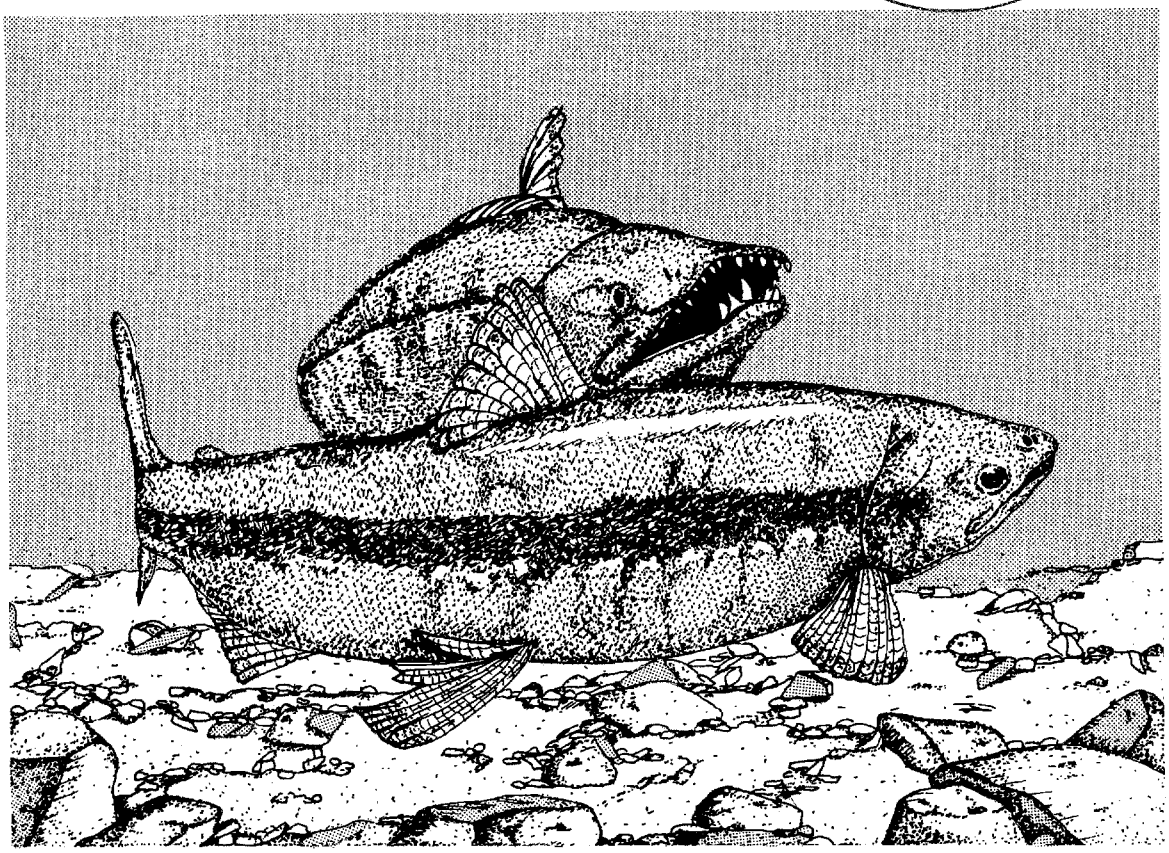


ALASKA
DEPARTMENT OF FISH AND GAME

SUSITNA HYDRO AQUATIC STUDIES
PHASE II BASIC DATA REPORT

Volume 4: Aquatic Habitat and Instream Flow Studies, 1982.

Appendices D - J

-by-

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

APPENDIX D

WATER QUALITY DATA

This appendix is a complete summary of the dissolved gas data (pp. 4-D-2 to 4-D-43); mainstem and designated fish habitat site water quality data (pp. 4-D-44 to 4-D-68); mainstem and slough provisional water quality data (pp. 4-D-69 to 4-D-84); and instantaneous surface and intragravel water temperature and specific conductance data from sloughs 8A, 9, 9B, 11 and 21 (pp. 4-D-85 to 4-D-96). These data were collected during the open-water season in the study area located within the Cook Inlet to Oshetna River reach of the Susitna River. Ice-covered season water quality data are located in Appendix J. A partial listing of the water quality data collected at Designated Fish Habitat sites, included in this appendix, is presented in Appendix I.

Listing of Dissolved Gas Decay Data

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

River Miles Above Mouth	Below D.C.	% Saturation	Discharge	Sat.	Temp.	Date	Year	Time	Barometer
161.3	-10.2	101.08	14.8	751	11.4	6.12	81		733
153.2	-2.1	105.03	14.8	784	11.1	6.12	81		737
151.3	-.2	102.73	14.8	769	11	6.12	81		739
149	2.1	108.72	14.8	815	10.2	6.12	81		741
148.5	2.6	108.31	14.8	812	10.2	6.12	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	-6.5	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	738
149	2.1	110.61	16	824	7.8	9.02	82	1327	738
148.5	2.6	109.12	16	813	7.9	9.02	82	1335	738
147.2	3.9	108.98	16	812	7.8	9.02	82	1348	738
146.5	4.6	108.98	16	812	7.8	9.02	82	1352	738
145.9	5.2	108.58	16	809	7.9	9.02	82	1406	738
144.8	6.3	108.04	16	805	7.9	9.02	82	1418	738
138.2	12.9	106.08	16	791	8.1	9.02	82	1537	738
137.3	13.8	106.21	16	792	8.2	9.02	82	1545	738
136.9	14.2	106.07	16	791	8.2	9.02	82	1550	738
136.3	14.8	105.80	16	789	8.3	9.02	82	1558	738
Gold Creek		100.31	16	748	7.9	9.02	82	1633	738
144.5	6.6	108.17	16	806	7.9	9.02	82	1422	738
143.9	7.2	107.36	16	800	7.9	9.02	82	1428	738
143.2	7.9	106.76	16	796	8.1	9.02	82	1439	738
142.3	8.8	107.22	16	799	8	9.02	82	1447	738
141.8	9.3	107.09	16	798	7.9	9.02	82	1452	738
141	10.1	106.76	16	796	8.1	9.02	82	1503	738
140.6	10.5	106.76	16	796	8.1	9.02	82	1511	738
140.1	11	106.63	16	795	8.1	9.02	82	1513	738
139.7	11.4	106.75	16	796	8.2	9.02	82	1518	738
139.4	11.7	106.19	16	792	8.4	9.02	82	1524	738
138.5	12.6	105.93	16	790	8.2	9.02	82	1534	738
144.5	6.6	111.51	32.5	834	7.8	9.16	82	1347	741
149.6	1.5	113.00	32.5	845	7.8	9.16	82	1245	741
146.8	4.3	111.92	32.5	837	7.6	9.16	82	1320	741
146.5	4.6	111.78	32.5	836	7.6	9.16	82	1328	741
145.5	5.6	111.78	32.5	836	7.8	9.16	82	1338	741
144.8	6.3	111.38	32.5	833	7.8	9.16	82	1345	741
143.2	7.9	110.97	32.5	830	7.8	9.16	82	1401	741
141.8	9.3	110.16	32.5	824	7.7	9.16	82	1421	741
140.5	10.6	109.62	32.5	820	7.7	9.16	82	1429	741
139.7	11.4	109.49	32.5	819	7.7	9.16	82	1443	741
139.4	11.7	109.35	32.5	818	7.7	9.16	82	1447	741
138.2	12.9	109.35	32.5	818	7.7	9.16	82	1501	741
137.4	13.7	108.95	32.5	815	7.7	9.16	82	1507	741
136.3	14.8	108.41	32.5	811	7.7	9.16	82	1517	741
Gold Creek		100.42		751	5.7	9.16	82	1545	741

Table 4-D-2.

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: Saturometer 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 x (S-B)/B

Total Dissolved gas saturation less water vapor = 100 x (S-B-w)/B
(Value reported in this report as Total Dissolved Gas Supersaturation)
Oxygen pressure = (DO x .7 ml/l. / b x 1000ml/l.) x 760 mm Hg.
Oxygen % saturation = Oxygen pressure x 100/B-w x .2095
Nitrogen pressure = 9877 x (S-Oxygen pressure -w)
Nitrogen saturation (N%)=Nitrogen pressure x 100 / ((.78) x (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

Table 4-D-3.

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

ANALYSIS OF RESIDUALS SORTED BY DISTANCE

INDEX	NAME	MEAN	STD.DEV.
1	MILE	9.636	7.552
2	Q	21,983.051	9,150.620
3	CO	7.396	5.737
4	TEMP	8.092	1.004
5	SATI	7.853	2.929
DEP. VAR.:	LNSAT	1.964	0.515

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

DEPENDENT VARIABLE: LNSAT

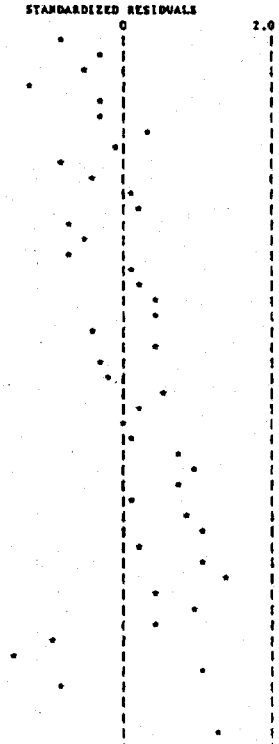
VAR.	REGRESSION COEFFICIENT	STD. ERROR	F(1, 56)	PARTIAL r^2
MILE	-0.0642	0.0034	346.703	0.8609
Q	0.0000	0.0000	109.406	0.6614
CONSTANT:	1.9280			

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		

STANDARDIZED RESIDUALS



	OBSERVED	CALCULATED	RESIDUAL
1	2.105	2.267	-0.162
2	2.251	2.308	-0.057
3	2.219	2.326	-0.106
4	2.565	2.799	-0.234
5	2.175	2.234	-0.059
6	2.219	2.269	-0.050
7	2.814	2.754	0.059
8	2.208	2.237	-0.029
9	2.026	2.187	-0.159
10	2.128	2.202	-0.073
11	2.197	2.181	0.017
12	2.186	2.154	0.032
13	2.477	2.619	-0.143
14	1.953	2.058	-0.105
15	2.460	2.600	-0.140
16	2.608	2.594	0.014
17	2.084	2.052	0.032
18	2.186	2.109	0.077
19	2.140	2.070	0.070
20	2.460	2.536	-0.076
21	2.079	2.000	0.080
22	2.425	2.491	-0.066
23	2.442	2.471	-0.029
24	2.079	1.981	0.099
25	1.988	1.942	0.046
26	2.389	2.388	0.001
27	1.917	1.897	0.020
28	1.974	1.839	0.135
29	1.954	1.776	0.178
30	1.946	1.807	0.139
31	2.313	2.298	0.014
32	1.917	1.756	0.161
33	1.917	1.730	0.187
34	2.262	2.215	0.047
35	1.887	1.698	0.189
36	1.917	1.673	0.244
37	2.241	2.163	0.077
38	1.825	1.653	0.171
39	2.230	2.144	0.086
40	1.421	1.590	-0.170
41	1.324	1.596	-0.272
42	1.792	1.595	0.196
43	2.171	2.335	-0.164
44	1.068	1.526	-0.458
45	1.099	1.532	-0.433
46	1.808	1.576	0.232
47	2.230	2.067	0.163
48	2.186	2.016	0.170
49	1.825	1.518	0.306
50	1.808	1.493	0.315
51	1.160	1.417	-0.257
52	0.963	1.411	-0.447
53	2.123	2.220	-0.096
54	2.116	1.945	0.171
55	1.224	1.472	-0.248
56	1.758	1.454	0.304
57	1.946	1.841	0.105
58	1.185	0.950	0.235
59	-0.511	-0.173	-0.338

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

	MILE	Q	CO	TEMP	SATI	LNSAT
1	1.30	14200.00	0.00	7.30	8.21	2.11
2	1.50	16000.00	10.08	7.70	9.50	2.25
3	1.50	16600.00	10.27	12.00	9.20	2.22
4	1.50	32500.00	13.86	7.80	13.00	2.56
5	2.10	14800.00	0.00	10.23	8.80	2.17
6	2.10	16000.00	10.08	7.80	9.20	2.22
7	2.10	32300.00	0.00	10.60	16.67	2.81
8	2.60	16000.00	10.08	7.90	9.10	2.21
9	2.60	14300.00	0.00	7.10	7.60	2.03
10	2.60	14600.00	0.00	10.20	8.40	2.13
11	2.60	14100.00	0.00	6.90	9.00	2.20
12	3.90	16000.00	10.08	7.80	8.90	2.19
13	4.30	32500.00	13.86	7.60	11.90	2.48
14	4.60	14300.00	0.00	7.20	7.05	1.95
15	4.60	32500.00	13.86	7.60	11.70	2.46
16	4.60	32300.00	0.00	10.60	13.57	2.61
17	4.60	14100.00	0.00	6.90	8.04	2.08
18	4.60	16000.00	10.08	7.80	8.90	2.19
19	5.20	16000.00	10.08	7.90	8.50	2.14
20	5.60	32500.00	13.86	7.80	11.70	2.46
21	6.30	16000.00	10.08	7.90	8.00	2.08
22	6.30	32500.00	13.86	7.80	11.30	2.42
23	6.60	32500.00	13.86	7.80	11.50	2.44
24	6.60	16000.00	10.08	7.90	8.00	2.08
25	7.20	16000.00	10.08	7.90	7.30	1.99
26	7.90	32500.00	13.86	7.80	10.90	2.39
27	7.90	16000.00	10.08	8.10	6.80	1.92
28	8.80	16000.00	10.08	8.00	7.20	1.97
29	8.90	14100.00	0.00	7.10	7.06	1.95
30	9.30	16000.00	10.08	7.90	7.00	1.95
31	9.30	32500.00	13.86	7.70	10.10	2.31
32	10.10	16000.00	10.08	8.10	6.80	1.92
33	10.50	16000.00	10.08	8.10	6.80	1.92
34	10.60	32500.00	13.86	7.70	9.60	2.26
35	11.00	16000.00	10.08	8.10	6.60	1.89
36	11.40	16000.00	10.08	8.20	6.80	1.92
37	11.40	32500.00	13.86	7.70	9.40	2.24
38	11.70	16000.00	10.08	8.40	6.20	1.82
39	11.70	32500.00	13.86	7.70	9.30	2.23
40	11.80	14100.00	0.00	7.60	4.14	1.42
41	11.80	14300.00	0.00	7.10	3.76	1.32
42	12.60	16000.00	10.08	8.20	6.00	1.79
43	12.80	41300.00	0.00	8.00	8.77	2.17
44	12.80	14100.00	0.00	7.60	2.91	1.07
45	12.80	14300.00	0.00	7.10	3.00	1.10
46	12.90	16000.00	10.08	8.10	6.10	1.81
47	12.90	32500.00	13.86	7.70	9.30	2.23
48	13.70	32500.00	13.86	7.70	8.90	2.19
49	13.80	16000.00	10.08	8.20	6.20	1.82
50	14.20	16000.00	10.08	8.20	6.10	1.81
51	14.60	14300.00	0.00	7.30	3.19	1.16
52	14.60	14100.00	0.00	7.70	2.62	0.96
53	14.60	41300.00	0.00	8.00	8.36	2.12
54	14.60	32500.00	13.86	7.70	8.30	2.12
55	14.80	16600.00	10.27	11.00	3.40	1.22
56	14.80	16000.00	10.08	8.30	5.80	1.76
57	20.50	41300.00	0.00	8.00	7.00	1.95
58	31.10	34200.00	0.00	8.30	3.27	1.18
59	48.60	34200.00	0.00	9.00	0.80	-0.51

Table 4-D-3. Cont.

```
          ----- REGRESSION ANALYSIS -----
HEADER DATA FOR: F:DGASMIN   LABEL: DGAS DATA FROM 11.8 TO 48.6
NUMBER OF CASES:  20         NUMBER OF VARIABLES:  6
-------------------------------------------------------------
   LOWER RIVER DATA RESIDUAL ANALYSIS BY LNSAT SORT

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         SAT%        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

                                          STANDARDIZED RESIDUALS
     OBSERVED  CALCULATED   RESIDUAL -2.0                0                 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      1.526     -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     1.808      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  |                 |   *               |

DURBIN-WATSON TEST =   0.8380
```

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

	MILE	Q	CO	TEMP	SAT%	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	12.80	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	16600.00	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	10.06	8.30	5.80	1.76
11	12.60	16000.00	10.08	8.20	6.00	1.79
12	12.90	16000.00	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	12.90	32500.00	13.86	7.70	9.30	2.22

Table 4-D-3. Cont.

```
----- REGRESSION ANALYSIS -----
HEADER DATA FOR: F:OGASSUM   LABEL: FINAL TOTAL DATA FILE
NUMBER OF CASES:  59         NUMBER OF VARIABLES:  6
-----------------------------------------------------------
TOTAL DATA REGRESSION ANALYSIS SORTED BY LNSAT(DEPENDENT)

INDEX      NAME          MEAN        STD.DEV.
 1         MILE         9.636          7.552
 2            Q    21,983.051      9,150.620
 3           CO         7.396          5.737
 4         TEMP         8.092          1.004
 5         SATZ         7.853          2.929
DEP. VAR.: LNSAT        1.964          0.515

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

-----------------------------------------------------------

DEPENDENT VARIABLE: LNSAT

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
```

STANDARDIZED RESIDUALS

	OBSERVED	CALCULATED	RESIDUAL
1	-0.511	-0.173	-0.338
2	0.963	1.411	-0.447
3	1.068	1.526	-0.458
4	1.099	1.532	-0.433
5	1.160	1.417	-0.257
6	1.185	0.950	0.235
7	1.224	1.472	-0.248
8	1.324	1.596	-0.272
9	1.421	1.590	-0.170
10	1.758	1.454	0.304
11	1.792	1.595	0.196
12	1.808	1.493	0.315
13	1.808	1.576	0.232
14	1.825	1.653	0.171
15	1.825	1.518	0.306
16	1.887	1.698	0.189
17	1.917	1.897	0.020
18	1.917	1.756	0.161
19	1.917	1.673	0.244
20	1.917	1.730	0.187
21	1.946	1.807	0.139
22	1.946	1.841	0.105
23	1.953	2.058	-0.105
24	1.954	1.776	0.178
25	1.974	1.839	0.135
26	1.988	1.942	0.046
27	2.028	2.187	-0.159
28	2.079	1.981	0.099
29	2.079	2.000	0.080
30	2.084	2.052	0.032
31	2.105	2.267	-0.162
32	2.116	1.945	0.171
33	2.123	2.220	-0.096
34	2.128	2.202	-0.073
35	2.140	2.070	0.070
36	2.171	2.335	-0.164
37	2.175	2.234	-0.059
38	2.186	2.109	0.077
39	2.186	2.154	0.032
40	2.186	2.016	0.170
41	2.197	2.181	0.017
42	2.208	2.237	-0.029
43	2.219	2.326	-0.106
44	2.219	2.269	-0.050
45	2.230	2.067	0.163
46	2.230	2.144	0.086
47	2.241	2.163	0.077
48	2.251	2.308	-0.057
49	2.262	2.215	0.047
50	2.313	2.298	0.014
51	2.389	2.388	0.001
52	2.425	2.491	-0.066
53	2.442	2.471	-0.029
54	2.460	2.536	-0.076
55	2.460	2.600	-0.140
56	2.477	2.619	-0.143
57	2.565	2.799	-0.234
58	2.608	2.594	0.014
59	2.814	2.754	0.059

DURBIN-WATSON TEST = 0.8348

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

	MILE	Q	CO	TEMP	SATZ	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	12.80	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	16000.00	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	14.20	16000.00	10.08	8.20	6.10	1.81
13	12.90	16000.00	10.08	8.10	6.10	1.81
14	11.70	16000.00	10.08	8.40	6.20	1.82
15	13.80	16000.00	10.08	8.20	6.20	1.82
16	11.00	16000.00	10.08	8.10	6.60	1.89
17	7.90	16000.00	10.08	8.10	6.80	1.92
18	10.10	16000.00	10.08	8.10	6.80	1.92
19	11.40	16000.00	10.08	8.20	6.80	1.92
20	10.50	16000.00	10.08	8.10	6.80	1.92
21	9.30	16000.00	10.08	7.90	7.00	1.95
22	20.50	41300.00	0.00	8.00	7.00	1.95
23	4.60	14300.00	0.00	7.20	7.05	1.95
24	8.90	14100.00	0.00	7.10	7.06	1.95
25	8.80	16000.00	10.08	8.00	7.20	1.97
26	7.20	16000.00	10.08	7.90	7.30	1.99
27	2.60	14300.00	0.00	7.10	7.60	2.03
28	6.60	16000.00	10.08	7.90	8.00	2.08
29	6.30	16000.00	10.08	7.90	8.00	2.08
30	4.60	14100.00	0.00	6.90	8.04	2.08
31	1.30	14200.00	0.00	7.30	8.21	2.11
32	14.80	32500.00	13.86	7.70	8.30	2.12
33	14.60	41300.00	0.00	8.00	8.36	2.12
34	2.60	14800.00	0.00	10.20	8.40	2.13
35	5.20	16000.00	10.08	7.90	8.50	2.14
36	12.80	41300.00	0.00	8.00	8.77	2.17
37	7.10	14800.00	0.00	10.23	8.80	2.17
38	4.60	16000.00	10.08	7.80	8.90	2.19
39	3.90	16000.00	10.08	7.80	8.90	2.19
40	13.70	32500.00	13.86	7.70	8.90	2.19
41	2.60	14100.00	0.00	6.90	9.00	2.20
42	2.60	16000.00	10.08	7.90	9.10	2.21
43	1.50	14600.00	10.27	17.00	9.20	2.22
44	2.10	16000.00	10.08	7.80	9.20	2.22
45	12.90	32500.00	13.86	7.70	9.30	2.23
46	11.70	32500.00	13.86	7.70	9.30	2.23
47	11.40	32500.00	13.86	7.70	9.40	2.24
48	1.50	16000.00	10.08	7.70	9.50	2.25
49	10.60	32500.00	13.86	7.70	9.60	2.26
50	9.30	32500.00	13.86	7.70	10.10	2.31
51	7.90	32500.00	13.86	7.80	10.90	2.39
52	6.30	32500.00	13.86	7.80	11.30	2.42
53	6.60	32500.00	13.86	7.80	11.50	2.44
54	5.60	32500.00	13.86	7.80	11.70	2.46
55	4.60	32500.00	13.86	7.60	11.70	2.46
56	4.30	32500.00	13.86	7.60	11.90	2.48
57	1.50	32500.00	13.86	7.80	13.00	2.56
58	4.60	32300.00	0.00	10.60	13.57	2.61
59	2.10	32300.00	0.00	10.60	16.67	2.81

Table 4-D-3. Cont.

```
          ----- REGRESSION ANALYSIS -----
HEADER DATA FOR: F:DGASHIL   LABEL: GAS DATA FROM MILE 0 TO 11.8
NUMBER OF CASES:  39         NUMBER OF VARIABLES:  6
-----------------------------------------------------------
   RESIDUAL ANALYSIS OF UPPER RIVER SORTED BY LNSAT

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           SAT2        9.118          2.250
DEP. 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     0.8185
   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     246.0647
RESIDUAL            0.1347    36          0.0037
TOTAL               1.9763    38
```

STANDARDIZED RESIDUALS

	OBSERVED	CALCULATED	RESIDUAL
1	1.825	1.849	-0.025
2	1.887	1.875	0.012
3	1.917	1.909	0.008
4	1.917	1.861	0.056
5	1.917	1.894	0.023
6	1.917	1.991	-0.074
7	1.946	1.939	0.007
8	1.953	2.072	-0.119
9	1.954	1.907	0.047
10	1.974	1.957	0.017
11	1.988	2.017	-0.029
12	2.028	2.147	-0.119
13	2.079	2.051	0.029
14	2.079	2.039	0.040
15	2.084	2.068	0.017
16	2.105	2.193	-0.088
17	2.128	2.159	-0.031
18	2.140	2.092	0.049
19	2.175	2.178	-0.003
20	2.186	2.114	0.072
21	2.186	2.140	0.046
22	2.197	2.142	0.055
23	2.208	2.188	0.020
24	2.219	2.244	-0.025
25	2.219	2.207	0.012
26	2.230	2.251	-0.021
27	2.241	2.263	-0.022
28	2.251	2.229	0.022
29	2.262	2.292	-0.031
30	2.313	2.341	-0.028
31	2.389	2.393	-0.004
32	2.425	2.452	-0.028
33	2.442	2.441	0.001
34	2.460	2.516	-0.056
35	2.460	2.479	-0.019
36	2.477	2.527	-0.050
37	2.565	2.631	-0.066
38	2.608	2.511	0.097
39	2.814	2.604	0.210

DURBIN-WATSON TEST = 1.3747

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

	MILE	Q	CO	TEMP	SAT2	LNSAT
1	11.70	16000.00	10.08	8.40	6.70	1.82
2	11.00	16000.00	10.08	8.10	6.60	1.89
3	10.10	16000.00	10.08	8.10	6.80	1.92
4	11.40	16000.00	10.08	8.70	6.80	1.92
5	10.50	16000.00	10.08	8.10	6.80	1.92
6	7.90	16000.00	10.08	8.10	6.80	1.92
7	9.30	16000.00	10.08	7.90	7.00	1.95
8	4.60	14300.00	0.00	7.20	7.05	1.95
9	8.90	14100.00	0.00	7.10	7.06	1.95
10	8.80	16000.00	10.08	8.00	7.20	1.97
11	7.20	16000.00	10.08	7.90	7.30	1.99
12	2.60	14300.00	0.00	7.10	7.60	2.03
13	6.30	16000.00	10.08	7.90	8.00	2.08
14	6.60	16000.00	10.08	7.90	8.00	2.08
15	4.60	14100.00	0.00	6.90	8.04	2.08
16	1.30	14200.00	0.00	7.30	8.21	2.11
17	2.60	14800.00	0.00	10.20	8.40	2.13
18	5.20	16000.00	10.08	7.90	8.50	2.14
19	2.10	14800.00	0.00	10.23	8.80	2.17
20	4.60	16000.00	10.08	7.80	8.90	2.19
21	3.90	16000.00	10.08	7.80	8.90	2.19
22	2.60	14100.00	0.00	6.90	9.00	2.20
23	2.60	16000.00	10.08	7.90	9.10	2.21
24	1.50	16600.00	10.27	12.00	9.20	2.22
25	2.10	16000.00	10.08	7.80	9.20	2.22
26	11.70	32500.00	13.86	7.70	9.30	2.23
27	11.40	32500.00	13.86	7.70	9.40	2.24
28	1.50	16000.00	10.08	7.70	9.50	2.25
29	10.60	32500.00	13.86	7.70	9.60	2.26
30	9.30	32500.00	13.86	7.70	10.10	2.31
31	7.90	32500.00	13.86	7.80	10.90	2.39
32	6.30	32500.00	13.86	7.80	11.30	2.42
33	6.60	32500.00	13.86	7.80	11.50	2.44
34	4.60	32500.00	13.86	7.60	11.70	2.46
35	5.60	32500.00	13.86	7.80	11.70	2.46
36	4.30	32500.00	13.86	7.60	11.90	2.46
37	1.50	32500.00	13.86	7.80	13.00	2.56
38	4.60	32300.00	0.00	10.60	13.57	2.61
39	2.10	32300.00	0.00	10.60	16.67	2.81

Table 4-D-3. Cont.

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

HEADER DATA FOR: F:DGASMIN 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	SATI	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			

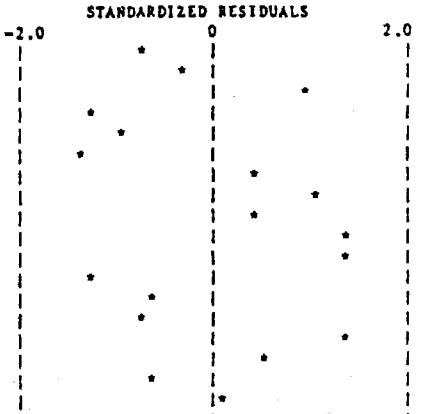
STD. ERROR OF EST. = 0.2849
R SQUARED = 0.8242
MULTIPLE R = 0.9079

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		

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

STANDARDIZED RESIDUALS



DURBIN-WATSON TEST = 1.6759

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

	MILE	Q	CO	TEMP	SATI	LNSAT
1	11.80	14300.00	0.00	7.10	3.76	1.32
2	11.80	14100.00	0.00	7.60	4.14	1.42
3	12.60	16000.00	10.08	8.20	6.00	1.79
4	12.80	14300.00	0.00	7.10	3.00	1.10
5	12.80	41300.00	0.00	8.00	8.77	2.17
6	12.80	14100.00	0.00	7.60	2.91	1.07
7	12.90	32500.00	13.86	7.70	9.30	2.23
8	12.90	16000.00	10.08	8.10	6.10	1.81
9	13.70	32500.00	13.86	7.70	8.90	2.19
10	13.80	16000.00	10.08	8.20	6.20	1.82
11	14.20	16000.00	10.08	8.20	6.10	1.81
12	14.60	14100.00	0.00	7.70	2.62	0.96
13	14.60	14300.00	0.00	7.30	3.19	1.16
14	14.60	41300.00	0.00	8.00	8.36	2.12
15	14.80	16000.00	10.08	8.30	5.80	1.76
16	14.80	32500.00	13.86	7.70	8.30	2.12
17	14.80	16600.00	10.27	11.00	3.40	1.22
18	20.50	41300.00	0.00	8.00	7.00	1.95
19	31.10	34200.00	0.00	8.30	3.27	1.18
20	48.60	34200.00	0.00	9.00	0.60	-0.51

Table 4-D-3. Cont.

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

INDEX        NAME          MEAN          STD.DEV.
 1           MILE         8.636           7.552
 2              Q     21,983.051       9,150.670
 3             CO         7.396           5.737
 4           TEMP         8.092           1.004
 5           SATI         7.853           2.929
DEP. VAR.: LNSAT          1.964           0.515

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

-----------------------------------------------------------

DEPENDENT VARIABLE: LNSAT

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
```

STANDARDIZED RESIDUALS

	OBSERVED	CALCULATED	RESIDUAL	-2.0 … 0 … 2.0
1	1.068	1.526	-0.458	*<
2	0.963	1.411	-0.447	*<
3	2.084	2.052	0.032	
4	2.197	2.181	0.017	
5	1.421	1.590	-0.170	
6	1.954	1.776	0.178	
7	2.105	2.267	-0.162	
8	1.953	2.058	-0.105	
9	1.099	1.532	-0.433	*<
10	2.028	2.187	-0.159	
11	1.324	1.596	-0.272	
12	1.160	1.417	-0.257	
13	2.128	2.202	-0.073	
14	2.175	2.234	-0.059	
15	1.917	1.730	0.187	
16	1.917	1.673	0.244	
17	2.219	2.269	-0.050	
18	1.917	1.756	0.161	
19	2.186	2.109	0.077	
20	1.825	1.518	0.306	
21	2.079	2.000	0.080	
22	1.792	1.595	0.196	
23	2.251	2.308	-0.057	
24	2.079	1.981	0.099	
25	1.988	1.942	0.046	
26	2.140	2.070	0.070	
27	1.917	1.897	0.020	
28	1.974	1.839	0.135	
29	2.208	2.237	-0.029	
30	1.946	1.807	0.139	
31	1.825	1.653	0.171	
32	1.808	1.576	0.232	
33	1.808	1.493	0.315	
34	2.186	2.154	0.032	
35	1.887	1.698	0.189	
36	1.758	1.454	0.304	
37	1.224	1.472	-0.248	
38	2.219	2.326	-0.106	
39	2.814	2.754	0.059	
40	2.608	2.594	0.014	
41	2.241	2.163	0.077	
42	2.262	2.215	0.047	
43	2.565	2.799	-0.234	
44	2.460	2.600	-0.140	
45	2.313	2.298	0.014	
46	2.230	2.144	0.086	
47	2.230	2.067	0.163	
48	2.186	2.016	0.170	
49	2.460	2.536	-0.076	
50	2.477	2.619	-0.143	
51	2.425	2.491	-0.066	
52	2.442	2.471	-0.029	
53	2.116	1.945	0.171	
54	2.389	2.388	0.001	
55	-0.511	-0.173	-0.338	
56	1.185	0.950	0.235	
57	2.171	2.335	-0.164	
58	1.946	1.841	0.105	
59	2.123	2.220	-0.096	

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

	MILE	Q	CO	TEMP	SATI	LNSAT
1	12.80	14100.00	0.00	7.60	2.91	1.07
2	14.60	14100.00	0.00	7.70	2.62	0.96
3	4.60	14100.00	0.00	6.90	8.04	2.08
4	2.60	14100.00	0.00	6.90	9.00	2.20
5	11.80	14100.00	0.00	7.60	4.14	1.42
6	8.90	14100.00	0.00	7.10	7.06	1.95
7	1.30	14200.00	0.00	7.30	8.23	2.11
8	4.60	14300.00	0.00	7.20	7.05	1.95
9	12.80	14300.00	0.00	7.10	3.00	1.10
10	2.60	14300.00	0.00	7.10	7.60	2.03
11	11.80	14300.00	0.00	7.10	3.76	1.32
12	14.60	14300.00	0.00	7.30	3.19	1.16
13	2.60	14800.00	0.00	10.20	6.40	2.13
14	2.10	14800.00	0.00	10.23	8.80	2.17
15	10.50	16000.00	10.08	8.10	6.80	1.92
16	11.40	16000.00	10.08	6.20	6.80	1.92
17	2.10	16000.00	10.08	7.80	9.20	2.22
18	10.10	16000.00	10.08	8.10	6.80	1.92
19	4.60	16000.00	10.08	7.80	8.90	2.19
20	13.80	16000.00	10.08	8.20	6.20	1.82
21	6.30	16000.00	10.08	7.90	8.00	2.08
22	12.60	16000.00	10.08	8.20	6.00	1.79
23	1.50	16000.00	10.08	7.70	9.50	2.25
24	6.60	16000.00	10.08	7.90	8.00	2.08
25	7.20	16000.00	10.08	7.90	7.30	1.99
26	5.20	16000.00	10.08	7.90	8.50	2.14
27	7.90	16000.00	10.08	8.10	6.80	1.92
28	8.80	16000.00	10.08	8.00	7.20	1.97
29	2.60	16000.00	10.08	7.90	9.10	2.21
30	9.30	16000.00	10.08	7.90	7.00	1.95
31	11.30	16000.00	10.08	8.40	6.20	1.82
32	12.90	16000.00	10.08	8.10	6.10	1.81
33	14.20	16000.00	10.08	8.20	6.10	1.81
34	3.90	16000.00	10.08	7.80	8.90	2.19
35	11.00	16000.00	10.08	8.10	6.60	1.89
36	14.80	16000.00	10.08	8.30	5.80	1.76
37	14.80	16600.00	10.27	11.00	3.40	1.22
38	1.50	16600.00	10.27	12.00	9.20	2.22
39	2.10	32300.00	0.00	10.60	16.67	2.81
40	4.60	32300.00	0.00	10.60	13.57	2.61
41	11.40	32500.00	13.86	7.70	9.40	2.24
42	10.60	32500.00	13.86	7.70	9.60	2.26
43	1.50	32500.00	13.86	7.80	13.00	2.56
44	4.60	32500.00	13.86	7.60	11.70	2.46
45	9.30	32500.00	13.86	7.70	10.10	2.31
46	11.70	32500.00	13.86	7.70	9.30	2.23
47	12.90	32500.00	13.86	7.70	9.30	2.23
48	13.70	32500.00	13.86	7.70	8.90	2.19
49	5.60	32500.00	13.86	7.80	11.70	2.46
50	4.30	32500.00	13.86	7.60	11.90	2.48
51	6.30	32500.00	13.86	7.80	11.30	2.42
52	6.60	32500.00	13.86	7.80	11.50	2.44
53	14.80	32500.00	13.86	7.70	8.30	2.12
54	7.90	32500.00	13.86	7.80	10.90	2.39
55	48.60	34200.00	0.00	9.00	0.60	-0.51
56	31.10	34200.00	0.00	8.30	3.27	1.18
57	12.80	41300.00	0.00	8.00	6.77	2.17
58	20.50	41300.00	0.00	8.00	7.00	1.95
59	14.60	41300.00	0.00	8.00	8.36	2.12

Table 4-D-3. Cont.

