

## Memorandum

To : Files

Date: December 6, 2000

From : Department of Fish and Game - Post Office Box 47, Yountville, California 94599

Subject : Marin-Sonoma Counties Agricultural Runoff Influence Investigation - 1999-2000 Summary

This program, supported in part by funding from the San Francisco Bay Regional Water Quality Control Board, was undertaken as a service to the Marin-Sonoma Animal Waste Committee, and local operators of confined animal feeding operations (CAFO), e.g. stables and dairies. The Department's program is limited to monitoring water quality at 20 stations in San Antonio, Stemple and Americano Creek watersheds of Sonoma County, and 20 stations in the Tomales Bay watershed of Marin County.

The 1999-2000 winter was relatively wet; yet most dairy operators were able to contain enough of their contaminated stormwater from entering local creeks, and causing significant water quality problems. The major exception to this was an incident this spring in upper Stemple Creek where runoff from one or more dairy operations above the study area was found to be the principal causal agent for unacceptable levels of dissolved oxygen, ammonia, and conductivity which moved downstream through the study area over a prolonged period of time. None-the-less, the data set continues to demonstrate the steady improvement in water quality within these watersheds since the early '90s as a result of increased attention to animal waste management by area producers.

### Methods

A water sample was collected from each of 40 stations identified on Figures 1a-e with the aid of an ACE 3-gallon, LRB sampler (little red bucket), and 50 feet of rope. Samples were collected from each station at least biweekly, with the Tomales watershed being sampled on alternating weeks with the Stemple, Americano, and San Antonio Creek watersheds. Some stations were sampled on a more frequent basis as a result of sample collection routing preferences.

All samples were initially collected with the LRB sampler, and then subsampled by immersing a chemically clean, glass, quart jar slowly into the sample as if it were the receiving water. Each subsample was then characterized in the field by measurement of pH, temperature, dissolved oxygen, and electrical conductivity, using a Cole/Parmer Model 5941-00 electronic pH probe, and a YSI Model 85 Dissolved Oxygen-Conductivity-Temperature Meter, respectively.

The quart samples were topped-off, sealed, labeled, placed in a sample carrier, kept cool and transported to the DFG Water Quality Laboratory in Yountville for analysis of turbidity and total ammonia, (usually the next morning), using a Hach Model 2100A Turbidimeter calibrated with Gelex® Secondary Turbidity Standards, and an Orion Model 290A pH/ISE meter with an Orion model 95-12 ammonia electrode. Concentrations of un-ionized ammonia (NH<sub>3</sub>-tox) were calculated according to methods outlined in Morgan and Turner, 1977. Samples were also collected periodically for bacterial analysis in coordination the San Francisco Bay Regional Water Quality Control Board's contract laboratory ( Sequoia Analytical Laboratories, 1455 McDowell Blvd. North, Suite D, Petaluma, CA 94954) as well as by Tomales Bay Oyster Growers and submitted to the County of Sonoma Public Health Laboratory in Santa Rosa for bacterial analysis. Although not an element of this program, laboratory results of bacterial analysis for samples collected at our station locations are included herein.

### Results

The following tables represent descriptive statistics for the 1999-2000 water year as a whole, as well as by watershed. The entire data set arranged by station and date with descriptive statistics is included as Appendix A; summary data by watershed is included as Appendix B; and a summary by water years by station over the period of investigation are contained in Appendix C.

**Table I**  
**All 99-2000 (98-9) Data**

	Dissolved Oxygen mg/l	Total Ammonia mg/l	Un-ionized Ammonia mg/l	Conductivity µmhos/cm
Average *	<b>9.29</b> (10.09)	<b>0.420</b> (1.004)	<b>0.0068</b> (0.014)	<b>577</b> (412)
Range	<b>6.2-10.3</b> ( 2.0-15.9)	<b>0-25.2</b> (0-17.4)	<b>0-1.071</b> ( 0- 0.377)	<b>8-2342</b> (75-1690)
Criteria**	5.0-7.0	-	0.025	750
Exceedances	<b>53</b> (14)	-	<b>39</b> (77)	<b>125</b> (73)
Percent Exceedance	<b>6.36</b> (2)	-	<b>4.68</b> (12)	<b>15</b> (12)

\* 833 measurements

\*\* SF Bay RWQCB Basin Plan

## **Discussion**

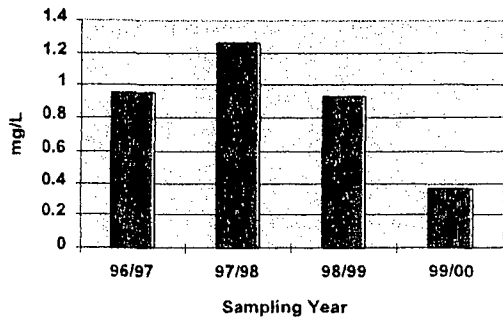
The majority of stations sampled revealed acceptable concentrations of all parameters, e.g. concentration of dissolved oxygen near saturation, low total ammonia and conductivity during most sampling events. Even at those locations where exceedances were locally great, the station averages appeared to indicate that conditions were marginally acceptable, --most of the time. However, it's important to keep in mind that averages of any water quality parameter do not adequately represent the health of the environment, as fish and aquatic life are extremely sensitive to change, and are more likely to be stressed, seriously compromised or even killed by rapid changes in just about any parameter. Likewise, if a lethal threshold of any parameter is reached, even for just a few minutes, i.e. toxic levels of ammonia, or insufficient concentrations of dissolved oxygen, sensitive species of fish or invertebrates upon which they rely for food, will be killed. If the adverse water quality condition dissipates, or is made more acceptable, either by abatement of discharge, reduction of contaminated stormwater runoff, or dilution, the habitat may again be able to sustain life, but few, if any organisms remain. Clearly, if our local streams are to have abundant fish and aquatic life, we must work hard to prevent receiving waters from experiencing these deleterious water quality excursions.

With the early onset of rains in the fall, streams began flowing, and we were again able to begin monitoring by the middle of November. The marginal habitat conditions resulting from oxygen depressions and lethal concentrations of ammonia observed during the first flush in 1998-9 wet weather season was much less pronounced this year. While probably not a true flush, it does represent the effect of mobilized decomposable organics and nutrients, either deposited during the dry season within the stream channels, or washed into channels with the first periods of runoff. Under these low flow conditions pollutants are neither diluted significantly, nor carried out of the system; and bacterial decomposition and conversion of urea and ammonia to nitrate is very active. These adverse conditions can inhibit the later establishment of the food web necessary for the survival of fish and invertebrates which will colonize the habitat when flows increase.

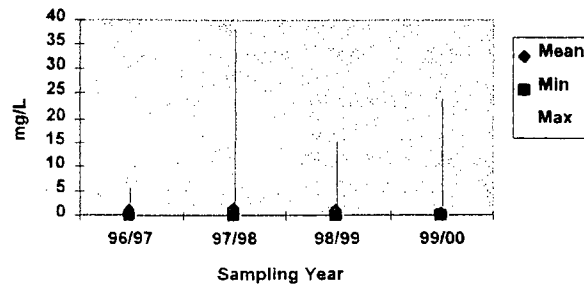
## **Trends**

From Table I, and Figures 1- we can see a dramatic improvement in nearly all parameters. The mean total ammonia concentrations, for example, for all data by year represented in Figure 1 shows an increase of about 30% in 97/98 from the previous winter, but then an equivalent decline in 98/99, followed by an amazing 60% decline in 99/00. The range of total ammonia represented in Figure 2 does not compliment the image of continual improvement, but rather the variability of the worst case scenarios.

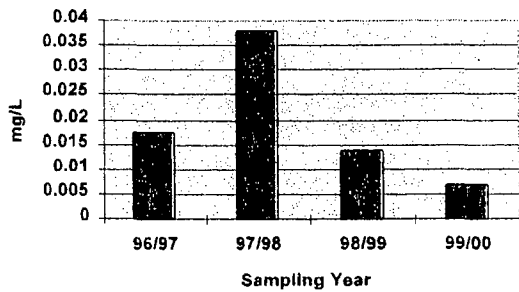
**Figure 1**  
 All Data-Mean Total NH3



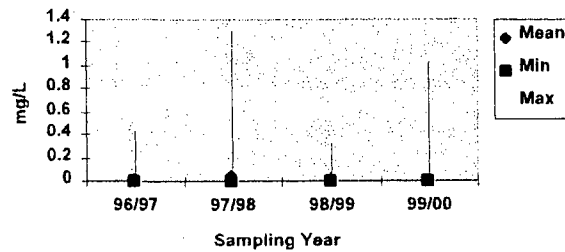
**Figure 2**  
 All Data-Mean Total NH3  
 With Range



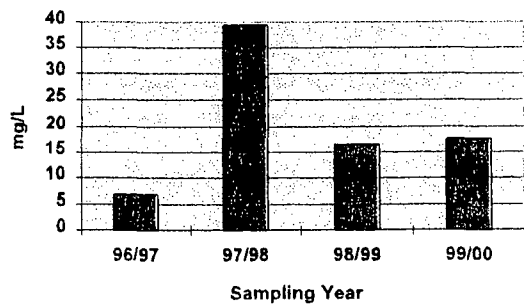
**Figure 3**  
 All Data-Mean Toxic NH3



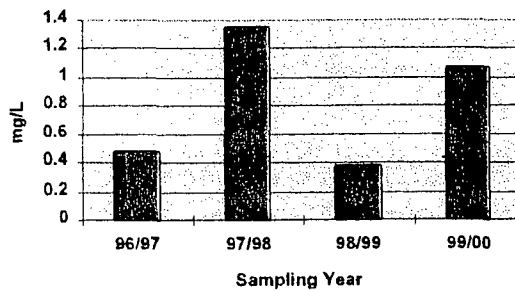
**Figure 4**  
 All Data-Mean Toxic NH3  
 With Range



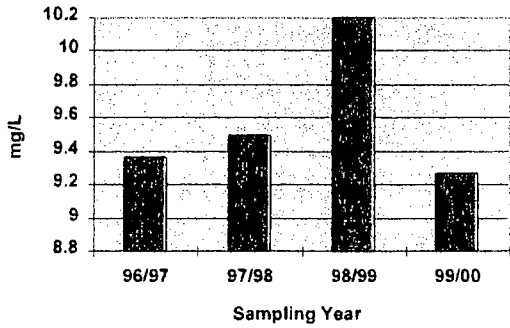
**Figure 5**  
 All Data-Maximum Total NH3



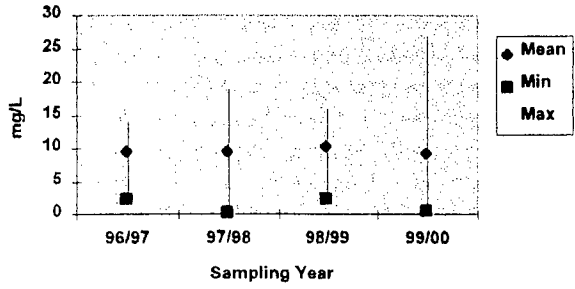
**Figure 6**  
 All Data-Maximum Toxic NH3



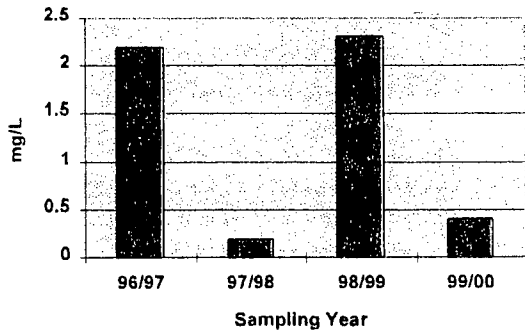
**Figure 7**  
 All Data-Mean D.O.



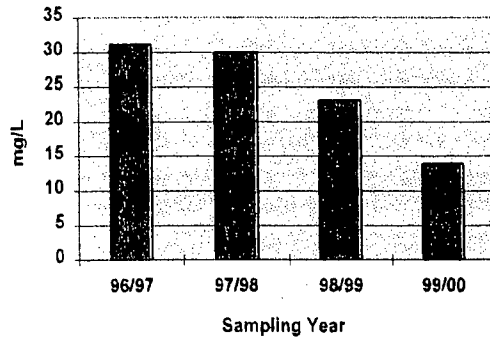
**Figure 8**  
 All Data-Mean D.O.  
 With Range



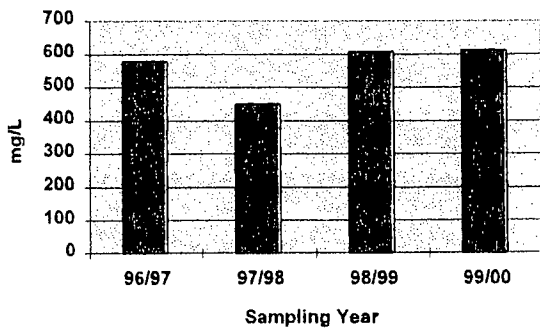
**Figure 9**  
 All Data-Minimum D.O.



