98	747.37	RU CO
12.0	96.95	747.34	--
16.9 LWS, LWE	95.49	745.88	High
20.0 LWS, LWE	94.20	744.59	Low
25.0	93.78	744.17	SI
34.0	93.23	743.62	SI BO
39.0	93.14	743.53	SI BO
47.0	92.89	743.28	SI BO
51.0	93.00	743.39	SI BO
56.0	92.68	743.07	SI BO
69.0	92.71	743.10	SI BO
75.0	93.03	743.42	SI BO
88.0	93.29	743.68	SI BO
Top of Staff Gage	96.30	746.69	SI BO
97.5 RWS, RWE	94.22	744.61	Low
101.4 RWS, RWE	95.40	745.79	High
106.0	98.41	748.86	--
112.2 GB	99.25	749.64	--
112.2 RBHP 3	99.57	749.96	--

Table 4-E-49. Cross section elevations in transect 4 of Slough 21 surveyed September 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 4	98.19	748.58	--
0.0 GB	98.03	748.42	--
11.5	97.63	748.02	RU CO
24.0	97.00	747.39	SA
30.0 LWS, LWE	94.45	744.84	High
32.5	94.27	744.66	Upwelling
33.7 LWS, LWE	94.18	744.57	Low
43.0	93.76	744.15	SA
46.0	93.70	744.09	SA
50.0	93.97	744.36	SA
66.0	93.25	743.64	SA
77.0	92.59	742.98	SA
81.0	91.96	742.35	SA
84.0	91.52	741.91	SA
85.0	91.41	741.90	SA
89.0	91.69	742.08	SA
93.0	92.38	742.77	BO SI
100.0 RWS, LWE	94.21	744.60	Low
102.3 RWS, LWE	95.46	745.85	High
106.0	98.42	748.81	--
109.9 GB	99.58	749.97	--
109.9 RBHP 4	99.89	750.28	--

Table 4-E-50. Cross section elevations in transect 5 of Slough 21 surveyed September 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 5	97.91	748.30	--
0.0 GB	97.70	748.09	--
10.0	97.57	747.96	SA
17.5	96.78	747.17	SA
24.0	94.95	745.34	SA
27.0	94.80	745.19	SA
29.0	94.97	745.36	SA
33.0	95.51	745.90	SA
35.2 LWS, RWE	95.47	745.86	SA/High
60.0	94.66	745.05	SA
67.5 LWS, WSE	94.19	744.58	SA/Low
72.0	93.86	744.25	SA
78.5	93.47	743.86	RU BO
82.5	93.08	743.47	RU BO
88.0	93.52	743.91	RU BO
91.5	93.20	743.59	RU BO
93.0	93.27	743.66	RU BO
100.0	93.57	743.96	RU BO
102.5	93.96	744.35	RU BO
106.0	93.66	744.05	RU BO
114.0	93.43	743.82	RU BO
117.7 RWS, WSE	94.25	744.64	Low
120.5	95.02	745.41	--
121.3 RWS, WSE	95.48	745.87	High
126.5	100.45	750.84	--
131.8 GB	100.54	750.93	--
131.8 RBHP 5	100.75	751.14	--

Table 4-E-51. Cross section elevations in transect 6 of Slough 21 surveyed September 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 6	97.86	748.25	--
0.0 GB	97.67	748.06	--
8.0	97.56	747.95	Vegetation
19.5	96.84	747.23	SA
25.0	96.08	746.47	SA
29.5	96.27	746.66	SA
36.0 LWS, LWE	95.51	745.90	High
42.0	94.84	745.23	SA
45.0	95.21	745.60	SA
66.0	94.71	745.10	GR CO
76.2 LWS, LWE	94.40	744.79	Low
85.0	94.08	744.47	GR CO
93.0	94.12	744.51	GR CO
96.5	94.27	744.66	GR CO
102.0	94.09	744.48	GR CO
104.5	93.85	744.24	GR CO
107.0	93.70	744.09	GR CO
109.0	93.65	744.04	CO BO
111.5	93.85	744.24	CO BO
120.5	94.14	744.53	CO BO
123.8 RWS, RWE	94.38	744.77	Low
131.0 RWS, RWE	95.48	745.87	High
136.0	100.49	750.88	--
138.3 GB	100.59	750.98	--
138.3 RBHP 6	100.77	751.16	--