```
                    ----- REGRESSION ANALYSIS -----
HEADER DATA FOR: F:DGASMIL   LABEL: GAS DATA FROM MILE 0 TO 11.8
NUMBER OF CASES:  39          NUMBER OF VARIABLES:  6
-----------------------------------------------------------------
            (GAS REGRESSION TO RIVER MILE 11.8
```

INDEX	NAME	MEAN	STD.DEV.
1	MILE	6.103	3.427
2	Q	21,164.103	6,125.930
3	CO	6.566	5.341
4	TEMP	8.119	1.092
5	SATI	9.118	2.250
DEP. 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		

STANDARDIZED RESIDUALS

	OBSERVED	CALCULATED	RESIDUAL	-2.0 … 0 … 2.0
1	2.105	2.193	-0.088	
2	2.219	2.244	-0.025	
3	2.251	2.229	0.022	
4	2.565	2.631	-0.066	
5	2.219	2.207	0.012	
6	2.814	2.604	0.210	
7	2.175	2.178	-0.003	
8	2.208	2.188	0.020	
9	2.028	2.147	-0.119	
10	2.197	2.142	0.055	
11	2.128	2.159	-0.031	
12	2.186	2.140	0.046	
13	2.477	2.527	-0.050	
14	2.084	2.068	0.017	
15	1.953	2.072	-0.119	
16	2.608	2.511	0.097	
17	2.460	2.516	-0.056	
18	2.186	2.114	0.072	
19	2.140	2.092	0.049	
20	2.460	2.479	-0.019	
21	2.079	2.051	0.029	
22	2.425	2.452	-0.028	
23	2.442	2.441	0.001	
24	2.079	2.039	0.040	
25	1.988	2.017	-0.029	
26	1.917	1.991	-0.074	
27	2.389	2.393	-0.004	
28	1.974	1.957	0.017	
29	1.954	1.907	0.047	
30	1.946	1.939	0.007	
31	2.313	2.341	-0.028	
32	1.917	1.909	0.008	
33	1.917	1.894	0.023	
34	2.262	2.292	-0.031	
35	1.887	1.875	0.012	
36	1.917	1.861	0.056	
37	2.241	2.263	-0.022	
38	1.925	1.849	-0.025	
39	2.230	2.251	-0.021	

DURBIN-WATSON TEST = 2.4488

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

	MILE	Q	CO	TEMP	SATI	LNSAT
1	1.30	14200.00	0.00	7.30	8.21	2.11
2	1.50	16600.00	10.27	12.00	9.20	2.22
3	1.50	16000.00	10.08	7.70	9.50	2.25
4	1.50	32500.00	13.86	7.80	13.00	2.56
5	2.10	16000.00	10.08	7.80	9.20	2.22
6	2.10	32300.00	0.00	10.60	16.67	2.81
7	2.10	14800.00	0.00	10.23	8.80	2.17
8	2.60	16000.00	10.08	7.90	9.10	2.21
9	2.60	14300.00	0.08	7.10	7.60	2.03
10	2.60	14100.00	0.00	6.90	9.00	2.20
11	2.60	14800.00	0.00	10.10	8.40	2.13
12	3.90	16000.00	10.08	7.80	8.90	2.19
13	4.30	32500.00	13.86	7.60	11.90	2.48
14	4.60	14100.00	0.00	6.90	8.04	2.08
15	4.60	14300.00	0.00	7.20	7.05	1.95
16	4.60	32300.00	0.00	10.60	13.57	2.61
17	4.60	32500.00	13.86	7.60	11.70	2.46
18	4.60	16000.00	10.08	7.80	8.90	2.19
19	5.20	16000.00	10.08	7.90	8.50	2.14
20	5.60	32500.00	13.86	7.80	11.70	2.46
21	6.30	16000.00	10.08	7.90	8.00	2.08
22	6.30	32500.00	13.86	7.80	11.30	2.42
23	6.60	32500.00	13.86	7.80	11.50	2.44
24	6.60	16000.00	10.08	7.90	8.00	2.08
25	7.20	16000.00	10.08	7.90	7.30	1.99
26	7.90	16000.00	10.08	8.10	6.80	1.92
27	7.90	32500.00	13.86	7.80	10.90	2.39
28	8.80	16000.00	10.08	8.00	7.20	1.97
29	8.90	14100.00	0.00	7.10	7.06	1.95
30	9.30	16000.00	10.08	7.90	7.00	1.95
31	9.30	32500.00	13.86	7.70	10.10	2.31
32	10.10	16000.00	10.08	8.10	6.80	1.92
33	10.50	16000.00	10.08	8.10	6.80	1.92
34	10.60	32500.00	13.86	7.70	9.60	2.26
35	11.00	16000.00	10.08	8.10	6.60	1.89
36	11.40	16000.00	10.08	8.20	6.80	1.92
37	11.40	32500.00	13.86	7.70	9.40	2.24
38	11.70	16000.00	10.08	8.40	6.20	1.82
39	11.70	32500.00	13.86	7.70	9.30	2.23

Table 4-D-4.

Dissolved Gas Data-Continous Record
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 8/8/82
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

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat Date 8/9/82
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	738	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 8/10/82
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

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat Date 8/11/82
108.77	15587	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
108.7	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 8/12/82
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

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat Date 8/13/82
107.62	13409	741	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 8/14/82
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

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat Date 8/15/82
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 8/16/82
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

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat Date 8/17/82
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 8/18/82
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

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat Date 8/19/82
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 8/20/82
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

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat Date 8/21/82
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 8/22/82
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

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat Date 8/23/82
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 8/24/82
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

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat Date 8/25/82
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	13733	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 8/26/82
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	13969	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
108.19	13780	735	11	806
107.86	13687	736	11	804
107.86	13547	736	11	804
107.86	13455	736	11	804

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat Date 8/27/82
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 8/28/82
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

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat Date 8/29/82
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 8/30/82
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

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat	Date 8/31/82
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	

Table 4-D-4. Cont.

% 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	
108.90	16414	738	8	814	
108.90	16205	738	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	

Table 4-D-4. Cont.

% 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	

Table 4-D-4. Cont.

% 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	11548	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	

Table 4-D-4. Cont.

% 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	

Table 4-D-4. Cont.

% 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	

Table 4-D-4. Cont.

% 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	

Table 4-D-4. Cont.

% 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	8.5	834	
112.7	31037	731	8.5	834	
112.64	30246	731	8.5	834	
112.73	30403	730	9	834	
112.85	30561	730	9	834	
112.7	30561	729	9	832	
112.7	30561	729	9	832	

Table 4-D-4. Cont.

% 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	

Table 4-D-4. Cont.

% 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	
112.09	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	

Table 4-D-4. Cont.

% 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	

Table 4-D-4. Cont.

% 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	18680	743	5.5	818	

Table 4-D-4. Cont.

% 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	

Table 4-D-4. Cont.

% Sat	Q	Bar	Temp	Sat	Date 9/26/82
107.94	14398	733	5	802	
107.94	14350	733	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	

Table 4-D-4. Cont.

% 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	

Table 4-D-4. Cont.

% 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	

Table 4-D-4. Cont.

% 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	

Table 4-D-4. Cont.

% 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	

Table 4-D-4. Cont.

% 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	9088.	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	

Table 4-D-4. Cont.

% 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	
105.80	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	778	
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	
105.42	8701.	730	.5	780	
105.42	8701.	730	.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	

Table 4-D-4. Cont.

% 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	

Table 4-D-5 Water Quality Summary Table.

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
							MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS						
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	--
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	--
							DESIGNATED FISH HABITAT SITES						
73.1	Lower Goose 2 Slough		S23N04W30BBB	820830	1620	--	--	8.7	--	--	--	50	--
73.1	Lower Goose 2 Slough		S23N04W30BBB	820915	1330	--	--	7.3	--	--	--	90	--

Table 4-D-5 (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								
73.1	Lower Goose Creek 2		S23N09W30BBB	820830	1400	--	8.4	8.4	--	--	--	34	--
73.1	Lower Goose Creek 2		S23N09W30BBB	820915	1330	15.0	7.2	7.3	--	--	--	28	--
73.1	Lower Goose Creek 2		S23N09W30BBB	821001	1030	4.6	3.8	3.7	--	--	--	40	--
73.1	Lower Goose 2 Slough Upper Q Station		S23N09W30BBB	821001	1305	5.0	5.2	5.3	--	--	--	204	--
73.1	Goose Creek 2 Slough	1	S23N04W30BBB	820610	1330	12.6	5.8	--	--	--	--	--	3
73.1	Goose Creek 2 Slough	7	S23N04W30BBB	820610	1330	12.6	7.0	--	--	--	--	--	45
73.1	Goose Creek 2 Slough	4	S23N04W30BBB	820610	1345	12.6	8.0	--	--	--	--	--	49
73.1	Goose Creek 2 Slough	1	S23N04W30BBB	820625	1420	22.9	--	10.4	11.0	98	7.1	27	6
73.1	Goose Creek 2 Slough	6	S23N04W30BBB	820625	1440	22.9	--	12.8	10.3	97	7.4	80	88
73.1	Goose Creek 2 Slough	7	S23N04W30BBB	820625	1435	22.9	--	12.3	10.7	100	7.3	73	95
73.1	Goose Creek 2 Slough	1	S23N04W30BBB	820713	1520	--	--	11.6	10.6	97	6.8	32	14
73.1	Goose Creek 2 Slough	6	S23N04W30BBB	820713	1320	22.7	--	11.3	10.6	96	7.6	107	110
73.1	Goose Creek 2 Slough	7	S23N04W30BBB	820713	1355	--	--	11.1	10.6	95	7.7	107	100
73.1	Goose Creek 2 Slough	1	S23N04W30BBB	820728	1255	19.2	--	9.5	--	--	--	28	18
73.1	Goose Creek 2 Slough	4	S23N04W30BBB	820728	1320	19.2	--	10.2	--	--	--	86	110
73.1	Goose Creek 2 Slough	7	S23N04W30BBB	820728	1315	19.2	--	10.2	--	--	--	76	120
73.1	Goose Creek 2 Slough	1	S23N04W30BBB	820811	1420	21.6	--	10.4	10.6	95	7.4	31	1
73.1	Goose Creek 2 Slough	6	S23N04W30BBB	820811	1210	21.6	--	9.7	11.2	98	7.6	111	85
73.1	Goose Creek 2 Slough	7	S23N04W30BBB	820811	1600	21.6	--	11.7	10.7	105	7.4	38	11
73.1	Goose Creek 2 Slough	1	S23N04W30BBB	820825	1340	15.2	--	9.8	--	--	--	31	6
73.1	Goose Creek 2 Slough	7	S23N04W30BBB	820825	1400	15.2	--	10.1	--	--	--	33	5
73.1	Goose Creek 2 Slough	3	S23N04W30BBB	820825	1420	15.3	--	9.9	--	--	--	91	14
73.1	Goose Creek 2 Slough	6	S23N04W30BBB	820825	1600	15.0	--	10.5	8.7	78	6.7	113	98
73.1	Goose Creek 2 Slough	1	S23N04W30BBB	820913	1315	8.4	--	6.2	--	--	--	--	4
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
					MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS								
77.0	Susitna River		S23N04W06ADD	821014	1130	-1.1	--	0.2	--	--	7.6	126	--
77.4	Susitna River		S23N04W06CBB	821014	1130	-1.2	--	0.4	--	--	7.6	131	--
					DESIGNATED FISH HABITAT SITES								
78.7	Whitefish Slough Q Site Main Tributary		S23N05W01BBC	820916	1020	10.2	9.2	9.3	--	--	--	14	--

Table 4-D-5 (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								
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	820629	1329	21.7	--	15.5	9.1	91	7.4	82	85
83.1	Rabideux Creek Slough	1	S24N05W16AAC	820726	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	--	4
83.1	Rabideux Creek Slough	7	S24N05W16AAC	820729	1600	--	--	13.0	9.1	85	6.4	--	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	1	S24N05W16AAC	820929	1740	--	--	6.0	11.1	89	6.3	29	7
83.1	Rabideux Creek Slough	2	S24N05W16AAC	820929	1630	--	--	6.1	10.6	85	5.8	29	3
83.1	Rabideux Creek Slough	3	S24N05W16AAC	820929	1645	--	--	5.1	11.8	92	6.5	96	41
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

Table 4-D-5 (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								
85.7	Sunshine Creek Side Ch.	3	S24N05W14BAB	820609	1645	16.0	--	7.2	--	--	--	--	37
85.7	Sunshine Creek Side Ch.	1	S24N05W14BAB	820624	1520	--	--	16.2	9.7	99	6.7	50	1
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	3
85.7	Sunshine Creek Side Ch.	4	S24N05W14BAB	820712	1720	21.3	--	11.3	10.6	97	7.1	93	100
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	--	--	--	--	3
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	10.7	95	7.2	81	--
85.7	Sunshine Creek Side Ch.	1	S24N05W14BAB	820824	1324	14.0	--	12.8	10.7	101	--	55	--
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.	9	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	138	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
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	--
					MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS								
85.7	Sunshine Slough		S24N05W14AAB	820525	--	--	--	6.4	11.4	92	7.1	54	--
					DESIGNATED FISH HABITAT SITES								
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

Table 4-D-5 (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								
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	32
88.4	Birch Creek Slough	9	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
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	--	11.9	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	--
					MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS								
89.2	Birch Creek Mouth		S25N05W25DCC	820624	--	--	--	15.3	10.0	99	6.8	50	--
91.5	Trapper Creek Mouth		S25N05W15DBA	820605	--	--	--	10.0	--	--	--	--	--
					DESIGNATED FISH HABITAT SITES								
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

Table 4-D-5 (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	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	3
101.2	Whiskers Creek Slough	4	S26N05W03ADB	820604	1250	--	--	7.2	13.3	108	7.2	60	36
101.2	Whiskers Creek Slough	2	S26N05W03ADB	820604	1215	--	--	8.6	12.2	104	6.2	28	2
101.2	Whiskers Creek Slough	7	S26N05W03ADB	820604	1200	13.5	--	8.6	13.0	110	6.7	44	13
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	30	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
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	--	1
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 Q Station		S26N05W03AAC	820816	1630	--	9.8	9.8	8.3	72	6.3	79	--
101.2	Whiskers Creek Slough Q Station		S26N05W03AAC	820903	1730	--	--	8.2	--	--	6.3	89	--
101.2	Whiskers Creek Slough		S26N05W03AAC	820920	1530	--	--	6.7	--	--	--	88	--

Table 4-D-5 (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		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	87.0	--
101.2	Transect 4		S26N05W03ADB	821002	1130	--	--	4.1	12.0	91	6.3	27.0	--
					DOWNSTREAM MIGRANT STUDY								
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

Table 4-D-5 (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
					DOWNSTREAM MIGRANT STUDY								
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
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
					DESIGNATED FISH HABITAT SITES								
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	135	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	--	--	--	--	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	

Table 4-D-5 (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								
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
113.6	Lane Creek Slough	7	S28N05W12ADD	820607	1430	14.0	--	4.6	14.5	112	7.1	26	1
113.6	Lane Creek Slough	3	S28N05W12ADD	820607	1425	14.0	--	5.7	14.1	110	7.1	59	16
113.6	Lane Creek Slough	0	S28N05W12ADD	820619	1500	--	--	16.2	8.3	85	6.7	48	2
113.6	Lane Creek Slough	1	S28N05W12ADD	820619	1600	--	--	8.9	10.8	93	7.3	51	1
113.6	Lane Creek Slough	2	S28N05W12ADD	820619	1435	20.5	--	11.0	9.0	--	6.9	58	1
113.6	Lane Creek Slough	9	S28N05W12ADD	820708	1225	21.5	--	7.0	9.0	74	6.1	62	3
113.6	Lane Creek Slough	2	S28N05W12ADD	820708	1210	21.5	--	9.5	10.3	91	6.7	57	2
113.6	Lane Creek Slough	3	S28N05W12ADD	820708	1200	21.5	--	11.8	10.1	94	6.8	76	73
113.6	Lane Creek Slough	9	S28N05W12ADD	820722	1125	15.6	--	5.8	9.3	74	6.6	70	2
113.6	Lane Creek Slough	1	S28N05W12ADD	820722	1120	15.6	--	7.8	12.6	105	6.9	50	6
113.6	Lane Creek Slough	2	S28N05W12ADD	820722	1105	15.6	--	7.6	12.3	102	6.6	53	3
113.6	Lane Creek Slough	3	S28N05W12ADD	820722	1115	15.6	--	10.5	11.6	104	6.7	83	170
113.6	Lane Creek Slough	1	S28N05W12ADD	820808	--	--	--	--	--	--	--	--	1
113.6	Lane Creek Slough	2	S28N05W12ADD	820808	--	--	--	--	--	--	--	--	1
113.6	Lane Creek Slough	3	S28N05W12ADD	820808	--	--	--	--	--	--	--	--	110
113.6	Lane Creek Slough	1	S28N05W12ADD	820820	1345	22.2	--	8.3	11.9	100	6.6	50	1
113.6	Lane Creek Slough	9	S28N05W12ADD	820820	1130	23.0	--	8.9	6.8	59	6.2	86	1
113.6	Lane Creek Slough	3	S28N05W12ADD	820820	1345	22.2	--	10.3	11.0	98	6.8	90	--
113.6	Lane Creek Slough	1	S28N05W12ADD	820910	1700	14.0	--	7.3	14.0	105	7.8	52	2
113.6	Lane Creek Slough	2	S28N05W12ADD	820910	1710	14.0	--	7.0	11.8	97	7.1	68	2
113.6	Lane Creek Slough	3	S28N05W12ADD	820910	1650	14.0	--	8.0	13.1	110	7.8	93	61
113.6	Lane Creek Slough	0	S28N05W12ADD	820910	1720	14.0	--	7.1	10.4	86	6.7	74	1
113.6	Lane Creek Slough	9	S28N05W12ADD	820910	1720	14.0	--	7.1	10.4	86	6.7	74	1
113.6	Lane Creek Slough	9	S28N05W12ADD	820925	1250	9.8	--	5.2	8.6	68	6.5	55	--
113.6	Lane Creek Slough	1	S28N05W12ADD	820925	1200	9.2	--	4.0	12.5	95	6.8	50	--
113.6	Lane Creek Slough	3	S28N05W12ADD	820925	1155	9.2	--	4.1	12.2	93	6.7	82	--
113.6	Lane Creek Slough	0	S28N05W12ADD	820925	1435	--	--	5.3	9.7	76	6.4	47	--
113.6	Lane Creek Q Station		S28N05W12ADD	820817	1440	--	7.5	7.5	12.0	100	7.2	61	--
113.6	Lane Creek Slough Q Station		S28N05W12ADD	820903	1510	--	6.8	6.8	--	--	--	67	--
113.6	Lane Creek Slough Q Station		S28N05W12ADD	820917	1517	--	7.3	7.2	10.3	85	5.7	67	--
113.6	Lane Creek Slough Q Station		S28N05W12ADD	820920	1420	--	7.2	6.7	--	--	--	38	--
					ADULT ANADROMOUS FISH INVESTIGATIONS								
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	--

Table 4-D-5 (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
					ADULT ANADROMOUS FISH INVESTIGATIONS								
113.6	Lane Creek Slough		S28N04W07BCB3	821002									
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	--
					MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS								
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	--
					DESIGNATED FISH HABITAT SITES								
120.7	Mainstem Curry	3	S29N04W10BCD	820608	1515	--	--	--	--	--	--	--	29
120.7	Mainstem Curry	8	S29N04W10BCD	820623	1530	--	--	11.2	11.1	101	7.5	79	16
120.7	Mainstem Curry	3	S29N04W10BCD	820623	1545	--	--	11.8	11.5	106	7.7	77	12
120.7	Mainstem Curry	8	S29N04W10BCD	820707	1115	21.8	--	13.4	9.8	94	6.5	114	140
120.7	Mainstem Curry	3	S29N04W10BCD	820707	1125	--	--	13.1	10.1	95	7.2	113	150
120.7	Mainstem Curry	4	S29N04W10BCD	820728	1830	16.2	--	12.1	8.5	79	7.5	112	22
120.7	Mainstem Curry	3	S29N04W10BCD	820728	1830	16.2	--	12.3	9.0	84	7.6	113	35
					ADULT ANADROMOUS FISH INVESTIGATIONS								
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	--
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	102	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	--

Table 4-D-5 (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
							ADULT ANADROMOUS FISH INVESTIGATIONS						
125.2	Slough 8A		S30N03W20DCC										
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	--	--	--	--	150
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
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	--	81
							MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS						
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	--

Table 4-D-5 (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						
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	--	28
129.2	Slough 9	3	S30N03W16BDC	820923	1145	--	--	5.4	11.6	92	7.0	--	28
							ADULT ANADROMOUS FISH INVESTIGATIONS						
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	--
129.2	Transect 6		S30N03W16BDC	820918	1805	--	--	6.0	--	--	--	117	--
129.2	Transect 7		S30N03W16BDC	820820	1620	--	--	8.7	8.2	71	6.7	158	--
129.2	Transect 7		S30N03W16BDC	820905	1828	--	--	4.0	8.9	68	6.6	175	--
129.2	Transect 7		S30N03W16BDC	820918	1805	--	--	3.5	--	--	--	183	--
129.2	Transect 8		S30N03W16BDC	820820	1635	--	--	11.8	9.5	87	6.8	127	--
129.2	Transect 9		S30N03W16BDC	820820	1645	--	--	11.3	8.9	81	6.9	117	--
129.2	Transect 9		S30N03W16BDC	820905	1651	--	--	8.2	10.3	87	6.8	106	--
129.2	Transect 9		S30N03W16BDC	820918	1758	--	--	6.1	--	--	--	112	--
129.2	Transect 10		S30N03W16BDC	820905	1550	--	--	8.2	10.0	85	6.7	110	--
129.2	Transect 10		S30N03W16BDC	820918	1752	--	--	6.1	--	--	--	113	--

Table 4-D-5 (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
						ADULT ANADROMOUS FISH INVESTIGATIONS							
129.2	Slough 9		S30N03W16BDC										
129.2	Transect 11		S30N03W16BDC	820820	1705	--	--	9.6	7.5	66	6.6	149	--
129.2	Transect 11		S30N03W16BDC	820905	1246	--	--	8.4	11.0	93	7.0	173	--
129.2	Transect 11		S30N03W16BDC	820918	1734	--	--	6.1	11.1	89	7.2	117	--
129.2	Transect 12		S30N03W16BDC	820905	1336	--	--	8.5	10.2	87	6.8	150	--
129.2	Transect 12		S30N03W16BDC	820918	1740	--	--	6.1	--	--	--	126	--
129.2	Transect 13		S30N03W16BDC	820918	1705	--	--	6.2	9.8	79	7.0	128	--
129.2	Transect A		S30N03W16BDC	820820	1555	--	--	8.3	9.2	78	6.9	90	--
129.2	Transect A		S30N03W16BDC	820918	1920	--	--	5.9	--	--	--	53	--
129.2	Transect B		S30N03W16BDC	820820	1825	--	--	10.8	8.6	78	6.7	172	--
129.2	Transect C		S30N03W16BDC	820905	1119	12.7	--	5.5	9.0	71	6.6	169	--
129.2	Transect C		S30N03W16BDC	820918	1700	9.6	--	5.6	7.3	58	6.4	150	--
129.2	Slough 9B, Transect C		S30N03W09DCC1	821004	1500	--	--	3.3	9.2	69	6.6	163	--
						MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS							
129.8	Susitna River		S30N03W09DAB	820914	1600	7.6	--	7.2	6.4	53	7.4	113	--
						DESIGNATED FISH HABITAT SITES							
131.1	4th of July Creek Mouth	1	S30N03W03DAC	820608	1540	--	--	6.7	11.4	93	6.2	21	1
131.1	4th of July Creek Mouth	3	S30N03W03DAC	820608	1535	--	--	6.7	11.3	92	6.3	21	1
131.1	4th of July Creek Mouth	1	S30N03W03DAC	820624	1010	18.0	--	9.1	12.5	108	7.2	25	1
131.1	4th of July Creek Mouth	3	S30N03W03DAC	820624	1035	18.0	--	9.5	11.9	104	7.0	21	5
131.1	4th of July Creek Mouth	1	S30N03W03DAC	820712	1930	12.6	--	11.5	9.9	91	7.1	26	1
131.1	4th of July Creek Mouth	3	S30N03W03DAC	820712	1950	12.6	--	11.0	9.9	90	7.1	54	90
131.1	4th of July Creek Mouth	1	S30N03W03DAC	820727	1415	20.0	--	10.6	10.0	90	7.3	--	1
131.1	4th of July Creek Mouth	3	S30N03W03DAC	820727	1400	--	--	10.6	10.0	90	6.4	--	5
131.1	4th of July Creek Mouth	1	S30N03W03DAC	820810	1730	--	--	10.8	--	--	--	--	1
131.1	4th of July Creek Mouth	3	S30N03W03DAC	820810	1725	--	--	10.8	--	--	--	--	7
131.1	4th of July Creek Mouth	1	S30N03W03DAC	820822	1305	--	--	12.0	10.2	94	6.8	--	2
131.1	4th of July Creek Mouth	3	S30N03W03DAC	820822	1255	18.1	--	12.1	7.2	67	6.3	--	9
131.1	4th of July Creek Mouth	1	S30N03W03DAC	820908	1250	12.4	--	9.0	10.9	94	6.7	--	--
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	--	1
131.1	4th of July Creek Mouth	3	S30N03W03DAC	820924	1820	6.8	--	5.6	12.0	95	6.8	--	16
						MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS							
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	--

Table 4-D-5 (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
					MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS								
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	--
					ADULT ANADROMOUS FISH INVESTIGATIONS								
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	Slough 10		S31N03W36AAC										
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	--
					DESIGNATED FISH HABITAT SITES								
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	2
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
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

Table 4-D-5 (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							
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	214	--
135.3	Slough 11		S31N02W19DDD	820830	1505	--	6.0	5.4	--	--	--	214	--
135.3	Slough 11		S31N02W19DDD	820918	1050	--	5.9	4.6	11.1	86	6.6	212	--
						ADULT ANADROMOUS FISH INVESTIGATIONS							
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	218	--
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	--
						MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS							
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	--
						DESIGNATED FISH HABITAT SITES							
137.7	Slough 16	4	S31N02W17ABD	820604	1500	16.4	--	6.8	11.1	91	6.2	42	3
137.7	Slough 16B, Q Site		S31N02W17ABC	820902	1140	--	7.2	7.0	--	--	--	56	--
137.7	Slough 16B, Q Site		S31N02W17ABC	820915	1500	--	7.8	7.5	11.8	99	6.6	34	--
						ADULT ANADROMOUS FISH INVESTIGATIONS							
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	--
						DESIGNATED FISH HABITAT SITES							
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

Table 4-D-5 (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								
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 (TRM2.7)	Indian R.-Helio Site 1	1	S32N02W28DDC	820606	0850	9.3	--	3.0	11.1	84	6.2	30	3
138.6 (TRM2.7)	Indian R.-Helio Site 1	1	S32N02W28DDC	820709	1525	18.6	--	10.4	10.9	97	6.7	35	1
138.6 (TRM2.7)	Indian R.-Helio Site 1	1	S32N02W28DDC	820808	1415	22.2	--	10.1	10.8	95	7.0	42	3
138.6 (TRM2.7)	Indian R.-Helio Site 1	1	S32N02W28DDC	820905	1055	11.8	--	6.7	11.4	93	6.5	46	5
138.6 (TRM 7.2)	Indian River -- Helio Site 2	1	S32N02W11DDC	820607	0950	--	--	2.8	11.4	84	6.3	29	2
138.6 (TRM 7.2)	Indian River -- Helio Site 2	1	S32N02W11DDC	820709	1550	19.0	--	9.0	11.7	101	6.7	34	1
138.6 (TRM 7.2)	Indian River -- Helio Site 2	1	S32N02W11DDC	820808	1455	19.0	--	9.7	10.7	94	7.1	39	1
138.6 (TRM 7.2)	Indian River -- Helio Site 2	1	S32N02W11DDC	820905	1145	11.6	--	6.5	11.4	93	6.6	43	4
138.6 (TRM 12.0)	Indian River -- Helio Site 3	1	S32N01W04BAB	820607	0915	8.0	--	2.6	10.8	79	6.1	29	1
138.6 (TRM 12.0)	Indian River -- Helio Site 3	1	S32N02W11DDC	820709	1625	19.0	--	8.4	10.5	89	6.8	34	1
138.6 (TRM 12.0)	Indian River -- Helio Site 3	1	S32N02W11DDC	820808	1515	18.4	--	8.6	10.4	89	7.2	42	1
138.6 (TRM 12.0)	Indian River -- Helio Site 3	1	S32N02W11DDC	820905	1215	11.4	--	6.0	11.2	90	6.6	43	4
					MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS								
138.9	Susitna River		S31N02W09DBD	820906	1220	12.2	--	5.1	9.0	70	7.1	58	--

Table 4-D-5 (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
						ADULT ANADROMOUS FISH INVESTIGATIONS							
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	6.6	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	130
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	--	29
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
140.0	Slough 19	3	S31N02W10DBB	820925	1215	12.0	--	4.3	11.8	91	7.1	--	61
						DESIGNATED FISH HABITAT SITES							
140.1	Slough 20	3	S31N02W11BBC	820605	1500	--	--	3.6	10.5	79	6.4	37	2
140.1	Slough 20	4	S31N02W11BBC	820605	1415	12.4	--	--	--	--	--	--	6
140.1	Slough 20	9	S31N02W11BBC	820605	1350	12.4	--	5.9	10.0	30	6.2	76	4
140.1	Slough 20	3	S31N02W11BBC	820620	1330	--	--	6.1	--	--	7.0	69	6
140.1	Slough 20	4	S31N02W11BBC	820620	--	--	--	--	--	--	--	--	9
140.1	Slough 20	5	S31N02W11BBC	820620	1315	--	--	5.6	14.3	113	7.0	67	4
140.1	Slough 20	9	S31N02W11BBC	820620	--	--	--	--	--	--	--	--	10
140.1	Slough 20	7	S31N02W11BBC	820620	1340	--	--	6.2	--	--	7.0	69	10
140.1	Slough 20	1	S31N02W11BBC	820708	1105	17.1	--	8.6	11.9	102	6.2	90	1
140.1	Slough 20	3	S31N02W11BBC	820708	1140	--	--	14.1	9.8	95	7.3	125	64
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

Table 4-D-5 (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	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	--
					ADULT ANADROMOUS FISH INVESTIGATIONS								
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	--
					DESIGNATED FISH HABITAT SITES								
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	127	9
142.0	Slough 21	6	S31N02W02AAA	820606	1130	11.8	--	7.2	8.2	68	6.4	141	2
142.0	Slough 21	3	S31N02W02AAA	820619	1130	--	--	10.5	10.8	88	6.8	188	3
142.0	Slough 21	4	S31N02W02AAA	820619	1150	--	--	10.0	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

Table 4-D-5 (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								
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	--	--
					ADULT ANADROMOUS FISH INVESTIGATIONS								
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	--	--	--	198	--
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	--
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	--
					DESIGNATED FISH HABITAT SITES								
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	--

Table 4-D-5 (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
						ADULT ANADROMOUS FISH INVESTIGATIONS							
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	--
						MAINSTEM ADULT ANADROMOUS FISH HABITAT INVESTIGATIONS							
148.2	Susitna River		S32N01W26DCA	820905	1300	13.0	--	7.5	9.9	82	8.6	96	--
						DESIGNATED FISH HABITAT SITES							
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
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 Mouth	3	S32N01W25CAC	820928	1200	3.6	--	2.5	13.4	97	7.1	--	2
148.8 (TRM 46)	Portage Creek Helio Site	1	S32N01E08CBA	820607	1615	8.0	--	2.4	11.0	81	6.4	48	4
148.8 (TRM 46)	Portage Creek Helio Site 1	1	S32N01E08CBA	820709	1730	19.0	--	8.7	11.6	100	6.6	61	1
148.8 (TRM 9.2)	Portage Creek Helio Site 2	1	S33N01E26DDC	820607	1135	--	--	2.4	11.5	84	6.3	44	1
148.8 (TRM 9.2)	Portage Creek Helio Site 2	1	S33N01E26DDC	820709	1750	18.5	--	8.0	10.7	91	6.9	55	2
148.8 (TRM 15.5)	Portage Creek Helio Site 3	1	S22N08W28BAB	820607	1210	--	--	1.7	11.5	82	6.4	37	3
148.8 (TRM 15.5)	Portage Creek Helio Site 3	1	S22N08W28BAB	820709	1800	18.5	--	6.0	12.0	96	6.7	36	1
						IMPOUNDMENT STUDY							
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

Table 4-D-5 (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
						IMPOUNDMENT STUDY							
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 50 ft. Above Fog Creek		S31N04E16DBB	820621	1135	10.8		7.3	10.7	93	7.0	84	66
176.7	Susitna River 50 ft. Above Fog Creek		S31N04E16DBB	820718	1140	14.6		8.6	10.6	94	7.2	92	36
176.7	Susitna River 50 ft. Above Fog Creek		S31N04E16DBB	820815	1315	15.8		9.7	9.0	83	7.2	110	85
176.7	Susitna River 50 ft. Above Fog Creek		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
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 50 ft above Tsusena		S32N04E36ADB	820619	1200	18.8		8.8	10.2	93	7.2	73	38
181.3	Susitna River 50 ft above Tsusena		S32N04E36ADB	820718	1440	16.6		11.0	10.3	99	7.5	122	140
181.3	Susitna River 50 ft above Tsusena		S32N04E36ADB	820816	1200	15.8		10.3	12.6	118	8.1	119	150
181.3	Susitna River 50 ft above Tsusena		S32N04E36ADB	820912	1410	10.2		6.2	11.7	100	7.5	127	25
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 Above Deadman Creek		S32N05E26CDB	820619	1315	17.8		8.7	10.2	93	7.3	80	38
186.7	Susitna River, 50 ft Above Deadman Creek		S32N05E26CDB	820718	1000	10.6		9.0	10.7	98	8.1	136	135

Table 4-D-5 (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
						IMPOUNDMENT STUDY							
186.7	Susitna River, 50 ft Above Deadman Creek		S32N05E26CDB	820816	1650	16.8		10.8	11.6	110	7.9	146	140
186.7	Susitna River, 50 ft Above Deadman Creek		S32N05E26CDB	820911	1220	9.1		5.8	11.5	97	7.4	136	33
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	--
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	--

Table 4-D-5 (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
						IMPOUNDMENT STUDY							
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	138	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	7.4	108	130
206.8	Mainstem-50 above Kosina Creek		S31N08E15BAB	820726	1055	17.6		09.4	11.0	102	7.3	116	130
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	89	--
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

Table 4-D-5 (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
						IMPOUNDMENT STUDY							
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		6.6	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
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	48	--
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

Table 4-D-5 (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
						IMPOUNDMENT STUDY							
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	--
	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-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/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

[a]Sloughs and mainstem Susitna River were sampled on 2 or 3 consecutive days in each month (except January) as follows.

	8A	9	16B	19	21	Susitna River at 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

[b]Parameters marked with an * are averages of transect point measurements (see methods).

--- indicates data not available.

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Physical and Field Parameters - Cont'd							
Specific Conductance (lab) umho/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/1	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/1 $CaCO_3$	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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Physical and Field Parameters - Cont'd							
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).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Physical and Field Parameters - Cont'd							
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	---	---	---	---	---	---
Major Constituents							
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/1 $CaCO_3$	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/1 $CaCO_3$	June	---	---	---	---	---	---
	July	---	---	---	---	---	---
	September	53	42	32	75	75	---
	January	---	---	---	---	---	---
	March	---	---	---	---	---	---

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Major Constituents - Cont'd							
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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Major Constituents - Cont'd							
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
Nutrients							
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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Nutrients - Cont'd							
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	0.42	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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Nutrients - Cont'd							
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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Nutrients - Cont'd							
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
Trace Metals							
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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Trace Metals - Cont'd							
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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Trace Metals - Cont'd							
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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Trace Metals - Cont'd							
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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Trace Metals - Cont'd							
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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Trace Metals - Cont'd							
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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Trace Metals - Cont'd							
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

Appendix Table 4-D-6 (Continued).

Parameter	Date	Slough 8A	Slough 9	Slough 16B	Slough 19	Slough 21	Susitna River at Gold Creek
Trace Metals - Cont'd							
Silver, suspended 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	---	---	---	---	---	---
	March	---	---	---	---	---	---
Silver, dissolved ug/1 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/1 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/1 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/1 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

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

Location[a]	Depth	Temperature: Surface	Temperature: Intra-gravel	Temperature: Substrate/Water[b]	Specific Conductance
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 Surface	Temperature Intra-gravel	Temperature Substrate/Water[b]	Specific Conductance
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

[a]Sampling locations are diagrammed in Appendix Figures 4-F-1 and 4-F-29.
[b]Temperature 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: Surface	Temperature: Intra-gravel	Temperature: Substrate/Water[b]	Specific Conductance
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 Surface	Temperature Intra-gravel	Temperature Substrate/Water[b]	Specific Conductance
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).

Location[a]	Depth	Temperature Surface	Temperature Intra-gravel	Temperature Substrate/Water[b]	Specific Conductance
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

[a]Sampling locations are diagrammed in Appendix Figures 4-F-2 and 4F-3.
[b]Temperature 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.

Location	Depth	Temperature			Specific Conductance
		Surface	Intra-gravel	Substrate/Water[a]	
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	---

[a]Temperature 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: Surface	Temperature: Intra-gravel	Temperature: Substrate/Water[a]	Specific Conductance
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	LB	0.40	5.4	4.9	5.2	---
	M	0.75	5.0	4.4	4.6	---
(upwelling)	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	---

[a]Temperature 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.

Location	Depth	Temperature			Specific Conductance
		Surface	Intra-gravel	Substrate/Water[a]	
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	-	---

[a]Temperature 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 Surface	Temperature Intragravel	Temperature Substrate/Water[b]	Comments
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

[a]Distance (ft) from left bank head pin (facing upstream).

[b]Temperature 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

[a]Distance (ft) from left bank head pin (facing upstream).

[b]Temperature 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 Surface	Intragravel	Substrate/Water[b]	Comments
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	52.6	--	-	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 Surface	Intragravel	Substrate/Water[b]	Comments
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	----

[a]Distance from left bank head pin (facing upstream).

[b]Temperature readings obtained at the substrate/water interface.

APPENDIX E

SURVEY DATA

This appendix includes a complete summary of the headpin and cross sectional elevations obtained at study transects (reported in feet) from five sites during 1982: Chum Channel, Rabideaux Slough, and sloughs 8A, 9, and 21. Cross sections and water surface elevations for these and other locations are illustrated in Appendix A. Thalweg profile data are also presented for sloughs 8A, 9, 11, and 21. Thalweg profiles are illustrated in Volume 4, Part I. These data were collected during the open-water season in the study area located within the Cook Inlet to Devil Canyon reach of the Susitna River.

Tables are ordered by slough with individual tables including: head pin data for each slough, cross sectional data for each transect within each slough (number of transects differed between sloughs), and 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).

Definitions of Terms Used in This Appendix

Table headings for head pin and cross sectional tables are defined as follows:

1) Bench Mark is that point in the immediate vicinity of the study site (i.e., head pin, nail in tree base, or ground)

which is assigned an elevation (usually 100.00 ft) from which relative elevations of headpins, the water surface, and streambed were determined.

2) Station is the horizontal distance from the left bank head pin (station 0+00 feet) to a point on the cross section where the streambed 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:

TBM	- 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 water's edge
RWE	- right bank water's 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 water's 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 water's 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 is 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 to E-3 for definitions of terms).

Bench Mark	Elevation (ft)	Estimated True Elevation (ft)[a]
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

[a]The estimated true elevation for each head pin was based on the TBM elevation of 180.00 feet which was estimated from a USGS topographical map.

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

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 Rabideux Slough surveyed August 10, 1982 (see pages E-1 to E-3 for definitions of terms).

Bench Mark	Elevation (ft)	True Elevation (ft)
TBM	100.00	269.08
LBHP 0	98.57	267.65
RBHP 0	94.16	263.24
LBHP 1	98.64	267.72
RBHP 1	94.06	263.14
LBHP 2	98.56	267.64
RBHP 2	91.98	261.06
LBHP 3	98.40	267.48
RBHP 3	94.76	263.84
LBHP 4	98.51	267.59
RBHP 4	96.28	265.36
LBHP 5	98.28	267.36
RBHP 5	95.20	264.28
LBHP 6	98.58	267.66
RBHP 6	96.06	265.14
LBHP 7	98.61	267.69
RBHP 7	94.14	263.22

Table 4-E-11. Cross section elevations in transect 0 of Rabideux Slough surveyed August 10, 1982 (see pages E-1 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
0.0 LBHP 0	98.57	267.65	RU
3.7	98.26	267.34	RU
4.1	95.13	264.21	RU
6.7	94.05	263.13	RU
9.1	93.94	263.02	RU
11.0 LWS, LWE	90.50	259.58	RU
14.3	88.75	257.83	RU
19.1	86.77	255.85	RU
21.3	85.47	254.55	RU
24.7	84.65	253.73	RU
27.4	85.49	254.57	RU
31.0	86.77	255.85	RU
35.4	87.76	256.84	RU
42.0	88.75	257.83	RU
50.0	89.64	258.72	RU
57.0	89.80	258.88	SI
64.0	89.63	258.71	SI
73.0	90.02	259.01	SI
78.2 RWS, RWE	90.86	259.94	SI
82.6	92.65	261.73	SI
86.0	93.22	262.30	SI
87.0	93.08	262.16	SI

Table 4-E-12. Cross section elevations in transect 1 of Rabideux Slough surveyed August 10, 1982 (see pages E-1 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
0.0 LBHP 1	98.64	267.72	--
0.0 GB	98.41	267.49	--
4.6	98.13	267.21	High bank
8.8	93.18	262.21	Vegetation
11.8 LWS, LWE	90.89	259.97	--
13.1	88.89	257.97	SI
15.6	88.25	257.33	GR RU
17.5	87.88	256.96	GR RU
23.0	87.65	256.73	GR RU
27.9	86.74	255.82	GR RU
32.0	86.15	255.23	GR RU
40.0	87.84	256.92	GR RU
48.0	89.66	258.74	GR RU
51.0 RWS, RWE	90.89	259.97	GR RU
64.0	92.15	261.23	--
100.3 GB	93.65	262.73	--
100.3 RBHP 1	94.01	263.09	--

Table 4-E-13. Cross section elevations in transect 2 of Rabideux Slough surveyed August 10, 1982 (see pages E-1 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
0.0 LBHP 2	98.55	267.63	--
0.0 GB	98.28	267.36	--
3.9	97.95	267.03	High bank
6.5	93.08	262.16	Vegetation
10.0 LWS, LWE	90.88	259.96	SI
15.0	88.92	258.00	SI
20.0	88.45	257.53	SI
25.0	87.99	257.07	SI
32.0	89.24	258.30	GR
27.0	90.04	259.12	GR
40.0 RWS, RWE	90.89	259.97	GR
72.5 GB	91.72	260.80	GR
72.5 RBHP 2	91.92	261.00	GR

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

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
0.0 LBHP 3	98.40	267.48	Vegetation
0.0 GB	98.15	267.23	Vegetation
4.6	96.96	266.04	Vegetation
7.0	94.63	263.71	High bank
9.2 LWS, LWE	91.01	260.09	SI
16.0	89.71	258.79	SI
25.0	90.62	259.70	SI
32.4	90.71	259.79	SI GU
33.3 RWS, RWE	91.01	260.09	SI GU
37.2	91.96	261.04	SI GU
41.6	91.95	261.03	GR RU
47.3	92.73	261.81	SI
51.2	94.62	263.70	SI
56.3 GB	94.52	263.60	SI
56.3 RBHP 3	94.75	263.83	SI

Table 4-E-15. Cross section elevations in transect 4 of Rabideux Slough surveyed August 10, 1982 (see pages E-1 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
0.0 LBHP 4	98.51	267.59	Vegetation
0.0 GB	98.11	267.19	Vegetation
10.0	97.02	266.10	High bank
11.8	89.92	259.00	Vegetation
15.0	93.60	262.68	SI
26.0 LWS, LWE	91.0	260.08	SI
28.9 RWS, RWE	90.05	259.13	GR RU
33.0	91.20	260.28	De-watered
37.2 LWS, LWE	90.98	260.06	Main channel
41.0	90.79	259.87	GR RU (SI)
46.0	90.67	259.75	GR RU (SI)
51.2	90.63	259.71	GR RU (SI)
53.6 RWS, RWE	90.91	259.99	GR
56.0	91.44	260.52	GR
58.9	92.53	261.61	GR SI
63.0	94.29	263.37	SI
72.9 GB	95.91	264.99	--
72.9 RBHP 4	96.27	265.35	--

Table 4-E-16. Cross section elevations in transect 5 of Rabideux Slough surveyed August 10, 1982 (see pages E-1 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
0.0 LBHP 5	98.28	267.36	Vegetation
0.0 GB	98.04	267.12	Vegetation
3.0	97.49	266.57	Vegetation
7.0	95.42	264.50	High bank
12.5	91.09	260.17	SI
17.0	91.36	260.44	GR
27.0	91.65	260.73	GR RU
37.7 LWS, LWE	91.05	260.13	GR RU
39.7	90.90	259.98	GR SA
46.0	90.61	259.69	GR SI
49.7 RWS, RWE	91.01	260.09	SA SI
57.6	92.68	261.76	SA SI
61.4	94.59	263.67	SA SI
65.7 GB	94.71	263.79	SA SI
65.7 RBHP 5	95.19	264.27	SA SI

Table 4-E-17. Cross section elevations in transect 6 of Rabideux Slough surveyed August 10, 1982 (see pages E-1 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
0.0 LBHP 6	98.58	267.66	Vegetation
0.0 GB	99.53	268.61	Vegetation
3.4	97.61	266.69	Vegetation
6.0	95.26	264.34	Vegetation
8.2 LWS, LWE	91.15	260.23	Vegetation
15.2	89.53	258.61	RU
27.4 RWS, RWE	91.10	260.18	SA GR
35.0	93.60	262.68	SA
41.9	93.61	262.99	SA
43.3	93.40	262.48	SA
49.0 GB	95.72	264.80	SA
49.0 RBHP 6	96.05	265.13	SA

Table 4-E-18. Cross section elevations in transect 7 of Rabideux Slough surveyed August 10, 1982 (see pages E-1 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
0.0 LBHP 7	98.61	267.69	Vegetation
0.0 GB	98.11	267.19	Vegetation
7.0	97.52	266.60	Vegetation
9.0	98.04	267.12	Vegetation
10.6	93.18	262.26	SA
13.7	91.50	260.58	GR
18.3 LWS, LWE	91.25	260.33	GR
21.0	90.97	260.05	GR
24.0	90.96	260.04	GR
28.5 RWS, RWE	91.26	260.34	GR
33.4	91.55	260.63	GR
34.8	91.87	260.95	GR
39.5	92.32	261.40	GR
43.0	93.06	262.14	SA
44.3	93.50	262.58	SA
49.3	93.51	262.59	SA
61.3 GB	93.89	262.97	SA
61.2 RBHP 7	94.13	263.21	SA

Table 4-E-19. Head pin elevations in Slough 8A surveyed August 23, 1982 (see pages E-1 to E-3 for definitions of terms).

Bench Mark	Elevation (ft)	True Elevation (ft)
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

[a]Working pin

Table 4-E-20. Cross section elevations in transect 1 of Slough 8A surveyed August 22, 1982 (see pages E-1 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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]

[a]Vegetation of undetermined type.

[b]Vegetation dominated by horsetail.

[c]Vegetation dominated by sedges.

[d]Vegetation dominated by willows.

Table 4-E-21. Cross section elevations in transect 2 of Slough 8A surveyed August 22, 1982 (see pages E-1 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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

[a]Stations 34.1 and 40.0 are edges of small channel.
[b]Stations 42.8 and 69.3 are edges of larger channel.
[c]Stations 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 and E-4 for definitions of terms).

Point	Distance	Station	Thalweg Elevation	Depth	WSE[a]	Comments
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).

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

Table 4-E-31. (Continued).

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

Table 4-E-31. (Continued).