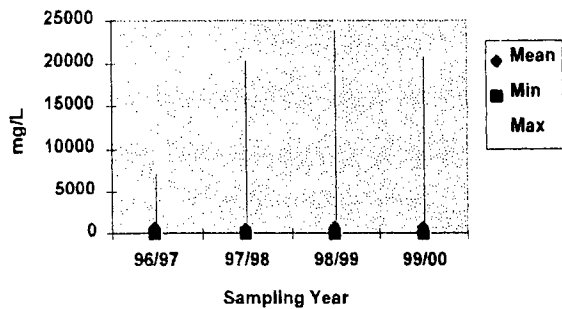
**Figure 10**  
 All Data-Mean Turbidity



**Figure 11**  
 All Data-Mean Conductivity



**Figure 12**  
 All Data-Mean Conductivity  
 With Range



**San Antonio Creek (>Petaluma River)**

Water quality in the San Antonio Watershed, a small basin tributary to the Petaluma river, for which we have the longest continuous record, has shown steady, and at times dramatic improvement over the years. Most recently the tributary sampled as Station 3, a site which has experienced severe fluctuations in both dissolved oxygen and toxic concentrations of ammonia during the past several years, now reveals an entirely different condition; comparable to most reference, or animal-free watersheds. Unfortunately, the change is not attributable to improvements in animal waste management, but rather changes in land use brought about by cessation of dairy operations at a facility located immediately upstream.

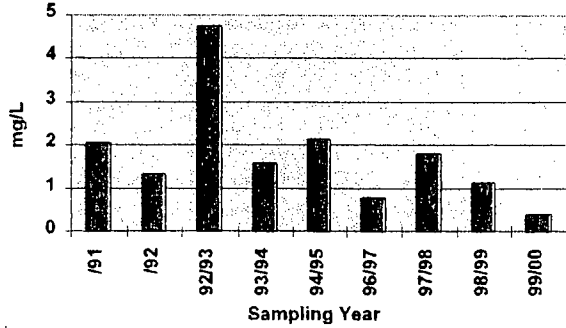
**Table II**  
**San Antonio Creek Watershed**  
 99-00 (98-99)

	Dissolved Oxygen mg/l	Total Ammonia mg/l	Un-ionized Ammonia mg/l	Conductivity µmhos/cm
Average *	<b>9.28</b> (10)	<b>0.4212</b> (1.173)	<b>0.00494</b> (0.0115)	<b>568</b> (463)
Range	<b>1.78 - 22.39</b> (2.0-13.9)	<b>0 - 7.15</b> (0.0-17.4)	<b>0 -0.086</b> (0.0-0.152)	<b>66 - 2092</b> (20-1690)
Criteria**	5.0-7.0	-	0.025	(750)
Exceedance	<b>10</b> (2)	-	<b>14</b> (15)	<b>43</b> (18)
Percent Exceedance	<b>4.88</b> (1.47)	-	<b>6.83</b> ( 11 )	<b>20.98</b> (13.2 )

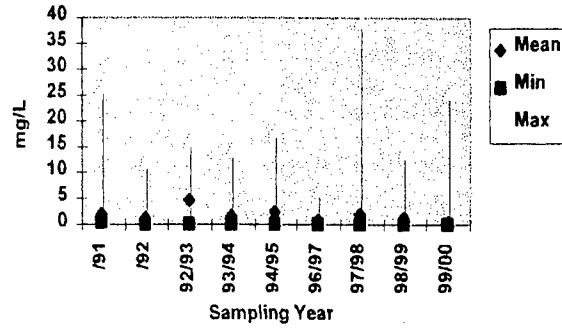
\* 205 (136) measurements

\*\* SF Bay RWQCB Basin Plan

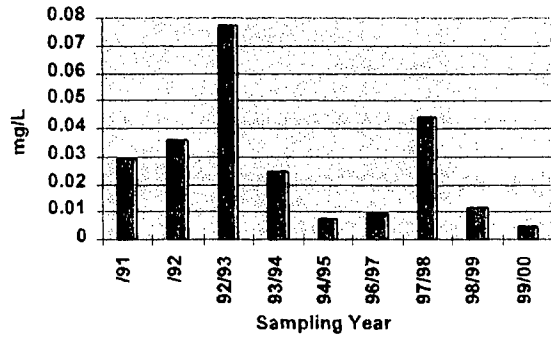
**Figure 13**  
 San Antonio Ck.-Mean Total NH3



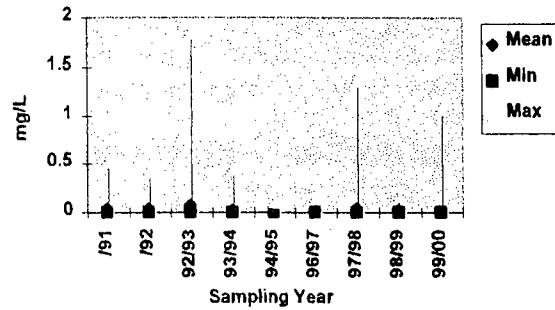
**Figure 14**  
 San Antonio Ck.-Mean Total HN3  
 With Range



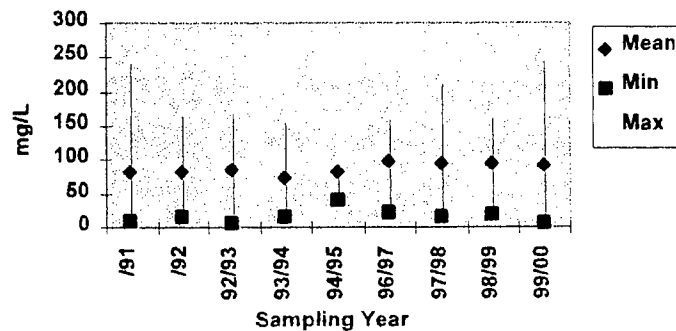
**Figure 15**  
 San Antonio Ck.-Mean Toxic NH3



**Figure 16**  
 San Antonio Ck.-Mean Toxic NH3  
 With Range



**Figure 17**  
 San Antonio Ck.-Mean Percent Sat.  
 With Range



**Ellis Creek Watershed (>Petaluma River)**

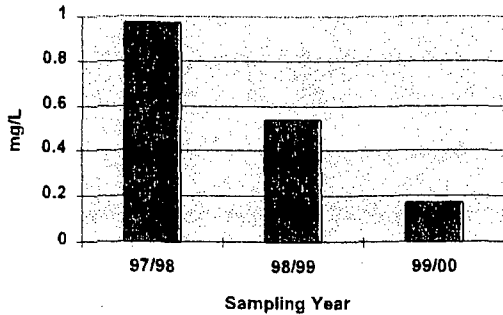
Mean concentrations of dissolved oxygen have dipped slightly, while those for total and un-ionized ammonia have improved dramatically. The continued excursions of conductivity, especially during the higher flow periods, reflects the increasing load of salts from animal wastes in the watershed.

**Table III**  
**Ellis Creek Watershed**  
**99-00 (98-9) Data**

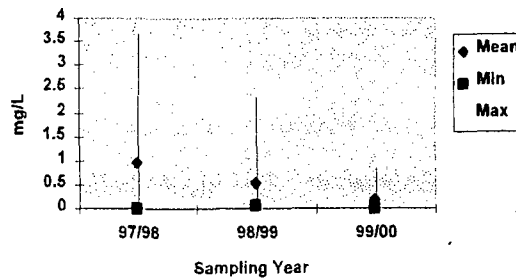
	Dissolved Oxygen mg/l	Total Ammonia mg/l	Un-ionized Ammonia mg/l	Conductivity µmhos/cm
Average *	9.38 (11.3)	0.1693 (0.534)	0.003921 (0.0226)	998 (790)
Range	2.98 - 15.8 ( 8.0-15.9)	0.0 - 0.94 (0.07-2.45)	0.0 - 0.0262 (0.001-0.058)	489 - 1980 (330-1070)
Criteria**	5.0-7.0	-	0.025	(750)
Exceedance	3 (13)	-	1 (4.3)	24 ( 9)
Percent Exceedance	10.34 (0)	-	3.5 (53)	79.3 (50)

\* 29(18) measurements  
 \*\* SF Bay RWQCB Basin Plan

**Figure 18**  
**Ellis Ck.-Mean Total NH3**

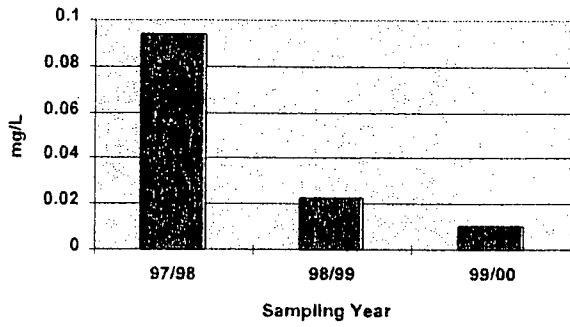


**Figure 19**  
**Ellis Ck.-Mean Total NH3**  
**With Range**

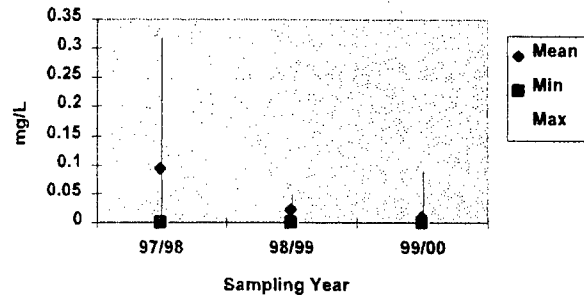




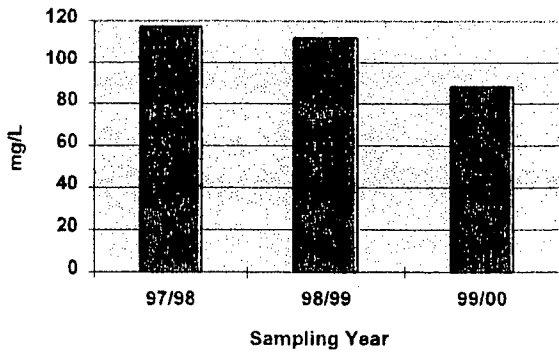
**Figure 20**  
Ellis Ck.-Mean Toxic NH3



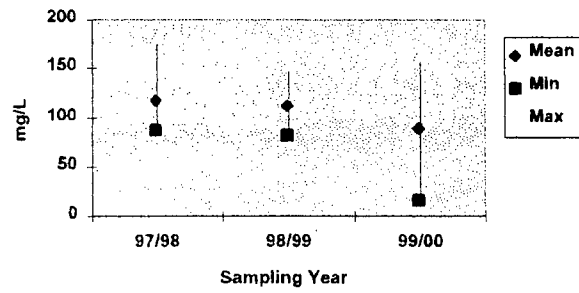
**Figure 21**  
Ellis Ck.-Mean Toxic NH3  
With Range



**Figure 22**  
Ellis Ck.-Mean Percent Sat.



**Figure 23**  
Ellis Ck.-Mean Percent Sat.  
With Range





**Stemple Creek Watershed (>Estero Americano> Pacific Ocean)**

Data from Table IV (below) show a significant reduction in the average dissolved oxygen, and percent saturation with only a slight improvement in the average total and un-ionized ammonia. The range of all parameters was greater this year than last, representing the influence of a single, but long-term excursion in water quality which resulted from a release of animal wastes upstream of the study area. The extremely low dissolved oxygen concentrations (<1ppm), the extremely high concentrations of total and un-ionized ammonia (17.4, and 1.07ppm respectively) together with increased conductivity would be lethal to any and all aquatic life, sensitive or not, during it's prolonged existence in the creek. This release of animal wastes was sufficient to negate the water quality improvements realized in the previous year; and emphasizes the point that continued continued water quality improvement is a cumulative function of everyone working together.

