

APPENDIX A
BASELINE WATER QUALITY DATA

LIST OF TABLES

- A-1. Dissolved Oxygen Determinations
- A-2. Results of Biochemical Oxygen Demand (5 day) Analyses
- A-3. Results of Chemical Oxygen Demand Analyses
- A-4. Results of pH Analyses
- A-5. Results of Total Alkalinity Analyses
- A-6. Results of Hardness Analyses
- A-7. Results of Conductivity Analyses
- A-8. Results of Dissolved Solids Analyses
- A-9. Results of Suspended Solids Analyses
- A-10. Results of Turbidity Analyses
- A-11. Results of Color Analyses
- A-12. Results of Chloride Analyses
- A-13. Results of Oil and Grease Analyses
- A-14. Results of Total Kjeldahl-Nitrogen Analyses
- A-15. Results of Ammonia-Nitrogen Analyses
- A-16. Results of Nitrate-Nitrogen Analyses
- A-17. Results of Total Phosphorus Analyses
- A-18. Results of Total Coliform Bacteria Analyses
- A-19. Results of Fecal Coliform Bacteria Analyses
- A-20. Results of Fecal Streptococci Bacteria Analyses
- A-21. Results of Heavy Metals Analyses

**Table A-1. Strawberry Creek
Dissolved Oxygen Determinations**

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>
<u>South Fork</u>				
1 *	0930	0930	0930	0915
**	11.0	12.0	13.0	14.0
***	12.4	15.4	13.9	11.4
****	112	142	131	110
2	1000	1030	1000	0945
	14.0	15.8	16.0	15.8
	11.0	12.0	10.9	11.3
	106	120	109	113
3	1100	1100	1045	1015
	14.5	14.2	16.5	17.8
	12.6	12.4	9.0	10.8
	122	116	91	114
<u>North Fork</u>				
4	1230	1200	1130	1220
	13.0	13.8	14.0	15.6
	11.0	9.8	10.0	10.3
	104	94	96	102
5	1330	1245	1200	1100
	15.5	14.2	16.5	16.6
	9.8	11.0	9.9	10.0
	97	106	100	102
6	1130	1130	1100	1035
	16.0	18.6	18.0	18.2
	9.2	8.3	9.8	9.3
	92	88	103	98

* Time
 ** Water Temperature (°C)
 *** Dissolved Oxygen Concentration (mg/l)
 **** Percent Saturation

Table A-2. Strawberry Creek
Results of Biochemical Oxygen Demand (5 day) Analyses (mg/l)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	< 3.0	< 2.4	< 2.4	< 2.4	< 2.6
2	< 3.0	< 2.4	< 2.4	< 2.4	< 2.6
3	< 3.0	< 2.4	< 2.4	< 2.4	< 2.6
<u>North Fork</u>					
4	< 3.0	< 2.4	< 2.4	< 2.4	< 2.6
5	< 3.0	2.4	< 2.4	3.7	< 2.9
6	< 3.0	5.3	< 2.4	< 2.4	< 3.3

Table A-3. Strawberry Creek
Results of Chemical Oxygen Demand Analyses (mg/l)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	< 5	13	8	< 5	< 8
2	< 5	4	8	10	< 7
3	9	22	12	10	13
<u>North Fork</u>					
4	< 5	4	12	10	< 8
5	< 5	9	< 5	19	< 10
6	< 5	18	< 5	10	< 10

Table A-4. Strawberry Creek
Results of pH Analyses (std. units)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	8.0	8.1	8.2	8.2	8.1
2	8.2	8.2	8.3	8.2	8.2
3	7.9	8.0	8.1	8.0	8.0
<u>North Fork</u>					
4	8.3	8.2	8.1	8.1	8.2
5	8.1	8.2	8.2	8.1	8.2
6	7.7	7.8	7.8	7.7	7.8

Table A-5. Strawberry Creek
Results of Total Alkalinity Analyses (mg/l CaCO₃)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	153	120	145	144	140
2	115	87	122	151	119
3	107	101	121	96	106
<u>North Fork</u>					
4	180	162	152	163	164
5	166	173	135	157	158
6	90	85	84	86	86