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

[a]Water surface elevation.

[b]Estimated value.

[c]No water at time of survey.

Table 4-E-32. Head pin elevations in Slough 9 surveyed August 23, 1982 (see pages E-1 to E-3 for definitions of terms).

Bench Mark	Elevation (ft)	True Elevation (ft)
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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	--

[a]Vegetation = Willow

Table 4-E-34. Cross section elevations in transect 2 of Slough 9 surveyed August 11, 1982 (see pages E-1 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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	--

[a]Stations 50.0 and 67.3 are edges of small channel.
[b]Stations 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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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	--

[a]Stations 36.0 and 58.0 are edges of small channel.
[b]Stations 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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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	--

[a]Stations 15.0 and 34.8 are edges of small channel.
[b]Stations 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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 and E-4 for definitions of terms).

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

Table 4-E-43. (Continued).

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

Table 4-E-43. (Continued).

Point	Distance	Station	Thalweg Elevation	Depth	WSE[a]	Comments
47	149	62 + 51	604.60	--	--	Head[d]

[a]Water surface elevation.

[b]Estimated value.

[c]Data surveyed on August 25, 1982.

[d]No water present at time of survey.

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

Point	Distance	Station	Thalweg Elevation	Depth	WSE[a]	Comments
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).

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

[a]Water surface elevation.

[b]Estimated value.

[c]No water present at time of survey.

Table 4-E-45. Head pin elevations in Slough 21 surveyed September 2, 1982 (see pages E-1 to E-3 for definitions of terms).

Bench Mark	Elevation (ft)	True Elevation (ft)
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 to E-3 for definitions of terms).

Station (ft)	Elevation (ft)	True Elevation (ft)	Comments and Substrate
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 BO
115.0	92.69	743.08	CO BO
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 and E-4 for definitions of terms).

Point	Distance	Station	Thalweg Elevation	Depth	WSE[a]	Comments
1		-51 + 68	731.05	0.40	731.45	Mouth
	46					
2		-51 + 22	730.95	0.45	731.40	Bar at mouth
	41					
3		-50 + 81	730.15	1.35	731.50	Btm. riffle
	24					
4		-50 + 57	730.55	1.05	731.60	Riffle
	26					
5		-50 + 31	731.15	0.75	731.90	Top riffle
	74					
6		-49 + 57	731.65	0.30	731.95	Pool
	200					
7		-47 + 57	730.25	1.70	731.95	Pool
	90					
8		-46 + 67	730.70	1.25	731.95	Top pool
	2					
9		-46 + 65	731.25	0.70	731.95	Top pool
	108					
10		-45 + 57	731.50	0.45	731.95	Top pool
	61					
11		-44 + 96	731.50	0.60	732.10	Btm. run
	58					
12		-44 + 38	731.65	0.60	732.25	Top run
	17					
13		-44 + 21	732.40	0.20	732.60	Riffle
	11					
14		-44 + 10	732.10	0.55	732.65	Top riffle
	28					
15		-43 + 82	731.30	1.35	732.65	Pool
	53					
16		-43 + 29	731.85	0.80	732.65	Top pool
	88					
17		-42 + 41	732.05	0.65	732.70	Run
	126					
18		-41 + 15	732.55	0.50	733.05	Run
	130					
19		-39 + 85	731.05	2.05	733.10	Pool
	146					
20		-38 + 39	731.45	1.65	733.10	Top pool
	20					
21		-38 + 19	731.55	1.55	733.10	Top pool
	31					
22		-37 + 88	732.75	0.35	733.10	Top pool
	87					
23		-37 + 01	733.65	0.50	734.15	Riffle

Table 4-E-54. (Continued).

Point	Distance	Station	Thalweg Elevation	Depth	WSE[a]	Comments
	82					
24		-36 + 19	734.55	0.25	734.80	Top riffle
	45					
25		-35 + 74	734.85	0.60	735.45	Top riffle
	66					
26		-35 + 08	734.90	0.70	735.60	Pool
	80					
27		-34 + 28	735.20	0.40	735.60	Pool
	38					
28		-33 + 90	735.35	0.35	735.70	Top pool
	37					
29		-33 + 53	735.90	0.40	736.30	Top riffle
	62					
30		-32 + 91	735.40	0.95	736.35	Pool
	91					
31		-32 + 00	736.00	0.35	736.35	Pool
	87					
32		-31 + 13	736.10	0.70	736.80	Run
	39					
33		-30 + 74	736.10	0.80	736.90	Pool
	67					
34		-30 + 07	736.00	0.90	736.90	Pool
	57					
35		-29 + 50	736.55	0.50	737.05	Top pool
	9					
36		-29 + 41	736.85	0.45	737.30	Top riffle
	53					
37		-28 + 88	737.05	0.40	737.45	Btm. riffle
	47					
38		-28 + 41	737.10	0.65	737.75	Riffle
	85					
39		-27 + 56	737.50	0.35	737.85	Riffle
	48					
40		-27 + 08	737.50	0.55	738.05	Riffle
	42					
41		-26 + 66	737.80	0.45	738.25	
	33					
42		-26 + 33	737.35	0.95	738.30	Boulder run
	19					
43		-26 + 14	737.85	0.45	738.30	Boulder run
	22					
44		-25 + 92	737.35	0.10	738.45	Boulder run
	75					
45		-25 + 17	737.90	0.60	738.50	Top run
	63					
46		-24 + 54	738.10	0.45	738.55	Pool

Table 4-E-54. (Continued).

Point	Distance	Station	Thalweg Elevation	Depth	WSE[a]	Comments
	31					
47		-24 + 23	737.55	1.00	738.55	Pool
	101					
48		-23 + 22	738.05	0.55	738.60	Top pool
	63					
49		-22 + 59	738.55	0.25	738.80	Btm. riffle
	100					
50		-21 + 59	738.60	0.45	739.05	Riffle
	113					
51		-20 + 46	739.30	0.25	739.55	Riffle
	87					
52		-19 + 59	739.45	0.55	740.00	Riffle
	95					
53		-18 + 64	740.20	0.30	740.50	Riffle
	108					
54		-17 + 56	740.85	0.50	741.35	Riffle
	88					
55		-16 + 68	741.60	0.50	742.10	Riffle
	96					
56		-15 + 72	742.10	0.55	742.65	Riffle
	82					
57		-14 + 90	742.25	0.50	742.75	Riffle
	70					
58		-14 + 20	742.00	0.85	742.85	Run
	90					
59		-13 + 30	742.55	0.30	742.85	Run
	128					
60		-12 + 02	742.15	0.75	742.90	Top run
	80					
61		-11 + 22	742.20	0.80	743.00	Pool
	103					
62		-10 + 19	742.65	0.35	743.00	Pool
	163					
63		-8 + 56	742.70	0.30	743.00	Top pool
	54					
64		-8 + 02	742.55	0.70	743.25	Run
	73					
65		-7 + 29	742.75	0.80	743.55	Run
	63					
66		-6 + 66	743.65	0.40	744.05	Run
	32					
67		-6 + 34	743.40	0.75	744.15	Run
	152					
68		-4 + 82	743.05	1.20	744.25	1982/TR-3
	97					
69		-3 + 85	742.00	2.25	744.25	1982/TR-4

Table 4-E-54. (Continued).

Point	Distance	Station	Thalweg Elevation	Depth	WSE[a]	Comments
	141					
70		-2 + 44	743.65	0.68	744.35	1982/TR-5
	60					
71		-1 + 84	744.10	0.51	744.60	1982/TR-6
	89					
72		-0 + 95	743.25	1.58	744.80	1982/TR-7
	95					
73		0 + 00	743.15	--[b]	--[b]	1981/TR-13
	82					
74		0 + 82	743.45	--[b]	--[b]	1981/TR-12
	118					
75		2 + 00	743.85	--[b]	--[b]	1981/TR-11
	126					
76		3 + 26	744.10	--[b]	--[b]	1981/TR-10
	314					
77		6 + 40	744.80	--[b]	--[b]	1981/TR-9
	204					
78		8 + 44	745.55	--[b]	--[b]	1981/TR-8
	214					
79		10 + 58	746.30	--[b]	--[b]	1981/TR-7
	139					
80[c]		11 + 97	747.06	--[b]	--[b]	1981/TR-6
	106					
81		13 + 03	747.75	--[b]	--[b]	1981/TR-5
	206					
82		15 + 09	749.65	--[b]	--[b]	1981/TR-4
	212					
83		17 + 21	748.30	--[b]	--[b]	1981/TR-3
	440					
84		21 + 61	752.10	--[b]	--[b]	1981/TR-2
	297					
85		24 + 58	753.80	--[b]	--[b]	1981/TR-1

[a]Water surface elevation.

[b]Estimated value.

[c]Point between left and right forks, from this point thalweg is measured up left fork.

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

Point	Distance	Station	Thalweg Elevation	Depth	WSE[a]	Comments
1		0 + 00	742.70	0.30	743.00	-8+56=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]

[a]Water surface elevation.

[b]No 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 and E-4 for definitions of terms).

Point	Distance	Station	Thalweg Elevation	Depth	WSE[a]	Comments
1		11 + 97	747.06	0.30[b]	747.35[b]	1981/TR-6
	50					
2		12 + 47	747.05	0.30[b]	747.35[a]	Btm. rt. fork
	124					
3		13 + 71	747.20	0.30[b]	747.55[b]	Riffle
	63					
4		14 + 34	748.75	0.30[b]	749.05[b]	Riffle
	126					
5		15 + 60	749.50	--	--	Top riffle[c]
	152					
6		17 + 12	748.85	--	--	Pool[c]
	110					
7		18 + 22	750.00	--	--	Top pool[c]
	186					
8		20 + 08	750.85	--	--	No water[c]
	176					
9		21 + 84	752.80	--	--	No water[c]
	224					
10		24 + 08	753.25	--	--	No water[c]
	194					
11		26 + 02	754.05	--	--	No water[c]
	247					
12		28 + 49	755.55	--	--	No water[c]
	179					
13		30 + 28	756.70	--	--	No water[c]
	247					
14		32 + 75	756.85	--	--	Head[c]

[a]Water surface elevation.

[b]Estimated value.

[c]No water present at time of survey.

APPENDIX F

HABITAT LOCATION DESCRIPTION AND PHOTOS

This appendix includes descriptions, maps, and/or photos of all mainstem, side channel, slough, and tributary study areas. There are two parts: the first describes study areas investigated with regard to spawning adult anadromous fish (pp. 4-F-2 to 4-F-92) and the second describes study areas investigated with regard to juvenile anadromous and resident fish (4-F-93 to 4-F-214). Other descriptions, maps and photographs of these study areas are included in Volume 4, Parts I and II. These data were collected during the open-water season in the study area located within the Cook Inlet to Devil Canyon reach of the Susitna River.

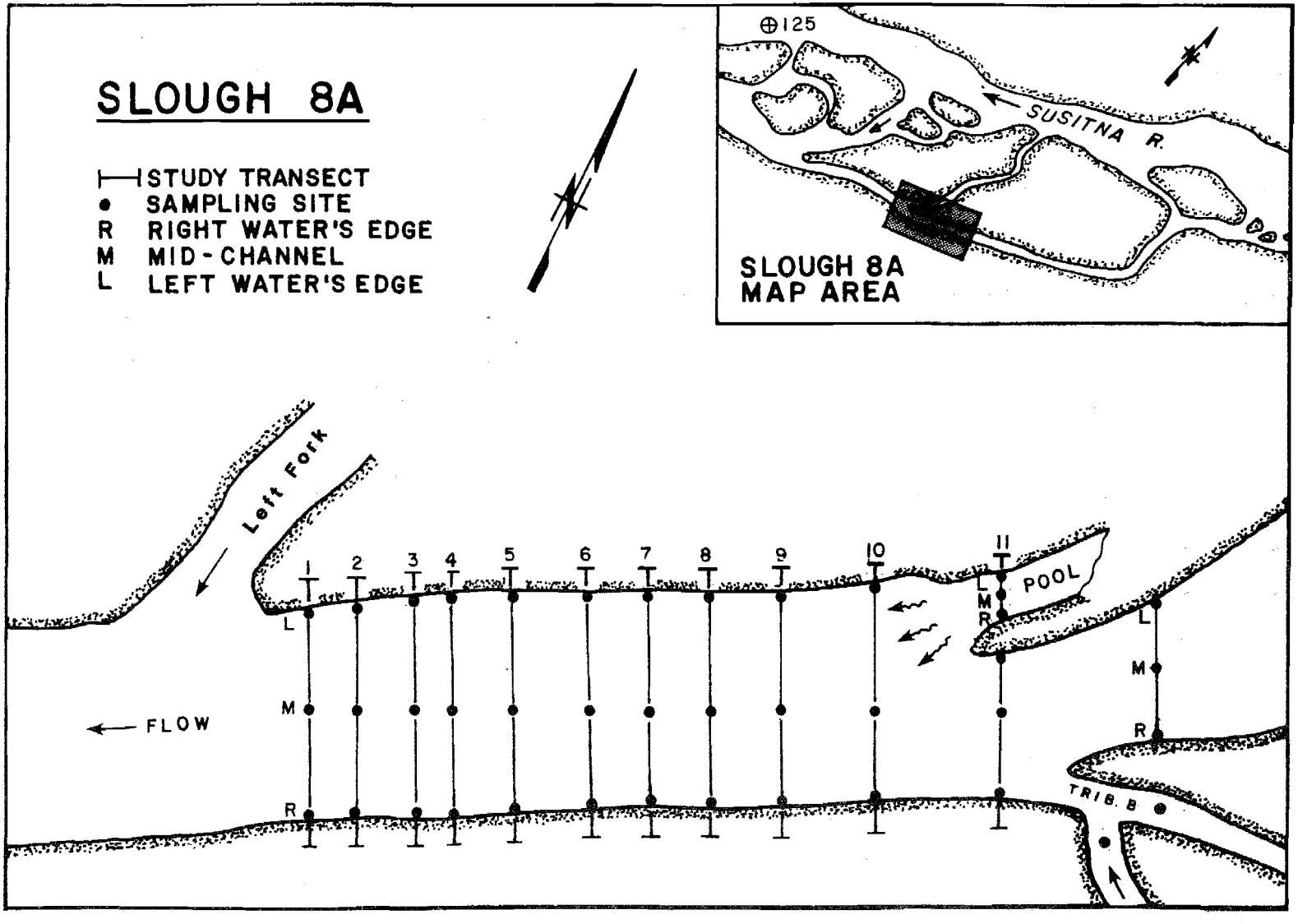


Figure 4-F-1. Water quality sampling locations in Slough 8A.

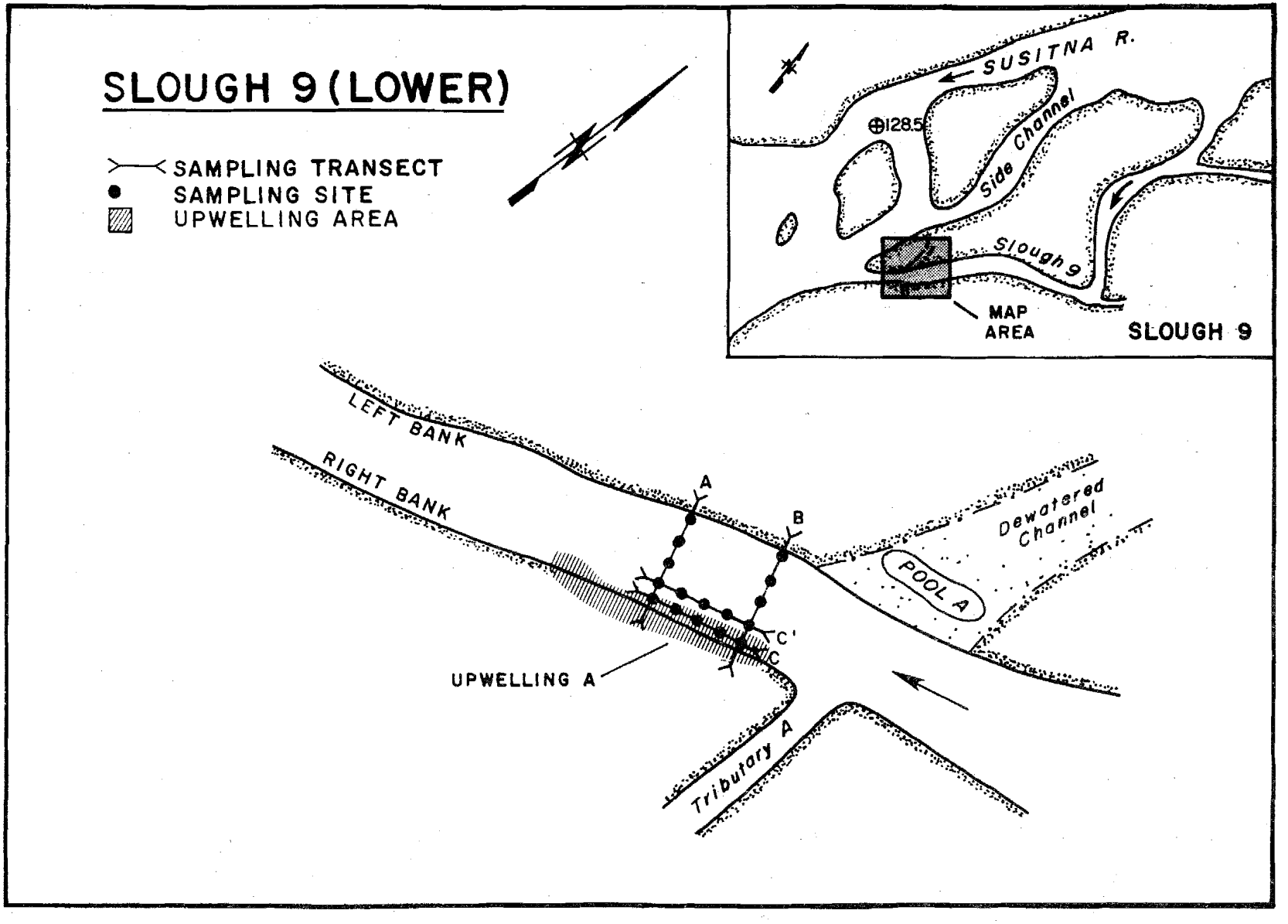


Figure 4-F-2. Water quality sampling locations in lower Slough 9.

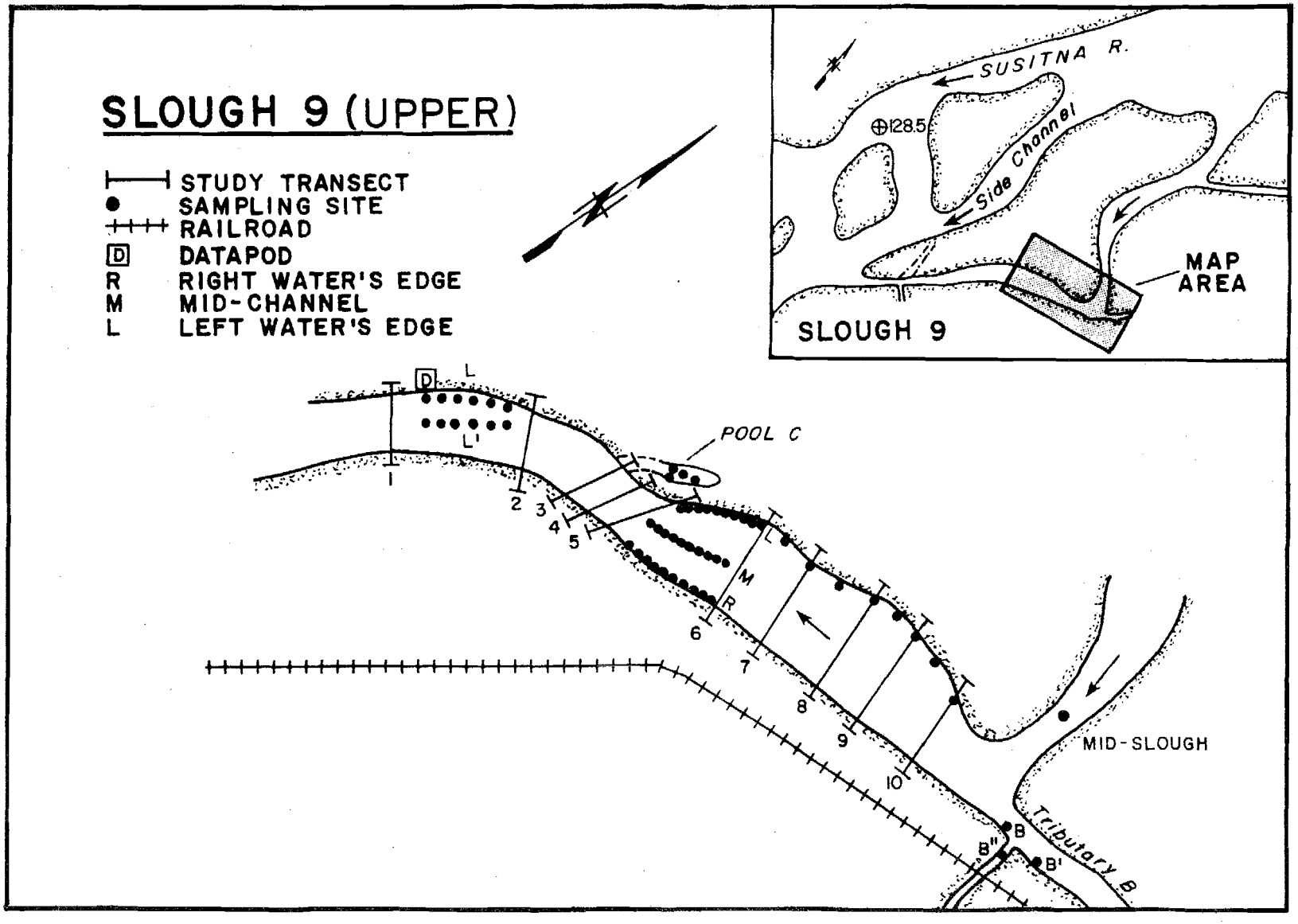


Figure 4-F-3. Water quality sampling locations in upper Slough 9.

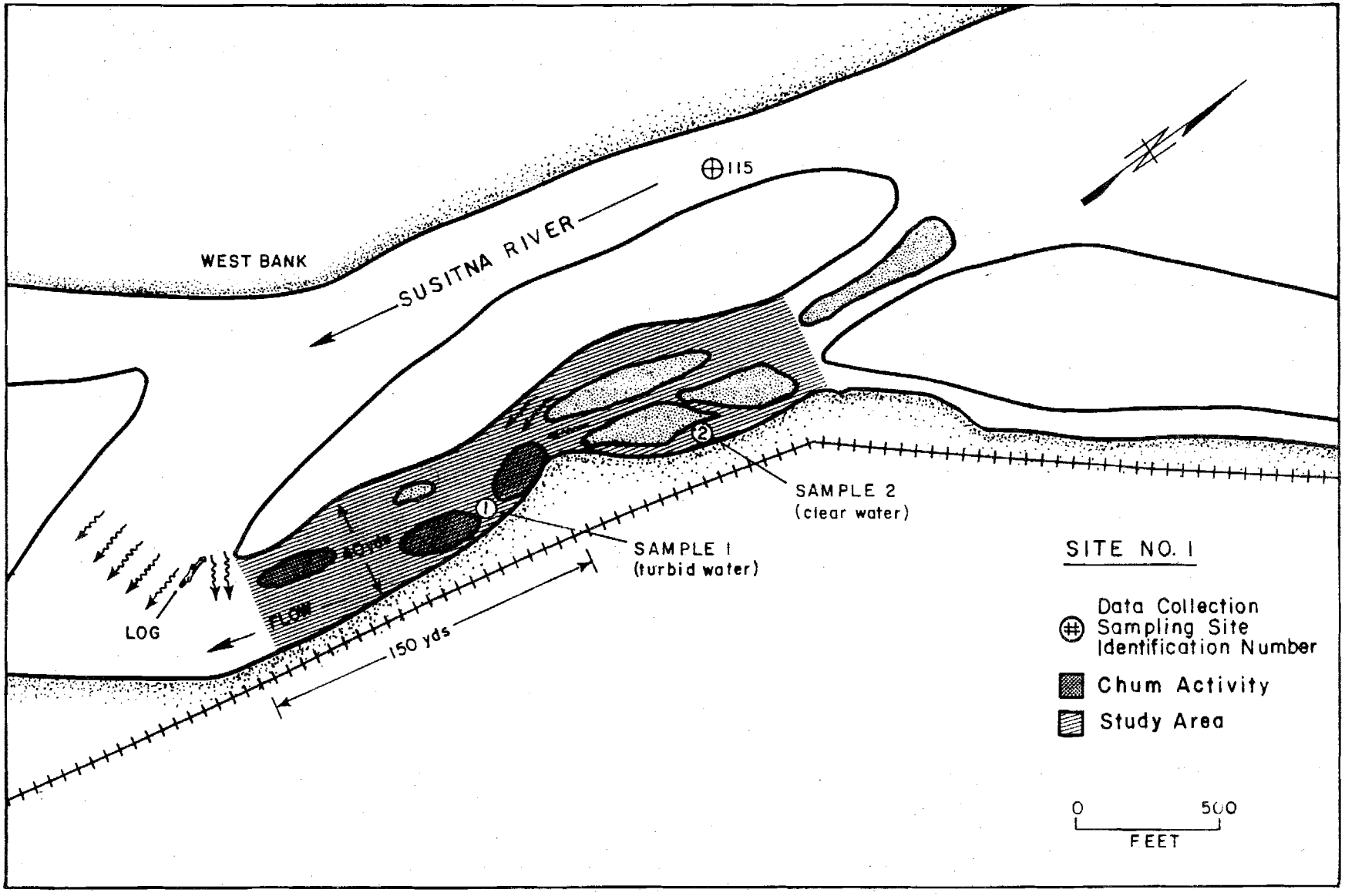


Figure 4-F-4. Chum salmon spawning area on the Susitna River at RM 114.4 (GC S28N04W06CAB): September 9, 1982.

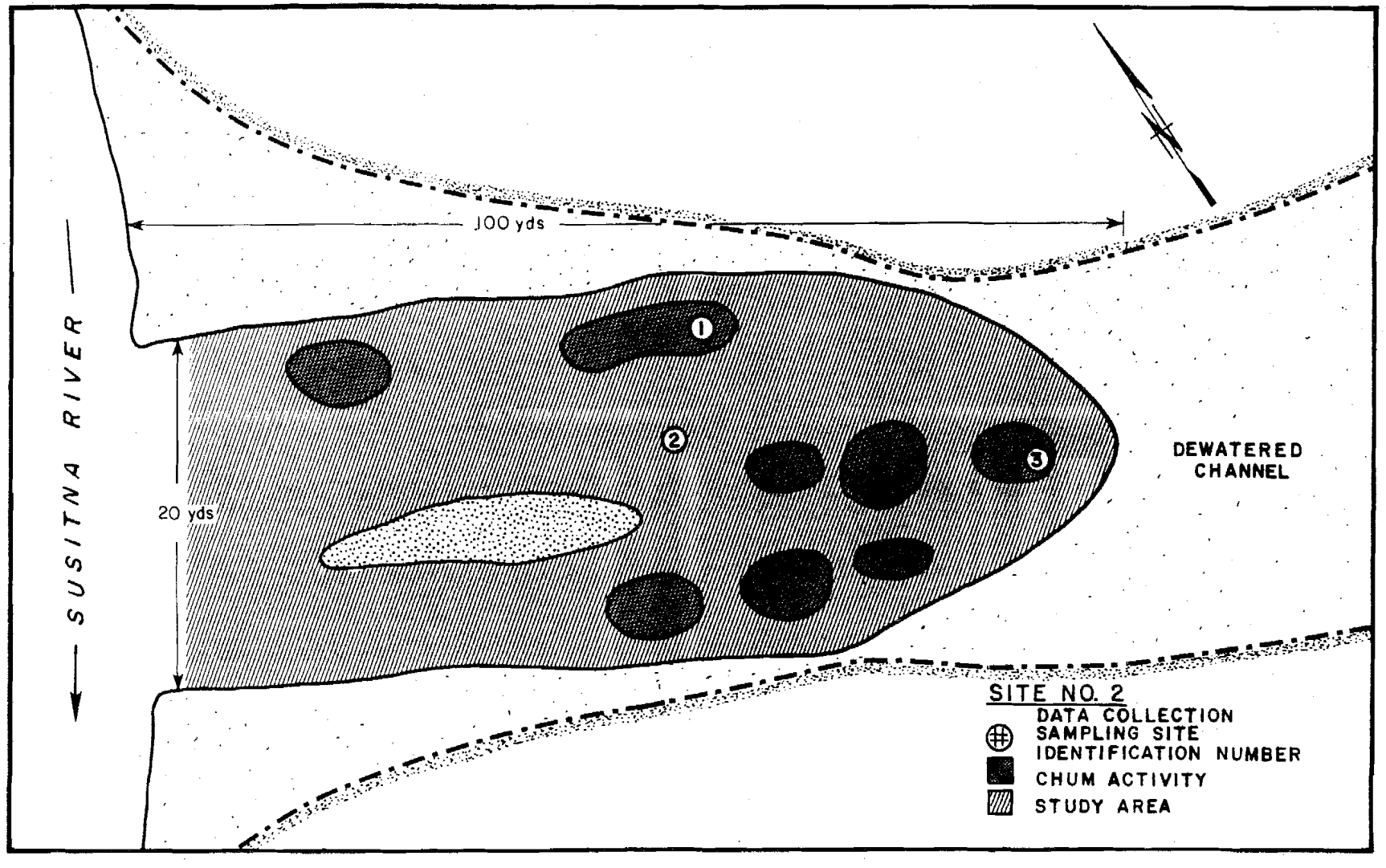


Figure 4-F-5. Chum salmon spawning area on the Susitna River at RM 136.0 (GC S31N02W19AD): September 4, 1982.

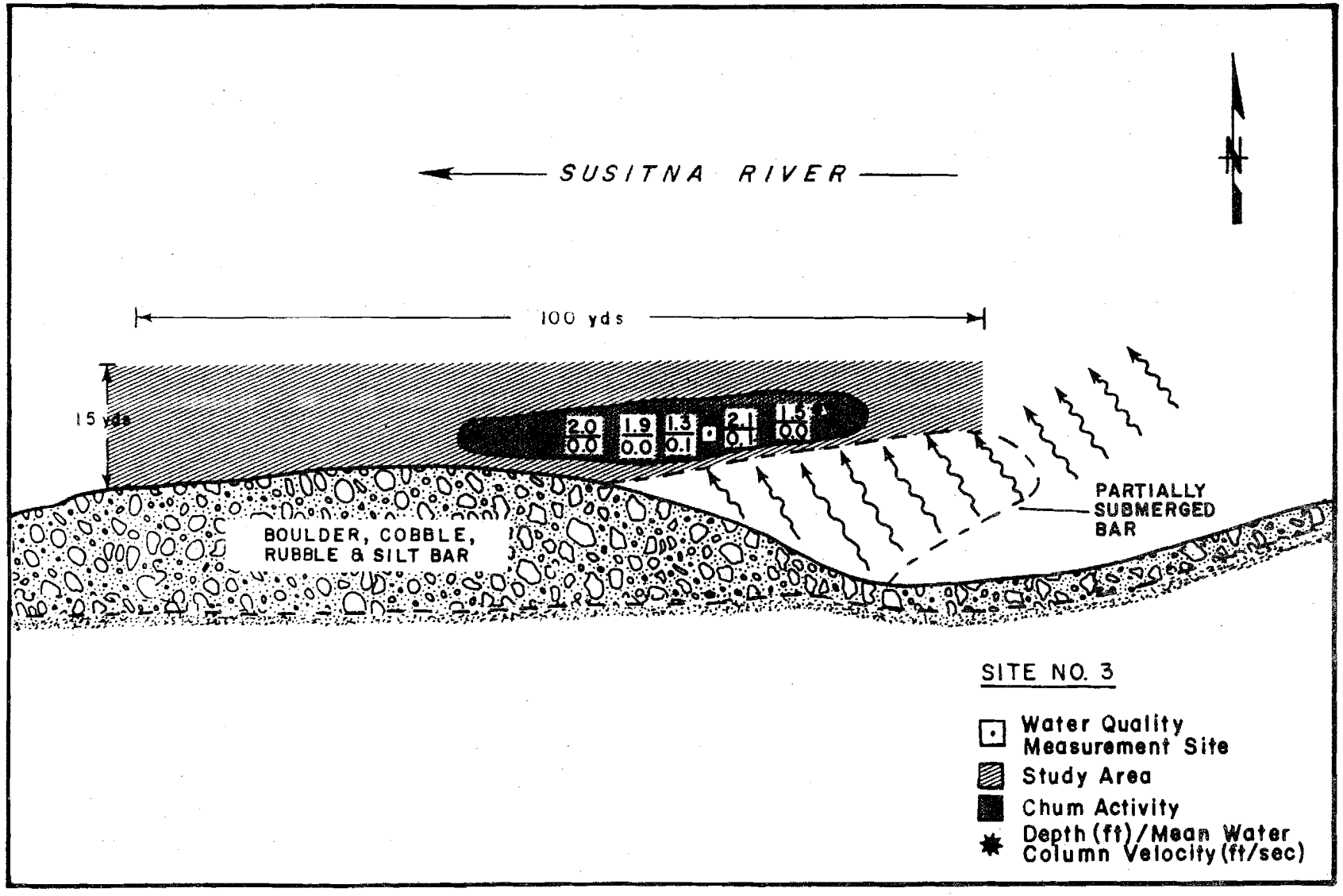


Figure 4-F-6. Chum salmon spawning area on the Susitna River at RM 148.2 (GC S32N01W26DCA): September 5, 1982.

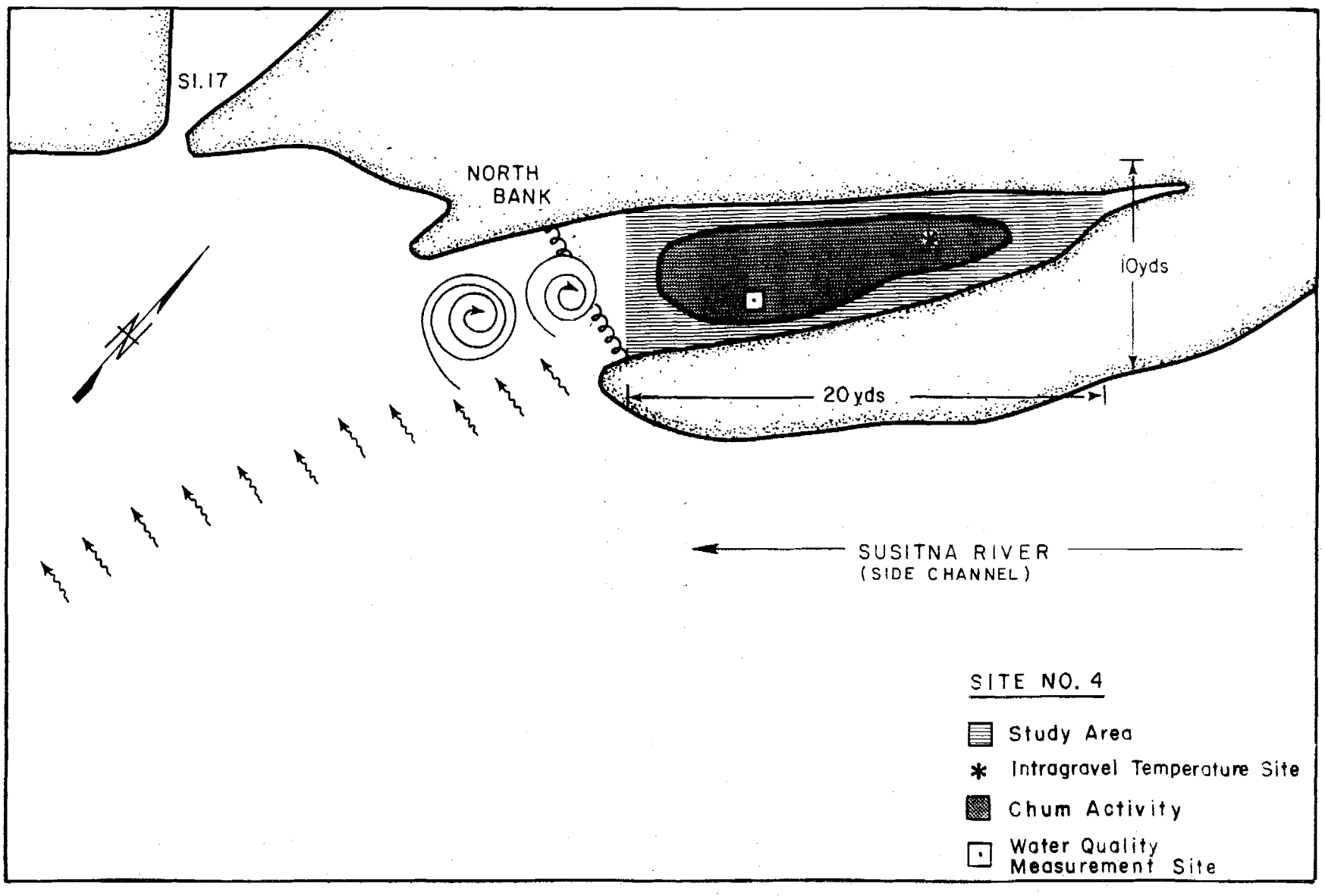


Figure 4-F-7. Chum salmon spawning area on the Susitna River at RM 138.9 (GC S31N02W09DBD): September 6, 1982.

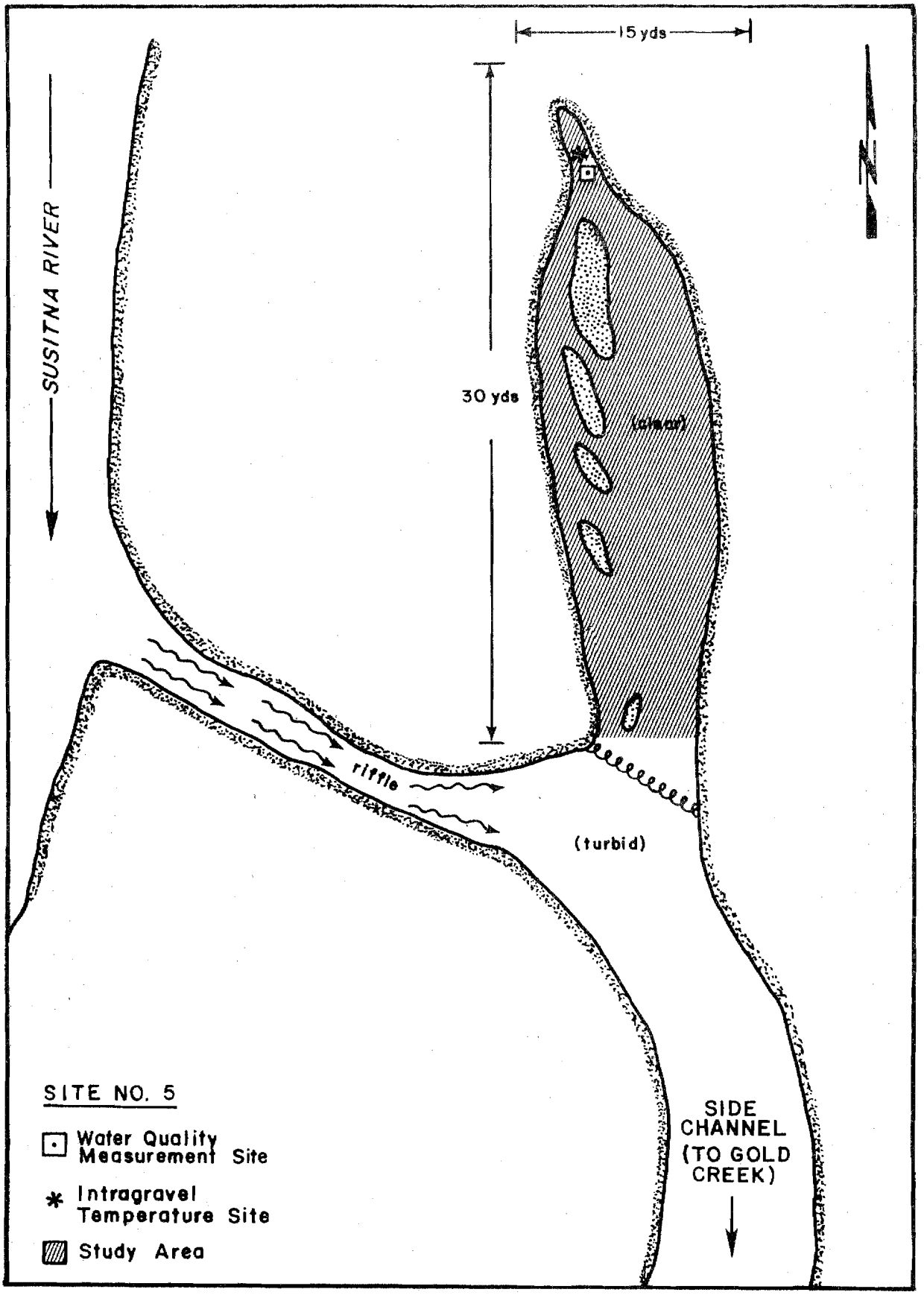


Figure 4-F-8. Chum salmon spawning area on the Susitna River at RM 137.4 (GC S31N02W17DBB): September 6, 1982.

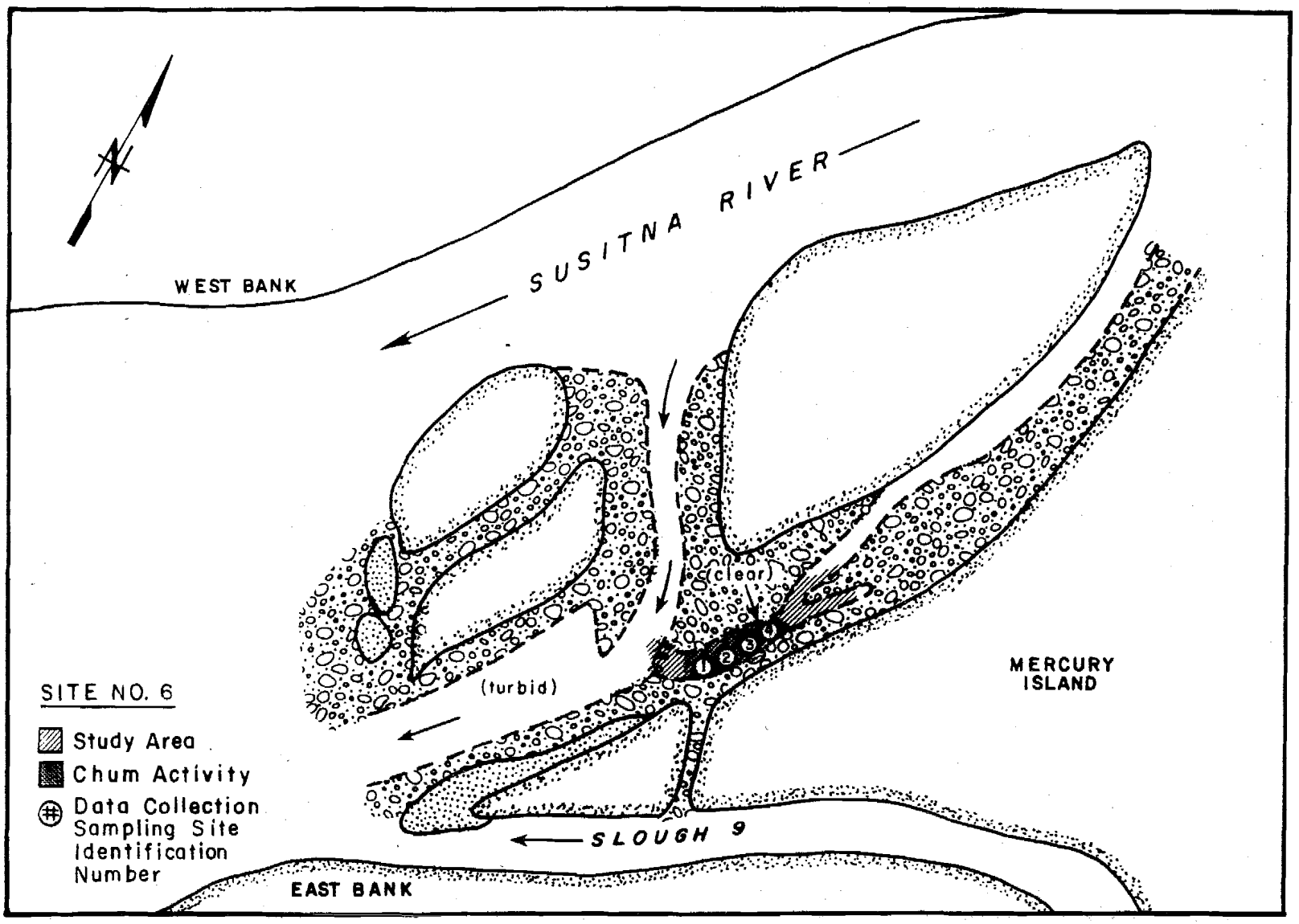


Figure 4-F-9. Chum salmon spawning area on the Susitna River at RM 128.6 (GC S30N03W16BCA): September 7, 1982.

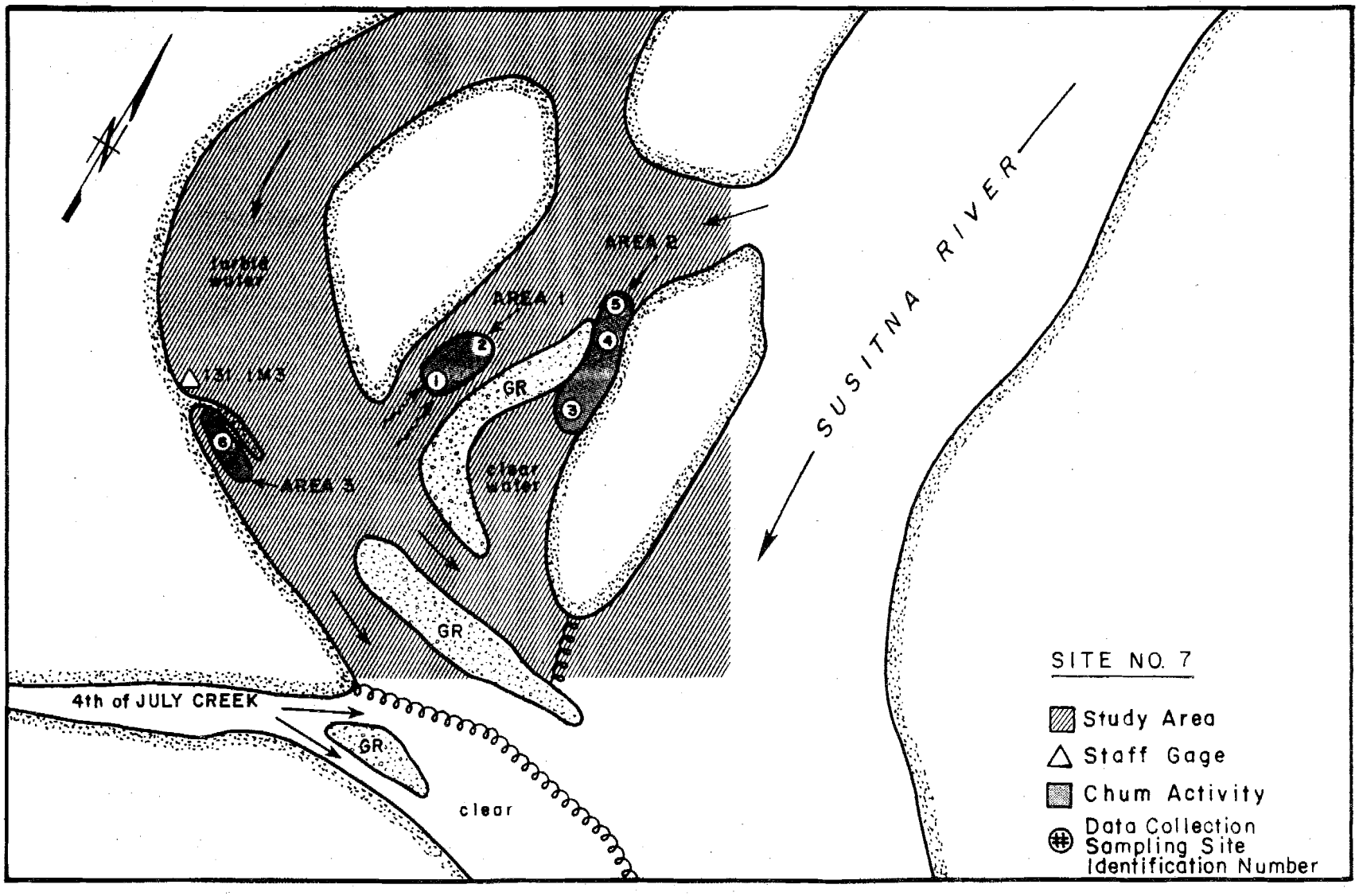


Figure 4-F-10. Chum salmon spawning area on the Susitna River at RM 131.3 (GC S30N03W03DAD): September 4-8, 1982.

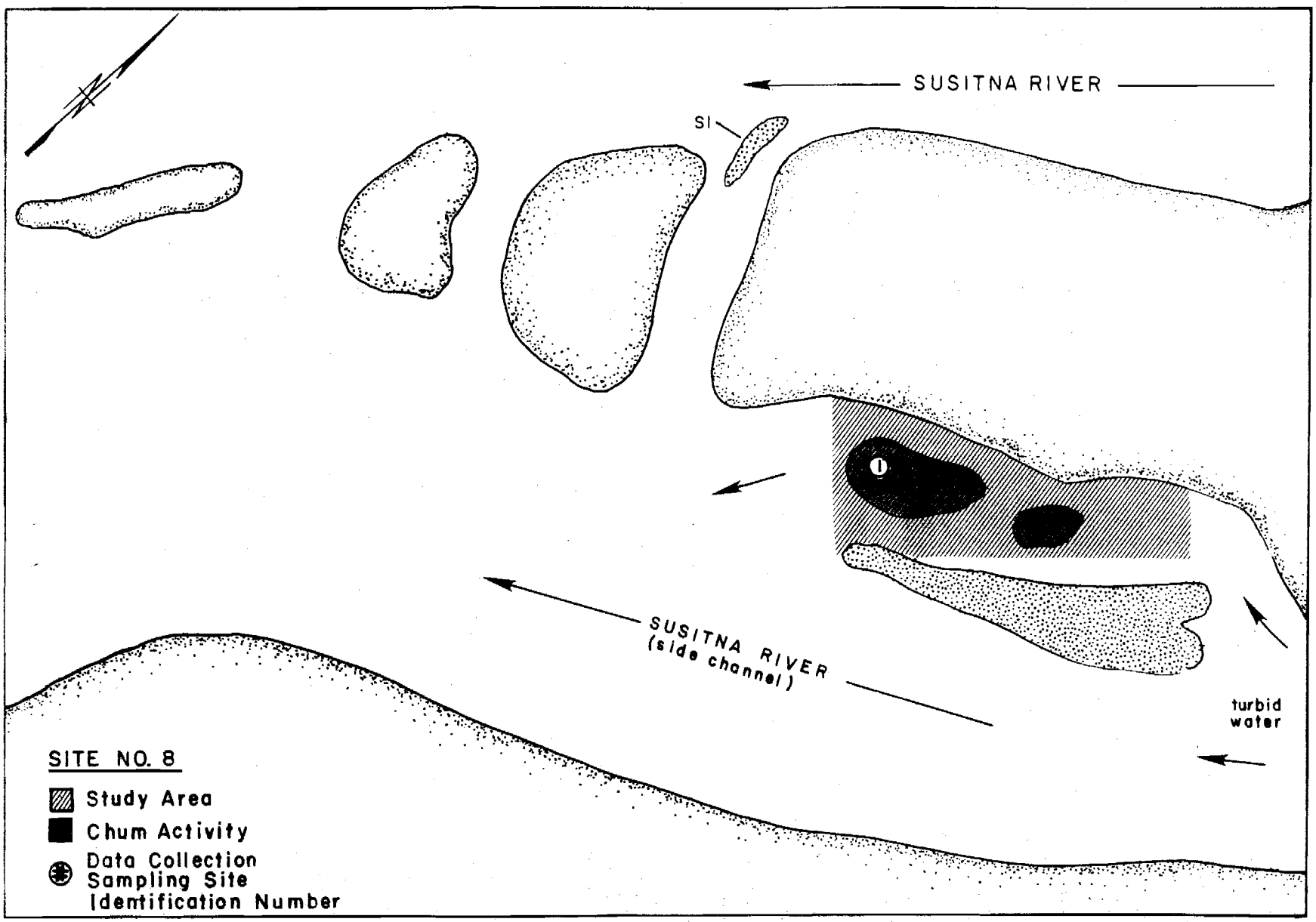


Figure 4-F-11. Chum salmon spawning area on the Susitna River at RM 129.8 (GC S30N03W09DAB): September 14, 1982. Chum salmo[illegible]e also observed spawning on September 12, 1982 [illegible]hen [illegible] wa[illegible] was [illegible]ar [illegible]he [illegible]e.

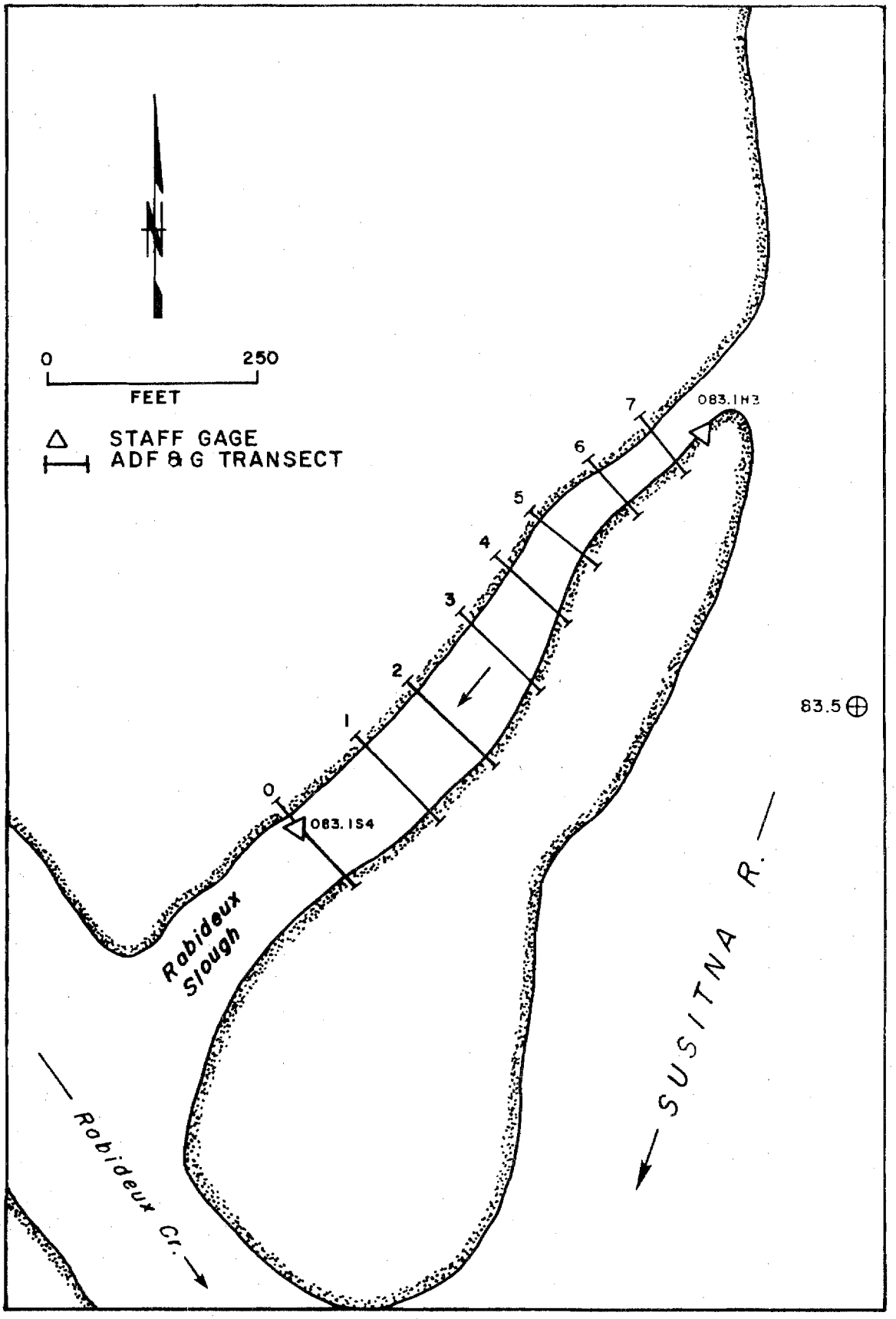


Figure 4-F-12. Rabideux Slough transects, 1982.

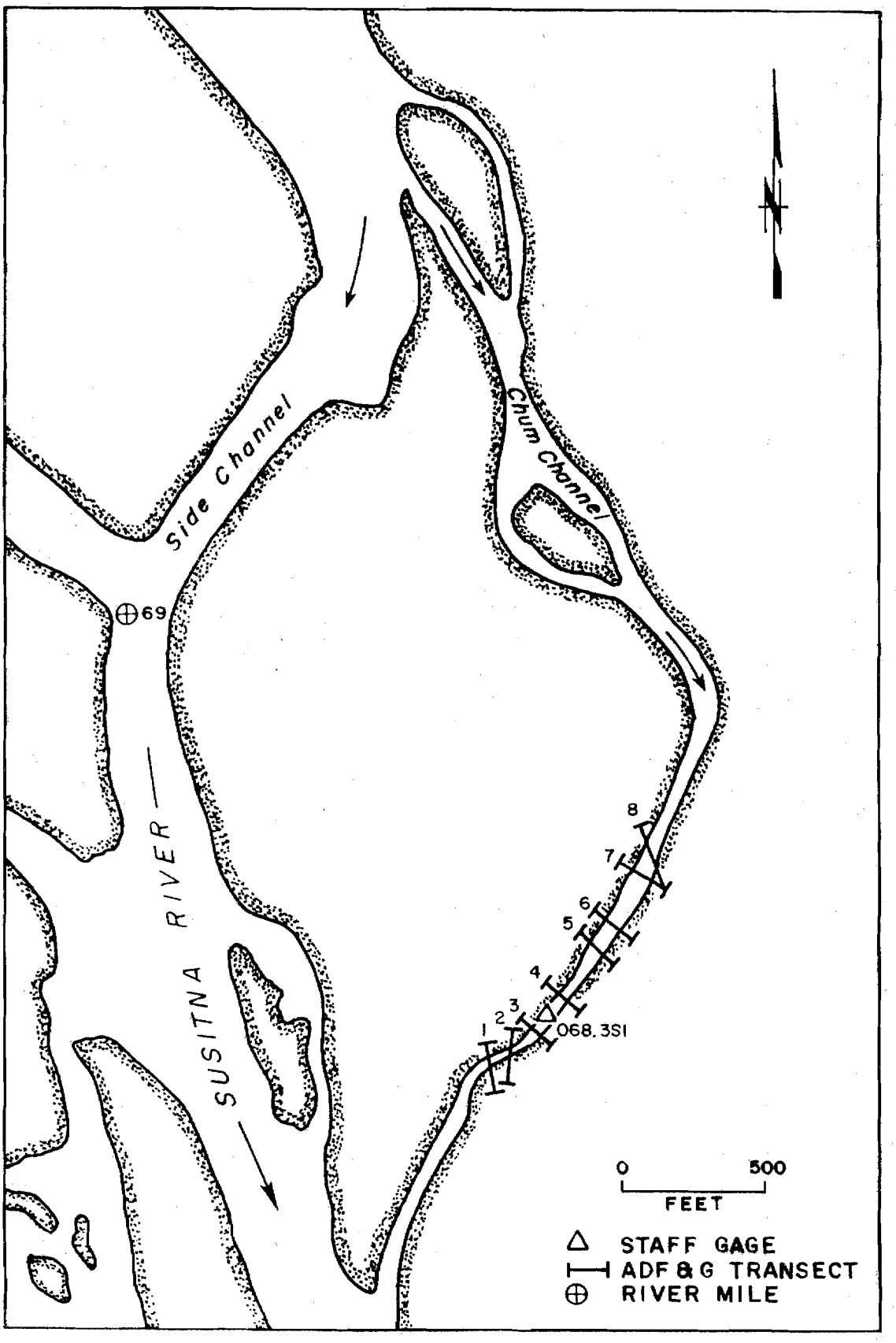


Figure 4-F-13. Chum Channel transects, 1982.

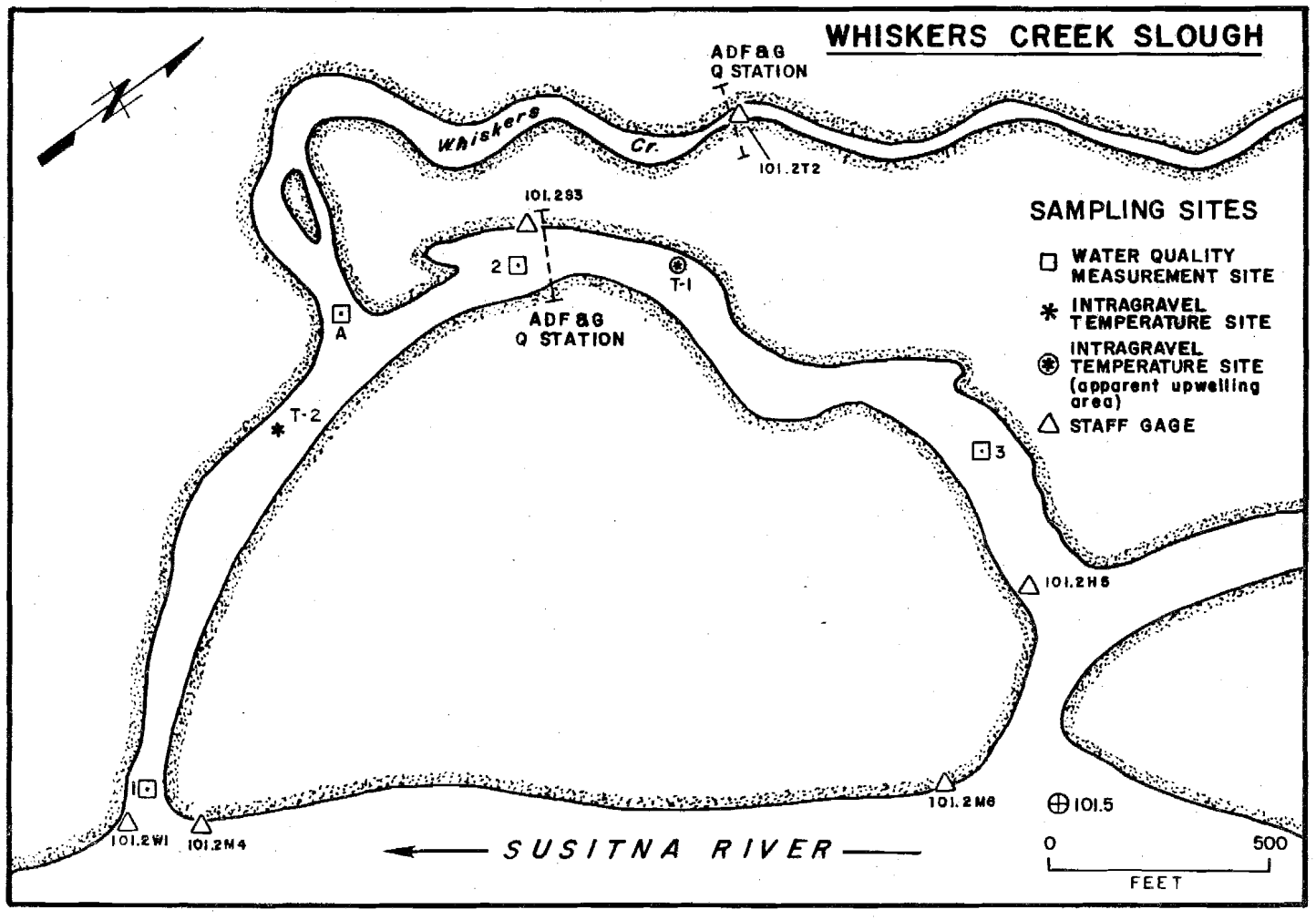


Figure 4-F-14. Whiskers Creek Slough sampling sites, 1982.

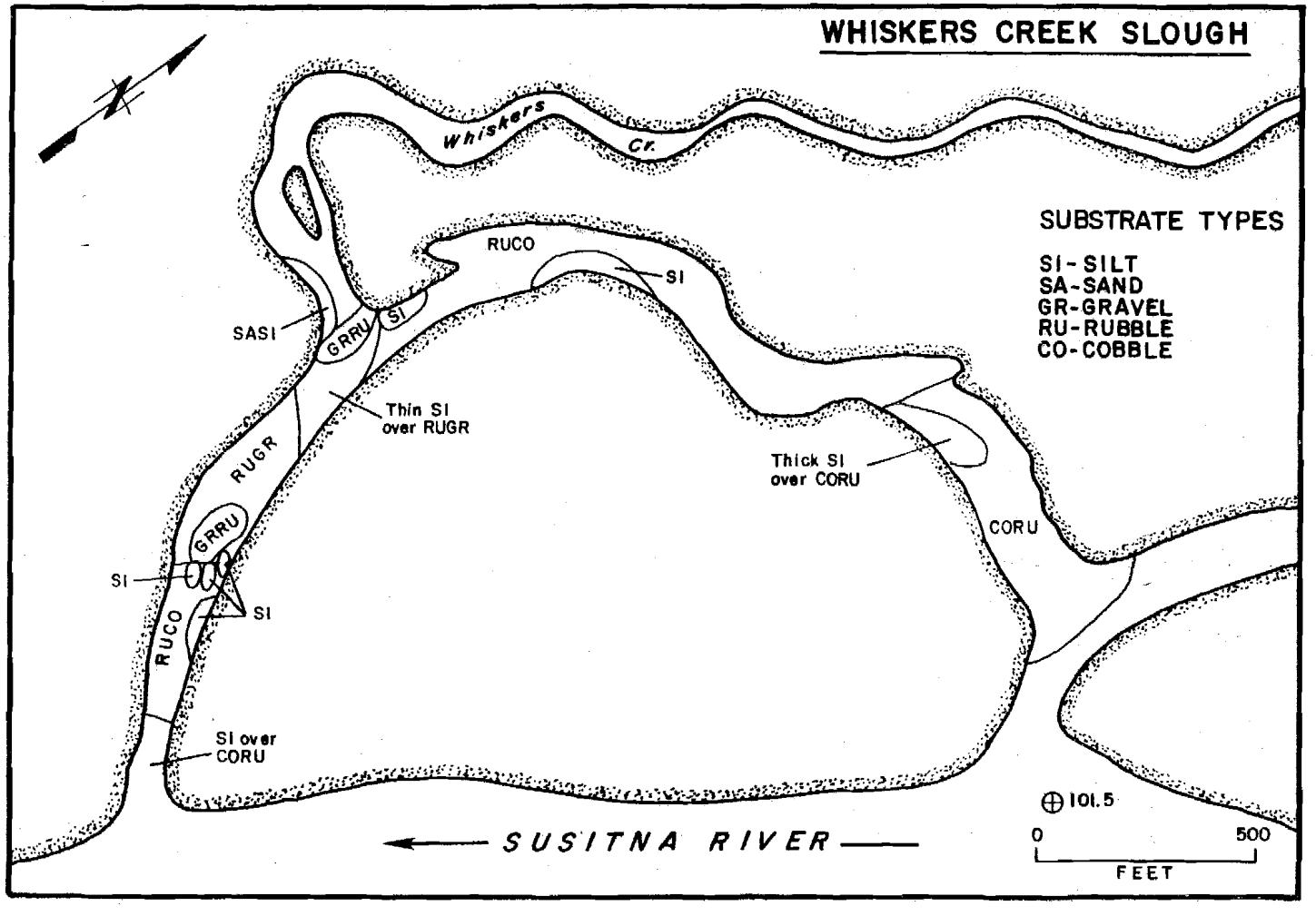


Figure 4-F-15. Whiskers Creek Slough substrate, 1982.

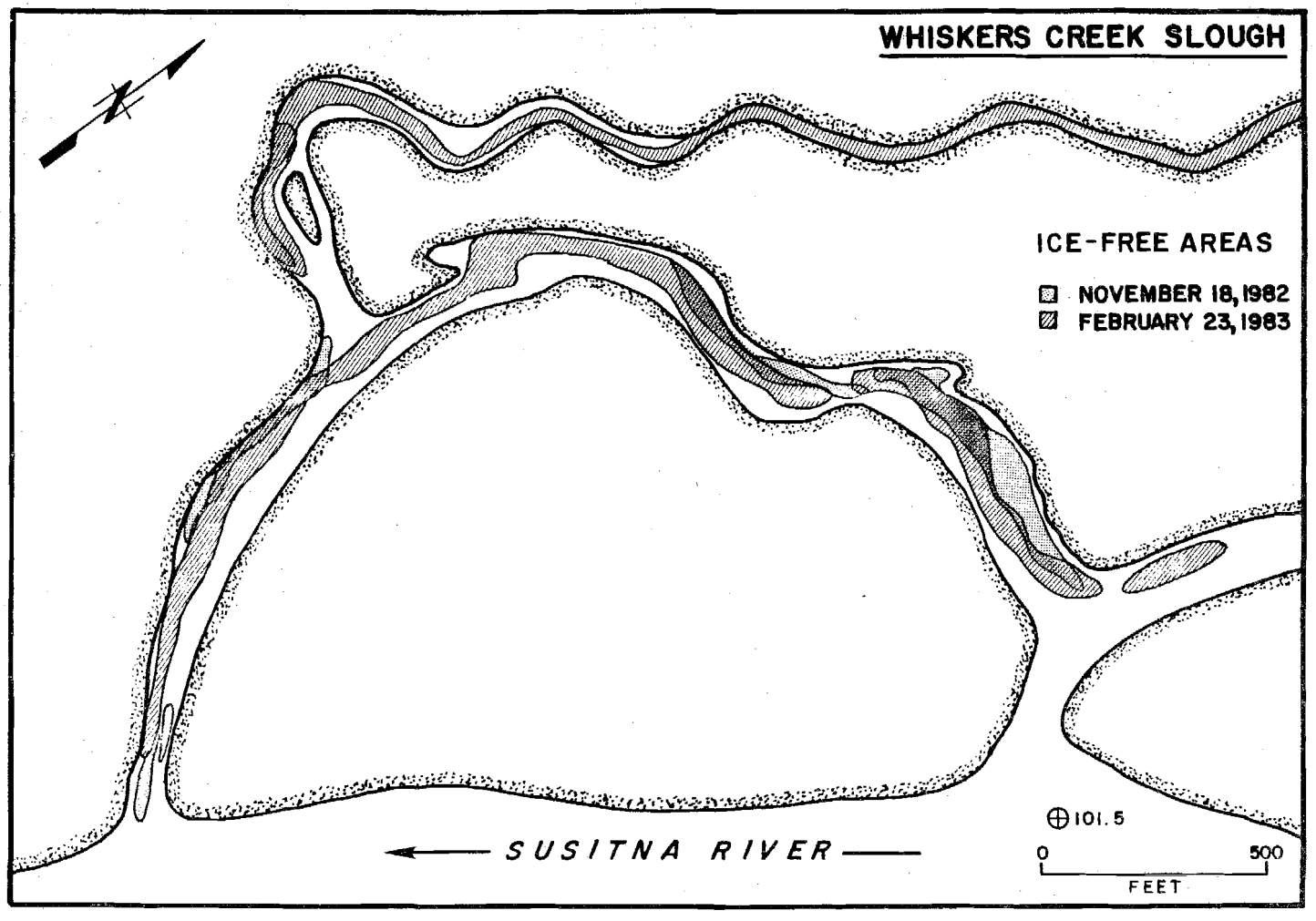


Figure 4-F-16. Whiskers Creek Slough ice-free areas, winter 1982-83.

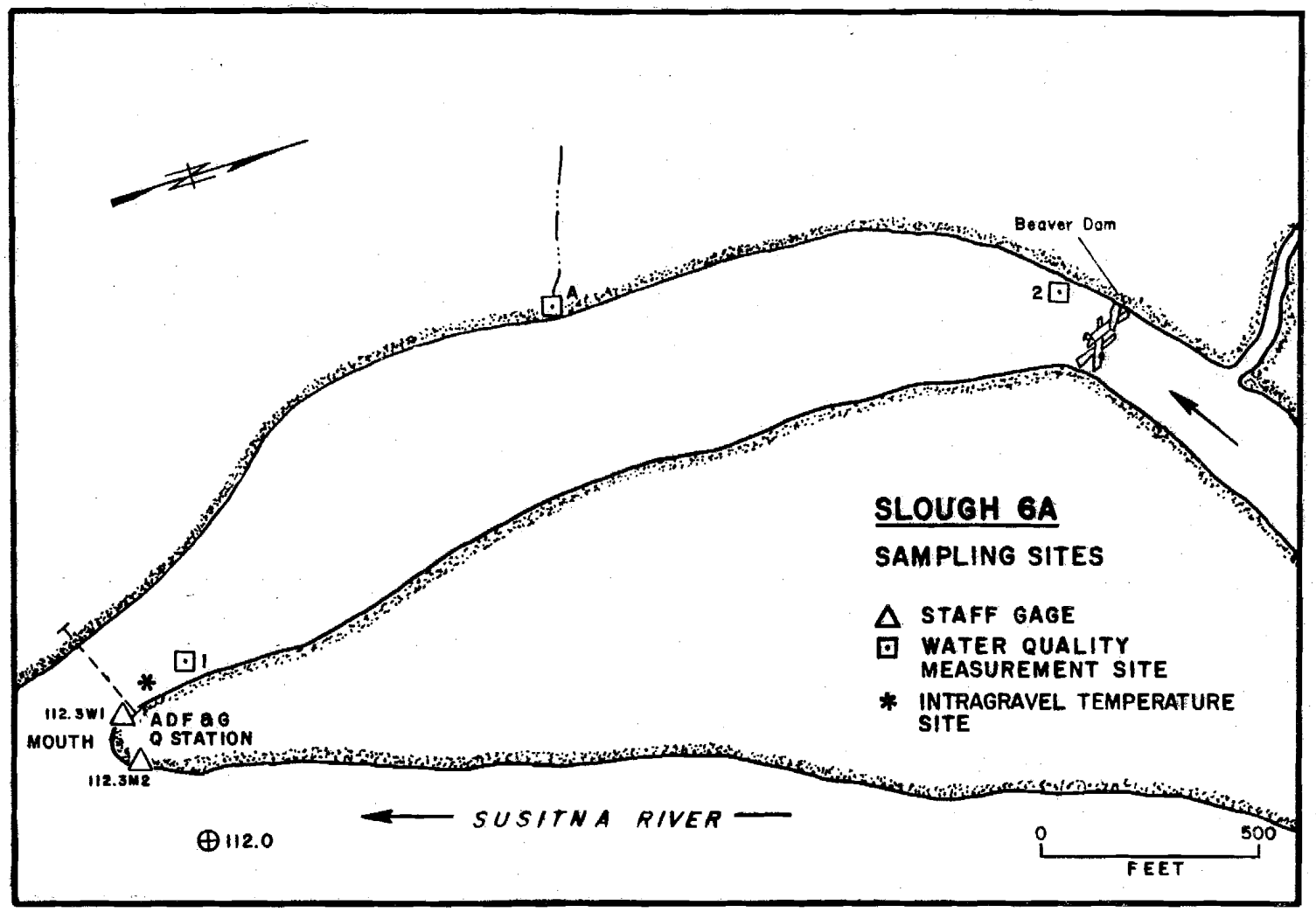


Figure 4-F-17. Slough 6A sampling sites, 1982.

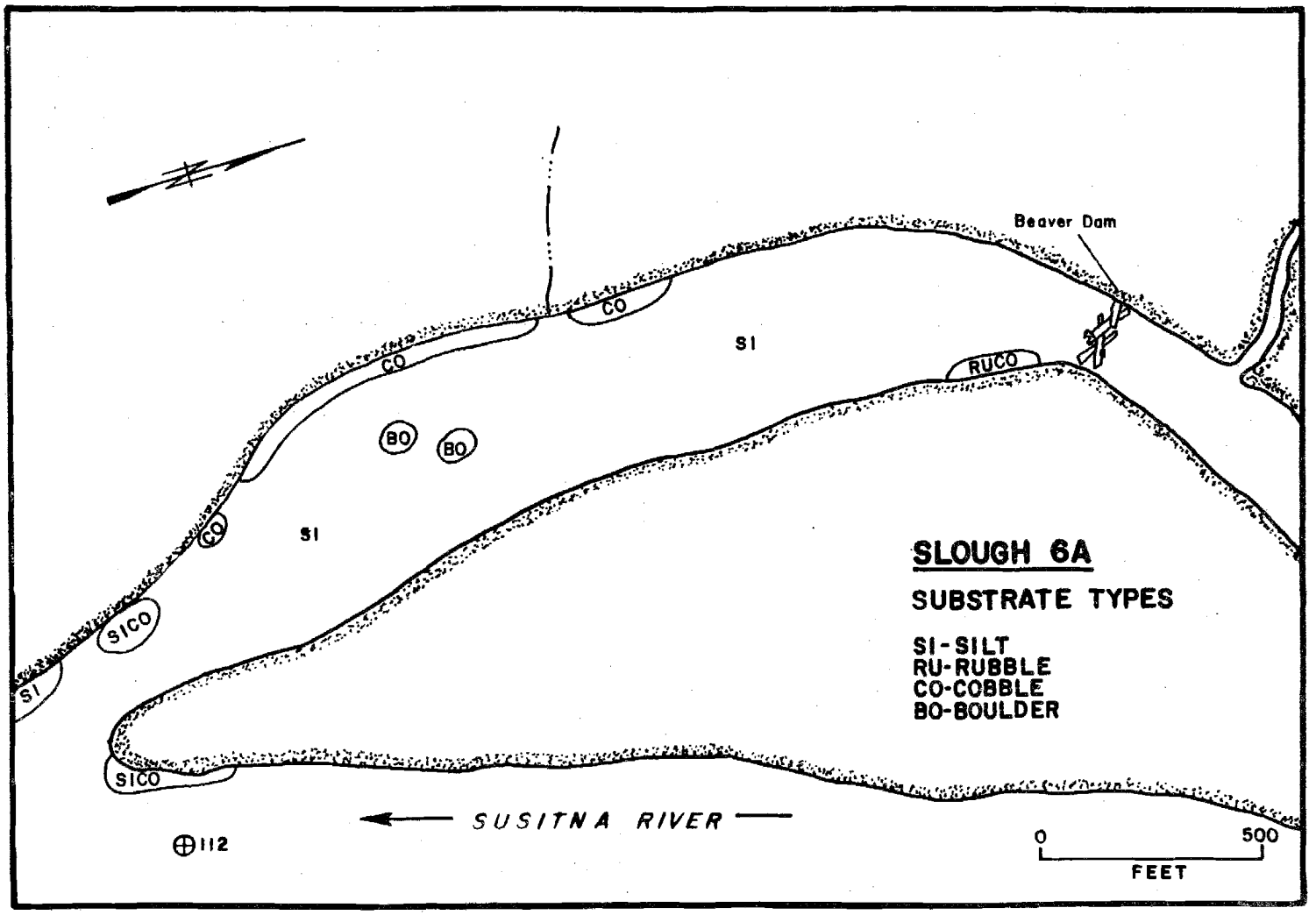


Figure 4-F-18. Slough 6A substrate, 1982.

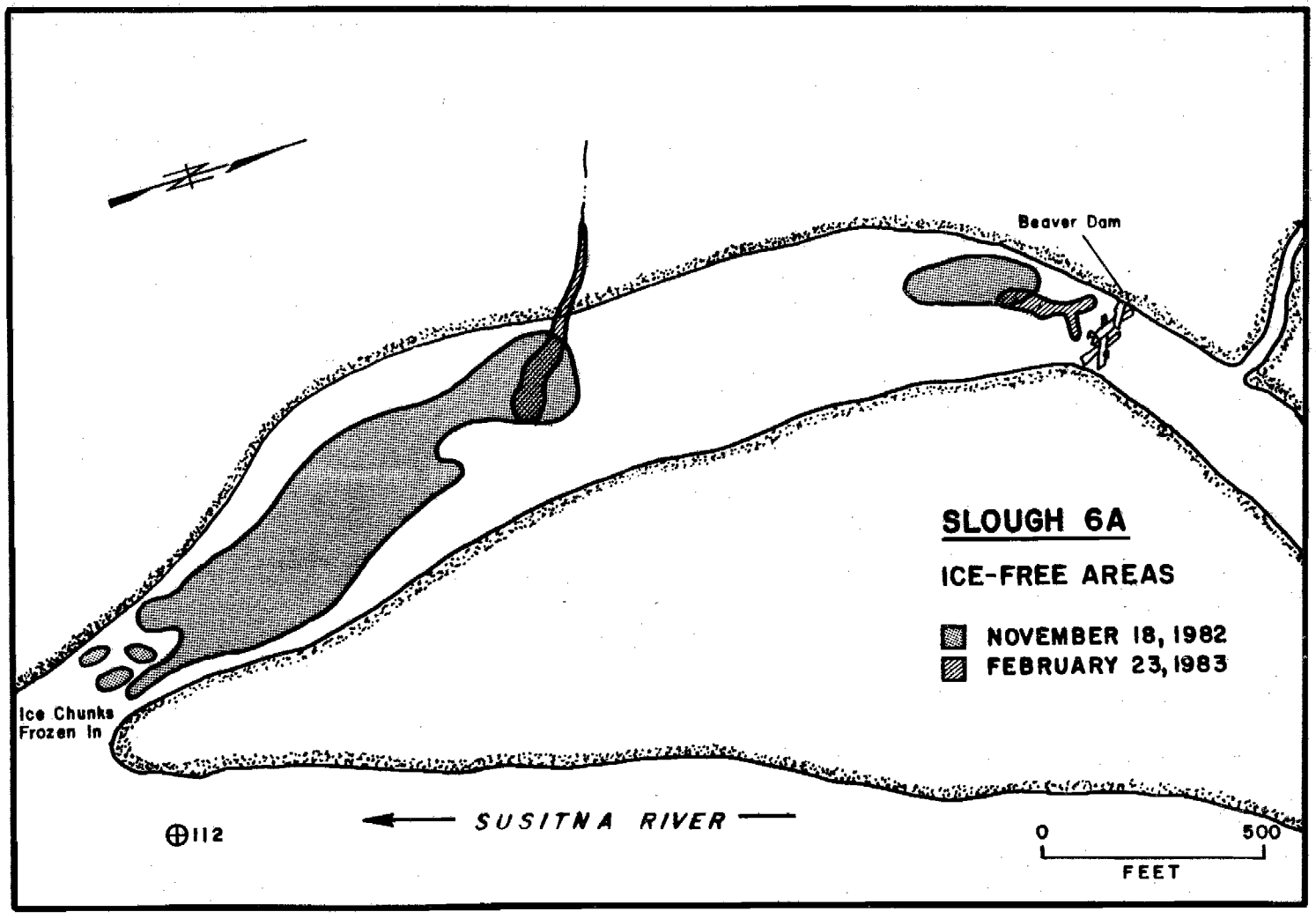


Figure 4-F-19. Slough 6A ice-free areas, winter 1982-83.

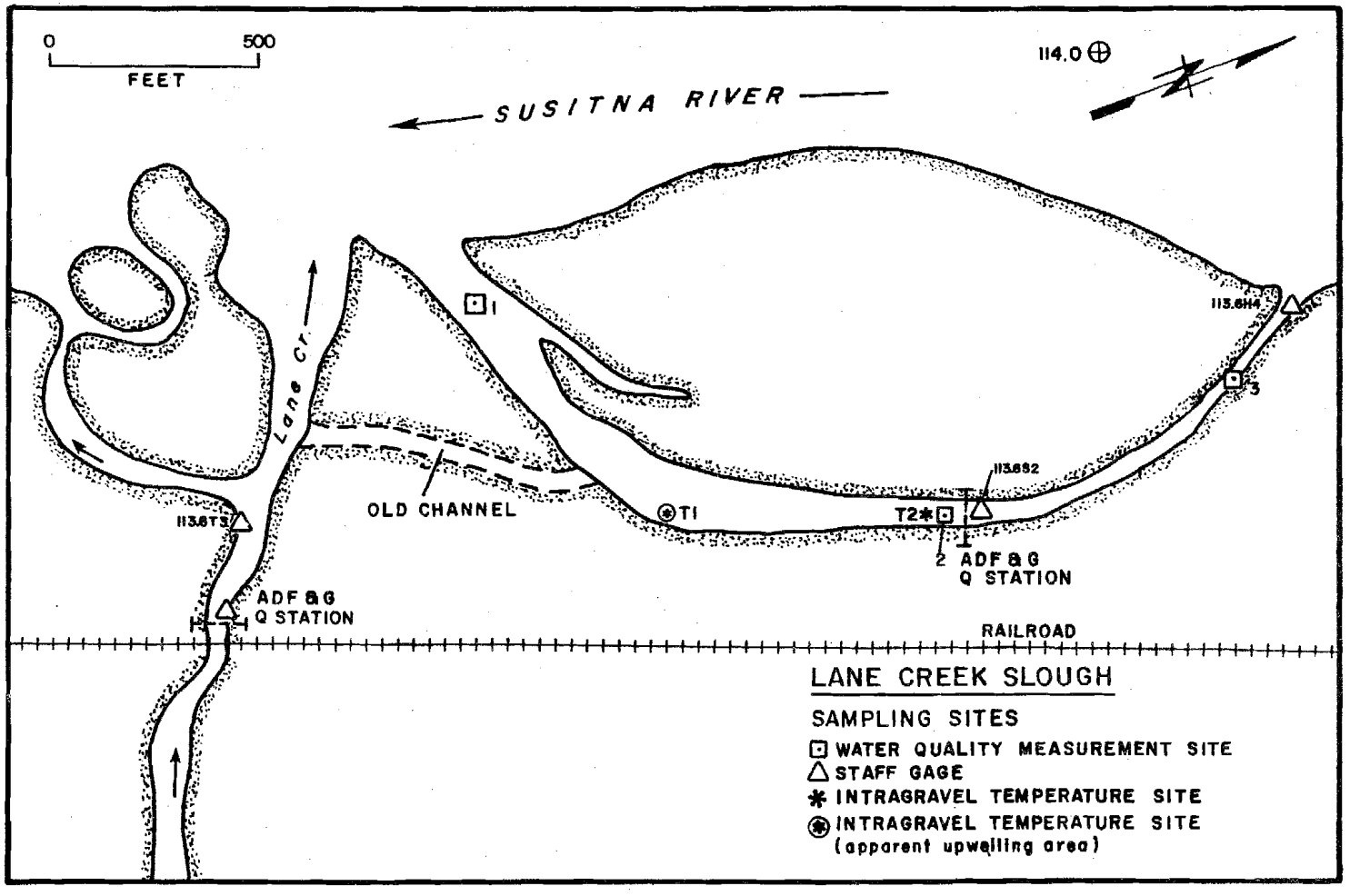


Figure 4-F-20. Lane Creek Slough sampling sites, 1982.

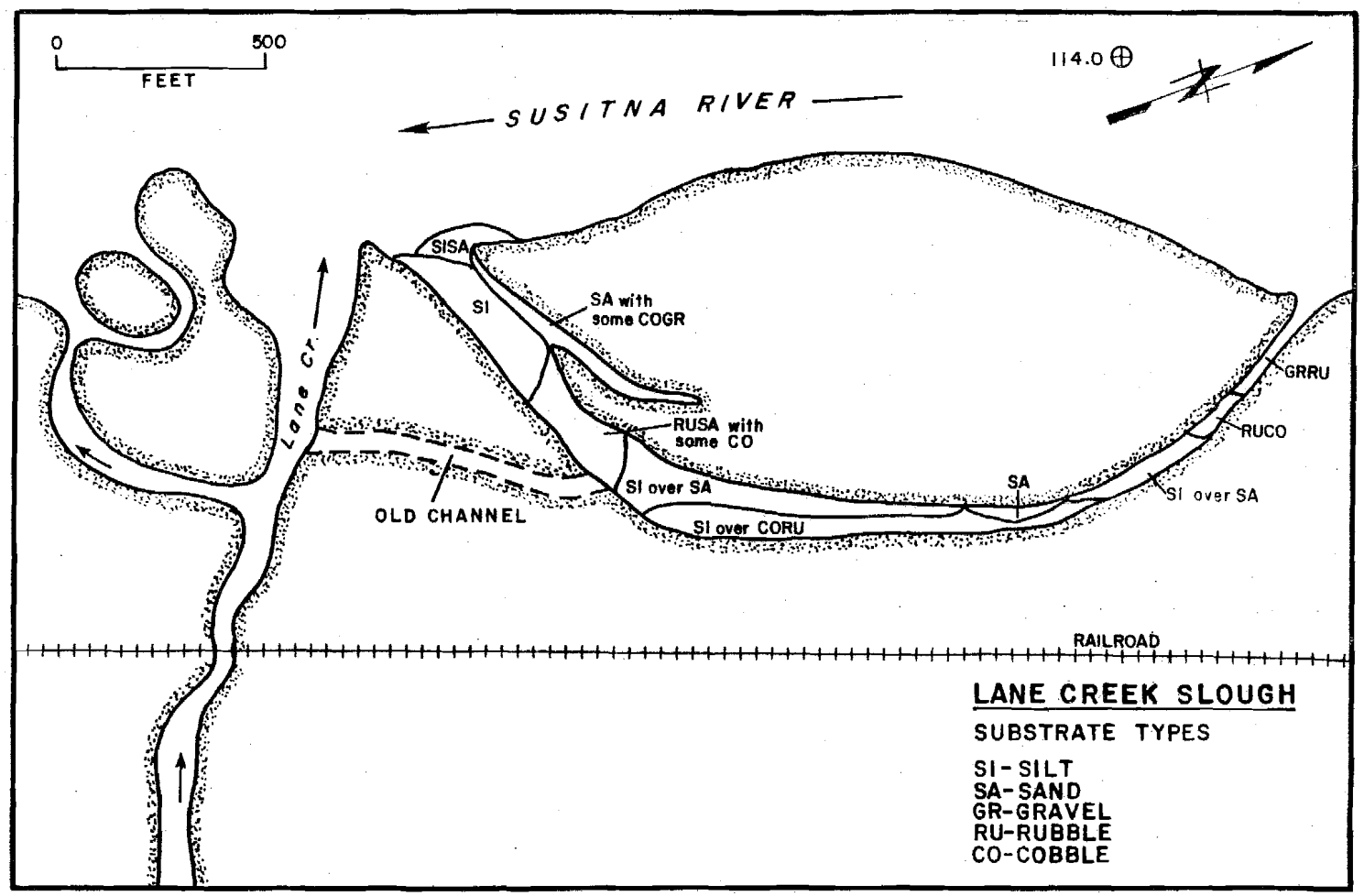


Figure 4-F-21. Lane Creek Slough substrate, 1982.

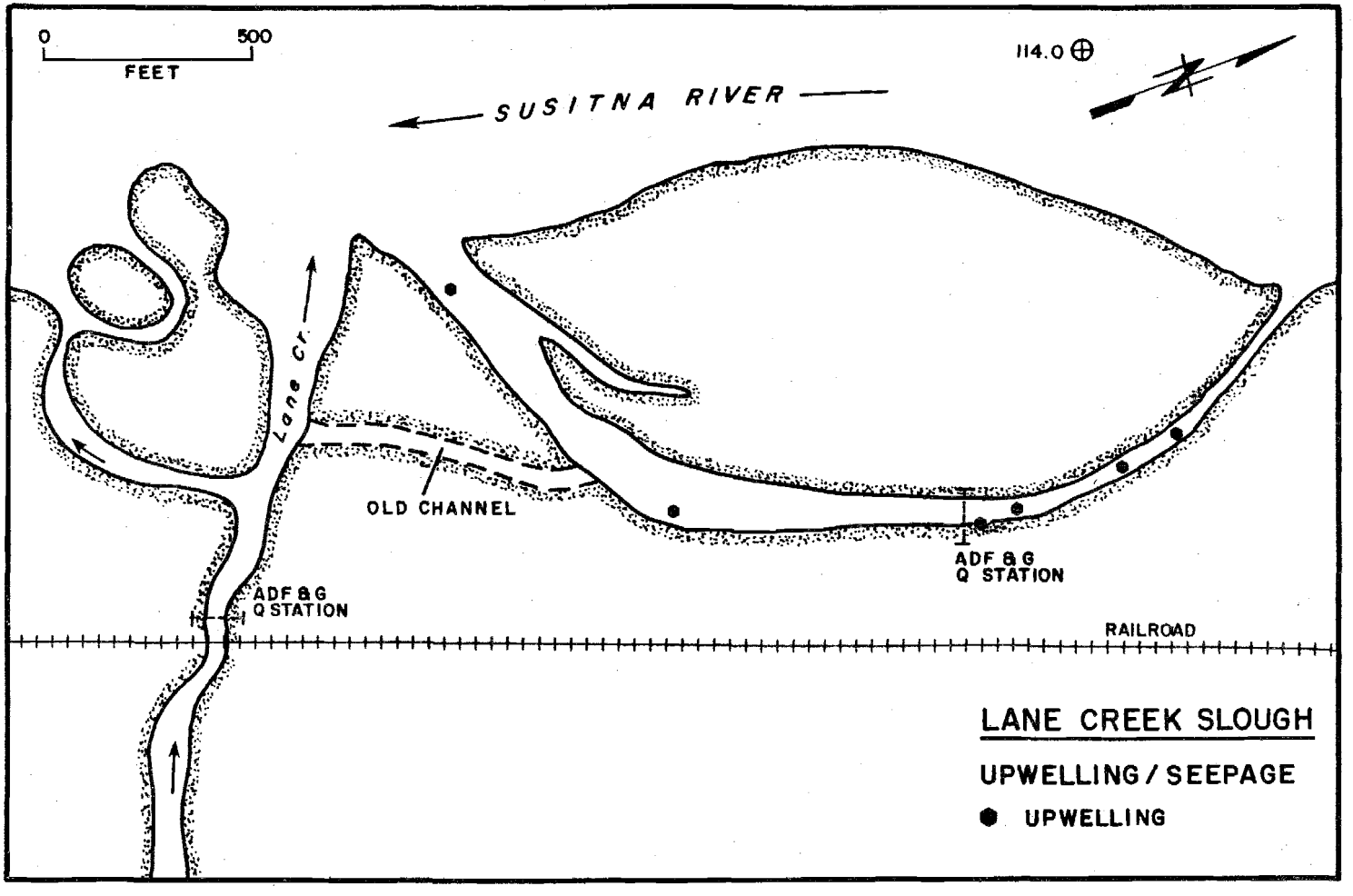


Figure 4-F-22. Lane Creek Slough upwelling/seepage, 1982.

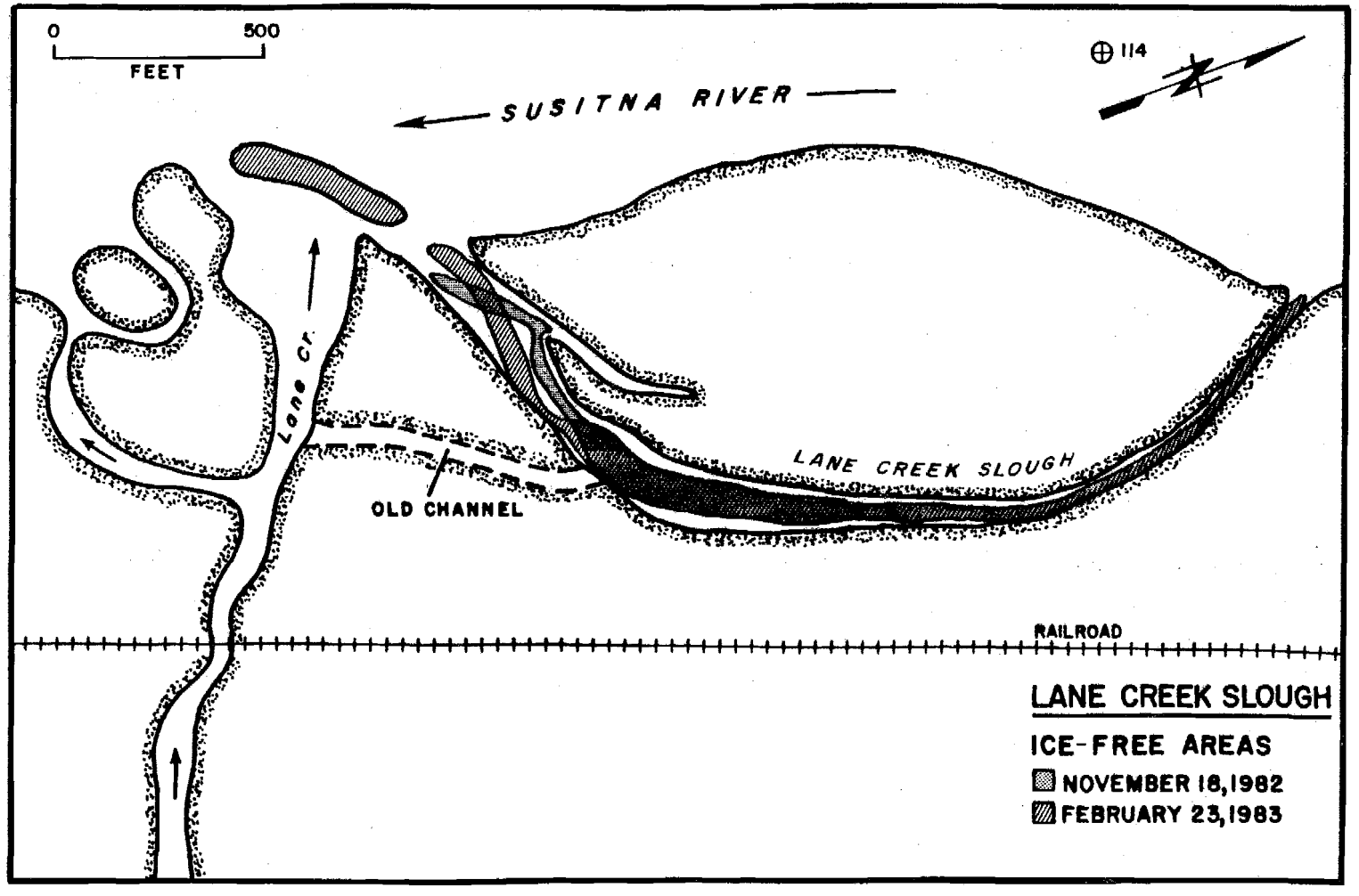


Figure 4-F-23. Lane Creek Slough ice-free areas, winter 1982-83.

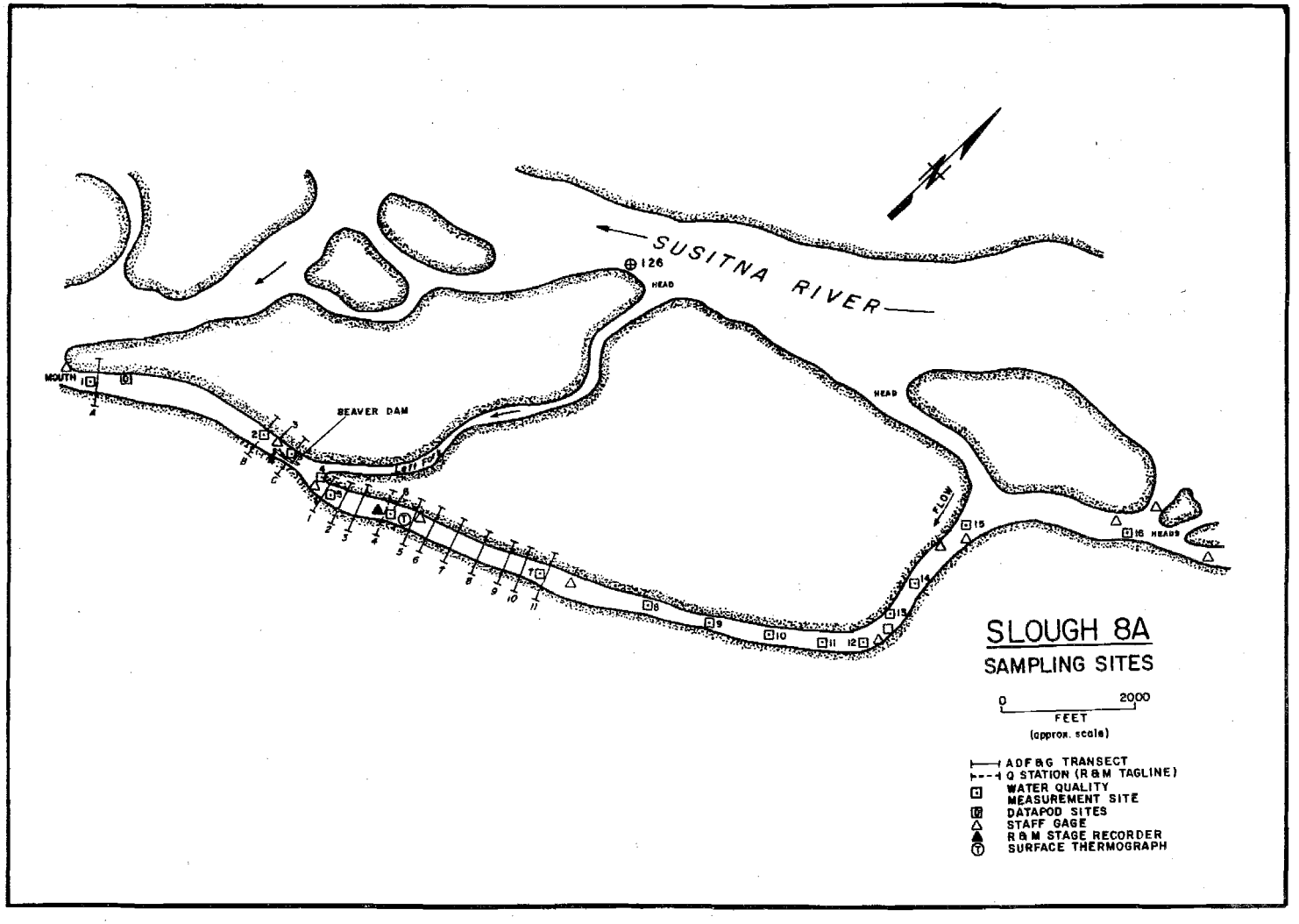


Figure 4-F-24. Slough 8A sampling sites, 1982.

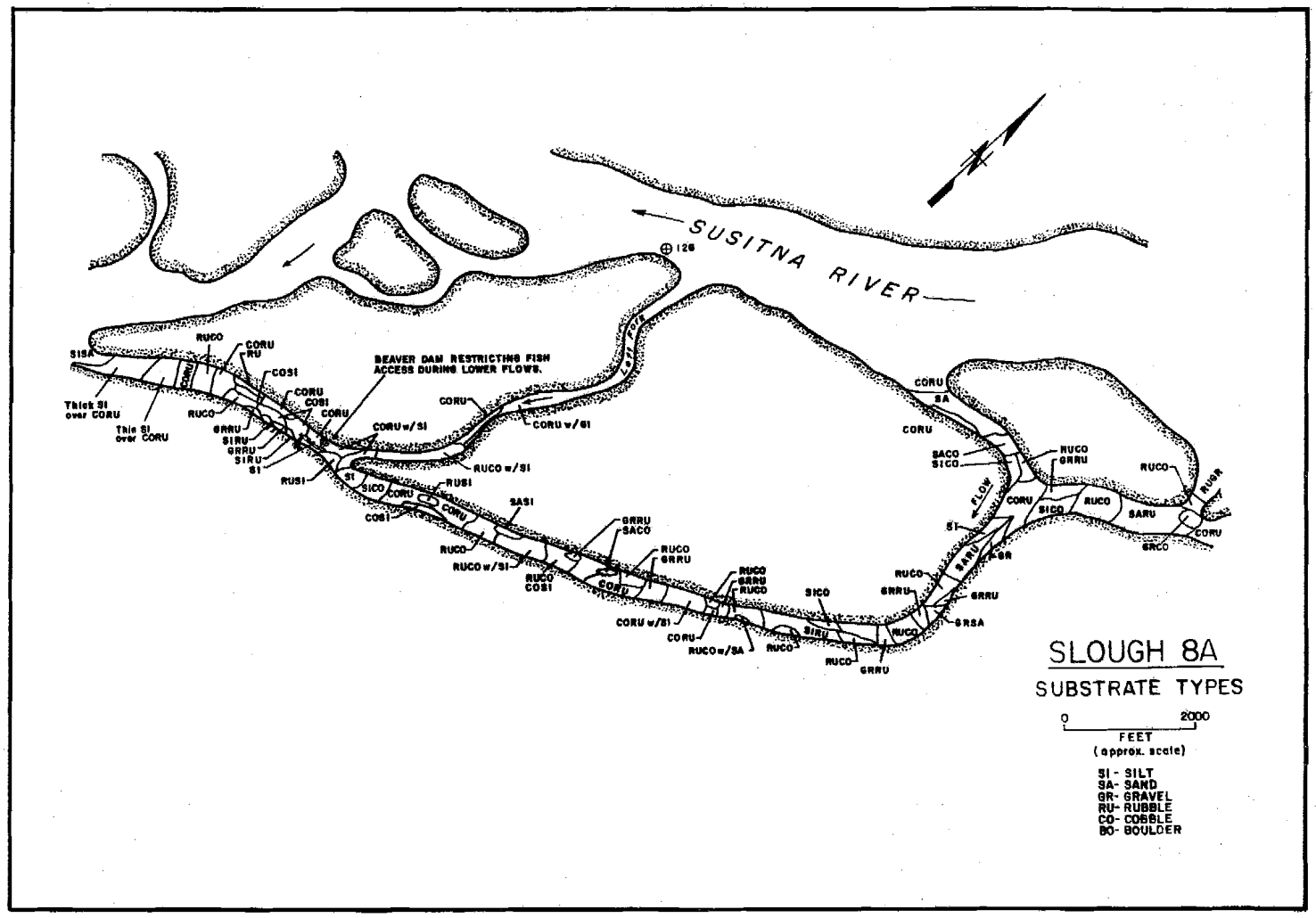


Figure 4-F-25. Slough 8A substrate, 1982.

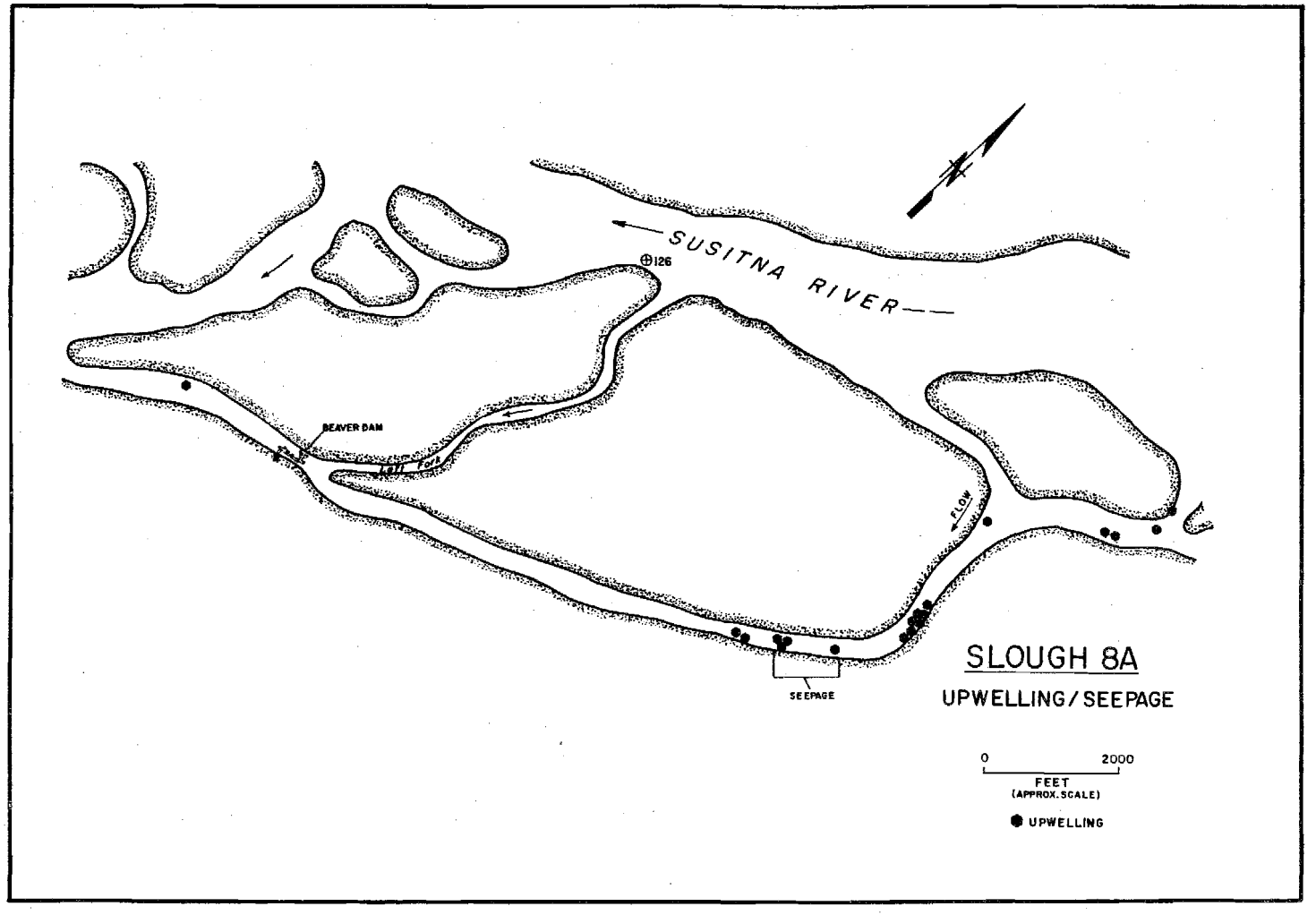


Figure 4-F-26. Slough 8A upwelling/seepage, 1982.

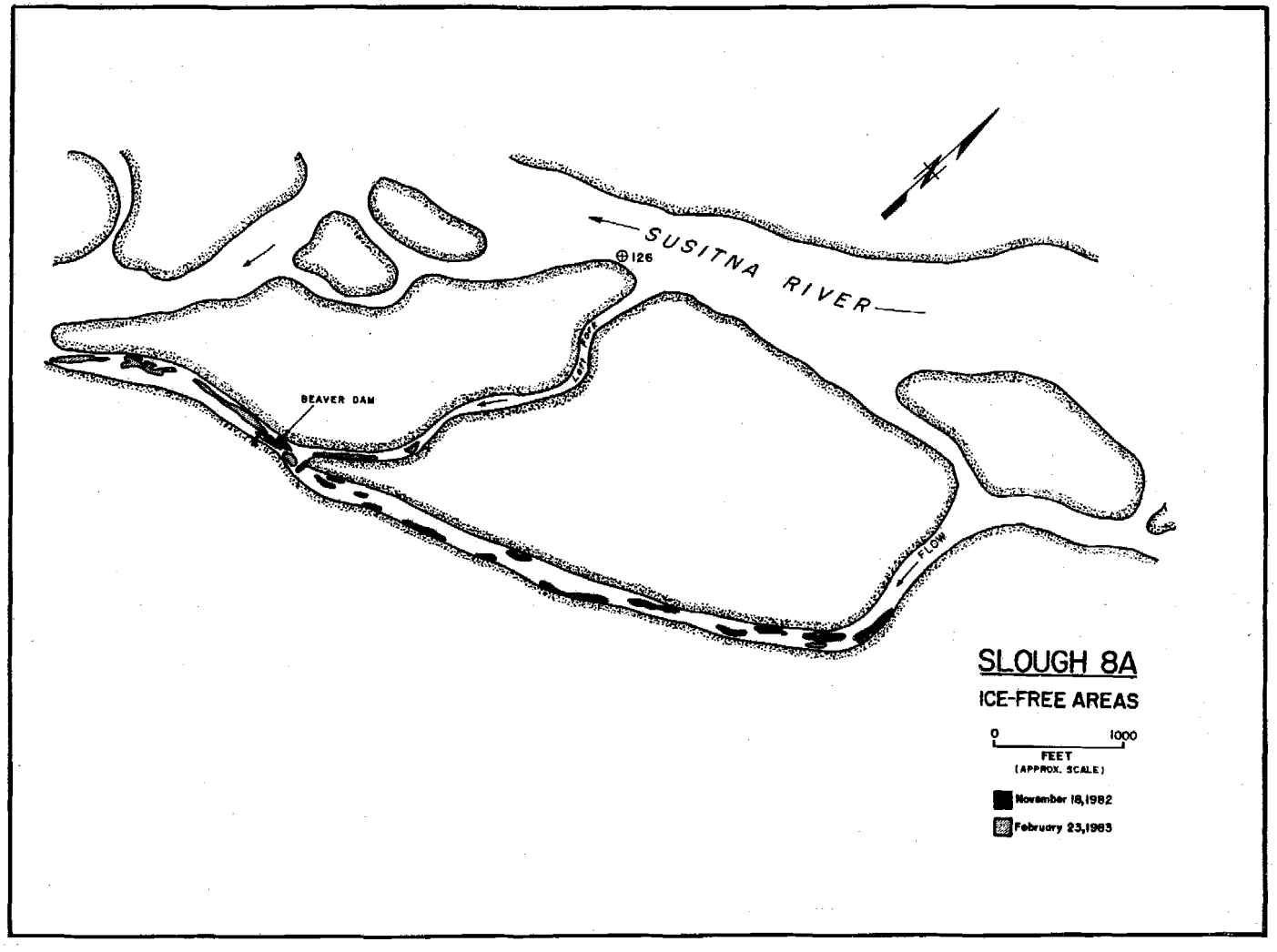


Figure 4-F-27. Slough 8A ice-free areas, winter 1982-83.

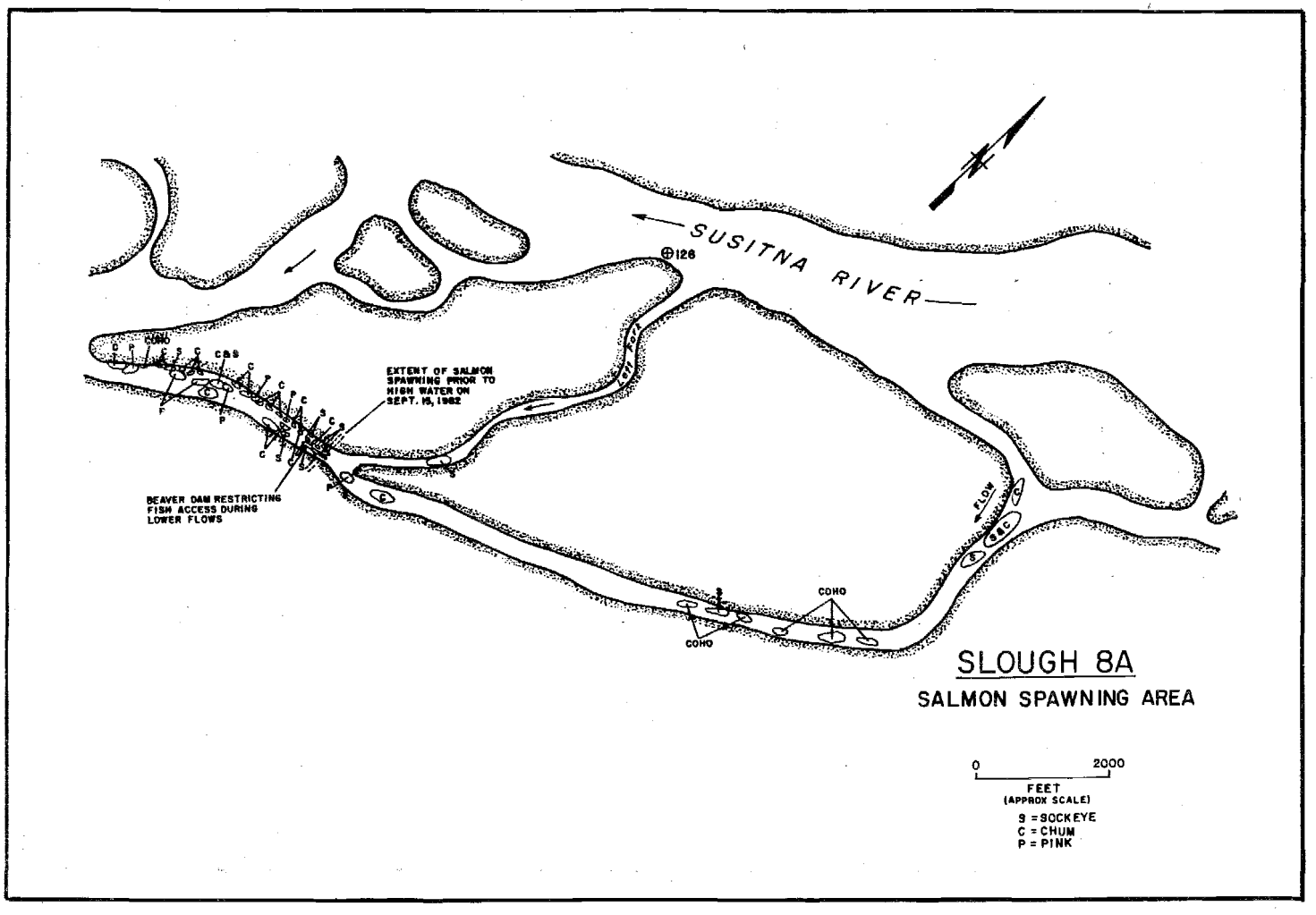


Figure 4-F-28. Slough 8A spawning areas, 1982.

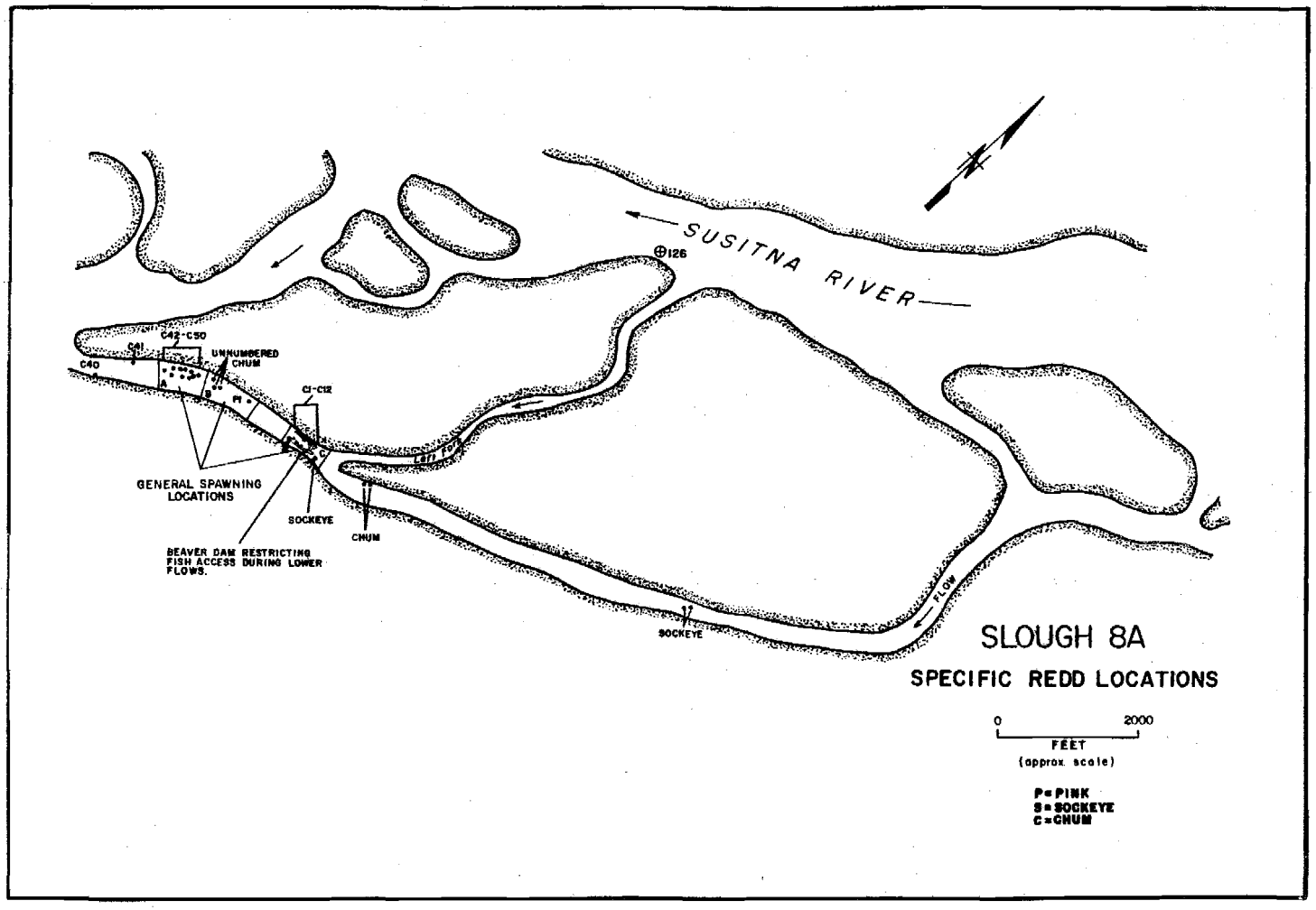


Figure 4-F-29. Slough 8A redd locations, 1982.

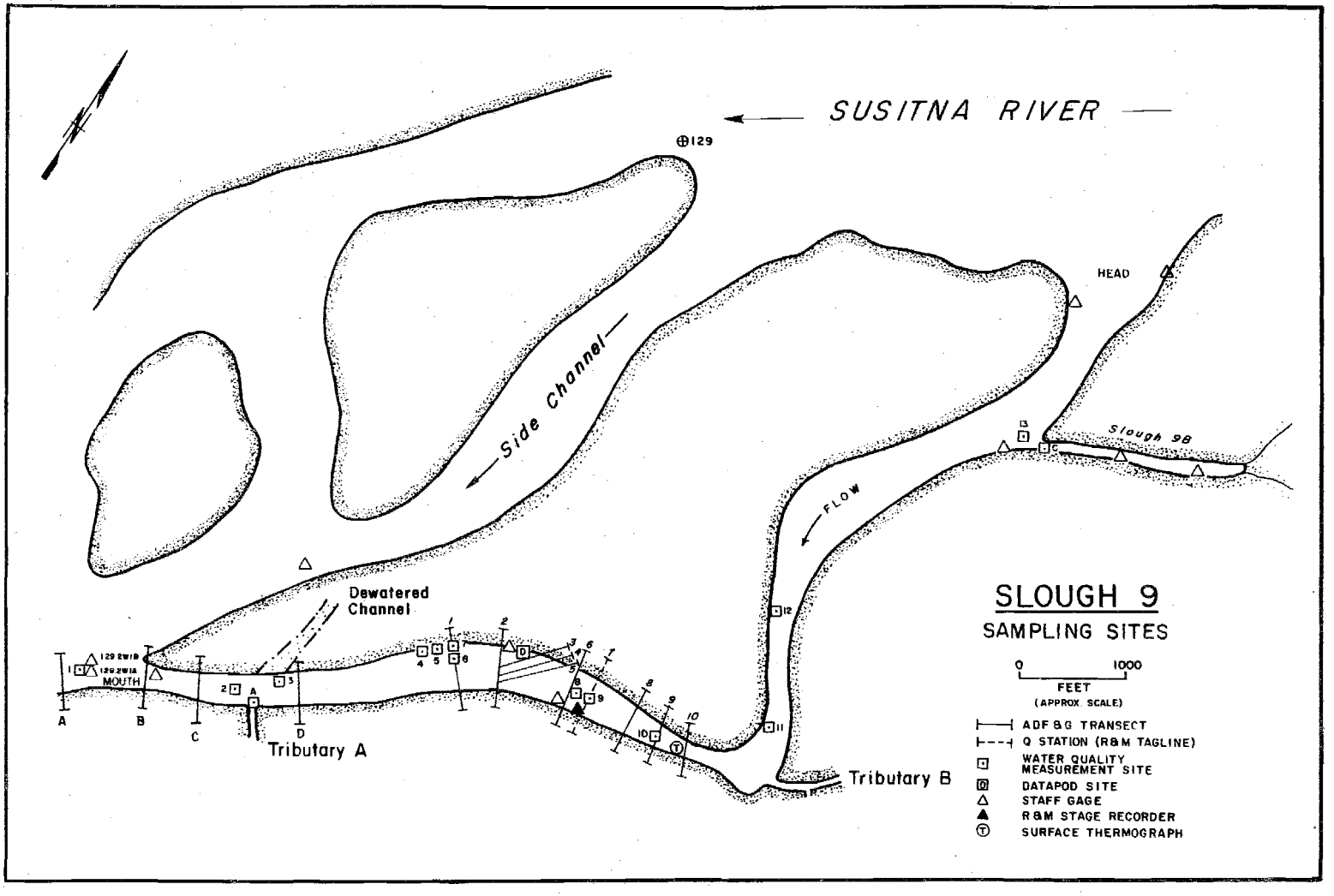


Figure 4-F-30. Slough 9 sampling sites, 1982.

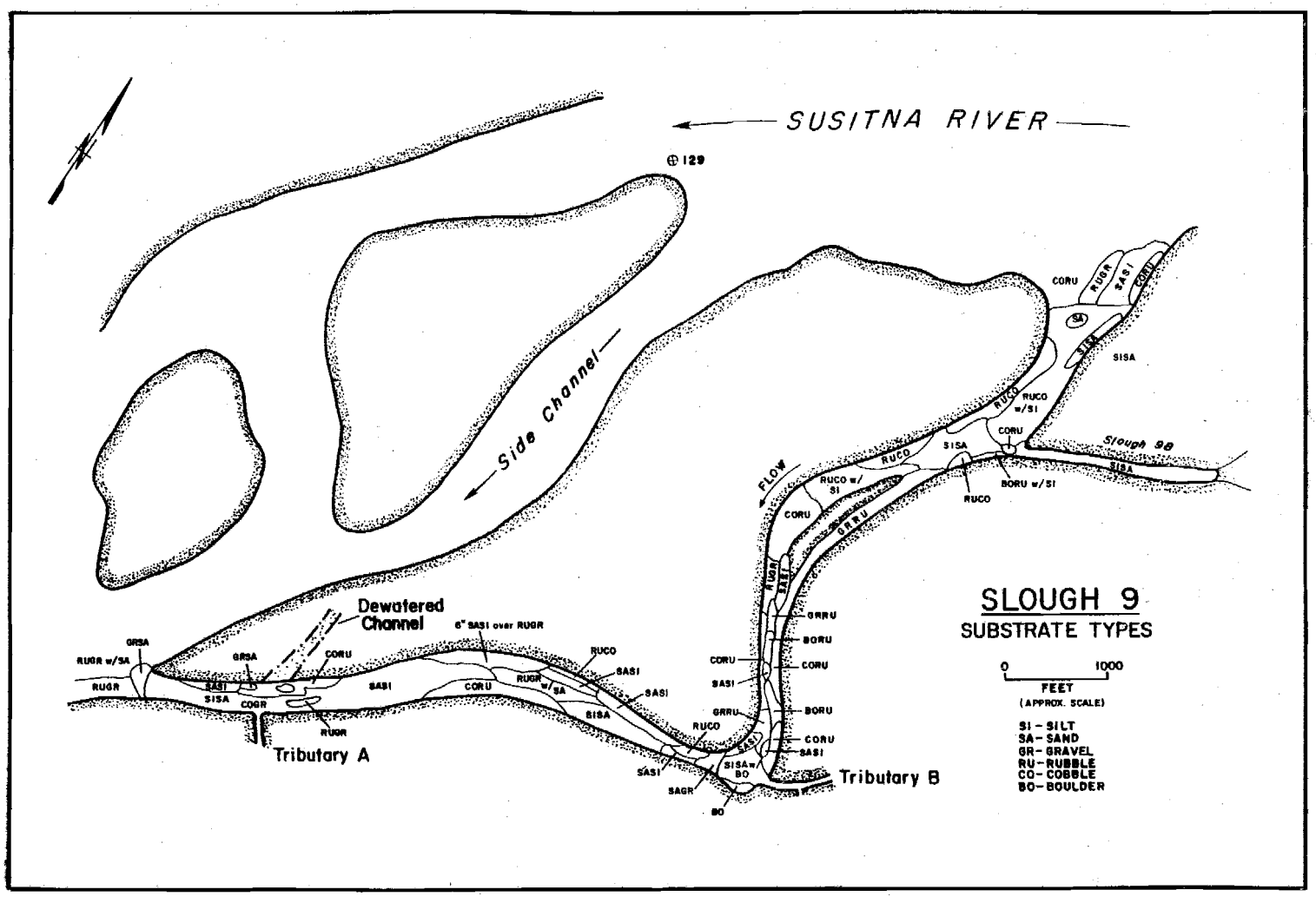


Figure 4-F-31. Slough 9 substrate, 1982.

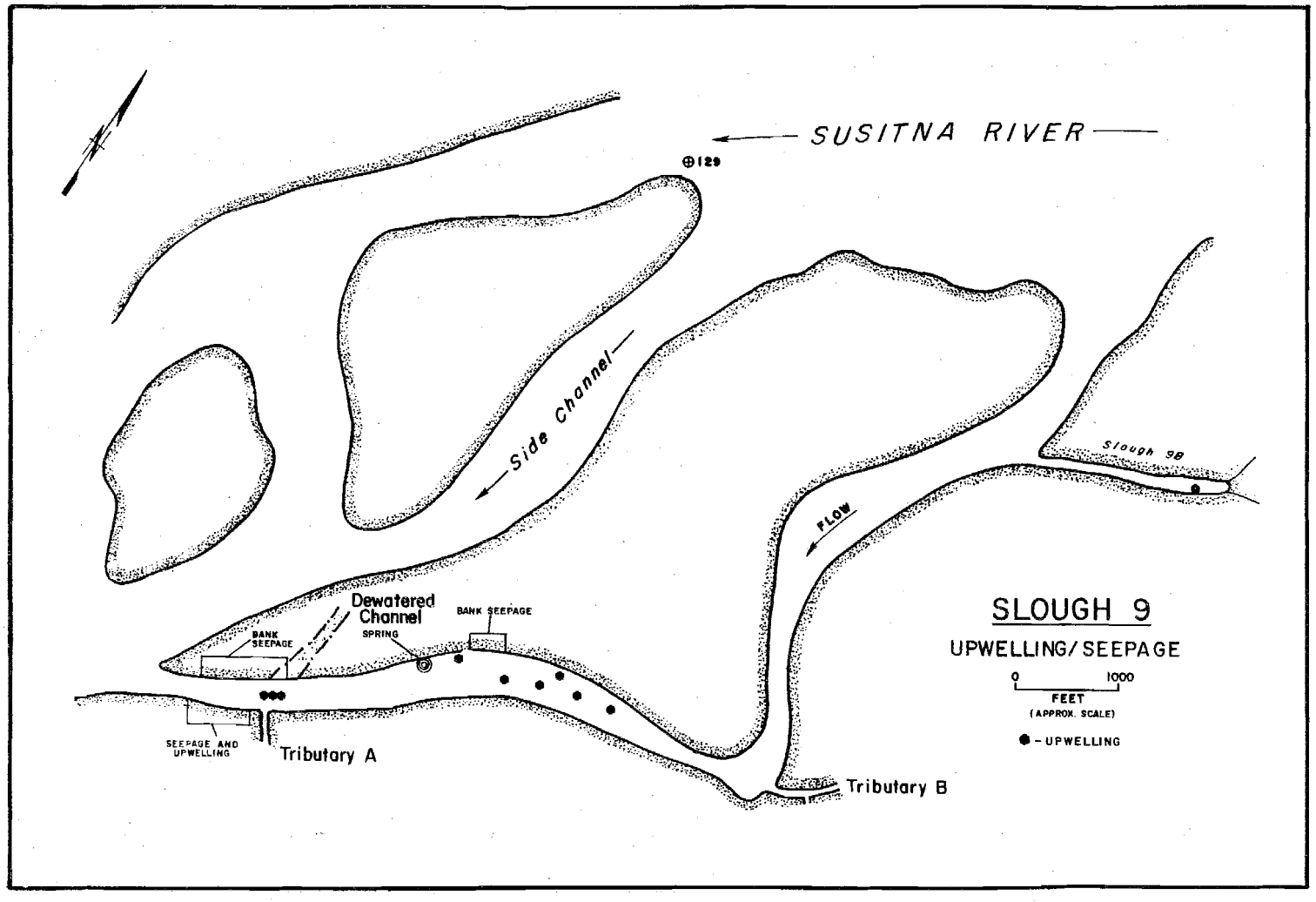


Figure 4-F-32. Slough 9 upwelling/seepage, 1982.

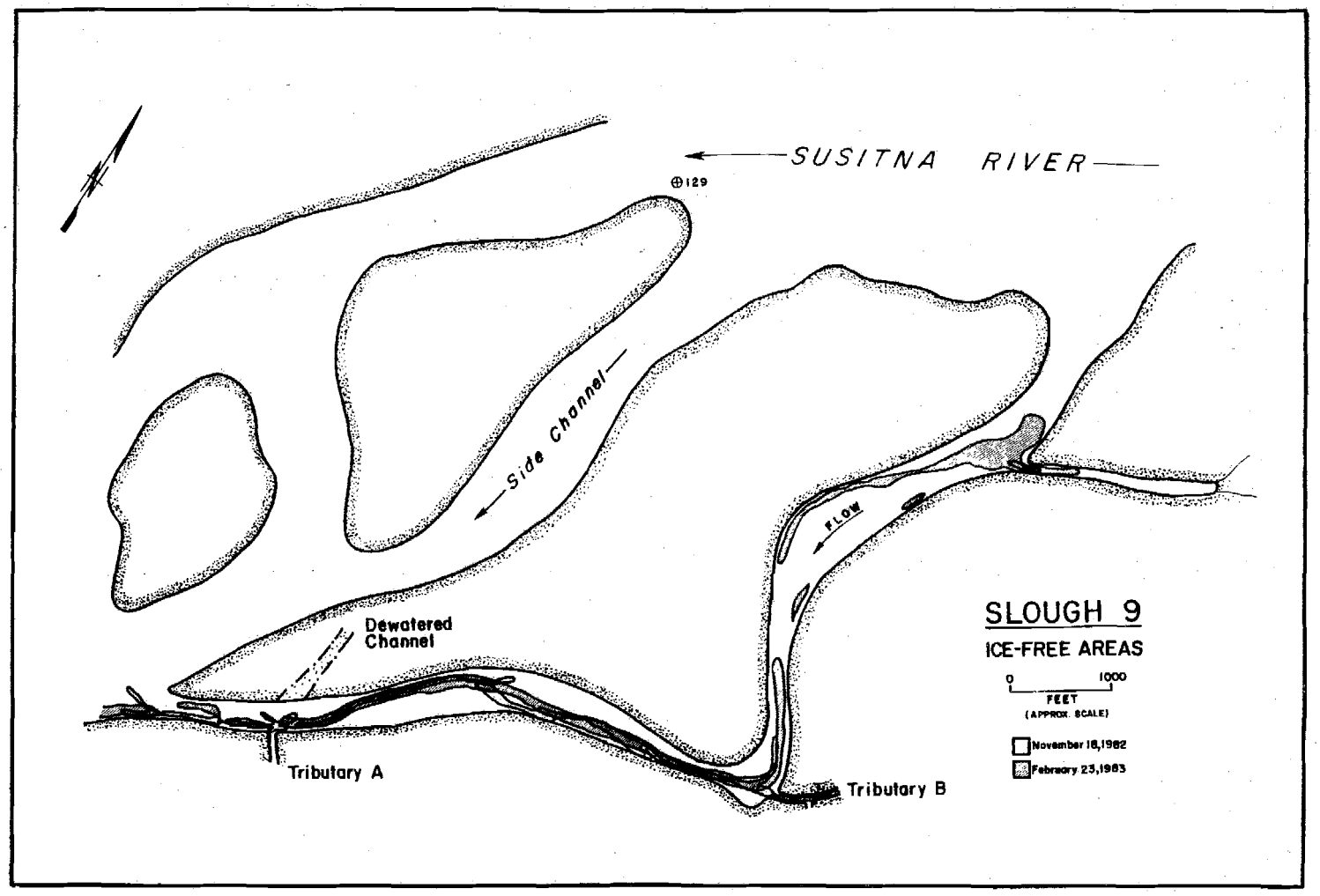


Figure 4-F-33. Slough 9 ice-free areas, winter 1982-83.

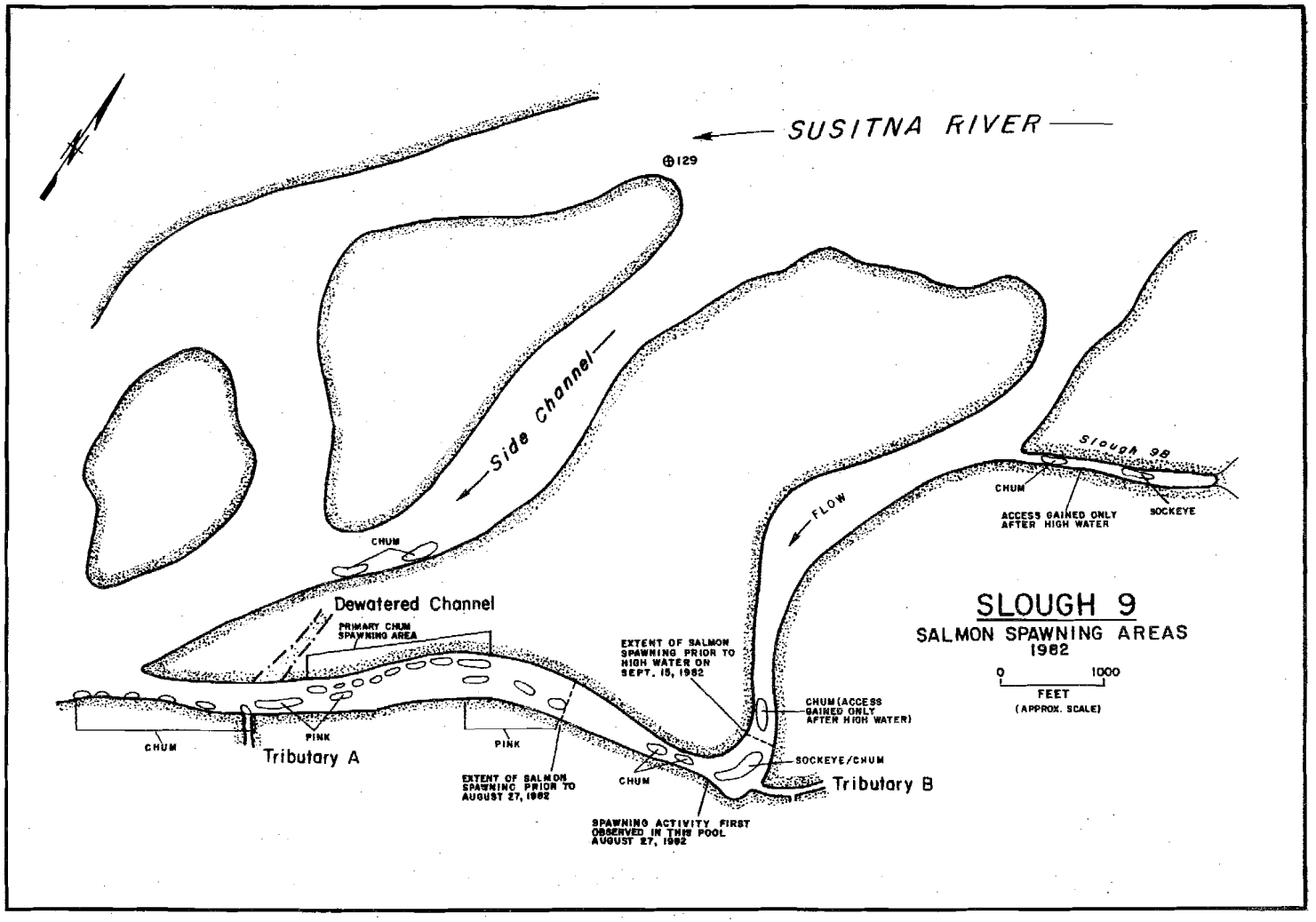


Figure 4-F-34. Slough 9 spawning areas, 1982.

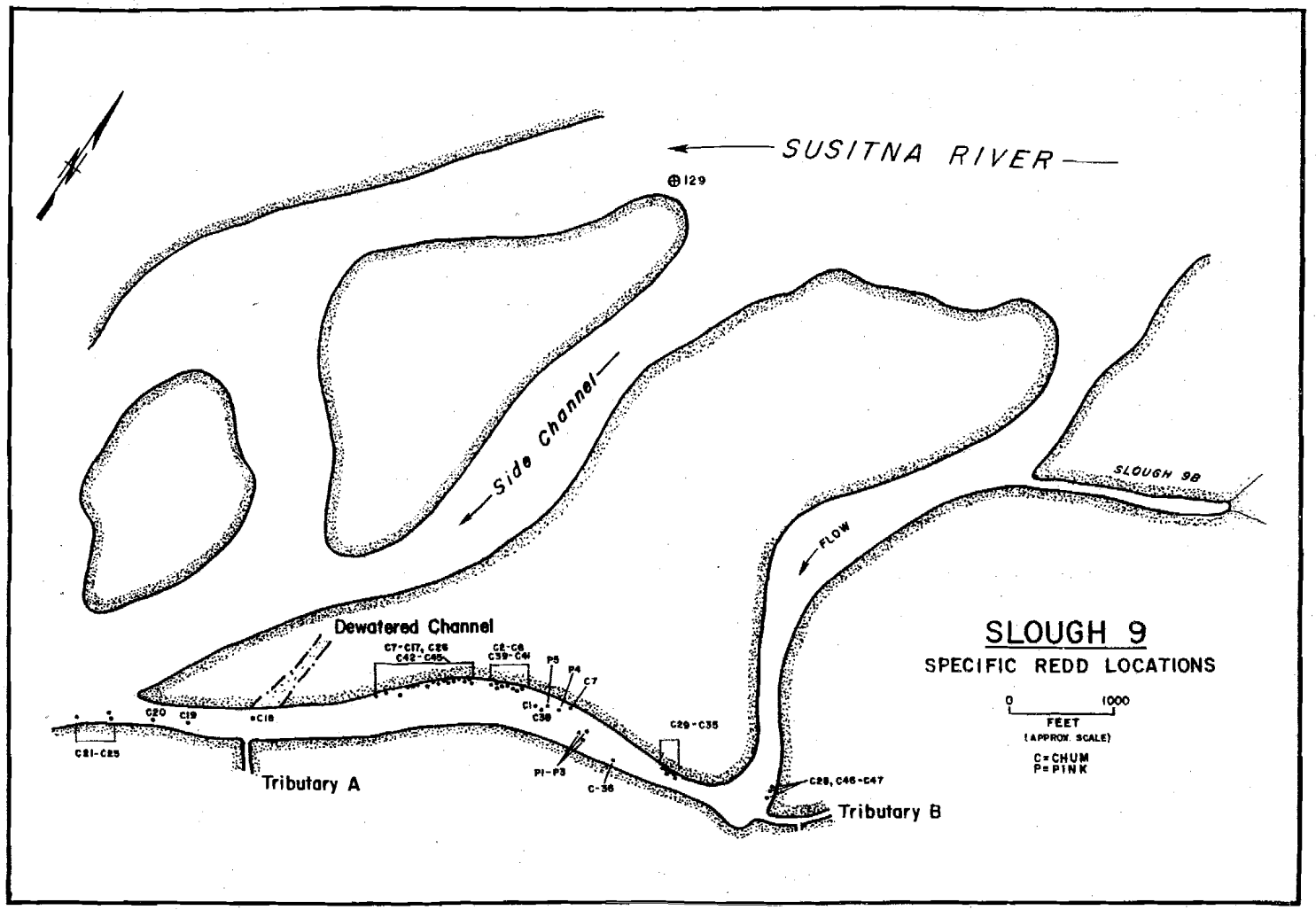


Figure 4-F-35. Slough 9 redd locations, 1982.

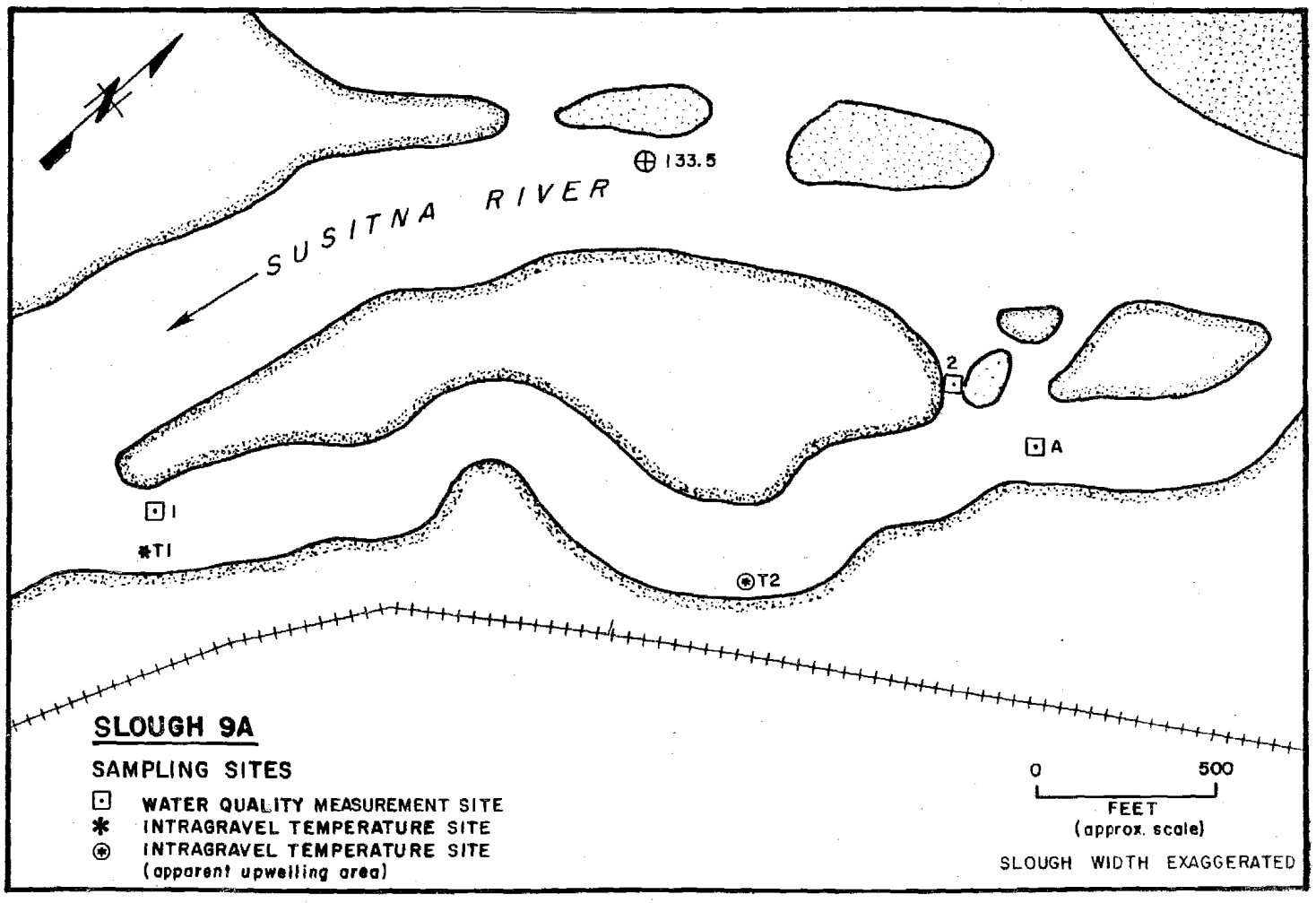


Figure 4-F-36. Slough 9A sampling sites, 1982.

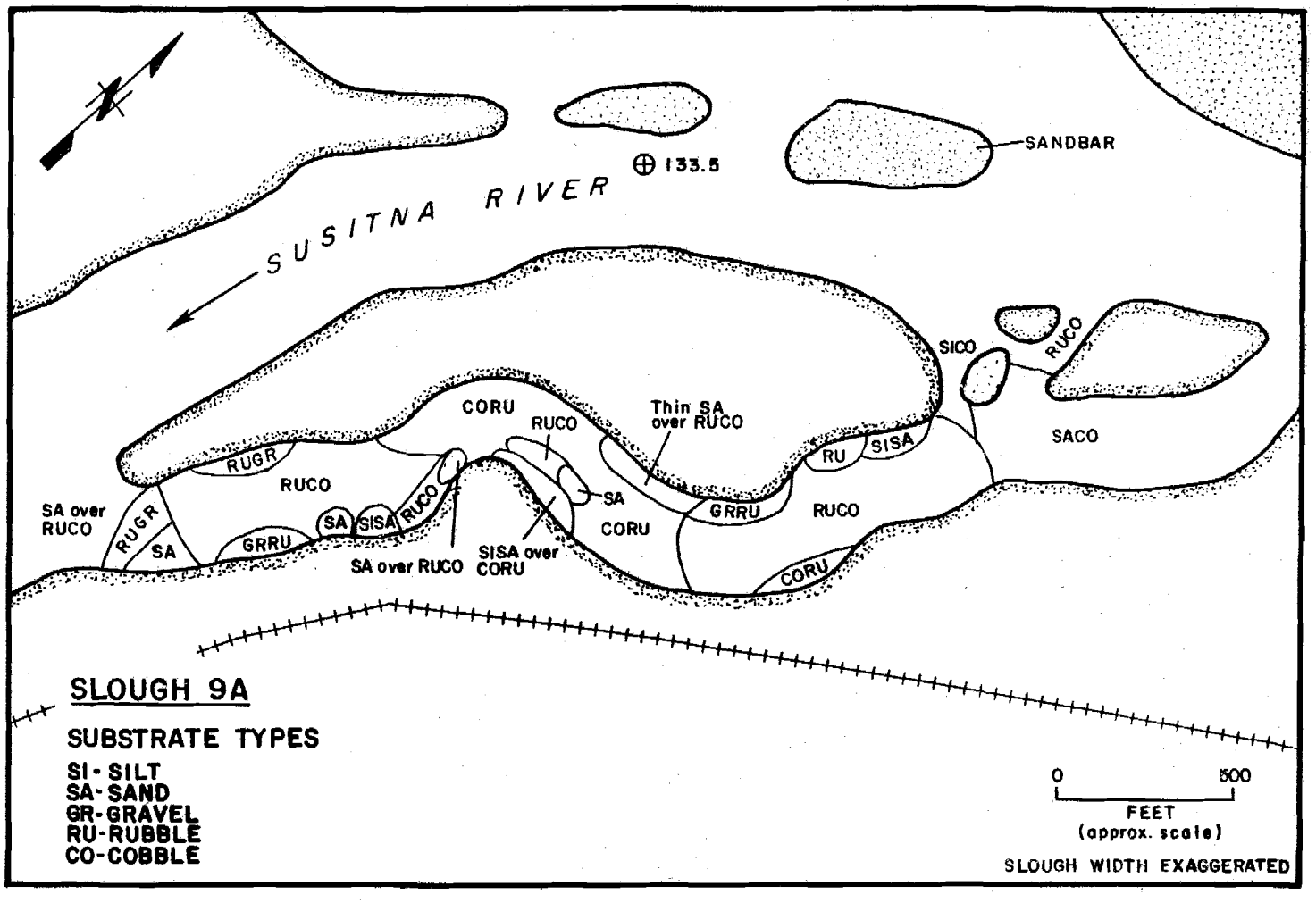


Figure 4-F-37. Slough 9A substrate, 1982.

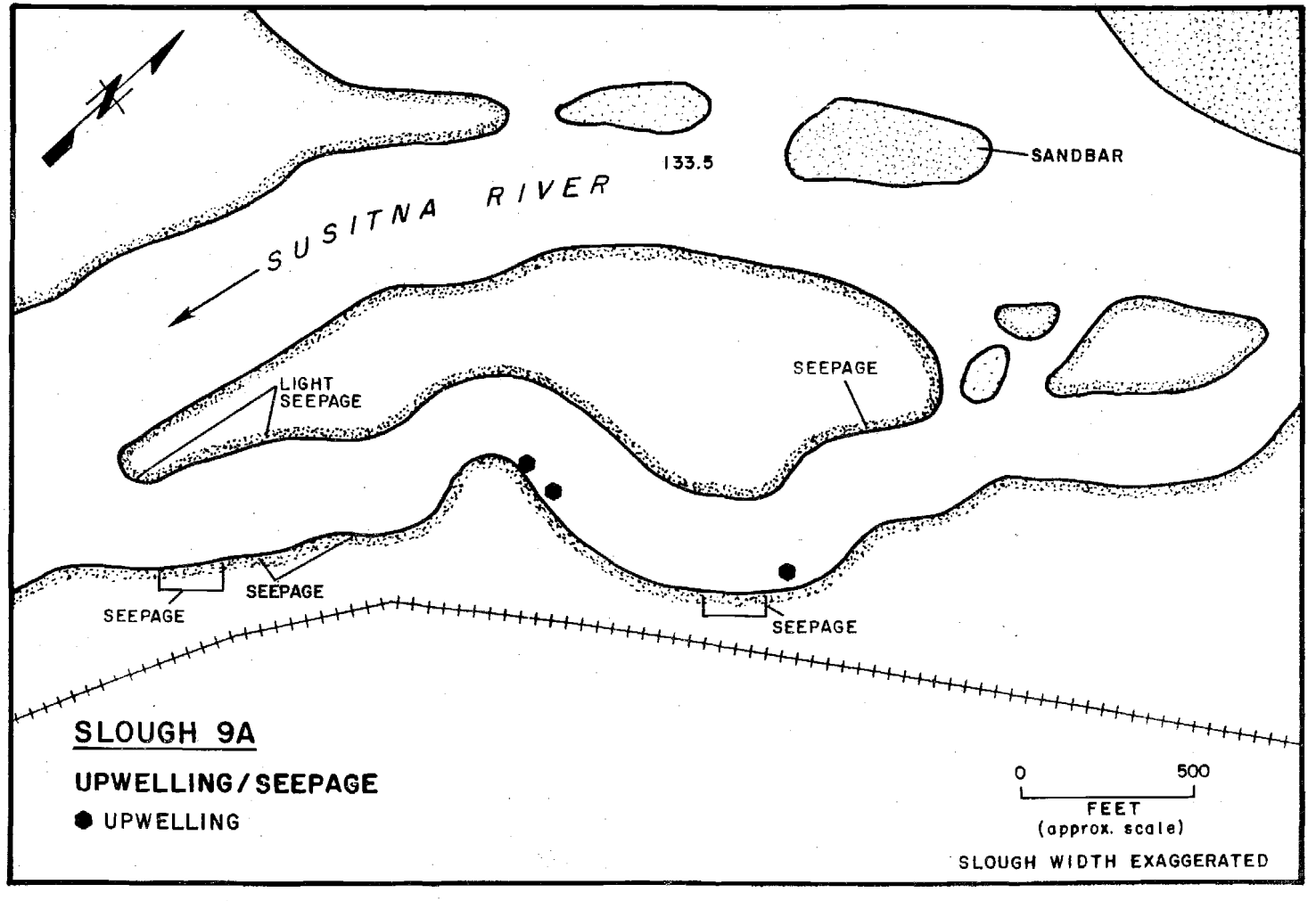


Figure 4-F-38. Slough 9A upwelling/seepage, 1982.

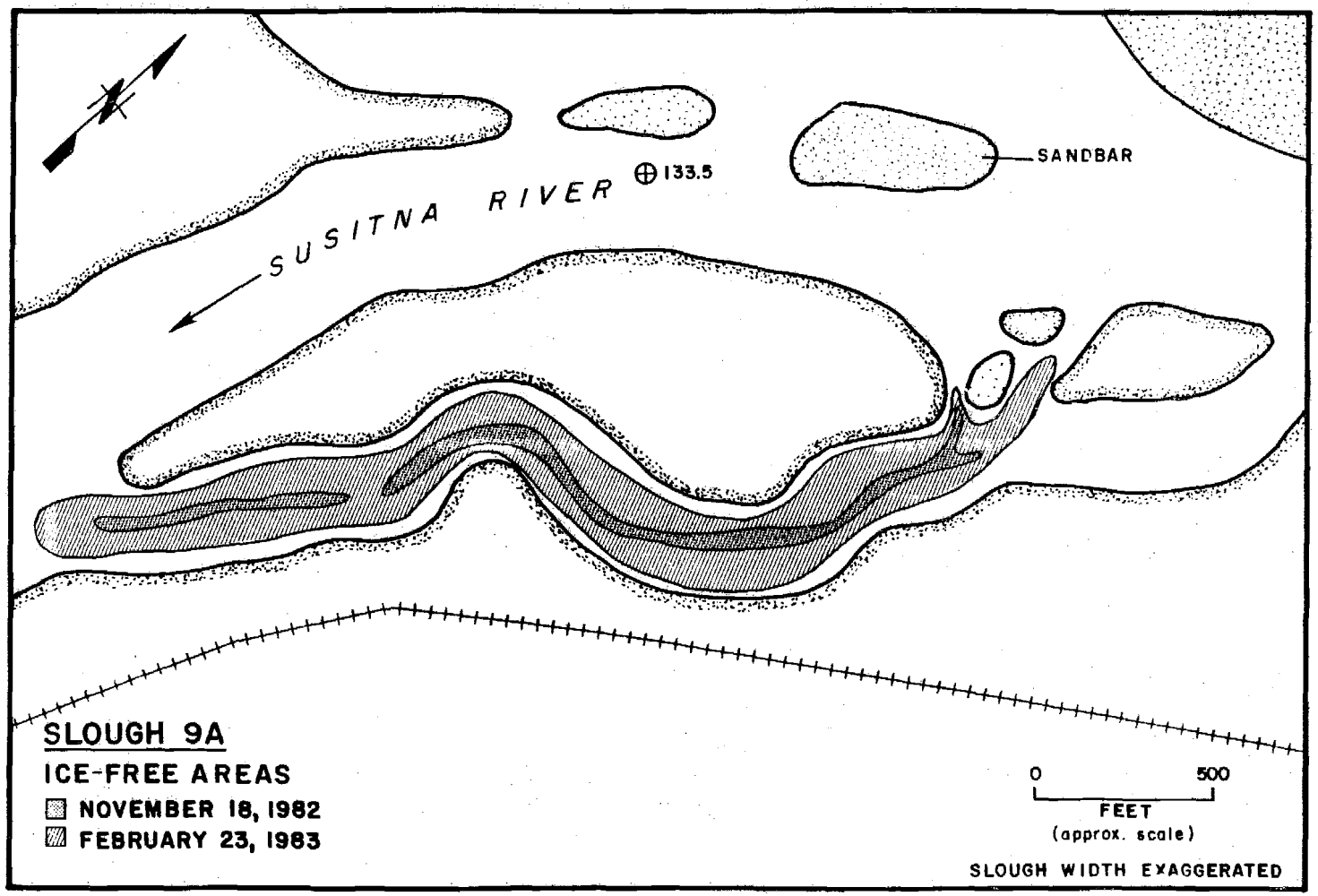


Figure 4-F-39. Slough 9A ice-free areas, winter 1982-83.

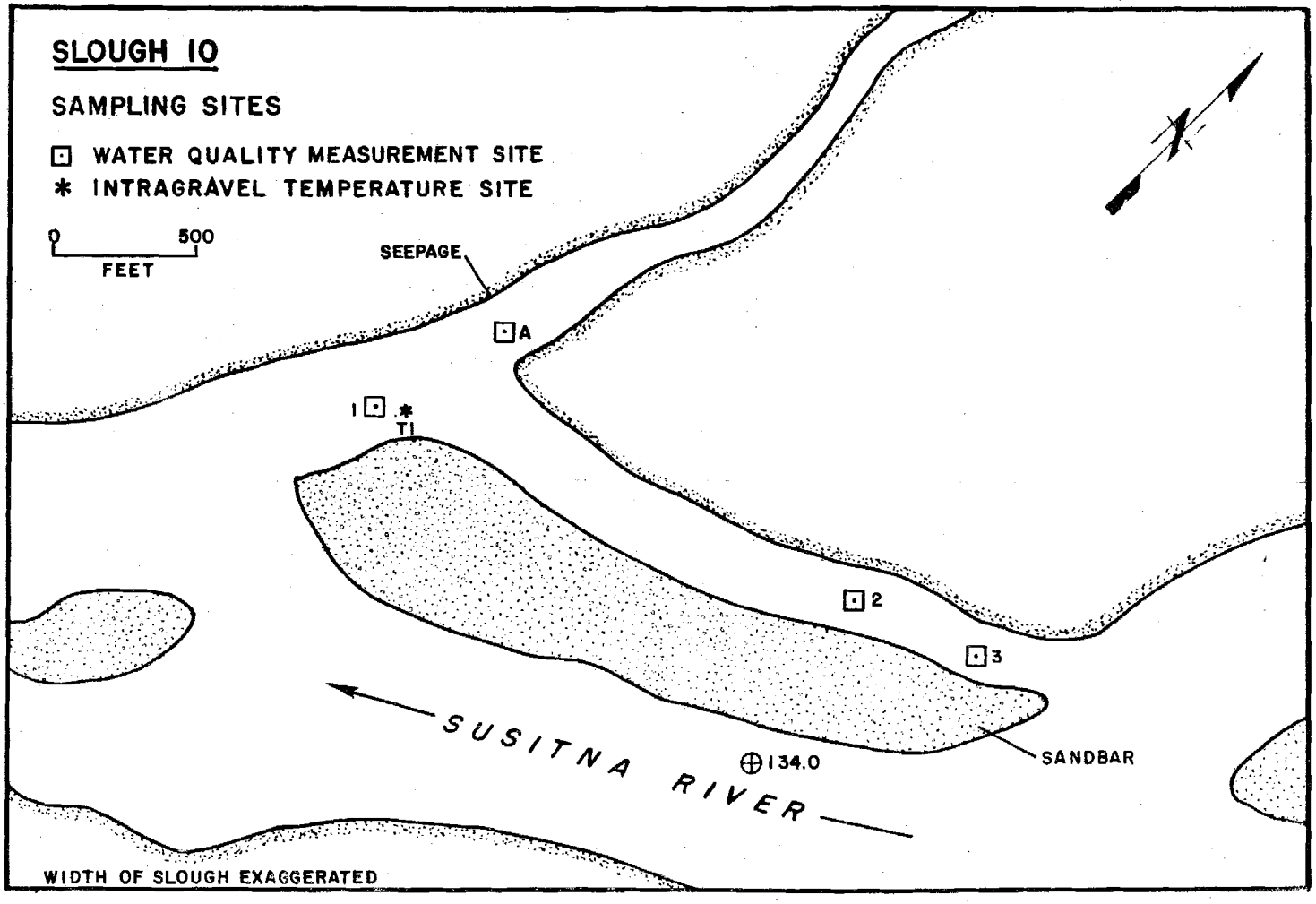


Figure 4-F-40. Slough 10 sampling sites, 1982.

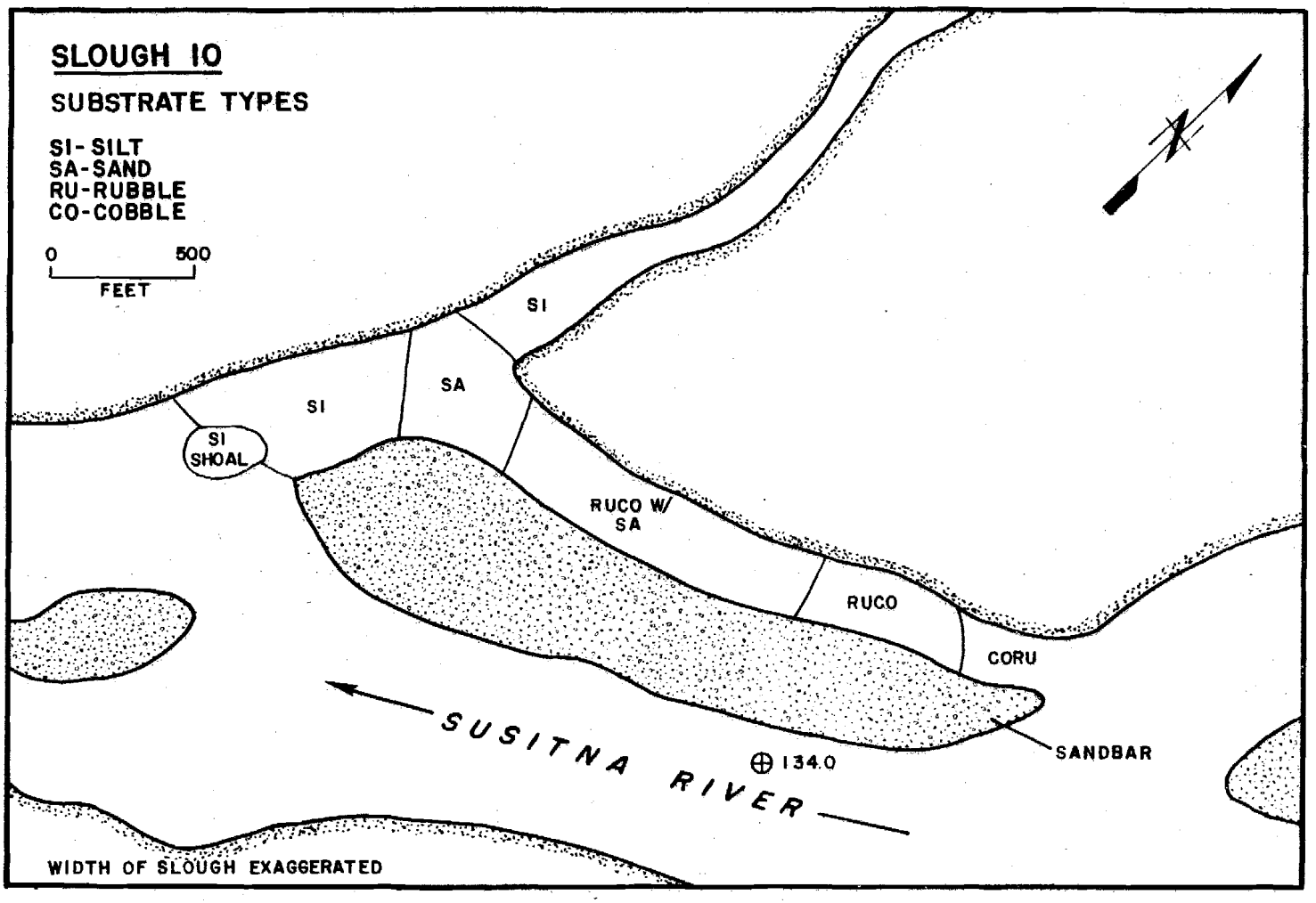


Figure 4-F-41. Slough 10 substrate, 1982.

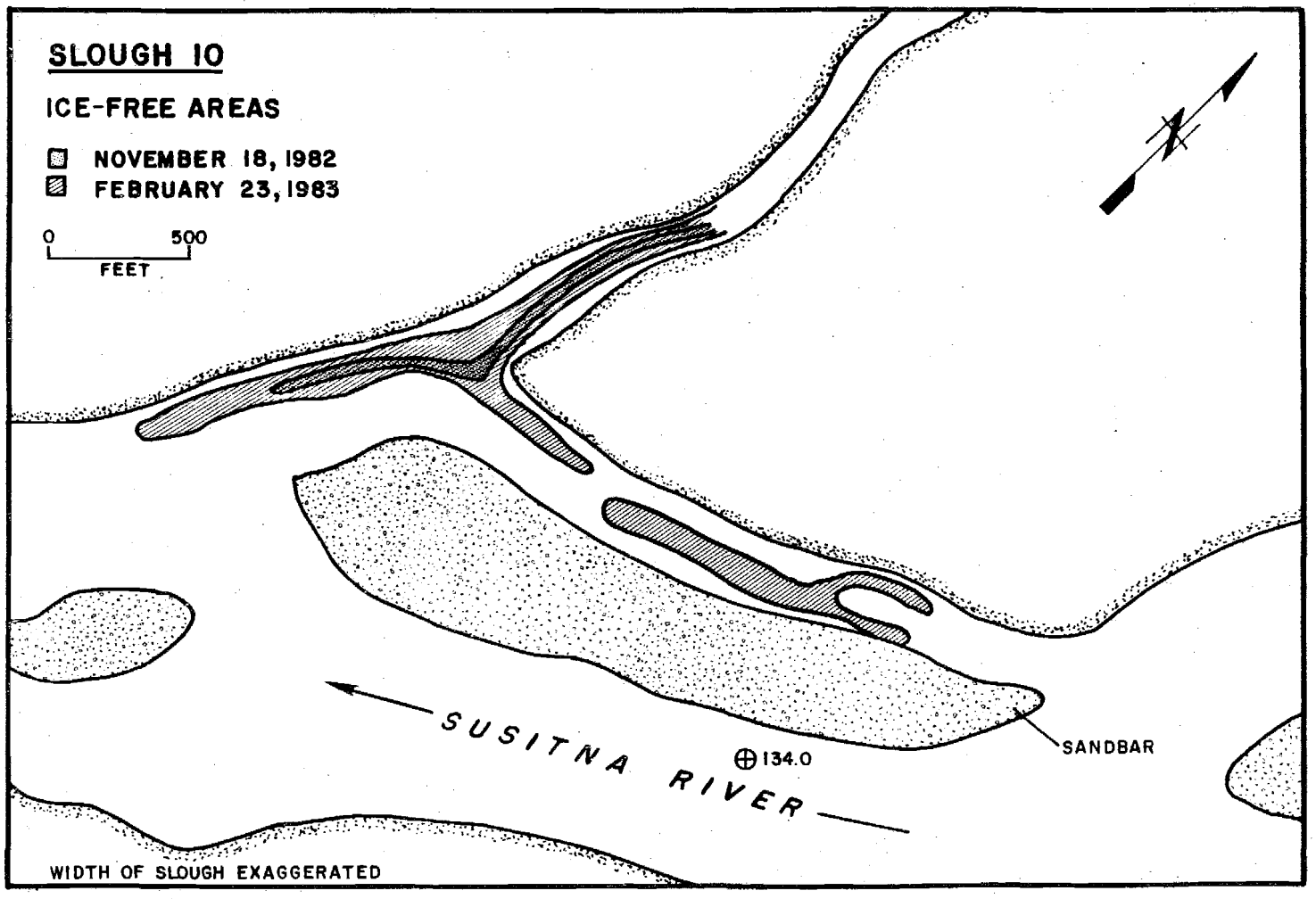


Figure 4-F-42. Slough 10 ice-free areas, winter 1982-83.

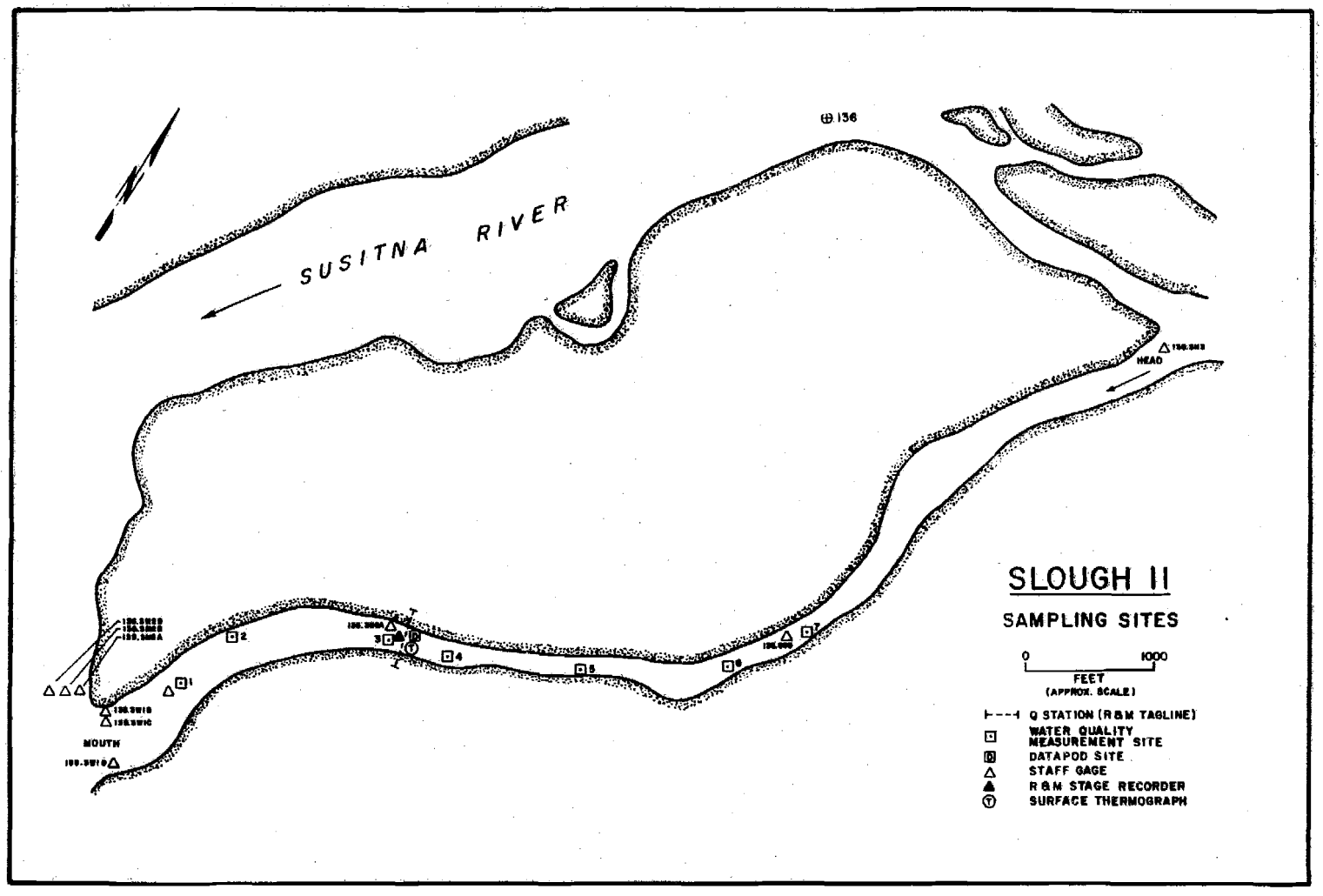


Figure 4-F-43. Slough 11 sampling sites, 1982.

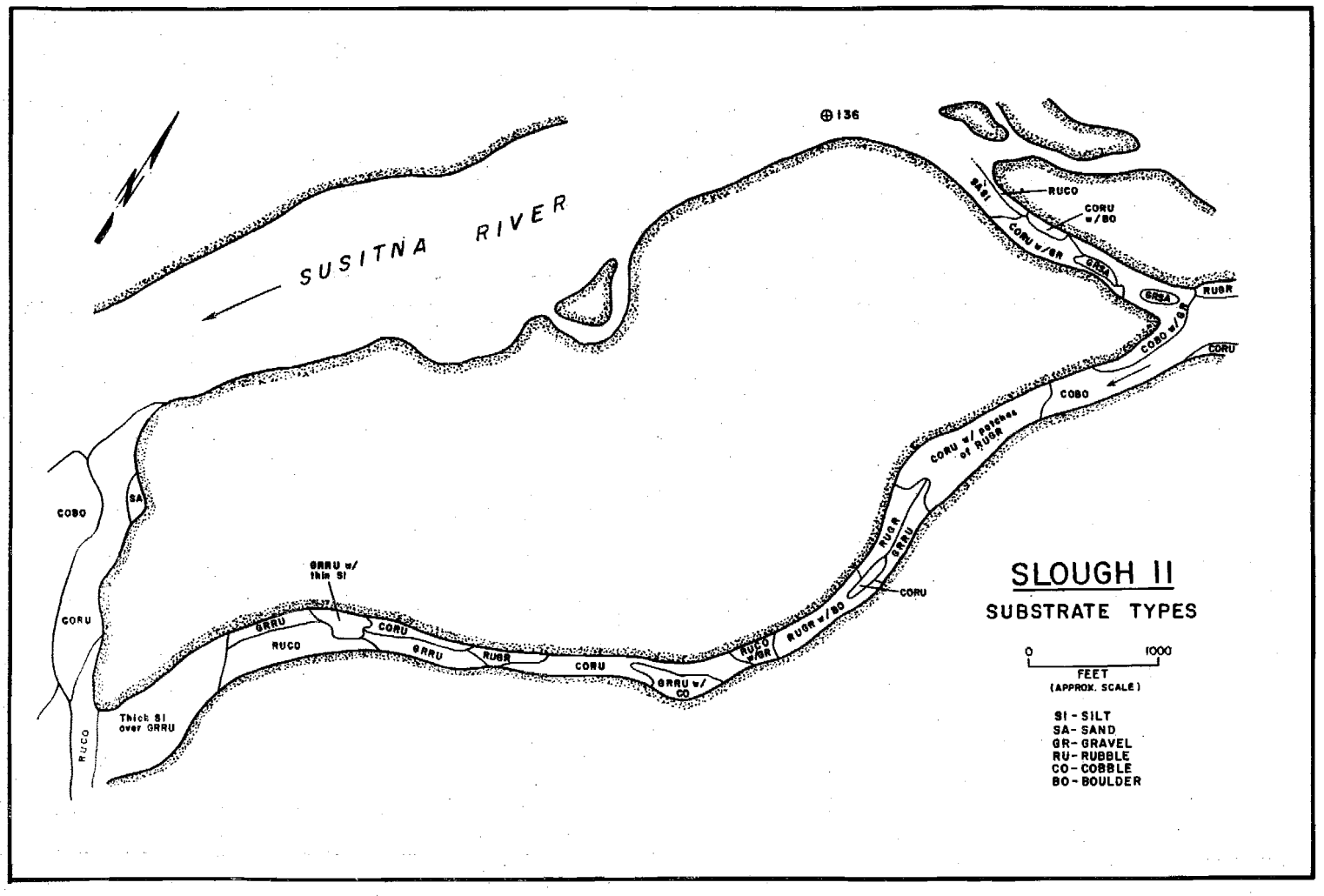


Figure 4-F-44. Slough 11 substrate, 1982.

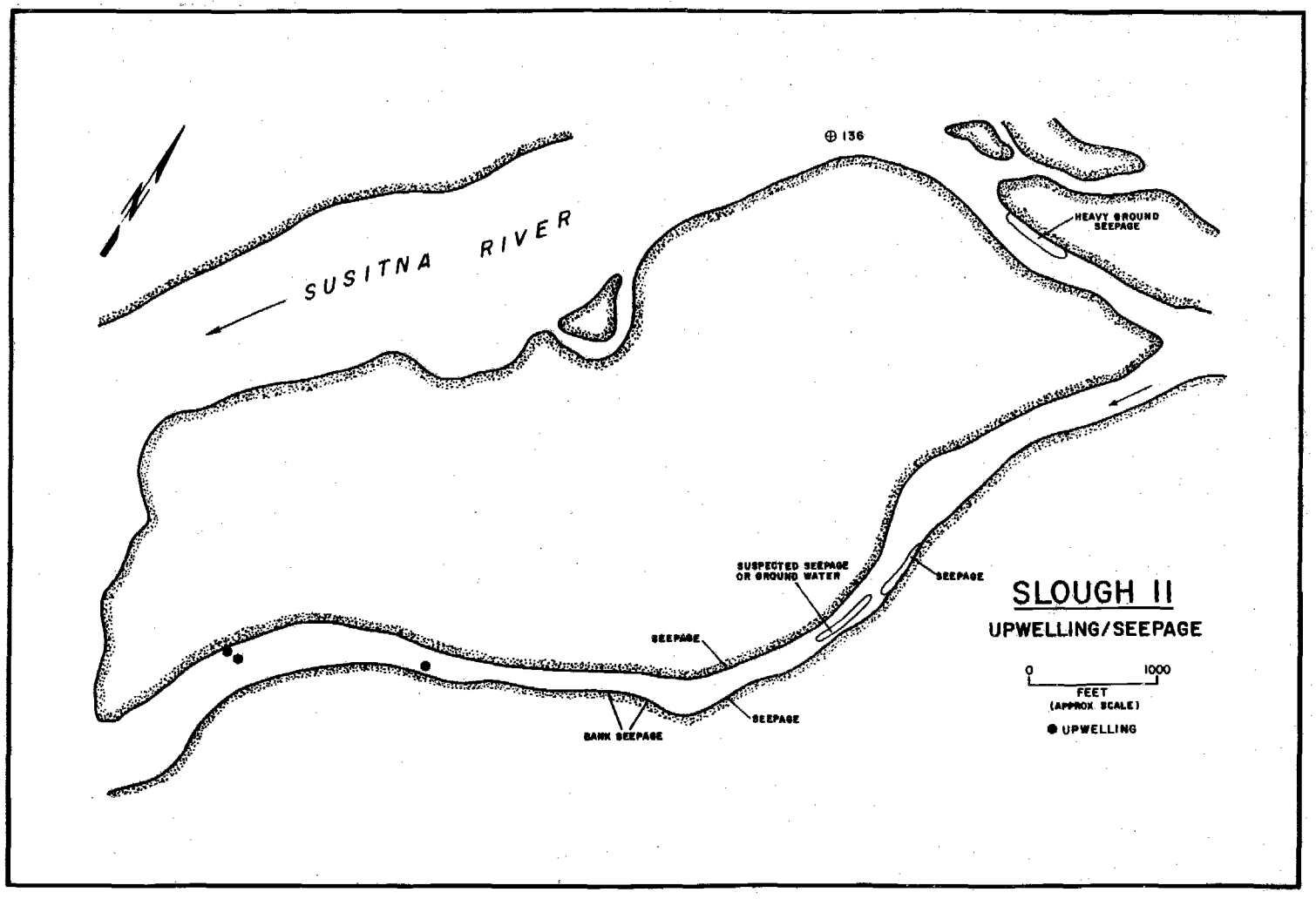


Figure 4-F-45. Slough 11 upwelling/seepage, 1982.

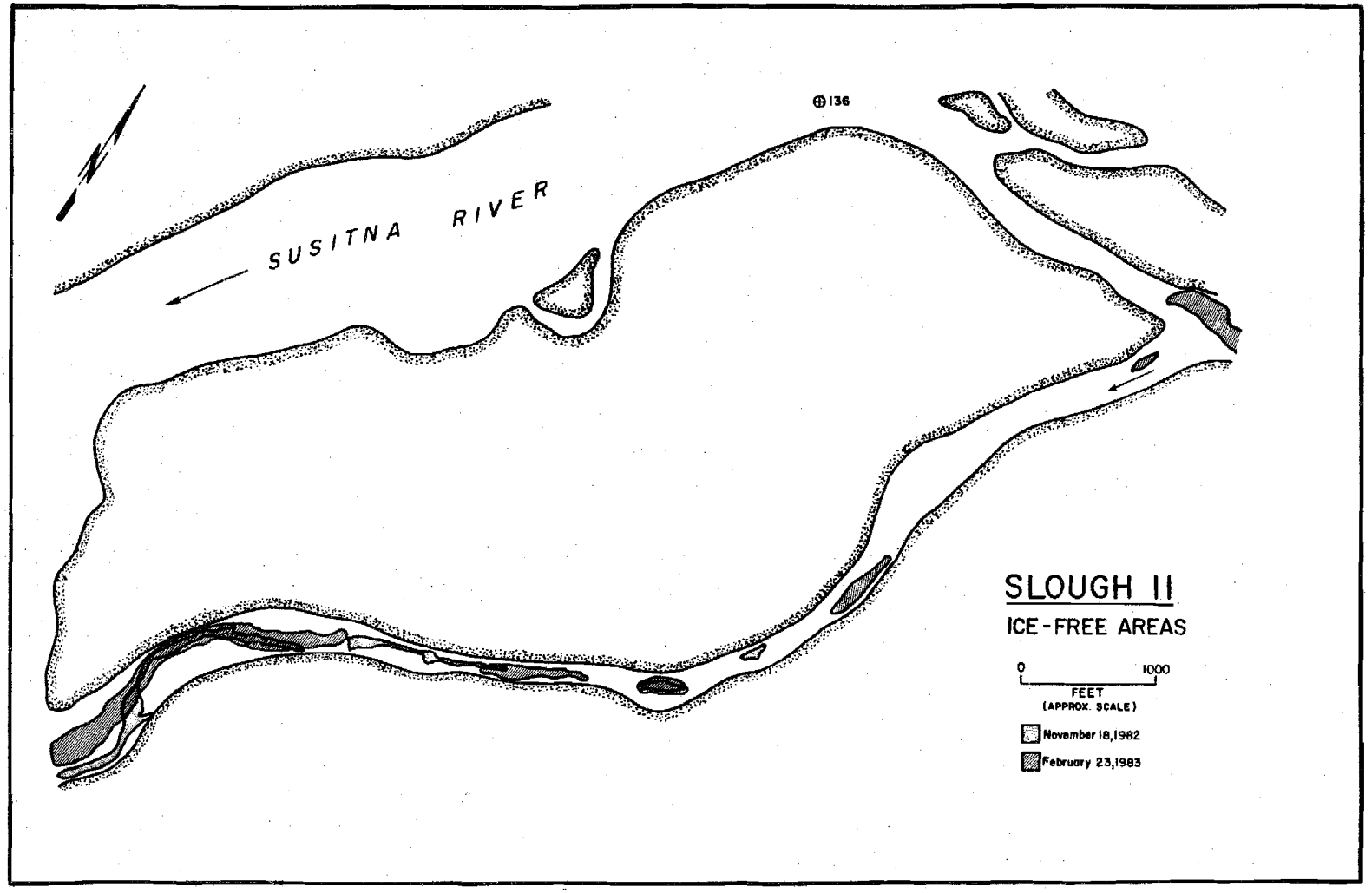


Figure 4-F-46. Slough 11 ice-free areas, winter 1982-83.

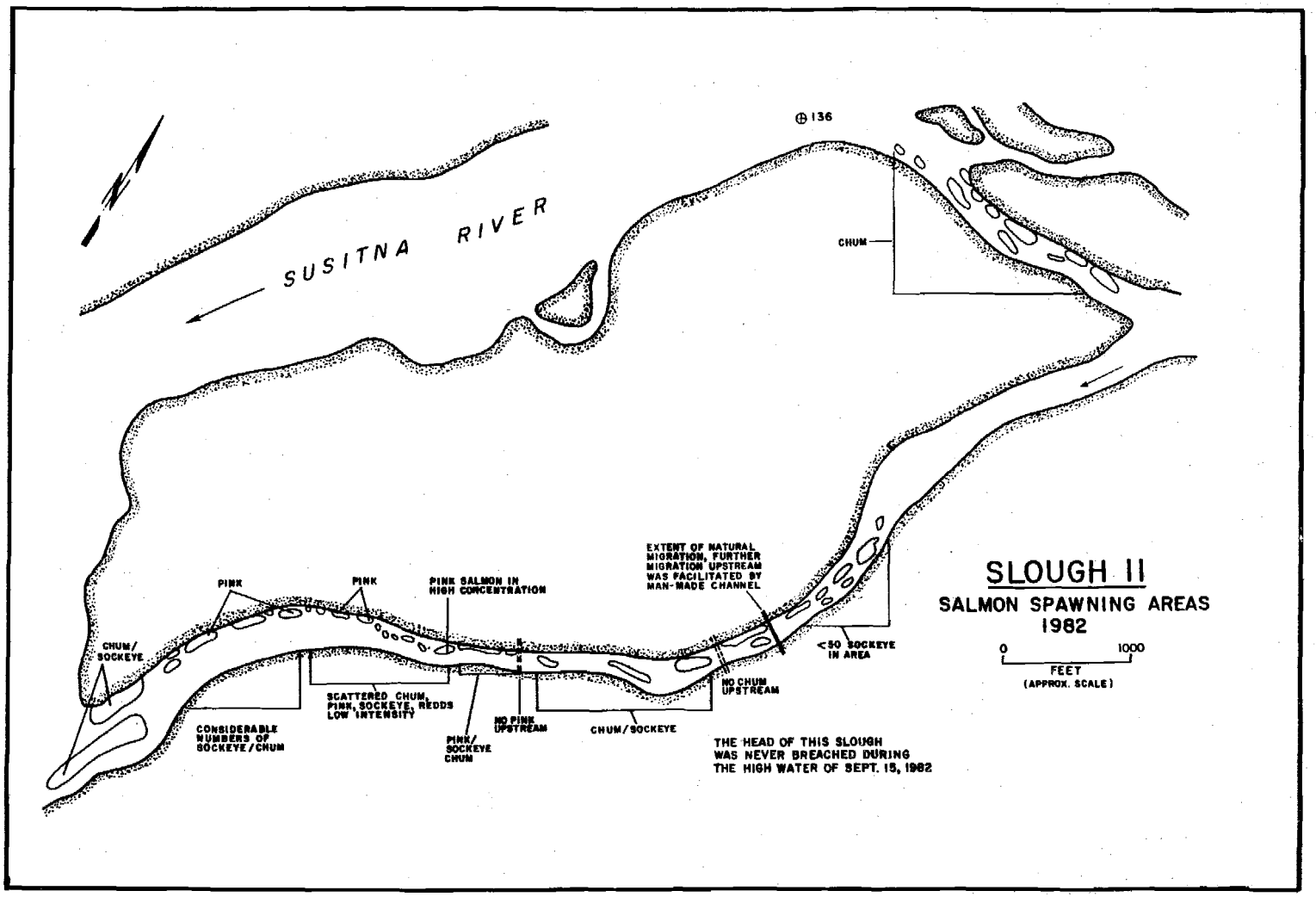


Figure 4-F-47. Slough 11 spawning areas, 1982.

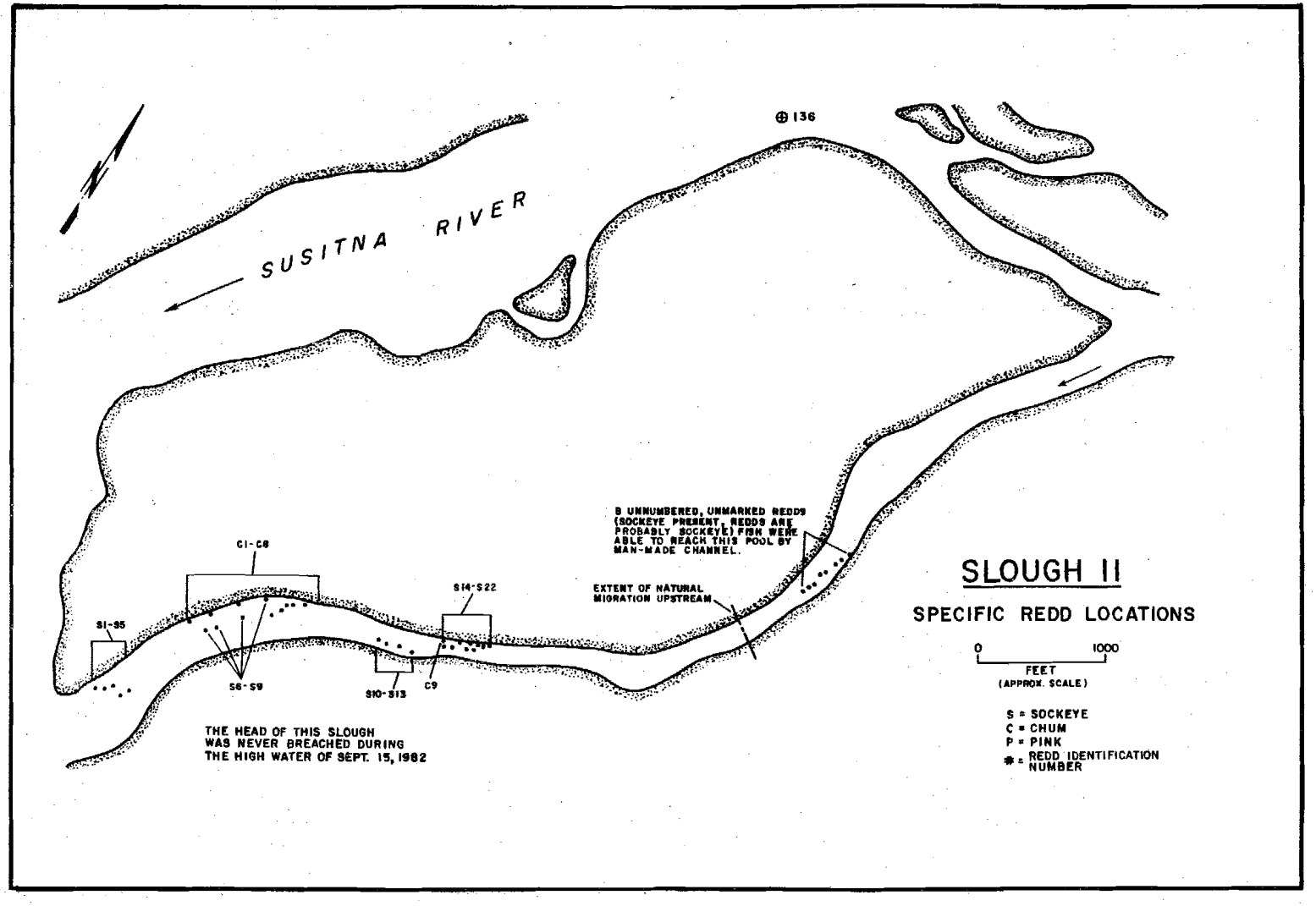


Figure 4-F-48. Slough 11 redd locations, 1982.

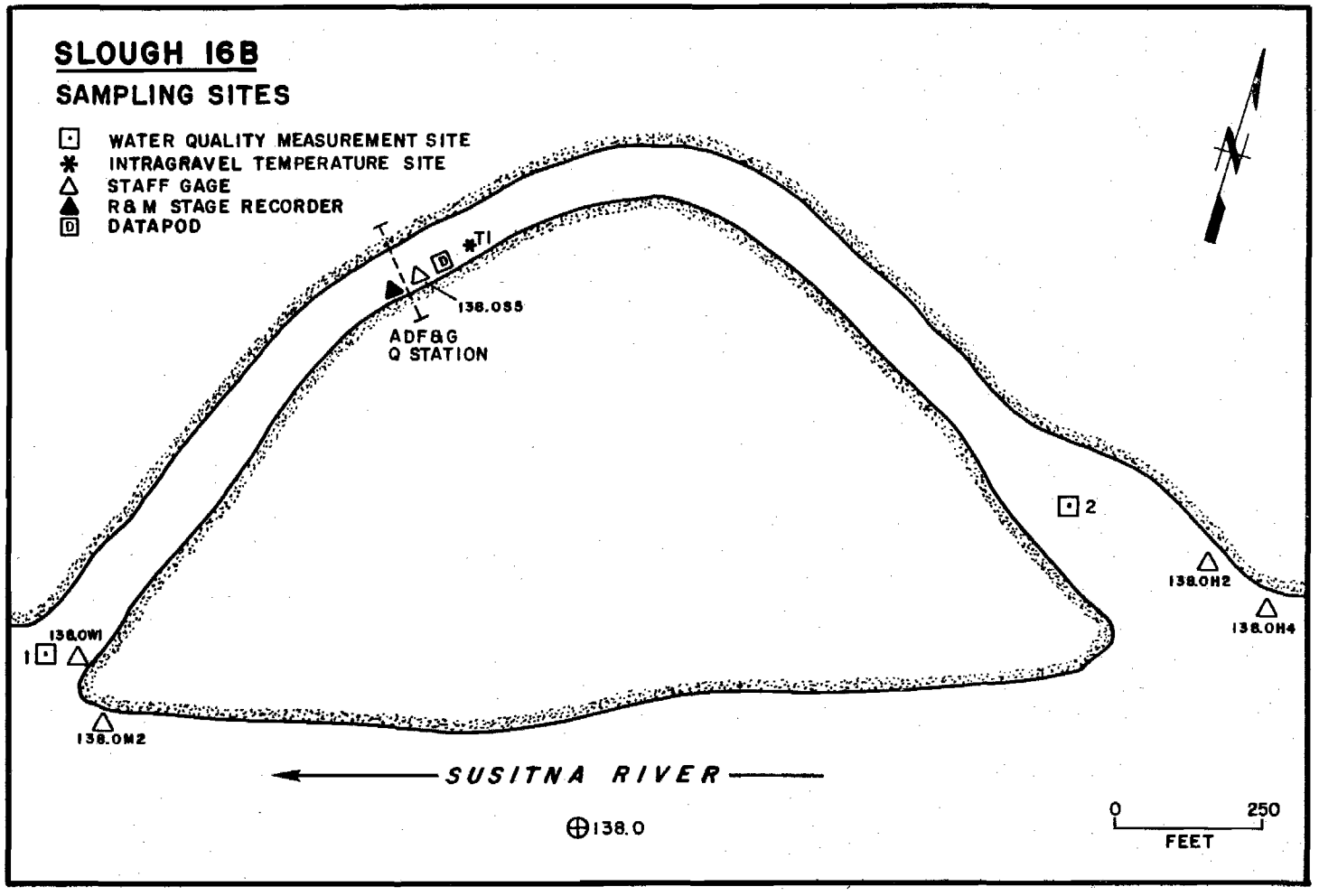


Figure 4-F-49. Slough 16B sampling sites, 1982.

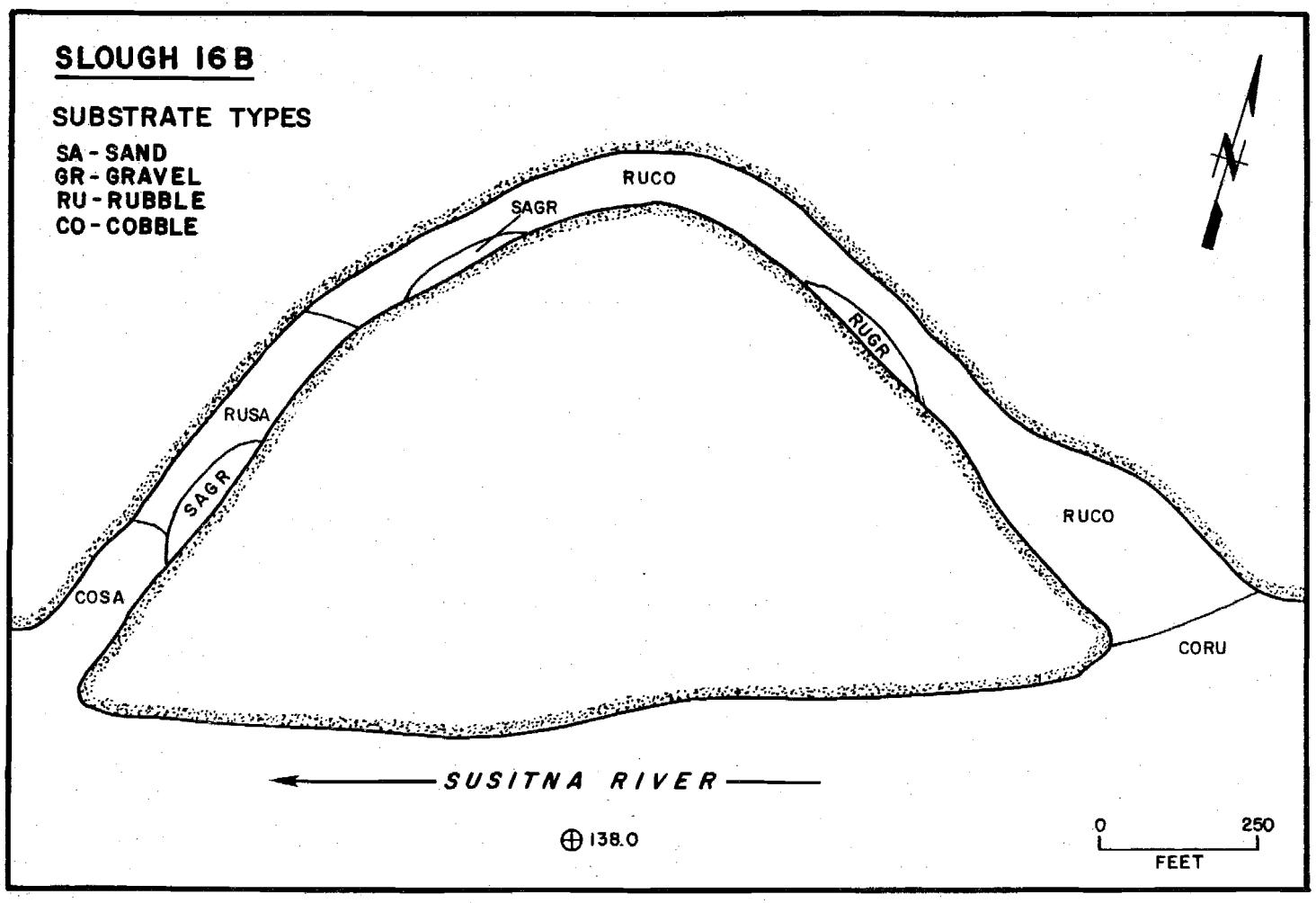


Figure 4-F-50. Slough 16B substrate, 1982.

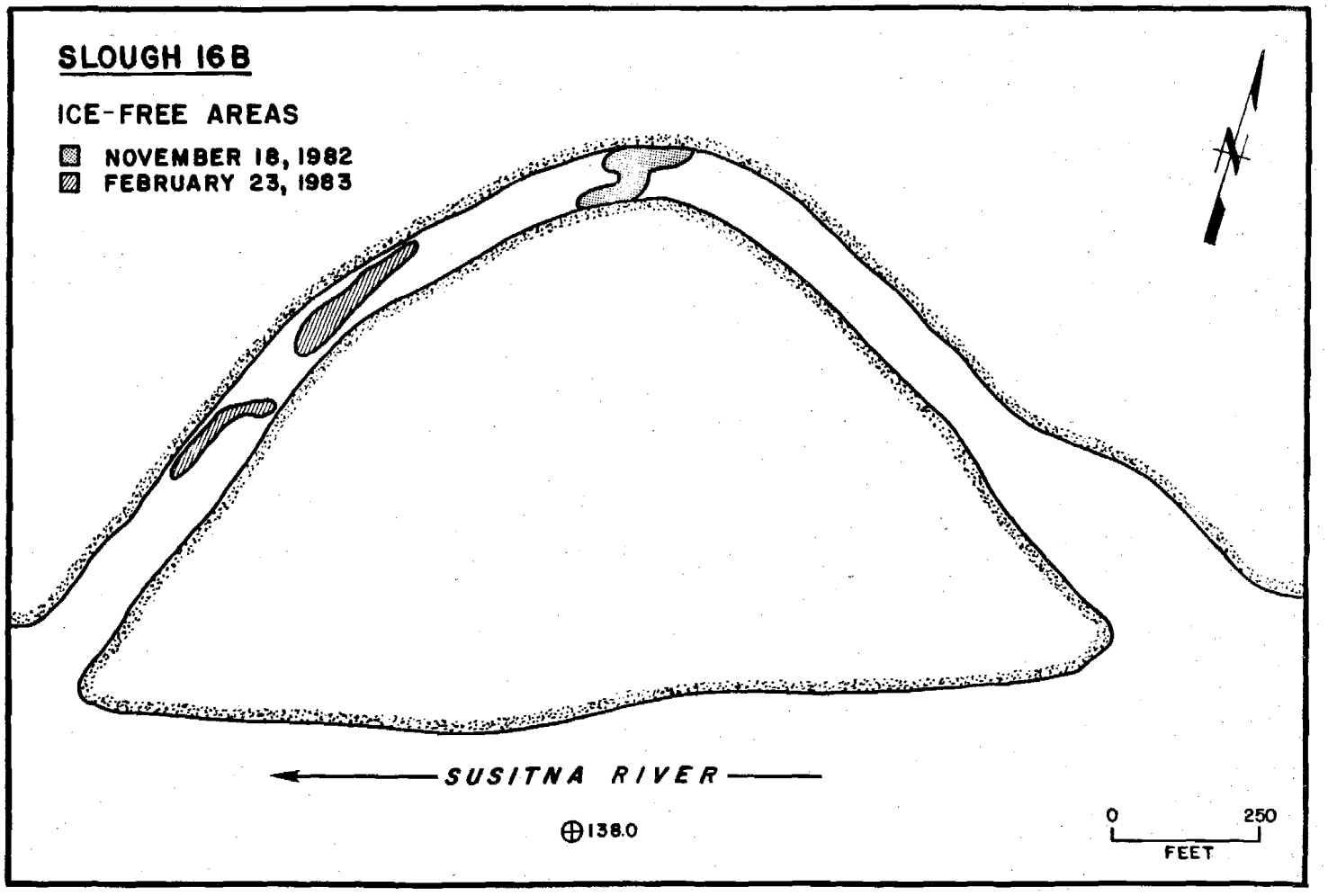


Figure 4-F-51. Slough 16B ice-free areas, winter 1982-83.

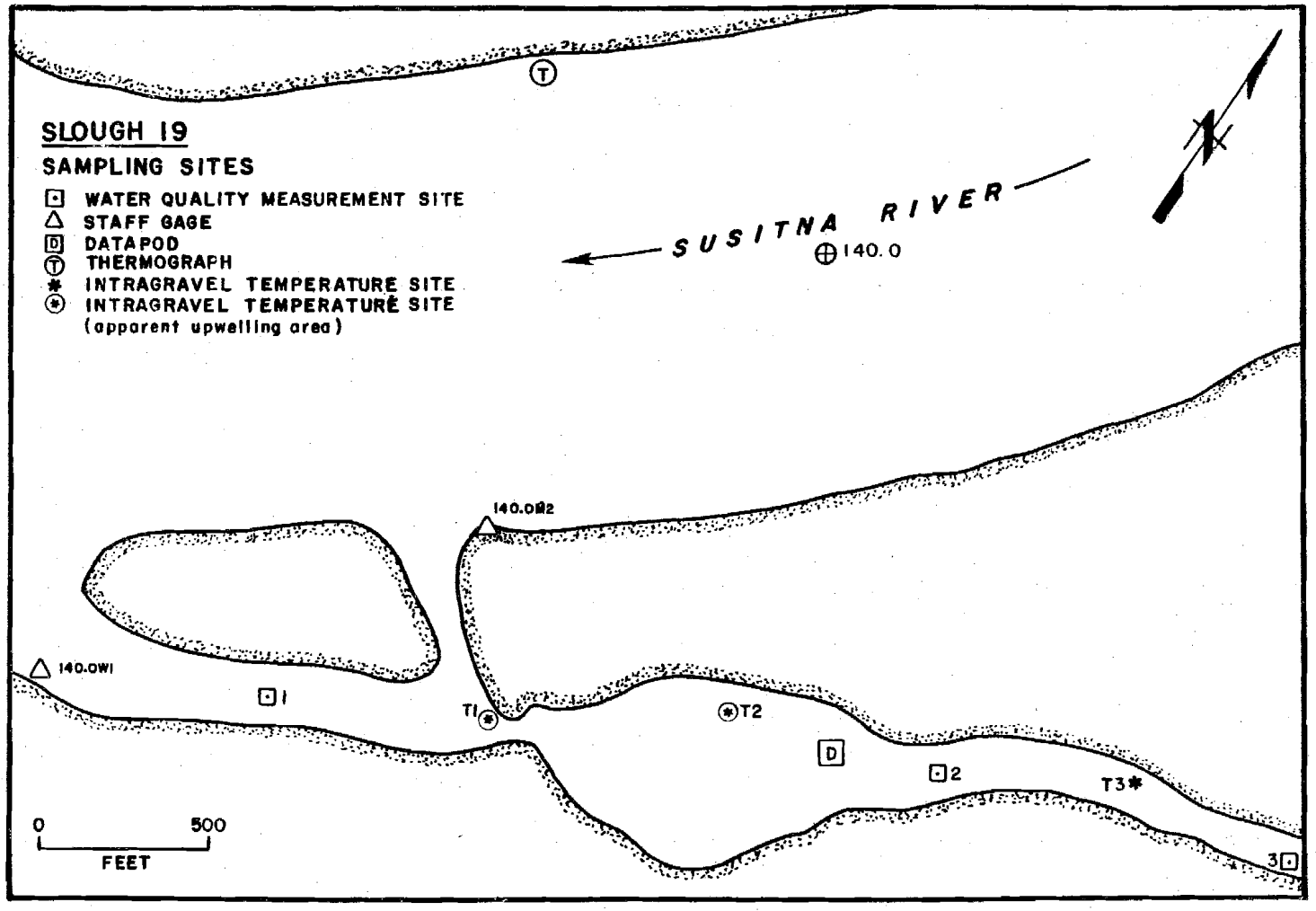


Figure 4-F-52. Slough 19 sampling sites, 1982.

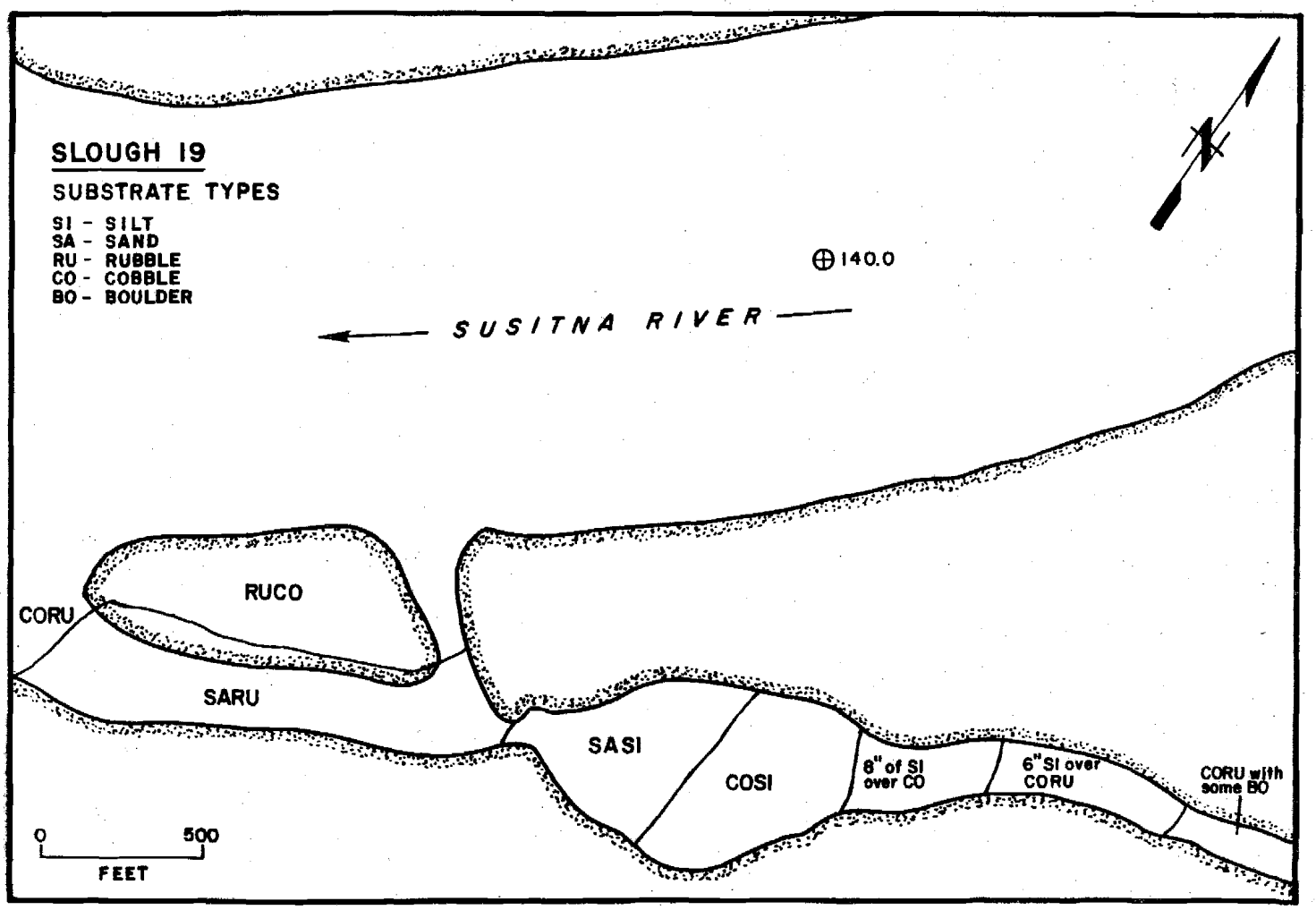


Figure 4-F-53. Slough 19 substrate, 1982.

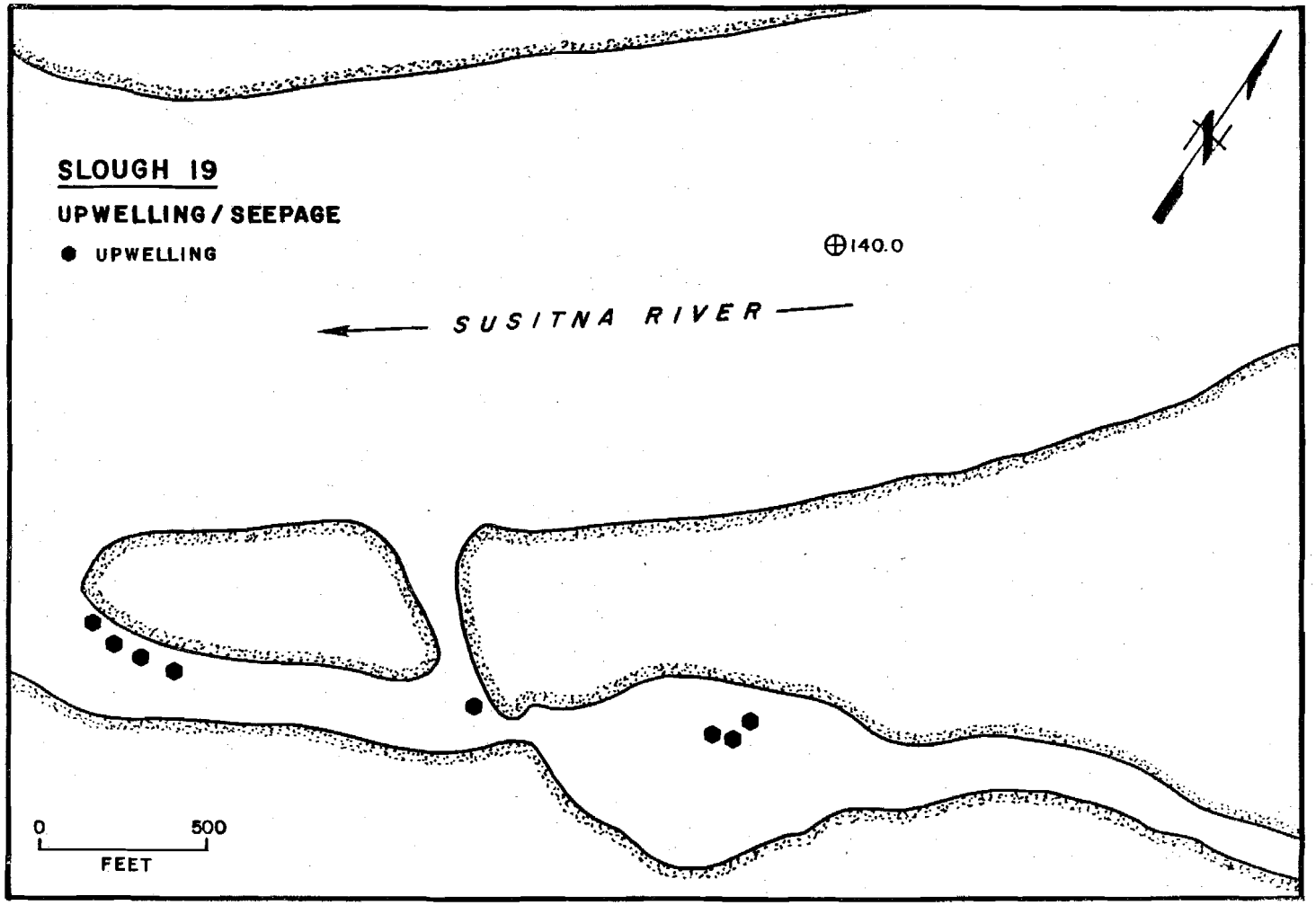


Figure 4-F-54. Slough 19 upwelling/seepage, 1982.

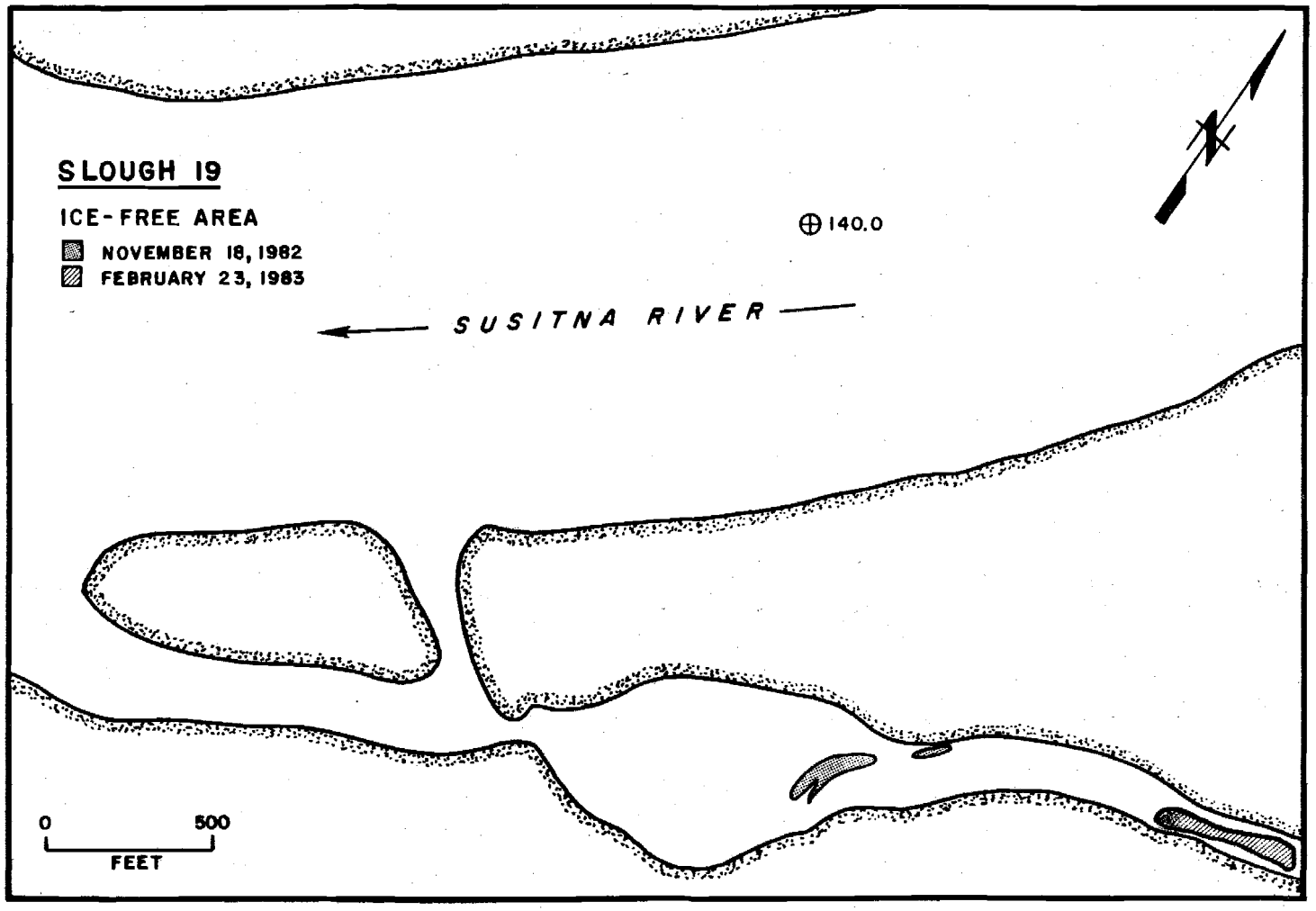


Figure 4-F-55. Slough 19 ice-free areas, winter 1982-83.

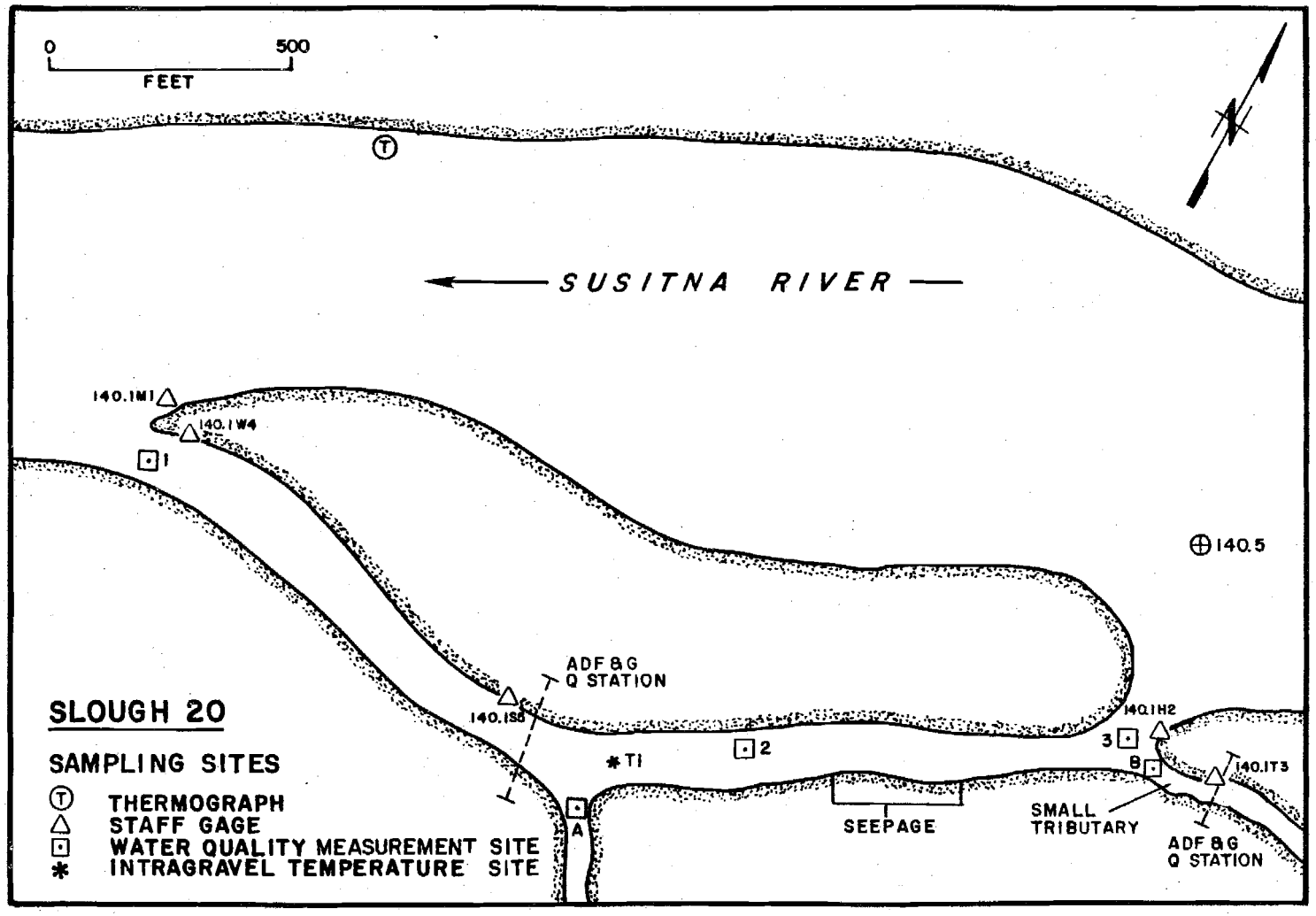


Figure 4-F-56. Slough 20 sampling sites, 1982.

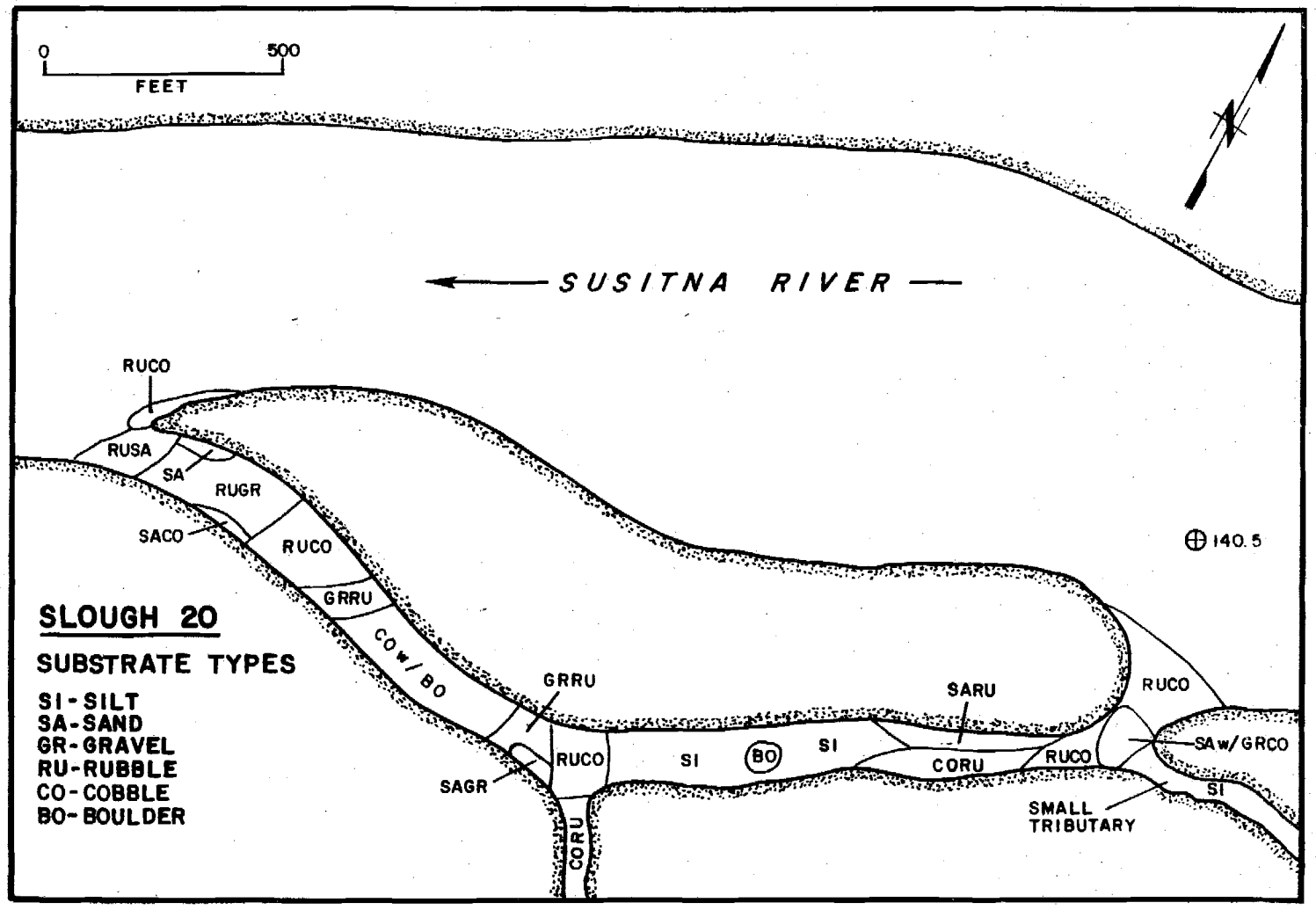


Figure 4-F-57. Slough 20 substrate, 1982.

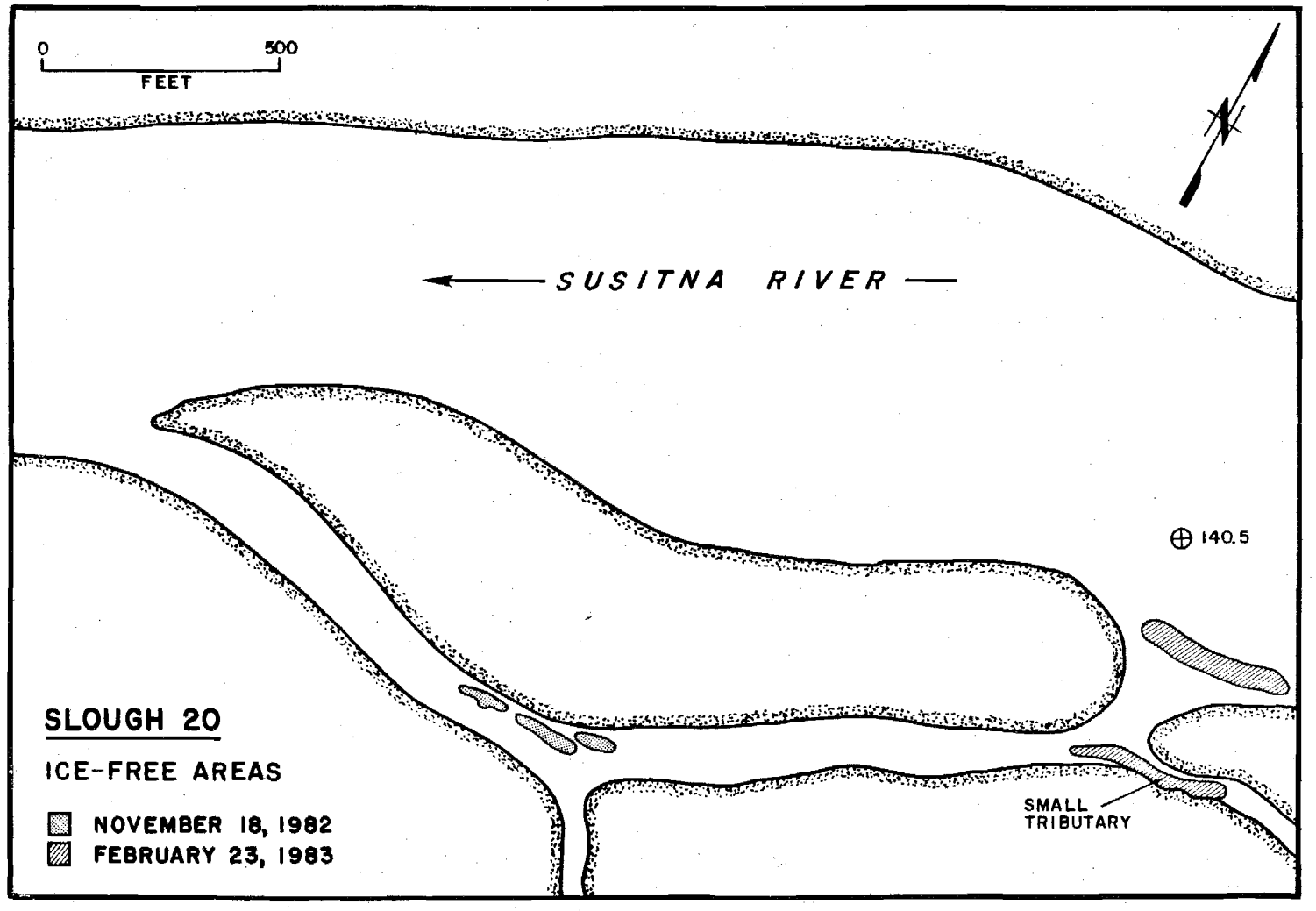


Figure 4-F-58. Slough 20 ice-free areas, winter 1982-83.

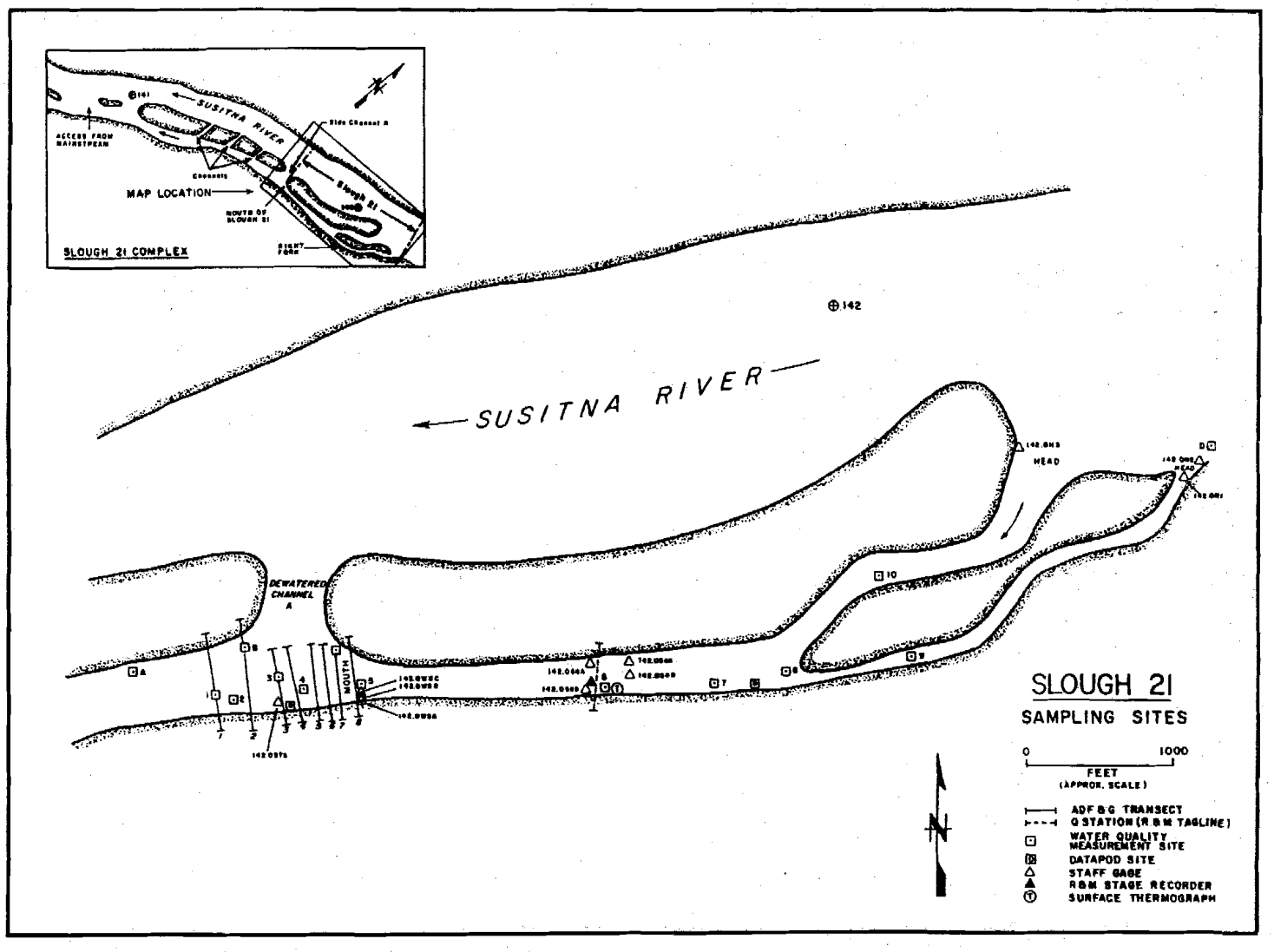


Figure 4-F-59. Slough 21 sampling sites, 1982.

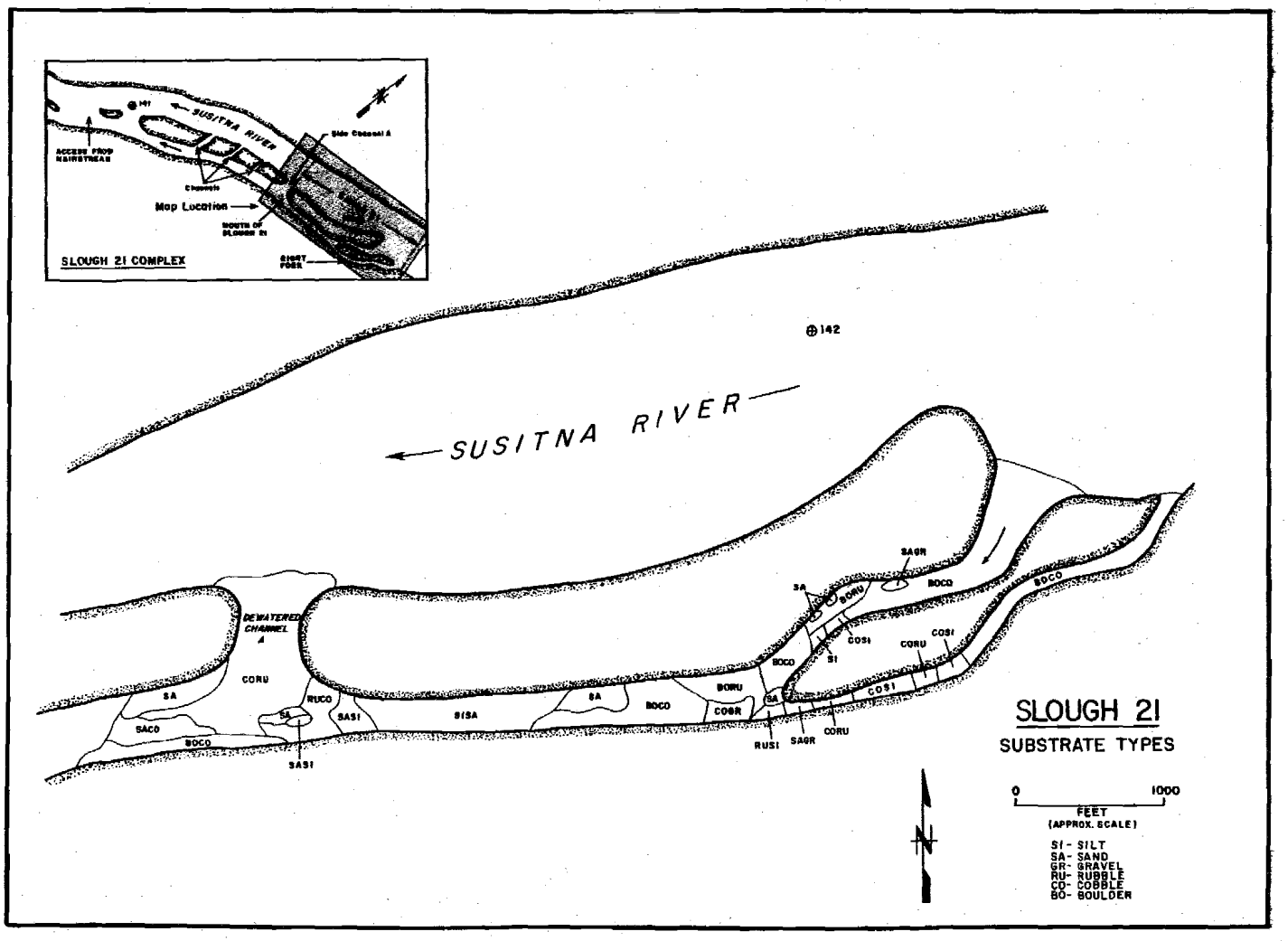


Figure 4-F-60. Slough 21 substrate, 1982.

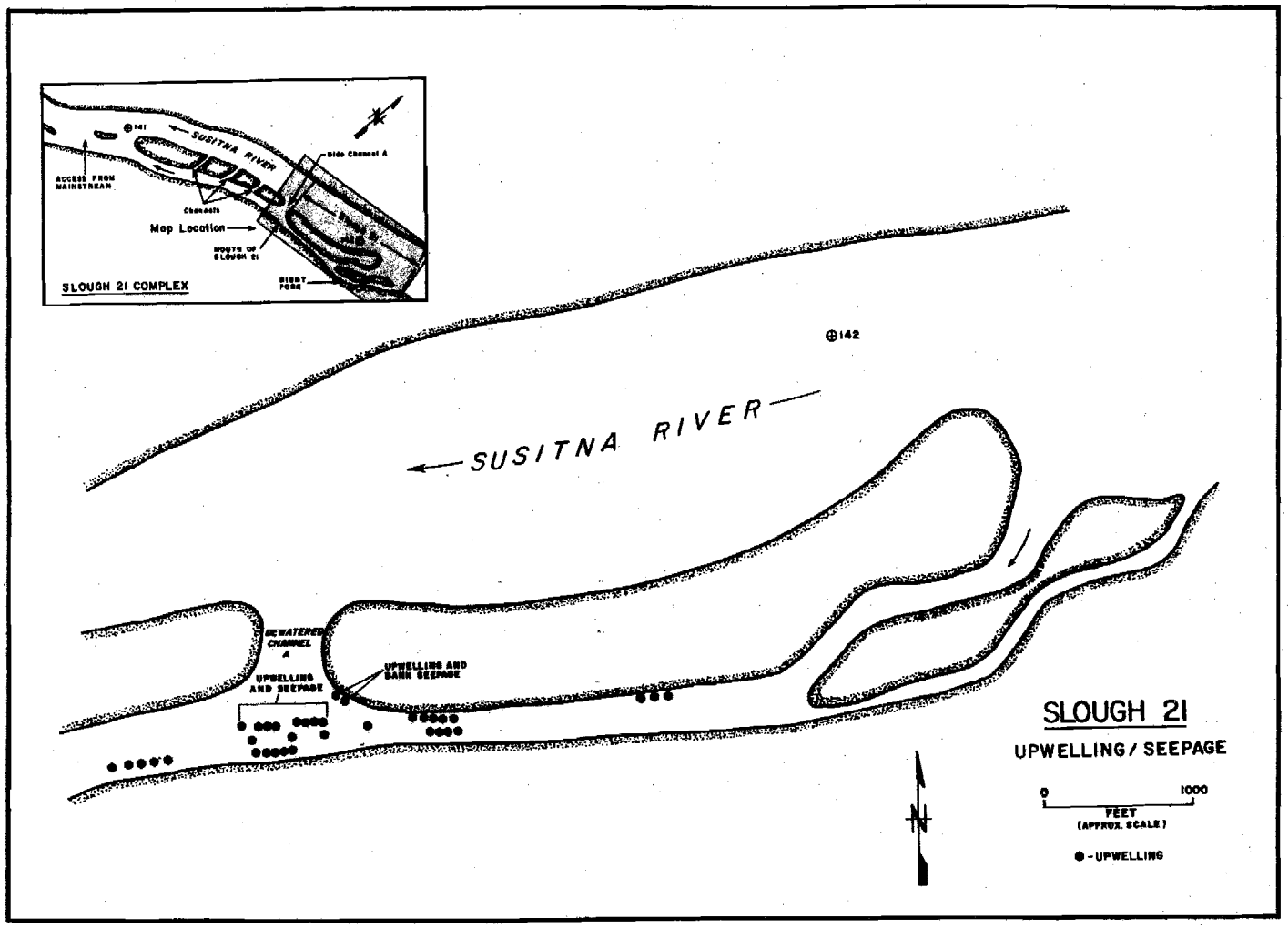


Figure 4-F-61. Slough 21 upwelling/seepage, 1982.

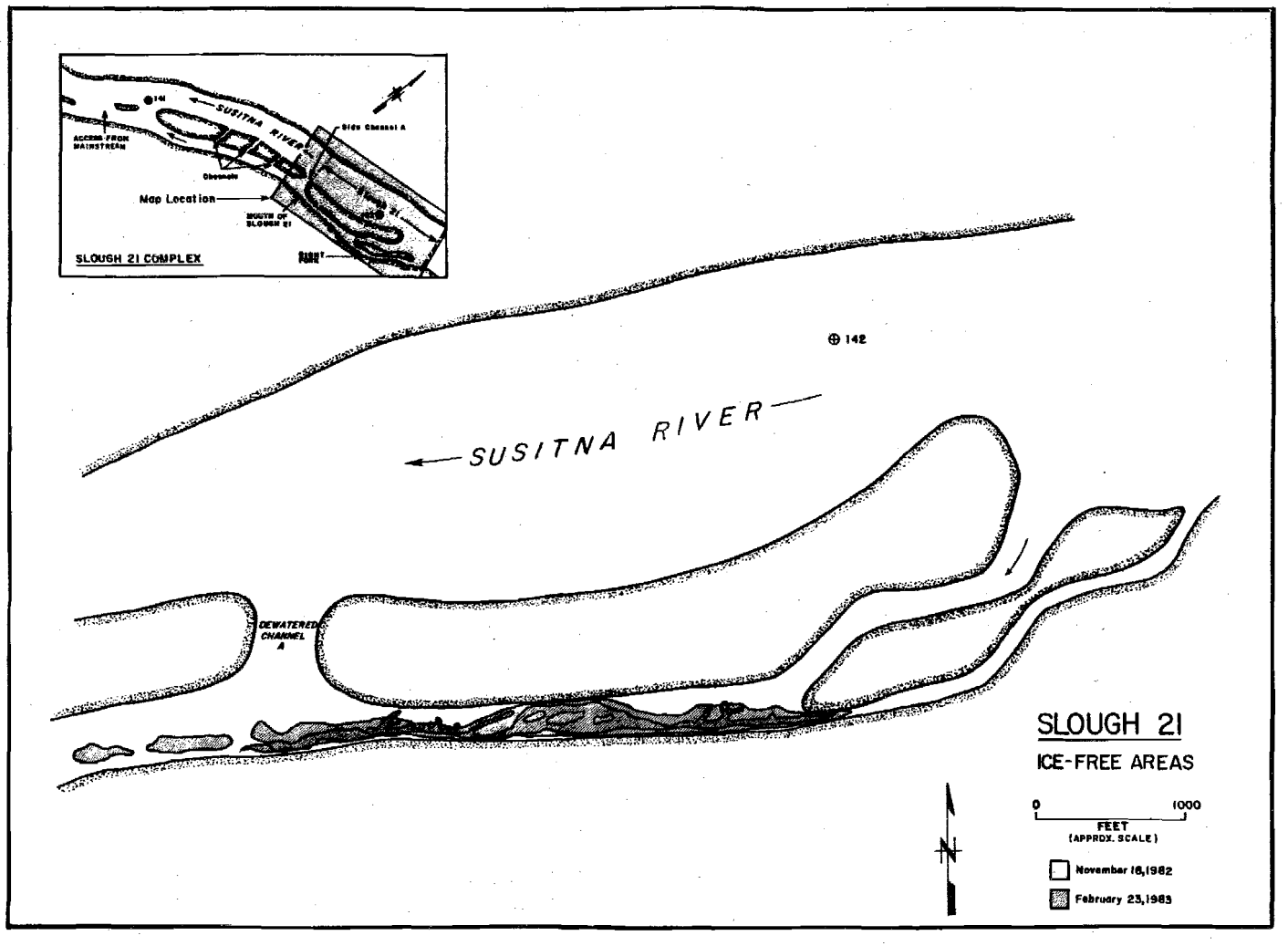


Figure 4-F-62. Slough 21 ice-free areas, winter 1982-83.

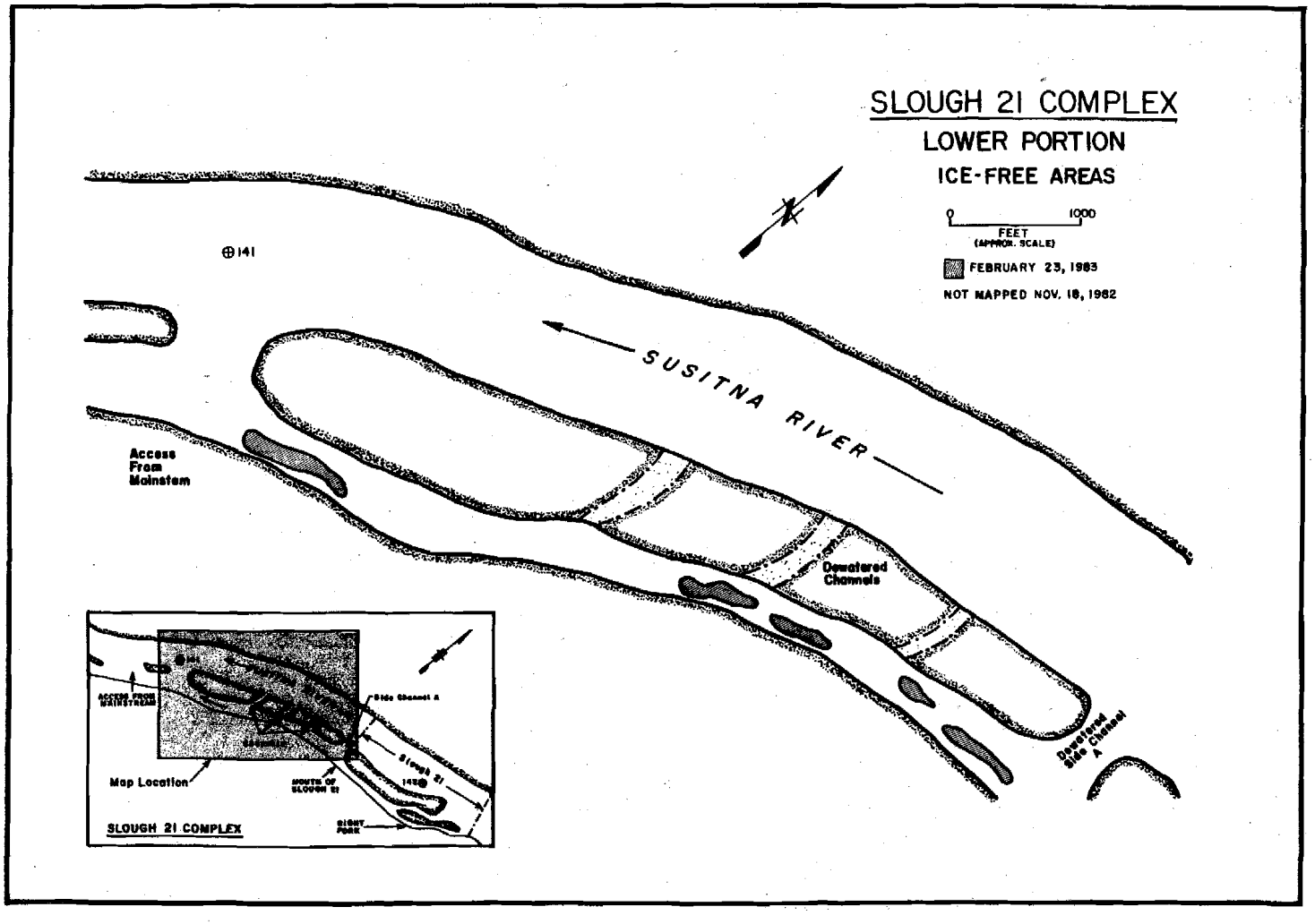


Figure 4-F-63. Slough 21 Complex ice-free areas, winter 1982-83.

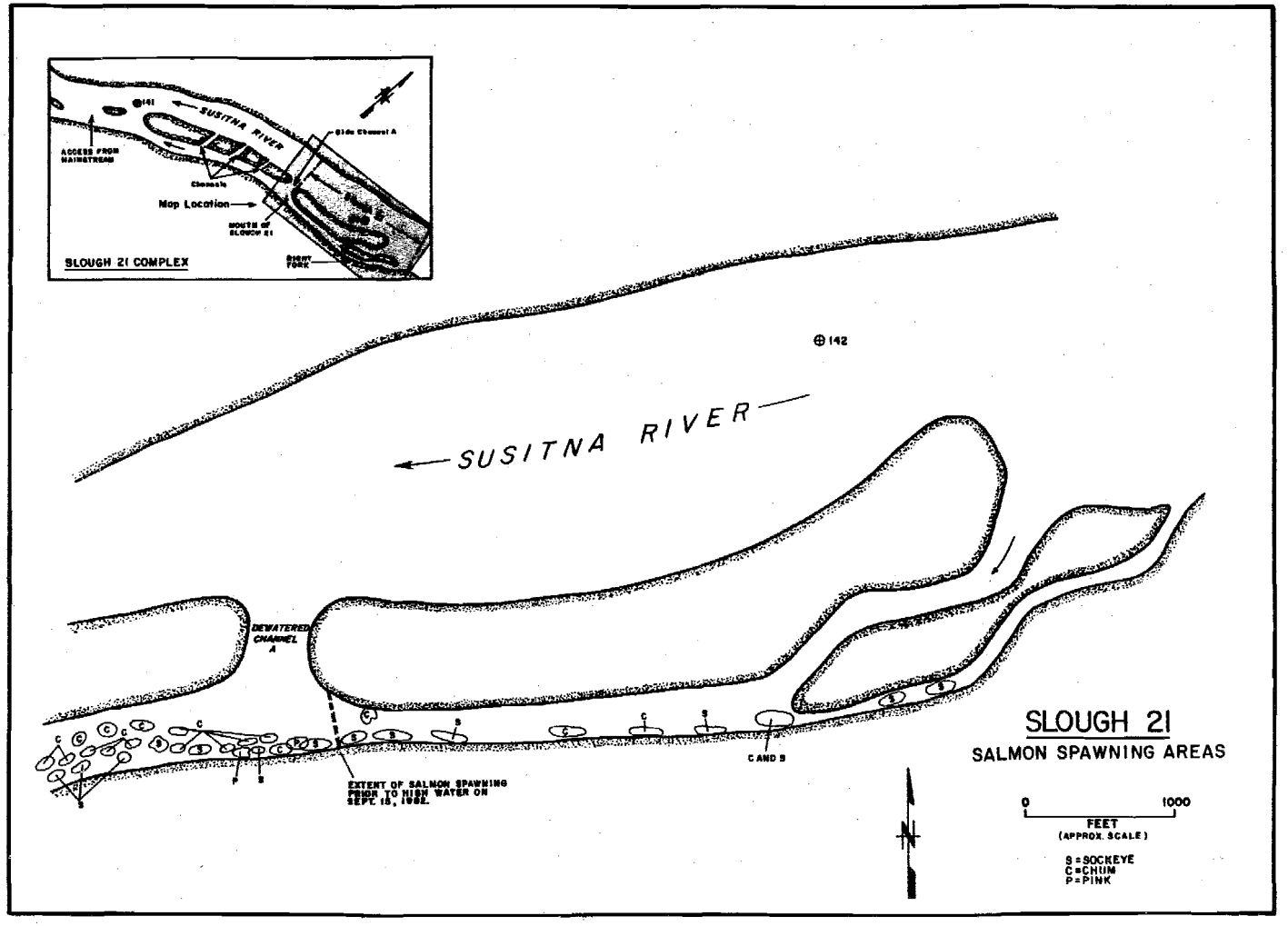


Figure 4-F-64. Slough 21 spawning areas, 1982.

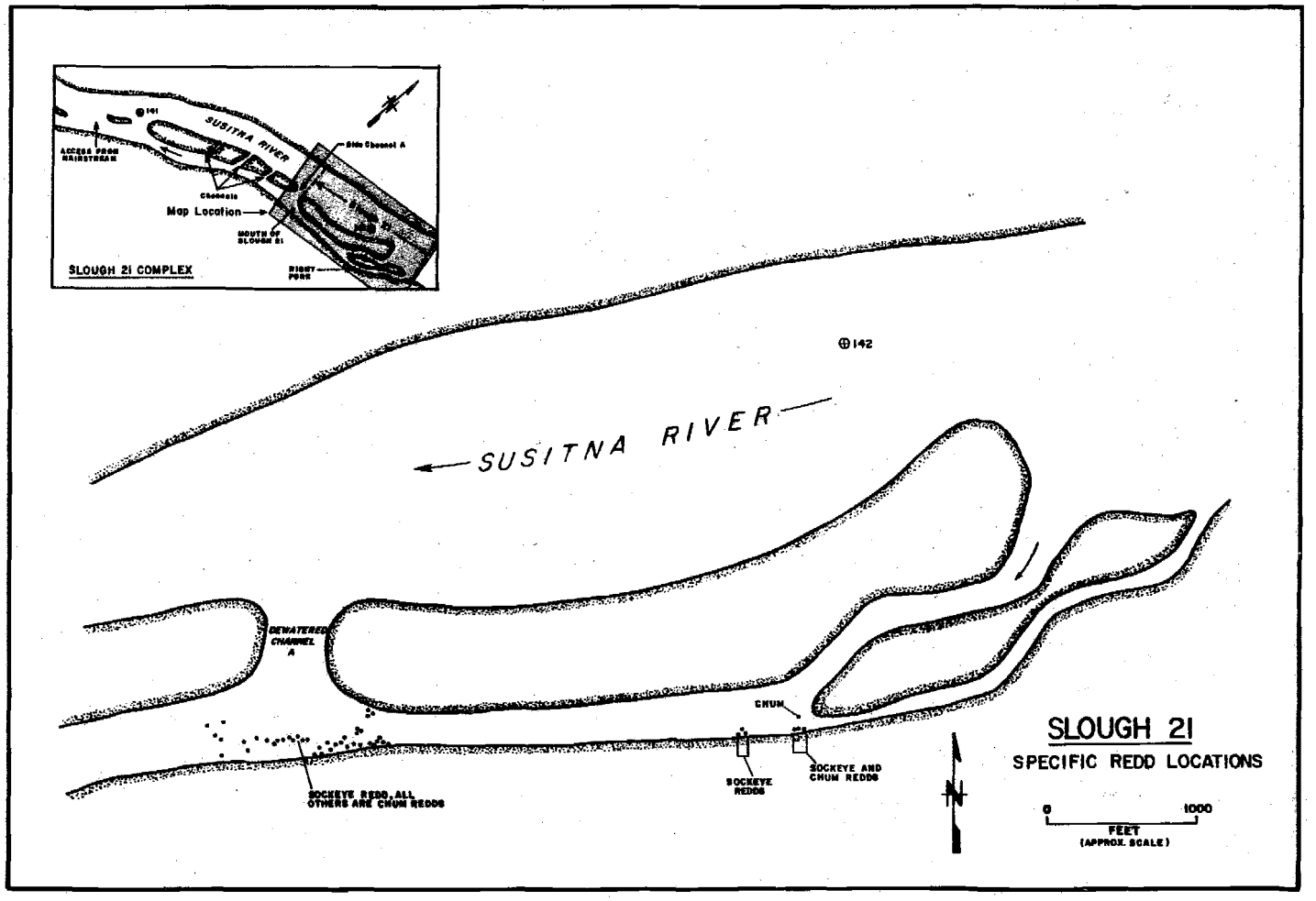


Figure 4-F-65. Slough 21 redd locations, 1982.

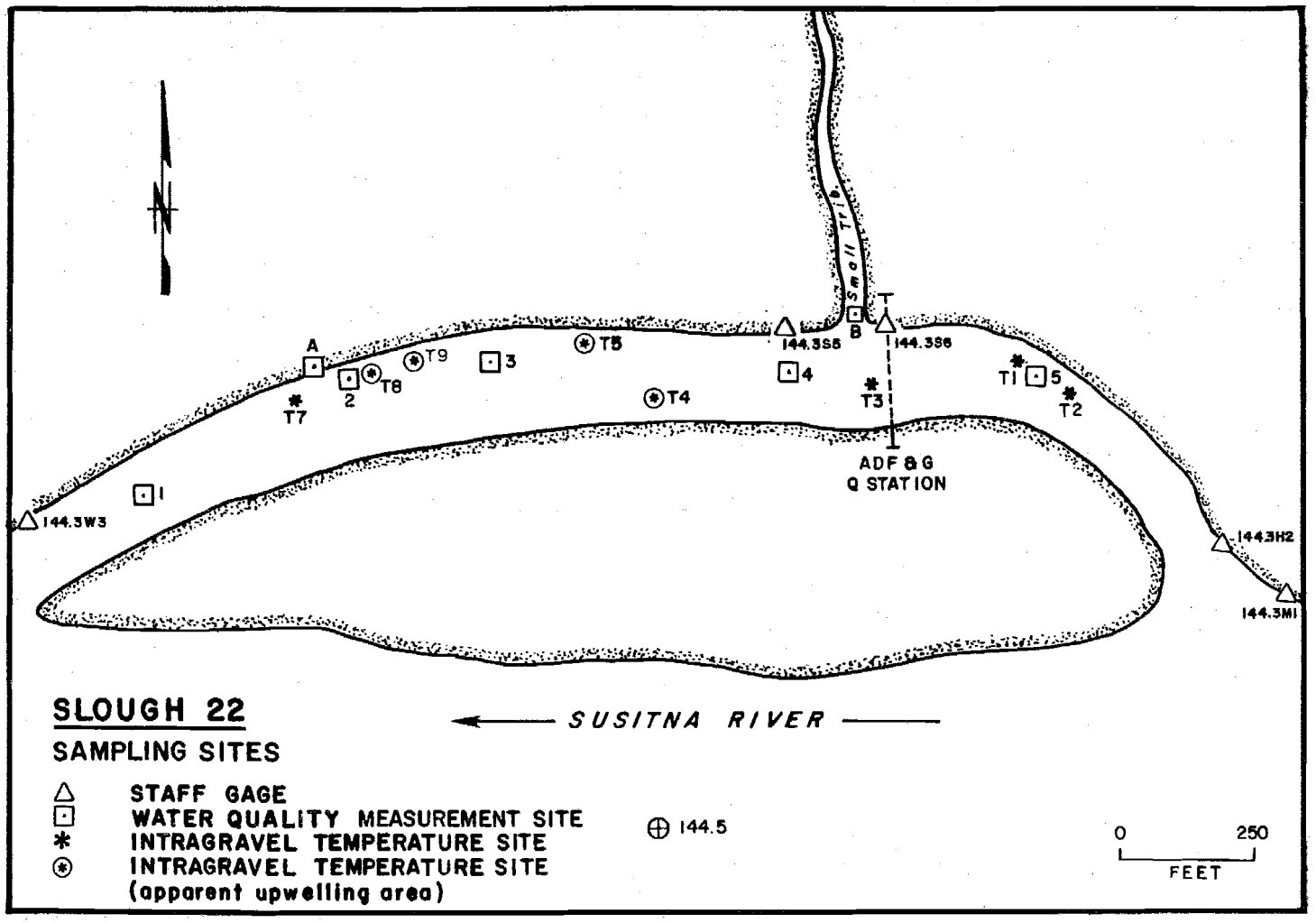


Figure 4-F-66. Slough 22 sampling sites, 1982.

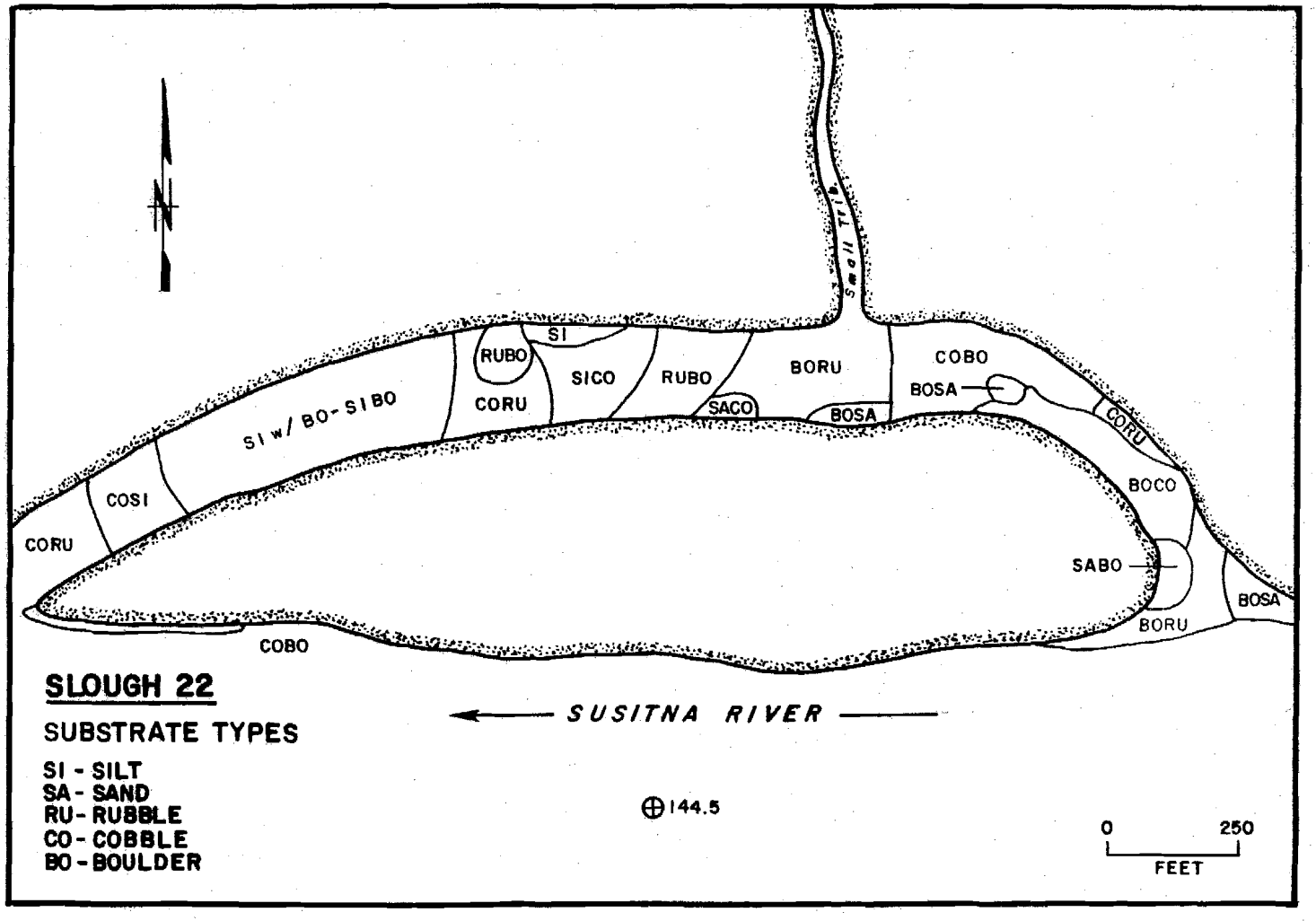


Figure 4-F-67. Slough 22 substrate, 1982.

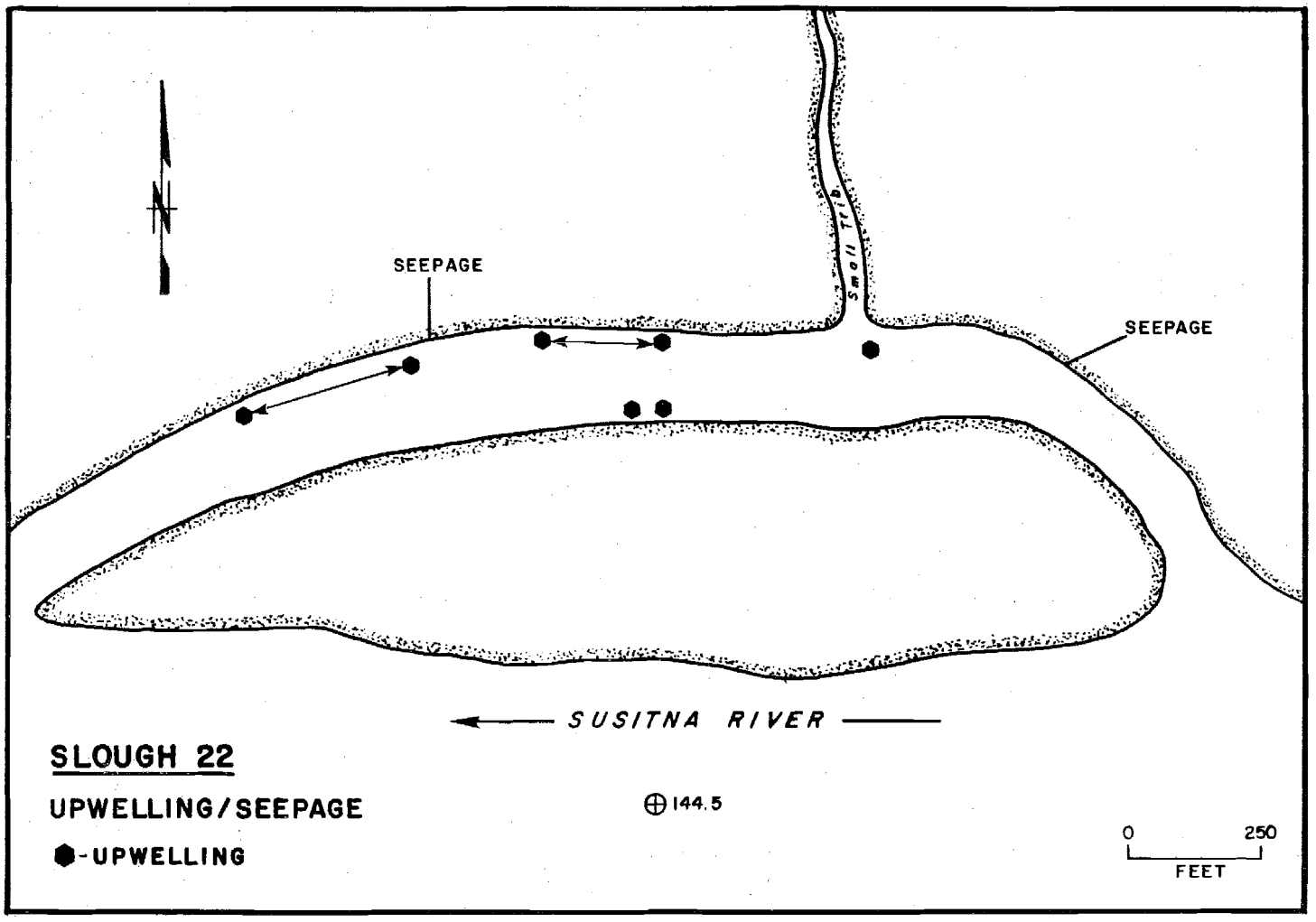


Figure 4-F-68. Slough 22 upwelling/seepage, 1982.

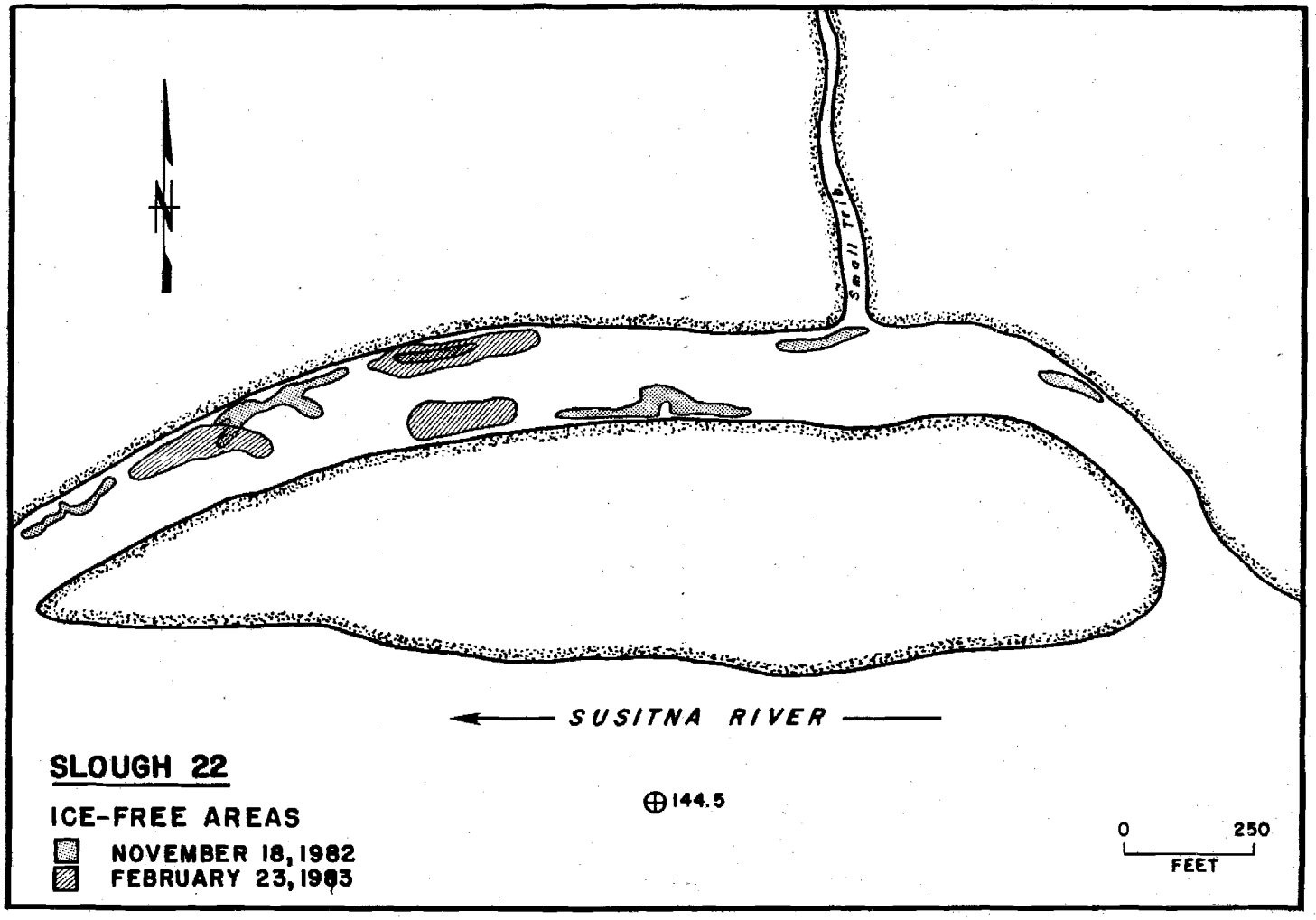


Figure 4-F-69. Slough 22 ice-free areas, winter 1982-83.

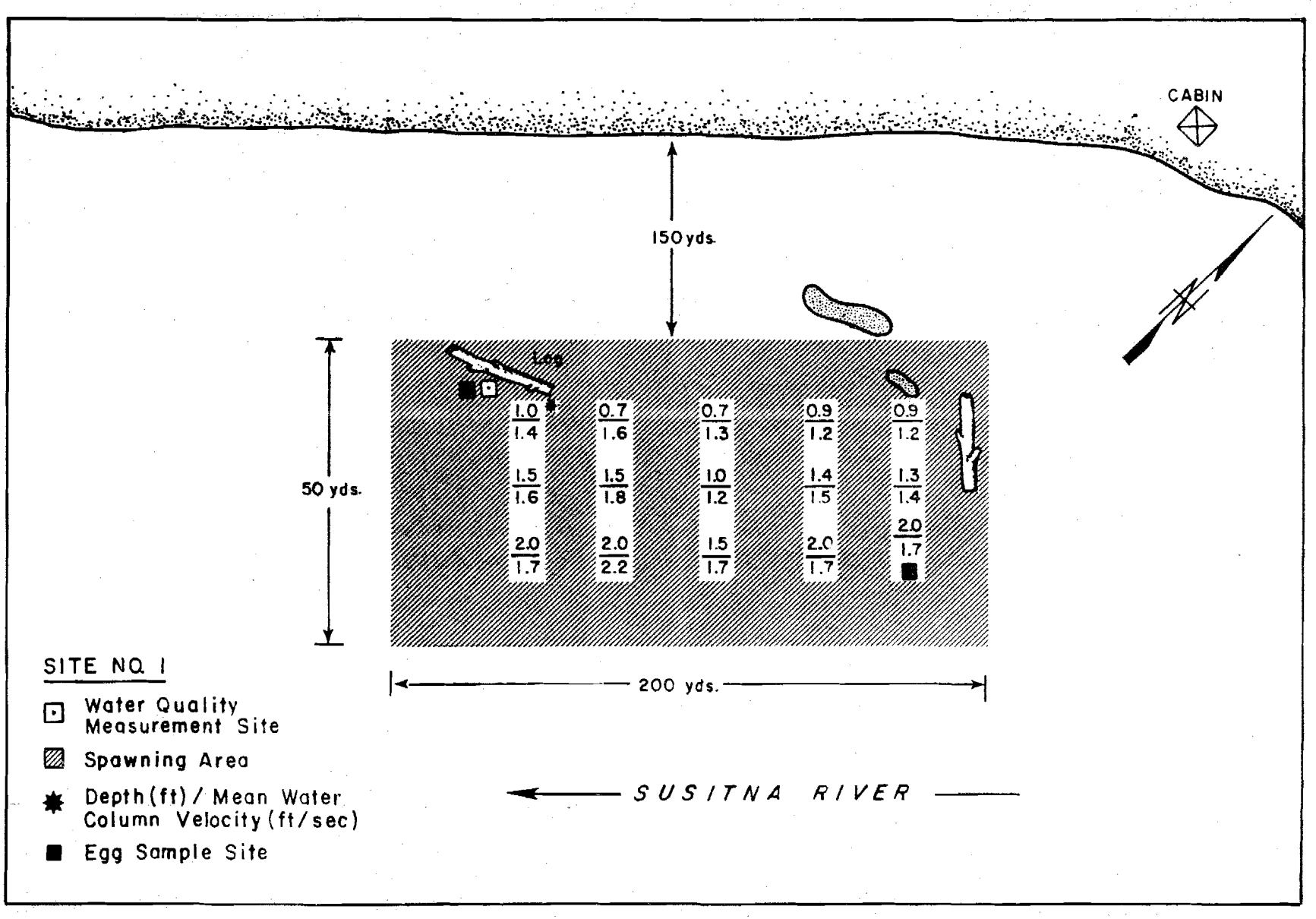


Figure 4-F-70. Eulachon spawning area on the Susitna River at RM 26.0 (GC S17N07W22DAA): May 31, 1982.

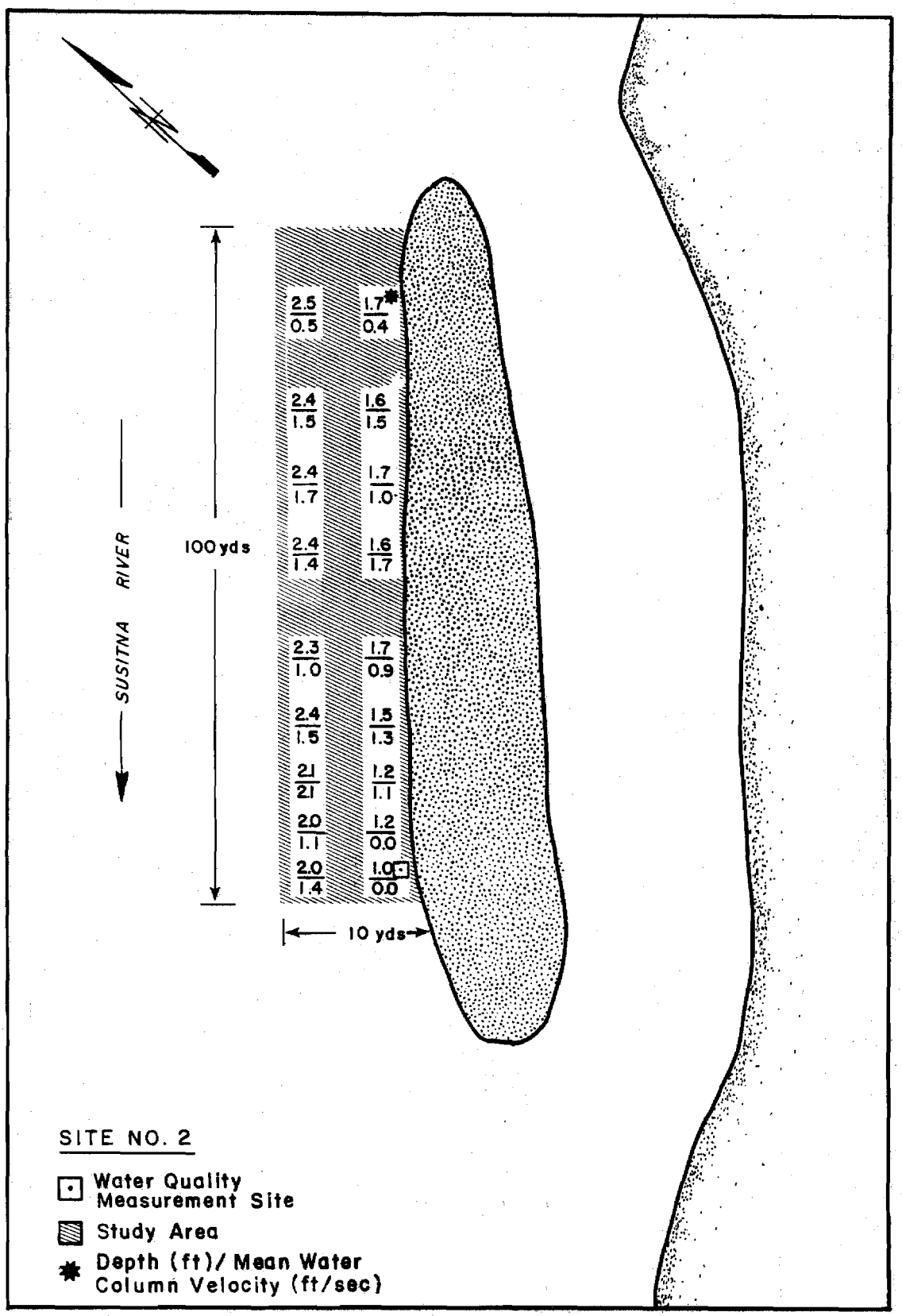


Figure 4-F-71. Eulachon spawning areas on the Susitna River at RM 25.9 (GC S17N07W22DDA): May 31, 1982.

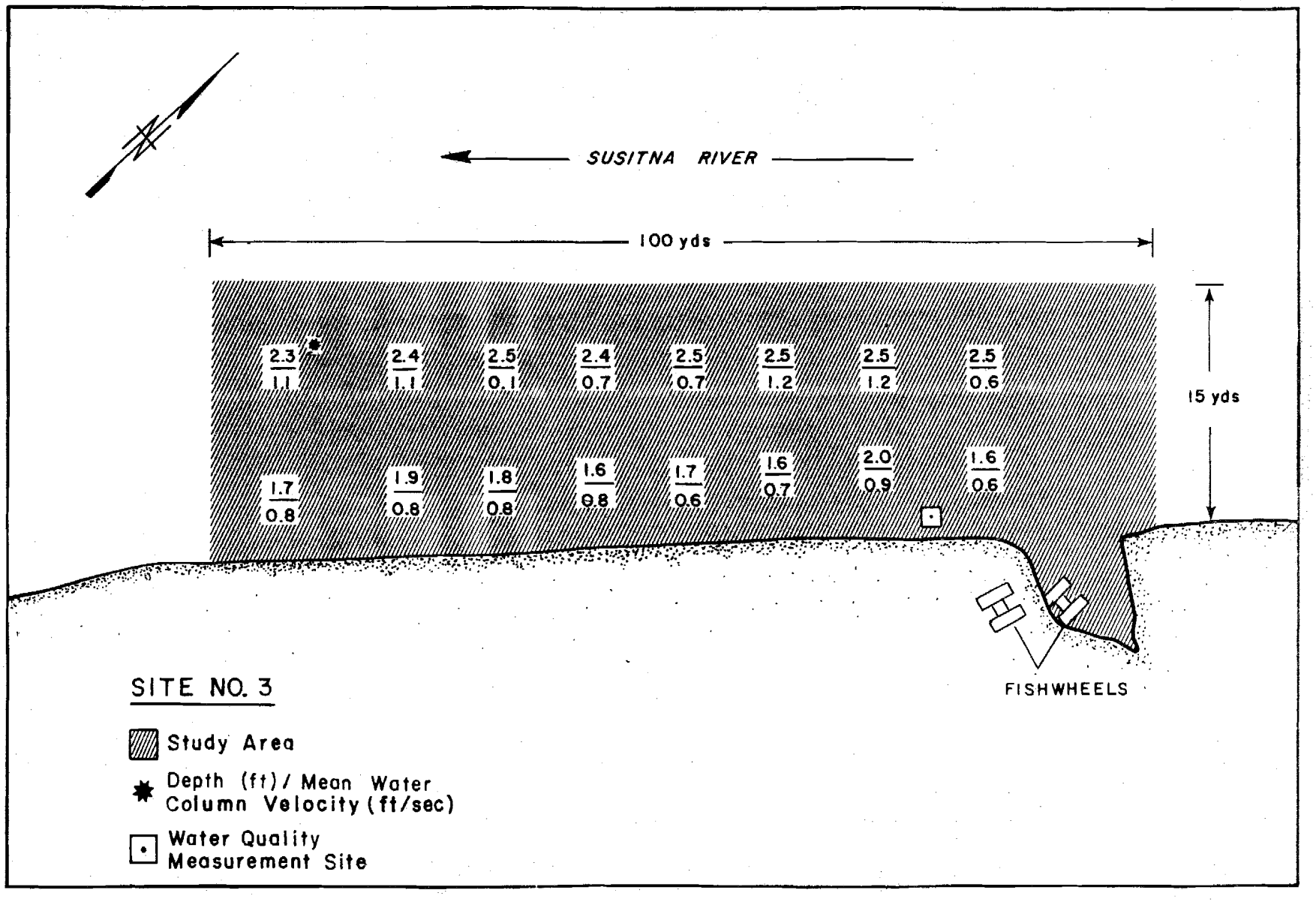


Figure 4-F-72. Eulachon spawning area on the Susitna River at RM 26.3 (GC S17N07W23CAB): May 31, 1982.

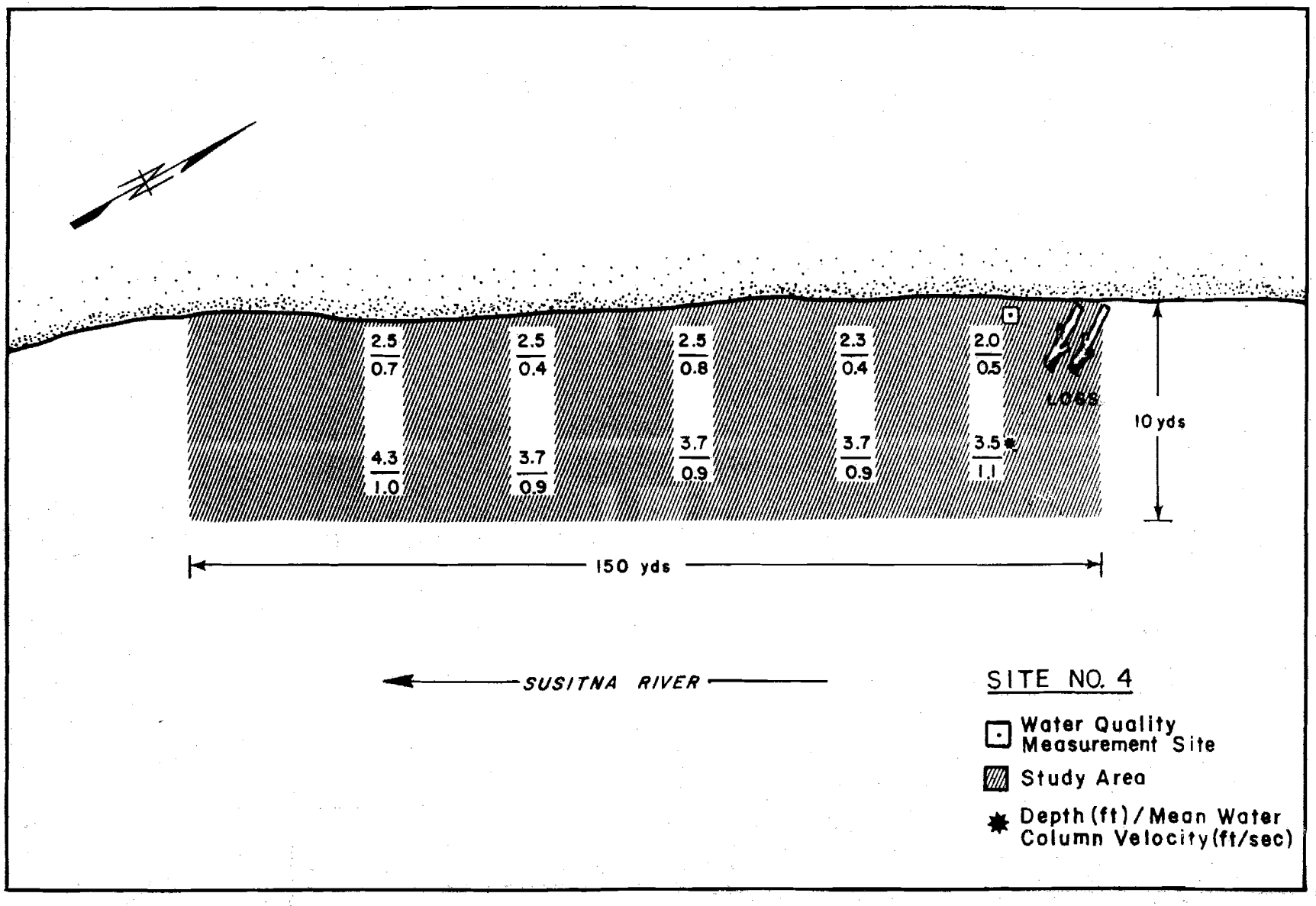


Figure 4-F-73. Eulachon spawning area on the Susitna River at RM 25.5 (GC S17N07W22CAA): May 31, 1982.

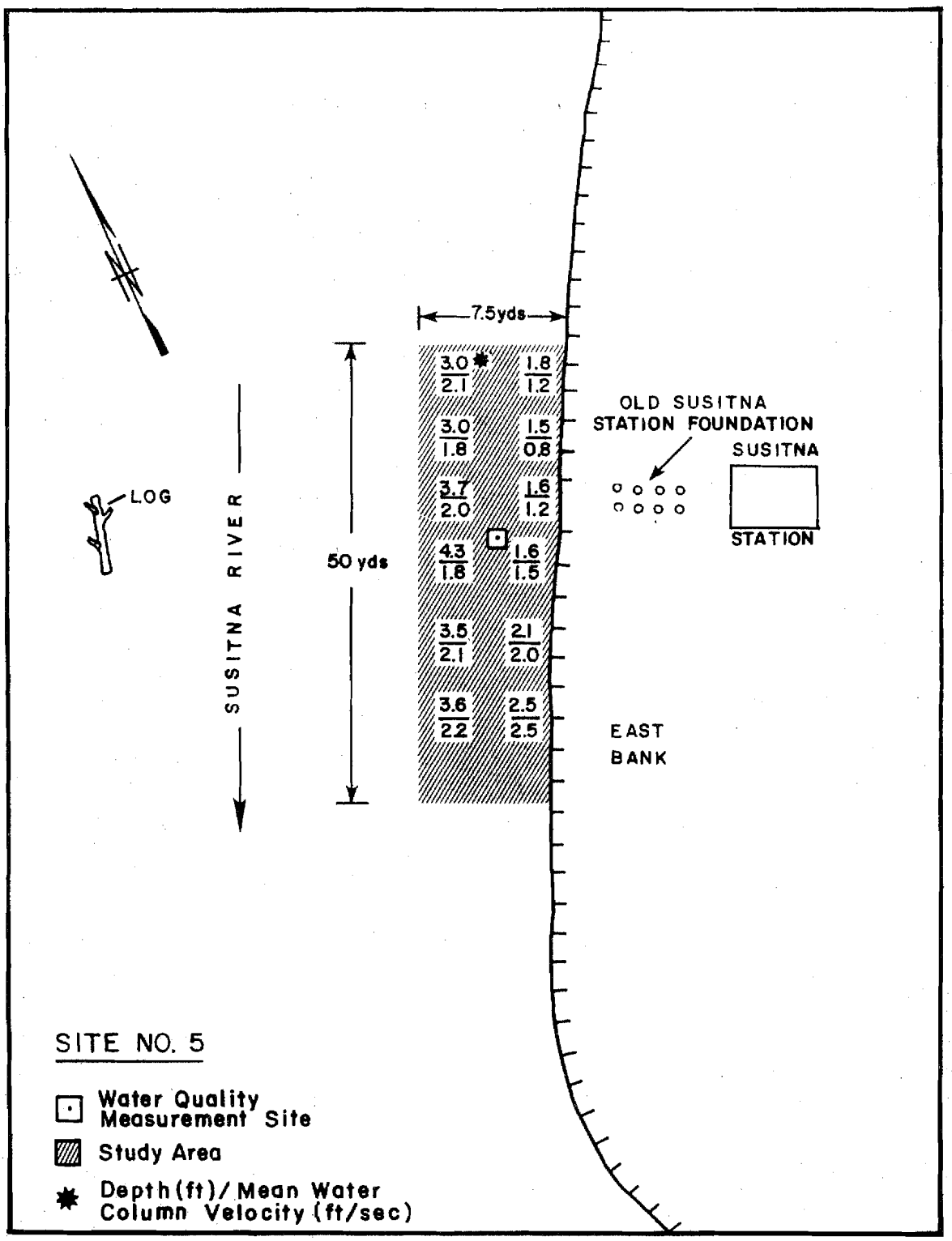


Figure 4-F-74. Eulachon spawning area on the Susitna River at RM 25.8 (GC S17N07W22DCD): June 1, 1982.

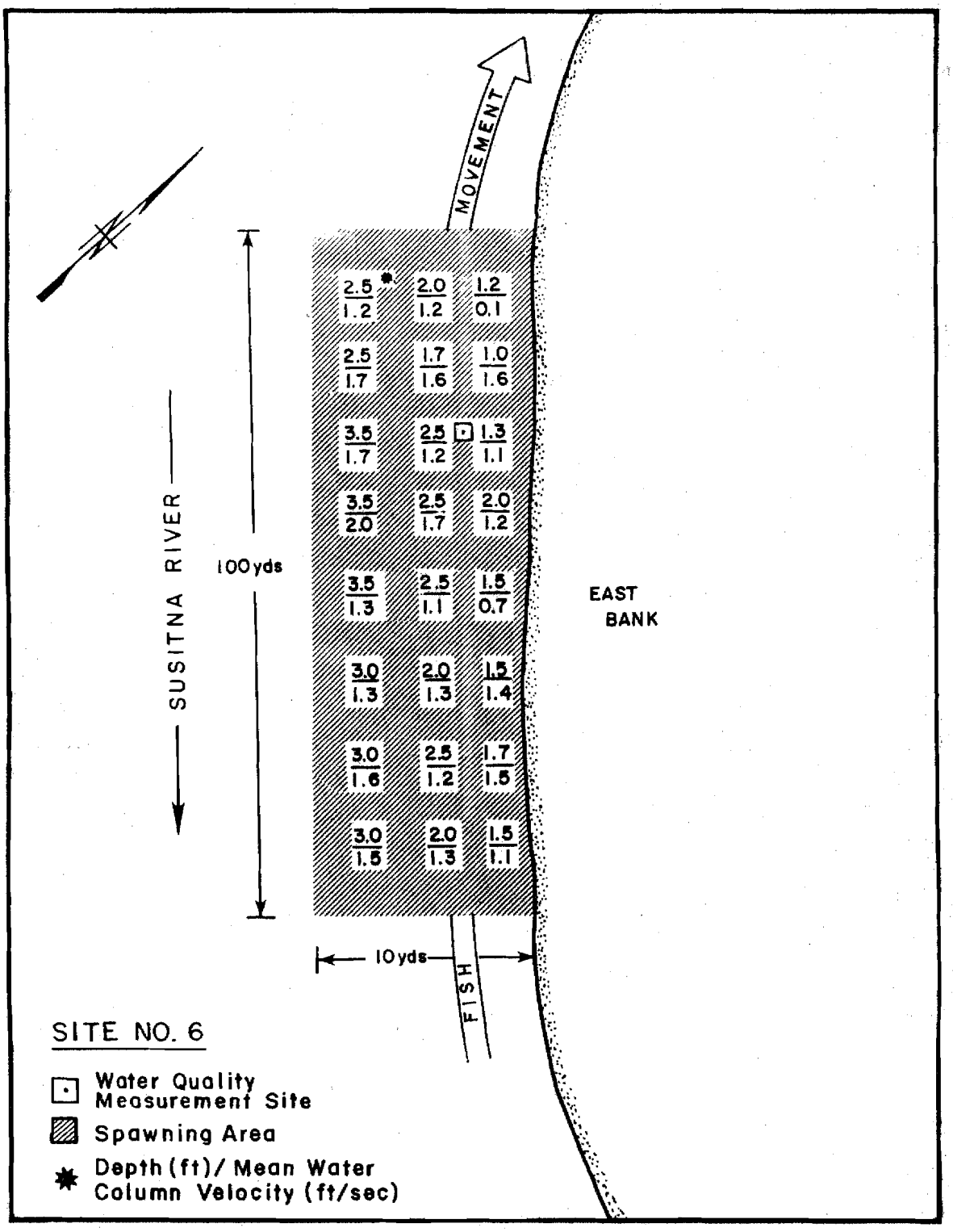


Figure 4-F-75. Eulachon spawning area on the Susitna River at RM 21.4 (GC S16N07W04CAC): June 1, 1982.

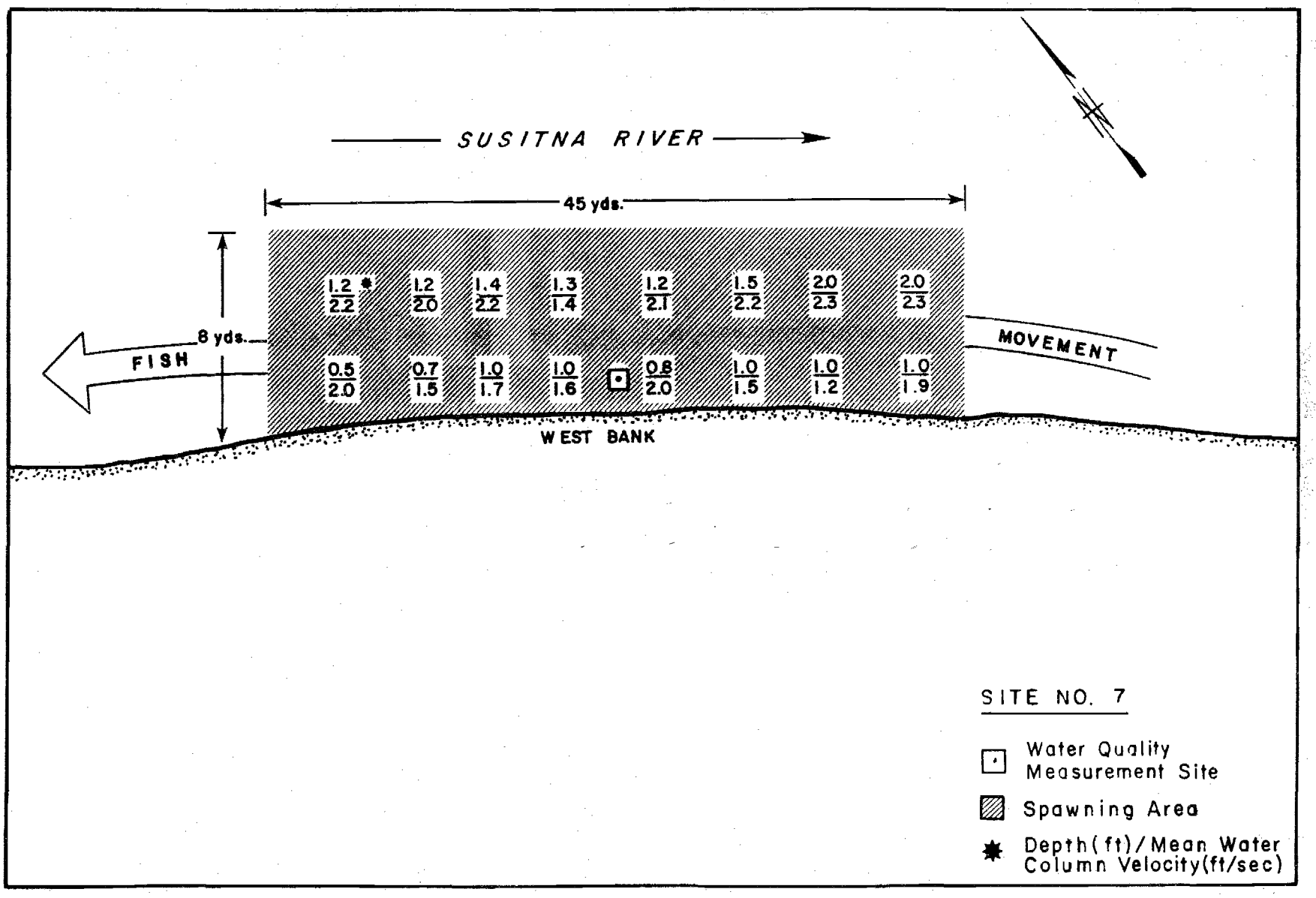


Figure 4-F-76. Eulachon spawning area on the Susitna River at RM 18.2 (GC S16N07W15CDB): June 1, 1982.

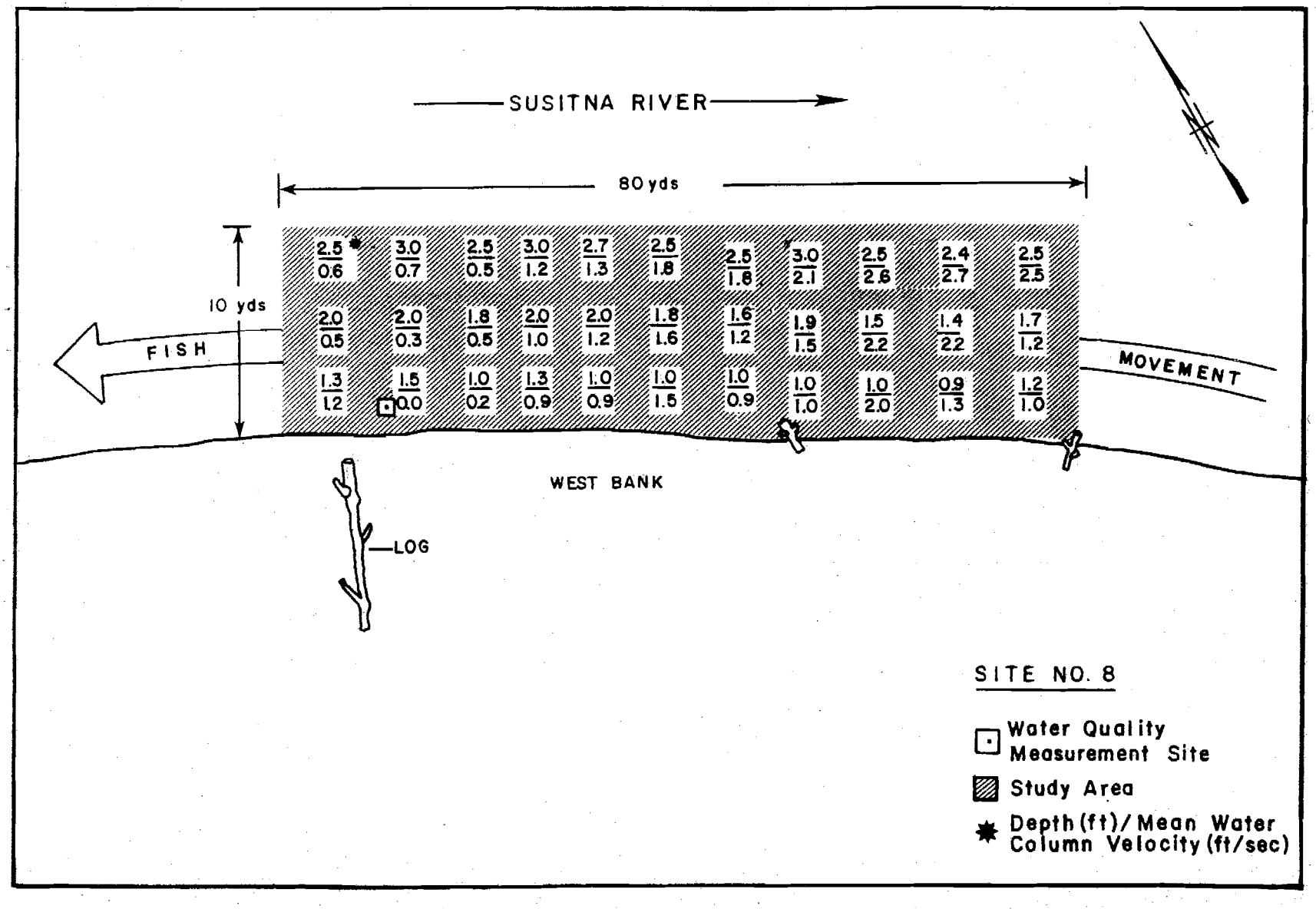


Figure 4-F-77. Eulachon spawning area on the Susitna River at RM 16.5 (GC S16N07W22DCD): June 1, 1982.

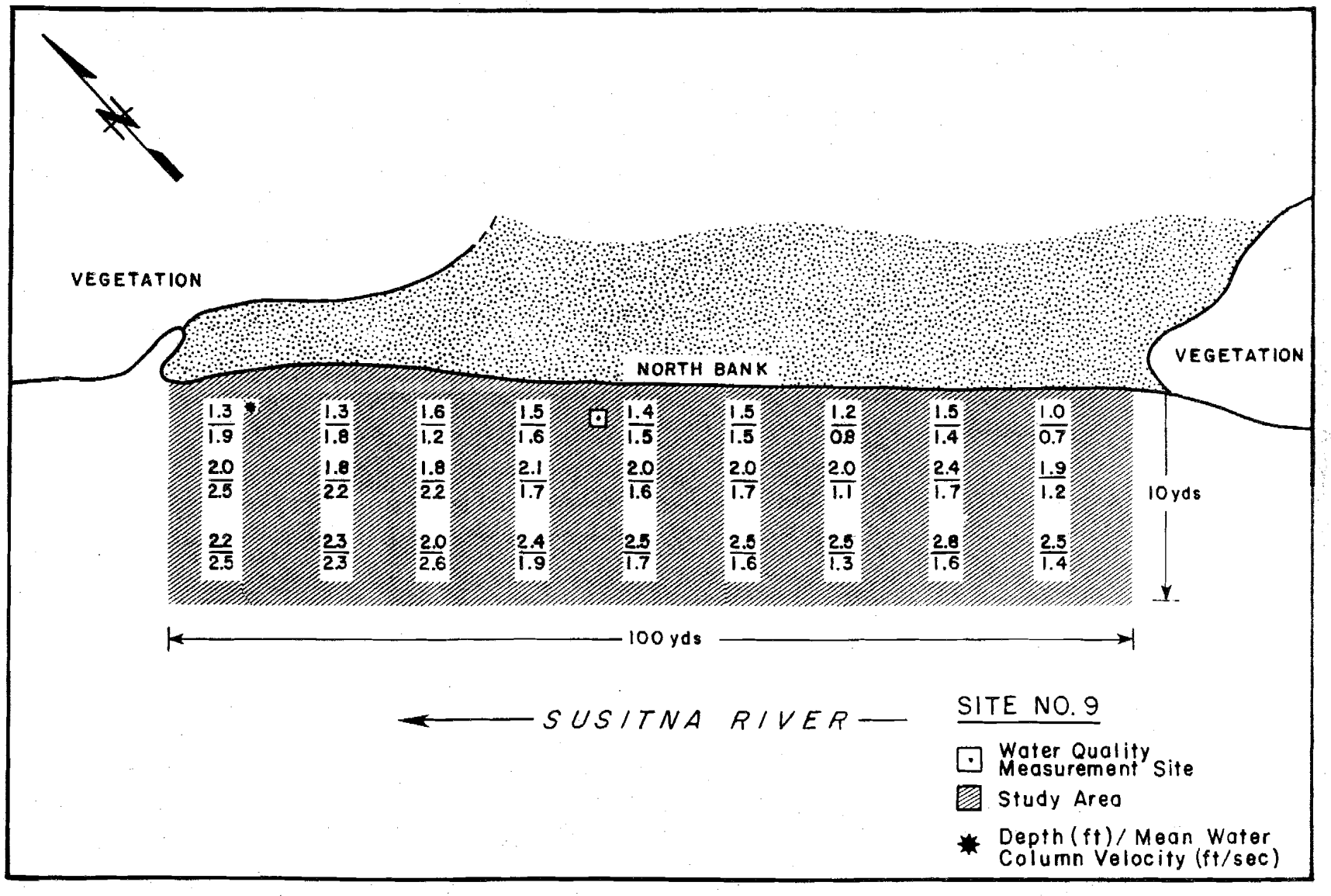


Figure 4-F-78. Eulachon spawning area on the Susitna River at RM 44.0 (GC S19N05W20CAC): June 3, 1982.

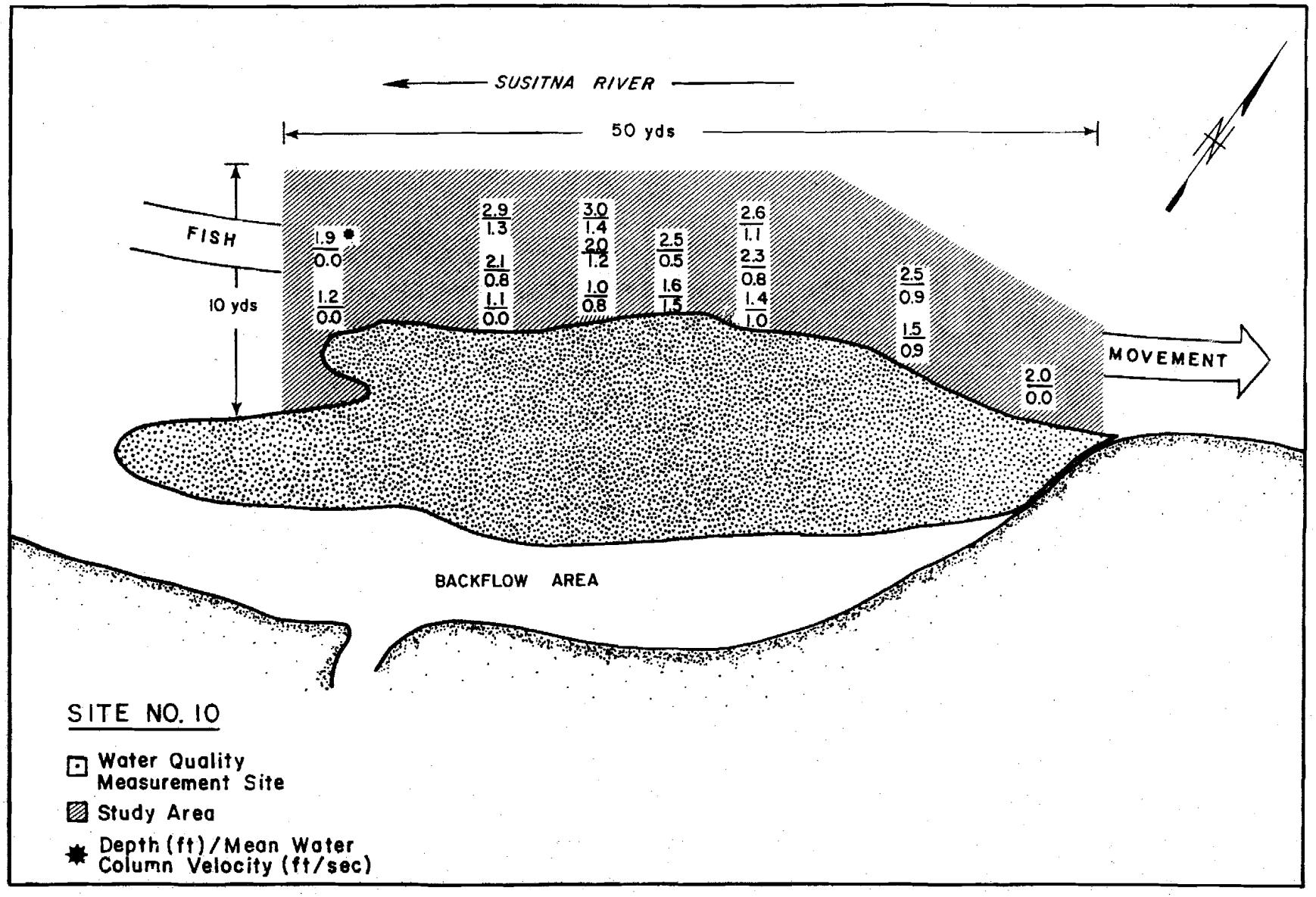


Figure 4-F-79. Eulachon spawning area on the Susitna River at RM 41.3 (GC S19N06W25CCD): June 4, 1982.

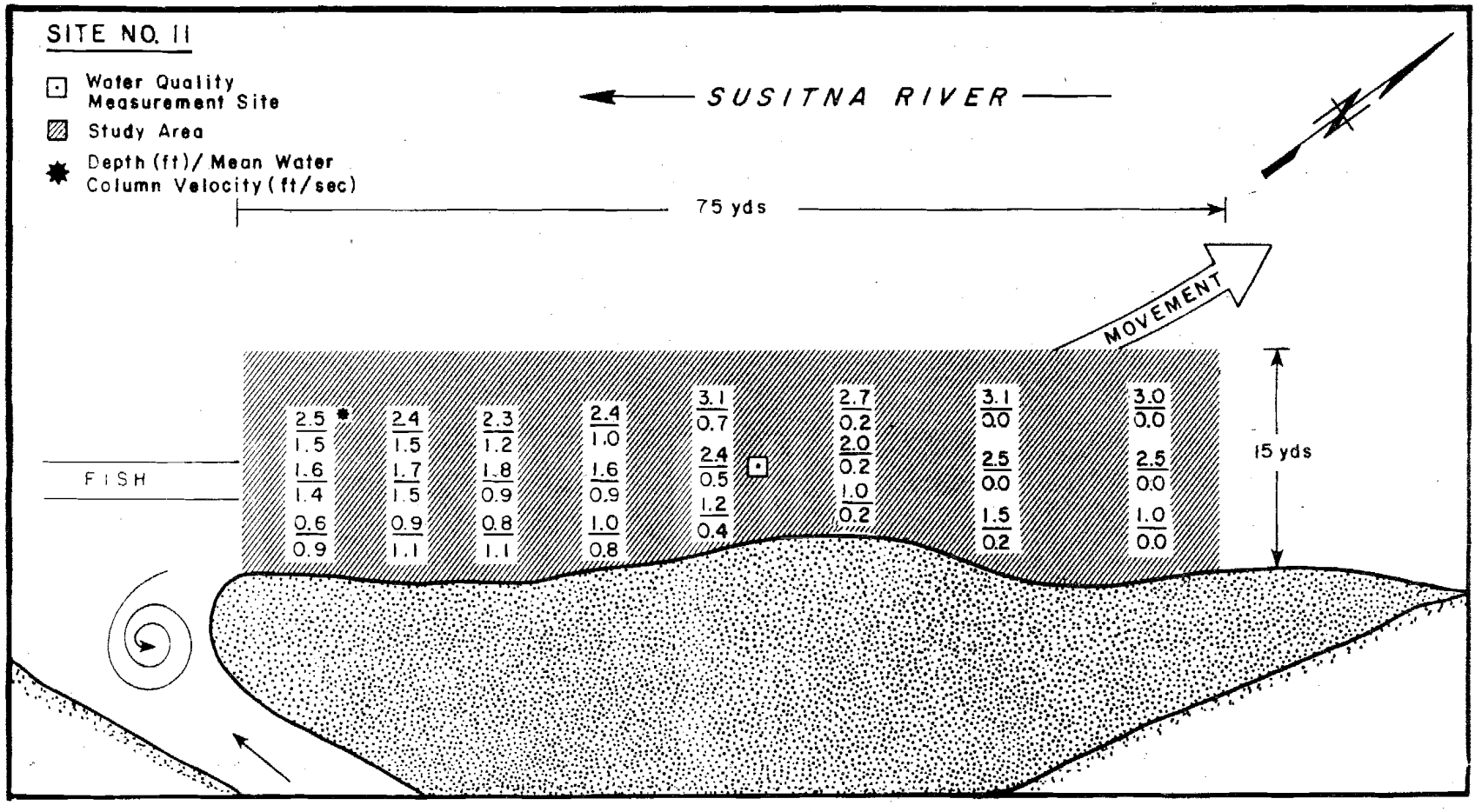


Figure 4-F-80. Eulachon spawning area on the Susitna River at RM 28.0 (GC S17N07W13DBB): June 5, 1982.

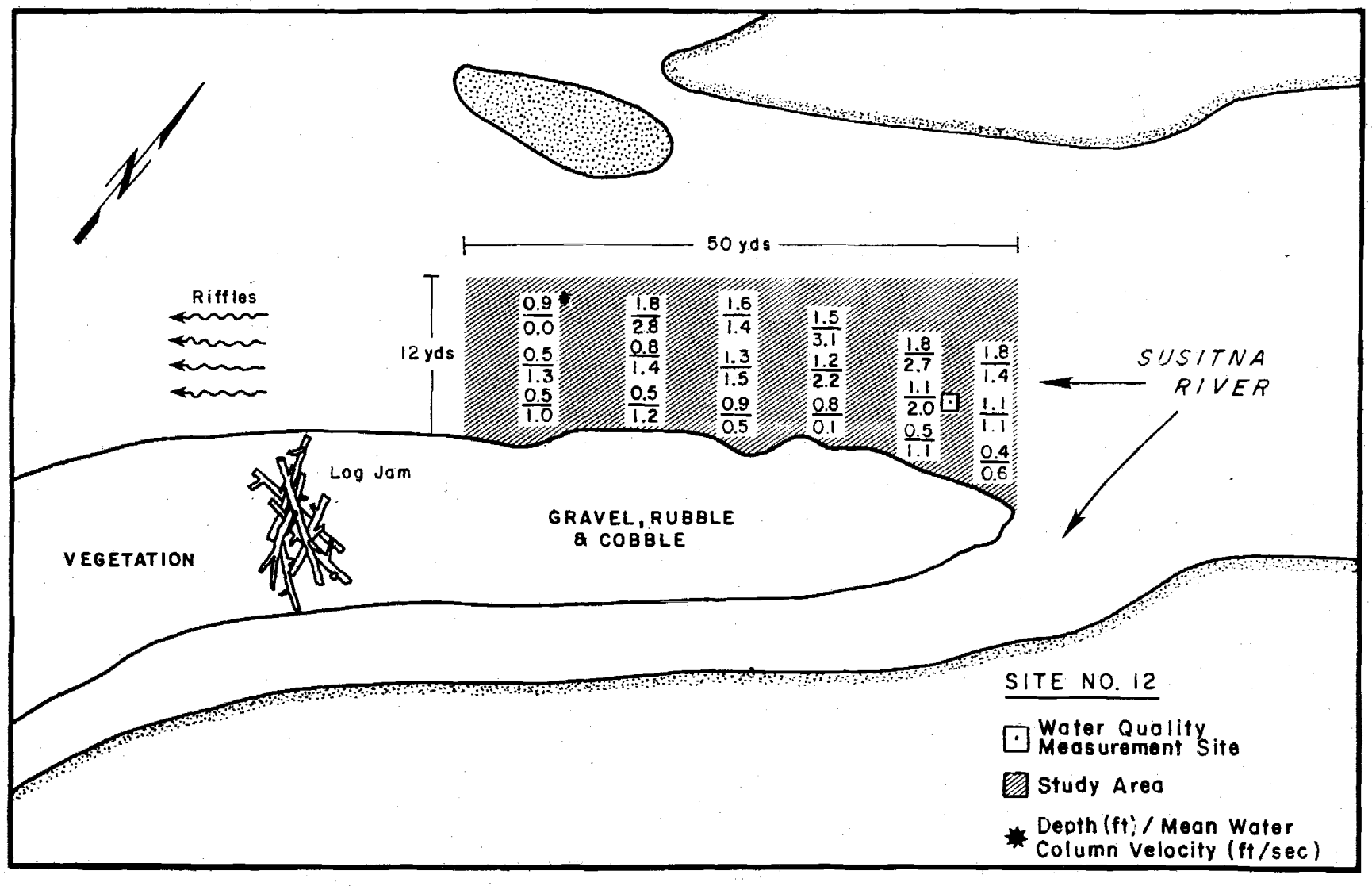


Figure 4-F-81. Eulachon spawning area on the Susitna River at RM 31.1 (GC S17N06W18BAA): June 5, 1982.

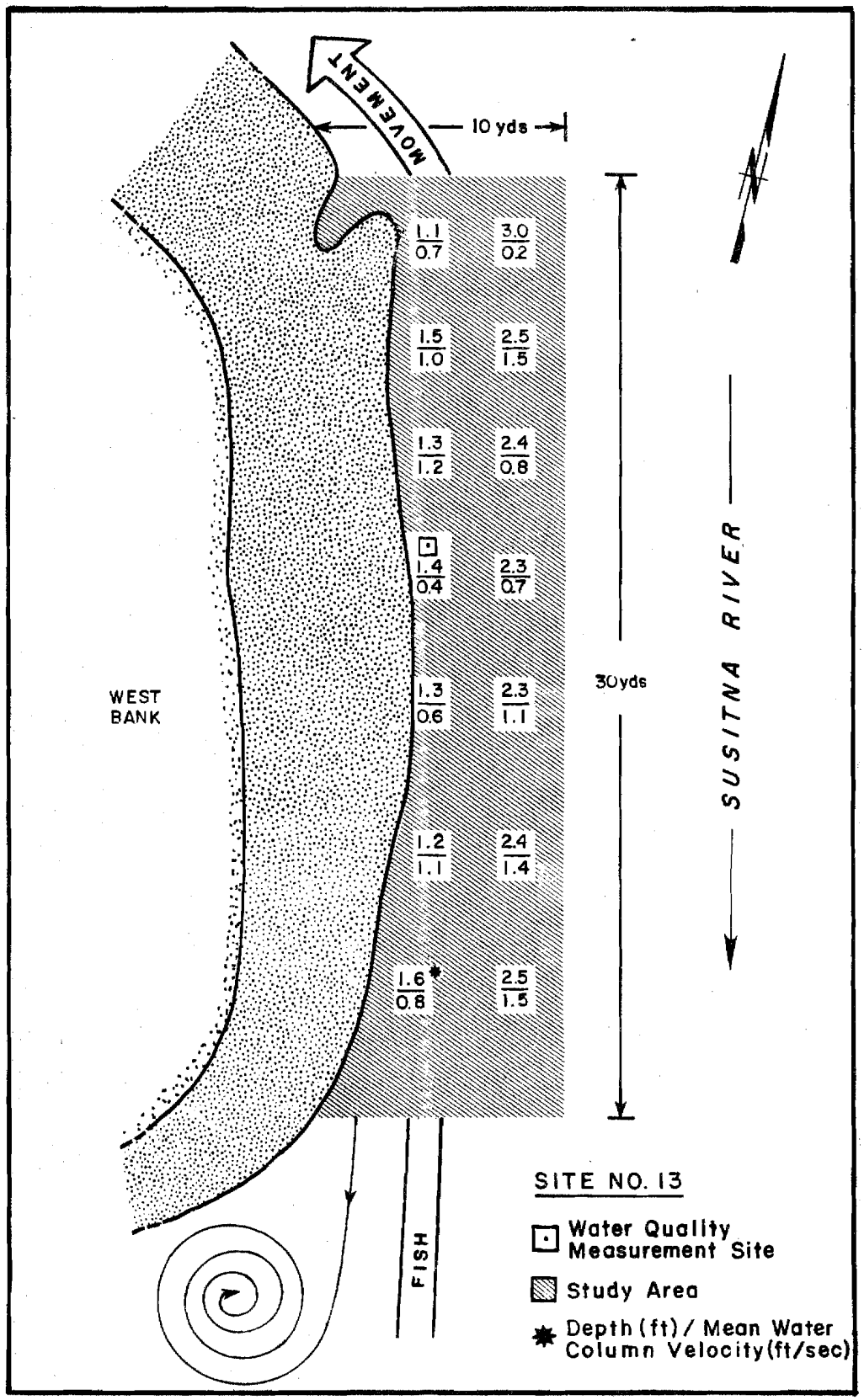


Figure 4-F-82. Eulachon spawning area on the Susitna River at RM 31.8 (GC S17N06W05ABA): June 5, 1982.

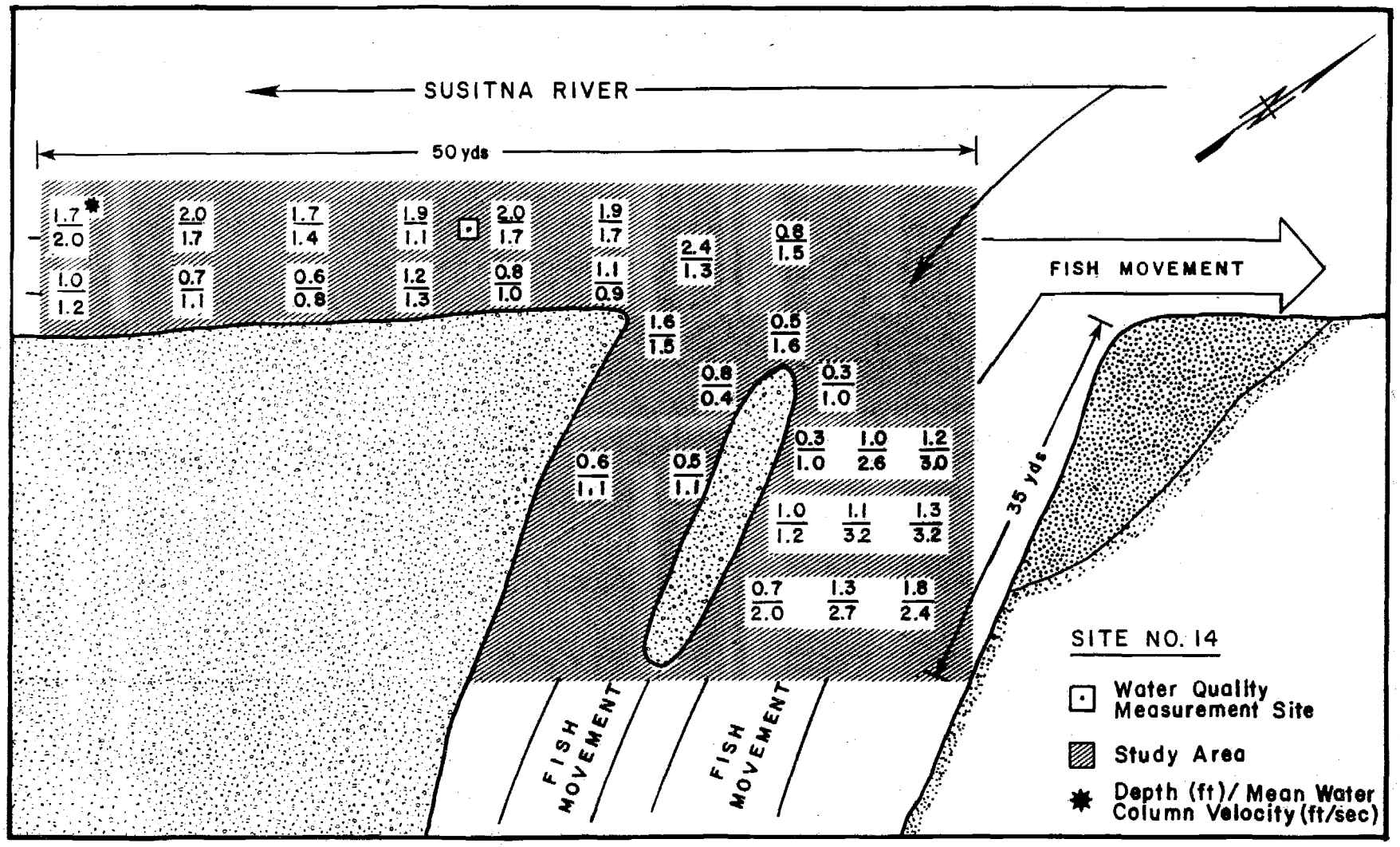


Figure 4-F-83. Eulachon spawning area on the Susitna River at RM 15.0 (GC S16N07W35BDD): June 6, 1982.

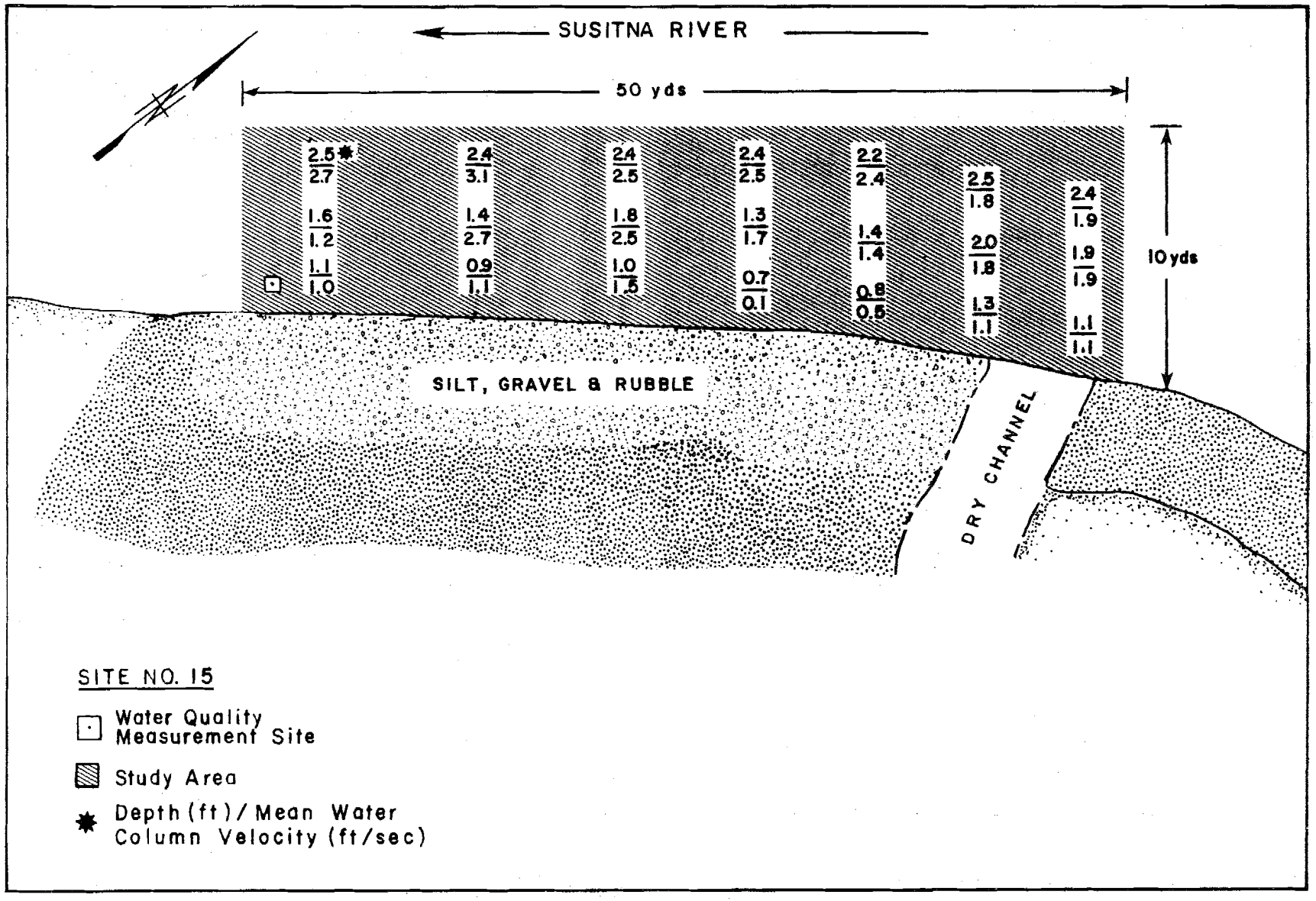


Figure 4-F-84. Eulachon spawning area on the Susitna River at RM 35.5 (GC S18N06W15CCC): June 7, 1982.

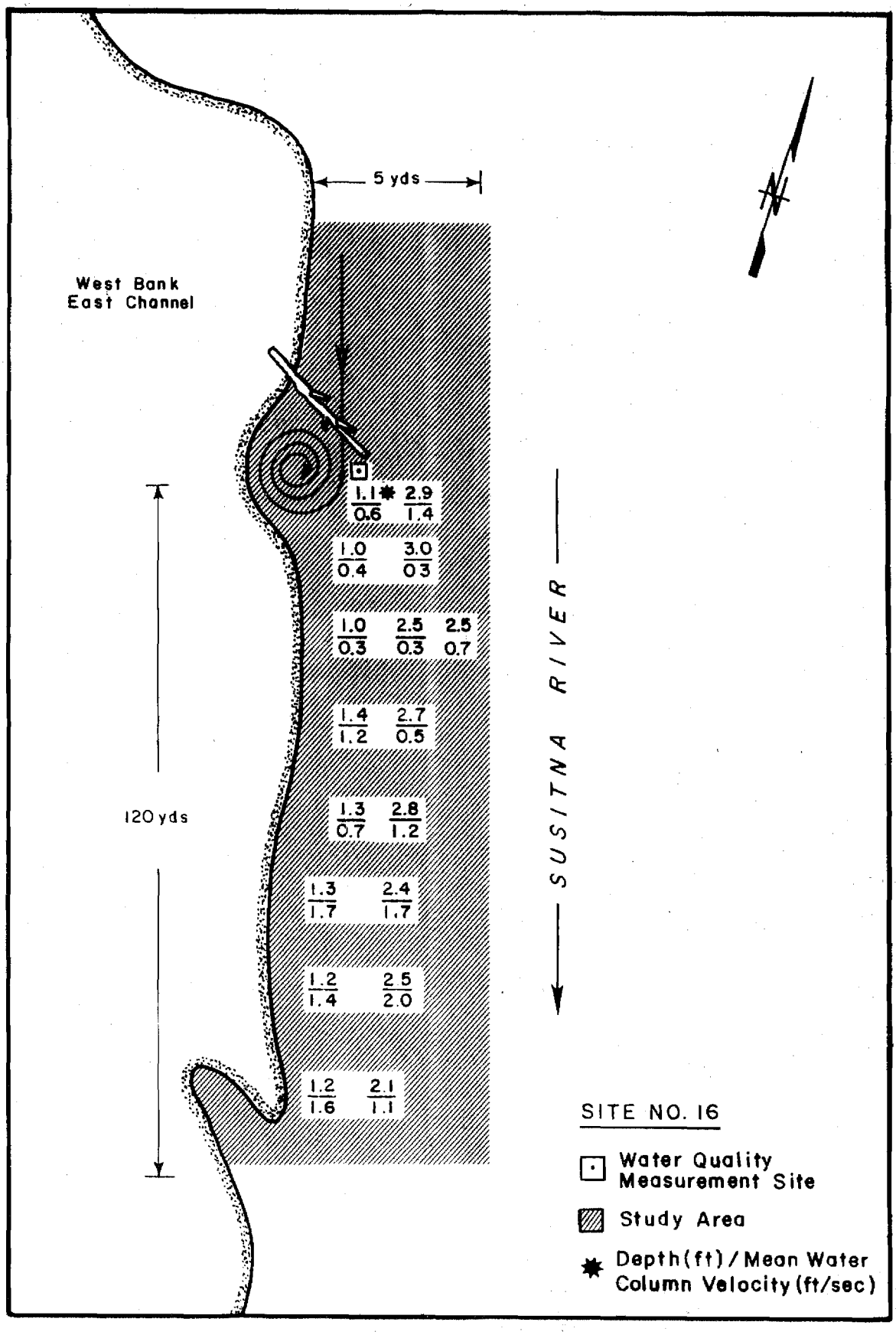


Figure 4-F-85. Eulachon spawning area on the Susitna River at RM 22.8 (GC S16N07W04BBA): May 30, 1982.

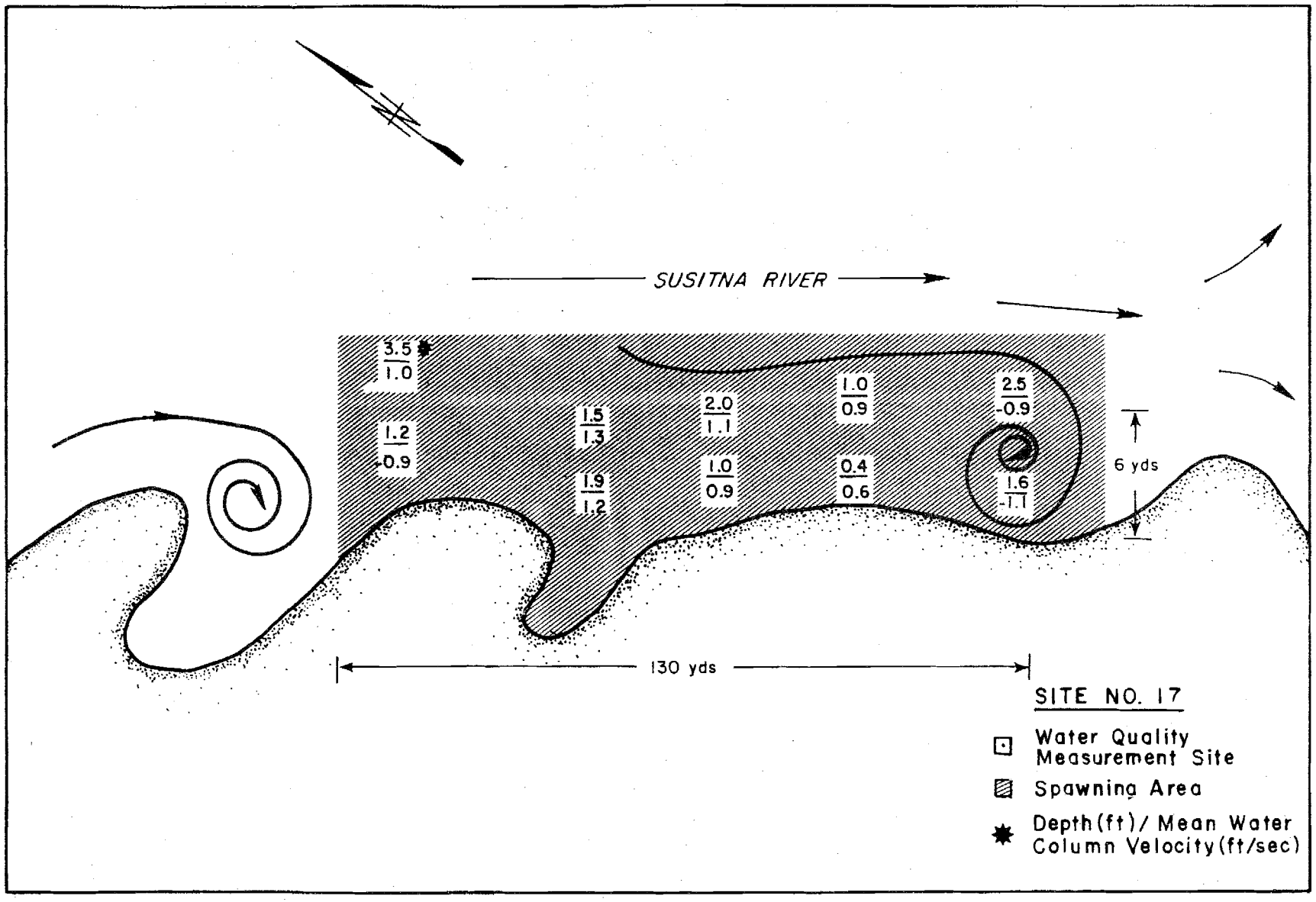


Figure 4-F-86. Eulachon spawning area on the Susitna River at RM 43.3 (GC S19N06W24ACC): May 24, 1982.

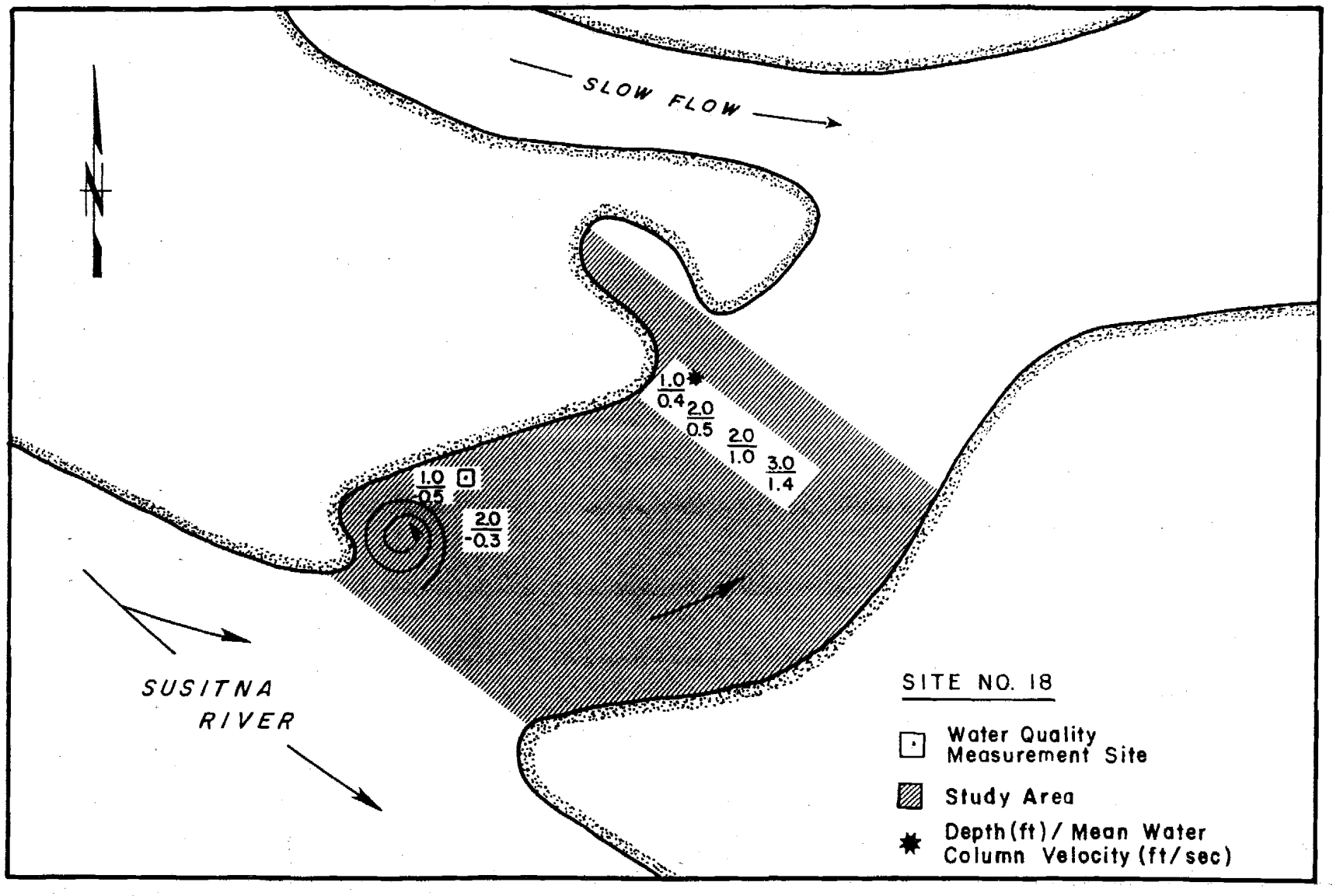


Figure 4-F-87. Eulachon spawning area on the Susitna River at RM 8.5 (GC S14N07W22ACA): May 26, 1982.

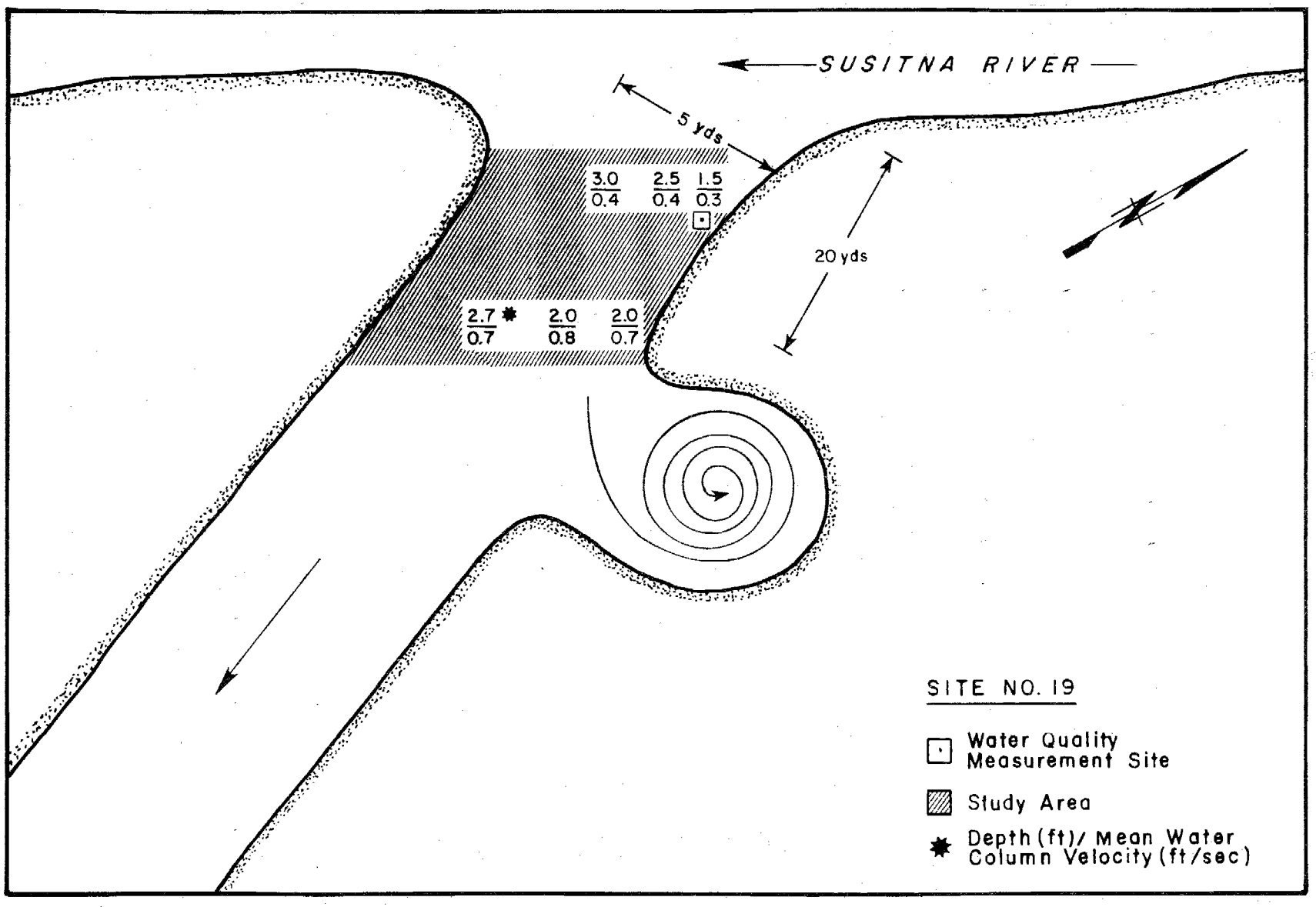


Figure 4-F-88. Eulachon spawning area on the Susitna River at RM 11.0 (GC S15N07W10DCC): May 26, 1982.

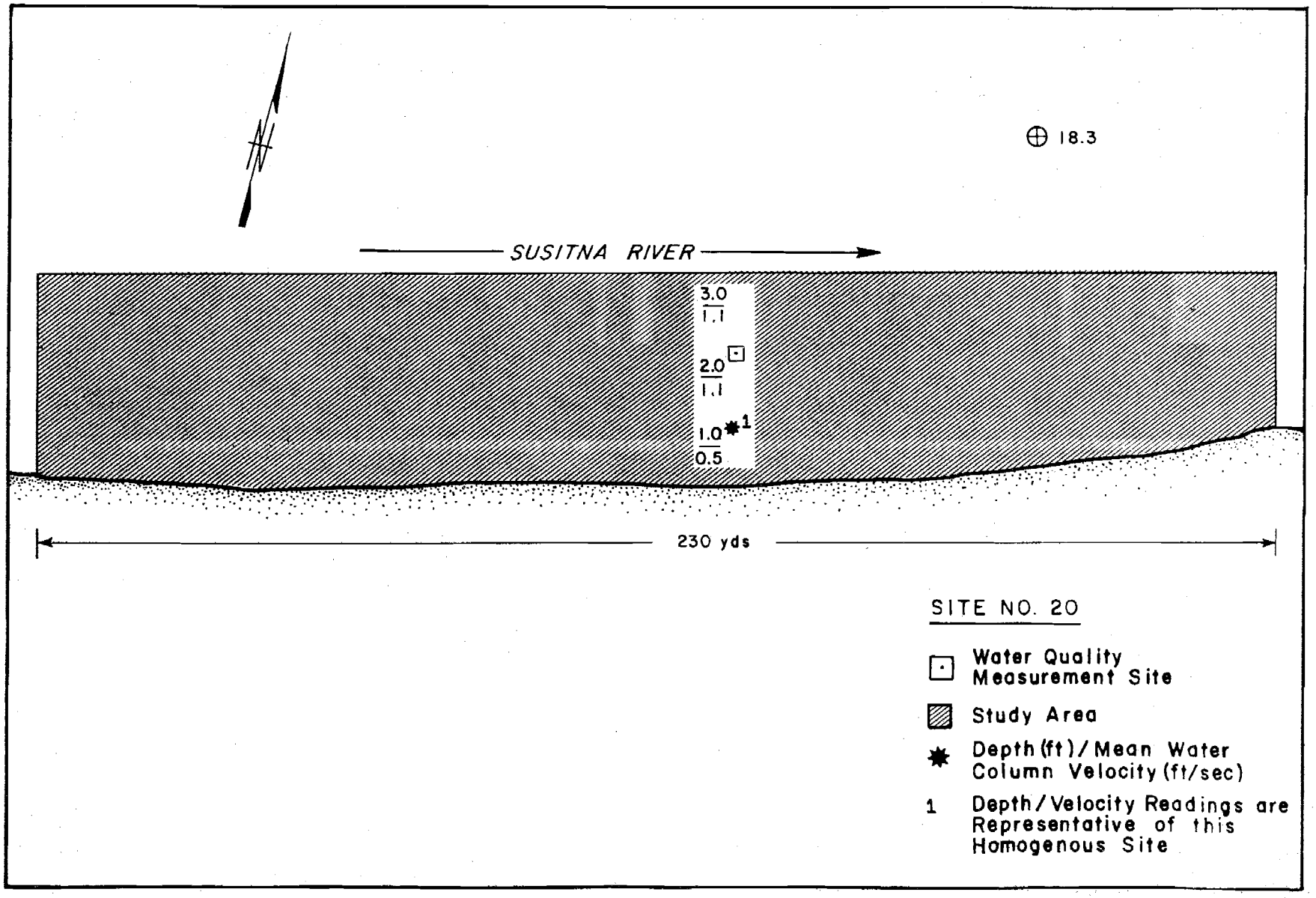


Figure 4-F-89. Eulachon spawning area on the Susitna River at RM 18.3 (GC S16N07W15CDB): May 26, 1982.

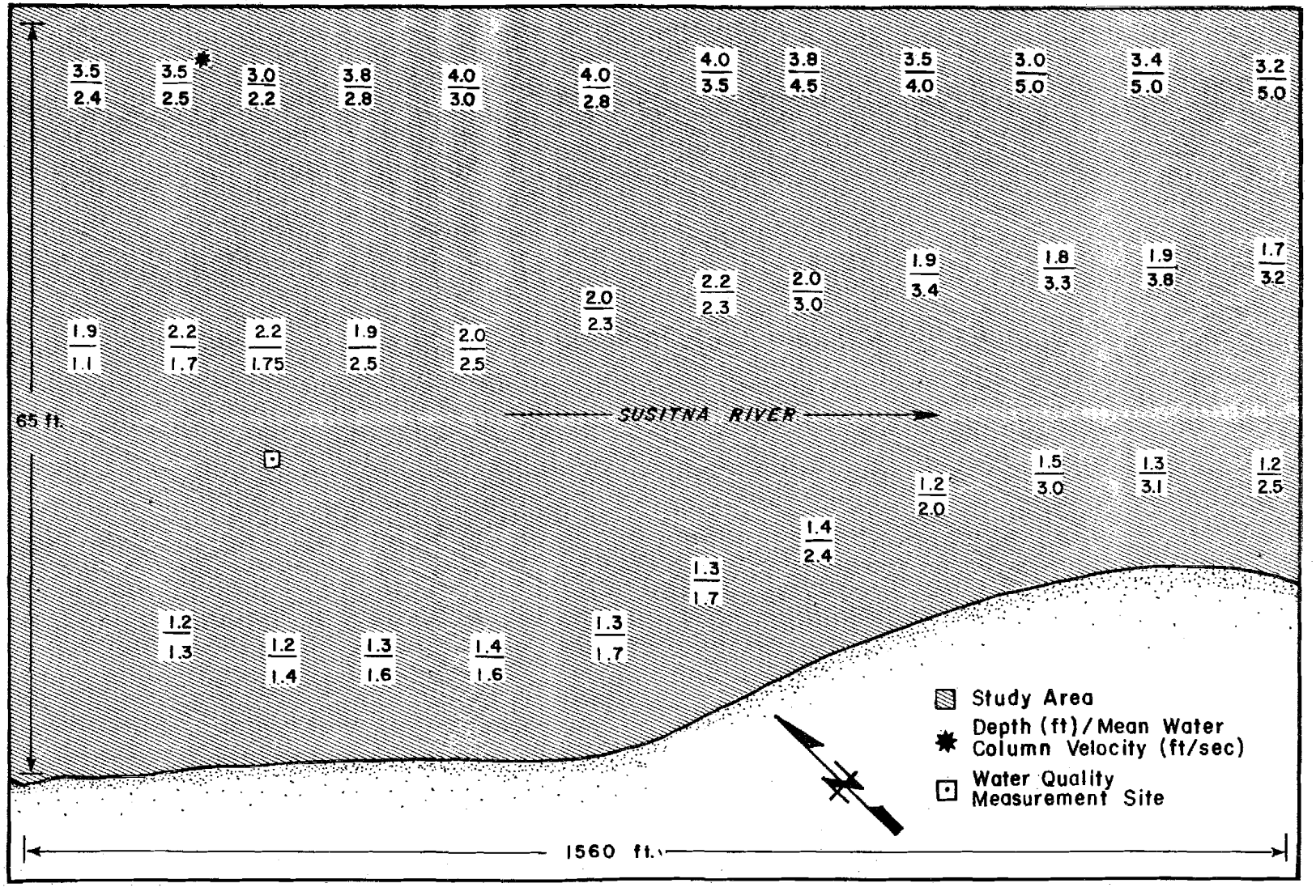


Figure 4-F-90. The Lower Montana Bering cisco spawning area on the Susitna River at RM 76.8 - 77.3 (GC S23N04W06ADD): October 14, 1982.

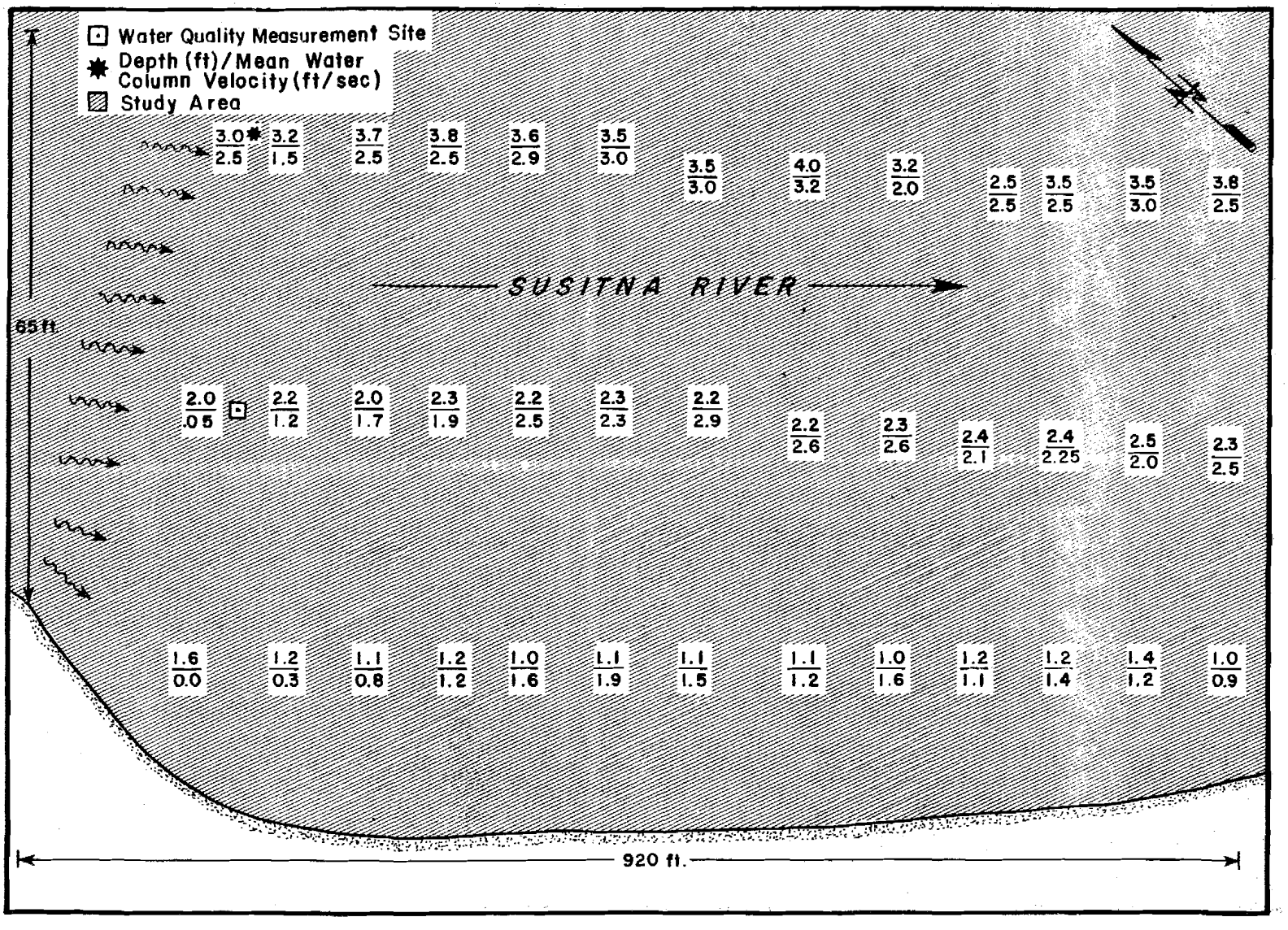


Figure 4-F-91. The Upper Montana Bering cisco spawning area on the Susitna River at RM 77.3 - 77.6 (GC S23N04W06CBB): October 14, 1982.

Site Descriptions of Designated Fish Habitat Sites

Descriptions and aerial photographs of each of the 17 Designated Fish Habitat (DFH) sites sampled during the open water season are included in this appendix. Each narrative gives a general introduction to the site, a summary of hydraulic conditions at the site, a general introduction to the site, a description of habitat characteristics and a summary of major fish species present. The narratives are only descriptive in nature and are intended as an aid to the reader in understanding conditions at each site. They do not include any data (except for the presence/absence of the various habitat zones) not presented elsewhere in this report, nor do they draw any conclusions.

Various sources of data are referred to in each site description. Provisional USGS Susitna River discharge data are contained in Appendix 4-A. Discharges associated with sites from Goose Creek to Birch Creek (below the Chulitna River confluence) are referenced to Susitna discharges at the Parks Highway bridge. The sites from Whiskers Creek to Portage Creek (above the Chulitna River confluence) are referenced to Susitna discharges at Gold Creek. The discharges referred to in each site description are the discharges at the appropriate gaging station on the day that biological sampling occurred at that site. The results of the studies relating changes in the surface area of the mainstem backwater area to mainstem discharge at each site, are contained in Part I, Section 3.1.3.1. Habitat data for each site are included in Appendix 4-I.

Fish catch data are presented in Appendix 4-G and fish catch per unit effort data are found in Appendix 4-H. The biological summaries also include results obtained by boat electrofishing at the DFH sites. These data are contained in Section 3.1.1 and Appendix 3-A of Volume 3. Boat electrofishing effort at DFH sites occurred in zone 3 or in the mainstem backwater zones (zone 2, zone 6, zone 7, zone 8).

Descriptions of each habitat zone are contained in Appendix Table 4-F-92. The distribution of zones at a hypothetical site at three different levels of mainstem discharge is shown in Appendix Figure 4-F-92. Discussion of the habitat zone concept is presented in Part II, Section 2.2.

References to slough heads being open or closed and the presence/absence of various hydraulic zones are restricted to the two days out of every two weeks that sampling was being conducted at the site. The slough head status and the zone distribution may well have been different between sampling trips at any particular site.

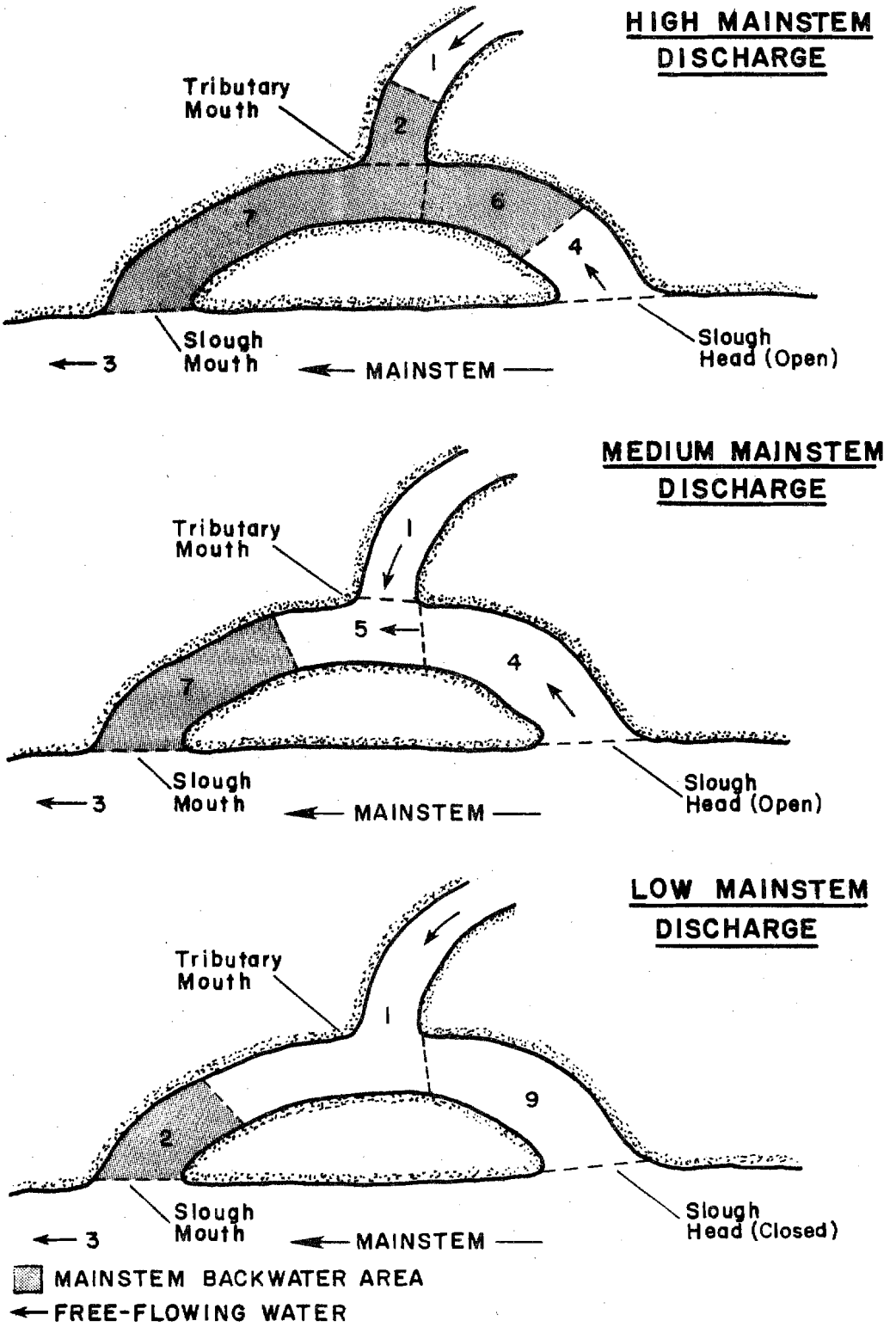


Figure 4-F-92. Hypothetical slough, with associated tributary showing presence of hydraulic zones at three different mainstem discharges.

Appendix Table 4-F-1. Description of habitat zones sampled at Designated Fish Habitat Sites, June through September, 1982.

ZONE CODE	DESCRIPTION
1	Areas with a tributary or groundwater water source, which are not influenced by mainstem stage, and which usually have significant[a] surface water velocity.
2	Areas with a tributary or groundwater water source, which have no appreciable[a] surface water velocity as a result of a hydraulic barrier created at the mouth of a tributary or slough by mainstem stage.
3	Areas of significant surface water velocities, primarily influenced by mainstem, where tributary or slough water mixes with the mainstem water.
4	Areas of significant surface water velocities, which are located in a slough or side channel above a tributary confluence (or in a slough or side channel where no tributary is present), when the slough head is open.

Appendix Table 4-F-1 (Continued).

ZONE CODE	DESCRIPTION
5	Areas of significant water surface velocities, which are located in slough or side channel below a tributary confluence, when the slough head is open.
6	Backwater areas with no appreciable surface water velocities resulting from a hydraulic barrier created by mainstem stage, which occur in a slough or side channel above a tributary confluence (or in a slough or side channel where no tributary is present), when the head of the slough is open.
7	Backwater areas with no appreciable surface water velocities resulting from a hydraulic barrier created by mainstem stage, which occur in a slough or side channel below a tributary confluence, when the head of the slough is open.
8	Backwater areas consisting of mainstem eddies.
9	A pool with no appreciable surface water surface velocities, which is created by a geomorphological feature of a free-flowing zone or from a hydraulic barrier created by a tributary; not created as a result of mainstem stage.

[a] "Significant" and "appreciable" surface water velocities mean a velocity of at least 0.5 ft/sec. However, there are site-specific exceptions to this, based on local morphology.

1. Goose Creek 2 and Side Channel

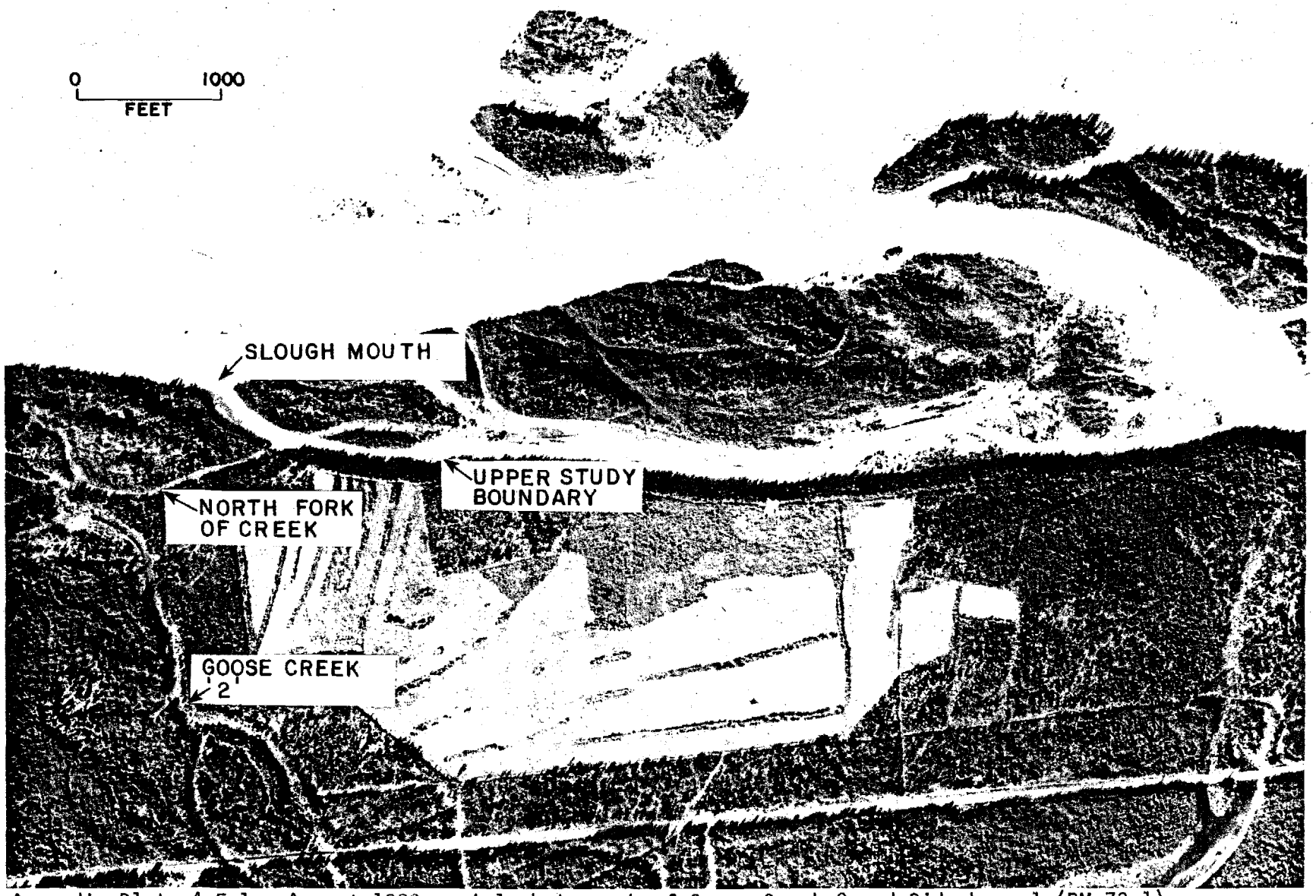
Goose Creek 2 and Side Channel is located at RM 73.1 on the east side of the Susitna River, approximately 10.9 miles downriver from the Parks Highway Bridge (Appendix Plate 4-F-1). The study site is centered around the confluence of the north mouth of Goose Creek and a side channel of the Susitna River.

The north fork of Goose Creek was typically 1 to 4 feet deep in the study area and was relatively swift and clear. The substrate consisted of sand overlying gravel in the lower reaches of the area and grades into gravel in the upper reaches. A log and debris jam wedged across the mouth of the creek created a small cascading water fall which was present during the entire 1982 summer field season. A large sand delta had been deposited in the side channel at the mouth of the tributary.

The side channel has a low gradient in the study area (about 1,600 feet). The steep south banks are covered with sparse emergent and overhanging riparian vegetation. Mud banks on the north side of the channel foster sparse vegetation and indicate the scouring effects of water and ice at high mainstem flows.

Hydraulic Conditions

The mainstem discharges (water surface elevations) observed in the side channel at this habitat location were higher in June and July than in August and September (Appendix Table 4-F-2). The highest mainstem



Appendix Plate 4-F-1. August 1980 aerial photograph of Goose Creek 2 and Sidechannel (RM 73.1). The Susitna River flows from right to left in this photo.

Appendix Table 4-F-2. Hydraulic zones, mainstem discharges at the Parks Highway bridge[a], and the status of the controlling streambed elevation at the upstream entrance (head) of Goose side channel at the Goose Creek-2 and Side channel site, for sampling dates from June to September, 1982.

Sampling Date	June 10	June 25	July 13	July 28	August 11	August 25	September 13	September 29
Mainstem Discharge (cfs)	64,200	66,700	63,000	72,000	47,900	38,700	36,400	33,900
Status of Channel Head	Open	Open	Open	Open	Open	Open	Transition Closing	Closed
Hydraulic Zones								
1	+	+	+	+	+	+	+	+
2	0	0	0	0	0	0	0	0
3	+	+	+	+	+	+	+	+
4	+	+	+	+	+	+	0	0
5	0	0	0	0	0	0	0	0
6	+	+	+	+	+	+	0	0
7	+	+	+	+	+	+	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	+	+

[a]USGS provisional data at Sunshine 15292780.

[+]Zone present.

[0]Zone absent.

discharge recorded at the Parks Highway Bridge during biological sampling of this site was 72,000 cfs in late July. The lowest mainstem discharge observed was 33,900 cfs during late September.

The head of the side channel was breached (open) to the conveyance of mainstem water into the side channel at mainstem discharges exceeding 34,000 cfs. The head was not found completely closed until the late September sampling trip.

The water in the side channel above the mouth of Goose Creek was turbid until late September and a heterogeneous mixture of turbid mainstem and clear tributary water was often distinguishable in the side channel below the mouth of Goose Creek.

On September 13 (mainstem discharge of 36,400 cfs) hydraulic conditions had changed substantially compared to previous observations as mainstem stage no longer regulated water surface elevations in the side channel above the mouth of the tributary.

The greatest area of backwater observed in the side channel above the tributary confluence (zone 6) occurred when the mainstem flows were about 39,000 cfs. At greater mainstem discharges, the surface area of this backwater area was decreased; the smallest backwater (zone 6) surface area was observed during mainstem flows around 72,000 cfs. This relationship resulted from the increasing velocities imparted to the waters in this area as increasing discharges raise the volume of water breaching the head of the side channel.

Conversely, the surface area and elevation of the low velocity backwater area located in the side channel below the tributary mouth (zone 7) was greatest during high mainstem flows and steadily decreased with a lowering mainstem, until around 39,000 cfs when zone 7 was lost to free flowing tributary condition.

Thus, the water surface areas, zone boundaries, and water quality changed dramatically in the hydraulic zones of the side channel located above and below the tributary as the head of the side channel regulated flows into the area. The backwater area (zone 6) above the tributary changed to a zero velocity slackwater area (zone 9) as the head dewatered, forming a pool type area resulting from channel morphology. The water cleared in this area (zone 9) due to the settling of suspended silt. The free-flowing area (zone 4) also disappeared. The lower zone boundary of the tributary (zone 1) which was at the log jam during high mainstem flows, moved down the side channel to the confluence of the sidechannel with the mainstem river at this time.

Other Habitat Characteristics

The drainage area of Goose Creek is approximately 12 square miles. Goose Creek was clear throughout the summer sampling season except during periods of precipitation when the water levels rose and the tributary became discolored due to increased sediment loads. Mean turbidity levels of the tributary were 8.3 NTU. The mean water temperature for the tributary during the season was 8.5°C. The highest tributary water temperature of 11.6°C was found in early July and the

lowest tributary water temperature of 4.7°C was recorded during late September. The north fork of Goose Creek was 15 to 25 feet wide and had a mean velocity of 1.6 ft/sec.

A mean water temperature of 10.4°C was found in the side channel during the time the side channel head was open. A high water temperature of 12.8°C was found in late June and the lowest water temperature of 8.0°C was found in early June. The side channel above the geographic mouth had mainstem chemical and turbidity characteristics during the period the slough head was open. A clearwater plume extended from the tributary geographic mouth to the mainstem along the side channel. The mean turbidity level recorded in the side channel during the period the slough head was open was 87 NTU.

The water temperature (tributary water primarily) in the sidechannel was 5.5°C during late September when the slough head was closed. A mean turbidity level of 36 NTU taken during this period showed a significant decrease over previous sampling periods.

The mainstem mixing area (zone 3) also exhibited changes throughout the sampling season. Water temperatures recorded in zone 3 during early and late September were 6.5°C and 5.1°C, respectively. Turbidity levels recorded for the same periods are 26 NTU and 19 NTU, respectively. Water temperatures and turbidity levels showed a progressive decline.

Substrate types varied throughout the site. The tributary had a base substrate composed predominantly of gravel. Suspended sands carried by

the tributary were continually deposited, shifting over the substrate. At the geographic confluence of the side channel and tributary, a large deposit of sand was continually observed, fluctuating in size from 20 to 40 ft. The side channel above the geographic mouth had a substrate predominantly composed of silt deposited from the mainstem. The side channel below the geographic mouth and the mainstem had a substrate of rubble and cobble.

The tributary, side channel and mainstem areas provided good habitat for resident and juvenile salmon species. Emergent vegetation was abundant throughout the side channel and tributary. Equisetum (horsetail) was found in abundance throughout the side channel above the geographic mouth and was utilized for cover by fry. Emergent sedges were abundant throughout the tributary and present along the margins of the sidechannel and mainstem. Grasses were abundant along the banks of the sidechannel, tributary and mainstem. Overhanging trees and shrubs were abundant along the banks of the tributary, mainstem and the south margin of the side channel.

Other forms of cover were provided throughout this site. Deadfalls were abundant throughout the tributary, mainstem and side channel. Undercut banks provided good cover in the tributary, especially when covered with sedges and grasses. Undercut banks were sparse in the side channel and mainstem. Turbidity levels created cover in the mainstem and side channel when the slough head was open.

Biological Summary

Chinook and chum salmon juveniles were abundant at this site in zone 2 and in zone 7, the area of the side channel below the creek mouth. Adults of both species spawn in the creek. Chum juveniles were not captured after late June and only a few chinook juveniles were captured after early August.

Juvenile round whitefish and both juvenile and adult longnose suckers were frequently captured in the side channel. Burbot were caught regularly in zone 3.

2. Whitefish Slough

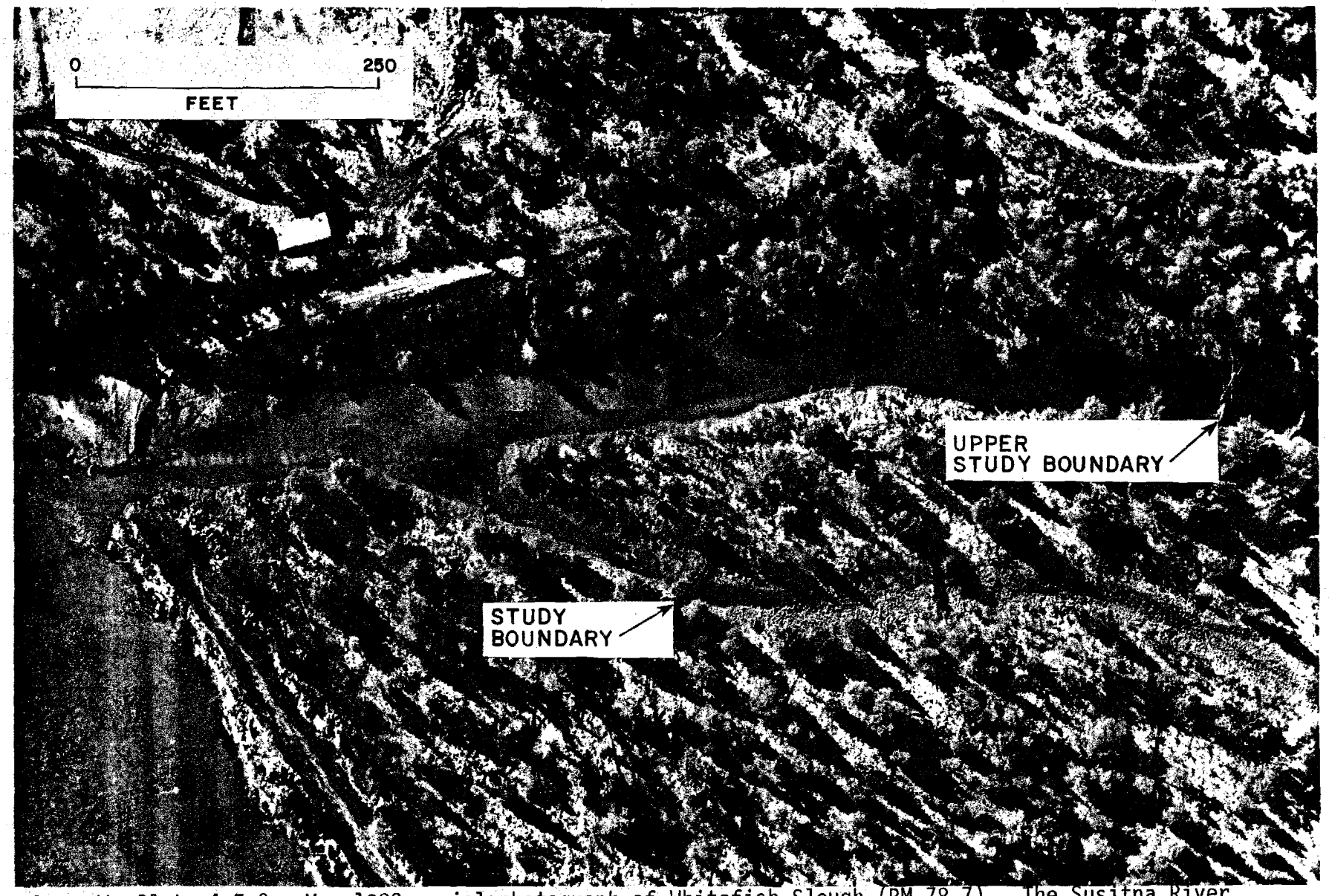
Whitefish Slough (RM 78.7) is located on the west side of the Susitna River, below the Parks Highway Bridge (Appendix Plate 4-F-2). The study area consisted of a large branched upland slough whose head is never open to mainstem flows. The morphology of the slough consisted of a channel with a flat gradient and gentle sloping mud banks, which steepened at the elevations of the highest mainstem flows.

The primary source of water for the slough was supplied from surface runoff originating in a muskeg. The water in the slough appeared opaque brown in color and was warmer than the mainstem water. Water depths ranged between approximately 2 and 8 feet depending on the mainstem elevation.

Hydraulic Conditions

The mainstem discharges (water surface elevations) observed at this habitat location were higher in late June and July, than in August and September (Appendix Table 4-F-3). The highest mainstem discharge recorded at the Parks Highway Bridge during biological sampling at this site was 72,000 cfs in late July. The lowest mainstem discharge observed was at 33,900 cfs during late September.

Two hydraulic zones were present at this site; the backwater area created by the mainstem (zone 2) and a high velocity mainstem mixing area (zone 3). The range of mainstem discharges observed had no



Appendix Plate 4-F-2. May 1982 aerial photograph of Whitefish Slough (RM 78.7). The Susitna River flows towards the upper left corner in this photo.

Appendix Table 4-F-3. Hydraulic zones, mainstem discharges at the Parks Highway bridge[a] for the Whitefish Slough site, for sampling dates from June to September, 1982.

Sampling Date	June 1-15[b]	June 25	July 12	July 28	August 11	August 25	September 14	September 29
Mainstem Discharge (cfs)		66,700	60,100	72,000	47,900	38,700	53,300	33,900
Hydraulic Zones								
1		0	0	0	0	0	0	0
2		+	+	+	+	+	+	+
3		+	+	+	+	+	+	+
4		0	0	0	0	0	0	0
5		0	0	0	0	0	0	0
6		0	0	0	0	0	0	0
7		0	0	0	0	0	0	0
8		0	0	0	0	0	0	0
9		0	0	0	0	0	0	0

[a]USGS provisional data at Sunshine 15292780.

[b]Site not sampled.

[+]Zone present.

[0]Zone absent.

significant effect on the position of the boundary between the two zones located at the slough's mouth.

The elevation and the surface area of the backwater area in the slough (zone 2) decreased dramatically as mainstem discharges decreased between 72,000 cfs and 33,900 cfs (Appendix Plate 4-F-3, Appendix Figure 4-F-93).

Other Habitat Characteristics

The drainage area for Whitefish Slough is approximately six square miles. Primary water sources for the slough originate from runoff of surrounding bogs and small lakes. Secondary water sources originate from ground water, springs and surface runoff. Tannins generated from vegetative detritus discolored the slough and reduced visibility so that the substrate could not be seen (typical slough depth 2 to 8 feet). An average turbidity level of 3.6 NTU was recorded for the slough throughout the season. A high turbidity level of 4.2 NTU was recorded during early September, while the lowest level during late September indicated a comparative reading of 2.6 NTU. The mean water temperature for the slough during the sampling season was 12.8°C. A high water temperature of 16.4°C was found during late July and a low water temperature of 6.1°C was recorded during late September.

Mainstem mixing areas (zone 3) associated with Whitefish Slough exhibited changes in water temperatures and turbidity levels throughout the sampling season. The mean water temperature for the mainstem was 8.3°C during the sampling season. A high water temperature of 10.2°C

Whitefish Slough (RM 78.7) in early August. Discharge at USGS gaging station at Sunshine recorded at 47,900 cfs.

Whitefish Slough (RM 78.7) in late September. Discharge at USGS gaging station at Sunshine recorded at 33,900 cfs.

Appendix Plate 4-F-3. Hydraulic changes at a designated fish habitat site caused by fluctuations in the discharge of the mainstem Susitna River.

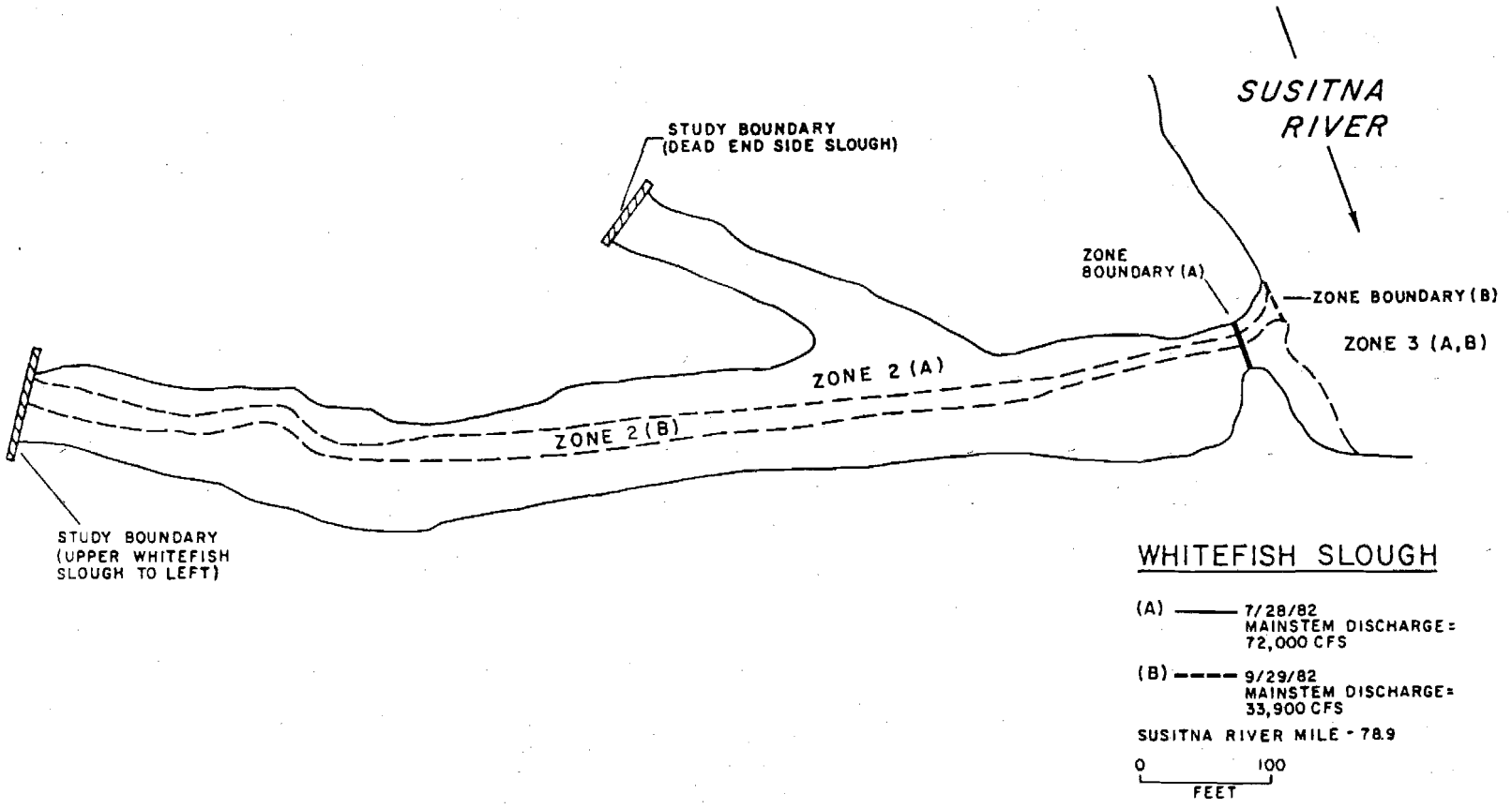


Figure 4-F-93. Map of surface areas and zone types at Whitefish Slough (RM 78.7) on two sampling dates. Discharges (cfs) at Sunshine (USGS Provisional Data, 1982, 15292780).

was found during late July and a low temperature of 4.5°C was recorded during late September. An average turbidity level of 77 NTU was recorded for the mainstem (zone 3), but turbidity ranged from 16 NTU during early June to 146 NTU in early July.

The mainstem mixing area and the slough had different substrates. The dominant substrate of the slough was composed of silt. Rubble and cobble were predominant throughout the mainstem.

Habitat availability in Whitefish Slough was greatly affected by fluctuations of mainstem discharge. Abundant cover in the form of overhanging vegetation, deadfalls, emergent grasses and turbidity were present at high mainstem discharges during June and July. Dewatering of the slough during low discharges in late August and late September drastically reduced the availability of this cover so that turbidity was the only available form of cover remaining.

Emergent and overhanging vegetation were found in abundance along the margins of the slough and mainstem. Equisetum (horsetail) grew in the shallow margins of these areas. Sedges (particularly those of the Genus Carex) were abundant throughout the slough and provided cover as overhanging and emergent vegetation. Emergent and overhanging vegetation, deadfalls and undercut banks were not available in late August and late September when water levels were low.

Turbidity levels in the mainstem and slough were high throughout most of the season, providing cover. Pools and eddies were present along the

bank of the zone 3 area in the mainstem, providing additional habitat for the resident and juvenile anadromous species.

Biological Summary

Catches were generally low at this site with the exception of chinook juveniles in late June (site was not sampled in early June).

Threespine sticklebacks were abundant in August. Burbot were frequently captured from mid-August to mid-September.

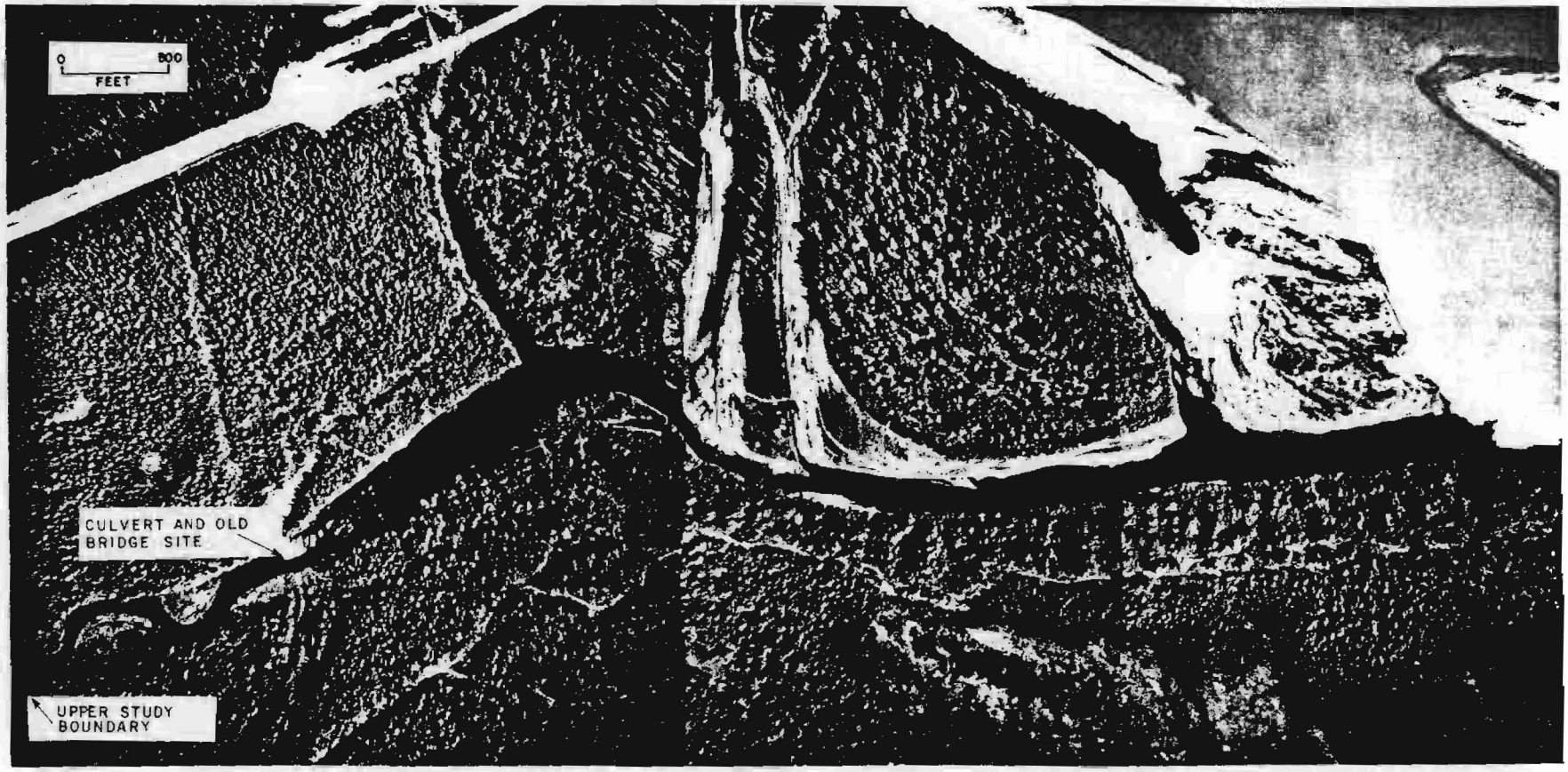
3. Rabideux Creek and Slough(s)

Rabideux Creek and Slough(s) is located at RM 83.1, 0.9 miles below the Parks Highway Bridge (Appendix Plate 4-F-4). The study area was very large, extending over 1.25 miles between the Susitna and a marshy meadow located immediately above the site of a former road crossing the creek. Tributary water enters a one-third mile long lake-like area after passing the road then exits through a sandy bottomed channel which slowly opens over a one-half mile reach to join the Susitna. Two different sloughs, which convey mainstem water at the higher discharges, enter the lower one-half mile reach.

Hydraulic Conditions

The mainstem discharges (water surface elevations) observed at this habitat location were greater in June and July than in August or September. The highest mainstem discharges recorded at the Parks Highway Bridge on those days when biological sampling occurred was at 71,700 cfs in late June. The lowest discharge when biological sampling occurred was at 33,400 cfs was recorded in late September (Appendix Table 4-F-4).

At high mainstem discharges the lower portion of this site can be viewed as two separate and independent sloughs that converged into one slough channel at two points located below the mouth of the tributary. The conveyance of mainstem water over the controlling stream bed elevations at the heads of the two sloughs occurred in June and late July, during



Appendix Plate 4-F-4. August 1982 aerial photograph of Rabideux Creek and Slough (RM 83.1). The Susitna River flows from top to bottom in this photo.

Appendix Table 4-F-4. Hydraulic zones, mainstem discharges at the Parks Highway bridge[a] and the status of the controlling streambed elevation at the upstream entrance (head) of Rabideux slough at the Rabideux Creek and Slough site, for sampling dates from June to September, 1982.

Sampling Date	June 1-15[b]	June 26	July 1-15[b]	July 29	August 12	August 26	September 14	September 30
Mainstem Discharge (cfs)		71,700		67,900	44,000	38,400	53,300	33,400
Status of Channel Head		Open		Open	Closed	Closed	Closed	Closed
Hydraulic Zones								
1		+		+	+	+	+	+
2		+		+	+	+	+	+
3		+		+	+	+	+	+
4		0		0	0	0	0	0
5		0		0	0	0	0	0
6		0		0	0	0	0	0
7		+		+	0	0	0	0
8		+		0	0	0	0	0
9		0		0	0	0	0	+

[a]USGS provisional data at Sunshine 15292780.

[b]Site not sampled.

+Zone present.

0Zone absent.

mainstem flows exceeding 70,000 cfs. The two slough heads were closed to the conveyance of mainstem water during August and September when mainstem flows were less than 54,000 cfs.

A large backwater area (zone 2) was observed in the tributary at all mainstem flows greater than 33,400 cfs. The water surface area of this low velocity backwater area decreased as mainstem flows decreased. During the highest mainstem discharges observed the backwater area extended up the tributary to a point about 1500 feet above the old bridge site. Another large low velocity backwater area (zone 7) existed below the mouth of the tributary during high mainstem discharges when the slough heads were open and discharges exceeded 67,900 cfs. The length of the zone 7 backwater area was as great as 3,400 feet on July 29. This area consisted of a mixture of cold turbid mainstem water and warmer, clearer tributary water.

Other Habitat Characteristics

The drainage area of Rabideux Creek is approximately 45 square miles. Primary water sources for the tributary are small tributaries and bogs. Secondary sources stem from surface runoff, groundwater and springs. Tannins generated from organic breakdown discolored the tributary. The tributary had coffee-colored discoloration levels that commonly reduced visibility to several feet. An average turbidity of 3.2 NTU was recorded. The mean water temperature for the tributary throughout the sampling season was 11.5°C, but the temperature ranged from 6.0°C during

late September to 14.2°C in late August. Rabideux Creek varied between 25 and 40 feet in width and had an average velocity of 1.3 ft/sec.

When the main slough head was open in late June and late July, there was a turbid mainstem plume extending down the north side of the slough from the tributary mouth to the slough mouth. The average water temperature during this time was 14.8°C and the mean turbidity level was 45 NTU.

When the slough head was closed during August and September, the primary water in the lower part of the study site exhibited tributary water quality characteristics. Mainstem water surface elevations created a large backwater area throughout the lower study area during most of the sampling season. Water in this area, as in the upper tributary, exhibited a coffee-colored discoloration. The mean turbidity during these sampling periods was 4.8 NTU. The water temperatures of the slough channel during late August, early September and late September were 15.6°C, 8.3°C and 6.1°C, respectively.

The mainstem mixing area (zone 3) exhibited changes in water temperatures and turbidity levels throughout the sampling season. The average water temperature was 8.4°C during the sampling season. A high water temperature of 12.2°C was recorded during late August while a low water temperature of 5.1°C was recorded in late September. Substrate found in the tributary above the old road site was predominantly gravel. Large boulders were scattered throughout the lake-like area of the tributary below the old road site and were also in the chanel above the

road. Substrate of the slough channel was primarily sand, while cobble was prevalent in the mainstem area.

Emergent vegetation was abundant throughout the tributary. The upper tributary had a shallow broad channel profile that was conducive for growth of Equisetum and sedges. Equisetum was found in abundance throughout the shallow low velocity margins of the tributary. Emergent sedges of the genera Carex and Scirpus were abundant throughout the tributary and slough channel. Grasses were abundant along the banks of the tributary and slough and provided cover as overhanging vegetation.

Overhanging vegetation, in the form of shrubs and trees, was found in abundance throughout Rabideux Creek/Slough. However, overhanging vegetation in the form of grasses, shrubs and trees was virtually absent along the slough side or northern bank of the slough and mainstem.

Other forms of cover were provided throughout Rabideux Creek/Slough. Coves present in the slough provided cover for fry at high water levels. Deadfall was abundant throughout the tributary and present in the slough and mainstem. Undercut banks were abundant through the tributary and present along the south bank of the slough and mainstem. Discoloration, due to organic stains, in the tributary and slough provided additional cover for fish.

Biological Summary

Rabideux Creek and Slough provided excellent habitat for chinook and coho juveniles, both of which were abundant until mid-August.

Burbot were caught on a regular basis in August and September. Schools of adult longnose suckers were present during July and August in the slough, as well as a few adult humpback whitefish and juvenile round whitefish.

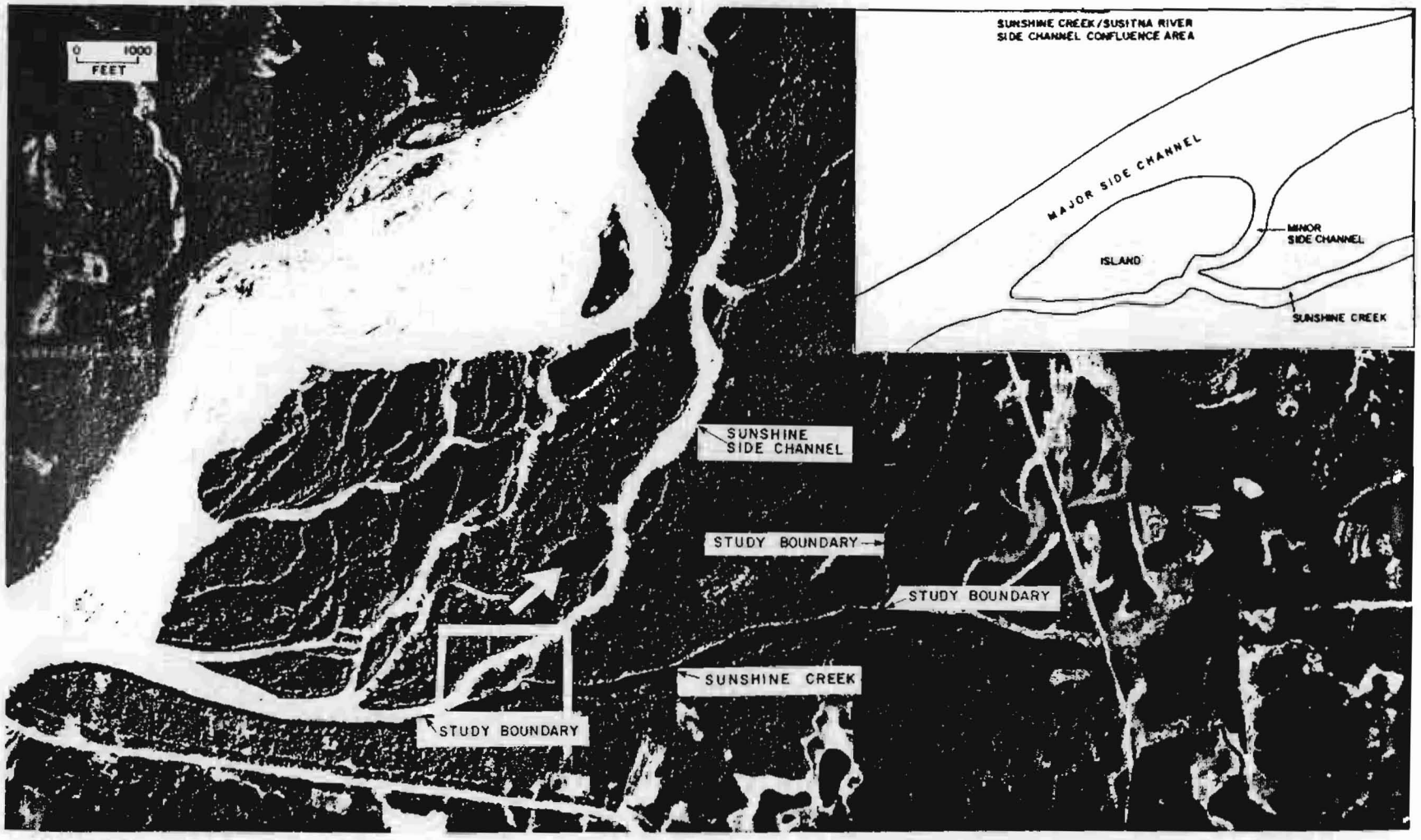
4. Sunshine Creek and Side Channel

The Sunshine Creek and Side Channel site (Appendix Plate 4-F-5) is located at RM 85.7, 1.7 miles above the Parks Highway Bridge. The site is located on the southeast side of a side channel of the river and consists of a tributary, its mouth, and a 1000 foot long minor side channel between the tributary mouth and a larger Susitna side channel.