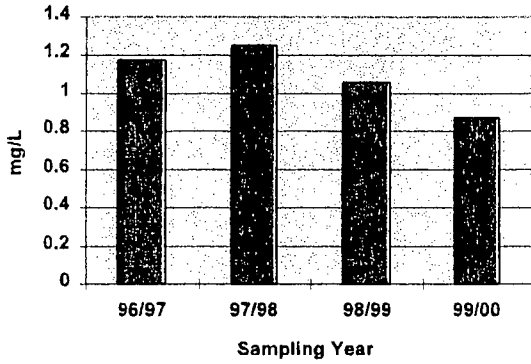
**Table IV  
 Stemple Creek Watershed  
 99-00 (98-9) Data**

	Dissolved Oxygen mg/l	Total Ammonia mg/l	Un-ionized Ammonia mg/l	Conductivity µmhos/cm
Average *	<b>8.9</b> (10.1)	<b>0.876</b> ( 1.055)	<b>0.0180</b> ( 0.0194)	<b>546</b> (437)
Range	<b>0.75 - 27.71</b> (2.7-15.9)	<b>0.0 - 17.4</b> (0.07-8.95)	<b>0.0 - 1.071</b> (0.0-0.229)	<b>6 - 1789</b> (75-1200)
Criteria**	5.0-7.0	-	0.025	(750)
Exceedance	<b>23</b> (7)	-	<b>19</b> ( 35)	<b>27</b> (11)
Percent Exceedance	<b>11</b> (3.6)	-	<b>9.3</b> (17.85)	<b>13</b> (5.6)

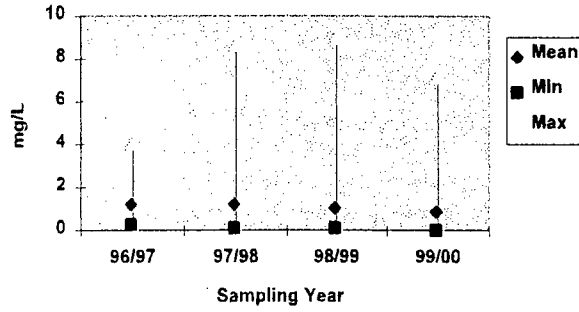
\*203 (196 ) measurements

\*\* SF Bay RWQCB Basin Plan

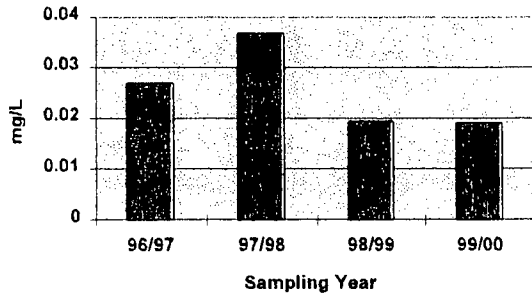
**Figure 24**  
 Stemple Ck.-Mean Total NH3



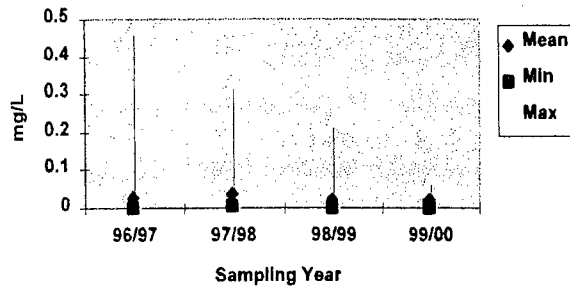
**Figure 25**  
 Stemple Ck.-Mean Total NH3  
 With Range



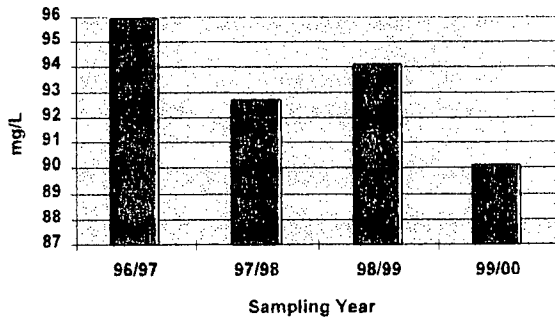
**Figure 26**  
 Stemple Ck.-Mean Toxic NH3



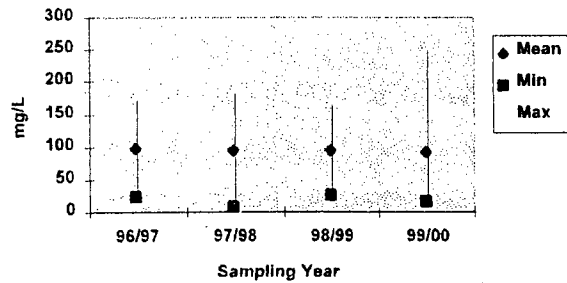
**Figure 27**  
 Stemple Ck.-Mean Toxic NH3  
 With Range



**Figure 28**  
 Stemple Ck.-Mean Percent Sat.



**Figure 29**  
 Stemple Ck.-Mean Percent Sat.  
 With Range



**Bloomfield Fork of Americano Creek (>Americano Creek> Estero San Antonio)**

Water quality in this sub basin had been steadily improving over the past 10 years; however, that trend was quickly, and significantly reversed this year due to release of animal wastes at Station 16. the average total ammonia increased by 280% over last season's average, while the maximum increased by nearly an order of magnitude. The number, and percentage of exceedances as well as the maximum conductivity increased dramatically. This, again, demonstrates the effect of one producer's management on receiving water quality of the entire sub-basin.

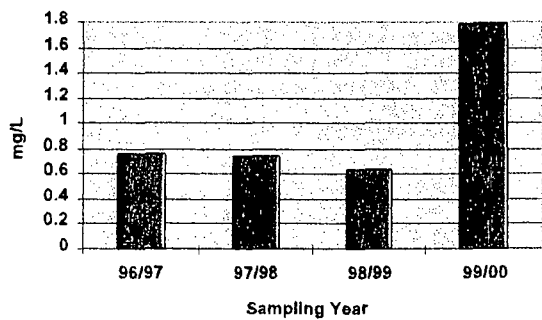
**Bloomfield Fork  
 99-00 (98-9) Data**

	Dissolved Oxygen mg/l	Total Ammonia mg/l	Un-ionized Ammonia mg/l	Conductivity µmhos/cm
Average *	7.68 (9.76)	1.938 (0.684)	0.010 (0.007)	447 (334)
Range	1.62-12.6 (6.0-12.8)	0-25.2 (0.1-2.73)	0-0.201 (0.001-0.043)	190-1127 (75-650)
Criteria**	5.0-7.0	-	0.025	(750)
Exceedance	5 (0)	-	3 (0)	1 (0)
Percent Exceedance	13 (0)	-	7.9 (0)	2.6( 0)

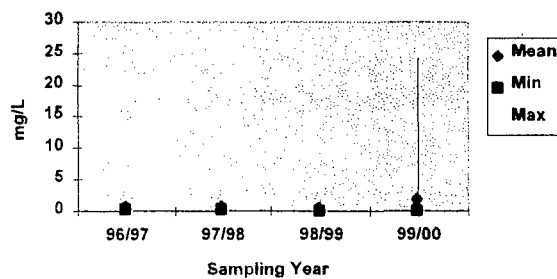
\*38 (31) measurements

\*\* SF Bay RWQCB Basin Plan

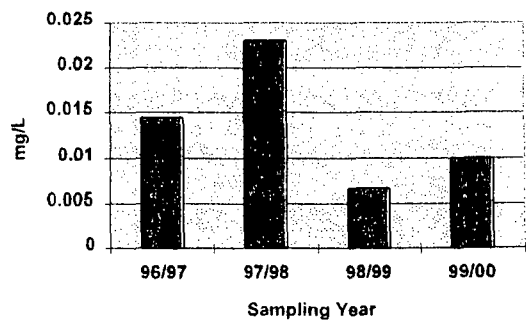
**Figure 30**  
Bloomfield Trib.-Mean Total NH3



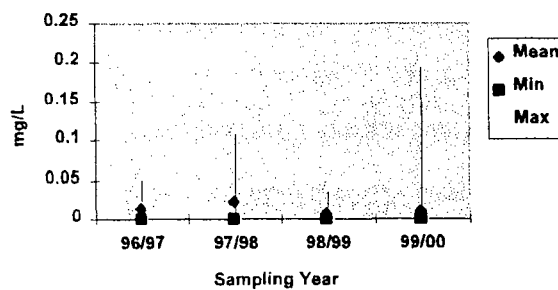
**Figure 31**  
Bloomfield Trib.-Mean Total NH3  
With Range



**Figure 32**  
Bloomfield Trib.-Mean Toxic NH3



**Figure 33**  
Bloomfield Trib.-Mean Toxic NH3  
With Range



**Tomales Bay Watershed (>Pacific Ocean)**

Twenty (20) stations were sampled again this year along the south and eastern shoreline of Tomales Bay at bridges or culverts under Hwy 1 wherever flow could be sampled. No attempt was made to specifically sample streams draining known dairy lands. Many of the tributary streams flow from areas which do not contain any confined animal operations, and as such provide a good reference.

With three notable exceptions, water quality parameters for samples collected within this watershed were very good. D.O. was consistently at or near saturation, total ammonia was low, with a notable exception, the toxic form of ammonia was low, and conductivity showed some slight improvement.

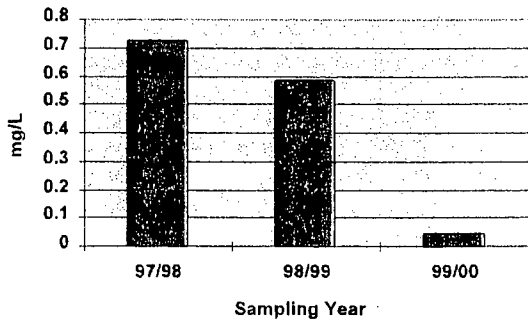
**Tomales Bay Watershed  
 99-00 (98-9) Data**

	Dissolved Oxygen mg/l	Total Ammonia mg/l	Un-ionized Ammonia mg/l	Conductivity µmhos/cm
Average *	<b>9.87</b> (10.1)	<b>0.061</b> (0.678)	<b>0.001</b> (0.0071)	<b>624</b> (781)
Range	<b>0.4-14.2</b> (6.4-9.0)	<b>0-3.45</b> (0-14.0)	<b>0-0.109</b> (0-0.19)	<b>8-21,500</b> ( 85-24,500)
Criteria**	5.0-7.0	-	0.025	(750)
Exceedance	<b>5</b> (1)	-	<b>3</b> (14)	<b>28</b> (9)
Percent Exceedance	<b>1.5</b> (<1)	-	<b>&lt;1</b> (6.4)	<b>8.5</b> (4.1)

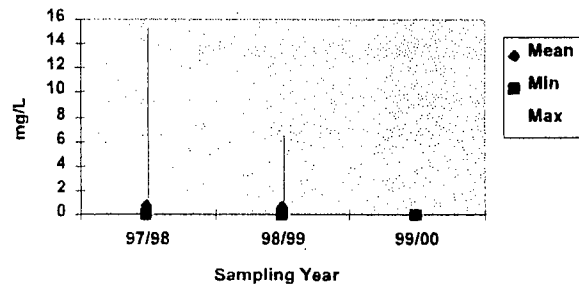
\*329 measurements

\*\* SF Bay RWQCB Basin Plan

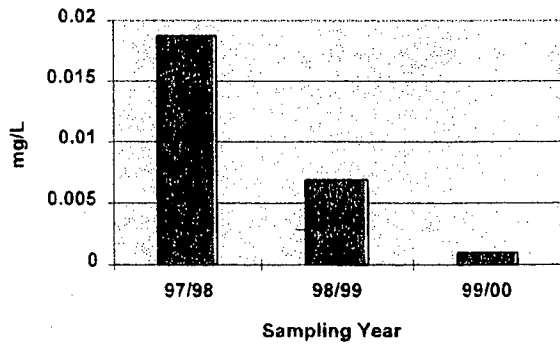
**Figure 34**  
 Tomales Tribs.-Mean Total NH3



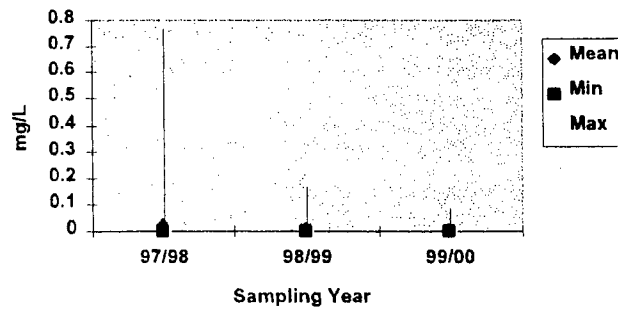
**Figure 35**  
 Tomales Tribs.-Mean Total NH3  
 With Range



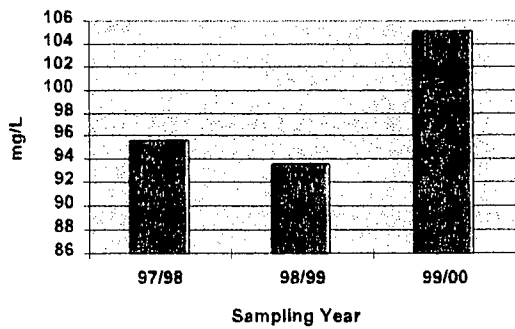
**Figure 35**  
 Tomales Tribs.-Mean Toxic NH3



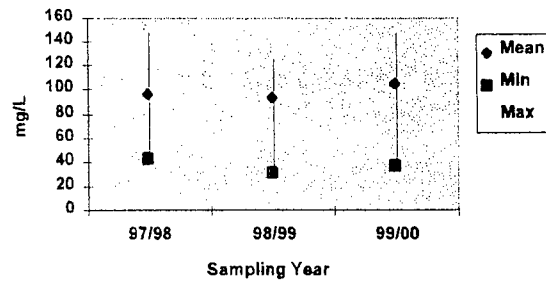
**Figure 36**  
 Tomales Tribs.-Mean Toxic NH3  
 With Range



**Figure 38**  
 Tomales Tribs.-Mean Percent Sat.



**Figure 39**  
 Tomales Tribs.-Mean Percent Sat.  
 With Range



Files  
MSCARII 99-00  
December 6, 2000  
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### **Conclusions**

The nearly normal winter did not create any serious water quality problems in most streams within the study area. Water quality problems encountered were principally the result of runoff of animal wastes from loafing areas, walkways, or disposal areas, or the resultant eutrophication and disruptive effects upon oxygen dynamics. Operators who experienced problems were contacted by Committee members or Western United Dairymen and responded appropriately to provide the necessary interim corrective action. Most problems encountered were not related to the unusual rainfall pattern, but rather to poor planning or management on the part of a few operators. Increased participation by operators on the Animal Waste Committee, together with completion of the UC Cooperative Extension Ranch Planning Workshops could bring about the necessary improvements in water quality.