Table 4-E-52. Cross section elevations in transect 7 of Slough 21 surveyed September 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 7	97.51	747.90	--
0.0 GB	97.28	747.67	GR RU
33.5	95.89	746.28	SI SA
38.0	95.74	746.13	SI SA
43.0	95.83	745.72	SI SA
49.0	95.23	745.62	SI SA
63.0	95.87	746.26	SI SA
66.0 LWS, LWE	95.54	745.93	High
74.0	94.95	745.34	GR CO
96.5 LWS, LWE	94.68	745.07	GR CO/Low
125.0	94.05	744.44	GR CO
108.0	93.47	743.86	CO RU
111.5	93.38	743.77	CO RU
115.0	93.12	743.51	CO RU
118.0	92.78	743.17	BO CO
125.5 RWS, LWE	94.52	744.91	Low
126.5 RWS, LWE	95.64	746.03	High
127.5	96.54	746.93	BO CU
130.0	100.18	750.57	BO CU
132.6 GB	100.09	750.48	--
132.6 RBHP 7	100.19	750.58	--

Table 4-E-53. Cross section elevations in transect 8 of Slough 21 surveyed September 22, 1982 (see pages E-1, -2, for definitions of terms).

<u>Station (ft)</u>	<u>Elevation (ft)</u>	<u>True Elevation (ft)</u>	<u>Comments and Substrate</u>
0.0 LBHP 8	101.10	751.49	--
0.0 GB	100.88	751.27	--
3.5	99.52	749.91	Vegetation
7.7	95.45	745.84	Vegetation
8.0 LWS, LWE	94.28	744.67	Low
8.0 LWS, LSE	94.53	744.92	High
9.5	93.69	744.08	SI
16.0	93.39	743.78	GR SI
27.0	93.39	743.78	SI
42.0	93.18	743.57	GR
55.0	92.29	742.68	SI
66.0	92.37	742.76	SI
82.0	92.95	743.34	SI
91.0	93.26	743.65	SI
97.0	93.49	743.88	SI
99.5	93.22	743.61	SI
104.0	93.93	744.32	SI
108.0	93.37	743.76	SI
111.0	93.07	743.46	CO B0
115.0	92.69	743.08	CO B0
115.5	92.69	743.08	SI
119.5 LWS, RWE	94.38	744.77	Low
119.5 LWS, RSE	94.54	744.93	High
120.0	95.20	745.59	--
123.0	96.64	747.03	--
125.0	98.90	749.29	--
126.5	100.08	750.47	--
129.3 GB	100.37	750.76	--
129.3 RBHP 8	100.57	750.96	--

Table 4-E-54. Data (ft) for streambed (thalweg) profile of Slough 21, 1982 (see pages E-3, -4 for definitions of terms).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
1		0 + 00	731.05	0.40	731.45	Mouth
2	46	0 + 46	730.95	0.45	731.40	Bar at mouth
3	41	0 + 87	730.15	1.35	731.50	Btm. riffle
4	24	1 + 11	730.55	1.05	731.60	Riffle
5	26	1 + 37	731.15	0.75	731.90	Top riffle
6	74	2 + 11	731.65	0.30	731.95	Pool
7	200	4 + 11	730.25	1.70	731.95	Pool
8	90	5 + 01	730.70	1.25	731.95	Top pool
9	2	5 + 03	731.25	0.70	731.95	Top pool
10	108	6 + 11	731.50	0.45	731.95	Top pool
11	61	6 + 72	731.50	0.60	732.10	Btm. run
12	58	7 + 30	731.65	0.60	732.25	Top run
13	17	7 + 47	732.40	0.20	732.60	Riffle
14	11	7 + 58	732.10	0.55	732.65	Top riffle
15	28	7 + 86	731.30	1.35	732.65	Pool
16	53	8 + 39	731.85	0.80	732.65	Top pool
17	88	9 + 27	732.05	0.65	732.70	Run
18	126	10 + 53	732.55	0.50	733.05	Run
19	130	11 + 83	731.05	2.05	733.10	Pool
20	146	13 + 29	731.45	1.65	733.10	Top pool
21	20	13 + 49	731.55	1.55	733.10	Top pool
22	31	13 + 80	732.75	0.35	733.10	Top pool
23	87	14 + 67	733.65	0.50	734.15	Riffle