The tributary is a slow meandering clear water creek which divides to become Question Creek and Answer Creek about 1.1 mile above the tributary/side channel junction. The creekbed has a very low gradient within the study boundaries. The channel is relatively uniform in cross section near the mouth of the tributary but there is a 3 to 4 foot deep V-shaped trench located mid channel which extends the length of the tributary starting roughly 100 yards above the creek mouth. The depth of the shallow areas along the banks were typically 1 to 3 feet depending on the discharge of the creek and mainstem stage.

Hydraulic Conditions

The mainstem mainstem Susitna River discharges (water surface elevations) observed at this habitat location were greater in June and July than in August and September. The lowest discharge (33,400 cfs) recorded at the Parks Highway gauging station on a day when biological sampling occurred was in late September. The side channel head was closed at mainstem discharge of 38,700 cfs and less (Appendix Table 4-F-5).



Appendix Plate 4-F-5. August 1980 aerial photograph of Sunshine Creek and Side Channel (RM 85.7). The lakes and tributaries above the study area provide water to Sunshine Creek. The Susitna River flows from top to bottom in this photo.

Appendix Table 4-F-5. Hydraulic zones, mainstem discharges at the Parks Highway bridge[a], and the status of the controlling streambed elevation at the upstream entrance (head) of Sunshine side channel at the Sunshine Creek and Side channel site, for sampling dates from June to September, 1982.

Sampling Date	June 09	June 24	July 12	July 27	August 10	August 24	September 12	September 30
Mainstem Discharge (cfs)	70,800	62,700	60,100	82,400	51,600	38,700	35,000	33,400
Status of Channel Head	Open	Open	Open	Open	Transition Closing	Closed	Closed	Closed
Hydraulic Zones								
1	+	+	+	+	+	+	+	+
2	+	+	+	+	+	+	+	+
3	+	+	+	+	+	+	+	+
4	+	+	+	+	0	0	0	0
5	+	+	+	+	0	0	0	0
6	0	0	0	0	+	0	0	0
7	0	0	0	0	+	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	+	+	+

[a]USGS provisional data at Sunshine 15292780.

[+]Zone present.

[0]Zone absent.

During mainstem discharges of 60,100 cfs and above, free-flowing water in the side channel below the tributary (zone 5) consisted of a mixture of clear, warmer tributary water and turbid colder (zone 4) mainstem water. In the tributary above, a calm and clear backwater area (zone 2) existed at these mainstem discharges.

The surface area and length of the backwater zone was greatest during the highest mainstem discharges and generally decreased with a receding mainstem; however the relationship between these variables was not linear (see Backwater Areas, Part I, Section 3.1.3.1). At the highest mainstem discharges observed (82,400 cfs) a large backwater (zone 2) extended from the slough/creek junction to approximately 4,000 feet up the creek. Thus, the upper boundary of the backwater in the tributary (zone 2) appeared to fluctuate considerably with mainstem discharges observed in June and July.

During the transitional period (mainstem discharges around 51,600 cfs) when the side channel head dewatered in response to decreasing mainstem discharges, water quality in the side channel below the tributary changed considerably; the free-flowing hydraulic zones in the side channel above the tributary mouth (zone 4) and below the tributary mouth (zone 5) which were present before the head dewatered, changed to backwater areas (zones 6 and 7) during the transition phase. Thus, during early August sampling, this low velocity backwater area extended from the mouth of the side channel to 1,400 feet up the creek and also up into the closing side channel. On August 24th (mainstem discharge 38,700 cfs), when the side channel head was completely closed, low

velocity (zone 2) tributary water had reached and was found entirely between the junction of the two side channels and the old tributary mouth and Sunshine Creek was free-flowing down to its former mouth.

During mainstem discharges of 33,400 and 35,000 cfs in September, the backwater (zone 2) area extended only above the confluence of the two side channels about 790 and 250 feet respectively.

The closing of the head of the side channel in late August resulted in the formation of a pool (zone 9) in the slough above the tributary mouth because a gravel bar acted as a physical barrier to contain the pool. The surface area of the pool (zone 9) remained relatively constant during September.

Other Habitat Characteristics

The drainage area of Sunshine Creek is approximately ten square miles. Primary water sources for the tributary are Sunshine Lake and Question Lake and Creek. Secondary contributions stem from runoff water, bogs, ground water and springs. The tributary was mostly clear and the average turbidity was 2.9 NTU. The mean water temperature for the tributary during the sampling season was 11.2°C. Water temperatures ranged from 6.0°C in late September to 14.0°C in early July.

When the side channel head was open during June and July, side channel water had mainstem characteristics (e.g., high turbidity levels and high water velocity).

When the side channel head was closed during late August and September, turbidity water velocity and surface area of the side channel decreased significantly.

The mainstem and Sunshine Creek mixing area (zone 3) experienced significant changes in turbidity levels and water temperatures throughout the sampling season. The mean turbidity level for this area during the sampling season was 42 NTU and the mean water temperature was 9.3°C. A high water temperature of 12.5°C was recorded during late August and a low water temperature of 6.3°C was recorded in late September.

The substrate of the mainstem was predominantly composed of rubble and cobble. The tributary substrate was composed mostly of gravel. The side channel between the geographic mouth and the mainstem had a substrate composed mostly of sand.

Emergent and overhanging vegetation were found in abundance along the margins of the tributary and side channel. Sedges (particularly those of the genus Carex), and horsetail (Equisetum) were abundant emergent plants observed in the tributary. Emergent plants were dewatered in side channel and tributary areas when the side channel head closed. Grasses, were abundant along the banks during periods of high discharge. Aquatic vegetation present in the tributary above the geographic mouth included both Hippurus vulgaris of the water milfoil family and Ranunculus trichophyllus of the buttercup family. Fry used the cover offered by the large mats of these flaccid aquatic plants.

Overhanging vegetation, in the form of trees and shrubs, was abundant throughout the entire sampling site. The side channel, particularly below the geographic mouth, was covered by a canopy of trees during most of the season. Deadfall was abundant along the tributary, side channel and mainstem areas. Turbidity levels in the mainstem and side channel were high enough throughout most of the season to provide cover.

Biological Summary

Sunshine Creek was another site that provided excellent habitat for chinook and coho juveniles. As at Rabideux, these two species were abundant until mid-August.

Slimy sculpins were relatively abundant in late August and early September. Rainbow trout were fairly abundant in late May and June. Burbot were regularly caught from mid-August to the end of September after the sampling effort moved down the side channel as a result of low water. Longnose suckers spawned in May and early June just below the creek mouth in the side channel. Humpback whitefish and round whitefish were also commonly captured in zone 3.

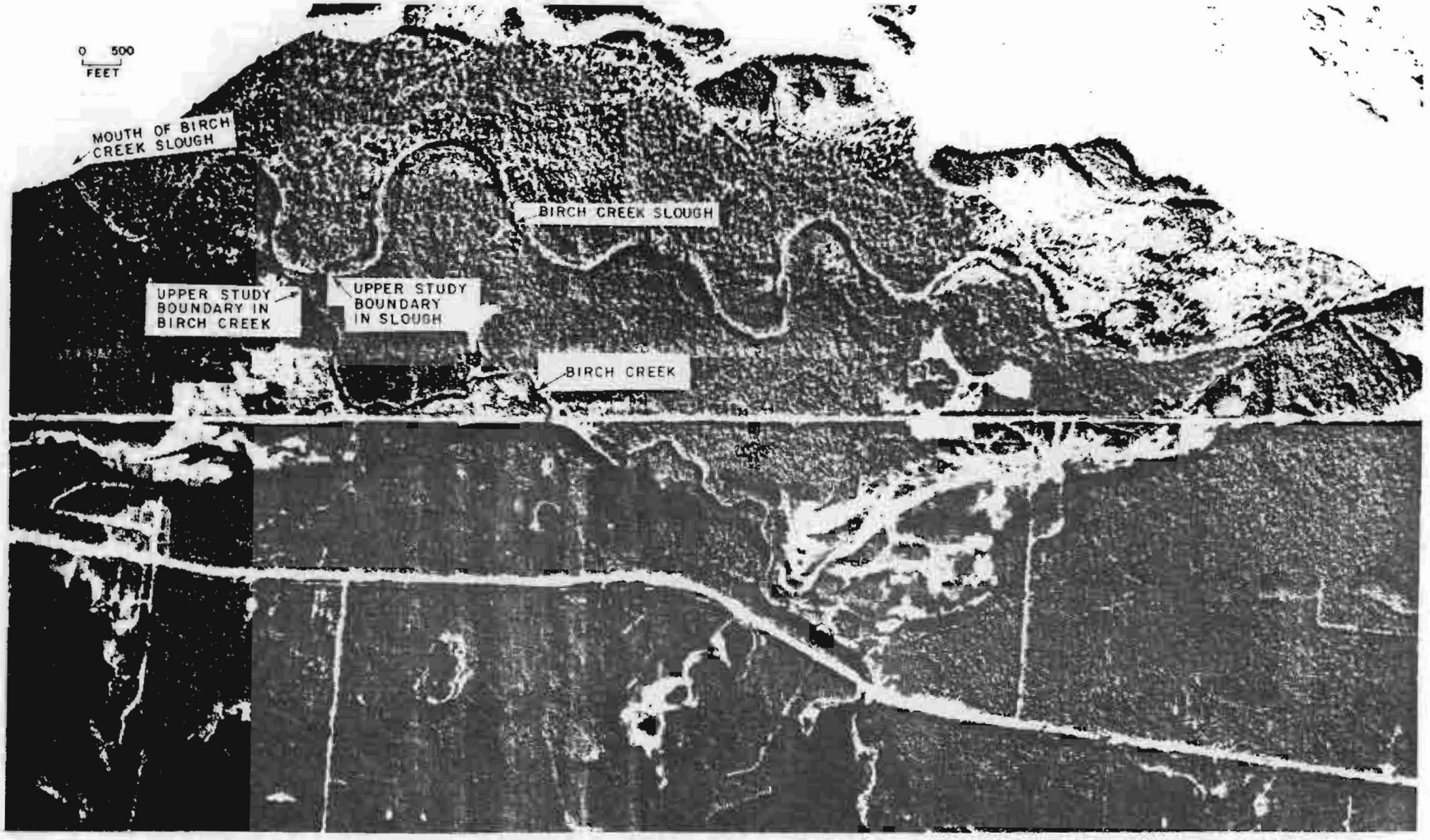
5. Birch Creek and Slough

Birch Creek and Slough (Appendix Plate 4-F-6) is located at RM 88.4, about 10 miles below the confluence of the Talkeetna and Susitna rivers. The study area was located around the confluence of Birch Creek and Birch Creek Slough, and on down the slough to its confluence with the east bank of mainstem Susitna.

The tributary reach in the study area was roughly 600 feet. Moderately sloped banks and loose gravel are characteristic of this tributary area. Abundant emergent and riparian vegetation was available for cover. The reach of slough below Birch Creek is approximately 4,900 feet in length, has steep banks with overhanging trees and deadfall cover but little emergent or riparian vegetation. Substrates are silt, sand and gravel. The length of slough studied above the junction with Birch Creek was about 525 feet. This area had a wide (about 60 feet) flat bottomed surface with a sandy substrate. When the water in this area was clear (late season) there was little cover.

Hydraulic Conditions

The mainstem discharges (water surface elevations) observed at this habitat location were greater in June and July than in August or September. The highest discharge recorded at the Parks Highway Bridge when biological sampling occurred was in late July (Appendix Table 4-F-6). The conveyance of mainstem water over the controlling stream bed elevation at the upstream entrance (head) of the slough, and the



Appendix Plate 4-F-6. August 1980 aerial photograph of Birch Creek and Slough (RM 88.4). The Susitna River flows from right to left in this photo.

Appendix Table 4-F-6. Hydraulic zones, mainstem discharges at the Parks Highway bridge[a], and the status of the controlling streambed elevation at the upstream entrance (head) of Birch slough at the Birch Creek and Slough site, for sampling dates from June to September, 1982.

Sampling Date	June 04	June 23	July 11	July 26	August 09	August 23	September 11	September 28
Mainstem Discharge (cfs)	59,700	61,600	58,400	99,300	52,500	38,000	33,800	35,900
Status of Channel Head	Transition Closing	Open	Transition Closing	Open	Transition Closing	Closed	Closed	Closed
Hydraulic Zones								
1	+	+	+	+	+	+	+	+
2	0	0	0	+	0	+	+	+
3	+	+	+	+	+	+	+	+
4	+	0	+	0	+	0	0	0
5	0	0	0	0	+	0	0	0
6	+	+	+	+	0	0	0	0
7	+	+	+	+	+	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	+	+	+

[a]USGS provisional data at Sunshine 15292780.

[+]Zone present.

[0]Zone absent.

presence of low velocity backwater areas at this site were regulated by mainstem flows. The slough head remained open during June, July, and early August when mainstem flows were greater than 38,000 cfs. The slough head was completely closed during the observations made from late August to the end of the open water season (mainstem flows of 38,000 cfs and less). During these periods, warmer clear tributary water predominated in the slough above and below the creek mouth.

During the highest mainstem flows observed (99,300 cfs), a backup zone extended to the limits of the study area in the slough (zone 6) and about 160 feet up the tributary (zone 2). Below the tributary/slough junction the backwater area (zone 7) extended to the slough/Susitna River confluence. As mainstem discharges dropped, the extent of this backwater area decreased (Part I, Section 3.1.3.1). At 52,500 cfs (the lowest transitional period of dewatering at the slough head) the backwater area (zone 7) extended about 2,100 feet above the slough's mouth; free-flowing waters existed in the tributary and slough above the point.

After the slough head closed, the water in backed up areas of the lower slough was predominately clear tributary water. A pool area (zone 9) had formed in the slough above the tributary mouth; its stage was regulated by the stage of the tributary alone.

At the lowest mainstem stages observed (35,900 and 33,800 cfs) tributary water was free-flowing to within 0.2 mile of the slough mouth.

Other Habitat Characteristics

The drainage area of Birch Creek is approximately eight square miles. Primary water sources for Birch Creek originate in Fish Lake. Other water sources stem from runoff, bogs, ground water and springs. The tributary was slightly discolored by organic stain throughout most of the sampling season. The mean water temperature of the tributary was 12.9°C, with high temperature of 16.0°C in early July and a low temperature of 5.2°C in late September. The mean turbidity level of the tributary was 7.3 NTU.

Water temperatures in late June and late July in the slough above the geographic mouth (head was open) were 9.3°C and 8.7°C, respectively. A mean turbidity of 18 NTU was recorded for these conditions. Springs, ground water and runoff contributed to the discharge of the slough.

Turbidity levels and water temperatures in the slough during late August and September, when the slough head was closed, were similar to those observed on the tributary. A turbidity recorded in the slough in early September was 4.2 NTU.

The mainstem mixing areas associated with Birch Creek exhibited changes in water temperatures and turbidity levels in the latter part of the sampling season. Water temperatures recorded for late August, early September and late September were 11.6°C, 8.0°C, and 4.7°C, respectively. Turbidity levels for late August, early September and late September were 82 NTU, 32 NTU, 21 NTU, respectively.

The tributary had a dominant substrate of gravel. The substrate of the slough channel in the study area was dominated by sand that frequently shifted, exposing a non-embedded gravel base.

The tributary (above its confluence with the slough), provided cover for juvenile fish in the form of dense mats of emergent vegetation, undercut banks, deadfalls and overhanging vegetation. Low velocity pool areas were also associated with the emergent vegetation and undercut banks. Flaccid aquatic plants were of the Myrophyllum and Callitriche genera. Sedges of the genera Carex and Scirpus were found in scattered clumps along the tributary margins. Equisetum (horsetail) was associated with shallow still water areas of the tributary. Juvenile salmonids were observed in abundance throughout the emergent vegetation.

Emergent vegetation was sparse within the slough and absent from the mainstem areas. Overhanging shrubs and trees, were abundant along the tributary and slough. Overhanging grasses were abundant along the mainstem and the tributary above the geographic mouth. Grasses were present within the slough but were not available to fish due to their being dewatered throughout most of the season. Aquatic vegetation was absent in the mainstem and the slough, both above and below the geographic mouth.

Deadfall was abundant throughout the tributary, slough and mainstem areas.

Biological Summary

Coho salmon juvenile were abundant at this site until mid-September and chinook salmon juveniles were moderately abundant through July. Chum juveniles were also relatively well represented in mid-July; the last chum juvenile was captured at this site in early August.

Burbot were caught on a regular basis after the sampling effort moved down the slough in mid-August as a result of low water. In late May and early June, rainbow trout, Arctic grayling, humpback whitefish, round whitefish, and longnose suckers were all found in the slough. Only a few longnose suckers remained in the slough after mid July.

6. Whiskers Creek and Slough

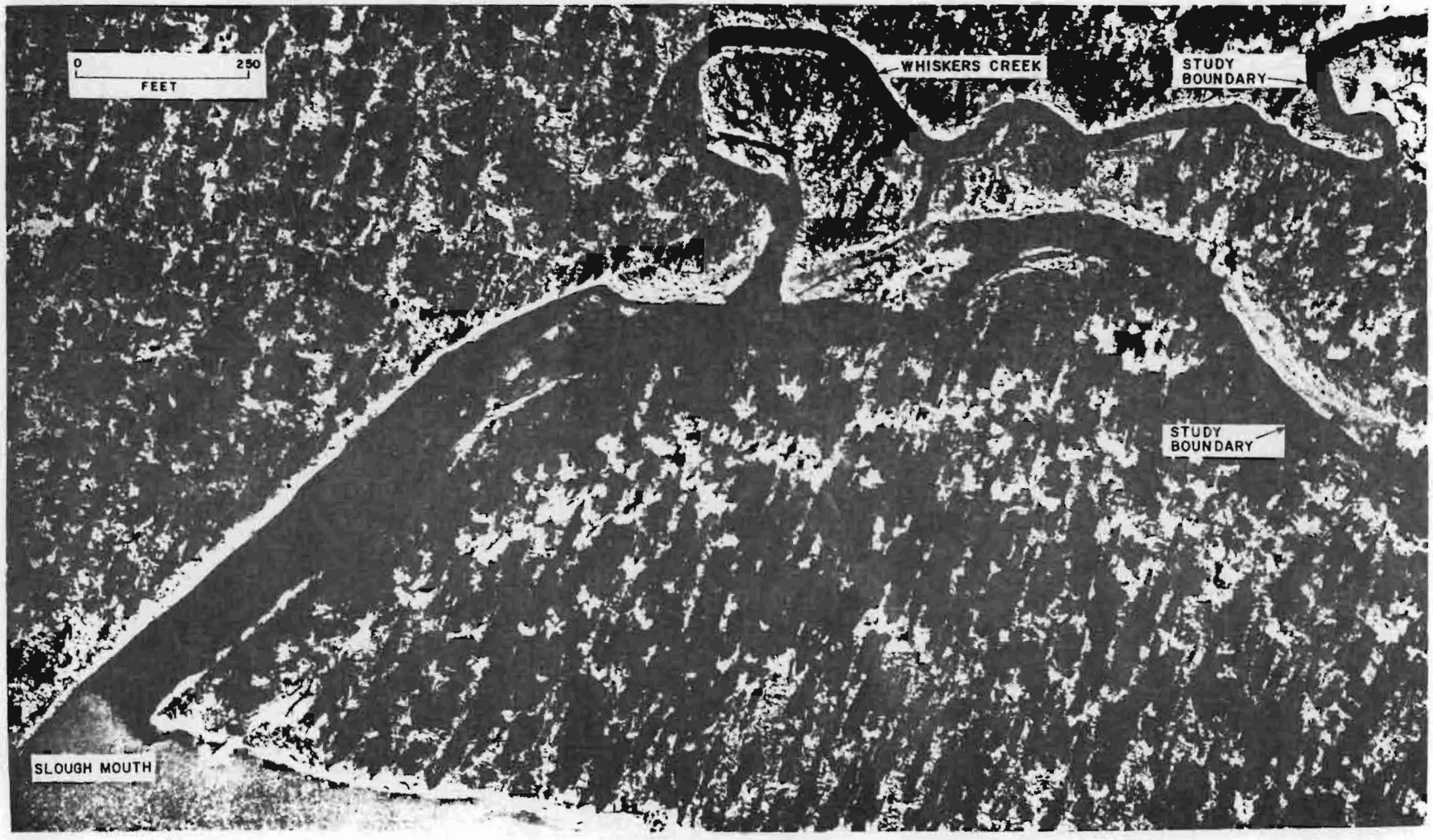
Whiskers Creek and Slough (Appendix Plate 4-F-7) is located on the west bank of the Susitna River (RM 101.2), 3.3 miles above the confluence of the Chulitna and Susitna rivers. The study area was centered around the confluence of Whiskers Creek and Whiskers Creek Slough, and the confluence of the slough with the Susitna.

Approximately 1,200 feet of Whiskers Creek were included in the study area. The banks here were low but very steep. The creek was typically about 15 to 20 feet wide and approximately 2 to 4 feet deep. The lower 100 yards of the tributary had a relatively flat streambed gradient.

Approximately 1,800 feet of the slough were included in the study area. The slough had both sharp and gentle sloping banks with sparse vegetation available for cover. Whiskers Creek entered the slough 1100 feet above the slough mouth. The lower third of this distance had a relatively low gradient before slowly reaching another flat gradient immediately above the tributary outlet. In low water conditions, pools (zone 9) formed in the slough above the tributary.

Hydraulic Conditions

The mainstem discharges (water surface elevations) observed at this habitat location were greater in June and July than in August or September. The highest mainstem discharges (31,900 cfs) at the Gold Creek gaging station when the site was sampled occurred in late July. The



Appendix Plate 4-F-7. May 1982 aerial photograph of Whiskers Creek and Slough (RM 101.2). The Susitna River flows from right to left in this photo.

lowest mainstem discharge on a sampling day (12,200 cfs), occurred in late August (Appendix Table 4-F-7).

The predominant hydraulic conditions observed at this site varied considerably with mainstem stage and tributary discharge (Appendix Figure 4-F-94). At moderate mainstem discharges (25,000 cfs) large backwater zones predominated. At higher discharges, higher velocity areas (zones 4 and 5) were more pronounced and at lower discharges the free flowing tributary water was the dominant feature of the study site (Part I, Section 3.1.3.1).

At mainstem discharges of 16,600 cfs and below (slough head closed) the free-flowing (zone 4) mainstem water in the slough above the creek mouth changed to zone 9 pool type areas, and the normally turbid water cleared. Under these same conditions, the turbid zones 5 and 7 (which were present below the tributary mouth at higher discharges) were replaced by free-flowing or backed-up tributary water areas (zones 1 and 2).

During the lowest mainstem stages observed, the free-flowing tributary (zone 1) extended down the slough to within 100 yards of the Susitna, where a small zone 2 backwater area existed. During the September 29th sampling trip (after major rains) the discharge of Whiskers Creek was high enough to raise the velocities in the pool to those of the free-flowing (zone 1) category.

Appendix Table 4-F-7. Hydraulic zones, mainstem discharges at the Gold Creek Station[a], and the status of the controlling streambed elevation at the upstream entrance (head) of Whiskers slough at the Whiskers Creek and Slough site, for sampling dates from June to September, 1982.

Sampling Date	June 03	June 21	July 10	July 25	August 08	August 22	September 09	September 27
Mainstem Discharge (cfs)	25,000	37,000	23,000	31,900	16,600	12,200	13,400	13,800
Status of Channel Head	Open	Open	Transition Closing	Open	Closed	Closed	Closed	Closed
Hydraulic Zones								
1	+	+	+	+	+	+	+	+
2	+	0	0	0	+	+	+	0
3	+	+	+	+	+	+	+	+
4	+	+	0	+	0	0	0	0
5	0	+	+	+	0	0	0	0
6	0	0	0	0	0	0	0	0
7	+	+	+	+	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	+	+	+	+	+	+	+

[a]USGS provisional data at Gold Creek 15292000.

+Zone present.

0Zone absent.

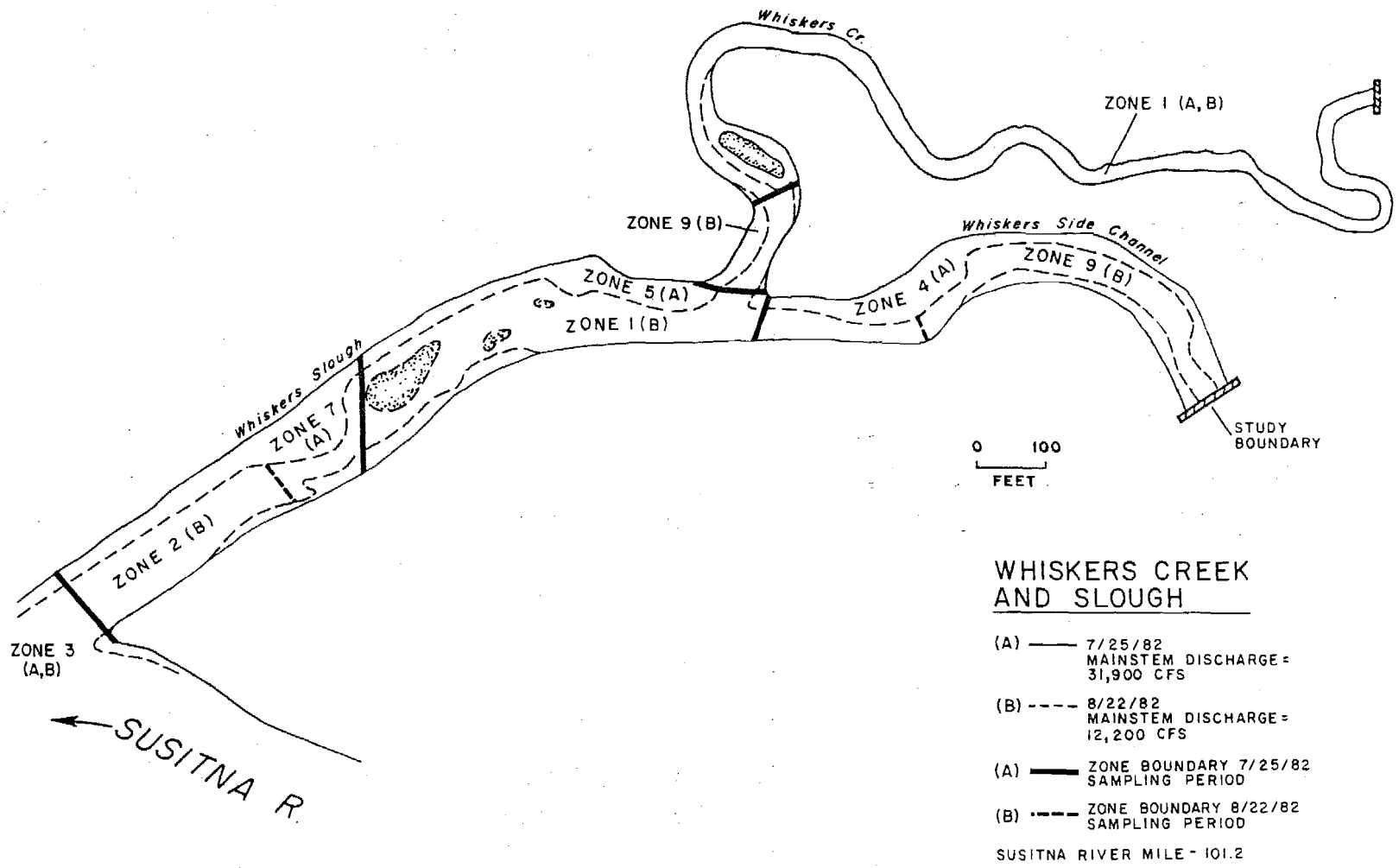


Figure 4-F-94. Map of surface areas and zone types at Whiskers Creek and Slough (RM 101.2) on two sampling dates. Discharges at Gold Creek (USGS Provisional Data, 1982, 1529200).

Other Habitat Characteristics

The drainage area of Whiskers Creek is approximately 20 square miles. Primary water source of the tributary is surface runoff from bogs. The tributary was discolored with tannins generated in these bogs. Suspended silts occasionally discolored the tributary during periods of high runoff. The mean water temperature of the tributary was 10.3°C. A high water temperature of 12.3°C was found during late July and a low water temperature of 4.5°C was found during late September. The mean turbidity level of the tributary for the sampling season was 7.8 NTU. Whiskers Creek had an average velocity of 1.8 ft/sec.

The slough head was open during June and July. The mean water temperature of the slough above Whiskers Creek during June and July was 9.8°C while the mean turbidity was 41 NTU. Below the geographic mouth of Whiskers Creek, the slough water was a mixture of mainstem and tributary water. The slough head was closed during August and September and the water in the slough above the geographic mouth exhibited a reduction in velocity, discoloration and surface area during this time. Emergent plants were dewatered when the slough head was closed.

The mean temperature for water in the slough above Whiskers Creek during August and September was 11.3°C. The water between the confluence of the tributary mouth and the mainstem was primarily tributary water throughout August and September. Turbidity levels and water temperatures in the slough below Whiskers Creek were thus similar to those

observed in the tributary, although some secondary spring percolation and runoff entered from the upper slough.

The mainstem water mixing zone (zone 3) experienced declining turbidity and water temperature levels towards the latter part of the season. Mean water temperatures for August and September were 10.5°C and 7.0°C, respectively.

Substrate types varied throughout the Whiskers Creek site. Gravel was abundant throughout the tributary while rubble and cobble were predominant in the mainstem and slough areas. Interstitial space found throughout the rubble and cobble provided cover for fry. Extensive areas near the mouth of the slough were also covered with silt.

Emergent and overhanging vegetation was abundant throughout most of this sampling location. In areas influenced by consistent tributary flows vegetation was more abundant. Emergent plants were inundated in slough and mainstem areas until late August.

Emergent plants occurring throughout the study area included sedges (*Carex* and *Scirpus*), grasses and horsetail (*Equisetum*). In addition to the presence of emergent plants, an aquatic moss of the Genus *Fontinalus* was present in small amounts on the substrate of the tributary.

Deadfall and undercut banks were abundant throughout the tributary and provided cover for juvenile and resident species. Slough and mainstem areas had little deadfall or undercut banks.

Biological Summary

Chinook salmon juveniles were relatively abundant at this site throughout the open water season. Fair numbers of coho juveniles were captured in late June and early September.

Slimy sculpins were moderately abundant during July, August, and September. In May and early June, rainbow trout, Arctic grayling, round whitefish, and longnose suckers were all abundant in the slough. Catches of these species decreased in July but adult longnose suckers and juvenile Arctic grayling and round whitefish were present most of the summer in zone 3.

7. Slough 6A

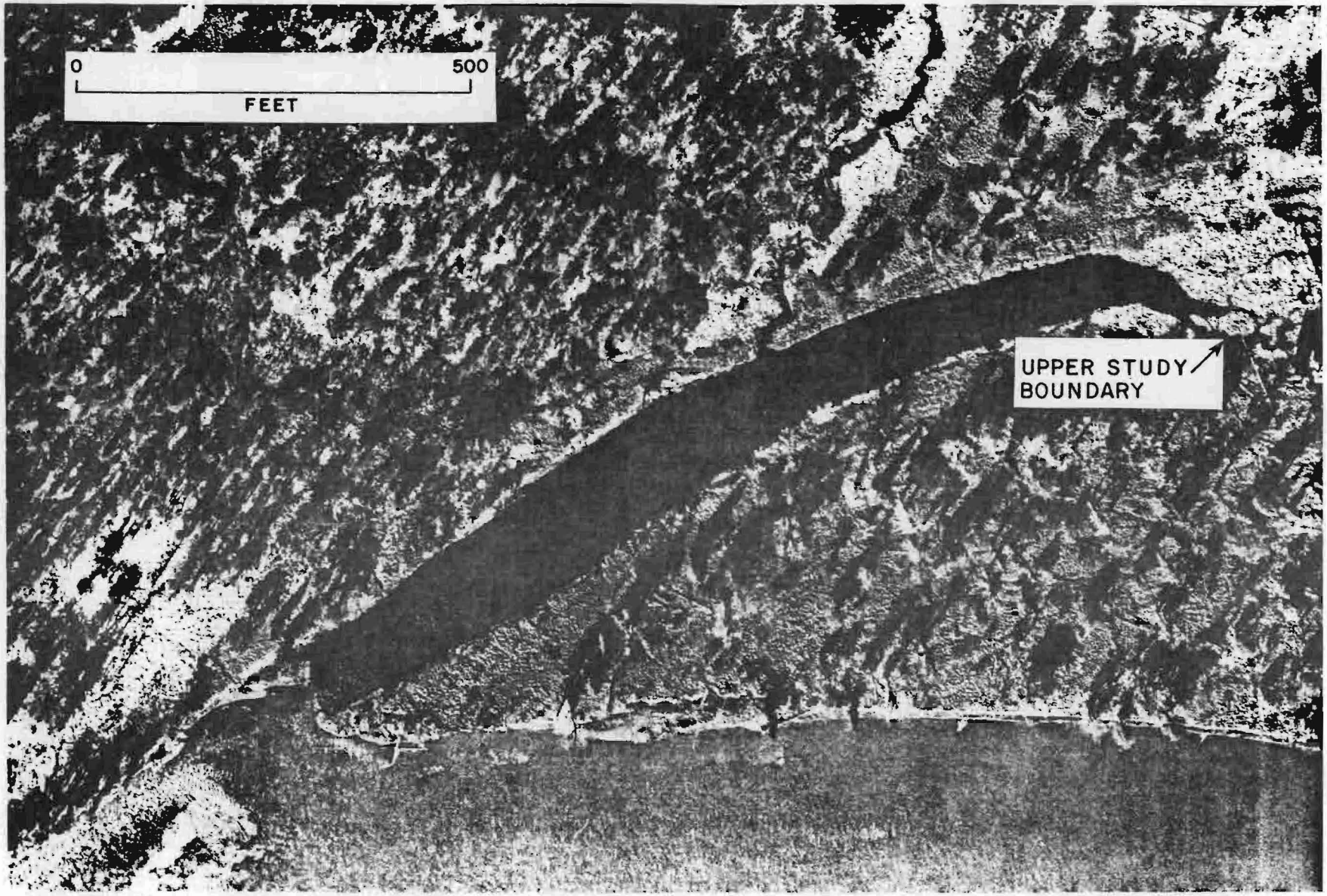
Slough 6A (Appendix Plate 4-F-8) is located at RM 112.3, on the west bank of the Susitna River. Slough 6A is an upland slough; the head is rarely breached by mainstem flow. The channel bed is a relatively deep and uniformly shaped wide U and the water in the study area of the slough was always calm.

Cover was provided along the sloping banks by overhanging trees, shrubs and emergent aquatic vegetation. The substrate of the slough consisted of silt, interspersed with organic debris and sparse aquatic vegetation.

The primary source of water for the slough was surface runoff from a series of beaver dams located at the head of the slough. A very small intermittent creek located midway in the slough provided a secondary source of water.

Hydraulic Conditions

The mainstem discharges (water surface elevations) observed at this habitat location were greater in June and July than in August or September. The highest mainstem flow recorded at the gaging station at Gold Creek for dates on which biological sampling occurred was 28,000 cfs in late June (Appendix Table 4-F-8). The lowest mainstem discharge was 12,200 cfs during late August.



Appendix Plate 4-F-8. May 1982 aerial photograph of Slough 6A (RM 112.3). The Susitna River flows from right to left in this photo.

Appendix Table 4-F-8. Hydraulic zones and mainstem discharges at the Gold Creek Station[a] for the Slough 6A site for sampling dates from June to September, 1982.

Sampling Date	June 06	June 20	July 09	July 23	August 08	August 21	September 10	September 26
Mainstem Discharge (cfs)	23,000	33,250[b]	21,500	24,900	16,600	12,200	14,400	14,000
Hydraulic Zones								
1	0	0	0	0	0	0	0	0
2	+	+	+	+	+	+	+	+
3	+	+	+	+	+	+	+	+
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0

[a]USGS provisional data at Gold Creek 15292000.

[b]Amended mainstem discharge at Gold Creek as determined from ADF&G stage discharge curves.

[+]Zone present.

[0]Zone absent.

Two hydraulic zones were present all season; zone 2, the slough area backed up by the mainstem, and zone 3 the mixing area. The surface area of the slough was not strongly influenced by variations in mainstem discharge, because of its steep banks. The surface area of the backup zone at two different mainstem discharges is shown in Appendix Figure 4-F-95. The zone boundary separating the slackwater area of the slough (zone 2) and the mainstem high velocity area (zone 3) was located at the mouth of the slough.

Other Habitat Characteristics

The drainage area for Slough 6A is approximately four square miles. Primary water sources for the slough originate from a small lake, tributaries and runoff waters. Secondary contributions originate from bogs, springs and ground water sources. Overflow from a beaver dam in the upper end provided a constant source of clearwater. Tannins generated from vegetative detritus discolored the slough to varying degrees, but normally the substrate could be seen in 3 to 6 feet of water. Turbidity in the slough averaged 3.6 NTU. The mean water temperature for the slough was 10.1°C, and the water temperature ranged from 4.9°C in late September to 15.0°C in early July.

The mainstem mixing area (zone 3) associated with Slough 6A were significantly more turbid than the slough. The mean turbidity of this area was 77 NTU. Mainstem water temperatures never deviated more than 2°C from the slough water temperature. The mean water temperature of

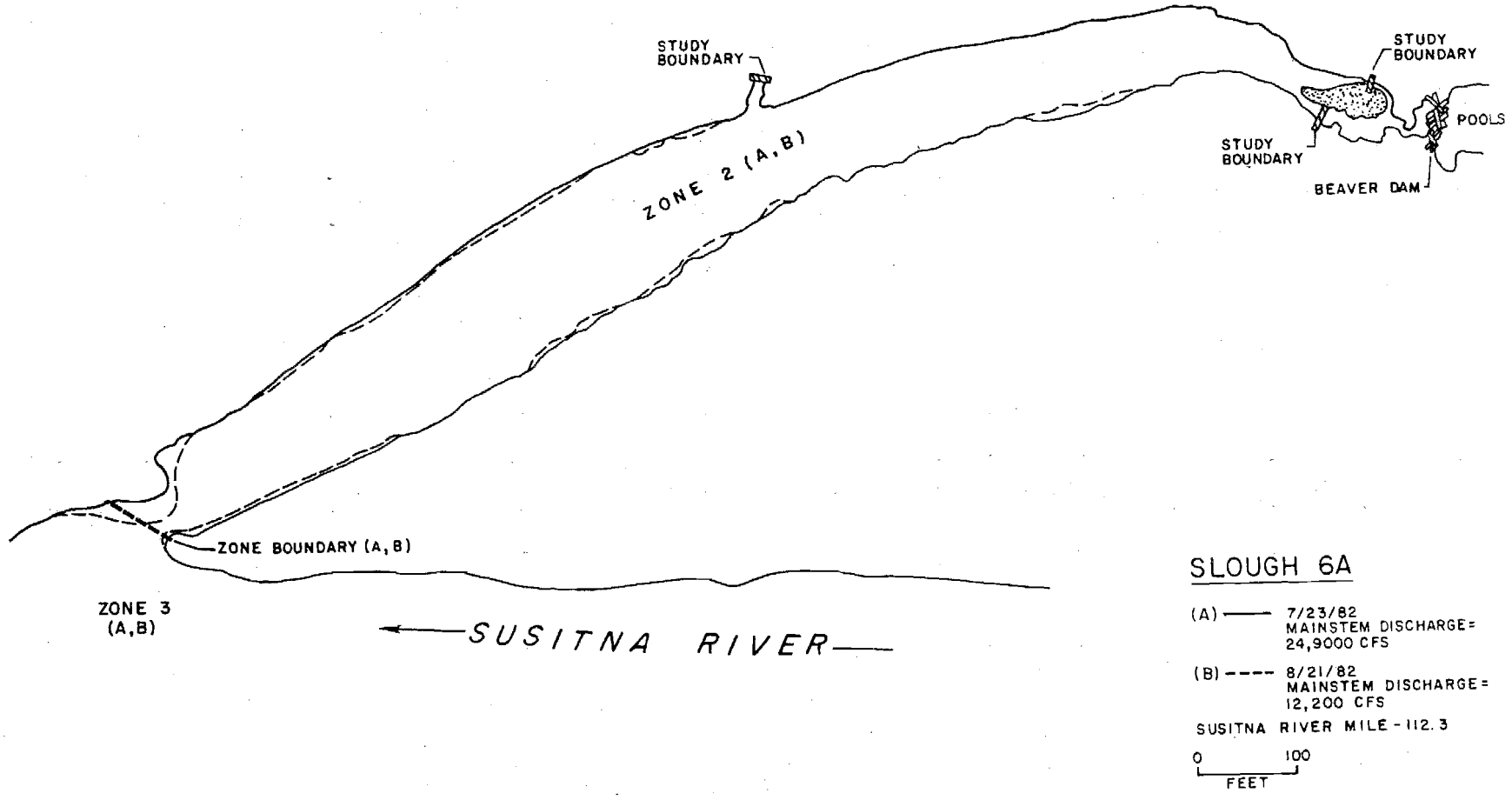


Figure 4-F-95. Map of surface areas and zone types at Slough 6A (RM 112.3) on two sampling dates. Discharges (cfs) at Gold Creek (USGS Provisional Data, 1982, 1529200).

zone 3 was 9.6°C, and water temperature ranged from 13.7°C during early July to 5.0°C during late September.

Substrate types varied between zone 3 area and the slough. The dominant substrate of the slough was composed of a thick layer of silt. Rubble and cobble were predominant throughout the mainstem.

Deadfalls were present in the mainstem but sparse throughout the slough. Grasses wer abundant along the banks of the slough and overhanging trees and shrubs were present. Turbidity levels in the mainstem were high enough throughout most of the season to provide cover. Pools and eddies in the mainstem (zone 3) provided additional habitat for fish.

Emergent vegetation was found in abundance along the margins of the slough and mainstem. Overflow from the beaver dam at the upper end of the slough created small channels throughout an area of abundant emergent growth and overhanging vegetation. Abundant cover in the upper end was productive and provided excellent rearing habitat throughout the sampling season. Emergent and overhanging vegetation associated with the mainstem and slough included sedges of the genera Carex and Scirpus and grasses of the genus Callamagrostis. Equisetum (horsetail) was found in abundance in the shallow margins of the slough.

Biological Summary

Sockeye salmon were relatively abundant in this slough the entire season; chum salmon were abundant in June. Coho juveniles salmon were

relatively abundant throughout the season, except for August. Chinook juveniles were present in low numbers.

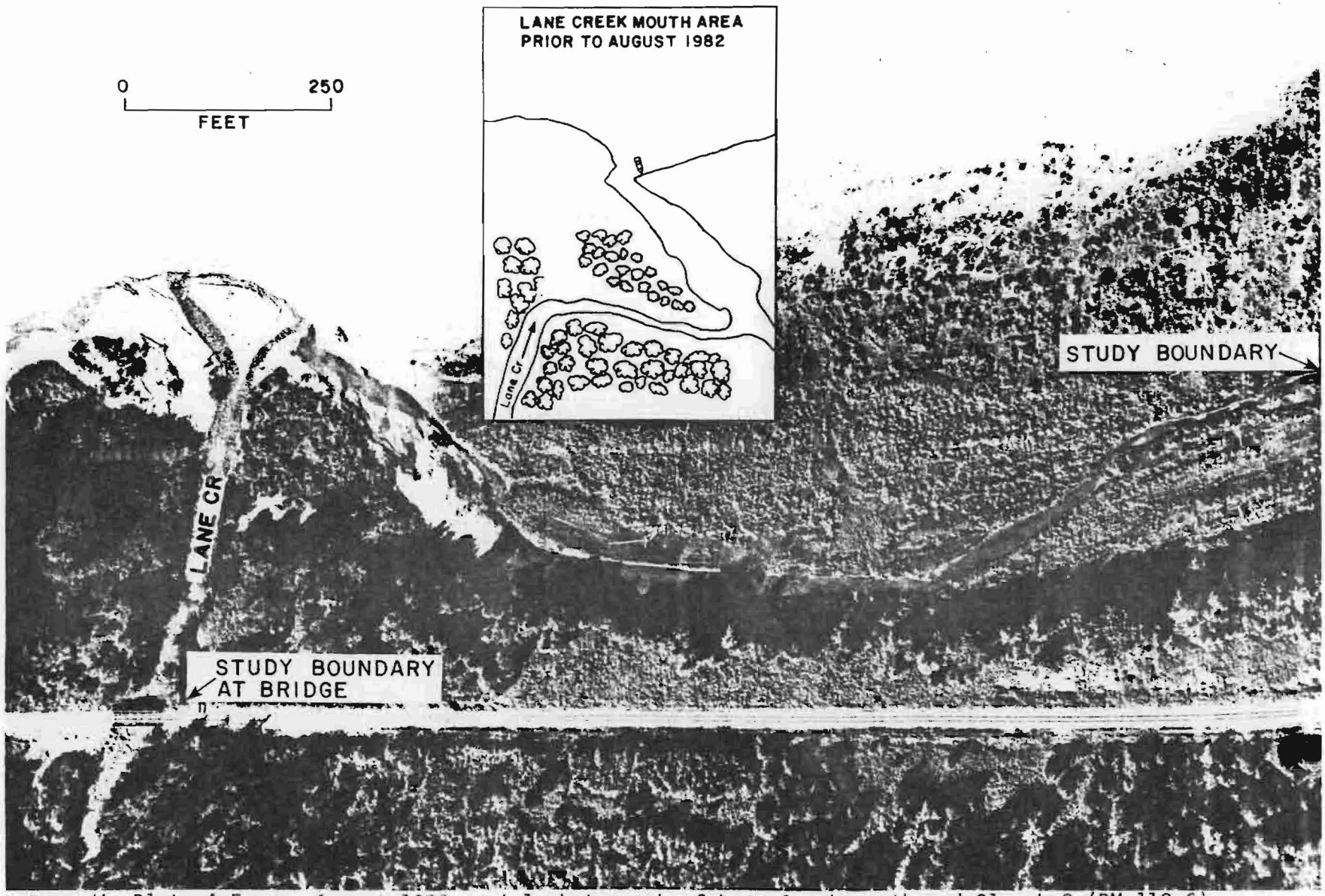
Round whitefish juveniles were fairly common during the season and a few juvenile longnose suckers were present during June and July. A few adult humpback whitefish and longnose suckers were also present in early July. Rainbow trout and more frequently burbot were caught on a regular basis. Large numbers of adult round whitefish were present in early July.

8. Lane Creek and Slough 8

The Lane Creek and Slough 8 study area (Appendix Plate 4-F-9) was centered around the confluence of Lane Creek and Slough 8 with the Susitna River at RM 113.6.

The 500 foot portion of Lane Creek in the study area has a relatively steep gradient which early in the season had two mouths in the mainstem and one in Slough 8. In early August the creek cut a new channel which did not enter Slough 8 (this is how it was when the aerial photo, Appendix Plate 4-F-9, was taken). The creek channel shift resulted in the deposition of a large quantity of rubble, cobble and boulders into the slough. The deposition of this substrate created a debris barrier which, at the lower mainstem stage observed, isolated the slough from the influence of the tributary and the mainstem.

Slough 8 is a long uniformly U-shaped channel about 30 feet wide which was open to mainstem water only during early June when mainstem discharge was 25,000 cfs. After early August, Slough 8 was joined to the mainstem without being hydraulically related to Lane Creek discharge. Several springs enter Slough 8 along its southeast bank. About 1500 feet of the slough were in the study area. The lower 315 feet of the slough is a wider (70 foot) eroded flat bottomed channel.



Appendix Plate 4-F- 9. August 1982 aerial photograph of Lane Creek mouth and Slough 8 (RM 113.6). The Susitna River flows from right to left in this photo.

Hydraulic Conditions

The mainstem discharges (water surface elevations) observed at this habitat location were greater in June and July than in August or September. The highest mainstem flow of 25,000 cfs at the Gold Creek gaging station at which biological sampling occurred was in early June (Appendix Table 4-F-9). The lowest mainstem flow of 12,500 cfs occurred in late August.

The conveyance of mainstem water through the slough head occurred only during the early June sampling period at 25,000 cfs. Backwater zones 6 and 7 were found in the slough (above and below the tributary) in early June. The slough head was closed on June 19th, when the estimated Susitna discharge at Gold Creek was the same as in early June. It should be noted that the gaging station at Gold Creek was not operating in June and the Susitna discharges were estimates from other data (see Part I). The slough head was open on June 20, when the Gold Creek discharge was estimated to be 28,000 cfs.

The water surface elevations in the slough were higher than mainstem elevations after late June. During late June the mainstem stage still regulated the stage in the slough, so this (backwater) area was classified zone 2.

Runoff from Lane Creek, springs and a small creek located near the head of the slough were the most important factors affecting the hydraulic conditions of this pool area (zone 9) after the mainstem stage dropped to 22,400 cfs.

Appendix Table 4-F-9. Hydraulic zones, mainstem discharges at the Gold Creek Station[a], and the status of the controlling streambed elevation at the upstream entrance (head) of slough 8 at the Lane Creek and Slough 8 site, for sampling dates from June to September, 1982.

Sampling Date	June 07	June 19	July 08	July 22	August 08	August 20	September 10	September 25
Mainstem Discharge (cfs)	25,000[b]	28,500[c]	18,100	22,400	16,600	12,500	14,400	15,000
Status of Channel Head	Transition Closing	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Hydraulic Zones								
1	+	+	+	+	+	+	+	+
2	0	+	+	+	+	+	+	+
3	+	+	+	+	+	+	+	+
4	+	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	+	0	0	0	0	0	0	0
7	+	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	+	+	+	+	+	+

[a]USGS provisional data at Gold Creek 15292000.

[b]The June discharge figures are approximations (see text).

[c]Amended mainstem discharge at Gold Creek as determined from ADF&G stage discharge curves.

+Zone present.

0Zone absent.

Large pools (zone 9) and smaller backwater areas (zone 2) were present after the mainstem stage reached 22,400 cfs in late July. The size of the zone 2 areas steadily decreased as mainstem discharges decreased.

The water surface area of the tributary (zone 1) remained relatively constant at the mainstem flows observed. The steep gradient of the stream bed and the high velocity water of this tributary did not permit the formation of tributary backwater areas (zone 2) in the tributary channel. A zone 2 was present in the slough channel after the head of the slough closed.

Other Habitat Characteristics

The drainage area of Lane Creek is approximately 12 square miles. Primary water sources include tributaries, surface runoff, springs, bogs, and ground water areas. Lane Creek was clear throughout the sampling season, and had a mean turbidity of 3.6 NTU.

Mainstem characteristics (e.g., high turbidity levels, increased surface areas and increased water velocity), were present in the slough when the slough head was open in early June. The water temperature for the slough during early June was 6.5°C.

Mean turbidity in the slough when the head was closed was 1.3 NTU and mean water temperature was 6.2°C. A high water temperature of 8.9°C was found during the late August sampling period.

Lane Creek is a narrow (approximately 15 ft), shallow (1-2 ft average depth), high velocity (seasonal mean 2.6 ft/sec) tributary. The mean water temperature was 6.4°C and ranged from 4.0°C in late September to 8.3°C in late August.

The mainstem mixing areas (zone 3) exhibited changes throughout the sampling season. A clear water plume generated from the tributary was present at the confluence of the tributary and mainstem. A mean water temperature of 8.4°C was recorded at the mainstem throughout the season. Mean turbidity level recorded throughout the season was 75 NTU. Mainstem turbidity levels and water temperatures exhibited significant reductions between late August and late September.

Substrate types varied between Lane Creek and Slough 8. Gravel was the dominant substrate of the tributary and the upper reaches of the slough. The lower slough was distinguished as having a substrate composed primarily of rubble and cobble. Interstices found within the substrate of the lower slough offered the only form of cover when slough discharge was negligible and water levels were low. Cobble was the dominant substrate found in the mainstem.

Emergent vegetation was abundant throughout the slough and present around the tributary and mainstem areas. Small tributary channels and shallow, low velocity pools of the upper slough had abundant growths of emergent and overhanging vegetation. Equisetum (horsetail) was found

in abundance along the shallow margins of the slough. Emergent sedges and Equisetum were dewatered in the lower slough for most of the sampling season. Grasses and emergent sedges were abundant along the banks of the slough, tributary and mainstem. Sedges and grasses were found as interspersed clumps and provided beneficial overhanging vegetation for fry. Overhanging shrubs and trees, were abundant along the banks of the tributary. Shrubs and trees were also present along the east bank of the slough.

Deadfall was abundant throughout the tributary, slough and mainstem areas. Undercut banks were abundant through the tributary and upper slough, present along the lower slough and absent along the mainstem. Turbidity levels provided cover in the mainstem and in the slough when its head was open.

Biological Summary

Chum salmon juveniles were abundant in the slough in June. Sockeye juveniles were moderately abundant throughout the season. Chinook juveniles were present in low numbers after June. Coho juveniles were relatively abundant in September.

Slimy sculpins were moderately abundant throughout the season. Round whitefish and Arctic grayling were often abundant in zone 3. A few rainbow trout and longnose suckers were also found in zone 3 during much of the summer.

9. Slough 8A

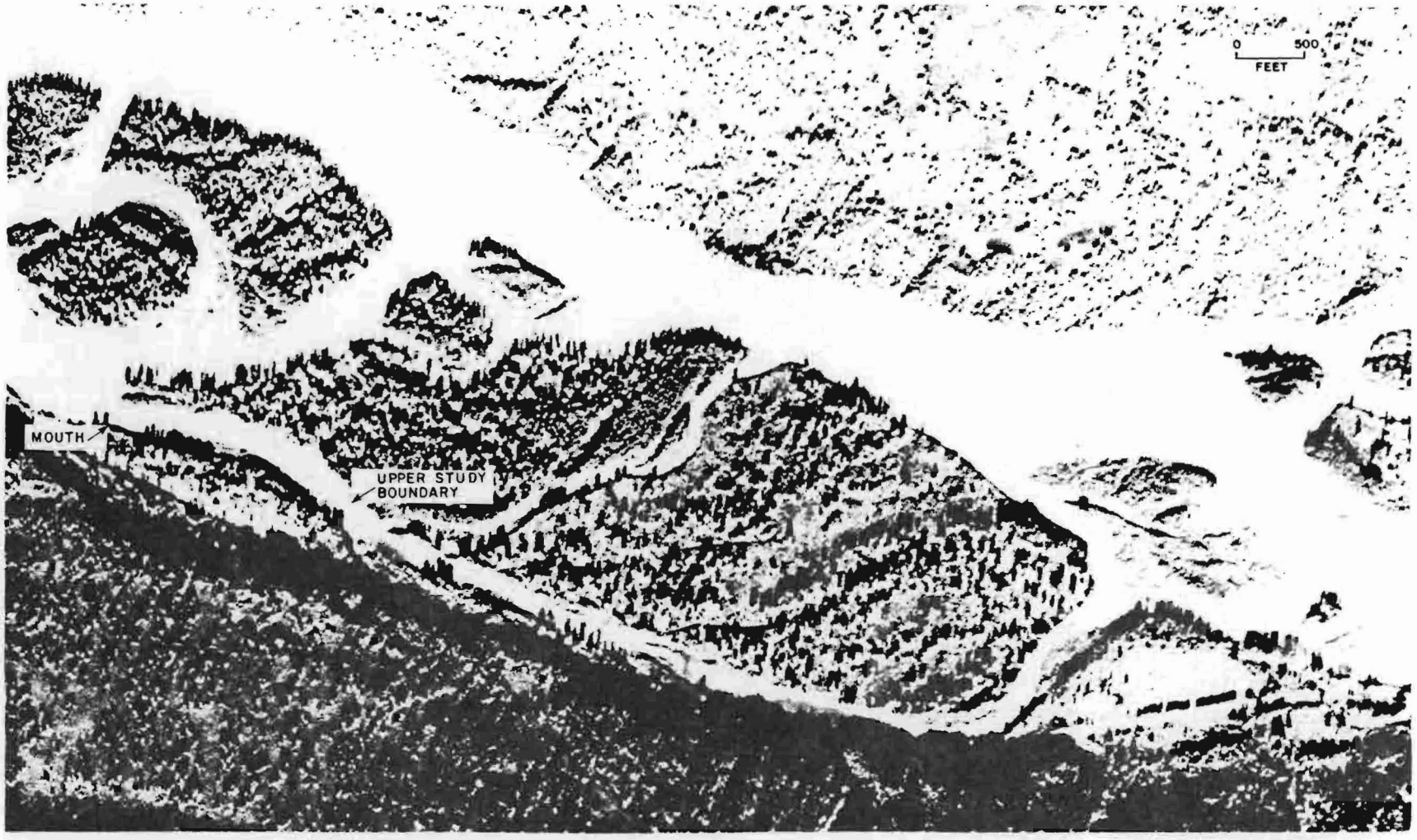
This site at RM 125.3 on the Susitna (Appendix Plate 4-F-10) is one of a complex of sloughs within a 5.5 mile stretch. The slough mouth is within a protected side channel, which was open at least until October 20th. The slough has a broad basin above the mouth which extends to a fork. Above the fork, a network of upper braided channels are impounded by a series of beaver dams. Some dams are completely rocked in with cobble, offering a semi-permanent barrier while others are modified by stage changes. There are two primary head channels which connect to the mainstem Susitna.

The head of this slough opens to the mainstem at flows of 30,000 cfs. Some percolation through gravel occurs in the various head channels at moderate mainstem flows. A long shallow basin occurs in the uppermost channel. This basin, 100-125 feet wide by 1,350 feet long, runs along the railroad embankment and is fed by stream runoff and mainstem percolation.

Hydraulic Conditions

The head channels were seldom open to the mainstem this season (only during the early June trip), although percolation of mainstem water through the cobble was evident (Appendix Table 4-F-10).

The mixing zone (zone 3) varied only slightly, due to the high bank along the lower portion of the slough. The mixing interface seldom



Appendix Plate 4-F-10. August 1980 aerial photograph of Slough 8A (RM 125.3). The Susitna River flows from right to left in this photo.

Appendix Table 4-F-10. Hydraulic zones, mainstem discharges at the Gold Creek station[a] and the status of the controlling streambed elevation at the upstream entrance (head) of slough 8A for the Slough 8A site for sampling dates from June to September, 1982.

Sampling Date	June 08	June 23	July 12	July 28	August 11	August 21	September 07	September 24
Mainstem Discharge (cfs)	28,000	26,500[b]	26,500	25,600	15,400	12,200	11,700	17,100
Status of Channel Head	Open	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Hydraulic Zones								
1	0	+	+	+	+	+	+	+
2	0	+	+	+	+	+	+	+
3	+	+	+	+	+	+	+	+
4	+	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	+	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0

[a]USGS provisional data at Gold Creek 15292000.

[b]Amended mainstem discharge at Gold Creek as determined from ADF&G stage discharge curve.

+Zone present.

0Zone absent.

extended more than 4 feet from the shore. The sampling area extended approximately 350 feet below the turbid interface at the slough mouth. The mouth of the slough was fixed by the morphology of the site. The 150-foot width of the interface (i.e., the mouth of the slough) remained fairly constant all season and also contributed to the rapid mixing of slough and mainstem water. A strong, small eddy area was present on the shoreward end of the interface. The location of the turbid interface and the eddy area remained fairly constant throughout the 1982 open water season.

The basin comprising zone 2 was approximately 150 by 1,500 feet. A 3- to 6-foot-deep channel runs about 300 feet along the cut bank. The dimensions of this zone varied only slightly throughout the season (surface area discussion, Part I, Section 3.1.2.1). However it did diminish after the first week in September as discharge fell below 15,000 cfs. The upper boundary of this pool shifted about 400 feet as the water varied seasonally. The surface area decreased in June and early July, then increased briefly in late July. After this period the size of the zone decreased gradually throughout the remainder of the season. As the mainstem Susitna began to ice up, the flow in zone 2 was generally restricted to a narrow channel.

The upper sampling zone, in free-flowing slough water, extended to the second fork in the system approximately 350 yards above the backup pool. The width of the channels varied from 25-50 feet. Later sampling was restricted to the channel below the beaver dam about 55 yards above zone 2. This change was made when the water level in the upper slough

dropped below the top of the beaver dam, and further activity by beavers reduced flow immediately above this control.

Other Habitat Characteristics

Slough 8A offered a variety of substrate and cover situations for juvenile fish rearing areas and adult salmon spawning. The mixing zone was a cut bank with cobble bottom and much deadfall or overhanging vegetation. Velocity was high one or two feet out from the bank (3.0+ ft/sec). The interface of zone 2/zone 3 remained fixed, varying no more than 20-30 feet in the season.

The backup zone had a variety of substrates, cover, depths and low turbidity (mean = 1.2 NTU). The channel along the cut bank had many deadfalls available. Substrate was primarily silt with little aquatic vegetation. The opposite bank sloped gradually, with large areas of *Sparganium multipedunculatum* and *Equisetum* available for cover. Above these areas were dense growth of alder, willow and cottonwood. The substrate consisted of rubble with a heavy layer of silt. The cobble and gravel substrate in the upper half of this zone was good spawning habitat for chum and sockeye salmon. This spawning area was very similar to that seen in zone 2 of Slough 11. A beaver lodge, deadfalls, and sparse vegetation provided cover. Turbidity varied in early season, but was always very slight (0.8-2.0 NTU). In the latter part of the season, the decreasing mainstem turbidity was reflected by the clarity within this zone (0.4-1.5 NTU). The dimensions of this zone varied throughout the season, but the surface area was great enough that a

variety of depth, cover and turbidity remained available at all levels. The zone 2/zone 1 interface covered an area of gravel interspersed in cobble. Late in the season the interface was fixed by dewatering cobble areas at the narrow right fork of the slough. This occurred after the middle of August, when discharge was about 12,500 cfs. This general area was the site of much spawning activity of anadromous species. The grassy areas in the lower back up zone were utilized by fry as was the large beaver lodge.

The free-flowing zone was generally crystal-clear and had several large pooling areas. Although a good deal of cover (deadfall, cobble) was present, the upper reaches were unproductive during earlier sampling trips in the open-water field season. Sockeye juveniles were dip netted in shallow head channels and various shallow pools in the area above the first beaver dam. In post-July trips, zone 1 sampling was limited to the channel below the beaver dam. This reach had deadfalls (beaver dam) and organic debris for cover.

Sparse aquatic vegetation was present and the depth ranged from 0.5-1.5 feet. No cover was offered by turbidity in this zone once the water level dropped below the height of the dam.

Growth of algae was profuse in July and August on the rocks in this upper zone. A similar condition was seen in Slough 11 at this time. Substrate in zone 1 was primarily gravel interspersed in cobble. Stage changes this season were not sufficient to alter the substrate, as was

evidenced during the 1981 season in high-water months with mean discharge of 30,000+ cfs.

Biological Summary

Sockeye and chinook salmon juveniles were fairly common throughout the season and chum salmon were abundant in June.

Round whitefish, longnose suckers, and slimy sculpins were moderately abundant all season. Rainbow trout and Arctic grayling were relatively abundant in June.

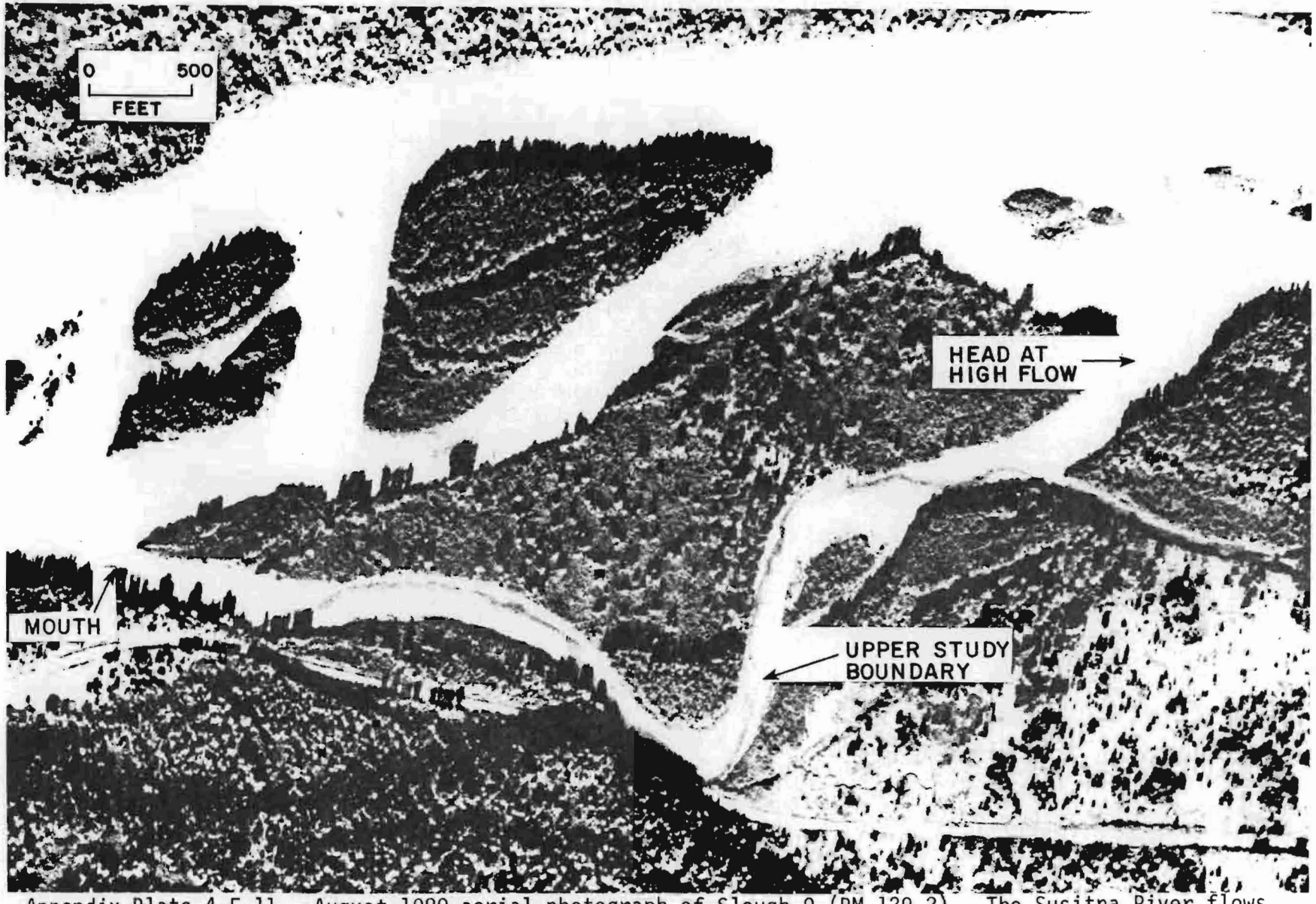
10. Slough 9

This slough is basically a long winding side channel of the Susitna with the mouth at RM 129.2. It is one of a complex of sloughs and is somewhat removed from the main channel of the Susitna (Appendix Plate 4-F-11). Several small subsidiary sloughs are present within this area and a small stream feeds into the lower portion of the sampling area.

The mouth of the slough is an area of sand bars which were sometimes covered with water. The confluence moved within a 300-500 foot area. The mixing zone had a gradual slope with relatively constant gradient well into the turbid water. Sampling within this zone extended approximately 300 feet below the slough mouth.

The backwater zone was very sandy on the mainstem side. The opposite bank had a gradual cobble slope extending 20-30 feet from the brushline of alder and cottonwood. The contribution of clear water by the stream was minimal relative to the slough discharge until late August, when the mainstem began to clear up and percolation through the head of the slough was reduced. At moderate to high water conditions (20,000+ cfs) the clear plume of the stream is very small in the slightly turbid, low velocity (0.2-1.3 ft/sec) backed up water.

The free-flowing zone had a varied morphology with cut-banks, cobble beaches, sand beaches and a railroad embankment of boulders. The gradient was variable, but the usual configuration was a cut bank on one side with a gradual slope of sand or cobble on the opposite shore. The



Appendix Plate 4-F-11. August 1980 aerial photograph of Slough 9 (RM 129.2). The Susitna River flows from right to left in this photo.

upper sampling boundary early in the season was the railroad embankment. Following the late July trip, the upper study boundary was redefined at a point approximately 600 feet above the stream mouth. This was dictated by the control between zones 1 and 2 which emerged in the delta area of the stream discharge at this time.

Hydraulic Conditions

The head of the slough was open to the mainstem in June and July (Appendix Table 4-F-11). Free-flowing slough (zone 4) with velocities ranging from 0.6 to 2.6 fps and the mixing zone (zone 3) were present in both June and July, with a possible additional backed up area of water (zone 6) in both June trips (velocity data is incomplete). Dropping Susitna water levels in early August (less than 20,000 cfs), dewatered the sand bar and subsequently shifted the zone 3 interface about 400 feet downstream. Also at this time, the primary source of water in the system became groundwater from percolation of water from small feeder sloughs and the tributary stream above the mouth. Velocity ranged from 0.2 to 1.5 ft/sec in these conditions.

The delta pushed out by the stream constricted the slough flow. This control became the upper boundary of the pool zone during September. Zones 1, 2 and 3 were present in early August (16,700 cfs) and late September (19,400 cfs). The remainder of the sampling trips, zone 1 flowed into zone 3, at discharges of 11,700 and 12,000 cfs.