If there are any questions on the sample methods, station locations, data or its evaluation, please give me a call at (707) 944-5523.



Michael E. Rugg  
Water Quality Biologist  
Region 3



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**Appendix A**  
**1998-99 Data Set**

California Department of Fish and Game Marin-Sonoma County Agricultural  
Runoff Influence Investigation Tomales Bay and Ellis Creek Watersheds -  
Report for 1999-2000

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
1	1/24/00	7.2	12.3	9.74	91.4	3.35	0.012	129	210
1	2/7/00	7.3	10.8	11.4	103	0	0	290.9	10
1	2/22/00	7.4	12	8.97	83.3	0.019	0	242.3	17
1	3/28/00	7.7	11.2	11.4	105	0.0312	0.0003	381.8	3.4
1	4/4/00	7.4	14.8	7.7	76.2	0	0	458	3.9
1	4/10/00	7.8	14.4	10.4	101.4	0	0	490	2.2
1	4/18/00	7.6	13	10.75	102.1	0.152	0.0014	370.4	13
1	4/24/00	7.6	15.6	8.29	83.3	0	0	477	2.5
1	5/2/00	7.5	16.5	7.61	77.6	0.0326	0.0003	571	3.7
1	5/7/00	7.6	16	12.04	122.2	0.0057	0.0001	531	3.5
1	5/16/00	7.5	16	10.11	102.4	0	0	526	2.3
1	5/24/00	7.5	18.4	6.16	65.6	0.0702	0.0008	578	2
1	5/31/00	7.6	17.3	7.87	82.1	0	0	563	1.6
1	6/7/00	7.4	17.6	7.41	77.8	0	0	563	2.3
1	6/13/00	8.2	20.3	6.58	72.6	0.0615	0.0036	604	1.1
1a	12/20/99	7.4	9.4	7.2	62	0	0	671	1
1a	1/10/00	7	11.6	9.47	87	0.35	0.001	781	
1a	1/24/00	7.2	12.3	9.77	91.3	3	0.011	130	180

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
1a	2/7/00	7.1	10.8	11.7	106	0	0	283	
1a	2/22/00	7.4	11.8	9.02	83.3	0	0	235.1	20
1a	3/20/00	7.8	12.1	11.96	111	0.0076	0	325	3.8
1a	3/28/00	7.9	11.2	12.4	113.5	0	0	369.7	2.2
1a	4/4/00	7.7	14.5	7.5	73.6	0	0	450.5	1.9
1a	4/10/00	7.8	13.4	10.5	101.5	0	0	464	2
1a	4/18/00	7.6	13.6	9.29	89.3	0.156	0.0015	368	13
1a	4/24/00	8	15.5	10.4	104.2	0	0	471	1.9
1a	5/2/00	7.8	16.8	8.84	91.3	0.0007	0	523	2.7
1a	5/7/00	7.8	15.8	13.04	131.8	0.0098	0.0002	529	2
1a	5/16/00	7.8	16.3	10.68	108.9	0	0	519	1.9
1a	5/24/00	7.6	19.2	5.53	60.1	0.0256	0.0004	578	1.6
1a	5/31/00	7.8	17.7	7.41	77.8	0	0	598	1.9
1a	6/7/00	7.5	17.8	6.88	72.8	0	0	463	2
1a	6/13/00	8.3	20.5	5.27	58.6	0.0206	0.0016	524	1.5
2	11/17/99	7.7	10.7	7.8	69.6	0.16	0.002	630	8
2	12/15/99	7.5	6.8	8.7	71.5	0.13	0	568	2
2	12/20/99	7.4	8.1	7	60	0.07	0	587	2
2	1/10/00	6.9	11.6	8.2	76	0.26	0	618	
2	1/24/00	7.1	12.5	9.11	85.6	1.73	0.005	203	100
2	2/7/00	7	10.3	11	99	0.005	0	356.1	6
2	2/22/00	7.3	11.8	9.23	85.2	0.083	0	249.3	25

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
3	5/2/00	7.8	16.6	8.83	90.6	0.0741	0.0014	399.8	15
3	5/7/00	7.8	15.6	12.39	124.4	0.0541	0.001	416.7	9
3	5/16/00	7.7	16.2	10.26	104.4	0	0	431.9	9
3	5/24/00	7.6	17.8	7.25	76.3	0.0454	0.0006	447.2	19
3	5/31/00	7.8	16.6	8.44	86.4	0	0	334.2	8.5
3	6/7/00	8	16.4	8.05	82.4	0	0	382.4	7.9
3	6/13/00	8.5	19.2	7.55	81.6	0.0185	0.0019	466	6.3
4	11/17/99	7.6	10.9	1.78	16	1.4	0.011	734	31
4	12/15/99	7.4	10.7	2.82	23.2	1.575	0.008	280	4
4	12/20/99	7.3	7.9	2	17	0.92	0.003	676	3
4	1/10/00	7	6.4	7.2	58.5	0.45	0.001	627	6
4	1/24/00	7.5	12.2	9.65	89.5	2.23	0.015	125.8	120
4	2/7/00	7.3	11.6	10.7	99	0.027	0	290	10
4	2/22/00	7.3	11.7	7.94	73.3	0	0	247.3	20
4	3/20/00	7.8	11.7	12.6	116.7	0.042	0	317	4.7
4	3/28/00	7.7	11.4	9.97	91.6	0	0	365.8	4.1
4	4/4/00	7.7	15.3	6.7	67.3	0.0327	0.0005	464	3.4
4	4/10/00	8.6	15	10.1	100.6	0	0	470	3.4
4	4/18/00	8	13.9	7.65	74.1	0.145	0.0036	375.3	12
4	4/24/00	7.8	16.1	7.1	72.1	0.0742	0.0001	470	7
4	5/2/00	7.5	17.1	5.83	60.5	0.0176	0.0002	544	6
4	5/7/00	7.5	16.3	9.86	100.5	0.156	0.0015	536	6.4

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
4	5/16/00	7.6	16.4	9.68	99	0.0892	0.0011	531	5.9
4	5/24/00	7.4	19.2	4.07	44.5	0.178	0.0016	619	2.9
4	5/31/00	7.6	16.1	4.14	41.9	0	0	646	4.8
4	6/7/00	7.4	16.9	6.05	62.5	0	0	696	3
4	6/13/00	8.1	18.6	3.08	32.7	0.712	0.0305	707	2.9
4a	12/20/99	7.6	7.8	7	59	0.25	0.002	768	2
4a	1/10/00	7.2	11.7	10.3	95	0.9	0.003	370	70
4a	1/24/00	7.5	12.7	9.63	89	1.15	0.008	189	200
4a	2/7/00	7.5	11.1	11.9	108	0	0	379	3
4a	2/22/00	7.2	11.3	9.59	87.7	0.03	0	312	13
4a	3/20/00	7.6	12.7	10.8	101.3	0	0	475	2.5
4a	3/28/00	7.7	10.8	11	99.6	0	0	537	2.9
4a	4/4/00	7.7	13.1	9.4	89.5	0	0	644	2.6
4a	4/10/00	8.5	14.1	14.6	141.4	0	0	689	1.9
4a	4/18/00	8.1	13.2	10.2	106.9	0	0	504	5.3
4a	4/24/00	8.2	13.9	13.39	129.6	0	0	660	2.1
4a	5/2/00	8	14.9	11.17	112.4	0.0198	0.0005	703	3.1
4a	5/7/00	8.1	14.6	15.52	152.1	0.0303	0.001	681	2.4
4a	5/16/00	8	14.3	12.03	116.4	0	0	673	2.5
4a	5/24/00	7.7	17.6	5.81	60.4	0.0769	0.0013	797	2.3
4a	5/31/00	8.1	15.1	8.1	79.8	0	0	764	2.4
4a	6/7/00	8.1	15.9	10.38	104.4	0	0	794	1.5

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
4a	6/13/00	8.8	18.1	2.96	31.1	0.435	0.0774	828	2
5	1/24/00	7	12.9	7.96	75.4	3.45	0.008	323	125
5	2/7/00	7.2	13.1	10.3	98	0.763	0.003	451	10
5	2/22/00	7.3	11.2	8.99	82	0.731	0.003	250.3	28
5	3/20/00	7.9	15.9	11.2	112.7	0.03	0.002	403	13
5	3/28/00	7.7	12.6	10.8	102.6	0	0	505	5.6
5	4/4/00	7.8	13.2	9.3	89.8	0.148	0.0022	559	6.2
5	4/10/00	8.3	16.1	9.5	97.4	0.247	0.0137	631	84
5	4/18/00	7.9	15.3	9.32	93.3	0.527	0.0116	557	19
5	4/24/00	8.3	18.5	9.39	100.9	0.15	0.0011	700	9.4
5	5/2/00	7.9	17.3	8.76	90.9	0.15	0.0038	691	17
5	5/7/00	7.9	15.8	12.47	125.7	0.13	0.003	729	9.4
5	5/16/00	7.9	18.5	10.01	106.9	0.0766	0.0021	793	9.4
6	11/17/99	7.2	13.3	6.4	60.6	0.48	0.002	209	19
6	12/20/99	7.6	10	7.7	69	0.18	0.001	393	1
6	1/10/00	6.9	11.2	10.1	92.3	0.225	0	282	18
6	1/24/00	6.4	12.3	9.27	86.3	1.2	0.001	88	80
6	2/7/00	7	11.9	6.71	62	0	0	284	12
6	2/22/00	7.1	11.4	7.22	66.2	0	0	233.9	21
6	3/20/00	7.5	12.4	11.8	110.7	0.481	0.0016	243.2	7
6	3/29/00	8	8.8	9.7	85.1	0	0	288.2	6
6	4/3/00	8.3	18.7	14.2	150.3	0.0619	0.00425	368	3.6

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
6	4/10/00	7.8	13.6	10.1	96.6	0.386	0.0059	336.9	5.6
6	4/17/00	7.4	15.5	8.1	81	0.0306	0.0002	528	35
6	4/24/00	8.1	17.5	11.19	115.4	0.723	0.0029	426	6.4
6	5/2/00	7.4	13.9	8.49	82.2	0.0355	0.0002	352.9	5.5
6	5/7/00	7.3	13.6	12.23	117.5	0.0264	0.0001	327.8	2.8
6	5/16/00	7.3	14.9	9.24	91.5	0	0	370	3.9
6	5/24/00	7.5	23.9	7.4	87.7	0.057	0.0009	433.2	3.6
6	5/31/00	7.4	15	5.99	60.2	0	0	363.1	2.2
6	6/7/00	7.7	17.4	7.23	75.7	0	0	370.4	3.4
6	6/13/00	8	20.2	6.13	67.3	0.104	0.004	399.2	1.2
7	1/24/00	7.1	12.4	9.09	85.4	1.15	0.003	452	70
7	2/7/00	7.3	11.9	9.3	86.6	0.001	0	563	12
7	2/22/00	7.3	11.6	8.57	79	0.198	0.001	318.4	20
7	3/20/00	7.3	12.9	9.13	86.5	0.0246	0	609	21
7	3/29/00	7.7	9.9	8.9	79	0	0	642	5.4
7	4/3/00	8	20.2	10.5	112.5	0	0	826	3.9
7	4/10/00	7.5	13.3	9.5	90	0.297	0.0022	799	6.8
7	4/17/00	7.6	17.6	9.2	96.5	0.0673	0.0009	718	12
7	4/24/00	7.7	16.4	9.1	93.2	0	0	825	4.5
7	5/2/00	7.4	14.3	7.2	70.1	0.0437	0.0003	809	4.3
7	5/7/00	7.3	13.7	10.45	100.9	0.0093	0	748	3.9
7	5/16/00	7.6	14.4	8.92	87.2	0	0	706	3.6

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
7	5/24/00	7.6	19.9	10.94	119.3	0.0555	0.0009	971	2.5
7	5/31/00	7.6	12.9	7.84	73.8	0	0	1015	2.7
7	6/7/00	7.9	14.4	8.08	79	0.0588	0.0012	1246	2.6
7	6/13/00	8.3	17.3	7.69	78.9	0	0	1392	2.3
7a	12/15/99	7.7	7	2.51	21.2	3.5	0.026	550	17
7a	1/10/00	7.4	11.1	6.3	58	7.15	0.036	1011	84
7a	1/24/00	7.3	12.7	8.96	84.3	1.975	0.009	341	70
7a	2/7/00	7.5	12.1	10.3	97.6	0.5	0.003	521	12
7a	2/22/00	7.3	11.4	8.51	78.1	1.84	0.008	350.2	24
7a	3/20/00	8	13.8	13.5	130.7	0.0316	0	526	10
7a	3/29/00	8.2	9.1	10	85.5	0.23	0.006	553	10
7a	4/3/00	8.3	22.9	8.9	104.2	0.485	0.0435	845	4.3
7a	4/10/00	7.7	14.1	7.9	76.4	0.884	0.0011	778	7.8
7a	4/17/00	8	19.3	10.5	114.5	0.8	0.0295	554	27
7a	4/24/00	7.9	21	7.92	88.9	0.492	0.0016	893	7.1
7a	5/2/00	7.6	15.5	5.79	58.4	0.141	0.0016	831	6
7a	5/7/00	7.5	14.5	9.77	96.1	0.12	0.001	782	5.1
7a	5/16/00	7.4	15	8.17	81.3	0.453	0.0031	812	7.1
7a	5/24/00	7.9	23.5	10.94	129.3	0	0	1157	15
7a	5/31/00	7.6	15.2	6.27	62.5	0.176	0.0019	978	5.4
7a	6/7/00	7.7	15.2	7.35	73.3	0	0	1065	8.5
7a	6/13/00	8.5	19.8	11.86	126.1	0.664	0.0743	1259	4.5