**Table A-6. Strawberry Creek
Results of Hardness Analyses (mg/l)**

<u>Station</u>	<u>8/19/87</u>
<u>South Fork</u>	
1	144
2	156
3	100
<u>North Fork</u>	
4	170
5	159
6	92

Table A-7. Strawberry Creek
Results of Conductivity Analyses (umhos/cm)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	442	286	412	390	382
2	374	242	390	442	362
3	350	288	392	276	326
<u>North Fork</u>					
4	460	412	366	406	411
5	454	438	344	416	413
6	270	226	222	236	238

Table A-8. Strawberry Creek
Results of Dissolved Solids Analyses (mg/l)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	280	207	258	264	252
2	210	157	238	275	220
3	203	188	225	174	198
<u>North Fork</u>					
4	252	271	221	247	248
5	260	282	212	245	250
6	150	164	139	148	150

Table A-9. Strawberry Creek
Results of Suspended Solids Analyses (mg/l)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	4.4	3.0	4.2	4.6	4.0
2	2.0	5.4	11.6	4.0	5.8
3	1.4	6.2	3.0	1.1	2.9
<u>North Fork</u>					
4	5.6	4.8	< 1.0	1.4	< 3.2
5	2.8	7.8	12.2	12.3	8.8
6	4.6	8.4	4.2	34.0	12.8

**Table A-10. Strawberry Creek
Results of Turbidity Analyses (NTU)**

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	2.4	2.0	2.9	3.5	2.7
2	1.5	2.5	3.2	4.4	2.9
3	1.5	2.1	2.4	1.6	1.9
<u>North Fork</u>					
4	0.9	1.1	1.0	1.5	1.1
5	2.2	2.1	4.5	4.8	3.4
6	3.3	6.5	4.5	25.0	9.8

**Table A-11. Strawberry Creek
Results of Color Analyses (c.u.)**

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	21	16	10	12	15
2	9	20	16	15	15
3	12	16	8	17	13
<u>North Fork</u>					
4	7	12	6	12	9
5	23	10	20	22	19
6	18	20	25	23	19

**Table A-12. Strawberry Creek
Results of Chloride Analyses (mg/l)**

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	11.2	9.0	23.9	21.0	16.3
2	26.0	22.0	33.0	34.0	28.8
3	23.0	18.0	35.0	18.0	23.5
<u>North Fork</u>					
4	17.0	19.0	9.4	18.0	15.8
5	22.0	21.0	14.5	20.0	19.4
6	9.6	9.5	9.4	12.0	10.1

Table A-13. Strawberry Creek
Results of Oil and Grease Analyses (mg/l)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	< 0.5	< 0.5	1.3	1.6	< 1.0
2	< 0.5	< 0.5	2.5	1.7	< 1.3
3	1.2	< 0.5	1.9	3.1	< 1.7
<u>North Fork</u>					
4	3.2	0.6	19.3	1.6	6.2
5	< 0.5	< 0.5	2.5	1.7	< 1.3
6	< 0.5	< 0.5	31.8	1.4	< 8.6

Table A-14. Strawberry Creek
Results of Total Kjeldahl-Nitrogen Analyses (mg/l)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	0.21	0.74	0.08	0.08	0.28
2	0.17	0.36	0.79	0.19	0.38
3	0.28	0.82	0.14	0.11	0.34
<u>North Fork</u>					
4	0.13	0.20	0.45	0.14	0.23
5	0.53	0.60	0.44	0.32	0.47
6	0.86	1.00	0.42	0.31	0.65

Table A-15. Strawberry Creek
Results of Ammonia-Nitrogen Analyses (mg/l)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	0.04	< 0.02	0.05	0.05	< 0.04
2	0.07	< 0.02	0.09	0.07	< 0.06
3	0.09	0.28	0.09	0.07	0.13
<u>North Fork</u>					
4	0.03	0.02	0.08	0.10	0.06
5	0.31	0.20	0.09	0.09	0.17
6	0.26	0.12	0.42	0.08	0.22