Appendix Table 4-F-11. Hydraulic zones, mainstem discharges at the Gold Creek Station[a], and the status of the controlling streambed elevation at the upstream entrance (head) of Slough 9 for the Slough 9 site for sampling dates from June to September, 1982.

Sampling Date	June 10	June 22	July 13	July 27	August 10	August 21	September 07	September 23
Mainstem Discharge (cfs)	26,000	31,500[c]	28,400	29,100	16,700	12,200	11,700	19,400
Status of Channel Head	Open	Open	Open	Open	Closed	Closed	Closed	Closed
Hydraulic Zones								
1	0	0	0	0	+	+	+	+
2	0	0	0	0	+	0	0	+
3	+	+	+	+	+	+	+	+
4	+	+	+	+	0	0	0	0
5	0	0	0	0	0	0	0	0
6	+[b]	+[b]	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0

[a]USGS provisional data at Gold Creek 15292000.

[b]Questionable conclusion, data inconclusive (see text).

[c]Amended mainstem discharge at Gold Creek as determined from ADF&G stage discharge curve.

+Zone present.

0Zone absent.

The Susitna discharge at Gold Creek decreased from September 1-7 (17,900 - 11,700 cfs). The discharge remained low until September 13 (15,200 cfs), then began increasing to a season peak of 32,500 cfs on September 16. Following the mid-September peak, the discharge decreased steadily through the remainder of the season.

Other Habitat Characteristics

The turbidity (13-99 NTU) present in this site during July and August provided cover for fish in all zones. Vegetative cover consisted of a narrow area, 300 feet in length of *Sparganium multipedunculatum*, which was inundated during June and July in the area above the stream. Also, woody shrubs calving off the cut bank areas into the water. Areas of deadfall accumulation were also present in all zones. Algae growth was very slight here in comparison to Slough 8A Slough 11 no other true aquatic vegetation offered significant cover to fry.

The substrate in the mixing zone was cobble interspersed with gravel. The shoreline grasses and deadfall were inundated in late July (29,100 cfs) and briefly in June. Velocity in the mixing area was fairly low (mean = 1.4 ft/sec) due to the braiding of the river and buffering effect of the sand bars. During early September sand covered spawning redds and quickly built up in trap sets.

The backwater zone was very sandy with a narrow channel of cobble extending up to the stream. A few dead trees were present and provided cover at moderate to high discharge (June through July). High water

levels did not provide any additional vegetative cover in the slough because the banks were bare rock and sand. Turbidity, offered cover most of the season.

Early in the open-water season the upper boundary of the backwater zone appeared to be further up the slough at high water stages. Due to the lack of a turbid interface, a slackening of the velocity was often the only indicator of the backwater area. Once the water had lowered below the control opposite the stream, the upper boundary remained constant throughout the season. Surface area of the backwater zone from high stage to low stage varied significantly due to the morphology of this system, particularly in the lower portion. Further discussion of surface area relationships is found in Part I, Section 3.1.2.1.

The free-flowing area of this system was rather extensive and sampling efforts dealt only with the lower portions. In early season trips, the upper sampling boundary was just above the railroad embankment some 2,500 feet above the late season zone 2/zone 1 interface control. Cover in this zone was deadfall, turbidity and some overhanging vegetation. The predominant substrate was cobble with areas of sand and gravel present in the upper reaches. As the backwater zone disappeared in late season, the free-flowing zone continued into the sand and gravel areas in the mouth region. No significant cover was offered by aquatic vegetation in this zone.

Due to the winding nature of this channel, micro-habitats of variable velocity are available within a range of cover when the head of the system is open to the Susitna. At lower discharges (less than 20,000 cfs) the amount of riffle area present became greater. Two primary riffle areas were present, in upper area above the sharp bend at the railroad embankment and a lower area at the control immediately above the stream mouth. Pool areas were present in the lower half of the slough, adjacent to and below the stream discharge. At late season conditions, the riffle/pool ratio was about 2:1.

Biological Summary

Chinook and sockeye salmon juveniles were present in low numbers. Chum salmon were moderately abundant in June.

Round whitefish, longnose suckers, and slimy sculpins were fairly common in June and July.

11. Fourth of July Creek Mouth

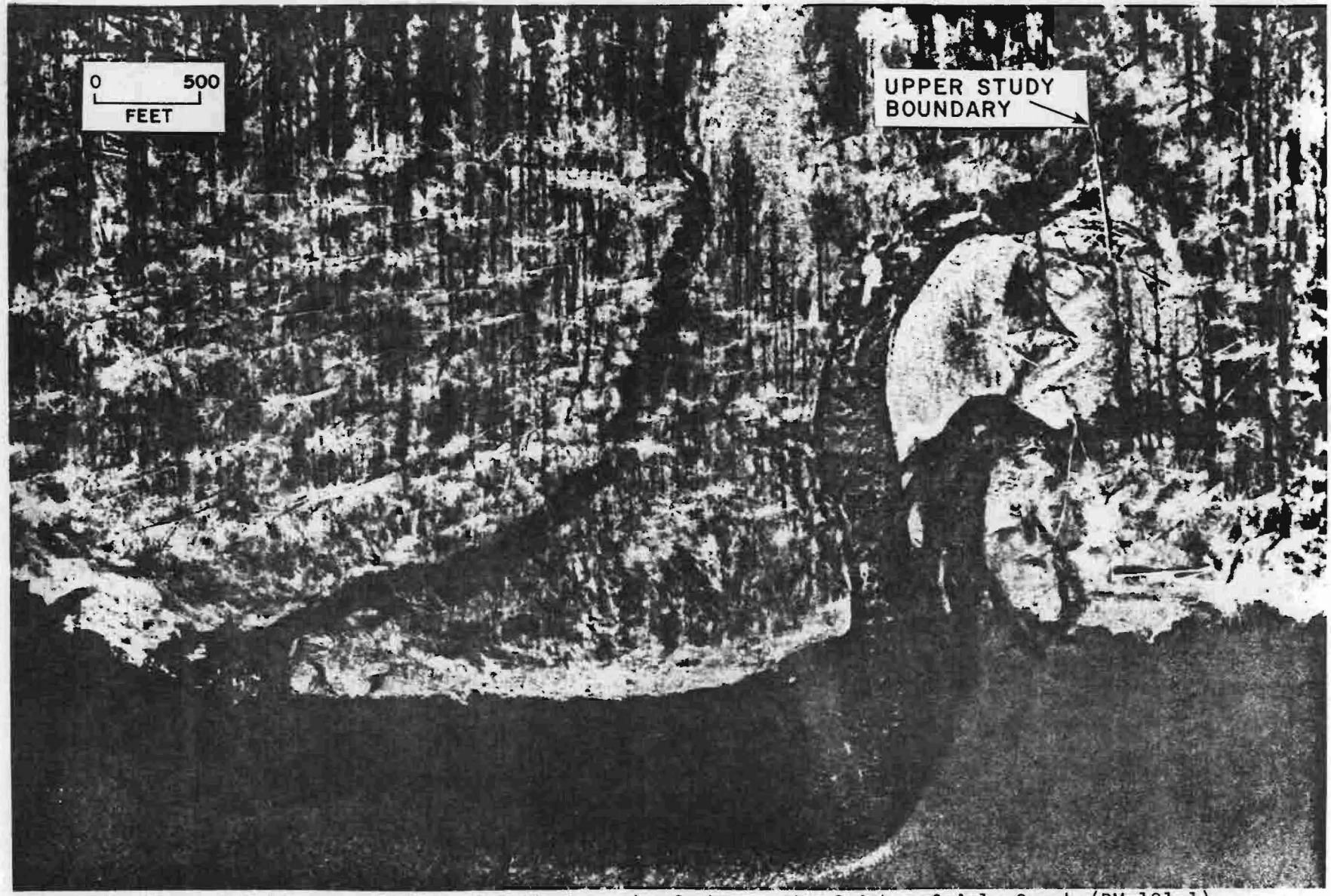
This site (Appendix Plate 4-F-12) is a clear water tributary of the Susitna at RM 131.1. The sampling area extends from approximately 1200 feet downstream to the narrow tributary channel 400 feet above the confluence with the Susitna. The mouth and delta area is a dynamic system, with substantial substrate movement and channel diversity noted in the course of the season.

As the flow of the creek varied, points of discharge varied. The tributary (zone 1) discharges into a Susitna side channel in an area of extensive cobble bars so the lower mixing zone (zone 3) was also subject to a great deal of change as water heights varied. The morphology of the mouth this season was such that no back-up zone was present throughout the ice-free season. This was in contrast to last season and was indicative of ongoing geomorphic changes.

Hydraulic Conditions

Zone 1 and zone 3 were present throughout the 1982 open water season (Appendix Table 4-F-12). The primary channel of this free-flowing tributary changed considerably following periods of heavy rain in late July.

The early season channel made a sharp bend immediately below the straight upper creek portion (the bottom of which marks the zone 1 uppermost sampling boundary). A terrace system which rose up the



Appendix Plate 4-F-12. May 1982 aerial photograph of the mouth of 4th. of July Creek (RM 131.1). The Susitna River flows from right to left in this photo.

Appendix Table 4-F-12. Hydraulic zones and mainstem discharges at the Gold Creek station[a] for the Fourth of July Creek-mouth site for sampling dates from June to September, 1982.

Sampling Date	June 09	June 24	July 12	July 27	August 10	August 22	September 08	September 24
Mainstem Discharge (cfs)	27,000	26,500[b]	26,500	29,100	16,700	12,200	11,900	17,100
Hydraulic Zones								
1	+	+	+	+	+	+	+	+
2	0	0	0	0	0	0	0	0
3	+	+	+	+	+	+	+	+
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0

[a]USGS provisional data at Gold Creek 15292000.

[b]Amended mainstem discharge at Gold Creek as determined from ADF&G stage discharge curve.

[+]Zone present.

[0]Zone absent.

north side of the delta was open in June but dry in the early July sampling period. During the high creek discharge in late July, the primary channel moved the substrate under a large deadfall accumulation; the net result was a straightening of the channel, coupled with a braiding effect. The step-like back channel was still open, but less often once the straight channel had been created. This flow was reduced in late August and early September, running through to the mainstem in early August and late September. This dynamic shift of substrate also occurred during the 1982 open water season.

The high water also extended the delta 50-100 feet. Several large breakwater areas were formed behind the delta and cobble bars, which subsequently dewatered. The mixing zone varied with the discharge from the creek. As water levels in the Susitna dropped, the large beds of dewatered cobble caused the turbid interface to move farther out from shore. In June and early July, the mixing zone followed the shoreline similar to Indian River. Following the channel change in late July, the shoreline and the mixing was extended out into the channel. Several large backwater areas were formed behind the delta and cobble bars, which subsequently dewatered when the water in the mixing zone dropped in August and September.

In September, the surface area of the mixing zone substantially increased as extensive shallow areas were created by the dewatering of cobble banks in the near-shore area. Mainstem Susitna discharge decreased through the first week of September an open water seasonal low of 11,700 cfs, then peaked on September 16 at 32,500 cfs. Following

this season high, discharge decreased throughout the remaining open-water season.

In early September the dewatering of a bar (about 2,950 ft^2) at the mouth coupled with the emergence of a bar about 500 feet below caused a slackening of the velocity which extended the mixing zone about 50 feet offshore between these bars. Prior to this, the turbid interface had been 3-10 feet offshore in this zone.

In late September, the upper bar dewatered completely, thus extending the continuous shoreline at the mouth. In the same period, a smaller bar (about 450 ft^2) began dewatering at the mouth to further buffer the tributary effect on the mainstem water. The downstream shoreline was simultaneously extended by decreasing mainstem discharge. The extension of this shoreline coupled with the decreasing depth of the sidechannel acted to extend the mixing zone outward to approximately 100 feet offshore (nearly to the offshore bar marking the opposite bank of the sidechannel).

At this time, the lower portion of the sampling area was also very shallow due to the dewatering of a large cobble bar. The net result of this was a doubling of the surface area of the mixing zone from early to late September.

Other Habitat Characteristics

The tributary remained clear (mean = 1.0 NTU) throughout the season, except during the brief highwater phase mentioned previously. The banks are densely brushed, supporting alders, willows and cottonwoods. A large amount of deadfall provide cover, in a range of velocities. Submerged tree roots below cut banks provided additional suitable cover for fry. Several small runoff and seepage areas channeled water from higher points in the creek (velocity was less than 1.0 ft/sec).

Substrate varied from boulders in the upper sample area to gravel interspersed in cobble in the lower mouth. The terraces provided a great deal of cover and appeared to be good rearing habitat, as well as a holding area for spawning adults. The back channel was a holding area, offering much cover (overhanging vegetation) and many breakwater situations. Very little aquatic vegetation was present.

The turbidity (mean = 18 NTU) in the mixing zone provided cover for resident and juvenile anadromous fish. Also areas of deadfall and numerous pooling areas became available as mainstem water levels decreased. Vegetative cover was virtually non-existent, because the highwater stage never reached the woody shrubs along shore as was the case in 1982.

Biological Summary

Chinook salmon juveniles were fairly common throughout the season. Coho juveniles were abundant in early September.

Rainbow trout were relatively abundant from June through September. Round whitefish and Arctic grayling were common in zone 3 throughout the season. Adult longnose suckers were also common in zone 3 in August and September.

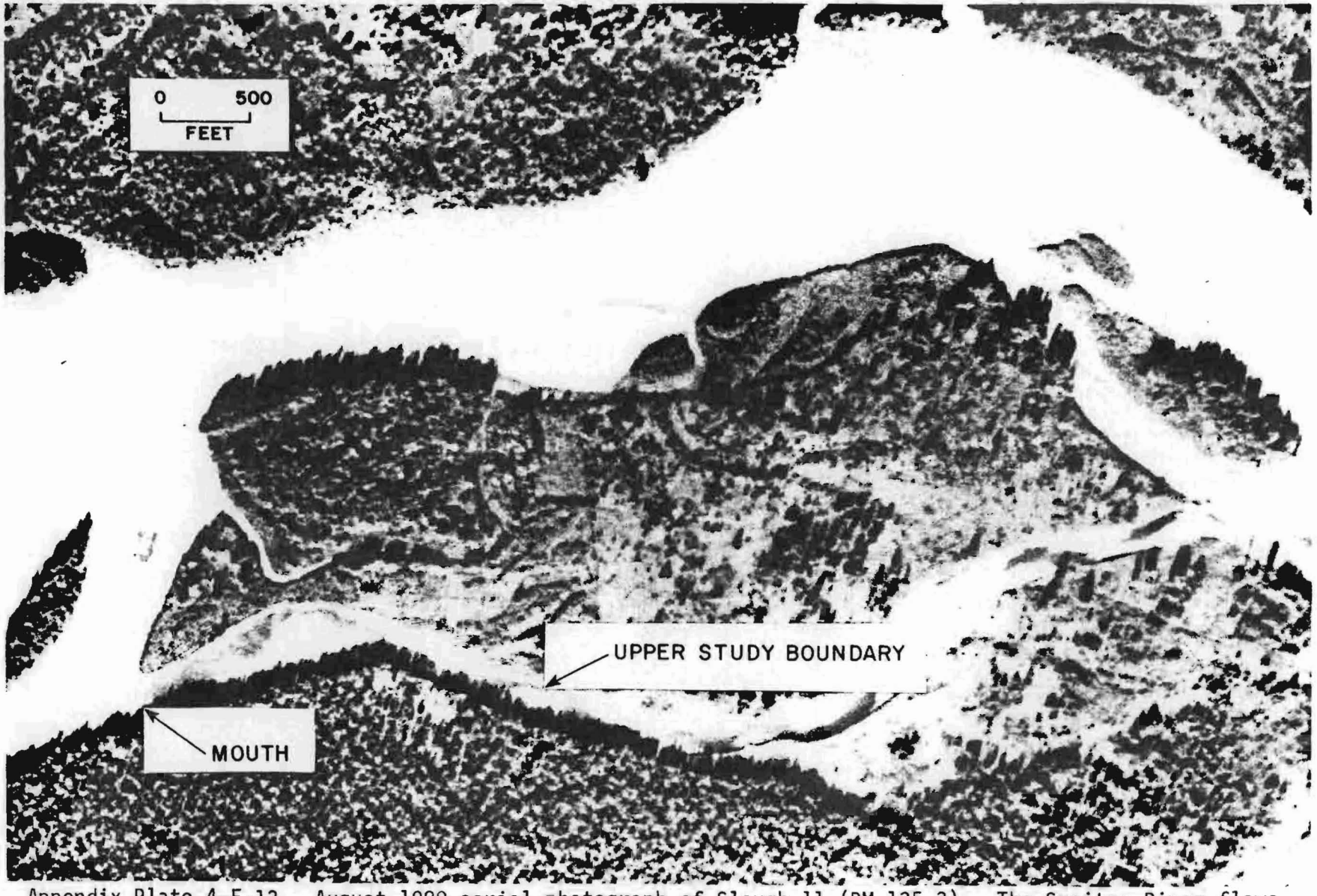
12. Slough 11

This site (Appendix Plate 4-F-13), located at RM 135.3 is a long (1800 yards) slough which in recent years has eroded much land through channel shifting, as evidenced by large deposits of soil and further verified by local residents. Originally enlarged by an ice jam several years ago, the ice outs of the last few winters have scoured the upper reaches of the slough, furthering the morphological change.

The slough has a single head. When the head is closed, springs are the only source of water flowing through the slough. The channel meanders down past large accumulations of rock deposited in S-curves by ice movement.

The mouth of the slough (RM 135.3) is fixed by a sand bar, which was dewatered most of the 1982 open water season (in contrast to the 1981 summer sampling season). The mouth was confluent to a Susitna side channel in an area separated from the primary channel by a series of 90 degree bends. The backwater area formed behind this varied considerably in size throughout this season, and appeared to be considerably reduced from 1981, based on the location of active redds in 1981 which were never wetted this season.

The sampling area encompassed the lower portion of the slough from approximately 50 yards below the mouth to the upper end of the backwater area, a total length of about 700 yards. Following the high water of late July, the sampling boundary was dropped about 50 yards to an



Appendix Plate 4-F-13. August 1980 aerial photograph of Slough 11 (RM 135.3). The Susitna River flows from right to left in this photo.

established control below the backwater area. This boundary remained consistent the remainder of the season. The interface between zone 1 and zone 2 stabilized at a control 450 yards below the upper boundary in early August. Although the width varied slightly after this period, the interface remained at this control for the rest of the season.

Hydraulic Conditions

The slough head was never open during the open water sampling season of 1982. Zone 1, zone 2, and zone 3 were present all season (Appendix Table 4-F-13).

The mixing zone remained fixed along a 15-20 foot cut bank. The slope flattened 2-3 feet beyond the water line; depth ranged from 0.5 to 3.0 feet during the course of the season. During the early season sampling trips the zone was more extensive at the upper end due to the inundation of the sand bar. The interface between slough and mainstem water was much wider when the barrier sand bar was submerged in June and July (28,000+ cfs). In August (17,000- cfs), the sand bar was dewatered and the interface (width of the mouth) was greatly reduced from previous conditions, the season width ranging from 175 to 8 feet. Also, as the mainstem dropped to 12,200 cfs in early September, the mixing zone was further compressed by the extension of the sand bar downstream, parallel with the mixing zone shoreline. A Susitna peak discharge of 32,500 cfs, which occurred on September 16, between sampling trips, again submerged the downstream extension of the sand bar at the mouth. The discharge

Appendix Table 4-F-13. Hydraulic zones, mainstem discharges at the Gold Creek station[a] and the status of the contolling streambed elevation at the upstream entrance (head) of Slough 11 at the Slough 11 site for sampling dates from June to September, 1982.

Sampling Date	June 04	June 20	July 14	July 29	August 12	August 22	September 06	September 29
Mainstem Discharge (cfs)	23,000	33,250[b]	27,300	23,600	14,400	12,200	12,200	12,400
Status of Channel Head	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed
Hydraulic Zones								
1	+	+	+	+	+	+	+	+
2	+	+	+	+	+	+	+	+
3	+	+	+	+	+	+	+	+
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0

[a]USGS provisional data at Gold Creek 15292000.

[b]Amended mainstem discharge at Gold Creek as determined from ADF&G stage discharge curve.

[+]Zone present.

[0]Zone absent.

from the slough was generally low relative to the mainstem flow; the turbid interface down the length of this zone was usually within 3.5 feet of shore.

The backwater area varied quite a lot seasonally in surface area with changes in stage, due to the low discharge of ground waters when the slough head was closed. The dewatering of the sand bar and two other margins of the pool as the season progressed significantly reduced the surface area. The maximum surface area was noted during late June and July while the smallest recorded surface area was on September 29. Further presentation of surface area data is found in Volume 4, Part I, Section 3.1.2.1. The irregular shape and size of the bar encroaching on the zone produced a marked baffling effect of the velocity from the free-flowing zone 1. In late September, the zone had large deadwater areas in pockets of the sand bar.

A large portion of the potential backwater area was never inundated this year as it was in 1981 when mean discharge was 30,000+ cfs in July and August. Many of the redd sites used in 1981 were dry in 1982 when salmon returned to spawn.

The free-flowing zone was greatly reduced because the head of the slough was closed to mainstem flow all summer. This zone did not exhibit much fluctuation this season due to the lack of mainstem contribution. The primary mainstem effect was seen during the peak flow periods on July 25 and September 16, which occurred between sampling trips. Apparently, percolation of mainstem water increased flows and expanded the wetted edge perimeter in the slough during late July.

Other Habitat Characteristics

The mixing zone substrate was primarily rubble,but a large area of sand and cobble existed when the barrier bar was submerged. Very little vegetative cover was available in the cut bank area. Turbidity was available as cover until the Susitna began to clear up in September. The velocity of the water in the mixing zone closely reflected the flows of the sidechannel, due to the relatively small contribution of the slough system.

The backwater area had gravel and sand substrate. Turbidity was very slight in this zone, 0.1 to 9.0 NTU. Velocity was very low in most areas (0.0-0.6 ft/sec). Late in the season the sand bar restricted flow, forming large deadwater areas. Deadfall was present near an earthen cut-bank. No vegetative cover was present, although algae buildup occurred late in the season.

The difference in the depth of the backwater zone from this year to last was reflected in the fact that the sand bar was not substantially dewatered until early September, a month later than in 1981. The mid-season reduction of surface area reflected the low precipitation rate of 1982 relative to the previous season.

The backwater zone was similar to that of Slough 8A in early season; slightly less aquatic vegetation was available in Slough 11, but the wide zone 2/zone 3 interface was present in both. The similarity rapidly decreased as the sand bar drastically reduced the backup zone at Slough 11 in late season.

The free-flowing zone offered a variety of cover in the form of deadfall and boulder areas. Many slackwater areas were available within this zone. Vegetative cover was scarce; at high water in early July (27,300 cfs) hummocks of grass that had calved off cut-banks were inundated. Blooms of algae occurred throughout the season. Algae blooms were also observed last year, however, lower water conditions and more days of sunshine caused extensive algae growth during the 1982 season.

Substrate varied from gravel to boulder, a sorting by size was common and many areas available for spawning and rearing were present. Depth varied from two to eight inches in riffle areas, while upper pools were up to 6 feet deep.

The pools and sorting of substrate in beds of a given size was similar to the head channels of Slough 8A. There seemed to be more boulder areas in Slough 11, which resulted from cut-bank degradation rather than from river movements (hydraulic or ice related).

Biological Summary

Chinook, coho, and sockeye salmon juveniles were all present in low numbers throughout the season. A few chum juveniles were present in June.

The number of resident fish captured was low but a large number of round whitefish were present in late June.

13. Indian River Mouth

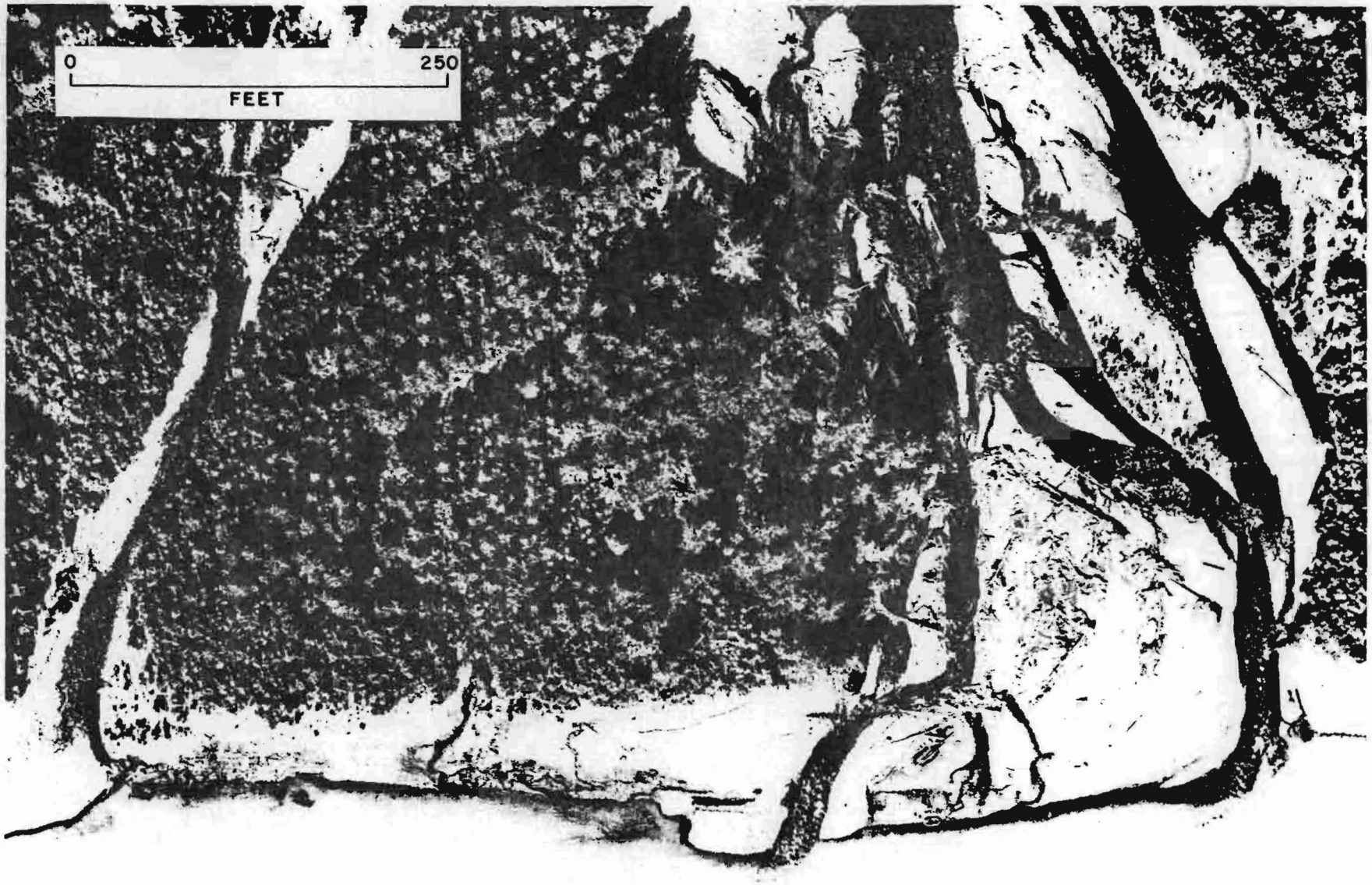
This site is a major tributary in the Susitna drainage area above the Chulitna confluence (Appendix Plate 4-F-14). The mouth of this river (RM 138.6) was braided and subject to major morphological change due to hydraulic interactions of the tributary and mainstem Susitna. No mainstem backwater zone (zone 2) was present, due to the steep gradient of the mouth.

Helicopter surveys of the upper reaches of this river were conducted on a monthly basis from June through September. Sites were located between Indian TRM 2.7 and TRM 12.0. Results and discussion of this data are included in Appendix Report 3-D-1.

Hydraulic Conditions

Only zone 1 and zone 3 were present during the open water season (Appendix Table 4-F-14). The free-flowing tributary underwent a significant change after the high water period in July. Prior to the stage increase, the river forked into two branches about 800 feet from the mainstem confluence. One of the branches discharged at the upper edge of the river delta after a small channel branched off from it. The other primary fork only slightly smaller in size, discharged into the Susitna some 800 feet below the first.

During the late July sampling periods (31,900 - 24,900 cfs), Indian River ran straight through the previous forking area and continued down



Appendix Plate 4-F-14. August 1982 aerial photograph of the mouth of Indian River (RM 138.6). The Susitna River flows from right to left in this photo.

Appendix Table 4-F-14. Hydraulic zones and mainstem discharges at the Gold Creek station[a] for the Indian River-mouth site for sampling dates from June to September, 1982.

Sampling Date	June 04	June 18	July 07	July 23	August 06	August 19	September 05	September 25
Mainstem Discharge (cfs)	23,000	23,000	16,600	24,900	16,800	13,300	13,600	15,000
Hydraulic Zones								
1	+	+	+	+	+	+	+	+
2	0	0	0	0	0	0	0	0
3	+	+	+	+	+	+	+	+
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0

[a]USGS provisional data at Gold Creek 15292000.

[+]Zone present.

[0]Zone absent.

to a large deadfall pile which diverted the channel about 75 feet short of the mainstem. A new fork was established approximately 250 feet down from the early season split; both channels ran to the Susitna in the primary delta area. In this case, the upriver channel was a secondary point of discharge. The braiding generally followed the previously existing patterns, but the almost total closure of the downstream channel diverted most of the river water through this upper network. As a result, the surface area was increased in this delta. Also, the substrate shift extended the edge of the delta 25-50 feet. This caused the tributary discharge to extend well into the mainstem for about 24-48 hours. When the tributary discharge decreased, the erosion of the outer delta edge left a net increase of approximately 35 feet. The channels thus formed were stable throughout the remainder of the season.

After the delta extension a breakwater area formed below the lower primary discharge in the mixing zone. This zone occasionally extended downstream to the head of Slough 16 in early season. The upper sampling boundary of this hydraulic zone was located immediately below the downstream delta discharge. The lower limit of the sampling effort extended to the channel of the lowest possible tributary discharge (dry in late season trips). The gradual slope of the sand bottom in this zone was created by an eddy effect created by tributary discharge out into the mainstem. Similar hydraulic conditions were found at Portage Creek, and to a lesser extent at Fourth of July Creek.

Other Habitat Characteristics

The habitat in the free-flowing area was quite varied due to the extensive braiding of the mouth. Large accumulations of deadfall were available in velocity ranging from about 5.0 ft/sec to backwater pools and eddies. The water was clear most of the summer (0.9-7.2 NTU), with the exception of brief (approximately 24 hours) periods following rain in the headwater drainages, during which time organic stain raised the turbidity. At the peak of flushing, the organic load of the river had darkened the water (85 NTU) so the mainstem appeared light in contrast.

The substrate available is varied due to the sorting effect of the velocity. Although spatial shifting of these substrate areas occurred as a result of high water, the variety of substrate remained available throughout the entire season. Size of substrate ranges from large gravel to boulder, with a general decrease in size from the upper sampling boundary to the confluence.

Vegetative cover was limited to downed terrestrial shrubs and exposed roots in cut-bank areas. No aquatic vegetation was seen, but high tributary water conditions flushed out loose materials and created large accumulations of organic debris at the mouth which appeared to offer excellent cover for fry.

In the mixing zone, substrate was primarily sand with sparse cobble; a small gravel area (less than 1,000 ft^2) was evident immediately below

the tributary discharge, which marked the upper limit of the zone. Beyond the sand, extending out towards the mainstem was cobble bottom. Deadfall offered cover, in addition to increasing turbidity. The mean mixing zone turbidity was 21 NTU. No vegetative cover was present. Susitna River levels did not reach high enough to encroach on shoreline vegetation as was observed during the 1981 open-water season. During late July, the mixing zone interface became difficult to distinguish due to the organic load of Indian River.

Biological Summary

Low numbers of chinook juveniles were present throughout the season.

Round whitefish and Arctic grayling were often abundant in zone 3. In late September, large numbers of rainbow trout and longnose suckers were present in zone 3.

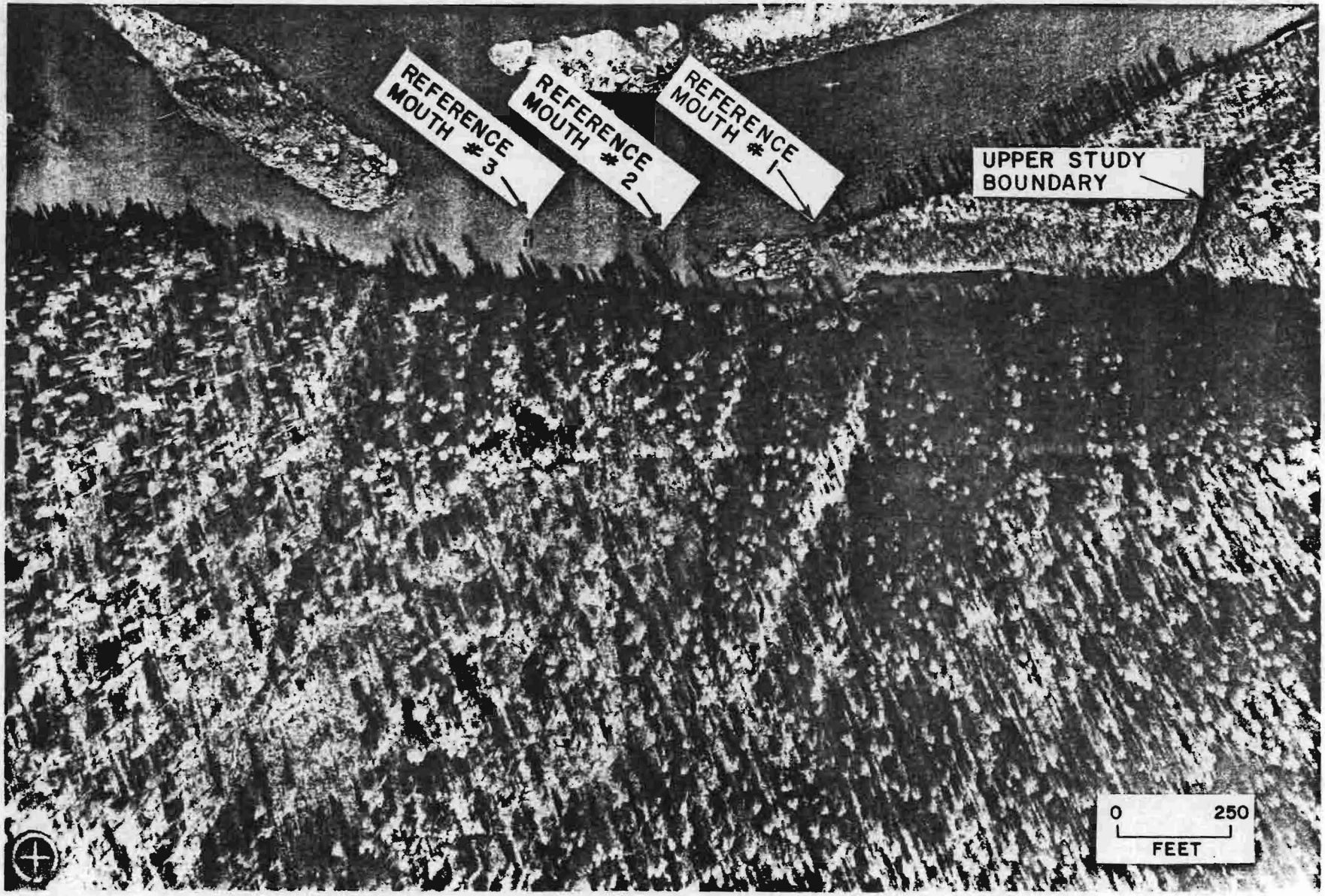
14. Slough 19

Slough 19 is an upland slough located at RM 140.0 (Appendix Plate 4-F-15). Ground water is the only water source as the head of the slough is overgrown with vegetation and is never open to mainstem water flow. The uppermost point of the slough is approximately 220 yards from the mainstem. The slough is in a latter stage of senescence. Terrestrial and aquatic vegetation indicate an aquatic habitat being filled in.

The upper free-flowing zone was quite shallow on several occasions. The mixing zone underwent the most change as the mainstem levels dropped late in the season.

Hydraulic Conditions

Zone 1 and zone 3 were present all season; zone 2 was present until September (Appendix Table 4-F-15). The upper zone originated in a pool at the head of the heavily brushed channel. The gradient and velocity were very slight. The slough discharge decreased late in the year as the mainstem stage dropped. The average depth in the upper portion of this zone was about 0.5 feet, limiting fry trap sets, but allowing electrofishing of virtually the entire zone. Length of this zone varied from 440 feet in early season to 1,275 feet in late season (after the early season the backwater area had been reduced to a channel).



Appendix Plate 4-F-15. May 1982 aerial photograph of Slough 19 (RM 140.0). The Susitna River flows from right to left in this photo.

Appendix Table 4-F-15. Hydraulic zones and mainstem discharges at the Gold Creek station[a] for the Slough 19 site for sampling dates from June to September, 1982.

Sampling Date	June 05	June 18	July 07	July 23	August 06	August 19	September 04	September 25
Mainstem Discharge (cfs)	22,000	23,000	16,600	24,900	16,800	13,300	14,400	15,500
Hydraulic Zones								
1	+	+	+	+	+	+	+	+
2	+	+	+	+	+	+	0	0
3	+	+	+	+	+	+	+	+
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0

[a]USGS provisional data at Gold Creek 15292000.

[+]Zone present.

[0]Zone absent.

The backwater zone was a small rectangular pool with an area of upwelling at the head and a narrow restriction which defined the lower boundary during the early season. After early August, this pool area was simply a portion of the free-flowing zone 1. Subsequently, the backup interface moved down 350 feet as the gravel bar dewatered; surface area in this back-channel backup was 4,158 ft^2. In the late season, no zone 2 was observed, and the free-flowing water from the slough ran directly into the mixing zone with the mainstem. A discussion of surface and relationships is presented in Part I, Section 3.1.2.1.

The actual zone 2/zone 3 interface at moderate to high discharge (16,500+ cfs) was about eight feet wide. This was due to the very narrow bottleneck which marks the lower boundary of the pool zone. At high water, the mixing zone located in a protected channel behind a barrier sand bar about 350 feet in length. The mainstem enters the channel at approximately a 90 degree angle. This creates an eddy which quickly mixes mainstem and slough water.

Below the sand bar, a gravel bar extended an additional 300 feet as a barrier when mainstem flows were less than 16,000 cfs. The uppermost side channel (mainstem source) was open in varying degrees through early August. On all subsequent trips, the mainstem initially merged with slough water via seepage below the sand bar, with the actual slough/mainstem confluence below the barrier gravel bar, some 650 feet below the pool area.

Other Habitat Characteristics

The channel in the upper zone 1 was 2 to 8 feet wide; the depth was 0.1 to 1.5 feet. The velocity was very minimal with algae growth extensive in the late season. Substrate was cobble and gravel with a heavy silt layer in the lower end. An area of upwellings was present at the top of the rectangular backup area. Vegetative cover consisted of overhanging woody shrubs, deadfall and much organic debris.

As the water level dropped, the lower boundary moved down behind the barrier sand bar. This shift encompassed an area which had little cover, resulting in a net loss of cover per unit area, although the length of the zone was greatly extended. This includes the dewatering of a pool (previously zone 2) a free-flowing channel. At the lower levels of discharge in the late season (below 15,000 cfs) the channel in the pool was well below any vegetative cover present.

The backwater zone had emergent vegetation (*Equisetum* sp.) available for cover in early season, with emergent reeds (*Sparganium multipedunculatum*) during the high water in late July. As the season progressed, the wetted edge declined below the grassy areas and the primary cover was deadfall and a beaver lodge in mid-zone. The substrate was a thick silt bed with sparse cobble. The water remained very clear throughout the season (0.3-6.4 NTU). On a single occasion during late July (24,900 cfs), a plume of turbidity encroached about 70 feet within the zone. When the zone moved out of the pool to the lower

sand bar, the substrate was sand; cover was absent except for boulders and limited deadfall.

The mixing zone was generally without any vegetative cover. Turbidity offered cover throughout the season, 16 - 150 NTU. Substrate was predominantly sand, with areas of sparse cobble and a few boulders. As the zone moved down in late season, runoff seepage entered the length of the zone. Velocity was fairly low (0.4 - 1.0 ft/sec) due to channel morphology.

Biological Summary

Sockeye salmon juveniles were moderately abundant at this site throughout the season.

Round whitefish were common in zone 3 all season. Humpback whitefish were present in late June.

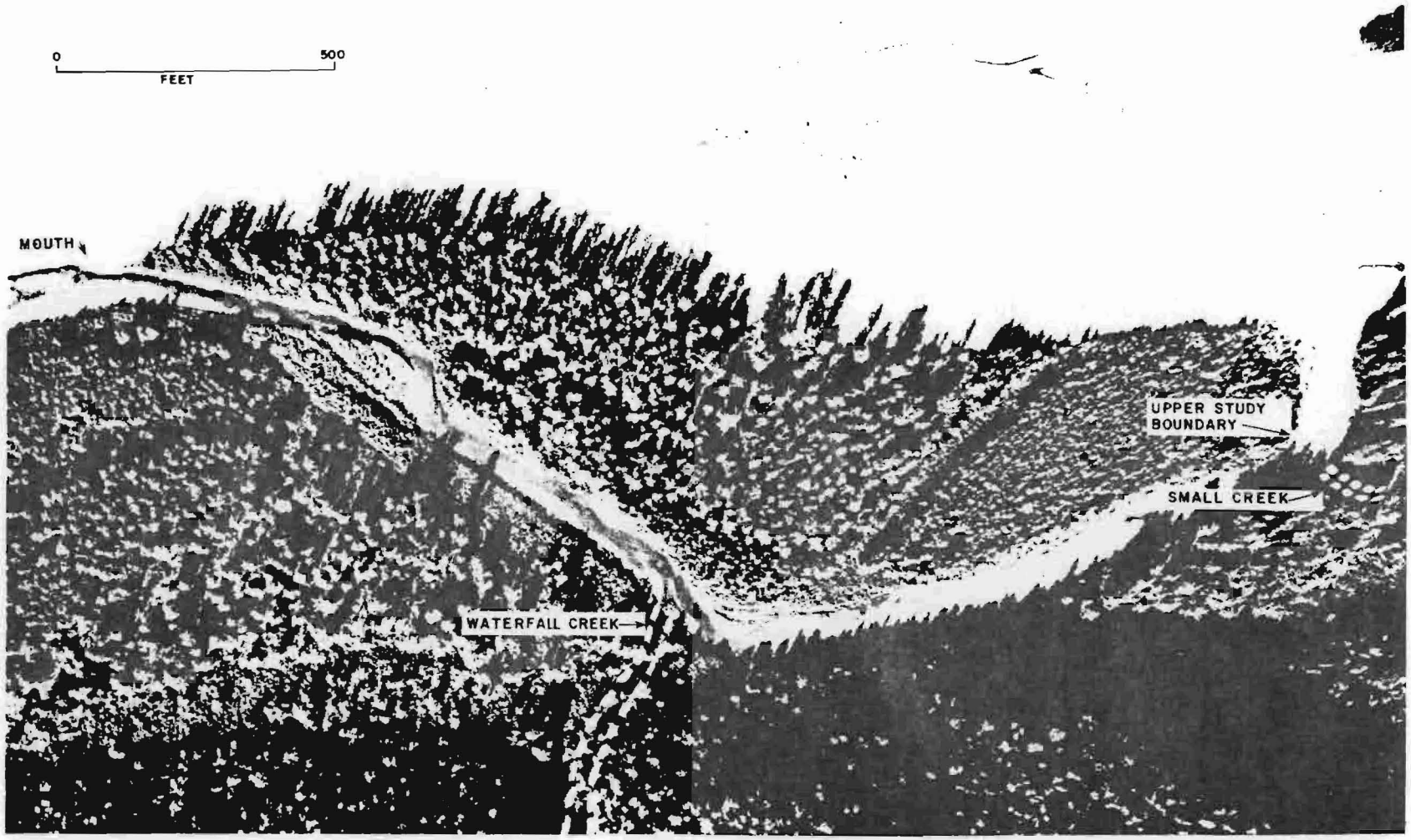
15. Slough 20

Slough 20 (Appendix Plate 4-F-16) is a winding channel (2600 feet) which had mainstem flow through the head channel at moderate to high discharge (20,000+ cfs). This was the only slough sampled in the upper reach of the river which had a large tributary associated with a slough. Waterfall Creek enters the system at the mid-point of the primary slough. At the lower mainstem discharges, there was a morphological pool (zone 9) in the slough immediately above the creek confluence caused by the gravel delta at the mouth of the creek. A small tributary enters the slough about 350 feet below the head of the main slough.

The channel makes a a series of right angle bends 500 feet below Waterfall Creek, then continues 550 feet straight to the mouth. The mixing zone at moderate to high Susitna stage had a straight shoreline. At low discharges less than 13,000 - 14,500 cfs, the water level drops below a cobble/rubble area which forms a shallow, intermittent barrier in the mixing zone.

Hydraulic Conditions

The slough head was open in June and in late July (Appendix Table 4-F-16). The head of this slough is a very flat shelf-like channel, which opened to the mainstem at a discharges between 18,100 and 26,800 cfs. The smaller tributary appeared stable in discharge over the season. When the mainstem was flowing through the system in June and late July, the free-flowing water was classified as zone 4. The free-



Appendix Plate 4-F-16. August 1982 aerial photograph of Slough 20 (RM 140.1). The Susitna River flows from right to left in this photo.

Appendix Table 4-F-16. Hydraulic zones, mainstem discharges at the Gold Creek Station[a], and the status of the controlling streambed elevation at the upstream entrance (head) of Slough 20 at the Slough 20 site for sampling dates from June to September, 1982.

Sampling Date	June 04	June 20	July 08	July 24	August 07	August 20	September 04	September 26
Mainstem Discharge (cfs)	23,000	33,250[b]	18,100	26,800	16,500	12,500	14,400	14,000
Status of Channel Head	Open	Open	Closed	Open	Closed	Closed	Closed	Closed
Hydraulic Zones								
1	+	+	+	+	+	+	+	+
2	0	0	0	0	0	+	+	0
3	+	+	+	+	+	+	+	+
4	+	+	0	+	0	0	0	0
5	+	+	0	+	0	0	0	0
6	0	0	0	0	0	0	0	0
7	+	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	+	+	+	+	+	+	+	+

[a]USGS provisional data at Gold Creek 15292000.

[b]Amended mainstem discharge at Gold Creek as determined from ADF&G stage discharge curve.

[+]Zone present.

[0]Zone absent.

flowing water below the tributary in June and late July was zone 5, while the backup zone at the mouth was a zone 7. The backup pool formed above Waterfall Creek was described as zone 9 under all flow conditions, i.e., it was created by channel morphology, not by mainstem backup.

The hydraulic conditions in the latter half of the season differed due to the source of the flow. The upper zone, supplied with discharge from groundwater and subsidiary slough, became a zone 1. The backup area was zone 2. These conditions were encountered in post-July trips, although in mid-September, the head opened up briefly (32,500 cfs) between sampling periods.

The small area of zone 2 in late August and September (Volume 4, Part I, Section 3.1.2.1) was quite small.

The profile of the mixing zone at high discharge was fairly constant. The turbid interface was a sweeping arc from the mouth 200 to 450 feet downstream, about five to ten feet offshore. At lower discharges, the profile became quite different; as the rubble bar gradually dewatered in the mouth area (13,000 - 14,500 cfs) it created an area which dissipated the (decreasing) discharge of the slough. Mixing then occurred by mainstem wave action against the rubble bar and the two water sources were thoroughly mixed within the 250 foot length of the bar.

The mixing zone at all flow conditions was described as a zone 3. The interface of zone 3 was somewhat fixed by the barrier spit at the upriver edge of the mouth.

Other Habitat Characteristics

Some emergent vegetation (*Equisetum* sp.) was present and offered a small amount of cover among the rubble substrate in the area from the head halfway to the creek mouth. There were also clumps of frequently submerged terrestrial shrubs on hummocks within the channel. When the head was open, turbidity provided additional cover.

Bank morphology consisted of low cut banks with low sloping sand banks on the opposite side of the channel. Channel substrate in the upper half of the slough was rubble, changing to gravel and sand immediately above the creek in the pool. The lower half of the site was gravel and cobble; in this segment, the water was less turbid and the gravel was kept relatively clear of silt by tributary flushing. Cover was available in deadfall, debris and overhanging vegetation. The mixing zone had turbidity as cover in addition to rubble and boulders creating slack water areas. During high stage in July, the water submerged sedges (*Carex* sp.) and woody shrubs in all zones, thus greatly increasing cover for brief periods. When the head was open, turbidity was high throughout the slough.

In low water conditions, the dewatered cobble bar at the mouth created a shallow pool/eddy system of varying turbidity and abundant interstitial cover.

Biological Summary

Only a few chinook, coho, and sockeye salmon juveniles were captured at this site.

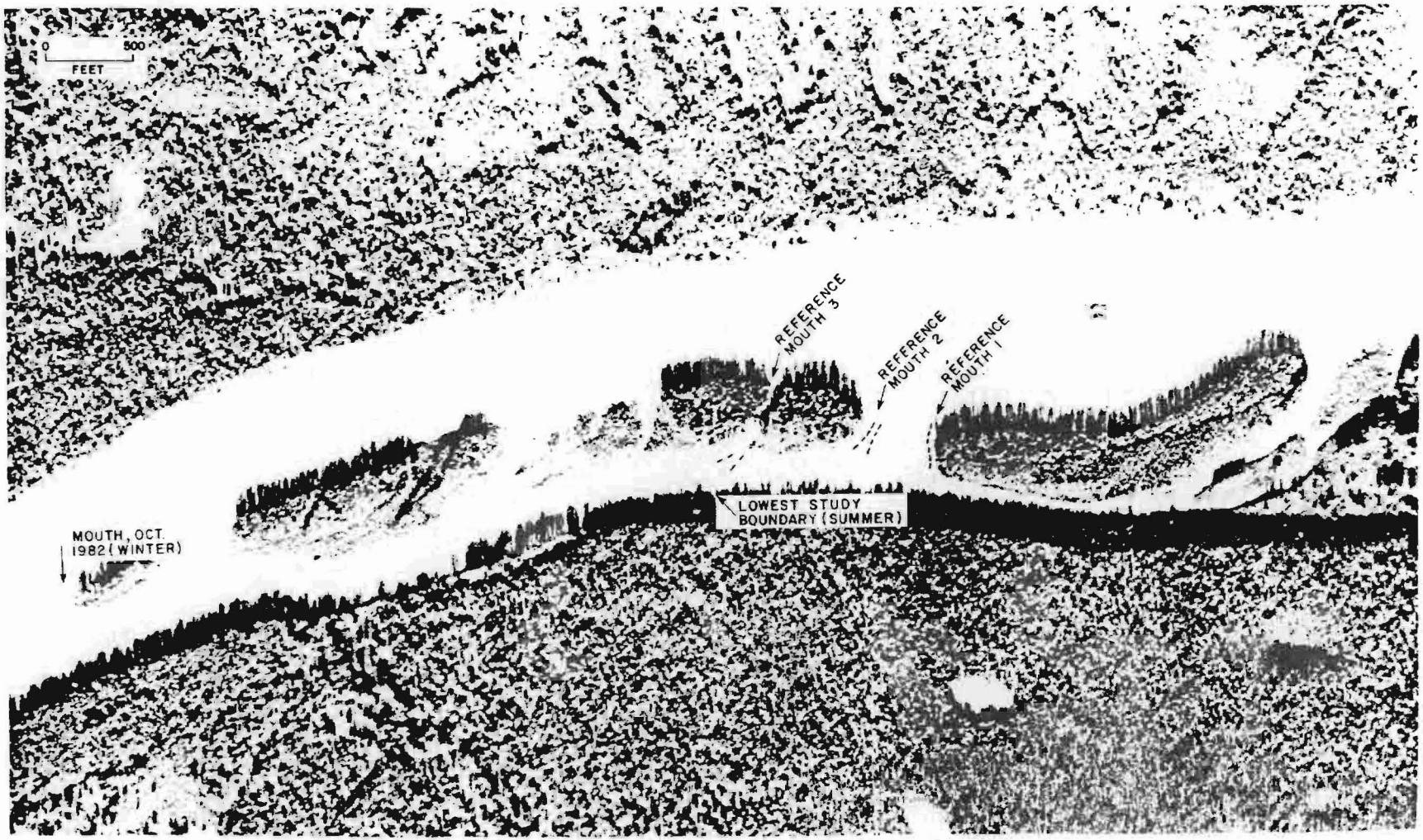
Round whitefish and Arctic grayling were relatively abundant throughout the season in zone 3. Slimy sculpins were common in July. Longnose suckers were common during late August and September.

16. Slough 21

Slough 21 is a long, straight channel with two heads located at RM 142.0 (Appendix Plate 4-F-17). The slough is a long narrow shelf with a relatively uniform width of about 100 feet. A cut bank runs the length of the shoreward side; the opposite bank is a less steep but constant slope. The actual basin is very flat with a narrow channel running along the base of the cut bank. The mouth of the slough has several positions, depending on the stage of the Susitna. Three potential points of confluence with the mainstem exist as a line of islands isolate the slough from the mainstem. At high water, the slough resembles a side channel approximately 0.5 miles in length.

A backwater area (zone 2) was present for most of the season, although the position shifted about mid-season. At discharges below 8,000 cfs, the slough continues to a point 0.25 miles above the head of Slough 20 before mixing with the mainstem, a shift of one mile from the high stage position.

The banks and woody vegetation of the slough had been scoured during ice out the previous winter. A heavy layer of silt was deposited over the area of 1981 spawning redds in the flat pan of the slough. This silt layer remained in place throughout the season, and was not flushed out by the high water peaks of late July (31,900 cfs) or mid-August (32,500 cfs).



Appendix Plate 4-F-17. August 1980 aerial photograph of Slough 21 (RM 142.0). The Susitna River flows from right to left in this photo.

Hydraulic Conditions

The zones present at different mainstem discharges are listed in Appendix Table 4-F-17. The zone distribution on different sample dates are shown in Appendix Figure 4-F-96. The head of the slough forks about 1200 feet in from the river. A relatively straight primary channel and a smaller branching channel are present. The slough head appeared to open between 24,000-31,900 cfs, discharges which were infrequent this season. The head was open in June and late July. At low water levels, there was a seepage area above the morphologized pool. Depth was one to three inches in most of the area, and eight to ten inches in the narrow channel below the cut bank.

The zone 4/zone 6 interface (high water) was about 25 to 50 feet in width. Low water conditions created a zone interface of 75 to 250 feet, when the initial point of mainstem confluence moved to one of the lower channels. As the point of mainstem influence dropped further down the slough in the fall, the backwater area moved down about 1000 feet and remained stable for the rest of the sampling season. In early October, the mixing zone had shifted farther downstream, to a point just above Slough 20, a shift of approximately 4,000 feet.

Other Habitat Characteristics

The substrate in the upper slough was rubble with boulders sparsely interspersed. The right fork formed a chain of isolated pools as the

Appendix Table 4-F-17. Hydraulic zones, mainstem discharges at the Gold Creek Station[a], and the status of the controlling streambed elevation at the upstream entrance (head) of Slough 21 at the Slough 21 site for sampling dates from June to September, 1982.

Sampling Date	June 05	June 19	July 11	July 25	August 09	August 20	September 06	September 27
Mainstem Discharge (cfs)	22,000	28,500[b]	24,000	31,900	17,000	12,500	12,200	13,800
Status of Channel Head	Open	Open	Closed	Open	Closed	Closed	Closed	Closed
Hydraulic Zones								
1	0	0	+	0	+	+	+	+
2	0	0	0	0	+	+	+	+
3	+	+	+	+	+	+	+	+
4	+	+	0	+	0	0	0	0
5	0	0	0	0	0	0	0	0
6	+	+	0	+	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0

[a]USGS provisional data at Gold Creek 15292000.

[b]Amended mainstem discharge at Gold Creek as determined from ADF&G stage discharge curve.

[+]Zone present.

[0]Zone absent.

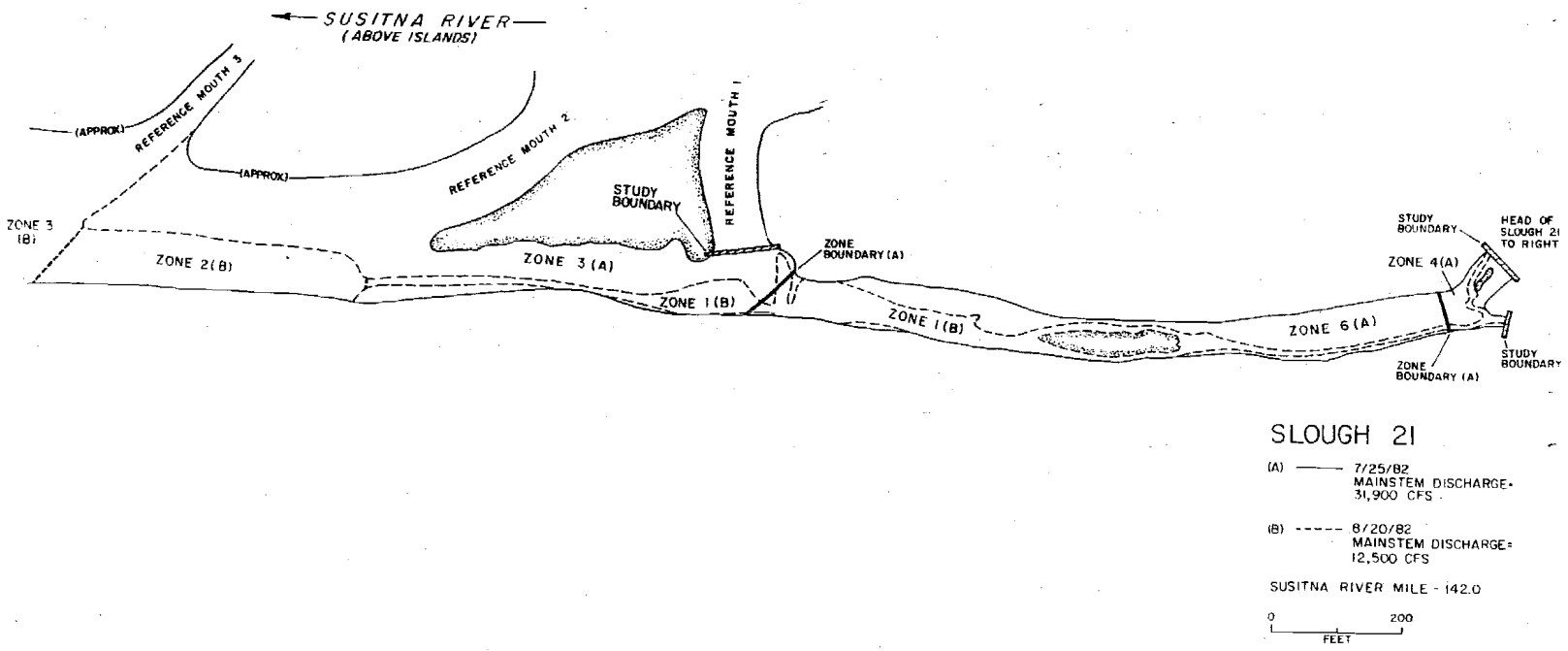


Figure 4-F-96. Map of surface areas and zone types at Slough 21 (RM 142.0) on two sampling dates. Discharges (cfs) at Gold Creek (USGS Provisional Data, 1982, 1529200).

water level dropped. Turbidity (9-30 NTU) and submerged woody vegetation offered cover in both forks, when open to the mainstem. Later in the season, the free-flowing zone extended down to a barren area of sand and boulders. Depth increased to four to ten inches and turbidity remained low (1.1 - 3.6 NTU).

The long shelf-like channel had substrate of sand/cobble. The silt area in the lower portion had gravel below, but this was never exposed by river action this season. During moderate stage, depth in about 40% of the zone was one to three inches over bare sand with no cover. This area had extensive bank storage during high water, with large beds of seepage over sand following the decrease in Susitna stage.

No true aquatic vegetation was present in this zone, however, during the high water of late July, the riparian shrubs and Equisetum along the bank were submerged. Turbidity offered cover in this zone when head channels were receiving mainstem flow.

The mixing zone was mostly sand and gravel during high water. Turbidity and slight deadfall provided cover. No aquatic vegetation was present. As the zone migrated down the slough in mid-season, the substrate inundated was rubble and cobble. Turbidity offered cover; no deadfall or aquatic vegetation was noted.

Biological Summary

A few chinook and sockeye salmon juveniles were present at this site during the season. Chum juveniles were present in June.

Round whitefish were fairly common in July and September. Arctic grayling, humpback whitefish, and longnose suckers were also present in July.

17. Portage Creek Mouth

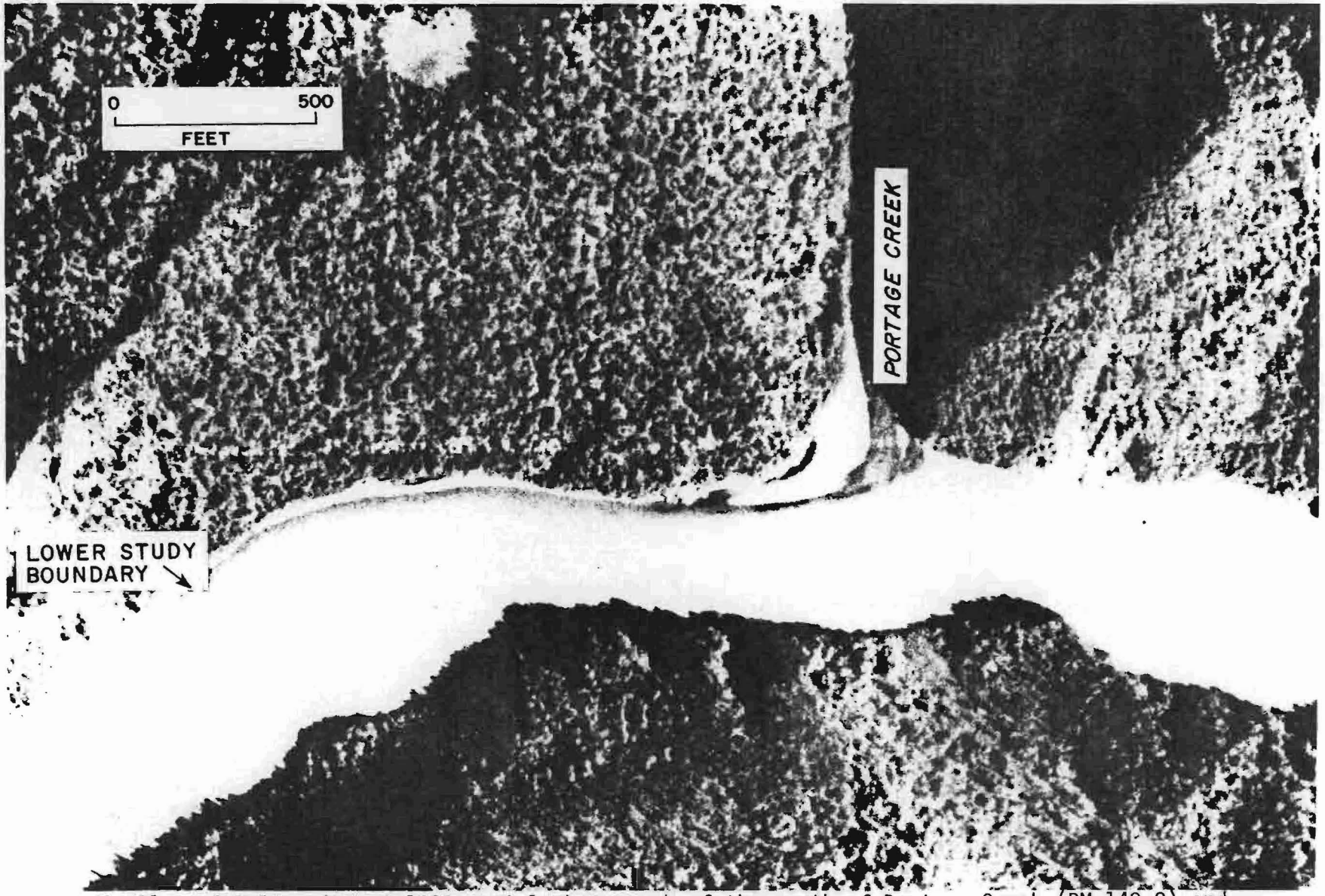
This tributary mouth site (Appendix Plate 4-F-18) is at RM 148.8. The channel as it approaches the mainstem Susitna is very straight and occasionally splits at a gravel bar located at its mouth. The major morphological change observed during 1982 occurred during late July, as noted in the hydraulic summary.

The sampling effort was conducted 500 feet up the tributary and approximately 2,000 feet downriver. The velocity and volume of the creek discharge necessitated setting the mixing zone gear well below the initial point of confluence.

A helicopter survey of three sites on the upper reaches of the creek was conducted in June from TRM 4.5 to 15.5. The results and discussions of the sampling efforts at these selected fish habitat sites is presented in Appendix 3-B Report 3-D-1.

Hydraulic Conditions

Only zone 1 and zone 3 were present during the open water season (Appendix Table 4-F-18). The free-flowing zone underwent only one major change this season. In late July, high creek discharge extended the delta approximately 30 feet into the Susitna River, altering the mixing flow patterns. At high creek stage, a 15-30 foot wide channel flowed along at the base of the rock wall on the east side of the tributary.



Appendix Plate 4-F-18. August 1980 aerial photograph of the mouth of Portage Creek (RM 148.8) and the Susitna River. The Susitna River flows from right to left in this photo.

Appendix Table 4-F-18. Hydraulic zones and mainstem discharges at Gold Creek Station[a] for the Portage Creek-mouth site for sampling dates from June to September, 1982.

Sampling Date	June 06	June 16-30[b]	July 10	July 26	August 08	August 16-30[b]	September 05	September 28
Mainstem Discharge (cfs)	23,000		23,000	31,800	16,600		13,600	12,900
Hydraulic Zones								
1	+		+	+	+		+	+
2	0		0	0	0		0	0
3	+		+	+	+		+	+
4	0		0	0	0		0	0
5	0		0	0	0		0	0
6	0		0	0	0		0	0
7	0		0	0	0		0	0
8	0		0	0	0		0	0
9	0		0	0	0		0	0

[a]USGS provisional data at Gold Creek 15292000.

[b]Site not sampled.

[+]Zone present.

[0]Zone absent.

The confluence of the secondary channel with the mainstem produced a delta of large gravel. As the tributary discharge lessened and the back channel dewatered, a slackwater area was created behind this submerged gravel spit.

The size of the mixing zone varied with the discharge of the creek. In general, the sampling effort occurred at a point where mixing was close enough to the shore for effective gear sets. Following the extension of the delta in late July, the lower boundary of the sampling area in the mixing zone moved downstream an additional 500 feet.

Other Habitat Characteristics

Cover for fry was scarce in the tributary, but boulders created slack water cover areas with small areas of gravel/cobble. Depth varied from one to five feet. Substrate was primarily large rubble and boulders. High water velocities prevented buildup of deadfall and aquatic vegetation. At the high water stage (31,800 cfs), the shoreline was briefly inundated providing a temporary increase in cover, including dark organic stain of the usually clear water. The mean seasonal turbidity was 3.9 NTU.

The mixing zone provided cover in turbidity in the early season (range 4.4-100 NTU). In late September and early October, however, turbidity (1.8 NTU) no longer provided cover in shallow water areas. Substrate varied with a large sand area and a gravel accumulation at the mouth of the secondary channel. The sand area was created by a strong eddy

initiated at the dewatering spit previously mentioned; the situation was very similar to areas at Indian River. At the base of this zone was a cobble area and increasing velocity.

Biological Summary

No juvenile salmon were captured at this site during the open water season.

Round whitefish and Arctic grayling were abundant. Humpback whitefish, burbot, and longnose suckers were common.

APPENDIX G

CATCH DATA

All juvenile anadromous and resident fish catch data (i.e., minnow trap, trotline, beach seine, dip net, backpack electrofishing), except boat electrofishing data, for the 17 Designated Fish Habitat sites by 2-week periods from early June to the end of September 1982 are included in this appendix. Additionally, catch data are included for two sites (Slough 20 and Portage Creek mouth) sampled in early October. These data were collected in the study area located within the Cook Inlet to Devil Canyon reach of the Susitna River.

The catch data are presented by zone and by gear type. Zone codes are defined in Part II, Section 2.2 and gear codes and species codes are defined in the following table.

STANDARD GEAR CODES