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh



STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
8	11/17/99	7.9	12.3	1.85	17.9	4.85	0.086	2092	20
8	12/15/99	7.5	13.8	10.25	105.4	1.25	0.01	1170	6
8	12/20/99	8	12.1	11.3	101	2.73	0.058	1796	4
8	1/10/00	7.4	12	10	94	2.4	0.013	980	64
8	1/24/00	7.3	12.8	8.67	82.3	2.23	0.01	317	76
8	2/7/00	7.6	13.2	11.5	110	0.72	0.007	563	13
8	2/22/00	7.4	11.5	8.87	81.4	0.546	0.003	347.7	18
8	3/20/00	8.2	14.9	14.5	146.7	0.0542	0.001	577	16.5
8	3/29/00	7.9	9.6	8.4	74	0	0	609	8.2
8	4/3/00	8.6	25	14.5	172.4	0.276	0.0511	966	4.3
8	4/10/00	8	17.3	11.5	120	0	0	865	6
8	4/17/00	8	19.5	10.4	113.7	1.28	0.0472	592	18
8	4/24/00	9.2	22.5	22.39	254.4	0.0835	0.0036	886	2.4
8	5/2/00	8.2	16.4	7.92	81.2	0.0645	0.003	902	1.5
8	5/7/00	7.8	15.7	11.51	116.3	0.0353	0.0006	816	2.2
8	5/16/00	7.6	16	8.44	86	0.148	0.0017	886	5.4
8	5/24/00	8.5	28.9	11.3	148.2	0.216	0.041	1312	2.5
9	11/17/99	7.9	13.1	4.4	42.6	3.7	0.068	1422	29
9	12/15/99	7.5	9.5	12.49	112.3	0.45	0.003	500	3
9	12/20/99	8	11.4	11.3	104	0.58	0.012	766	2
9	1/10/00	7.2	11.6	7.8	72.4	1.4	0.005	863	27
9	1/24/00	6.5	12.4	9.5	88.6	2.23	0.002	101	90

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
9	2/7/00	7.2	13.3	9.35	89.3	0.009	0	281.1	18
9	2/22/00	7.2	11.6	6.6	60.6	0	0	216.6	20
9	3/20/00	8	14.9	14.2	141	0.032	0	285	4.6
9	3/29/00	7.9	10.2	10	88.1	0	0	316.5	3.1
9	4/3/00	8.5	21.5	13.3	150.5	0	0	449.6	4
9	4/10/00	8	16.5	12.1	123.6	0	0	421.8	6.5
9	4/17/00	7.9	17.3	11.3	116.3	0.372	0.0095	330	24
9	4/24/00	8.9	20.3	17.73	196.7	0	0	440.4	4.6
9	5/2/00	7.7	16.8	9.28	95.8	0.0425	0.0007	473	2.2
9	5/7/00	7.6	15.6	12.48	125.3	0.0356	0.0004	419.8	3
9	5/16/00	7.6	15.9	9.32	94.5	0	0	466	2.5
9	5/24/00	8.3	28.7	12.46	161.7	0.0441	0.0006	652	2.2
9	5/31/00	7.8	15.6	8.28	83.6	0	0	550	1.7
9	6/7/00	7.9	16.7	8.32	85.9	0	0	622	2.5
9	6/13/00	8.5	20.9	8.55	95.9	0.0396	0.0047	714	1.3
10	11/17/99	7.4	14.2	9.2	91	0.19	0.001	787	2
10	12/15/99	7.1	10.1	8.3	73	0.26	0.001	470	3
10	12/20/99	7.3	14.9	5.8	62	1.75	0.01	16	3
10	1/10/00	6.7	12.1	8.3	77.2	0.375	0	1789	38
10	1/24/00	7.2	12.6	8.02	75.5	2.8	0.01	351	73
10	2/7/00	7.3	13.8	9.1	88.7	0.701	0.004	387	15
10	2/22/00	7.2	12.7	8.26	77.9	0.428	0.002	247.4	23

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
10	3/20/00	7.5	14.6	10.3	102	0.0279	0	336	9
10	3/28/00	9.1	15.9	14	141.2	0	0	383.5	4.4
10	4/4/00	8.9	17.2	9.6	101.1	0	0	440.2	7.3
10	4/10/00	7.9	18.7			0	0	473	5.1
10	4/18/00	7.2	17	7.56	78.3	0.695	0.0035	361.5	32
10	4/24/00	7.9	18.4	9.99	107.1	0.0318	0.0009	410.3	16.5
10	5/2/00	8	18.1	10.9	116	0.0075	0.0002	409.6	5.6
10	5/7/00	7.7	19.4	12.42	134.2	0.0081	0.0002	424.3	6.1
10	5/16/00	8	19.4	11.2	121.1	0	0	114.4	3.9
10	5/24/00	7.5	21.4	7.04	79.6	0.002	0	502	3.9
10	5/31/00	7.8	22.1	8.15	93	0	0	532	5.5
10	6/7/00	7.8	20.8	6.9	76.5	0	0	515	3.7
10	6/13/00	8.2	23.8	6.95	82.5	0.0533	0.0041	558	2
11	11/17/99	7.7	16.1	8.9	91.5	0.06	0.001	710	4
11	12/15/99	7.3	9	11.8	106	0.07	0	608	7
11	12/20/99	8.4	12.5	10.7	101	0.45	0.024	645	60
11	1/10/00	7.4	11.5	12.1	112	0.375	0.002	564	18
11	1/24/00	7.1	12.5	5.51	51.9	4	0.011	330	85
11	2/7/00	7.2	13.9	8.06	78.5	0.361	0.001	363.9	12
11	2/22/00	7.1	12	8.05	74.6	0.636	0.002	261.8	22
11	3/20/00	7.2	15.2	8.6	85.6	0.831	0.0029	421.3	7.9
11	3/28/00	8.4	16.1	11.7	119.3	0	0	453.9	6.9

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
11	4/4/00	7.9	17.8	7.2	75.9	0	0	514	4.5
11	4/10/00	7.9	17.5	11.7	121.8	0	0	636	2.1
11	4/18/00	7.1	17.6	6.4	67.2	1.58	0.0065	470	32
11	4/24/00	8	18.3	11.07	117.9	0.0103	0.0001	444.7	19.5
11	5/2/00	8	17.9	10.02	106.1	0.0101	0.0003	481	6.4
11	5/7/00	7.7	18.7	12.89	138.4	0.0034	0.0001	492	9.5
11	5/16/00	8.1	19.2	11.16	120.4	0	0	515	6.4
11	5/24/00	7.7	22.6	7.51	86.7	0.0338	0.0008	564	5.5
11	5/31/00	8.6	22.8	9.93	115.6	0	0	633	7
11	6/7/00	8.9	22.2	14.24	164.7	0	0	667	18
11	6/13/00	9.7	20.3	6.46	71.3	0.166	0.1106	690	15.5
12	11/17/99	8.8	15.7		208.5	0.95	0.144	936	57
12	12/15/99	7.5	9.6	13.95	121	1.65	0.009	800	48
12	12/20/99	8.3	11.9	11.3	105	1.68	0.07	866	45
12	1/10/00	7.4	11.8	10.1	93.8	1.15	0.006	841	55
12	1/24/00	6.9	12.4	5.56	52.1	2.35	0.004	299	73
12	2/7/00	7.2	13.1	7.05	67	0.471	0.002	359	12
12	2/22/00	7.1	11.7	7.45	68.8	0.751	0.002	271.9	26
12	3/20/00	7.2	15.5	7.8	78	0.245	0.0003	510	7.8
12	3/28/00	8	16.4	9.7	98.8	0	0	472	5.7
12	4/4/00	7.8	17.6	7.3	76.7	0	0	539	5.5
12	4/10/00	7.7	17.7	10.3	108	0	0	552	5.1

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
12	4/18/00	7.1	16.8	5.57	57.4	1.31	0.0052	417.2	33
12	4/24/00	7.8	17.6	9.19	96.4	0.0425	0.0009	474	17
12	5/2/00	7.8	18	9.16	97.2	0.0102	0.0002	504	9
12	5/7/00	7.4	18.3	11.22	119.1	0.163	0.0014	524	14
12	5/16/00	7.7	17.9	10.68	112.3	0	0	497	6.8
12	5/24/00	8.3	22.7	8.79	102.2	0.0353	0.0031	567	7.8
12	5/31/00	8.8	21	10.77	121.2	0.0118	0.0025	298	8.7
12	6/7/00	8.8	19.9	9.48	103.9	0	0	595	16
12	6/13/00	9.1	22.3	8.09	92.3	0.114	0.0417	638	15
13	12/15/99	8.1	9.2	16.6	144	0.4	0.008	492	4
13	1/10/00	7.3	12.2	10.7	100	1.05	0.004	590	34
13	1/24/00	7	12.3	7.18	67.2	2.3	0.005	331	67
13	2/7/00	7.2	13.9	10.96	106	0.089	0	404	10
13	2/22/00	7.2	11.6	9.01	82.9	0.595	0.002	256.5	26
13	3/20/00	7.9	16.2	14	151.3	0	0	470	5.1
13	3/28/00	8.5	16.4	16.7	171.3	0	0	543	2.7
13	4/4/00	8.3	16.7	11	113.8	0	0	599	2.4
13	4/10/00	8	18.3	13	140	0.0155	0.0005	775	5.6
13	4/18/00	7.5	19.3	11.41	123.8	0.236	0.0028	377.1	16
13	4/24/00	8.4	19.2	12.99	141.5	0.0064	0.0005	597	5.3
13	5/2/00	8.3	18.4	15.3	152.8	0.0063	0.0004	761	3.4
13	5/7/00	8.2	19.3	15.16	164.9	0.0264	0.0018	504	4.9

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
13	5/16/00	8	17.8	11.8	124.1	0.0668	0.0022	515	4.6
13	5/24/00	9	26.5	16.85	211.3	0.0134	0.0052	726	5.3
13	5/31/00	9.4	24.1	14.3	171.3	0	0	749	6.5
13	6/7/00	9.2	23	11.02	129	0	0	789	6.5
13	6/13/00	10.3	26.5	8.55	106.7	0.017	0.0148	901	5.1
14	12/20/99	7.3	9.6	5.7	50	0.38	0.001	510	3
14	1/10/00	6.8	11.1	8.5	77.5	0.9	0.001	485	69
14	1/24/00	7.2	12.4	7.33	68.6	1.63	0.006	294	67
14	2/7/00	7.3	13	8.22	78	0.089	0	364	15
14	3/20/00	7.4	15.4	12.5	125.2	0	0	395.7	6.6
14	3/28/00	7.5	10.3	8.9	80.2	0	0	411.2	3.2
14	4/4/00	7.6	14	6.3	61.7	0	0	526	2
14	4/10/00	7.7	18.7	10.4	110.6	0	0	691	3.2
14	4/18/00	7.2	13	9	86.1	0.256	0.0009	299.5	14
14	4/24/00	7.3	12.2	7.71	71.9	0.469	0.0043	495	3.6
14	5/2/00	7.6	16.2	11.09	112.7	0.0324	0.0004	503	3.4
14	5/7/00	7.1	13.7	9.09	87.8	0.0639	0.0002	424.1	5.4
14	5/16/00	7.5	14.2	9.29	90.8	0.024	0.0002	450.8	3.5
14	5/24/00	7.2	16.6	3.9	40.2	0.135	0.0007	611	1.4
14	5/31/00	7.6	13.3	5.24	50.2	0	0	607	2.2
14	6/7/00	7.9	14.4	6.69	65.8	0	0	698	2.3
14	6/13/00	7.6	15.9	6.76	68.3	0.0954	0.0011	750	2.8

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
15	12/15/99	7.4	7	6.35	52.5	0.478	0.002	546	2
15	1/10/00	6.7	11.7	5.22	48.2	5	0.005	608	32
15	1/24/00	7.4	12.9	7.04	66.7	2.43	0.014	344	62
15	2/7/00	7.2	13.4	7.2	68	0.124	0.001	348	10
15	2/22/00	7.3	11.4	8.75	80.1	0.505	0.002	291.2	19
15	3/20/00	7.6	15.2	12.6	126.5	0.0692	0	363.5	6.6
15	3/28/00	7.7	10.1	7	62.6	0.136	0.0013	399.2	4.7
15	4/4/00	7.6	14.6	4.3	42.8	0.242	0.00252	534	4
15	4/10/00	7.5	19.1	8.6	92.8	0.0903	0.001	608	4.4
15	4/18/00	7.2	10.6	9.2	83.7	3.75	0.0115	372.6	41
15	4/24/00	7.3	12.3	6.95	65.1	0.113	0.0008	470	5.3
15	5/2/00	7.3	15.5	6.62	66.4	0.0485	0.0003	528	4.5
15	5/7/00	7	14.7	7.76	76.7	0.126	0.0003	452.7	6.4
15	5/16/00	7.4	14.4	9.3	91.2	0.079	0.0005	464	5
15	5/24/00	7.3	16.7	4.41	45.5	0.136	0.0009	598	2.1
15	5/31/00	7.5	13	5.08	48.1	0.136	0.0001	606	2.7
15	6/7/00	7.7	14.8	5.63	55.4	0.0182	0.0002	650	2.6
15	6/13/00	9.1	15.6	3.73	37.3	0.0172	0.0045	655	3.1
16	12/15/99	7.2	11	10.9	99.5	0.175	0.001	343	8
16	1/10/00	7	11.6	7.35	68.2	7.84	0.016	692	155
16	1/24/00	7.4	12.6	9.15	86	0.46	0.003	190	32
16	2/7/00	7.2	13	9.8	93.5	0.0128	0	206.5	4