Table 4-E-54. (Continued).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
24	82	15 + 49	734.55	0.25	734.80	Top riffle
	45					
25		15 + 94	734.85	0.60	735.45	Top riffle
	66					
26		16 + 60	734.90	0.70	735.60	Pool
	80					
27		17 + 40	735.20	0.40	735.60	Pool
	38					
28		17 + 78	735.35	0.35	735.70	Top pool
	37					
29		18 + 15	735.90	0.40	736.30	Top riffle
	62					
30		18 + 77	735.40	0.95	736.35	Pool
	91					
31		19 + 68	736.00	0.35	736.35	Pool
	87					
32		20 + 55	736.10	0.70	736.80	Run
	39					
33		20 + 94	736.10	0.80	736.90	Pool
	67					
34		21 + 61	736.00	0.90	736.90	Pool
	57					
35		22 + 18	736.55	0.50	737.05	Top pool
	9					
36		22 + 27	736.85	0.45	737.30	Top riffle
	53					
37		22 + 80	737.05	0.40	737.45	Btm. riffle
	47					
38		23 + 27	737.10	0.65	737.75	Riffle
	85					
39		24 + 12	737.50	0.35	737.85	Riffle
	48					
40		24 + 60	737.50	0.55	738.05	Riffle
	42					
41		25 + 02	737.80	0.45	738.25	
	33					
42		25 + 35	737.35	0.95	738.30	Boulder run
	19					
43		25 + 54	737.85	0.45	738.30	Boulder run
	22					
44		25 + 76	737.35	0.10	738.45	Boulder run
	75					
45		26 + 51	737.90	0.60	738.50	Top run
	63					
46		27 + 14	738.10	0.45	738.55	Pool

Table 4-E-54. (Continued).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
47	31	27 + 45	737.55	1.00	738.55	Pool
48	101	28 + 46	738.05	0.55	738.60	Top pool
49	63	29 + 09	738.55	0.25	738.80	Btm. riffle
50	100	30 + 09	738.60	0.45	739.05	Riffle
51	113	31 + 22	739.30	0.25	739.55	Riffle
52	87	32 + 09	739.45	0.55	740.00	Riffle
53	95	33 + 04	740.20	0.30	740.50	Riffle
54	108	34 + 12	740.85	0.50	741.35	Riffle
55	88	35 + 00	741.60	0.50	742.10	Riffle
56	96	35 + 96	742.10	0.55	742.65	Riffle
57	82	36 + 78	742.25	0.50	742.75	Riffle
58	70	37 + 48	742.00	0.85	742.85	Run
59	90	38 + 38	742.55	0.30	742.85	Run
60	128	39 + 66	742.15	0.75	742.90	Top run
61	80	40 + 46	742.20	0.80	743.00	Pool
62	103	41 + 49	742.65	0.35	743.00	Pool
63	163	43 + 12	742.70	0.30	743.00	Top pool
64	54	43 + 66	742.55	0.70	743.25	Run
65	73	44 + 39	742.75	0.80	743.55	Run
66	63	45 + 02	743.65	0.40	744.05	Run
67	32	45 + 34	743.40	0.75	744.15	Run
68	152	46 + 86	743.05	1.20	744.25	1982/TR-3
69	97	47 + 83	742.00	2.25	744.25	1982/TR-4