005	minnow trap
010	trotline

OPPORTUNISTIC GEAR CODES

000	smolt trap
001	set gillnet
01a	drift gillnet
002	electroshock
003	beach seine
04d	drift net
05a	fish trap
05b	hoop net
008	fishwheel
009	hook and line
011	dip net

RESIDENT SPECIES CODES

162	Slimy sculpin
500	Northern pike
530	Dolly Varden
541	Rainbow trout
550	Lake trout
582	Humpback whitefish
586	Round whitefish
590	Burbot
601	Arctic lamprey
610	Longnose sucker
660	Threespine stickleback
661	Ninespine stickleback

JUVENILE ANADROMOUS CODES

410	Chinook 0+
411	Chinook 0+
412	Chinook juvenile
415	Chinook smolt 0+
416	Chinook smolt 1+
417	Chinook smolt
420	Sockeye 0+
421	Sockeye 1+
422	Sockeye juvenile
425	Sockeye smolt 0+
426	Sockeye smolt 1+
427	Sockeye smolt
430	Coho 0+
431	Coho 1+
432	Coho 2+
433	Coho juvenile
435	Coho smolt 0+
436	Coho smolt 1+
437	Coho smolt 2+
438	Coho smolt
440	Pink 0+
450	Chum 0+

Appendix 4-G. Catch data for Designated Fish Habitat sites, 1982. Units for gear 002 are minutes shocked, for gear 009 are hours fished, and for all other gears are pieces of gear fished.

LOCATION: GOOSE CREEK 2 AND SIDE CHANNEL
RIVER MILE: 73.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
JUN 1 - 15	1	005	5.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	1	010	1.00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	003	1.00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
JUN 1 - 15	4	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
JUN 1 - 15	7	003	1.00	0	2	0	0	0	0	2	0	1	1	0	0	0	0	0	0
JUN 1 - 15	7	005	5.00	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0
JUN 1 - 15	7	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	3	0	2	0	1	5	0	1	2	2	0	0	2	0	3
JUN 16 - 30	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
JUN 16 - 30	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0
JUN 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
JUN 16 - 30	6	002	5.00	0	0	0	0	0	7	0	0	0	14	0	1	0	0	0	0
JUN 16 - 30	6	005	7.00	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0
JUN 16 - 30	6	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUN 16 - 30	7	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
JUN 16 - 30	7	005	7.00	0	1	0	0	0	0	0	0	0	0	2	4	0	8	0	0
JUN 16 - 30	7	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	1	0	1	0	7	1	0	1	14	3	9	0	9	0	25
JUL 1 - 15	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	005	7.00	0	1	0	0	0	0	0	0	0	0	0	39	0	0	0	0
JUL 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	6	003	1.00	0	1	0	0	0	0	0	0	0	3	0	0	1	0	0	0
JUL 1 - 15	6	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	6	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUL 1 - 15	7	003	1.00	0	1	0	0	0	22	0	0	0	0	0	6	2	0	0	0
JUL 1 - 15	7	005	7.00	0	0	0	0	0	0	0	0	0	0	0	91	0	1	0	0
JUL 1 - 15	7	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	3	0	0	0	22	1	0	0	3	0	136	3	1	0	0
JUL 16 - 31	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUL 16 - 31	1	005	5.00	0	2	0	0	0	0	0	0	0	0	0	22	0	0	0	0
JUL 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: GOOSE CREEK 2 AND SIDE CHANNEL
RIVER MILE: 73.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUL 16 - 31	4	002	19.85	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
JUL 16 - 31	4	003	1.00	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	4	005	5.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUL 16 - 31	4	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUL 16 - 31	7	003	1.00	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUL 16 - 31	7	005	5.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUL 16 - 31	7	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	4	0	0	0	1	2	0	0	1	0	26	0	0	0	0
AUG 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	6	003	1.00	0	0	0	0	0	4	0	0	0	1	0	0	3	0	0	0
AUG 1 - 15	6	005	7.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 1 - 15	6	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
AUG 1 - 15	7	003	1.00	0	0	0	0	0	4	0	0	0	1	0	0	0	0	0	0
AUG 1 - 15	7	005	7.00	0	0	0	0	0	0	0	0	0	0	0	13	0	1	0	0
AUG 1 - 15	7	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	8	2	0	0	2	0	16	3	1	0	0
AUG 16 - 31	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	6	003	1.00	0	1	0	0	0	8	0	0	0	0	0	0	6	0	0	0
AUG 16 - 31	6	005	8.00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
AUG 16 - 31	6	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
AUG 16 - 31	7	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	7	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	1	0	0	0	8	2	0	0	2	0	0	6	0	0	0
SEP 1 - 15	1	002	3.00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	003	1.00	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
SEP 1 - 15	1	005	10.00	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0
SEP 1 - 15	1	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	002	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: GOOSE CREEK 2 AND SIDE CHANNEL
RIVER MILE: 73.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 1 - 15	9	002	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	9	003	1.00	0	2	0	0	0	1	0	0	0	1	0	1	2	0	0	0
SEP 1 - 15	9	005	10.00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
SEP 1 - 15	9	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	5	0	0	0	1	5	0	1	1	1	3	4	2	0	0
SEP 16 - 30	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	005	7.00	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 16 - 30	9	003	1.00	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	9	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	9	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	2	0	0	0	2	1	0	0	0	1	1	0	2	0	0
TOTAL FOR LOCATION				0	19	0	3	0	50	19	0	3	25	7	191	16	17	0	28

Appendix 4-G. Cont.

LOCATION: WHITEFISH SLOUGH
RIVER MILE: 78.7

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 16 - 30	2	005	5.00	0	0	0	0	0	0	0	0	0	0	1	10	0	1	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	1	10	0	1	0	0
JUL 1 - 15	2	001	1.00	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0
JUL 1 - 15	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	2	05B	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0
JUL 16 - 31	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	6	003	1.00	0	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0
AUG 1 - 15	2	003	1.00	0	0	0	0	0	0	0	0	0	0	54	0	0	0	0	0
AUG 1 - 15	2	005	7.00	0	1	0	0	0	0	0	0	0	0	1	0	0	8	0	0
AUG 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	011	1.00	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0
AUG 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	1	0	0	0	0	0	0	0	0	65	0	0	8	0	0
AUG 16 - 31	2	003	1.00	0	0	0	0	0	0	0	0	0	0	7	2	1	0	0	0
AUG 16 - 31	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0
AUG 16 - 31	2	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	011	1.00	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0
AUG 16 - 31	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	5	0	0	0	13	2	1	7	0	0
SEP 1 - 15	2	002	------	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	003	1.00	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
SEP 1 - 15	2	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0

Appendix 4-C. Cont.

LOCATION: WHITEFISH SLOUGH
RIVER MILE: 78.7

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	1	3	0	0	0	0	0	1	2	0	0
SEP 16 - 30	2	003	1.00	0	2	0	0	0	0	0	0	0	2	0	0	3	0	0	0
SEP 16 - 30	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	2	0	0	0	0	0	0	0	2	0	0	3	0	0	0
TOTAL FOR LOCATION				0	4	0	0	0	3	8	0	0	4	80	13	5	18	0	0

Appendix 4-C. Cont.

LOCATION: RABIDEUX CREEK AND SLOUGH
RIVER MILE: 83.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 16 - 30	1	003	1.00	0	6	0	0	0	0	0	0	0	0	0	11	0	37	0	0
JUN 16 - 30	1	005	7.00	0	4	0	0	0	0	0	0	0	0	0	13	0	62	0	0
JUN 16 - 30	1	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	005	7.00	0	2	0	0	0	0	0	0	0	0	1	26	0	22	0	0
JUN 16 - 30	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	8	003	1.00	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	8	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	8	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	12	0	1	0	8	0	0	0	0	1	50	0	121	0	0
JUL 16 - 31	1	005	7.00	0	2	0	0	0	0	0	0	0	0	0	48	0	179	0	0
JUL 16 - 31	2	005	7.00	0	1	0	0	0	0	0	0	0	0	0	6	0	74	0	0
JUL 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	7	002	2.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	7	005	7.00	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	0
JUL 16 - 31	7	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	3	0	0	0	0	2	0	0	0	0	57	0	255	0	0
AUG 1 - 15	1	005	5.00	0	1	0	0	0	0	0	0	0	0	0	1	0	52	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	005	10.00	0	2	0	0	0	0	0	0	0	0	0	2	0	23	0	0
AUG 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	011	1.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	3	0	0	0	0	2	0	0	0	0	4	0	75	0	0
AUG 16 - 31	1	003	1.00	0	9	0	0	0	0	0	0	0	0	7	0	0	0	0	0
AUG 16 - 31	1	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0
AUG 16 - 31	1	011	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0
AUG 16 - 31	2	005	8.00	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0
AUG 16 - 31	2	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	9	0	0	0	0	4	0	0	0	7	1	0	30	0	0

Appendix 4-G. Cont.

LOCATION: RABIDEUX CREEK AND SLOUGH
RIVER MILE: 83.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
				CATCH - FOR SPECIES CODE															
SEP 1 - 15	1	005	10.00	0	12	0	0	0	0	0	0	0	0	1	0	0	23	0	0
SEP 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	003	1.00	0	1	0	0	0	0	0	0	3	0	4	0	13	0	0	0
SEP 1 - 15	2	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0
SEP 1 - 15	2	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	011	1.00	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
SEP 1 - 15	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	13	0	0	0	0	4	0	4	0	6	0	13	31	0	0
SEP 16 - 30	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	005	5.00	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	011	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	005	5.00	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0
SEP 16 - 30	2	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	2	0	0	0	0	2	0	0	0	0	1	0	3	0	0
TOTAL FOR LOCATION				0	42	0	1	0	8	14	0	4	0	14	113	13	515	0	0

Appendix 4-G. Cont.

LOCATION: SUNSHINE CREEK AND SIDE CHANNEL
RIVER MILE: 85.7

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
JUN 1 - 15	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0
JUN 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	2	003	1.00	0	1	1	0	0	0	0	0	0	0	0	0	0	2	0	4
JUN 1 - 15	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	4	0	50	0	0
JUN 1 - 15	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
JUN 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	1	5	0	7	0	0
JUN 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	1	1	1	0	0	0	0	0	0	1	11	0	84	0	14
JUN 16 - 30	1	002	3.33	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
JUN 16 - 30	1	005	7.00	0	0	0	0	0	0	0	0	0	0	3	19	0	28	0	0
JUN 16 - 30	1	010	1.00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	002	4.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	005	7.00	0	0	0	2	0	0	0	0	0	0	5	21	0	18	0	0
JUN 16 - 30	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	002	3.13	0	1	0	0	0	0	0	0	0	4	0	4	0	0	0	0
JUN 16 - 30	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
JUN 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	1	0	5	0	0	0	1	0	4	8	51	0	46	0	0
JUL 1 - 15	2	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	2	005	10.00	0	1	0	0	0	0	0	0	0	0	13	4	0	181	0	0
JUL 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	1	0	0	0	0	0	0	0	0	13	4	0	181	0	0
JUL 16 - 31	1	005	5.00	0	0	0	0	0	0	0	0	0	0	1	11	0	103	0	0
JUL 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	2	005	5.00	0	2	0	0	0	0	0	0	0	0	3	29	0	61	0	0
JUL 16 - 31	2	009	.42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	2	0	0	0	0	0	0	0	0	4	40	0	164	0	0
AUG 1 - 15	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: SUNSHINE CREEK AND SIDE CHANNEL
RIVER MILE: 85.7

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 1 - 15	1	005	5.00	0	2	0	0	0	0	0	0	0	0	1	10	0	58	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	005	5.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	3	0	0	0	0	0	0	0	0	1	10	0	58	0	0
AUG 16 - 31	1	003	1.00	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	0
AUG 16 - 31	1	005	7.00	0	0	0	0	0	0	0	0	0	0	3	0	1	5	0	0
AUG 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AUG 16 - 31	9	003	1.00	0	12	0	0	1	0	0	0	0	0	6	0	2	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	12	0	0	1	3	1	0	0	0	10	0	3	5	0	0
SEP 1 - 15	1	002	1.23	0	20	0	0	0	0	0	0	0	0	1	0	0	0	0	0
SEP 1 - 15	1	005	10.00	0	0	0	0	0	0	0	0	0	0	1	2	0	5	0	0
SEP 1 - 15	1	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	005	10.00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
SEP 1 - 15	2	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	002	2.00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	9	002	2.38	0	12	0	0	0	0	0	0	0	0	1	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	34	0	1	0	0	2	0	0	0	4	2	0	5	0	0
SEP 16 - 30	1	005	5.00	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
SEP 16 - 30	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	5.00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	2	0	0	0	3	0	0	3	0	0

Appendix 4-G. Cont.

LOCATION: SUNSHINE CREEK AND SIDE CHANNEL
RIVER MILE: 85.7

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE														
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
TOTAL FOR LOCATION				0	54	1	7	1	3	5	1	0	4	44	118	3	546	0	14

Appendix 4-G. Cont.

LOCATION: BIRCH CREEK AND SLOUGH
RIVER MILE: 88.4

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	10.00	0	0	0	0	0	0	0	0	0	0	4	2	0	25	0	0
JUN 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	002	10.07	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	28
JUN 1 - 15	4	005	10.00	0	2	0	0	0	0	0	0	0	0	0	1	0	3	0	0
JUN 1 - 15	4	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	7	002	2.77	0	0	0	0	0	2	0	6	0	0	1	0	0	0	0	7
JUN 1 - 15	7	005	10.00	0	1	0	0	0	0	0	1	0	0	2	0	0	6	0	0
JUN 1 - 15	7	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	3	0	1	0	2	0	7	0	0	8	3	1	34	0	35
JUN 16 - 30	1	003	1.00	0	0	0	0	0	0	0	0	0	0	3	0	0	16	0	0
JUN 16 - 30	1	005	7.00	0	3	0	0	0	0	0	1	0	0	5	10	0	50	0	0
JUN 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	4	002	18.92	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1
JUN 16 - 30	6	002	5.00	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
JUN 16 - 30	6	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
JUN 16 - 30	6	005	7.00	0	1	0	0	0	0	0	0	0	0	2	5	0	4	0	0
JUN 16 - 30	6	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	6	011	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
JUN 16 - 30	7	002	5.18	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0
JUN 16 - 30	7	003	1.00	0	1	0	0	0	0	0	0	0	0	0	0	2	2	0	16
JUN 16 - 30	7	005	7.00	0	1	0	0	0	0	0	0	0	0	1	5	0	12	0	0
JUN 16 - 30	7	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	15	0	0	0	0	0	3	0	0	11	22	2	84	0	21
JUL 1 - 15	1	003	1.00	0	2	0	0	0	0	0	0	0	0	0	0	0	19	0	0
JUL 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	3	0	0	87	0	0
JUL 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	6	003	1.00	0	1	0	0	0	0	0	0	0	0	0	0	3	0	0	14
JUL 1 - 15	6	005	7.00	0	1	0	0	0	0	0	0	0	0	1	0	0	5	0	0
JUL 1 - 15	6	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	7	003	1.00	0	0	0	1	0	0	0	0	0	0	0	0	32	0	0	2
JUL 1 - 15	7	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
JUL 1 - 15	7	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	7	05B	1.00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	4	0	1	0	0	0	0	0	1	4	0	35	113	0	16

Appendix 4-G. Cont.

LOCATION: BIRCH CREEK AND SLOUGH
RIVER MILE: 88.4

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUL 16 - 31	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	6	0	51	0	0
JUL 16 - 31	1	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	6	002	-------	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	6	003	1.00	0	2	0	0	0	0	0	0	0	1	0	0	7	1	0	2
JUL 16 - 31	6	005	7.00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
JUL 16 - 31	6	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	6	05B	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	7	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
JUL 16 - 31	7	005	7.00	0	0	0	0	0	0	0	0	0	0	0	26	1	11	0	0
JUL 16 - 31	7	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	2	0	1	0	0	0	0	0	1	0	35	9	63	0	2
AUG 1 - 15	1	003	1.00	0	5	0	0	0	0	0	0	0	0	3	1	0	3	0	0
AUG 1 - 15	1	005	5.00	0	1	0	0	0	0	0	0	0	0	1	0	0	22	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	4	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	4	005	5.00	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
AUG 1 - 15	4	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	5	003	1.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
AUG 1 - 15	5	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0
AUG 1 - 15	5	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	7	0	0	0	0	0	0	0	0	5	1	0	35	0	1
AUG 16 - 31	1	005	16.00	0	4	0	0	0	0	0	0	0	0	11	1	0	7	0	0
AUG 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	005	10.00	0	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0
AUG 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	8	0	0	0	0	2	0	0	0	12	1	0	7	0	0
SEP 1 - 15	1	002	27.15	0	11	0	1	0	0	0	21	0	0	2	0	0	5	0	0
SEP 1 - 15	1	003	1.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0
SEP 1 - 15	1	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: BIRCH CREEK AND SLOUGH
RIVER MILE: 88.4

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 1 - 15	1	011	1.00	0	15	0	0	0	0	0	0	0	0	3	1	0	1	0	0
SEP 1 - 15	2	005	10.00	0	1	0	0	0	0	0	0	0	0	1	0	0	5	0	0
SEP 1 - 15	2	010	1.00	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	005	10.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 1 - 15	9	011	1.00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	29	0	1	0	0	8	21	0	0	7	1	0	30	0	1
SEP 16 - 30	1	011	1.00	0	11	0	0	0	0	0	0	0	0	10	0	0	1	0	0
SEP 16 - 30	2	002	———	0	9	0	1	0	0	0	0	0	0	0	0	0	1	0	0
SEP 16 - 30	2	003	1.00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	011	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	22	0	1	0	0	1	0	0	0	10	0	0	2	0	0
OCT 1 - 15	1	05B	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
OCT 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
TOTAL FOR LOCATION				0	90	0	5	0	2	12	31	0	2	57	63	47	368	0	76

Appendix 4-G. Cont.

LOCATION: WHISKERS CREEK AND SLOUGH
RIVER MILE: 101.2

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	7.00	0	1	0	0	0	0	0	0	0	0	1	0	0	2	0	0
JUN 1 - 15	1	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	2	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
JUN 1 - 15	2	005	7.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	010	1.00	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
JUN 1 - 15	7	005	7.00	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUN 1 - 15	7	010	1.00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	3	1	4	0	0	2	0	0	0	1	1	0	2	0	7
JUN 16 - 30	1	005	10.00	0	1	0	0	0	0	0	1	0	0	0	4	0	8	0	0
JUN 16 - 30	1	010	1.00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	7	005	10.00	0	2	0	0	0	0	0	1	0	0	0	39	0	1	0	0
JUN 16 - 30	7	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	9	005	10.00	0	3	0	0	0	0	0	1	0	0	0	1	0	19	0	0
JUN 16 - 30	9	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	6	0	2	0	0	0	3	0	0	0	44	0	28	0	0
JUL 1 - 15	1	003	1.00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	005	7.00	0	1	0	0	0	0	0	0	0	0	0	5	0	8	0	0
JUL 1 - 15	1	010	1.00	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	7	003	1.00	0	0	0	5	0	0	0	0	0	0	0	0	11	0	0	0
JUL 1 - 15	7	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	7	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	9	003	1.00	0	7	0	0	0	0	0	0	0	0	1	1	0	0	0	1
JUL 1 - 15	9	005	7.00	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0
JUL 1 - 15	9	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	13	0	8	0	0	0	0	0	0	1	6	11	9	0	1
JUL 16 - 31	1	005	7.00	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUL 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	7	005	7.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	7	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUL 16 - 31	9	005	7.00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0

Appendix 4-G. Cont.

LOCATION: WHISKERS CREEK AND SLOUGH
RIVER MILE: 101.2

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUL 16 - 31	9	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	2	0	0	0	0	1	0	0	0	0	4	0	0	0	0
AUG 1 - 15	1	003	1.00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	003	1.00	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	005	7.00	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
AUG 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	10	0	2	0	2	0	0	0	0	1	6	0	1	0	0
AUG 16 - 31	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	005	9.00	0	0	0	0	0	0	0	0	0	0	4	6	0	5	0	0
AUG 16 - 31	1	010	1.00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	005	9.00	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0
AUG 16 - 31	2	010	1.00	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	003	1.00	0	0	0	0	1	1	0	0	0	14	0	0	0	0	0	0
AUG 16 - 31	3	005	9.00	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	9	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	9	005	9.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	9	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	1	0	6	1	1	0	0	0	14	5	7	1	7	0	0
SEP 1 - 15	1	002	5.50	0	7	0	0	0	0	0	0	5	0	0	0	0	0	0	0
SEP 1 - 15	1	005	8.00	0	0	0	0	0	0	0	0	2	0	1	29	0	30	0	0
SEP 1 - 15	1	010	2.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	002	1.65	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	005	8.00	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
SEP 1 - 15	2	010	1.00	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	002	6.47	0	4	0	0	0	1	0	0	4	0	0	0	0	0	0	0
SEP 1 - 15	3	003	1.00	0	0	0	0	0	2	0	0	4	0	0	4	0	0	0	0
SEP 1 - 15	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: WHISKERS CREEK AND SLOUGH
RIVER MILE: 101.2

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 1 - 15	9	011	1.00	0	0	0	0	0	0	0	0	3	0	6	0	0	5	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	13	0	2	0	3	2	0	19	0	7	34	0	35	0	0
SEP 16 - 30	1	002	10.00	0	48	0	0	0	0	0	0	2	0	1	1	0	0	0	0
SEP 16 - 30	1	003	1.00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
SEP 16 - 30	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	009	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	009	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	002	1.00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	003	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	9	002	5.00	0	0	0	0	0	1	0	0	8	0	0	0	0	0	0	0
SEP 16 - 30	9	003	1.00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
SEP 16 - 30	9	005	7.00	0	0	0	0	0	0	0	0	3	0	1	2	0	1	0	0
SEP 16 - 30	9	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	9	011	1.00	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	53	0	4	0	1	0	0	21	1	3	3	0	1	0	0
TOTAL FOR LOCATION				0	101	1	28	1	7	5	3	40	15	18	105	12	83	0	8

Appendix 4-G. Cont.

LOCATION: SLOUGH 6A
RIVER MILE: 112.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	2	003	1.00	0	1	0	0	0	7	0	0	0	1	0	9	223	1	0	830
JUN 1 - 15	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
JUN 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	2	05A	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	005	5.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	05A	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	2	0	1	0	7	0	0	0	1	0	10	223	2	0	830
JUN 16 - 30	2	003	1.00	0	0	0	1	0	3	0	0	0	5	0	0	16	0	0	5
JUN 16 - 30	2	005	10.00	0	0	0	0	0	0	0	0	0	0	0	9	0	23	0	0
JUN 16 - 30	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	2	0	3	1	0	0	5	0	9	16	23	0	5
JUL 1 - 15	2	003	1.00	0	7	0	1	0	8	0	0	0	6	0	1	173	5	0	0
JUL 1 - 15	2	005	10.00	0	0	0	0	0	0	0	0	0	0	0	3	0	4	0	0
JUL 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUL 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	7	0	1	0	8	0	0	0	6	0	5	173	9	0	0
JUL 16 - 31	2	003	1.00	0	3	0	0	0	17	0	0	0	0	0	2	374	0	0	0
JUL 16 - 31	2	05B	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0
JUL 16 - 31	2	005	10.00	0	0	0	0	0	0	0	0	0	0	0	2	0	12	0	0
JUL 16 - 31	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	005	5.00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
JUL 16 - 31	8	003	1.00	0	0	0	0	0	4	0	0	0	2	0	4	1	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	3	1	1	0	21	3	0	0	2	0	8	375	17	0	0
AUG 1 - 15	2	005	8.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

Appendix 4-C. Cont.

LOCATION: SLOUGH 6A
RIVER MILE: 112.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	1	0	0	0	0	3	0	0	0	0	0	1	0	0	0
AUG 16 - 31	2	003	1.00	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0
AUG 16 - 31	2	005	8.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	003	1.00	0	4	0	0	0	1	0	0	0	1	0	1	0	0	0	0
AUG 16 - 31	3	005	8.00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	6	0	1	0	4	1	0	0	1	0	1	1	1	0	0
SEP 1 - 15	2	002	6.22	0	0	0	0	0	2	0	0	0	0	0	2	3	6	0	0
SEP 1 - 15	2	003	1.00	0	1	0	0	0	13	0	0	0	0	0	3	17	3	0	0
SEP 1 - 15	2	005	8.00	0	0	0	0	0	0	0	0	0	0	0	1	0	20	0	0
SEP 1 - 15	2	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	011	1.00	0	0	0	0	0	0	0	0	0	0	0	1	3	6	0	0
SEP 1 - 15	3	002	5.22	0	5	0	0	0	1	0	0	3	0	0	1	0	0	0	0
SEP 1 - 15	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	6	0	0	0	16	3	0	3	0	0	8	23	35	0	0
SEP 16 - 30	2	003	1.00	0	1	0	0	0	0	0	0	0	0	0	0	6	1	0	0
SEP 16 - 30	2	005	5.00	0	0	0	0	0	0	2	0	0	0	0	0	0	43	0	0
SEP 16 - 30	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
SEP 16 - 30	3	005	5.00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	3	0	1	0	0	5	0	0	0	0	3	6	44	0	0
TOTAL FOR LOCATION				0	28	1	7	0	59	16	0	3	15	0	44	818	131	0	835

Appendix 4-G. Cont.

LOCATION: LANE CREEK AND SLOUCH 8
RIVER MILE: 113.6

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	1	05A	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	010	1.00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	05A	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	7	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	7	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	7	009	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	7	010	1.00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	7	05A	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	0	005	5.00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
JUN 16 - 30	0	011	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
JUN 16 - 30	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
JUN 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	55
JUN 16 - 30	2	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	010	2.00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	1	1	0	0	0	0	0	0	0	0	0	2	2	0	58
JUL 1 - 15	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	002	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	003	1.00	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0
JUL 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
JUL 1 - 15	3	010	1.00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	9	002	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	9	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	9	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	0	1	1	0	0	0	0	9	0	0	2	0	0	0	0
JUL 16 - 31	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUL 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	2	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: LANE CREEK AND SLOUGH 8
RIVER MILE: 113.6

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUL 16 - 31	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	002	3.90	0	6	0	0	0	7	0	0	9	0	0	1	0	0	0	0
JUL 16 - 31	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	4	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	9	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	9	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	6	0	0	0	7	0	0	9	0	0	3	0	0	0	0
AUG 1 - 15	1	002	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	005	7.00	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	005	4.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	002	1.00	0	8	1	0	0	0	0	0	1	0	0	5	0	0	0	0
AUG 1 - 15	3	005	7.00	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0
AUG 1 - 15	9	005	3.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	8	2	0	0	1	2	0	2	0	0	8	0	0	0	0
AUG 16 - 31	0	011	1.00	0	0	0	0	0	1	0	0	0	0	0	0	16	3	0	0
AUG 16 - 31	1	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	003	1.00	0	0	0	0	0	3	1	0	3	1	0	3	0	0	0	0
AUG 16 - 31	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	0	0	4	1	0	3	1	0	9	16	3	0	0
SEP 1 - 15	0	002	5.73	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0
SEP 1 - 15	0	005	6.00	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0
SEP 1 - 15	1	002	.50	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
SEP 1 - 15	1	005	6.00	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0
SEP 1 - 15	1	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	005	6.00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
SEP 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4-C. Cont.

LOCATION: LANE CREEK AND SLOUGH 8
RIVER MILE: 113.6

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 1 - 15	3	002	6.55	0	0	0	1	0	2	1	0	0	0	0	3	0	0	0	0
SEP 1 - 15	3	003	1.00	0	1	0	0	0	1	0	0	2	0	0	1	0	0	0	0
SEP 1 - 15	3	005	6.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
SEP 1 - 15	9	002	8.80	0	9	0	0	0	0	0	0	0	0	0	1	13	2	0	0
SEP 1 - 15	9	005	6.00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	14	1	2	0	3	3	0	2	0	0	9	13	40	0	0
SEP 16 - 30	0	005	5.00	0	0	0	0	0	0	0	0	0	0	0	1	3	34	0	0
SEP 16 - 30	1	002	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	002	2.20	0	1	0	1	0	3	0	0	1	0	0	2	0	0	0	0
SEP 16 - 30	3	003	1.00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	9	002	3.85	0	27	0	0	0	0	2	0	0	0	0	3	17	6	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	28	0	1	0	5	2	0	1	0	0	9	20	41	0	0
OCT 1 - 15	1	009	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	2	009	.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	3	009	.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL FOR LOCATION				0	57	7	4	0	20	8	0	26	1	0	40	51	86	0	58

Appendix 4-C. Cont.

LOCATION: SLOUGH 8A
RIVER MILE: 125.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	3	001	1.00	0	0	0	0	0	2	0	0	1	1	0	0	0	0	0	0
JUN 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	6	001	1.00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
JUN 1 - 15	6	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	40
JUN 1 - 15	6	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	6	010	1.00	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	1	0	2	2	0	2	3	0	0	1	0	0	40
JUN 16 - 30	1	003	1.00	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0
JUN 16 - 30	1	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	1	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	001	1.00	0	0	0	2	0	2	0	0	1	8	0	0	0	0	0	0
JUN 16 - 30	2	003	1.00	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
JUN 16 - 30	2	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	001	1.00	0	0	0	10	0	15	0	0	1	4	0	0	0	0	0	0
JUN 16 - 30	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	2	0	13	0	17	3	0	2	13	0	1	2	0	0	0
JUL 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	011	1.00	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0
JUL 1 - 15	2	002	38.25	0	1	0	0	0	0	0	0	0	0	0	1	6	0	0	0
JUL 1 - 15	2	003	1.00	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0
JUL 1 - 15	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	2	011	1.00	0	0	0	0	0	1	0	0	0	0	0	0	4	0	0	0
JUL 1 - 15	3	003	1.00	0	2	0	0	0	6	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	4	0	0	0	8	0	0	0	0	0	1	19	0	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 8A
RIVER MILE: 125.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUL 16 - 31	1	003	1.00	0	0	0	0	0	10	0	0	0	0	0	2	173	0	0	0
JUL 16 - 31	1	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	2	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	34	0	0	0
JUL 16 - 31	2	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	005	8.00	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	0	0	10	1	0	0	0	0	4	207	0	0	0
AUG 1 - 15	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	003	1.00	0	30	0	0	0	0	0	0	0	0	0	0	1	0	0	0
AUG 1 - 15	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	30	0	1	0	0	2	0	0	0	0	0	1	0	0	0
AUG 16 - 31	1	003	1.00	0	1	0	0	0	0	0	0	0	1	0	5	9	6	0	0
AUG 16 - 31	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	003	1.00	0	0	0	0	0	2	0	0	0	0	0	0	4	0	0	0
AUG 16 - 31	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0
AUG 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	1	0	0	0	2	0	0	0	1	0	11	13	7	0	0
SEP 1 - 15	1	002	30.00	0	1	0	0	0	0	0	0	0	16	0	5	8	0	0	0
SEP 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	011	1.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
SEP 1 - 15	2	002	10.00	0	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0
SEP 1 - 15	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 8A
RIVER MILE: 125.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 1 - 15	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	3	0	1	0	0	0	0	0	16	0	7	9	0	0	0
SEP 16 - 30		011	1.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	002	8.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	003	1.00	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
SEP 16 - 30	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	3	0	2	0	0	0	0	0	1	0	0	0	0	0	0
TOTAL FOR LOCATION				0	43	0	18	0	39	8	0	4	34	0	24	252	7	0	40

Appendix 4-G. Cont.

LOCATION: SLOUGH 9
RIVER MILE: 129.2

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
JUN 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUN 1 - 15	6	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
JUN 1 - 15	6	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	6	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	5
JUN 16 - 30	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	4	003	1.00	0	0	0	0	0	18	0	0	0	2	0	2	2	0	0	0
JUN 16 - 30	4	005	5.00	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUN 16 - 30	4	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
JUN 16 - 30	6	003	1.00	0	2	0	0	0	0	18	0	0	7	0	0	5	0	0	13
JUN 16 - 30	6	005	5.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUN 16 - 30	6	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	4	0	0	0	18	20	0	0	9	0	4	7	0	0	13
JUL 1 - 15	3	002	5.15	0	5	0	0	0	4	0	0	0	0	0	1	2	0	0	0
JUL 1 - 15	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	4	002	2.23	0	1	0	0	0	13	0	0	1	4	0	0	4	0	0	2
JUL 1 - 15	4	003	1.00	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	4	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	4	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	6	0	0	0	54	0	0	1	4	0	1	6	0	0	2
JUL 16 - 31	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	4	003	1.00	0	0	0	0	0	17	0	0	1	0	0	0	2	0	0	0
JUL 16 - 31	4	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	0	0	17	0	0	1	0	0	0	2	0	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 9
RIVER MILE: 129.2

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 1 - 15	1	002	1.25	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 1 - 15	1	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	010	1.00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	002	1.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 1 - 15	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	4	0	2	0	0	0	0	0	0	0	2	0	0	0	0
AUG 16 - 31	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	003	1.00	0	0	0	0	0	2	0	0	1	0	0	5	0	0	0	0
AUG 16 - 31	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	0	0	2	1	0	1	0	0	7	0	0	0	0
SEP 1 - 15	1	002	15.00	0	0	0	0	0	0	0	0	0	0	0	2	4	1	0	0
SEP 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	0	2	4	1	0	0
SEP 16 - 30	1	002	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
SEP 16 - 30	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	1	0	0	0	0	0	0	0	6	0	0	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 9
RIVER MILE: 129.2

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
TOTAL FOR LOCATION				0	14	0	3	0	91	23	0	3	13	0	26	19	1	0	20

Appendix 4-G. Cont.

LOCATION: 4TH OF JULY CREEK-MOUTH
RIVER MILE: 131.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	1	009	1.00	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0
JUN 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0
JUN 16 - 30	1	005	10.00	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
JUN 16 - 30	1	010	1.00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
JUN 16 - 30	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	010	1.00	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	1	0	7	0	0	0	0	0	0	0	1	0	0	0	8
JUL 1 - 15	1	005	8.00	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0
JUL 1 - 15	1	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	002	3.02	0	1	0	0	0	4	1	0	8	1	0	2	0	0	0	0
JUL 1 - 15	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	1	0	1	0	4	2	0	8	1	0	5	0	1	0	0
JUL 16 - 31	1	005	10.00	0	1	0	0	0	0	0	0	0	0	0	5	0	0	0	0
JUL 16 - 31	1	009	.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	003	1.00	0	0	0	0	0	13	0	0	6	0	0	5	1	0	0	0
JUL 16 - 31	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	009	.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	1	0	0	0	13	0	0	6	0	0	10	1	0	0	0
AUG 1 - 15	1	005	10.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 1 - 15	1	009	9.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	002	47.00	0	8	1	0	0	9	0	0	17	0	0	6	0	0	0	0
AUG 1 - 15	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: 4TH OF JULY CREEK-MOUTH
RIVER MILE: 131.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	8	1	1	0	9	0	0	17	0	0	7	0	0	0	0
AUG 16 - 31	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0
SEP 1 - 15	1	009	4.00	0	0	0	11	0	0	0	0	2	0	0	0	0	0	0	0
SEP 1 - 15	1	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	002	20.00	0	3	0	0	0	5	0	0	1	0	0	8	0	1	0	0
SEP 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	009	.15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	3	0	13	0	5	0	0	3	0	0	8	0	25	0	0
SEP 16 - 30	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	009	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL FOR LOCATION				0	14	1	24	0	31	2	0	36	1	0	31	1	26	0	8

Appendix 4-G. Cont.

LOCATION: SLOUGH 11
RIVER MILE: 135.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	1	05A	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	2	001	1.00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
JUN 1 - 15	2	05A	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	001	1.00	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
JUN 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
JUN 1 - 15	3	05A	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0
JUN 16 - 30	1	002	2.00	0	0	0	0	0	0	0	0	0	0	0	0	8	2	0	4
JUN 16 - 30	1	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
JUN 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	002	1.50	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	11
JUN 16 - 30	2	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	0	0	8	5	0	15
JUL 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	2	002	1.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	002	1.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUL 16 - 31	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0
JUL 16 - 31	1	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	2	003	1.00	0	0	0	1	0	0	0	0	0	0	0	0	2	1	0	0
JUL 16 - 31	2	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 11
RIVER MILE: 135.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUL 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	1	0	0	0	0	0	0	0	0	9	1	0	0
AUG 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	002	1.00	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
AUG 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0
AUG 16 - 31	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	010	1.00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 16 - 31	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	2	0	0	0	0	0	0	0	3	0	0	0	0
SEP 1 - 15	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0
SEP 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0
SEP 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	0	1	10	0	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 11
RIVER MILE: 135.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 16 - 30	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL FOR LOCATION				0	2	0	6	0	2	1	0	3	0	0	7	27	6	0	15

Appendix 4-G. Cont.

LOCATION: INDIAN RIVER-MOUTH
RIVER MILE: 138.6

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15		010	1.00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	010	1.00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	1	002	4.77	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	28
JUN 16 - 30	1	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	005	10.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	28
JUL 1 - 15	1	005	5.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	011	1.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	002	.87	0	3	0	0	0	1	0	0	2	0	0	1	0	0	0	0
JUL 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	5	0	0	0	1	0	0	2	0	0	1	0	0	0	0
JUL 16 - 31	1	005	10.00	0	2	0	0	0	0	0	0	0	0	0	1	1	1	0	0
JUL 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	2	0	0	0	0	0	0	0	0	0	1	1	1	0	0
AUG 1 - 15	1	005	8.00	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	003	1.00	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0
AUG 1 - 15	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	1	2	0	0	0	0	5	2	0	0	0

Appendix 4-G. Cont.

LOCATION: INDIAN RIVER-MOUTH
RIVER MILE: 138.6

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 16 - 31	1	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	003	1.00	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0
AUG 16 - 31	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	0	0	1	0	0	0	0	0	8	0	0	0	0
SEP 1 - 15	1	005	7.00	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
SEP 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	003	1.00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0
SEP 16 - 30	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	009	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	1	009	3.00	0	0	0	4	0	0	0	0	6	0	0	0	0	0	0	0
OCT 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	4	0	0	0	0	6	0	0	0	0	0	0	0
TOTAL FOR LOCATION				0	9	2	4	0	4	2	0	8	0	0	17	3	1	0	28

Appendix 4-G. Cont.

LOCATION: SLOUGH 19
RIVER MILE: 140.0

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	2	010	1.00	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
JUN 16 - 30	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	002	2.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	4
JUN 16 - 30	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	4
JUL 1 - 15	2	003	1.00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	2	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	002	1.77	0	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	2	0	1	0	4	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	2	003	1.00	0	0	0	0	0	0	2	0	0	0	0	0	5	0	0	0
JUL 16 - 31	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	003	1.00	0	2	0	0	0	3	0	0	0	0	0	0	3	0	0	0
JUL 16 - 31	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	2	0	0	0	3	2	0	0	0	0	0	8	0	0	0
AUG 1 - 15	2	005	5.00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
AUG 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	011	1.00	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0
AUG 1 - 15	3	003	1.00	0	1	0	0	0	1	0	0	0	0	0	0	19	0	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 19
RIVER MILE: 140.0

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	1	0	0	0	1	1	0	0	1	0	0	23	0	0	0
AUG 16 - 31	1	002	.83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	011	1.00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
AUG 16 - 31	2	002	1.60	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	002	.80	0	0	0	0	0	3	0	0	0	0	0	2	0	0	0	0
AUG 16 - 31	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	1	0	0	0	3	0	0	0	0	0	2	2	0	0	0
SEP 1 - 15	1	002	.50	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
SEP 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	011	1.00	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0
SEP 1 - 15	3	002	2.00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	2	0	0	0	0	0	3	10	0	0	0
SEP 16 - 30	1	005	6.00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	011	1.00	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0
SEP 16 - 30	3	003	1.00	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0
SEP 16 - 30	3	005	6.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	0	0	1	0	0	0	0	0	6	10	0	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 19
RIVER MILE: 140.0

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
TOTAL FOR LOCATION				0	6	0	2	0	14	4	0	0	1	0	11	93	0	0	4

Appendix 4-G. Cont.

LOCATION: SLOUGH 20
RIVER MILE: 140.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	9	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	4	002	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	4	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	5	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	5	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	7	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	9	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	9	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	9	010	1.00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	002	1.60	0	3	0	0	0	0	0	0	7	0	0	1	0	0	0	0
JUL 1 - 15	3	005	10.00	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	1
JUL 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUL 1 - 15	9	002	2.80	0	3	0	0	0	0	0	0	0	0	0	0	3	0	0	2
JUL 1 - 15	9	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	7	0	0	0	0	1	0	7	0	0	5	3	0	0	3
JUL 16 - 31	3	003	1.00	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0
JUL 16 - 31	3	005	6.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	4	003	1.00	0	12	0	0	0	6	0	0	1	0	0	2	1	3	0	0
JUL 16 - 31	4	005	6.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	5	003	1.00	0	1	0	0	0	0	0	0	6	0	0	0	1	5	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 20
RIVER MILE: 140.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUL 16 - 31	5	005	6.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	5	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	15	0	0	0	6	0	0	8	0	0	2	2	8	0	0
AUG 1 - 15	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	002	1.25	0	2	0	0	0	2	1	0	1	0	0	2	1	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	9	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	2	0	1	0	2	1	0	1	0	0	2	1	0	0	0
AUG 16 - 31	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	003	1.00	0	0	0	1	0	1	0	0	1	0	0	2	0	0	0	0
AUG 16 - 31	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	1	0	1	0	0	1	0	0	2	0	0	0	0
SEP 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	002	4.00	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0