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity , 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
16	2/22/00	7.5	11.1	6.99	63.6	5.33	0.034	315.5	70
16	3/20/00	7.9	15.4	10.7	107	0	0	221	6
16	3/28/00	7.6	8.8	10.1	86.7	0	0	232.9	3.4
16	4/4/00	8	12.8	8.2	77.2	0	0	257.1	3.3
16	4/10/00	7.6	20	7.7	84.5	0.0913	0.0014	378	6.5
16	4/18/00	7.3	9	12.2	111.5	2.56	0.0088	239	25
16	4/25/00	7.5	10.7	9.74	89.1	0.0166	0.0001	283.2	3.6
16	5/2/00	7.5	14	8.07	77.6	0.0331	0.0003	334.9	2.6
16	5/7/00	7.3	13.4	9.86	94.5	0.114	0.0006	318.6	4.1
16	5/16/00	7.4	13.7	9.9	95	0.149	0.0009	313.8	20
16	5/24/00	7.2	15.3	4.07	40.6	4.67	0.026	518	6.9
16	5/31/00	7.6	10.8	1.62	14.8	25.2	0.201	1127	44
17	1/24/00	7.2	12.7	6.04	57.1	1.98	0.007	313	82
17	2/7/00	7.4	14.2	9.36	91.2	0.33	0.002	462	20
17	3/20/00	7.3	14.9	7.8	77	0.617	0.0021	640	8
17	3/28/00	7.6	12	5.4	50	0.152	0.0013	581	9.4
17	4/4/00	8.2	15.4	7.7	76.6	0.024	0.001	673	11
17	4/10/00	8.9	16.2	15	152.5	0	0	812	22
17	4/18/00	7.2	12.9	5.7	54.2	2.43	0.009	440.5	30
17	4/24/00	7.7	14.5	5.47	53.9	0.183	0.0024	587	7.5
17	5/2/00	7.6	14.6	6.28	61.8	0.0855	0.0009	624	5.4
17	5/7/00	7.5	15.9	6.95	69.6	0.29	0.0027	824	6.6

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity , 750 umh



STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
17	5/16/00	7.7	14.7	8.77	86.6	0.379	0.0005	729	8.8
17	5/24/00	8	17.3	6.01	62.8	0.315	0.0101	761	6
17	5/31/00	7.9	14.2	4.42	43.1	0.72	0.0014	739	5.2
17	6/7/00	8.2	14.8	6.24	61.3	0.583	0.024	759	5
17	6/13/00	8.6	16.1	6.21	63.1	0.639	0.0671	783	4.4
18	1/24/00	7.2	13	5.27	50.2	1.5	0.006	303	77
18	2/7/00	7	14.6	4.4	43.1	0.67	0.002	473	15
18	2/22/00	7.1	11.2	7.4	67.6	0.576	0.002	328.4	18
18	3/20/00	7.6	18.9	10.3	111.5	0.705	0.0074	558	10
18	3/28/00	7.5	9.8	3.7	32	1.6	0.0094	564	20
18	4/4/00	7.8	14.8	1.5	14.9	5.36	0.0911	898	24
18	4/10/00	8.8	20.7	26.76	290.9	0.888	0.1829	995	26
18	4/18/00	7.3	12	7.2	66.6	2.32	0.01	451.8	25
18	4/24/00	7.5	14.4	4.5	44.2	1.7	0.0141	699	11
18	5/2/00	7.5	5.5	4.44	42.5	0.52	0.0046	866	14
18	5/7/00	7.1	14.9	4.29	42.8	1.88	0.0065	672	9.8
18	5/16/00	7.1	15.1	7.93	79	1.87	0.006	647	15
18	5/24/00	7.4	17.4	2.51	26.1	1.19	0.0098	734	3.4
18	5/31/00	7.5	15.3	1.44	14.5	2.64	0.0235	713	6.4
18	6/7/00	7.7	15.2	3.37	33.5	3.82	0.0515	727	9.4
18	6/13/00	8.4	17.2	7.03	72.7	3.28	0.2472	768	7.9
19	11/17/99	7.1	14.8	2.89	29.3	0.7	0.002	800	10

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
19	12/15/99	7.1	9.7	8.97	79	2.5	0.006	670	8
19	12/20/99	8.3	12.8	16.3	156	1.9	0.085	696	10
19	1/10/00	6.9	11.8	11.1	102	0.8	0.001	567	15
19	1/24/00	6.8	13.2	7.35	70	0.925	0.001	247	71
19	2/7/00	7.1	13.8	10.6	103	0.198	0.001	357	10
19	2/22/00	7.1	11.2	6.16	56.2	0.418	0.001	262.8	12
19	3/20/00	7.4	17.4	11.5	120.2	0.0157	0	395	6.2
19	3/28/00	7.5	9.6	5.8	50.5	0.02	0.0001	353.5	11
19	4/4/00	7.9	15	0.75	7.5	13.8	0.2939	791	39
19	4/10/00	8.9	19	27.71	298	4.72	1.071	717	24
19	4/18/00	7.2	12.2	8.5	78.8	0.302	0.001	353.8	21
19	4/24/00	7.4	14.7	4.84	47.7	0.589	0.0039	471	13
19	5/2/00	7.8	15.8	8.29	83.5	0.0074	0.0001	491	7.3
19	5/7/00	6.9	14.9	6.95	68.7	0.53	0.0012	394.2	23
19	5/16/00	6.9	13.9	8.03	79.5	0.314	0.0006	433.3	20
19	5/24/00	7.5	18.7	4.73	47.7	0.184	0.0021	547	4.4
19	5/31/00	7.9	15.6	5.91	59.3	0	0	518	2.2
19	6/7/00	7.9	16.6	4.91	50.4	0.0518	0.0012	558	3.8
19	6/13/00	8.4	18.9	4.89	52.9	0.102	0.0087	603	2.8
20	1/10/00	6.9	12.1	9.96	92.5	3.6	0.006	292	235
20	1/24/00	7.1	13.1	8.18	78.1	0.875	0.003	247	65
20	2/7/00	7.3	14.9	9.77	96.7	0.18	0.001	356.4	12

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
20	2/22/00	7.1	11.2	7.42	67.7	0.39	0.001	262.7	11
20	3/20/00	8.8	18.6	13.6	146.5	0.01	0	387	7
20	3/28/00	7.5	9.4	7.8	68.3	17.4	0.098	669	42
20	4/4/00	7.2	13.9	1.6	15.5	13.1	0.0525	673	31
20	4/10/00	7.7	14	8.4	80.7	2.41	0.0304	492	8.3
20	4/18/00	7.2	11.6	10	91.4	0.14	0.0005	334.6	20
20	4/24/00	7.5	12.4	7.39	69.3	0.199	0.0014	461	14
20	5/2/00	7.6	13.8	8.31	80.2	0.142	0.0014	459	2.5
20	5/7/00	7.3	13.4	11.22	107.3	0.0423	0.0002	478	8.2
20	5/16/00	7	14.2	9.07	88.3	0.032	0	469	13
20	5/24/00	7.5	16.3	5.9	60.1	0.255	0.0024	525	1.5
20	5/31/00	7.8	12.7	7.7	72.1	0.186	0.0027	489	2.2
20	6/7/00	8.3	14.5	9.3	90.7	0	0	518	3.7
20	6/13/00	8.5	16	6.51	65.3	0.462	0.0394	558	4
E 1	2/7/00	8.1	14.2	11.1	109	0.94	0.01	761	45
E 1	3/20/00	8.9	17.4	15.8	163	0	0	489	12
E 1	3/29/00	7.9	10.3	9	80.6	0.46	0.007	587	8.6
E 1	4/3/00	8	21.6	9.6	109.4	0	0	880	8.2
E 1	4/10/00	7.8	12.6	9.6	90.7	0	0	830	6.4
E 1	4/17/00	7.7	17.4	10.1	105.7	0.85	0.0139	850	29
E 1	4/24/00	8.6	22.4	11.88	138.8	0	0	850	4.1
E 1	5/2/00	8	16.2	8.23	85.9	0.102	0.0029	842	2.5

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
E 1	5/7/00	7.9	16.8	11.57	119.4	0.0025	0.0001	917	3.9
E 1	5/16/00	8	17	9.74	100.8	0	0	1016	3.5
E 1	5/24/00	7.6	18.4	2.98	31.6	0.118	0.0017	1125	3.8
E 1	5/30/00	8.1	26	9.89	122.8	0.368	0.0262	1438	2.4
E 1	6/7/00	7.2	16.8	3.53	36.5	0	0	1329	3.3
E 1	6/13/00	8	18.7	4.98	53.3	0.0324	0.0012	1346	4.4
E 2	11/17/99	7.9	13.2	9.96	95.6	0.46	0.008	1980	3
E 2	2/7/00	7.7	14.4	8.75	86.3	0.79	0.01	871	42
E 2	3/20/00	8.8	17.3	15	156	0	0	500	15
E 2	3/29/00	8.1	10.7	10.1	91.2	0.4	0.01	565	8.5
E 2	4/3/00	8.7	23.8	13.5	160.5	0.0215	0.0045	895	3.5
E 2	4/10/00	8	13.9	9.8	95.5	0	0	807	3.4
E 2	4/17/00	8.1	17.9	11.1	117.2	0	0	643	18
E 2	4/24/00	7.9	20.7	8.78	97.6	0	0	847	7
E 2	5/2/00	7.6	16.1	7.23	73.5	0.0588	0.0007	949	8.5
E 2	5/7/00	7.7	15.1	11.9	116.8	0.0048	0.0001	1165	5
E 2	5/16/00	7.7	15.2	9.82	97.9	0	0	1486	6.3
E 2	5/24/00	7.6	17.9	5.42	58.2	0.0616	0.0083	1271	4.5
E 2	5/30/00	7.5	23.6	7.65	89.9	0	0	1447	2.6
E 2	6/7/00	7.5	17.9	6.46	68.4	0.0469	0.0005	1108	1.9
E 2	6/13/00	8	20.3	8.7	97.3	0.225	0.0086	1154	3.5
K 1	1/24/00	7.5	12.7	7.78	73.7	2.4	0.017	635	55

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity , 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
K 1	2/22/00	7.3	11.3	8.73	79.8	1.69	0.007	459	38
K 1	3/28/00	7.8	13.8	11.2	106.7	0.97	0.015	840	8.6
K 1	4/4/00	7.8	15.3	7.6	75.7	0.122	0.0022	722	6.8
K 1	4/10/00	7.7	19.3	7.4	81	0.0496	0.0009	888	6.4
K 1	4/18/00	7.6	10.2	11.7	103.5	0.919	0.0068	671	16
K 1	4/24/00	7.8	12.1	9.74	90	0.136	0.0018	754	7
K 1	5/2/00	7.3	14.3	5.57	54.6	0.207	0.0011	727	8.1
K 1	5/7/00	7.2	13.8	9.74	93.9	0.315	0.0013	668	6.5
K 1	5/16/00	7.2	14.8	8.92	88.2	0.156	0.0007	668	7.5
K 1	5/24/00	7.5	21.3	6.43	71.2	0.0555	0.0008	861	4.5
K 1	5/31/00	7.5	13.5	5.25	50.5	0.0151	0.0001	7565	5.4
K 1	6/7/00	7.3	14.9	5.24	52	0	0	757	4.2
K 1	6/13/00	8.2	16.2	4.67	47.5	0.0577	0.0026	772	3.5
K 2	1/24/00	7.9	13.1	8.16	78.3	4.7	0.086	758	60
K 2	2/1/00	7.5	13.6	7.7	74.3	0.804	0.006	927	33
K 2	2/7/00	7.3	12.5	8.5	80	0.21	0.001	733	15
K 2	2/17/00	7.8	15.2	8.67	85.5	0.484	0.008	528	35
K 2	2/22/00	7.9	10.9	9.67	87.7	5.39	0.085	508	210
K 2	3/28/00	8.7	16.8	10	103.2	0	0	779	7.4
K 2	4/4/00	8	16.2	7.7	79	0.0694	0.002	817	8
K 2	4/10/00	7.6	15.1	9.8	97.6	0.0856	0.0009	726	7.2
K 2	4/18/00	7.4	11.4	9.8	90.4	0.715	0.0037	624	17