Table 4-E-54. (Continued).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
70	141	49 + 24	743.65	0.68	744.35	1982/TR-5
71	60	49 + 84	744.10	0.51	744.60	1982/TR-6
72	89	50 + 73	743.25	1.58	744.80	1982/TR-7
73	95	51 + 68	743.15	-- ^b	-- ^b	1981/TR-13
74	82	52 + 50	743.45	-- ^b	-- ^b	1981/TR-12
75	118	53 + 68	743.85	-- ^b	-- ^b	1981/TR-11
76	126	54 + 94	744.10	-- ^b	-- ^b	1981/TR-10
77	314	58 + 08	744.80	-- ^b	-- ^b	1981/TR-9
78	204	60 + 12	745.55	-- ^b	-- ^b	1981/TR-8
79	214	62 + 26	746.30	-- ^b	-- ^b	1981/TR-7
80	139	63 + 65	747.05	-- ^b	-- ^b	1981/TR-6
81	106	64 + 71	747.75	-- ^b	-- ^b	1981/TR-5
82	206	66 + 77	749.65	-- ^b	-- ^b	1981/TR-4
83	212	68 + 89	748.30	-- ^b	-- ^b	1981/TR-3
84	440	73 + 29	752.10	-- ^b	-- ^b	1981/TR-2
85	297	76 + 26	753.80	-- ^b	-- ^b	1981/TR-1

^aWater surface elevation.

^bEstimated value.

Table 4-E-55. Data (ft) for streambed (thalweg) profile of side-channel of Slough 21, 1982 (see pages E-3, -4 for definitions of terms).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
1		0 + 00	742.70	0.30	743.00	43+12=0+00
	26					
2		0 + 26	741.80	1.20	743.00	-
	73					
3		0 + 99	742.80	0.20	743.00	-
	53					
4		1 + 52	743.80	0.20	744.00	-
	61					
5		2 + 13	743.85	0.55	744.40	-
	112					
6		3 + 25	743.50	0.90	744.40	-
	133					
7		4 + 58	744.50	--	--	- ^b
	179					
8		6 + 37	747.20	--	--	- ^b
	70					
9		7 + 07	747.45	--	--	Head ^b

^aWater surface elevation.

^bNo water present at time of survey.

Table 4-E-56. Data (ft) for streambed (thalweg) profile of right fork of Slough 21, 1982 (see pages E-3, -4 for definitions of terms).

<u>Point</u>	<u>Distance</u>	<u>Station</u>	<u>Thalweg Elevation</u>	<u>Depth</u>	<u>WSE^a</u>	<u>Comments</u>
1		63 + 65	747.05	0.30 ^b	747.35 ^b	1981/TR-6
	50					
2		64 + 15	747.05	0.30 ^b	747.35 ^a	Btm. rt. fork
	124					
3		65 + 39	747.20	0.30 ^b	747.55 ^b	Riffle
	63					
4		66 + 02	748.75	0.30 ^b	749.05 ^b	Riffle
	126					
5		67 + 28	749.50	--	--	Top riffle ^c
	152					
6		68 + 80	748.85	--	--	Pool ^c
	110					
7		69 + 90	750.00	--	--	Top pool ^c
	186					
8		71 + 76	750.85	--	--	No water ^c
	176					
9		73 + 52	752.80	--	--	No water ^c
	224					
10		75 + 76	753.25	--	--	No water ^c
	194					
11		77 + 70	154.05	--	--	No water ^c
	247					
12		80 + 17	755.55	--	--	No water ^c
	179					
13		81 + 96	756.70	--	--	No water ^c
	247					
14		84 + 43	756.85	--	--	Head ^c

^aWater surface elevation.

^bEstimated value.

^cNo water present at time of survey.