SEP 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0
SEP 16 - 30	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
OCT 1 - 15	1	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 20
RIVER MILE: 140.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
OCT 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	SAMPLINC PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL FOR LOCATION				0	24	1	3	0	10	4	0	17	0	0	13	6	8	0	3

Appendix 4-G. Cont.

LOCATION: SLOUGH 21
RIVER MILE: 142.0

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	010	1.00	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	4	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	6	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	6	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	4	002	.83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	4	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	4	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	6	002	1.08	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	22
JUN 16 - 30	6	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	6	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 16 - 30	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	22
JUL 1 - 15	1	002	3.77	0	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0
JUL 1 - 15	1	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	002	2.28	0	1	0	0	0	7	0	0	0	1	0	0	0	0	0	2
JUL 1 - 15	3	005	10.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	6	0	0	0	7	0	0	0	1	0	0	1	0	0	2
JUL 16 - 31	3	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
JUL 16 - 31	4	003	1.00	0	0	0	0	0	2	0	0	1	0	0	1	0	0	0	0
JUL 16 - 31	4	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	4	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	6	005	8.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	6	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	0	0	2	4	0	1	0	0	1	0	0	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 21
RIVER MILE: 142.0

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 1 - 15	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	011	1.00	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0
AUG 1 - 15	2	003	1.00	0	0	0	0	0	0	0	0	0	0	0	11	7	0	0	0
AUG 1 - 15	2	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	0
AUG 1 - 15	3	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	1	0	0	0	0	12	20	0	0	0
AUG 16 - 31	1	002	1.87	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 16 - 31	1	005	6.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	002	.50	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	2	005	6.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 16 - 31	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	002	.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 16 - 31	3	005	6.00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
AUG 16 - 31	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AUG 16 - 31	SAMPLING PERIOD TOTAL			0	4	0	0	0	0	1	0	0	0	0	3	0	0	0	0
SEP 1 - 15	1	002	10.00	0	0	0	0	0	0	0	0	0	0	0	11	1	0	0	0
SEP 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	002	2.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	2	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	002	10.00	0	0	0	0	0	8	0	0	1	0	0	11	1	0	0	0
SEP 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	8	0	0	1	0	0	22	2	0	0	0
SEP 16 - 30	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	2	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: SLOUGH 21
RIVER MILE: 142.0

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 16 - 30	2	010	1.00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	003	1.00	0	0	0	0	0	5	0	0	0	0	0	5	0	0	0	0
SEP 16 - 30	3	005	7.00	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	1	0	1	0	5	3	0	0	0	0	6	0	0	0	0
TOTAL FOR LOCATION				0	11	0	2	0	22	11	0	2	1	0	44	25	1	0	24

Appendix 4-G. Cont.

LOCATION: PORTAGE CREEK-MOUTH
RIVER MILE: 148.8

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	5.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUN 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	3	009	3.00	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
JUL 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
JUL 1 - 15	9	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	1	0	4	0	0	0	0	0	0	0
JUL 16 - 31	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	1	009	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	3	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JUL 16 - 31	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	005	7.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	009	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AUG 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
AUG 1 - 15	SAMPLING PERIOD TOTAL			0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	005	7.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 1 - 15	3	010	1.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 1 - 15	SAMPLING PERIOD TOTAL			0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
SEP 16 - 30	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix 4-G. Cont.

LOCATION: PORTAGE CREEK-MOUTH
RIVER MILE: 148.8

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 16 - 30	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	005	7.00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
SEP 16 - 30	3	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
SEP 16 - 30	SAMPLING PERIOD TOTAL			0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0
OCT 1 - 15	1	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	1	010	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	3	003	1.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	3	005	7.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCT 1 - 15	3	010	1.00	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
OCT 1 - 15	SAMPLING PERIOD TOTAL			0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
TOTAL FOR LOCATION				0	2	1	0	0	0	7	0	4	0	0	0	0	0	0	0

APPENDIX H

CATCH PER UNIT EFFORT DATA

All juvenile anadromous and resident fish catch per unit effort (CPUE) data (i.e., minnow trap, trotline, beach seine, dip net, backpack electrofishing), except boat electrofishing data, for the 17 Designated Fish Habitat sites by 2-week periods from early June to the end of September 1982 are included in this appendix. Additionally, CPUE data are included for two sites (Slough 20 and Portage Creek mouth) sampled in early October. These data were collected in the study area located within the Cook Inlet to Devil Canyon reach of the Susitna River.

The CPUE data are presented by zone and by gear type. Zone codes are defined in Part II, Section 2.2 and gear codes and species codes are defined in the following tables.

STANDARD GEAR CODES

005 minnow trap
010 trotline

OPPORTUNISTIC GEAR CODES

000 smolt trap
001 set gillnet
01a drift gillnet
002 electroshock
003 beach seine
04d drift net
05a fish trap
05b hoop net
008 fishwheel
009 hook and line
011 dip net

RESIDENT SPECIES CODES

162 Slimy sculpin
500 Northern pike
530 Dolly Varden
541 Rainbow trout
550 Lake trout
582 Humpback whitefish
586 Round whitefish
590 Burbot
601 Arctic lamprey
610 Longnose sucker
660 Threespine stickleback
661 Ninespine stickleback

JUVENILE ANADROMOUS CODES

410 Chinook 0+
411 Chinook 0+
412 Chinook juvenile
415 Chinook smolt 0+
416 Chinook smolt 1+
417 Chinook smolt
420 Sockeye 0+
421 Sockeye 1+
422 Sockeye juvenile
425 Sockeye smolt 0+
426 Sockeye smolt 1+
427 Sockeye smolt
430 Coho 0+
431 Coho 1+
432 Coho 2+
433 Coho juvenile
435 Coho smolt 0+
436 Coho smolt 1+
437 Coho smolt 2+
438 Coho smolt
440 Pink 0+
450 Chum 0+

Appendix 4-H. Catch per unit effort for Designated Fish Habitat sites, 1982. Units for gear 002 are minutes shocked, for gear 009 are hours fished, and for all other gears are pieces of gear fished.

LOCATION: GOOSE CREEK 2 AND SIDE CHANNEL
RIVER MILE: 73.1

				CATCH PER UNIT EFFORT - FOR SPECIES CODE															
SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
JUN 1 - 15	1	005	5.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	1	010	1.00	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	003	1.00	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	2.0
JUN 1 - 15	4	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	7	003	1.00	0.0	2.0	0.0	0.0	0.0	0.0	2.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	7	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	.4	0.0	0.0
JUN 1 - 15	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0
JUN 16 - 30	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	.1	0.0	0.0
JUN 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	6	002	5.00	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	2.8	0.0	.2	0.0	0.0	0.0	0.0
JUN 16 - 30	6	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	.3	0.0	0.0	0.0	0.0
JUN 16 - 30	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	7	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0
JUN 16 - 30	7	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	.6	0.0	1.1	0.0	0.0
JUN 16 - 30	7	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
JUL 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	6	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	1.0	0.0	0.0	0.0
JUL 1 - 15	6	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	7	003	1.00	0.0	1.0	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	0.0	6.0	2.0	0.0	0.0	0.0
JUL 1 - 15	7	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	0.0	.1	0.0	0.0
JUL 1 - 15	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	005	5.00	0.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0
JUL 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	4	002	19.85	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	4	003	1.00	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	4	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0
JUL 16 - 31	4	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	7	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
JUL 16 - 31	7	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: GOOSE CREEK 2 AND SIDE CHANNEL
RIVER MILE: 73.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUL 16 - 31	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	6	003	1.00	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	1.0	0.0	0.0	3.0	0.0	0.0	0.0
AUG 1 - 15	6	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
AUG 1 - 15	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	7	003	1.00	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	7	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	.1	0.0	0.0
AUG 1 - 15	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	6	003	1.00	0.0	1.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0
AUG 16 - 31	6	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	7	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	002	3.00	0.0	.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	.2	.2	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	002	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	9	002	3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	9	003	1.00	0.0	2.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0	2.0	0.0	0.0	0.0
SEP 1 - 15	9	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	9	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	.1	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	.2	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	9	003	1.00	0.0	1.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	9	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: GOOSE CREEK 2 AND SIDE CHANNEL
RIVER MILE: 73.1

				CATCH PER UNIT EFFORT - FOR SPECIES CODE															
SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 16 - 30	9	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: WHITEFISH SLOUGH
RIVER MILE: 78.7

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 16 - 30	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	2.0	0.0	.2	0.0	0.0
JUL 1 - 15	2	001	1.00	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	05B	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	6	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	1.1	0.0	0.0
AUG 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	2.0	1.0	0.0	0.0	0.0
AUG 16 - 31	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
AUG 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	002	———	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	003	1.00	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
SEP 1 - 15	2	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0
SEP 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	003	1.00	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	3.0	0.0	0.0	0.0
SEP 16 - 30	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: RABIDEUX CREEK AND SLOUGH
RIVER MILE: 83.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 16 - 30	1	003	1.00	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	37.0	0.0	0.0
JUN 16 - 30	1	005	7.00	0.0	.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	8.9	0.0	0.0
JUN 16 - 30	1	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	005	7.00	0.0	.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	3.7	0.0	3.1	0.0	0.0
JUN 16 - 30	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	8	003	1.00	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	8	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	8	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	005	7.00	0.0	.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	0.0	25.6	0.0	0.0
JUL 16 - 31	2	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.9	0.0	10.6	0.0	0.0
JUL 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	7	002	2.33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	7	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	.3	0.0	0.0
JUL 16 - 31	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	5.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	10.4	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	005	10.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	2.3	0.0	0.0
AUC 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	003	1.00	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
AUG 16 - 31	1	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0
AUG 16 - 31	2	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	.3	0.0	0.0
AUG 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	005	10.00	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	2.3	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	4.0	0.0	13.0	0.0	0.0	0.0
SEP 1 - 15	2	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.8	0.0	0.0
SEP 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: RABIDEUX CREEK AND SLOUGH
RIVER MILE: 83.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	5.00	0.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	.2	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0
SEP 16 - 30	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SUNSHINE CREEK AND SIDE CHANNEL
RIVER MILE: 85.7

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0
JUN 1 - 15	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
JUN 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	2	003	1.00	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	4.0
JUN 1 - 15	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.8	0.0	10.0	0.0	0.0
JUN 1 - 15	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	1.0	0.0	1.4	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	002	3.33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	2.7	0.0	4.0	0.0	0.0
JUN 16 - 30	1	010	1.00	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	002	4.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	005	7.00	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0	0.0	0.0	.7	3.0	0.0	2.6	0.0	0.0
JUN 16 - 30	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	002	3.13	0.0	.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.3	0.0	0.0	0.0	0.0
JUN 16 - 30	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	005	10.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	.4	0.0	18.1	0.0	0.0
JUL 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	2.2	0.0	20.6	0.0	0.0
JUL 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	005	5.00	0.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.6	5.8	0.0	12.2	0.0	0.0
JUL 16 - 31	2	009	.42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	5.00	0.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	2.0	0.0	11.6	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	005	5.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	003	1.00	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	.1	.7	0.0	0.0
AUG 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SUNSHINE CREEK AND SIDE CHANNEL
RIVER MILE: 85.7

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 16 - 31	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	9	003	1.00	0.0	12.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	2.0	0.0	0.0	0.0
SEP 1 - 15	1	002	1.23	0.0	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.8	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	.2	0.0	.5	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	002	2.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	9	002	2.38	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	.2	0.0	0.0	.2	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0
SEP 16 - 30	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: BIRCH CREEK AND SLOUGH
RIVER MILE: 88.4

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	.2	0.0	2.5	0.0	0.0
JUN 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	002	10.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	.1	0.0	0.0	2.8
JUN 1 - 15	4	005	10.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	.3	0.0	0.0
JUN 1 - 15	4	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	7	002	2.77	0.0	0.0	0.0	0.0	0.0	.7	0.0	2.2	0.0	0.0	.4	0.0	0.0	0.0	0.0	2.5
JUN 1 - 15	7	005	10.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	.2	0.0	0.0	.6	0.0	0.0
JUN 1 - 15	7	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	16.0	0.0	0.0
JUN 16 - 30	1	005	7.00	0.0	.4	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	.7	1.4	0.0	7.1	0.0	0.0
JUN 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	4	002	18.92	0.0	.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1
JUN 16 - 30	6	002	5.00	0.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0	0.0
JUN 16 - 30	6	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
JUN 16 - 30	6	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	.7	0.0	.6	0.0	0.0
JUN 16 - 30	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	6	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
JUN 16 - 30	7	002	5.18	0.0	.2	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	7	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	16.0
JUN 16 - 30	7	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	.7	0.0	1.7	0.0	0.0
JUN 16 - 30	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	003	1.00	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.0
JUL 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	12.4	0.0	0.0
JUL 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	6	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	14.0
JUL 1 - 15	6	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	.7	0.0	0.0
JUL 1 - 15	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	7	003	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.0	0.0	0.0	2.0
JUL 1 - 15	7	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0
JUL 1 - 15	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	7	05B	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.9	0.0	7.3	0.0	0.0
JUL 16 - 31	1	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	6	002	------	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	6	003	1.00	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	7.0	1.0	0.0	2.0
JUL 16 - 31	6	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: BIRCH CREEK AND SLOUGH
RIVER MILE: 88.4

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUL 16 - 31	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	6	05B	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	7	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
JUL 16 - 31	7	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	.1	1.6	0.0	0.0
JUL 16 - 31	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	003	1.00	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.0	0.0	3.0	0.0	0.0
AUG 1 - 15	1	005	5.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	4.4	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	4	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	4	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	.2	0.0	0.0
AUG 1 - 15	4	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	5	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
AUG 1 - 15	5	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0
AUG 1 - 15	5	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	16.00	0.0	.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.7	.1	0.0	.4	0.0	0.0
AUG 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	005	10.00	0.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	002	27.15	0.0	.4	0.0	.0	0.0	0.0	0.0	.8	0.0	0.0	.1	0.0	0.0	.2	0.0	0.0
SEP 1 - 15	1	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	011	1.00	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.0	0.0	1.0	0.0	0.0
SEP 1 - 15	2	005	10.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	.5	0.0	0.0
SEP 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	10.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	9	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
SEP 16 - 30	1	011	1.00	0.0	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	1.0	0.0	0.0
SEP 16 - 30	2	002	———	0.0	9.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
SEP 16 - 30	2	003	1.00	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: BIRCH CREEK AND SLOUGH
RIVER MILE: 88.4

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 16 - 30	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	1	05B	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: WHISKERS CREEK AND SLOUGH
RIVER MILE: 101.2

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	.3	0.0	0.0
JUN 1 - 15	1	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
JUN 1 - 15	2	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	010	1.00	0.0	0.0	1.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	7	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
JUN 1 - 15	7	010	1.00	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	005	10.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	.4	0.0	.8	0.0	0.0
JUN 16 - 30	1	010	1.00	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	7	005	10.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	3.9	0.0	.1	0.0	0.0
JUN 16 - 30	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	9	005	10.00	0.0	.3	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	.1	0.0	1.9	0.0	0.0
JUN 16 - 30	9	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	003	1.00	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.7	0.0	1.1	0.0	0.0
JUL 1 - 15	1	010	1.00	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	7	003	1.00	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	0.0
JUL 1 - 15	7	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	9	003	1.00	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0
JUL 1 - 15	9	005	7.00	0.0	.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0
JUL 1 - 15	9	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
JUL 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	7	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	7	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	9	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0	0.0
JUL 16 - 31	9	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	003	1.00	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.7	0.0	.1	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	003	1.00	0.0	4.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: WHISKERS CREEK AND SLOUGH
RIVER MILE: 101.2

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 1 - 15	2	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	9.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	.7	0.0	.6	0.0	0.0
AUG 16 - 31	1	010	1.00	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	005	9.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	.1	0.0	.1	0.0	0.0
AUG 16 - 31	2	010	1.00	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	003	1.00	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	9.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	.1	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	9	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	9	005	9.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	9	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	002	5.50	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	.1	3.6	0.0	3.7	0.0	0.0
SEP 1 - 15	1	010	2.00	0.0	0.0	0.0	.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	002	1.65	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	.1	0.0	0.0	0.0	0.0
SEP 1 - 15	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	002	6.47	0.0	.6	0.0	0.0	0.0	.2	0.0	0.0	.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	003	1.00	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	9	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	6.0	0.0	0.0	5.0	0.0	0.0
SEP 16 - 30	1	002	10.00	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	.1	.1	0.0	0.0	0.0	0.0
SEP 16 - 30	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	009	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	009	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	002	1.00	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	003	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: WHISKERS CREEK AND SLOUGH
RIVER MILE: 101.2

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 16 - 30	9	002	5.00	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	9	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	9	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	.1	.3	0.0	.1	0.0	0.0
SEP 16 - 30	9	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	9	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 6A
RIVER MILE: 112.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	2	003	1.00	0.0	1.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	1.0	0.0	9.0	223.0	1.0	0.0	830.0
JUN 1 - 15	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	.2	0.0	0.0
JUN 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	2	05A	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	005	5.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	05A	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	003	1.00	0.0	0.0	0.0	1.0	0.0	3.0	0.0	0.0	0.0	5.0	0.0	0.0	16.0	0.0	0.0	5.0
JUN 16 - 30	2	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.9	0.0	2.3	0.0	0.0
JUN 16 - 30	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	003	1.00	0.0	7.0	0.0	1.0	0.0	8.0	0.0	0.0	0.0	6.0	0.0	1.0	173.0	5.0	0.0	0.0
JUL 1 - 15	2	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	.4	0.0	0.0
JUL 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0
JUL 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	003	1.00	0.0	3.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	2.0	374.0	0.0	0.0	0.0
JUL 16 - 31	2	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	1.2	0.0	0.0
JUL 16 - 31	2	05B	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0
JUL 16 - 31	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	005	5.00	0.0	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	8	003	1.00	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	2.0	0.0	4.0	1.0	0.0	0.0	0.0
AUG 1 - 15	2	005	8.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	003	1.00	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
AUG 16 - 31	2	005	8.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	003	1.00	0.0	4.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	8.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 6A
RIVER MILE: 112.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 1 - 15	2	002	6.22	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0	0.0	.3	.5	1.0	0.0	0.0
SEP 1 - 15	2	003	1.00	0.0	1.0	0.0	0.0	0.0	13.0	0.0	0.0	0.0	0.0	0.0	3.0	17.0	3.0	0.0	0.0
SEP 1 - 15	2	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	2.5	0.0	0.0
SEP 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	6.0	0.0	0.0
SEP 1 - 15	3	002	5.22	0.0	1.0	0.0	0.0	0.0	.2	0.0	0.0	.6	0.0	0.0	.2	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	1.0	0.0	0.0
SEP 16 - 30	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0
SEP 16 - 30	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	5.00	0.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: LANE CREEK AND SLOUGH 8
RIVER MILE: 113.6

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	1	05A	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	05A	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	7	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	7	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	7	009	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	7	010	1.00	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	7	05A	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	0	005	5.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	.2
JUN 16 - 30	0	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
JUN 16 - 30	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0
JUN 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	55.0
JUN 16 - 30	2	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	010	2.00	0.0	0.0	.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	002	2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0
JUL 1 - 15	3	010	1.00	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	9	002	2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	9	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	9	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0
JUL 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	002	3.90	0.0	1.5	0.0	0.0	0.0	1.8	0.0	0.0	2.3	0.0	0.0	.3	0.0	0.0	0.0	0.0
JUL 16 - 31	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	4	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: LANE CREEK AND SLOUGH 8
RIVER MILE: 113.6

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUL 16 - 31	9	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	9	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	002	3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	7.00	0.0	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	005	4.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	002	1.00	0.0	8.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	9	005	3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	0	011	1.00	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	3.0	0.0	0.0
AUG 16 - 31	1	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	003	1.00	0.0	0.0	0.0	0.0	0.0	3.0	1.0	0.0	3.0	1.0	0.0	3.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.6	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	0	002	5.73	0.0	.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.5	0.0	0.0
SEP 1 - 15	0	005	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0
SEP 1 - 15	1	002	.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	005	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	005	6.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0
SEP 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	002	6.55	0.0	0.0	0.0	.2	0.0	.3	.2	0.0	0.0	0.0	0.0	.5	0.0	0.0	0.0	0.0
SEP 1 - 15	3	003	1.00	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	2.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	1.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	9	002	8.80	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	1.5	.2	0.0	0.0
SEP 1 - 15	9	005	6.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0
SEP 16 - 30	0	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	.6	6.8	0.0	0.0
SEP 16 - 30	1	002	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	002	2.20	0.0	.5	0.0	.5	0.0	1.4	0.0	0.0	.5	0.0	0.0	.9	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: LANE CREEK AND SLOUGH 8
RIVER MILE: 113.6

				CATCH PER UNIT EFFORT - FOR SPECIES CODE															
SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 16 - 30	3	003	1.00	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.6	0.0	.2	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	9	002	3.85	0.0	7.0	0.0	0.0	0.0	0.0	.5	0.0	0.0	0.0	0.0	.8	4.4	1.6	0.0	0.0
OCT 1 - 15	1	009	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	2	009	.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	3	009	.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 8A
RIVER MILE: 125.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	3	001	1.00	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	6	001	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	6	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	40.0
JUN 1 - 15	6	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	003	1.00	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
JUN 16 - 30	1	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	001	1.00	0.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	1.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	001	1.00	0.0	0.0	0.0	10.0	0.0	15.0	0.0	0.0	1.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0
JUL 1 - 15	2	002	38.25	0.0	.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.0	.2	0.0	0.0	0.0
JUL 1 - 15	2	003	1.00	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
JUL 1 - 15	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	011	1.00	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
JUL 1 - 15	3	003	1.00	0.0	2.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	003	1.00	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	2.0	173.0	0.0	0.0	0.0
JUL 16 - 31	1	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	0.0	0.0	0.0
JUL 16 - 31	2	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 8A
RIVER MILE: 125.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUL 16 - 31	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	003	1.00	0.0	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0
AUG 1 - 15	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	5.0	9.0	6.0	0.0	0.0
AUG 16 - 31	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	003	1.00	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
AUG 16 - 31	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.9	0.0	.1	0.0	0.0
AUG 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	002	30.00	0.0	.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.5	0.0	.2	.3	0.0	0.0	0.0
SEP 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	002	10.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	.1	0.0	0.0	0.0
SEP 1 - 15	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30		011	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	002	8.33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	003	1.00	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 8A
RIVER MILE: 125.3

				CATCH PER UNIT EFFORT - FOR SPECIES CODE															
SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 9
RIVER MILE: 129.2

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.8	0.0	0.0	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	6	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
JUN 1 - 15	6	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	4	003	1.00	0.0	0.0	0.0	0.0	0.0	18.0	0.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	0.0	0.0
JUN 16 - 30	4	005	5.00	0.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0
JUN 16 - 30	4	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	6	003	1.00	0.0	2.0	0.0	0.0	0.0	0.0	18.0	0.0	0.0	7.0	0.0	0.0	5.0	0.0	0.0	13.0
JUN 16 - 30	6	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0
JUN 16 - 30	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	002	5.15	0.0	1.0	0.0	0.0	0.0	.8	0.0	0.0	0.0	0.0	0.0	.2	.4	0.0	0.0	0.0
JUL 1 - 15	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	4	002	2.23	0.0	.4	0.0	0.0	0.0	5.8	0.0	0.0	.4	1.8	0.0	0.0	1.8	0.0	0.0	.9
JUL 1 - 15	4	003	1.00	0.0	0.0	0.0	0.0	0.0	37.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	4	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	4	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	4	003	1.00	0.0	0.0	0.0	0.0	0.0	17.0	0.0	0.0	1.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
JUL 16 - 31	4	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	002	1.25	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.8	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	010	1.00	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	002	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 9
RIVER MILE: 129.2

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 16 - 31	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	003	1.00	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	1.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	002	15.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	.3	.1	0.0	0.0
SEP 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	002	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.6	0.0	0.0	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
SEP 16 - 30	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: 4TH OF JULY CREEK-MOUTH
RIVER MILE: 131.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	1	009	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	005	10.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
JUN 16 - 30	1	010	1.00	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0
JUN 16 - 30	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	010	1.00	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	.1	0.0	0.0
JUL 1 - 15	1	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	002	3.02	0.0	.3	0.0	0.0	0.0	1.3	.3	0.0	2.7	.3	0.0	.7	0.0	0.0	0.0	0.0
JUL 1 - 15	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	005	10.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.5	0.0	0.0	0.0	0.0
JUL 16 - 31	1	009	.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	003	1.00	0.0	0.0	0.0	0.0	0.0	13.0	0.0	0.0	6.0	0.0	0.0	5.0	1.0	0.0	0.0	0.0
JUL 16 - 31	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	009	.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
AUG 1 - 15	1	009	9.00	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	002	47.00	0.0	.2	.0	0.0	0.0	.2	0.0	0.0	.4	0.0	0.0	.1	0.0	0.0	0.0	0.0
AUG 1 - 15	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0
SEP 1 - 15	1	009	4.00	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: 4TH OF JULY CREEK-MOUTH
RIVER MILE: 131.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	002	20.00	0.0	.1	0.0	0.0	0.0	.3	0.0	0.0	.0	0.0	0.0	.4	0.0	.0	0.0	0.0
SEP 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	009	.15	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	009	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 11
RIVER MILE: 135.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	1	05A	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	2	001	1.00	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	2	05A	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	001	1.00	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	05A	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	002	2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	1.0	0.0	2.0
JUN 16 - 30	1	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0
JUN 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	002	1.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	7.3
JUN 16 - 30	2	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	002	1.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	002	1.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0
JUL 16 - 31	1	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	003	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.0	0.0	0.0
JUL 16 - 31	2	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 11
RIVER MILE: 135.3

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 1 - 15	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	002	1.00	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	010	1.00	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	0.0	0.0
SEP 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	0.0	0.0	0.0
SEP 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: INDIAN RIVER-MOUTH
RIVER MILE: 138.6

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15		010	1.00	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	002	4.77	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	5.9
JUN 16 - 30	1	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	005	10.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	005	5.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	011	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	002	.87	0.0	3.5	0.0	0.0	0.0	1.2	0.0	0.0	2.3	0.0	0.0	1.2	0.0	0.0	0.0	0.0
JUL 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	005	10.00	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	.1	.1	0.0	0.0
JUL 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	003	1.00	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
AUG 1 - 15	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	003	1.00	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.6	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	003	1.00	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: INDIAN RIVER-MOUTH
RIVER MILE: 138.6

				CATCH PER UNIT EFFORT - FOR SPECIES CODE															
SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
SEP 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	009	2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	1	009	3.00	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 19
RIVER MILE: 140.0

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	002	2.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	4.0
JUN 16 - 30	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	003	1.00	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	2	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	002	1.77	0.0	0.0	0.0	.6	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0
JUL 16 - 31	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	003	1.00	0.0	2.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0
JUL 16 - 31	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
AUG 1 - 15	3	003	1.00	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.0	0.0
AUG 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	002	.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
AUG 16 - 31	2	002	1.60	0.0	.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 19
RIVER MILE: 140.0

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 16 - 31	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	002	.80	0.0	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	002	.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0
SEP 1 - 15	3	002	2.00	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0
SEP 16 - 30	3	003	1.00	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 20
RIVER MILE: 140.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	9	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	4	002	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	4	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	5	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	5	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	7	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	9	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	9	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	9	010	1.00	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	002	1.60	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	.6	0.0	0.0	0.0	0.0
JUL 1 - 15	3	005	10.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0	.1
JUL 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	9	002	2.80	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	.7
JUL 1 - 15	9	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	003	1.00	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	005	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	4	003	1.00	0.0	12.0	0.0	0.0	0.0	6.0	0.0	0.0	1.0	0.0	0.0	2.0	1.0	3.0	0.0	0.0
JUL 16 - 31	4	005	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	5	003	1.00	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	1.0	5.0	0.0	0.0
JUL 16 - 31	5	005	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	5	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	002	1.25	0.0	1.6	0.0	0.0	0.0	1.6	.8	0.0	.8	0.0	0.0	1.6	.8	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 20
RIVER MILE: 140.1

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	9	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	003	1.00	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	002	4.00	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0	0.0	0.0	.5	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	1	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 21
RIVER MILE: 142.0

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	4	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	6	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	4	002	.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	4	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	4	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	6	002	1.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	.9	0.0	20.3
JUN 16 - 30	6	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 16 - 30	6	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	002	3.77	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.3	0.0	0.0	0.0
JUL 1 - 15	1	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	002	2.28	0.0	.4	0.0	0.0	0.0	3.1	0.0	0.0	0.0	.4	0.0	0.0	0.0	0.0	0.0	.9
JUL 1 - 15	3	005	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	4	003	1.00	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
JUL 16 - 31	4	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	4	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	6	005	8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	6	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	011	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0
AUG 1 - 15	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	7.0	0.0	0.0	0.0
AUG 1 - 15	2	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	6.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: SLOUGH 21
RIVER MILE: 142.0

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
AUG 1 - 15	3	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	002	1.87	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.5	0.0	0.0	0.0	0.0
AUG 16 - 31	1	005	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	002	.50	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	2	005	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0
AUG 16 - 31	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	002	.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 16 - 31	3	005	6.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0