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
K 2	4/24/00	7.6	12.4	9.06	66.2	0.222	0.002	705	7
K 2	5/2/00	7.6	13.8	8	77	0.2	0.002	797	7.4
K 2	5/7/00	7.5	13.3	11.07	105.8	0.299	0.0022	793	9
K 2	5/16/00	7.5	14.3	9.28	90.7	0.183	0.0015	787	15
K 2	5/24/00	7.7	22.9	6.08	70.8	0.0333	0.0008	966	4.5
K 2	5/31/00	7.8	13	8.5	79.3	0.192	0.0028	775	4.2
K 2	6/7/00	7.7	14.8	8.39	82.3	0	0	797	3.5
K 2	6/13/00	8.5	16.2	7.08	72	0.184	0.0157	824	3.4
L-1	6/21/00	7.3	13.8	10.7	104	0	0	121	3
L 2	6/21/00	7.5	15.1	10.2	101	0	0	156	2.8
L 3	6/21/00	8	15.9	10	98.8	0	0	288	2
L 4	6/21/00	7.8	17.1	9.8	103	0	0	179	2.5
L 5	6/21/00	7.3	16.8	8.85	84.2	0	0	18.6	1.4
L 6	6/21/00	7	16.8	5.81	58.4	0	0	232	1.5
N 1	6/29/00	6.9	23	4.74	55.8	0	0	228.3	1.6
N 5	6/29/00	7.7	25.5	10.31	128.7	0.0138	0.0004	470.5	2.5
N 6	6/29/00	7.3	23.8	7.28	86.4	0	0	409.1	2
N 7	6/29/00	7.5	24.8	10.75	117.7	0.009	0.0002	310.7	1.6
N 8	6/29/00	7.5	25.1	8.31	100.7	0.0198	0.0004	278.7	1.5
N 8a	6/29/00	7.6	24.5	10.24	107.3	0.0073	0.0002	275.5	2.1
N 9	6/29/00	7.5	25.4	8.31	101.2	0.0042	0	287.5	1.6
N10	6/29/00	7.5	26.9	9.04	113.5	0.0027	0	313.4	1.8

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
N11	6/29/00	7.6	23.7	7.87	92.7	0.0428	0.0009	339.2	0.8
N16	6/29/00	8.1	22.9	8.71	102.8	0.047	0.0003	448.6	1.2
N17	6/29/00	8.2	23.7	10.64	126.8	0	0	811	3.9
N18b	6/29/00	7.7	23	6.9	82.1	0.0409	0.001	7460	5
N20	6/29/00	7.7	73.6	7.69	81.6	0.0039	0	11430	6.5
O 1	6/21/00	7.8	17.9	9.9	106	0	0	213	2.2
O 2	6/21/00	7.6	19.2	9.4	103	0	0	248	1.8
P 1	6/29/00	8.1	18.4	5.2	56.1	0	0	2027	7.4
P 2	6/29/00	7.8	16.5	3.3	34.3	0.0147	0.0003	1499	3.5
P 3	6/29/00	7.7	17.9	5.54	57.9	0.0848	0.0014	1156	15
P 4	6/29/00	7.6	21.2	4.55	52.6	0.155	0.0026	16370	7
P 5	6/29/00	7.6	20.6	5.18	61.8	0.159	0.0026	16680	7.5
S 1	6/29/00	8.1	20.2	8.07	97	0.0095	0.00055	372.1	1
S 2	6/29/00	7.9	19.6	6.97	76.3	0.0097	0.0003	609	1.4
S 3	6/29/00	8	21.1	11.59	96.7	0.0273	0.0011	393.4	1
S 4	6/29/00	7.8	20.5	6.25	70.8	0.0322	0.0008	414.8	1.7
SG 1	6/21/00	7.1	16.8	7.1	74	0	0	288	2.3
SG 2	6/21/00	7.6	16.8	8.6	89.3	0	0	345	1.6
SG 3	6/21/00	7.5	17.9	9.43	99.6	0	0	379.3	1.5
SG 4	6/21/00	7.6	17.2	8.75	91	0	0	4.1	1.7
SG 5	6/21/00	7.6	17.5	7.3	97.7	0	0	324	1.7
SG 6	6/21/00	7.8	7.1	9.56	99	0	0	322.6	1.4

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
SH 1	2/1/00	7	14.7	7.1	70	0.061	0	158.5	25
SH 1	2/17/00	6.9	14	5.28	51.1	0.23	0	316.5	26
SH 1	3/20/00	7.2	16	11	112.3	0.0187	0	417.9	7
SH 1	4/18/00	6.8	12.7	6	56.8	0.574	0.0008	193.5	20
SH 1	5/16/00	7.2	14.8	8.73	86.2	0.235	0.0001	214	15
SH 1	5/24/00	7.1	16.6	1.73	17.7	0.743	0.0029	234.2	7.6
SH 2	2/1/00	7.2	13.5	6.9	67.5	0.433	0.002	585	30
SH 2	2/17/00	7.3	13	8	74.5	0.26	0	370.9	35
SH 2	3/20/00	8.5	17.3	18.8	197	0	0	593	5
SH 2	3/28/00	8.6	16.8	16.7	173	0	0	649	4.4
SH 2	4/4/00	8.4	16.9	9.6	96.5	0	0	694	4.5
SH 2	4/10/00	8.6	20	14.5	157.6	0	0	764	3.4
SH 2	4/18/00	6.9	12.4	5.8	54.3	0.322	0.0006	344.6	20
SH 2	4/24/00	8.4	13.9	7.84	75.8	0	0	525	4.5
SH 2	5/2/00	7.8	15.9	4.59	46.5	0.0495	0.0009	650	4.4
SH 2	5/7/00	7.5	14.8	8.35	82.7	0.206	0.0018	637	4.3
SH 2	5/16/00	7.8	15.1	8.61	85.6	0.193	0.0032	571	5.6
SH 2	5/24/00	7.7	18.4	4.88	51.9	0.261	0.0046	715	5.3
SH 2	5/31/00	7.8	15.6	3.42	34.3	0.0298	0.0005	714	5.5
SH 2	6/7/00	8.2	16	5.21	52.5	0.208	0.0093	724	3.7
SH 2	6/13/00	8.8	17	6.17	64	0.669	0.1117	749	3.3
SH 3	2/1/00	7.2	13.4	8.95	86.5	0.235	0.001	469	50

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh



STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
SH 3	2/17/00	7.2	14	8.35	81.3	0.273	0.001	285.6	40
SH 3	3/20/00	8.5	17.5	15.5	163	0.0194	0	492	6.5
SH 3	3/28/00	8.9	15.7	16.4	165.6	0	0	534	6.6
SH 3	4/4/00	7.9	16.3	7.4	75.8	0.0179	0.0043	699	5
SH 3	4/10/00	8.2	20.4	15.2	169.3	0.01	0.0006	804	4.1
SH 3	4/18/00	7.3	12.4	8.6	80.3	0.13	0.0006	424.4	6.3
SH 3	4/24/00	7.6	13.8	6.2	59.9	0.0848	0.0008	701	3
SH 3	5/2/00	7.5	14.4	6.95	60	0.0425	0.0004	814	2
SH 3	5/7/00	7.2	14.6	9.44	93.1	0.051	0.0002	511	4.5
SH 3	5/16/00	7.2	14.7	8.55	84.4	0.0034	0	511	4
SH 3	5/24/00	7.5	15.9	3.43	34.8	0.874	0.0081	650	1.9
T 1	12/10/99	7.4	8.7	11.6	101	0.06	0	202	3
T 1	1/4/00	7	7.9	10.3	86.6	0.09	0	204	1
T 1	2/1/00	6.7	11.6	10.1	93	0.0028	0	183.3	3
T 1	2/17/00	7.1	10.4	10.5	93	0.001	0	141	35
T 1	3/1/00	6.8	11.4	11.3	103	0	0	129.6	22
T 1	3/13/00	7.1	12.7	10.8	101	0.012	0	156	
T 1	3/28/00	7.5	10.5	10.9	98	0.04	0.0003	182.4	4.2
T 1	4/4/00	7.7	12.3	9.7	91	0	0	196.9	2.3
T 1	4/10/00	7.8	15.2	12.2	120	0	0	207.4	2.4
T 1	4/18/00	7.8	13.3	10.92	101.3	0	0	171.6	10
T 1	4/24/00	7.8	13	11.16	105.3	0	0	190.5	2.5

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T 1	5/2/00	7.6	14.4	10.33	99.7	0.0065	0	206.1	2.5
T 1	5/7/00	7.7	14.2	13.3	128.5	0	0	197.1	1.9
T 1	5/16/00	7.6	14.4	11.84	115.3	0	0	201.7	2.9
T 1	5/24/00	7.6	17.4	8.83	91.2	0.0111	0.0001	228.5	1.9
T 1	5/31/00	7.8	16.5	9.5	95.3	0	0	217.1	1.6
T 1	6/7/00	7.5	16.3	8.95	90.7	0	0	232.8	2
T 2	12/10/99	7.4	7.5	11.9	99	0.07	0	212	1
T 2	1/4/00	6.9	7.2	10.34	85.8	0.04	0	211	2
T 2	2/1/00	6.3	11.6	9.8	90	0.0096	0	135	20
T 2	2/17/00	7.1	10.3	10.2	91	0.008	0	106.6	30
T 2	3/1/00	6.8	11.4	11.24	104	0	0	94.4	45
T 2	3/13/00	6.9	12.3	10.3	96.4	0.0049	0	122.2	11
T 2	3/28/00	6.8	11.2	10.2	93	0.09	0.0002	166.6	2.4
T 2	4/4/00	7.8	13.6	10.1	96.9	0	0	192.2	2
T 2	4/10/00	7.8	14.3	12	116.3	0	0	201.5	2
T 2	4/18/00	7.9	12.5	10.65	99.5	0	0	115.4	46
T 2	4/24/00	7.6	13.6	10.59	101.4	0	0	169.2	3
T 2	5/2/00	7.6	14.1	9.66	93.8	0.003	0	186.3	3.6
T 2	5/7/00	7.6	14.1	13.21	128.2	0	0	181.7	3.9
T 2	5/16/00	7.5	14.2	11.57	112.5	0	0	160.7	6
T 2	5/24/00	7.5	16.6	8.76	90.7	0	0	199.8	1.9
T 2	5/31/00	7.9	15.1	9.36	92.6	0	0	203.4	2.3

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T 2	6/7/00	7.9	15.7	8.83	88.8	0	0	219	2.4
T 3	12/10/99	7.3	9.6	11.8	104	0.06	0	230	2
T 3	1/4/00	7	8.5	11.25	96.5	0	0	123	1
T 3	2/1/00	7.1	11.5	9.75	89	0.004	0	166.6	15
T 3	2/17/00	7.3	11.5	9.84	90.5	0.021	0	136.3	17
T 3	3/1/00	6.8	12	11.1	103	0	0	115.9	22
T 3	3/13/00	6.9	12.7	10.2	96.4	0.0025	0	128.4	13
T 3	3/28/00	7.1	12.4	10.8	101.3	0.1	0.0003	175.9	3.4
T 3	4/4/00	7.8	14.1	9.4	91.8	0	0	186.9	2.4
T 3	4/10/00	7.8	15.1	11.5	113.6	0	0	199.7	2.1
T 3	4/18/00	7.8	14	10.05	97.9	0	0	142.6	26
T 3	4/24/00	7.7	14.4	10.82	106	0	0	194.8	3.5
T 3	5/2/00	7.6	14.6	9.31	91.5	0.0014	0	202.7	3.6
T 3	5/7/00	7.5	14.5	12.66	124.2	0	0	203.1	4.8
T 3	5/16/00	7.3	15.1	11.08	109.8	0	0	199.3	7.5
T 3	5/24/00	7.4	18.5	7.77	82.5	0.0142	0.0001	222.9	2
T 3	5/31/00	7.7	17.3	8.06	83.8	0	0	214.1	3.4
T 3	6/7/00	7.8	16.9	8.12	84.1	0	0	203.9	2.5
T 4	12/10/99	7.4	8.6	11.7	100.7	0.09	0	412	3
T 4	1/4/00	7	7.6	8.05	69.5	0.21	0	431	2
T 4	2/1/00	7.1	12	9.95	92.2	0.0086	0	175.7	30
T 4	2/17/00	7.1	10.5	10.4	92.7	0	0	136.5	38

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity , 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T 4	3/1/00	6.7	12.6	11.7	107	0	0	124	50
T 4	3/13/00	6.9	12.6	10.5	98	0.0224	0	161.6	18
T 4	3/28/00	7.1	12	10.3	95.3	0	0	257.6	3.2
T 4	4/4/00	7.7	14	9.7	94.3	0	0	296.1	2
T 4	4/10/00	7.6	15.1			0.265	0.0029	427	3.8
T 4	4/18/00	7.8	12.9	10.74	101.1	0	0	168.6	50
T 4	4/24/00	7.5	14.3	10.74	104	0	0	263.3	4.9
T 4	5/2/00	7.4	14.6	9.55	94	0.0047	0	296.8	2.6
T 4	5/7/00	7.4	14.8	13.06	128.9	0	0	271.5	3.9
T 4	5/16/00	7.3	15.3	11.36	113.1	0	0	273.8	3.7
T 4	5/24/00	7.4	17.4	8.5	88.5	0	0	350.5	2.2
T 4	5/31/00	7.6	16.1	8.88	89.9	0	0	371.8	2.8
T 4	6/7/00	7.7	16.3	8.52	86.8	0	0	390.4	2.5
T 5	12/10/99	7.2	8.5	11	95	0.07	0	300	4
T 5	1/4/00	7.1	8.4	9.51	81.2	0.1	0	268.8	1
T 5	2/1/00	7.1	12.1	9.77	91	0.0173	0	179.5	32
T 5	2/17/00	6.9	10.5	10.1	90.4	0	0	132.3	34
T 5	3/1/00	6.6	12.6	10.86	102	0	0	121	46
T 5	3/13/00	6.8	13.2	10.1	96.2	0.0075	0	153.1	17
T 5	3/28/00	6.7	12.8	10.2	95.8	0.013	0	186.8	2.9
T 5	4/4/00	7.6	13.3	10	95	0	0	197.2	2.3
T 5	4/10/00	6.9	15	8.9	87.5	0	0	336.5	3