Table A-16. Strawberry Creek
Results of Nitrate-Nitrogen Analyses (mg/l)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	2.4	2.6	0.8	1.0	1.7
2	2.2	1.5	1.9	1.9	1.9
3	2.5	2.5	1.3	1.6	2.0
<u>North Fork</u>					
4	1.6	2.3	2.0	2.8	2.2
5	3.9	3.2	3.7	7.9	4.7
6	4.9	3.8	2.0	3.5	3.6

Table A-17. Strawberry Creek
Results of Total Phosphorus Analyses (mg/1)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	< 0.01	0.46	0.29	0.30	< 0.21
2	0.17	0.28	0.19	0.16	0.20
3	0.39	0.24	0.18	0.13	0.24
<u>North Fork</u>					
4	0.07	0.13	0.08	0.10	0.10
5	0.28	0.44	0.42	0.88	0.50
6	0.33	0.32	0.24	0.46	0.34

Table A-18. Strawberry Creek
Total Coliform Bacteria (Number per 100 ml)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	3,000	2,400	2,400	1,700	2,375
2	9,000	16,000	16,000	1,300	10,575
3	9,000	≥16,000	≥16,000	3,000	≥11,000
<u>North Fork</u>					
4	2,400	9,000	700	16,000	7,025
5	1,300	≥16,000	≥16,000	≥16,000	≥12,325
6	≥16,000	≥16,000	≥16,000	≥160,000	≥52,000

Note: MPN method.

Table A-19. Strawberry Creek
Fecal Coliform Bacteria (Number per 100 ml)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	300	140	300	300	260
2	3,000	170	300	140	902
3	3,000	≥16,000	≥16,000	3,000	≥11,000
<u>North Fork</u>					
4	500	700	700	1,400	825
5	300	5,000	≥16,000	≥16,000	≥10,825
6	≥16,000	>16,000	≥16,000	90,000	≥34,500

Note: MPN method.

Table A-20. Strawberry Creek
Fecal Streptococci Bacteria (Number per 100 ml)

<u>Station</u>	<u>5/27/87</u>	<u>6/19/87</u>	<u>7/22/87</u>	<u>8/19/87</u>	<u>Mean</u>
<u>South Fork</u>					
1	3,000	800	500	800	1,275
2	1,700	16,000	≥16,000	1,300	≥8,750
3	>16,000	>16,000	5,000	1,100	>11,025
<u>North Fork</u>					
4	300	800	800	16,000	4,475
5	130	1,700	800	≥16,000	≥4,658
6	≥16,000	9,000	≥16,000	160,000	≥51,750

Note: MPN method.

**Table A-21. Strawberry Creek
Results of Heavy Metals Analyses (ug/l)**

Station:	----- <u>South Fork</u> -----						----- <u>North Fork</u> -----					
	#1		#2		#3		#4		#5		#6	
Date:	<u>7/22</u>	<u>8/19</u>	<u>7/22</u>	<u>8/19</u>	<u>7/22</u>	<u>8/19</u>	<u>7/22</u>	<u>8/19</u>	<u>7/22</u>	<u>8/19</u>	<u>7/22</u>	<u>8/19</u>
<u>Parameter</u>												
Cadmium	< 1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	1.0	2.0	<1.0	1.0	1.0	<1.0	2.0	1.0	3.0	2.0	1.0	1.0
Copper	1.0	3.0	3.0	2.0	6.0	2.0	4.0	6.0	9.0	7.0	11.0	15.0
Iron	50.0	111.0	100.0	93.0	6.0	62.0	30.0	58.0	150.0	163.0	170.0	93.0
Lead	9.0	<10.0	<2.0	<10.0	31.0	<10.0	<2.0	<10.0	8.0	15.0	<2.0	<10.0
Manganese	10.0	13.0	60.0	34.0	20.0	7.0	10.0	64.0	40.0	44.0	40.0	72.0
Mercury	0.55	0.04	0.02	0.03	0.06	0.04	0.01	0.01	0.38	0.03	0.06	0.08
Nickel	4.0	<2.0	<2.0	4.0	4.0	4.0	<2.0	4.0	5.0	<2.0	2.0	<2.0
Zinc	2.0	2.0	6.0	4.0	6.0	8.0	8.0	6.0	30.0	25.0	15.0	24.0

All Analyses in ug/l