AUG 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	002	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	.1	0.0	0.0	0.0
SEP 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	002	2.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	2	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	002	10.00	0.0	0.0	0.0	0.0	0.0	.8	0.0	0.0	.1	0.0	0.0	1.1	.1	0.0	0.0	0.0
SEP 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	2	010	1.00	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	003	1.00	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.1	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix 4-H. Cont.

LOCATION: PORTAGE CREEK-MOUTH
RIVER MILE: 148.8

SAMPLING PERIOD	ZONE	GEAR	UNITS FISHED	CATCH PER UNIT EFFORT - FOR SPECIES CODE															
				UNIDEN-TIFIED	162	530	541	582	586	590	601	610	640	660	412	422	433	440	450
JUN 1 - 15	1	005	5.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUN 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	009	3.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 1 - 15	9	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	009	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JUL 16 - 31	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	009	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AUG 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	005	7.00	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	005	7.00	0.0	0.0	.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 16 - 30	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	1	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	1	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	3	003	1.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	3	005	7.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OCT 1 - 15	3	010	1.00	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

APPENDIX I

HABITAT DATA

Water quality and velocity data for the 17 Designated Fish Habitat sites which were collected twice a month on a regularly scheduled basis are included in this appendix. These data are repeated in Appendix D and supplemented with similar data collected on an irregular basis at these sites. The methods describing how these data were obtained and an explanation of the Zone Code are in Part II, Section 2.2 of this volume. These data were collected during the open-water season in the study area located within the Cook Inlet to Devil Canyon reach of the Susitna River.

The data obtained from mixing zones, where tributary, slough or mainstem water mix (zone 3, zone 5, and zone 7), can vary widely, depending on exactly where in the zone the sample was taken.

Appendix 4-1. Habitat data for Designated Fish Habitat sites, 1982.

LOCATION GOOSE CREEK 2-SLOUGH
RIVER MILE 73.1

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	12.6	22.9	-----	19.2	21.6	15.2	8.4	-----
	WATER TEMPERATURE (C)	5.8	10.4	11.6	9.5	10.4	9.8	6.2	4.7
	DISSOLVED OXYGEN (mg/l)	-----	11.0	10.6	-----	10.6	-----	-----	-----
	PH	-----	7.1	6.8	-----	7.4	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	27	32	28	31	31	-----	30
	TURBIDITY (NTU)	3	6	14	18	< 1	6	4	14
	WATER VELOCITY (ft/s)	1.8	1.4	1.2	1.5	1.5	1.5	2.1	1.4
3	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	15.3	8.4	-----
	WATER TEMPERATURE (C)	-----	-----	-----	-----	-----	9.9	6.0	4.7
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	-----	-----	-----
	PH	-----	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	-----	91	71	68
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	14	26	19
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	-----	2.2	3.1	1.0
4	AIR TEMPERATURE (C)	12.6	-----	-----	19.2	-----	-----	-----	-----
	WATER TEMPERATURE (C)	8.0	-----	-----	10.2	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	-----	-----	-----
	PH	-----	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	56	-----	-----	-----	-----
	TURBIDITY (NTU)	49	-----	-----	110	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	2.1	-----	-----	2.5	-----	-----	-----	-----
6	AIR TEMPERATURE (C)	-----	22.9	22.7	-----	21.6	15.0	-----	-----
	WATER TEMPERATURE (C)	-----	12.8	11.3	-----	9.7	10.5	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	10.3	10.6	-----	11.2	8.7	-----	-----
	PH	-----	7.4	7.5	-----	7.6	6.7	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	80	107	-----	111	113	-----	-----
	TURBIDITY (NTU)	-----	88	110	-----	85	98	-----	-----
	WATER VELOCITY (ft/s)	-----	.5	.5	-----	.3	0.0	-----	-----
7	AIR TEMPERATURE (C)	12.6	22.9	-----	19.2	21.6	15.2	-----	-----
	WATER TEMPERATURE (C)	7.0	12.3	11.1	10.2	11.7	10.1	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	10.7	10.6	-----	10.7	-----	-----	-----
	PH	-----	7.3	7.7	-----	7.4	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	73	107	76	38	33	-----	-----
	TURBIDITY (NTU)	45	95	100	120	11	5	-----	-----
	WATER VELOCITY (ft/s)	.3	.7	1.1	1.7	.7	0.0	-----	-----

Appendix 4-I. Cont.

LOCATION GOOSE CREEK 2-SLOUGH
RIVER MILE 73.1

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
9	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	8.4	-----
	WATER TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	7.4	5.5
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	-----	-----	-----
	PH	-----	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	-----	-----	-----	179
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	-----	18	22
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	-----	-----	0.0	0.0

Appendix 4-I. Cont.

LOCATION WHITEFISH SLOUGH
RIVER MILE 78.7

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
2	AIR TEMPERATURE (C)	-----	-----	14.9	15.8	21.4	17.0	14.3	-----
	WATER TEMPERATURE (C)	-----	-----	16.3	16.4	15.9	14.3	9.2	6.1
	DISSOLVED OXYGEN (mg/1)	-----	-----	8.4	-----	10.7	8.3	-----	-----
	PH	-----	-----	6.8	-----	7.3	6.8	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	101	27	51	121	-----	44
	TURBIDITY (NTU)	-----	-----	46	18	-----	25	-----	23
	WATER VELOCITY (ft/s)	-----	-----	0.0	0.0	0.0	0.0	-----	0.0
3	AIR TEMPERATURE (C)	-----	-----	-----	15.8	21.4	17.0	14.3	-----
	WATER TEMPERATURE (C)	-----	-----	-----	10.2	9.5	9.7	7.6	4.5
	DISSOLVED OXYGEN (mg/1)	-----	-----	-----	-----	11.2	11.3	-----	12.5
	PH	-----	-----	-----	-----	7.6	6.5	-----	5.2
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	91	89	-----	-----	109
	TURBIDITY (NTU)	-----	-----	-----	120	86	11	-----	55
	WATER VELOCITY (ft/s)	-----	-----	-----	.5	.4	.5	-----	.5

Appendix 4-I. Cont.

LOCATION RABIDEUX CREEK-SLOUGH
RIVER MILE 83.1

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	-----	21.7	-----	13.5	-----	19.8	8.7	-----
	WATER TEMPERATURE (C)	-----	16.6	-----	13.1	12.6	14.2	-----	6.0
	DISSOLVED OXYGEN (mg/l)	-----	9.3	-----	8.9	10.0	11.0	-----	11.1
	PH	-----	6.8	-----	6.2	6.0	7.1	-----	6.3
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	37	-----	29	27	52	-----	29
	TURBIDITY (NTU)	-----	2	-----	2	-----	3	2	7
	WATER VELOCITY (ft/s)	-----	.6	-----	1.9	1.0	.6	1.7	1.8
2	AIR TEMPERATURE (C)	-----	21.7	-----	-----	-----	19.0	11.2	-----
	WATER TEMPERATURE (C)	-----	17.2	-----	13.5	12.6	15.6	8.3	6.1
	DISSOLVED OXYGEN (mg/l)	-----	9.1	-----	9.3	10.0	9.2	-----	10.6
	PH	-----	7.1	-----	6.6	6.4	7.2	-----	5.8
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	44	-----	27	29	69	23	29
	TURBIDITY (NTU)	-----	3	-----	4	-----	9	3	3
	WATER VELOCITY (ft/s)	-----	0.0	-----	0.0	-----	0.0	0.0	.2
3	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	19.0	9.4	-----
	WATER TEMPERATURE (C)	-----	-----	-----	-----	9.8	12.2	6.5	5.1
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	11.0	9.6	-----	11.8
	PH	-----	-----	-----	-----	7.5	7.5	-----	6.5
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	83	85	61	96
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	13	160	41
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	2.5	.5	1.5	.8
7	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	-----	-----	-----	13.0	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	9.1	-----	-----	-----	-----
	PH	-----	-----	-----	6.4	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	40	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	-----	-----	10	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	-----	-----	0.0	-----	-----	-----	-----
8	AIR TEMPERATURE (C)	-----	21.7	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	-----	15.5	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	9.1	-----	-----	-----	-----	-----	-----
	PH	-----	7.4	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	82	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	85	-----	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	0.0	-----	-----	-----	-----	-----	-----

Appendix 4-I. Cont.

LOCATION SUNSHINE CREEK-SIDE CHANNEL
RIVER MILE 85.7

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	16.0	-----	-----	-----	14.0	14.0	9.4	-----
	WATER TEMPERATURE (C)	10.8	16.2	-----	13.0	11.8	12.8	7.8	6.0
	DISSOLVED OXYGEN (mg/l)	-----	9.7	-----	-----	10.5	10.7	13.4	11.2
	PH	-----	6.7	-----	-----	6.8	-----	7.2	5.6
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	50	-----	-----	43	55	27	45
	TURBIDITY (NTU)	1	1	-----	3	-----	-----	1	8
	WATER VELOCITY (ft/s)	.3	.7	-----	1.2	.7	.7	1.2	2.0
2	AIR TEMPERATURE (C)	16.0	27.1	21.4	15.2	-----	14.0	9.8	-----
	WATER TEMPERATURE (C)	11.5	16.4	14.0	12.4	-----	12.3	8.1	6.0
	DISSOLVED OXYGEN (mg/l)	-----	9.7	10.1	-----	-----	9.4	13.1	11.2
	PH	-----	6.8	6.7	-----	-----	6.7	7.3	5.6
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	55	59	-----	-----	63	47	45
	TURBIDITY (NTU)	2	2	3	3	-----	5	9	4
	WATER VELOCITY (ft/s)	.1	.2	.4	.6	-----	0.0	.3	0.0
3	AIR TEMPERATURE (C)	16.0	-----	-----	-----	-----	16.3	9.4	-----
	WATER TEMPERATURE (C)	7.2	12.1	-----	-----	10.5	12.5	7.4	6.2
	DISSOLVED OXYGEN (mg/l)	-----	10.8	-----	-----	10.7	-----	13.8	10.8
	PH	-----	7.4	-----	-----	7.2	6.7	7.3	6.3
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	74	-----	-----	81	-----	71	48
	TURBIDITY (NTU)	37	45	-----	-----	-----	-----	48	4
	WATER VELOCITY (ft/s)	1.6	2.0	-----	-----	1.2	.9	1.1	.9
4	AIR TEMPERATURE (C)	-----	-----	21.3	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	-----	-----	11.3	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	10.6	-----	-----	-----	-----	-----
	PH	-----	-----	7.1	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	93	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	-----	100	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	-----	-----	-----	-----
6	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	-----	-----	-----
	PH	-----	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	-----	-----	-----	-----

Appendix 4-I. Cont.

LOCATION SUNSHINE CREEK-SIDE CHANNEL
RIVER MILE 85.7

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
9	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	17.0	9.4	-----
	WATER TEMPERATURE (C)	-----	-----	-----	-----	-----	12.4	6.1	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	5.9	6.6	-----
	PH	-----	-----	-----	-----	-----	6.7	6.9	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	-----	125	138	-----
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	67	1	-----
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	-----	0.0	0.0	-----

Appendix 4-I. Cont.

LOCATION BIRCH CREEK-SLOUGH
RIVER MILE 88.4

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	-----	18.9	15.9	19.0	17.8	18.0	8.8	4.4
	WATER TEMPERATURE (C)	13.1	15.3	16.0	14.9	15.0	14.5	9.7	5.2
	DISSOLVED OXYGEN (mg/l)	11.4	10.1	9.3	10.5	-----	9.6	13.4	10.9
	PH	7.0	6.9	6.8	6.7	7.1	6.8	7.1	5.5
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	72	60	70	57	-----	85	81	77
	TURBIDITY (NTU)	1	2	38	3	4	1	2	7
	WATER VELOCITY (ft/s)	1.1	1.4	1.1	1.2	1.7	1.4	.8	1.2
2	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	17.8	8.9	4.4
	WATER TEMPERATURE (C)	-----	-----	-----	-----	-----	14.3	9.7	5.2
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	8.5	12.0	10.9
	PH	-----	-----	-----	-----	-----	6.7	7.4	5.5
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	-----	94	89	77
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	2	2	7
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	-----	.7	0.0	.6
3	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	17.8	8.9	4.4
	WATER TEMPERATURE (C)	-----	-----	-----	-----	-----	11.6	8.0	4.7
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	10.6	13.3	11.5
	PH	-----	-----	-----	-----	-----	7.3	7.4	6.7
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	-----	106	104	88
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	82	32	21
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	-----	2.0	.5	1.5
4	AIR TEMPERATURE (C)	13.8	-----	-----	-----	17.8	-----	-----	-----
	WATER TEMPERATURE (C)	9.2	-----	-----	-----	8.7	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	12.8	-----	-----	-----	-----	-----	-----	-----
	PH	7.2	-----	-----	-----	7.7	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	138	-----	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	5	-----	-----	-----	6	-----	-----	-----
	WATER VELOCITY (ft/s)	.3	-----	-----	-----	.3	-----	-----	-----
5	AIR TEMPERATURE (C)	-----	-----	-----	-----	17.8	-----	-----	-----
	WATER TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	-----	-----	-----
	PH	-----	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	-----	-----	-----	40	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	1.0	-----	-----	-----

Appendix 4-I. Cont.

LOCATION BIRCH CREEK-SLOUGH
RIVER MILE 88.4

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
6	AIR TEMPERATURE (C)	-----	18.9	15.9	18.7	-----	-----	-----	-----
	WATER TEMPERATURE (C)	-----	9.3	9.8	8.7	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	11.9	10.6	10.9	-----	-----	-----	-----
	PH	-----	7.2	6.6	6.4	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	144	165	150	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	3	76	32	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	.4	.6	0.0	-----	-----	-----	-----
7	AIR TEMPERATURE (C)	-----	18.9	16.0	18.4	-----	-----	-----	-----
	WATER TEMPERATURE (C)	11.6	13.1	14.2	12.1	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	11.6	11.1	10.0	10.1	-----	-----	-----	-----
	PH	7.0	7.0	6.6	6.4	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	95	101	104	70	-----	-----	-----	-----
	TURBIDITY (NTU)	6	2	60	22	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	1.1	.3	.6	0.0	-----	-----	-----	-----
9	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	8.8	-----
	WATER TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	-----	-----	-----
	PH	-----	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	-----	4	-----
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	-----	-----	0.0	-----

Appendix 4-I. Cont.

LOCATION WHISKERS CREEK-SLOUGH
RIVER MILE 101.2

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	16.0	15.8	16.1	18.2	14.4	17.0	13.0	4.4
	WATER TEMPERATURE (C)	10.0	11.4	12.2	11.2	12.2	10.7	9.3	4.5
	DISSOLVED OXYGEN (mg/l)	12.5	10.7	9.3	9.9	9.8	7.9	13.0	12.1
	PH	6.8	7.4	6.1	5.8	6.7	6.7	7.1	6.0
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	27	25	30	19	25	31	27	24
	TURBIDITY (NTU)	3	2	3	40	< 1	6	5	2
	WATER VELOCITY (ft/s)	.7	2.9	.4	3.2	4.0	.4	1.2	-----
2	AIR TEMPERATURE (C)	16.0	-----	-----	-----	14.4	16.0	13.0	-----
	WATER TEMPERATURE (C)	9.7	-----	-----	-----	12.2	11.8	9.8	-----
	DISSOLVED OXYGEN (mg/l)	12.2	-----	-----	-----	-----	9.3	12.9	-----
	PH	6.2	-----	-----	-----	6.7	6.7	7.3	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	28	-----	-----	-----	29	30	27	-----
	TURBIDITY (NTU)	2	-----	-----	-----	3	2	5	-----
	WATER VELOCITY (ft/s)	0.0	-----	-----	-----	0.0	.2	.3	-----
3	AIR TEMPERATURE (C)	-----	-----	-----	-----	14.4	15.0	13.0	4.4
	WATER TEMPERATURE (C)	-----	-----	-----	-----	12.4	11.6	9.5	4.5
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	10.0	10.9	13.3	11.7
	PH	-----	-----	-----	-----	6.8	6.8	7.0	6.3
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	63	46	49	24
	TURBIDITY (NTU)	-----	-----	-----	-----	5	31	21	2
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	1.7	1.4	1.4	-----
4	AIR TEMPERATURE (C)	16.0	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	6.9	9.4	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	13.3	11.4	-----	-----	-----	-----	-----	-----
	PH	7.2	7.3	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	60	69	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	36	-----	-----	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	.3	1.5	-----	-----	-----	-----	-----	-----
7	AIR TEMPERATURE (C)	14.8	15.8	16.1	18.2	-----	-----	-----	-----
	WATER TEMPERATURE (C)	9.0	9.7	12.4	11.1	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	13.0	11.1	9.2	9.8	-----	-----	-----	-----
	PH	6.7	7.0	6.2	6.1	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	44	50	43	24	-----	-----	-----	-----
	TURBIDITY (NTU)	13	42	7	72	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	.5	0.0	.3	-----	-----	-----	-----

Appendix 4-I. Cont.

LOCATION WHISKERS CREEK-SLOUGH
RIVER MILE 101.2

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
9	AIR TEMPERATURE (C)	-----	15.0	16.1	15.5	-----	20.0	11.8	4.4
	WATER TEMPERATURE (C)	-----	11.2	11.5	11.2	-----	10.7	8.4	-----
	DISSOLVED OXYGEN (mg/l)	-----	10.9	8.8	9.9	-----	8.6	6.4	-----
	PH	-----	6.6	6.5	5.8	-----	6.6	7.1	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	26	93	19	-----	64	68	-----
	TURBIDITY (NTU)	-----	3	41	42	-----	3	-----	2
	WATER VELOCITY (ft/s)	-----	.5	0.0	1.2	-----	0.0	0.0	-----

Appendix 4-I. Cont.

LOCATION SLOUGH 6A
RIVER MILE 112.3

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
2	AIR TEMPERATURE (C)	-----	10.0	19.0	11.4	-----	20.2	14.3	6.8
	WATER TEMPERATURE (C)	8.8	11.1	15.0	10.4	-----	11.7	8.1	4.9
	DISSOLVED OXYGEN (mg/l)	12.8	12.5	9.6	8.9	-----	8.9	11.9	-----
	PH	6.8	6.6	6.8	6.3	-----	6.7	7.8	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	66	60	82	50	-----	61	49	-----
	TURBIDITY (NTU)	4	4	40	26	4	4	4	3
	WATER VELOCITY (ft/s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2
3	AIR TEMPERATURE (C)	-----	10.0	19.0	11.4	-----	19.8	14.3	6.8
	WATER TEMPERATURE (C)	7.6	8.2	13.7	10.9	-----	13.4	8.2	5.0
	DISSOLVED OXYGEN (mg/l)	13.9	11.2	9.8	10.7	-----	10.3	13.4	-----
	PH	7.2	7.3	6.7	6.8	-----	7.1	7.7	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	79	75	113	94	-----	135	116	-----
	TURBIDITY (NTU)	16	31	150	26	120	110	51	60
	WATER VELOCITY (ft/s)	.7	1.5	1.5	1.4	.7	5.0	1.3	1.3

Appendix 4-I. Cont.

LOCATION LANE CREEK-SLOUGH
RIVER MILE 113.6

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
0	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	14.0	-----
	WATER TEMPERATURE (C)	-----	16.2	-----	-----	-----	-----	7.1	5.3
	DISSOLVED OXYGEN (mg/l)	-----	8.3	-----	-----	-----	-----	10.4	9.7
	PH	-----	6.7	-----	-----	-----	-----	6.7	6.4
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	48	-----	-----	-----	-----	74	47
	TURBIDITY (NTU)	-----	2	-----	-----	-----	-----	1	-----
	WATER VELOCITY (ft/s)	-----	.3	-----	-----	-----	-----	.2	1.1
1	AIR TEMPERATURE (C)	14.0	-----	-----	15.6	-----	22.2	14.0	9.2
	WATER TEMPERATURE (C)	4.4	8.9	-----	7.8	-----	8.3	7.3	4.0
	DISSOLVED OXYGEN (mg/l)	14.5	10.8	-----	12.6	-----	11.9	14.0	12.5
	PH	7.1	7.3	-----	6.9	-----	6.6	7.8	6.8
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	26	51	-----	50	-----	50	52	50
	TURBIDITY (NTU)	3	1	-----	6	< 1	1	2	-----
	WATER VELOCITY (ft/s)	4.0	1.8	-----	3.6	2.1	1.3	2.1	3.7
2	AIR TEMPERATURE (C)	-----	20.5	21.5	15.6	-----	-----	14.0	-----
	WATER TEMPERATURE (C)	-----	11.0	9.5	7.6	-----	-----	7.0	-----
	DISSOLVED OXYGEN (mg/l)	-----	9.0	10.3	12.3	-----	-----	11.8	-----
	PH	-----	6.9	6.7	6.6	-----	-----	7.1	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	58	57	53	-----	-----	68	-----
	TURBIDITY (NTU)	-----	< 1	2	3	1	-----	2	-----
	WATER VELOCITY (ft/s)	-----	0.0	0.0	0.0	0.0	-----	.2	-----
3	AIR TEMPERATURE (C)	14.0	-----	21.5	15.6	-----	22.2	14.0	9.2
	WATER TEMPERATURE (C)	5.7	-----	11.8	10.5	-----	10.3	8.0	4.1
	DISSOLVED OXYGEN (mg/l)	14.1	-----	10.1	11.6	-----	11.0	13.1	12.2
	PH	7.1	-----	6.8	6.7	-----	6.8	7.8	6.7
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	59	-----	76	83	-----	90	93	82
	TURBIDITY (NTU)	16	-----	73	170	110	22	61	-----
	WATER VELOCITY (ft/s)	1.2	-----	1.0	1.8	1.7	.5	1.4	1.5
4	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	-----	-----	-----
	PH	-----	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	-----	-----	-----	-----

Appendix 4-I. Cont.

LOCATION LANE CREEK-SLOUGH
RIVER MILE 113.6

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
6	AIR TEMPERATURE (C)	14.0	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	6.5	-----	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	10.9	-----	-----	-----	-----	-----	-----	-----
	PH	6.9	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	67	-----	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	0.0	-----	-----	-----	-----	-----	-----	-----
7	AIR TEMPERATURE (C)	14.0	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	4.6	-----	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	14.5	-----	-----	-----	-----	-----	-----	-----
	PH	7.1	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	26	-----	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	1	-----	-----	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	0.0	-----	-----	-----	-----	-----	-----	-----
9	AIR TEMPERATURE (C)	-----	-----	21.5	15.6	-----	23.0	14.0	9.8
	WATER TEMPERATURE (C)	-----	-----	7.0	5.8	-----	8.9	7.1	5.2
	DISSOLVED OXYGEN (mg/l)	-----	-----	9.0	9.3	-----	6.8	10.4	8.6
	PH	-----	-----	6.1	6.6	-----	6.2	6.7	6.5
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	62	70	-----	86	74	55
	TURBIDITY (NTU)	-----	-----	3	2	-----	< 1	< 1	-----
	WATER VELOCITY (ft/s)	-----	-----	0.0	0.0	-----	0.0	.2	.2

Appendix 4-I. Cont.

LOCATION SLOUGH 8A
RIVER MILE 125.3

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	-----	15.0	11.9	18.0	-----	-----	13.2	8.2
	WATER TEMPERATURE (C)	-----	7.4	10.1	7.6	10.5	12.1	8.8	4.2
	DISSOLVED OXYGEN (mg/l)	-----	11.6	8.6	8.6	-----	9.7	10.9	11.1
	PH	-----	7.1	6.9	6.8	-----	7.0	6.7	6.9
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	131	158	123	118	137	116	131
	TURBIDITY (NTU)	-----	2	16	< 1	1	1	2	< 1
	WATER VELOCITY (ft/s)	-----	1.0	.3	.5	.4	.4	.5	.8
2	AIR TEMPERATURE (C)	-----	-----	11.9	21.0	17.8	18.0	13.2	-----
	WATER TEMPERATURE (C)	-----	8.9	10.3	10.1	10.5	14.0	9.1	4.3
	DISSOLVED OXYGEN (mg/l)	-----	11.8	8.7	8.9	-----	10.6	10.7	11.1
	PH	-----	7.4	6.9	6.7	-----	7.1	6.7	6.9
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	128	168	135	149	149	126	112
	TURBIDITY (NTU)	-----	2	-----	< 1	2	< 1	1	2
	WATER VELOCITY (ft/s)	-----	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	AIR TEMPERATURE (C)	-----	-----	11.9	21.3	-----	-----	-----	-----
	WATER TEMPERATURE (C)	7.9	9.3	11.0	12.3	12.1	13.3	9.4	4.7
	DISSOLVED OXYGEN (mg/l)	10.4	10.7	9.9	8.8	-----	10.1	10.5	12.8
	PH	6.4	7.3	7.5	7.3	-----	7.8	7.2	7.5
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	96	123	121	124	129	148	139	130
	TURBIDITY (NTU)	32	9	200	68	150	88	22	81
	WATER VELOCITY (ft/s)	0.0	2.1	1.2	.8	3.3	1.5	2.2	1.8
4	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	7.7	-----	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	10.6	-----	-----	-----	-----	-----	-----	-----
	PH	6.5	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	86	-----	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	34	-----	-----	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	1.0	-----	-----	-----	-----	-----	-----	-----
6	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	7.7	-----	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	10.3	-----	-----	-----	-----	-----	-----	-----
	PH	6.4	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	96	-----	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	0.0	-----	-----	-----	-----	-----	-----	-----

Appendix 4-I. Cont.

LOCATION SLOUGH 9
RIVER MILE 129.2

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	18.5	13.2	6.5
	WATER TEMPERATURE (C)	-----	-----	-----	-----	7.3	12.7	9.0	5.2
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	9.8	10.8	11.2
	PH	-----	-----	-----	-----	-----	7.7	7.0	7.0
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	129	155	109	122
	TURBIDITY (NTU)	-----	-----	-----	-----	4	2	4	5
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	.4	.2	.5	1.5
2	AIR TEMPERATURE (C)	-----	-----	-----	-----	10.2	-----	-----	6.5
	WATER TEMPERATURE (C)	-----	-----	-----	-----	7.4	-----	-----	4.9
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	-----	-----	8.9
	PH	-----	-----	-----	-----	-----	-----	-----	7.1
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	134	-----	-----	163
	TURBIDITY (NTU)	-----	-----	-----	-----	2	-----	-----	28
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	0.0	-----	-----	0.0
3	AIR TEMPERATURE (C)	-----	17.0	-----	-----	-----	-----	13.2	-----
	WATER TEMPERATURE (C)	7.3	10.1	12.5	10.1	8.0	14.5	10.4	5.4
	DISSOLVED OXYGEN (mg/l)	10.9	12.2	10.7	9.6	-----	9.5	10.3	11.6
	PH	6.8	7.4	7.7	7.4	-----	7.8	7.9	7.0
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	78	93	113	111	121	163	136	92
	TURBIDITY (NTU)	13	52	99	-----	34	25	3	28
	WATER VELOCITY (ft/s)	2.4	2.0	.9	.7	1.4	.8	1.1	1.8
4	AIR TEMPERATURE (C)	12.1	14.8	17.4	20.2	-----	-----	-----	-----
	WATER TEMPERATURE (C)	7.1	9.0	11.9	10.7	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	11.2	12.9	10.4	9.5	-----	-----	-----	-----
	PH	6.7	7.5	7.5	7.5	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	81	87	122	119	-----	-----	-----	-----
	TURBIDITY (NTU)	47	33	43	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	2.0	2.6	1.0	.6	-----	-----	-----	-----
6	AIR TEMPERATURE (C)	-----	16.0	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	7.3	9.2	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	10.9	13.4	-----	-----	-----	-----	-----	-----
	PH	6.8	7.3	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	68	91	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	15	48	-----	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	.2	1.3	-----	-----	-----	-----	-----	-----

Appendix 4-I. Cont.

LOCATION 4TH OF JULY CREEK-MOUTH
RIVER MILE 131.1

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	-----	18.0	12.6	20.0	-----	-----	12.4	-----
	WATER TEMPERATURE (C)	6.7	9.1	11.5	10.6	10.8	12.0	9.0	5.6
	DISSOLVED OXYGEN (mg/l)	11.4	12.5	9.9	10.0	-----	10.2	10.9	12.2
	PH	6.2	7.2	7.1	7.3	-----	6.8	6.7	6.7
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	21	25	26	17	18	21	18	16
	TURBIDITY (NTU)	< 1	< 1	< 1	1	< 1	2	-----	< 1
	WATER VELOCITY (ft/s)	2.5	3.8	.4	.6	3.3	1.8	2.1	4.3
3	AIR TEMPERATURE (C)	-----	18.0	12.6	-----	-----	18.1	12.4	6.8
	WATER TEMPERATURE (C)	6.7	9.5	11.0	10.6	10.8	12.1	8.9	5.6
	DISSOLVED OXYGEN (mg/l)	11.3	11.9	9.9	10.0	-----	7.2	11.2	12.0
	PH	6.3	7.0	7.1	6.4	-----	6.3	6.7	6.8
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	21	21	54	20	22	37	44	29
	TURBIDITY (NTU)	< 1	5	90	5	7	9	-----	16
	WATER VELOCITY (ft/s)	1.3	1.1	.8	1.0	.4	2.0	1.4	1.5

Appendix 4-I. Cont.

LOCATION SLOUGH 11
RIVER MILE 135.3

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	17.4	10.2	14.0	12.0	12.0	-----	12.8	7.1
	WATER TEMPERATURE (C)	7.2	6.3	5.6	11.6	5.6	8.2	6.2	4.5
	DISSOLVED OXYGEN (mg/l)	10.4	12.1	12.9	9.7	11.3	10.2	10.3	11.4
	PH	5.8	7.2	7.2	7.8	6.6	7.2	6.8	7.2
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	208	222	230	127	224	227	226	221
	TURBIDITY (NTU)	< 1	-----	-----	3	< 1	2	1	3
	WATER VELOCITY (ft/s)	1.2	.5	.4	.6	.6	.5	.6	.7
2	AIR TEMPERATURE (C)	17.4	10.2	14.0	12.0	12.0	-----	12.8	7.1
	WATER TEMPERATURE (C)	5.3	6.0	6.0	6.1	4.6	8.4	6.1	4.3
	DISSOLVED OXYGEN (mg/l)	9.2	11.3	10.1	9.8	10.2	10.3	10.2	11.6
	PH	6.3	7.1	7.1	7.1	6.4	7.3	7.1	7.2
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	211	224	230	228	213	227	221	218
	TURBIDITY (NTU)	< 1	2	-----	1	< 1	9	3	1
	WATER VELOCITY (ft/s)	0.0	-----	0.0	0.0	0.0	0.0	0.0	.6
3	AIR TEMPERATURE (C)	17.4	10.2	14.0	12.0	12.0	-----	12.8	-----
	WATER TEMPERATURE (C)	5.1	6.4	10.4	5.9	9.3	10.5	6.8	4.1
	DISSOLVED OXYGEN (mg/l)	10.0	12.5	11.4	9.6	10.6	10.4	10.8	12.2
	PH	6.7	6.9	7.6	7.2	7.4	7.5	7.2	6.9
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	204	197	133	226	141	173	184	193
	TURBIDITY (NTU)	-----	5	49	59	38	30	22	4
	WATER VELOCITY (ft/s)	-----	-----	1.5	1.2	1.6	.9	1.2	1.5

Appendix 4-I. Cont.

LOCATION INDIAN RIVER-MOUTH
RIVER MILE 138.6

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	14.6	-----	23.0	-----	23.0	16.4	16.0	10.2
	WATER TEMPERATURE (C)	6.2	5.9	9.0	8.1	11.7	11.4	8.2	5.3
	DISSOLVED OXYGEN (mg/l)	10.3	14.2	11.3	10.5	11.0	10.7	11.0	12.6
	PH	6.0	6.4	5.8	6.7	6.6	7.1	6.8	6.8
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	35	32	39	36	36	44	45	41
	TURBIDITY (NTU)	3	-----	7	85	< 1	2	2	< 1
	WATER VELOCITY (ft/s)	1.0	1.4	1.7	1.7	1.4	3.0	2.5	4.4
3	AIR TEMPERATURE (C)	14.5	-----	23.0	13.2	-----	-----	16.0	10.2
	WATER TEMPERATURE (C)	6.5	5.6	10.4	8.2	11.8	11.6	8.1	5.2
	DISSOLVED OXYGEN (mg/l)	11.1	13.9	11.3	10.3	11.2	9.7	11.1	12.3
	PH	6.2	6.6	6.2	6.7	6.7	6.9	6.9	6.9
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	35	36	104	34	47	56	63	54
	TURBIDITY (NTU)	4	5	100	7	8	18	13	16
	WATER VELOCITY (ft/s)	.9	1.2	2.0	.6	.5	1.5	.5	1.8

Appendix 4-I. Cont.

LOCATION SLOUGH 19
RIVER MILE 140.0

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	13.0	-----	12.0
	WATER TEMPERATURE (C)	-----	3.9	-----	-----	-----	5.8	8.1	3.9
	DISSOLVED OXYGEN (mg/l)	-----	10.6	-----	-----	-----	9.3	10.1	9.5
	PH	-----	6.6	-----	-----	-----	7.0	6.7	6.8
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	107	-----	-----	-----	150	159	150
	TURBIDITY (NTU)	-----	3	-----	-----	1	3	< 1	< 1
	WATER VELOCITY (ft/s)	-----	.1	-----	-----	-----	.1	.1	.3
2	AIR TEMPERATURE (C)	10.8	-----	23.5	-----	-----	13.0	-----	-----
	WATER TEMPERATURE (C)	4.8	5.9	10.5	5.3	8.6	6.2	-----	-----
	DISSOLVED OXYGEN (mg/l)	9.2	11.6	8.4	8.5	-----	9.4	-----	-----
	PH	6.0	6.6	6.5	6.8	-----	7.1	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	139	128	134	135	128	159	-----	-----
	TURBIDITY (NTU)	< 1	< 1	2	2	2	6	-----	-----
	WATER VELOCITY (ft/s)	0.0	0.0	0.0	0.0	0.0	0.0	-----	-----
3	AIR TEMPERATURE (C)	7.9	-----	23.5	13.4	21.6	13.0	-----	12.0
	WATER TEMPERATURE (C)	5.3	8.6	13.9	9.8	12.6	11.4	8.7	4.3
	DISSOLVED OXYGEN (mg/l)	7.3	13.2	9.4	10.5	-----	10.6	11.3	11.8
	PH	6.2	7.0	7.0	7.6	-----	7.7	7.3	7.1
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	93	84	113	108	119	135	138	140
	TURBIDITY (NTU)	22	16	130	29	45	150	56	61
	WATER VELOCITY (ft/s)	.4	1.0	.4	.8	.7	.8	1.0	.9

Appendix 4-I. Cont.

LOCATION SLOUGH 20
RIVER MILE 140.1

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	-----	-----	17.1	-----	12.2	20.8	12.4	7.9
	WATER TEMPERATURE (C)	-----	-----	8.6	-----	9.2	10.0	6.3	4.1
	DISSOLVED OXYGEN (mg/l)	-----	-----	11.9	-----	-----	11.6	12.4	12.8
	PH	-----	-----	6.2	-----	-----	8.0	7.1	7.3
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	90	-----	84	97	79	85
	TURBIDITY (NTU)	-----	-----	< 1	-----	< 1	< 1	5	1
	WATER VELOCITY (ft/s)	-----	-----	.5	-----	1.2	.5	1.3	1.5
2	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	-----	-----	-----
	PH	-----	-----	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	-----	-----	-----	-----
3	AIR TEMPERATURE (C)	-----	-----	-----	-----	12.2	-----	-----	7.9
	WATER TEMPERATURE (C)	3.6	6.1	14.1	7.5	10.1	12.4	7.1	4.1
	DISSOLVED OXYGEN (mg/l)	10.5	-----	9.8	10.2	-----	10.4	12.1	12.7
	PH	6.4	7.0	7.3	7.1	-----	7.8	7.4	6.7
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	37	69	125	87	92	142	94	89
	TURBIDITY (NTU)	2	6	64	12	34	46	12	4
	WATER VELOCITY (ft/s)	.7	1.4	.9	.7	.5	1.0	1.2	1.8
4	AIR TEMPERATURE (C)	12.4	-----	-----	12.1	-----	-----	-----	-----
	WATER TEMPERATURE (C)	-----	-----	-----	9.3	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	10.6	-----	-----	-----	-----
	PH	-----	-----	-----	7.4	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	105	-----	-----	-----	-----
	TURBIDITY (NTU)	6	9	-----	50	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	.6	-----	-----	.5	-----	-----	-----	-----
5	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	-----	5.6	-----	7.6	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	14.3	-----	10.3	-----	-----	-----	-----
	PH	-----	7.0	-----	7.1	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	67	-----	83	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	4	-----	7	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	2.0	-----	1.3	-----	-----	-----	-----

Appendix 4-I. Cont.

LOCATION SLOUGH 20
RIVER MILE 140.1

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
7	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	-----	6.2	-----	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	-----	-----	-----	-----
	PH	-----	7.0	-----	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	69	-----	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	10	-----	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	.8	-----	-----	-----	-----	-----	-----
9	AIR TEMPERATURE (C)	12.4	-----	-----	-----	12.2	-----	-----	-----
	WATER TEMPERATURE (C)	5.9	-----	10.4	-----	11.2	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	10.0	-----	11.6	-----	-----	-----	-----	-----
	PH	6.2	-----	6.8	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	76	-----	96	-----	74	-----	-----	-----
	TURBIDITY (NTU)	4	10	1	-----	2	-----	-----	-----
	WATER VELOCITY (ft/s)	.2	-----	.1	-----	0.0	-----	-----	-----

Appendix 4-I. Cont.

LOCATION SLOUGH 21
RIVER MILE 142.0

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	-----	-----	-----	-----	13.8	19.0	14.8	8.2
	WATER TEMPERATURE (C)	-----	-----	8.0	-----	6.7	9.3	5.2	4.7
	DISSOLVED OXYGEN (mg/l)	-----	-----	5.3	-----	9.8	9.6	10.2	10.7
	PH	-----	-----	7.2	-----	7.3	7.3	6.8	7.2
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	277	-----	194	192	179	186
	TURBIDITY (NTU)	-----	-----	2	-----	4	2	2	1
	WATER VELOCITY (ft/s)	-----	-----	.2	-----	.8	.3	.7	1.7
2	AIR TEMPERATURE (C)	-----	-----	-----	-----	13.8	-----	14.8	8.2
	WATER TEMPERATURE (C)	-----	-----	-----	-----	6.2	10.8	5.3	4.6
	DISSOLVED OXYGEN (mg/l)	-----	-----	-----	-----	10.9	9.8	10.3	11.2
	PH	-----	-----	-----	-----	7.3	7.4	6.7	7.1
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	-----	-----	118	184	180	179
	TURBIDITY (NTU)	-----	-----	-----	-----	2	< 1	2	1
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	.2	0.0	0.0	0.0
3	AIR TEMPERATURE (C)	11.8	-----	-----	12.4	13.8	-----	14.8	8.2
	WATER TEMPERATURE (C)	7.4	10.5	11.4	9.3	8.8	12.6	6.2	4.9
	DISSOLVED OXYGEN (mg/l)	5.9	10.8	4.8	10.9	10.9	10.3	10.6	12.8
	PH	6.4	6.8	7.5	7.4	7.4	7.8	7.2	7.5
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	82	188	151	103	157	153	171	146
	TURBIDITY (NTU)	24	3	110	39	36	92	24	29
	WATER VELOCITY (ft/s)	1.5	1.1	.3	.7	.6	.3	.6	.6
4	AIR TEMPERATURE (C)	11.8	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	7.3	10.0	-----	9.0	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	9.5	12.7	-----	10.2	-----	-----	-----	-----
	PH	6.0	7.1	-----	7.3	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	127	115	-----	122	-----	-----	-----	-----
	TURBIDITY (NTU)	9	11	-----	30	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	.5	.9	-----	1.1	-----	-----	-----	-----
6	AIR TEMPERATURE (C)	11.8	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	7.2	9.9	-----	9.1	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	8.2	11.4	-----	10.2	-----	-----	-----	-----
	PH	6.4	7.2	-----	7.1	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	141	143	-----	121	-----	-----	-----	-----
	TURBIDITY (NTU)	2	4	-----	62	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	.3	0.0	-----	.2	-----	-----	-----	-----

Appendix 4-1. Cont.

LOCATION PORTAGE CREEK-MOUTH
RIVER MILE 148.8

ZONE	HABITAT PARAMETER	JUNE 1-15	JUNE 16-30	JULY 1-15	JULY 16-31	AUGUST 1-15	AUGUST 16-31	SEPTEMBER 1-15	SEPTEMBER 16-30
1	AIR TEMPERATURE (C)	-----	-----	-----	14.8	-----	-----	11.3	5.4
	WATER TEMPERATURE (C)	2.9	-----	7.6	6.4	9.7	-----	5.8	3.1
	DISSOLVED OXYGEN (mg/l)	11.7	-----	11.6	11.2	10.8	-----	12.3	12.7
	PH	6.2	-----	7.0	7.1	7.5	-----	6.7	7.1
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	46	-----	66	60	83	-----	89	85
	TURBIDITY (NTU)	8	-----	8	9	< 1	-----	< 1	< 1
	WATER VELOCITY (ft/s)	.4	-----	-----	1.0	1.3	-----	2.6	3.1
3	AIR TEMPERATURE (C)	-----	-----	-----	-----	19.9	-----	11.3	3.6
	WATER TEMPERATURE (C)	-----	-----	8.1	6.8	9.7	-----	5.9	2.5
	DISSOLVED OXYGEN (mg/l)	-----	-----	11.4	11.0	10.6	-----	12.1	13.4
	PH	-----	-----	7.0	7.1	7.4	-----	6.8	7.1
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	70	63	91	-----	91	88
	TURBIDITY (NTU)	-----	-----	44	100	14	-----	4	2
	WATER VELOCITY (ft/s)	-----	-----	-----	1.0	.8	-----	1.1	.9
9	AIR TEMPERATURE (C)	-----	-----	-----	-----	-----	-----	-----	-----
	WATER TEMPERATURE (C)	-----	-----	7.6	-----	-----	-----	-----	-----
	DISSOLVED OXYGEN (mg/l)	-----	-----	10.4	-----	-----	-----	-----	-----
	PH	-----	-----	7.0	-----	-----	-----	-----	-----
	SPECIFIC CONDUCTANCE (MICROMHOS/CM)	-----	-----	84	-----	-----	-----	-----	-----
	TURBIDITY (NTU)	-----	-----	7	-----	-----	-----	-----	-----
	WATER VELOCITY (ft/s)	-----	-----	-----	-----	-----	-----	-----	-----

APPENDIX J

ICE-COVERED SEASON (1981-82) HABITAT DATA

This appendix includes physical and chemical data that were measured instantaneously during the ice-covered season to describe general habitat conditions. Continuous surface and intragravel water temperatures in sloughs are located in Appendix C. These data were collected in the study area located within the Cook Inlet to Oshetna River reach of the Susitna River.

Data were collected at sites previously sampled during the 1981 open-water season and at selected sites in conjunction with radio telemetry studies. Open-water season habitat data are located in Appendices C, D and I.

Variables measured include air temperature, water temperature, pH, dissolved oxygen, specific conductance, turbidity, water depth, and ice thickness. Air temperature was measured with calibrated Brooklyn mercury thermometers. Water temperature, pH, dissolved oxygen, and specific conductance were measured with a Hydrolab Model 4041. Meters were calibrated before and after each field sampling period. Turbidity samples were collected in 250ml polyethylene bottles and stored in a cool, dark location until analyzed.

Analysis was done using a Hach laboratory Model 2100A turbidimeter. Water depth was measured from the bottom of the ice to the substrate. Ice thickness was measured from the top of the ice to the bottom. Surface and intragravel water temperature were monitored continuously at selected sites using Peabody-Ryan thermographs.

Appendix Table 4-J-1. Selected physicochemical data collected during the ice-covered study season, 1982.

River Mile	Site	Geographic Code	Date	Time	Air Temp (°C)	Water Temp (°C)	Hydrolab Measurements D.O. (mg/l)	D.O. (% sat)	pH	Spec. Cond. (micromhos/cm)	Turbidity (NTU)	Water Depth (ft)	Ice Thickness (ft)
36.3	Mid Kroto Slough	S18N06W16BBC	820207	1130	0.0	0.2	8.7	59	6.3	163	1	1.0	2.0
40.6	Deshka River - Confluence	S19N06W35BDA	820206	1130	-1.5	0.1	11.2	76	6.6	204	1	---	---
			820422	1220	---	0.0	12.9	88	6.7	194	1	6.2	2.7
40.6	Deshka River - Mouth	S19N06W35BDA	820206	1130	-1.5	0.0	8.0	54	6.3	81	2	---	---
			820422	1140	---	0.0	9.9	68	6.4	62	2	5.5	1.7
40.6	Deshka River - T.R.M. 1.0	S19N06W26BCB	820206	1200	2.0	0.0	7.9	54	5.8	86	1	---	---
			820422	1420	---	0.2	10.0	69	6.5	58	2	3.4	2.3
40.6	Deshka River - T.R.M. 3.5	S19N06W14BCA	820206	1230	1.0	0.0	8.1	55	5.8	86	1	---	---
			820422	1620	---	0.2	10.1	69	6.5	55	3	3.5	2.5
50.5	Little Willow Creek	S20N05W27AAD	820221	1430	---	0.0	10.0	68	5.7	56	-	1.0	3.0
53.5	Susitna River - East Channel	S20N05W14BCA	820221	1330	---	0.3	7.9	54	5.7	134	-	1.0	1.0
53.5	Susitna River - West Channel	S20N05W14BCA	820221	1330	---	0.4	11.0	76	5.9	211	-	2.0	2.0
58.1	Susitna River - Rustic Wilderness	S21N05W25CBD	820224	1700	0.0	0.3	----	---	6.4	---	3	3.0	2.9
			820323	1100	4.6	0.4	11.0	76	7.2	57	4	1.4	0.0
			820406	1115	12.2	0.7	10.8	75	---	57	3	0.7	0.0
61.0	Kashwitna River - Mouth	S21N05W13AAA	820406	1145	13.3	0.4	12.6	87	---	62	1	1.9	0.0
61.0	Susitna River - West Bank	S21N05W13AAA	820304	1200	-8.9	0.0	11.6	79	7.3	247	-	5.8	3.8
61.5	Susitna River	S21N05W13BAA	820221	1630	---	-0.1	11.4	78	6.1	147	-	2.5	2.0
63.0	Caswell Creek	S21N04W06BDD	820304	1345	-6.7	0.2	9.1	63	6.7	58	1	---	3.5
66.1	Sheep Creek Slough - Mouth	S22N04W30BAB	820307	1400	-1.1	0.3	9.9	68	6.6	126	-	---	---
			820409	1145	4.4	0.2	11.1	76	---	114	3	2.0	5.0
67.5	Susitna River - East Bank	S22N05W24DAC	820304	1230	-8.8	0.0	11.2	76	---	161	-	---	3.5
68.4	Susitna River	S22N05W13CCA	820307	1300	-1.1	1.8	9.0	64	6.9	253	-	0.8	0.0

Appendix Table 4-J-1 (Continued).

River Mile	Site	Geographic Code	Date	Time	Air Temp (°C)	Water Temp (°C)	Hydrolab Measurements D.O. (mg/1)	D.O. (% sat)	pH	Spec. Cond. (micromhos/cm)	Turbidity (NTU)	Water Depth (ft)	Ice Thickness (ft)
68.5	Susitna River - West Bank	S22N05W14ADD	820305	1300	-1.1	0.6	13.0	90	6.9	224	1	6.6	4.1
72.0	Lower Goose Creek 1	S23N04W31BBC	820226	1130	-2.0	0.2	----	---	6.5	55	5	1.7	2.5
			820325	1200	2.2	0.4	12.4	85	7.3	56	1	1.9	1.8
			820408	1130	1.7	-0.1	14.1	95	---	56	1	1.8	1.5
74.4	Susitna River - West Bank	S23N05W13CCD	820308	1300	-1.1	0.3	12.5	86	7.2	225	-	5.0	4.0
77.0	Montana Creek	S23N04W07ABA	820212	1115	-5.2	0.0	13.7	93	6.4	54	1	---	2.5
			820325	1300	7.0	0.3	11.3	78	7.3	63	2	1.7	4.5
			820410	1030	-0.1	1.8	14.4	102	---	19	1	2.0	0.0
82.0	Susitna River	S24N05W22DAC	820308	1600	-1.1	0.0	13.4	91	7.1	216	-	7.5	4.0
84.0	Susitna River	S24N05W10DCC	820210	1600	-5.5	0.0	10.5	72	6.5	148	3	---	3.3
			820303	1200	-17.0	0.1	9.3	63	6.6	115	1	---	3.0
			820410	1345	2.2	0.3	12.5	86	---	160	1	3.0	4.0
85.7	Sunshine Creek - Upper Site	S24N05W14AAB	820210	1500	-4.0	0.0	12.7	86	6.7	59	1	1.5	2.5
			820318	1030	3.2	0.2	10.1	70	7.3	48	4	4.5	3.5
			820410	1300	1.6	0.6	12.7	88	---	66	2	2.0	2.0
85.7	Sunshine Creek - Lower Site	S24N05W14AAB	820303	1230	-17.0	0.0	11.2	76	6.0	60	1	1.1	2.6
88.4	Birch Creek Slough	S25N05W25DCC	820212	1030	-6.0	0.3	13.0	89	6.4	203	1	---	3.3
			820302	1500	-0.3	-0.1	11.4	87	6.8	102	1	2.3	2.0
			820310	1600	1.0	0.0	11.3	76	6.8	90	1	1.8	0.0
			820407	1015	8.0	0.5	11.6	80	---	91	1	2.9	0.0
89.2	Birch Creek - Mouth	S25N05W25ABD	820318	1530	1.0	0.0	10.1	56	7.3	69	2	---	---
			820407	1100	8.0	0.9	11.4	80	---	124	1	1.4	0.0
95.5	Cache Creek Slough	S26N05W35ADC	820202	1215	3.4	0.1	12.6	86	6.9	183	-	0.9	---
			820302	1115	0.0	0.1	11.4	78	7.1	194	1	1.1	0.0
			820411	1045	8.1	1.3	11.5	81	---	174	1	1.3	0.0
96.0	Cache Creek	S26N05W26DCB	820202	1015	3.7	1.2	9.0	64	6.4	191	-	0.8	---
			820302	1000	0.0	1.2	7.7	54	7.4	180	1	1.5	0.0
			820411	1130	7.8	3.3	8.1	55	---	227	1	1.0	0.0
101.2	Whisker Creek Slough	S26N05W03ADB	820204	1145	6.4	1.0	9.6	68	6.5	37	-	1.0	0.0
			820322	1100	0.0	1.2	10.7	76	7.1	40	1	0.6	0.0

Appendix Table 4-J-1 (Continued).

River Mile	Site	Geographic Code	Date	Time	Air Temp (°C)	Water Temp (°C)	Hydrolab Measurements D.O. (mg/l)	D.O. (% sat)	pH	Spec. Cond. (micromhos/cm)	Turbidity (NTU)	Water Depth (ft)	Ice Thickness (ft)
101.4	Whisker Creek	S26N05W03AAC	820204	1110	6.4	1.6	10.0	72	6.3	30	-	1.3	1.7
			820322	1130	0.0	0.9	9.6	67	7.3	37	1	1.3	0.0
			820422	1200	---	3.8	9.3	70	7.2	---	1	3.0	0.0
112.3	Slough 6A	S28N05W13CAC	820223	1345	-10.5	0.3	---	---	---	---	1	2.0	2.0
			820324	1030	8.5	1.5	7.2	51	6.9	83	3	2.5	0.0
113.6	Lane Creek - Mouth	S28N05W12ADD	820324	1110	1.8	1.8	11.4	82	7.1	64	2	0.4	0.0
114.4	Susitna River	S28N04W06CAB	820324	1145	3.0	3.9	9.2	70	7.3	206	2	1.0	0.0
121.6	Susitna River - Side Channel	S23N04W11BBB	820208	1333	---	1.5	9.4	66	6.5	101	1	0.6	0.0
			820312	1200	-1.2	1.4	9.3	66	6.4	161	-	0.4	0.0
			820422	1305	9.8	5.8	9.3	75	7.2	82	1	1.2	0.0
122.3	Slough 8D	S29N04W02CBA	820420	1346	13.0	4.6	7.7	60	7.2	166	1	0.9	0.0
123.8	Susitna River	S30N04W26DDD	820222	1200	---	0.3	12.3	84	6.9	274	1	3.5	2.7
125.3	Slough 8A	S30N03W20CCD	820222	1300	-15.0	0.4	6.4	45	6.4	163	1	0.4	0.0
			820312	1300	0.0	1.8	6.3	45	6.4	192	2	0.6	0.0
129.2	Slough 9	S30N03W09DCB	820312	1330	-0.4	2.4	7.6	66	6.5	199	1	0.7	0.0
129.2	Slough 9B	S30N03W09DCB	820416	1540	8.0	4.5	8.3	64	6.0	175	1	1.3	0.0
131.1	Susitna River near mouth of 4th of July Creek	S30N03W03DAC	820312	1400	-0.4	1.3	9.2	65	7.1	353	1	0.9	0.0
			820209	1120	---	1.8	9.3	67	6.2	291	1	4.7	0.0
			820416	1653	6.6	2.3	11.3	83	7.5	279	1	1.5	0.0
133.6	Slough 9A	S30N03W36DAA	820416	1800	4.0	3.7	10.0	86	7.4	184	1	1.1	0.0
133.8	Slough 10	S31N03W36AAC	820208	1354	---	0.8	11.6	81	6.7	197	1	2.4	0.0
			820312	1415	-0.4	1.4	10.0	71	6.8	213	1	1.2	0.0
			820416	1715	5.8	3.6	10.0	75	7.3	187	-	1.5	0.0
135.3	Slough 11	S32N02W19DDD	820205	1556	-1.6	0.9	12.4	87	6.9	224	1	0.8	---
			820308	1120	5.0	1.6	10.5	75	6.4	217	1	0.8	0.0
			820414	1500	4.4	2.2	13.3	69	6.9	207	1	---	1.2
136.9	Susitna River - Inside Bend	S31N02W17CDA	820205	1446	-3.2	0.0	15.1	101	7.0	259	1	1.8	2.6
			820308	1215	4.0	0.1	13.1	89	7.1	292	1	1.5	2.5

Appendix Table 4-J-1 (Continued).

River Mile	Site	Geographic Code	Date	Time	Air Temp (°C)	Water Temp (°C)	Hydrolab Measurements D.O. (mg/1)	D.O. (% sat)	pH	Spec. Cond. (micromhos/cm)	Turbidity (NTU)	Water Depth (ft)	Ice Thickness (ft)
138.6	Susitna River - near Indian River	S31N02W09CDA	820205	1255	-1.0	0.3	14.0	96	6.3	110	1	1.4	0.0
			820308	1300	0.2	0.6	11.8	82	6.7	185	1	2.1	0.0
138.6	Indian River - Mouth	S31N02W09CDA	820414	1357	4.2	0.7	----	---	6.6	173	1	1.0	0.0
140.1	Slough 20	S31N02W11BBC	820205	1145	3.8	2.7	12.3	90	6.4	88	1	0.9	0.0
			820308	1315	0.0	3.2	12.1	90	6.7	91	1	0.5	0.0
			820414	1335	4.6	0.8	14.5	101	6.6	87	1	1.3	0.2
142.0	Slough 21	S31N11W02AAA	820220	1200	12.0	0.6	9.2	64	7.0	214	1	---	0.0
			820308	1350	-1.2	1.6	6.8	49	6.8	218	3	0.8	0.0
			820414	1252	4.0	3.1	10.3	77	6.4	220	1	1.4	---
144.3	Slough 22	S32N01W32BBC	820220	1130	12.0	2.0	7.2	52	6.2	152	-	0.8	0.0
			820308	1515	-0.6	1.5	6.8	48	6.6	225	1	0.6	0.0
			820414	1200	4.5	1.8	9.4	68	6.3	189	1	0.9	---
148.8	Susitna River - near Portage Creek	S32N01W25CDB	820219	1130	-12.0	0.0	12.3	84	7.0	279	1	7.0	3.6
			820308	1435	-0.6	0.0	14.1	96	7.5	310	1	3.2	3.7
185.6	Susitna River	S32N06E31BAD	820324	1100	0.0	0.0	8.6	58	6.7	292	3	2.1	6.1
186.9	Susitna River	S32N05E26CDA	820324	1129	-4.0	0.0	10.9	75	6.9	257	-	---	---
187.9	Susitna River	S32N06E28DBA	820324	0950	-4.2	0.3	10.6	73	6.6	234	-	3.0	4.6
189.0	Susitna River	S32N06E31BAD	820324	1100	0.0	0.0	8.6	58	6.7	292	3	2.1	6.1
191.5	Susitna River	S32N06E28DBA	820324	0940	-4.2	0.3	10.6	73	6.6	234	-	3.0	4.6
193.5	Susitna River	S32N07E33CCA	820324	1406	----	1.7	10.3	74	---	228	1	---	---
193.6	Watana Slough	S32N06E26DBA	820324	1426	-0.6	2.1	10.9	79	---	373	2	---	---
196.1	Susitna River	S31N07E02DDB	820324	1254	3.0	-1.0	11.1	73	6.6	232	2	---	4.5
197.5	Susitna River	S32N07E33CCA	820324	1406	----	1.7	10.3	74	---	228	1	---	---
198.1	Susitna River	S31N08E07CDC	820324	1321	3.0	0.0	11.5	78	6.7	245	3	2.7	3.1
200.6	Susitna River	S31N07E02DDB	820324	1254	3.0	-1.0	11.1	73	6.6	232	2	---	4.5
202.8	Susitna River	S31N08E07CDC	820324	1321	3.0	0.0	11.5	78	6.7	245	3	2.7	3.1
233.4	Oshetna River - T.R.M. 2.0	S30N11E10CBD	820324	1524	0.4	0.0	13.6	92	---	230	1	1.2	2.7