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity , 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T 5	4/18/00	7.6	13.7	10.3	99.4	0	0	182.9	48
T 5	4/24/00	7.3	15.6	10.27	103.3	0	0	224.1	5.4
T 5	5/2/00	7.2	16.6	9.03	92.9	0.0101	0	241.1	4.2
T 5	5/7/00	7.2	16.3	12.3	125.4	0	0	227.7	6
T 5	5/16/00	7.1	17.1	10.55	109.5	0	0	240.1	7.4
T 5	5/24/00	7.2	19.6	8.56	82	0.0127	0	274.6	1.6
T 5	5/31/00	6.8	15.8	5.35	53.6	0	0	382.8	3.8
T 5	6/7/00	7.4	16.9	7.37	76.1	0	0	310.8	3.2
T 6	12/10/99	7.2	9.3	7	61	0.08	0	810	3
T 6	1/4/00	6.7	8.9	4.21	37	0.475	0	705	5
T 6	2/1/00	7.2	12.5	8.9	83.1	0.505	0.002	527	30
T 6	2/17/00	7.2	11.1	9.57	87.3	0.195	0.001	279.5	50
T 6	3/1/00	6.8	13	10.15	97.1	0.122	0	243	40
T 6	3/13/00	6.9	13.3	9.38	90	0.047	0	309	13
T 6	3/28/00	7	12.1	11.9	110.4	0.0243	0	473	4.9
T 6	4/4/00	7.4	13.1	8	75.3	0	0	525	3
T 6	4/10/00	7.2	14.1	9.5	91.6	0.024	0	564	3.3
T 6	4/18/00	7.4	13.5	9.25	88.7	0.144	0.0009	474	18
T 6	4/24/00	7.3	14	9.08	87.6	0.288	0.0015	556	4.5
T 6	5/2/00	7.2	14.5	8.75	85.5	0.0535	0.0002	599	5.5
T 6	5/7/00	7.1	15.3	11.42	113.3	0.0685	0.0002	628	5.2
T 6	5/16/00	7.2	15.8	10.32	103.6	0.106	0.0005	660	6.5

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T 6	5/24/00	7.2	16.9	5.63	58.3	0.101	0.0006	686	4.1
T 7	12/10/99	7.7	9.5	11.8	116	0	0	208	3
T 7	1/4/00	7.2	9.7	8.5	84.2			21500	3
T 7	2/1/00	7	12	9.57	89.2	0.0576	0	198	27
T 7	2/17/00	7	10.9	9.79	88.5	0.102	0	234.3	33
T 7	3/1/00	6.7	12.7	10.7	100.5	0.033	0	121.6	33
T 7	3/13/00	6.8	13.1	10	95.1	0.0175	0	152.6	20
T 7	3/28/00	7.4	13	12.9	123	0	0	245	4
T 7	4/4/00	8	13.6	12.5	120.9	0	0	289	3
T 7	4/10/00	7.8	18.5	14.2	152	0	0	1403	2.5
T 7	4/18/00	7.7	14.6	10.32	101.2	0	0	225.8	33
T 7	4/24/00	7.7	15.6	12.27	123.6	0	0	293.6	4
T 7	5/2/00	7.5	15.6	11.08	111.3	0.017	0.0002	327.8	4.7
T 7	5/7/00	7.5	16.2	13.24	134.7	0.0122	0.0001	451.3	4.5
T 7	5/16/00	7.5	18.6	11.1	118.8	0	0	357	4.2
T 7	5/24/00	7.4	21.2	8.43	95.8	0.0087	0	734	4.1
T 7	5/31/00	7.3	22.1	7.91	86.6	0	0	6490	3.5
T 7	6/7/00	7.4	19.8	8.26	93.4	0.0304	0.0003	7560	4.5
T 8	2/1/00	6.7	11.6	8.23	76	0.0012	0	162.5	25
T 8	2/17/00	6.7	10.7	8.91	80.3	0	0	116.4	27
T 8	3/1/00	6.4	12.2	10.36	96	0	0	106	30
T 8	3/13/00	6.6	12.6	8.86	83.6	0.0044	0	138.4	24

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity , 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T 8	3/28/00	6.5	12.9	6.8	63.8	0	0	189.4	3.6
T 8	4/18/00	6.8	13.5	8.98	85.2	0	0	167.6	54
T 8	4/24/00	7	14.2	7.65	74.2	0	0	218.4	4
T 9	12/10/99	7.6	9.6	9.2	81	0.09	0.001	389	1
T 9	2/1/00	7.1	12.2	9.72	91	0.01	0	202.9	30
T 9	2/17/00	7	11.5	9.96	91.3	0	0	140.6	30
T 9	3/1/00	6.7	12.9	10.63	102	0	0	132	20
T 9	3/13/00	6.9	13.6	9.96	96.1	0.0046	0	160.7	18
T 9	3/28/00	7.2	13.4	11.7	112.6	0	0	221.4	3
T 9	4/4/00	7.8	13.6	11.1	106.8	0	0	238.9	2.2
T 9	4/10/00	7.7	16.4	13.3	136	0	0	323	1.9
T 9	4/18/00	7.5	14.4	10.87	106.4	0	0	225.6	35
T 9	4/24/00	7.7	14.8	11.85	116.8	0.0439	0.0006	250.9	4.2
T 9	5/2/00	7.5	15.1	10.62	104.7	0.0178	0.0002	267	4
T 9	5/7/00	7.6	16.3	13.33	135.8	0	0	287.5	3.3
T 9	5/16/00	7.6	17.4	11.37	118.3	0	0	291.6	3.2
T 9	5/24/00	7.4	18.7	8.74	93	0	0	335.6	3.1
T 9	5/31/00	7.9	18.8	9.25	95.7	0	0	373.8	3.4
T 9	6/7/00	8.2	17.2	9.26	95.7	0	0	489	1.5
T10	2/1/00	7.1	12.1	9.9	92.8	0.0146	0	162.5	27
T10	2/17/00	7.3	11.5	10.1	92.7	0	0	114.9	30
T10	3/1/00	6.9	12.7	10.9	103	0	0	115	27

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T10	3/13/00	7.1	14.1	10.04	96.7	0.0072	0	142.3	15
T10	3/28/00	7.9	14	9.8	95.3	0	0	194.5	5.5
T10	4/4/00	8	14.9	9.6	95.7	0	0	213.1	4.2
T10	4/10/00	7.9	16.8	10.8	111	0	0	236	4.9
T10	4/18/00	7.3	16.4	9.82	100.2	0	0	199.5	41
T10	4/24/00	7.9	15.4	10.34	103.5	0	0	222.3	4
T10	5/2/00	7.7	16.1	9.92	100.6	0.0137	0.0002	230.2	3.9
T10	5/7/00	7.9	16.9	12.58	130	0.0039	0.0001	228.3	5.5
T10	5/16/00	7.8	17.1	10.84	111.9	0	0	245.8	7.4
T10	5/24/00	7.5	19.4	8.21	90	0	0	275.8	8.5
T10	5/31/00	8.1	17.7	8.75	90.9	0	0	285.9	7.2
T10	6/7/00	8.2	17.9	8.66	91.4	0	0	310.6	5.6
T11	12/10/99	7.9	9.2	11.7	101	0.07	0	219	1
T11	1/4/00	7.9	8.8	11.56	99.5	0.01	0	242	4
T11	2/1/00	7.1	12.1	10	93.1	0.0031	0	185.2	17
T11	2/17/00	7	11.6	9.98	91.6	0	0	121	22
T11	3/1/00	6.8	12.4	10.87	101	0	0	116	25
T11	3/13/00	6.9	13.1	9.2	96.7	0.0049	0	136.1	13
T11	3/28/00	7.6	13.2	10	94.9	0	0	195.6	3.6
T11	4/4/00	7.2	13.4	10.2	97.7	0	0	200.3	3
T11	4/10/00	7.5	15.3	11.4	113.5	0	0	215	2
T11	4/18/00	7.5	14.6	10.37	101.2	0	0	212.1	30

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity , 750 umh



STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T11	4/24/00	7.4	14	10.66	102.9	0	0	211.1	3.5
T11	5/2/00	7.4	14.2	10.53	102	0.0109	0	220.4	3
T11	5/7/00	7.4	15.7	13.06	130.9	0.0043	0	247.4	3.6
T11	5/16/00	7.3	15.9	11.22	113.1	0	0	244.4	2.9
T11	5/24/00	7.4	18	9.25	97.7	0	0	254.9	2.2
T11	5/31/00	7.8	17.3	9.46	98.2	0	0	246.3	1.7
T12	2/1/00	7	12.7	9.9	93	0	0	177.4	23
T12	2/17/00	7	12	9.88	92.9	0.002	0	138.5	32
T12	3/1/00	6.8	13	10.6	102	0	0	119	40
T12	3/13/00	6.7	14.5	9.85	96.4	0.004	0	147.8	30
T12	3/28/00	7.7	16.4	9.5	97.9	0	0	210.3	6.4
T12	4/4/00	7.1	15.7	9.4	94.3	0	0	220.5	4.8
T12	4/10/00	7.5	21	9.8	111.4	0	0	258	3.1
T12	4/18/00	7.6	16.3	10.36	105.4	0	0	197.9	51
T12	4/24/00	7.7	17.4	10.77	113	0	0	224.6	5.2
T12	5/2/00	7.7	16.9	10.61	110	0.0178	0.0003	247.1	6.6
T12	5/7/00	7.6	18.9	12.42	133.8	0	0	259.2	8.6
T12	5/16/00	7.8	19.8	10.18	112.3	0	0	270.5	15
T12	5/24/00	8.2	23.5	9.41	111.8	0.175	0.0127	300.2	3.5
T12	5/31/00	7.3	22.3	5.79	67	0.882	0.0083	369.8	6.8
T13	2/1/00	6.9	12.1	7.84	73	0.0224	0	396	6
T13	2/17/00	7.2	12.2	9.42	87.7	0.18	0.001	317.8	32

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity , 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T13	3/1/00	6.9	13.4	10.1	96.7	0.138	0	287	32
T13	3/13/00	6.9	14	9.05	93.6	0.004	0	298	21
T13	3/28/00	7.2	14.1	8.2	78.7	0	0	349.9	3
T13	4/4/00	6.6	13.2	6.6	62.3	0	0	383.6	2.7
T13	4/10/00	6.9	17.2	7.8	81	0	0	456	2.9
T13	4/18/00	7.4	16.5	9.52	97.6	0	0	331	21
T13	4/24/00	7	14.4	8.6	83.9	0	0	372.4	2.9
T13	5/2/00	6.9	15.1	7.5	74.4	0.0197	0	425.1	5
T13	5/7/00	6.9	16.9	11.68	120.3	0	0	469	2.6
T13	5/16/00	7	17.9	9.91	104.4	0	0	502	3.3
T13	5/24/00	7.5	18.5	8.57	91.3	0.0193	0.0002	555	2.6
T14	2/1/00	6.8	12.2	8.83	82.5	0.0231	0	424.7	10
T14	2/17/00	7.2	11.3	9.31	86.2	0.004	0	250.4	70
T14	3/1/00	6.9	13	10.18	97	0	0	18.5	42
T14	3/13/00	6.5	13.4	9.55	91.6	0.0029	0	214.6	29
T14	3/28/00	6.9	14.1	8.3	80.9	0	0	334	6.2
T14	4/4/00	6.4	13.3	8.2	78.5	0	0	352.6	2.6
T14	4/10/00	6.7	17.4	10.1	106.4	0	0	490	2.8
T14	4/18/00	7.2	16.1	9.13	93.2	0	0	341.1	33
T14	4/24/00	6.8	14.7	9.32	91.8	0	0	365.2	5.5
T14	5/2/00	6.7	15	8.73	86.5	0.0054	0	395.4	2.8
T14	5/7/00	6.7	16.3	11.78	119.5	0	0	1593	3.1

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity , 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T14	5/16/00	6.8	17.9	10.25	108.2	0	0	766	3.4
T14	5/24/00	6.7	18.3	6.7	71	0	0	586	1.6
T14	5/31/00	6.8	21.6	8.39	95.5	0	0	2342	3
T14	6/7/00	6.9	20.7	9.97	116.3	0	0	9450	5.5
T15	1/4/00	7	9.9	8.73	79.8	0.4	0.001	7410	16
T15	2/1/00	6.9	12.8	9.34	88.1	0.005	0	296.9	10
T15	2/17/00	7.1	11.7	9.8	90	0	0	145	43
T15	3/1/00	6.8	12.8	10.3	97.9	0	0	163	33
T15	3/13/00	6.6	13.8	9.73	93.2	0.0045	0	193.5	20
T15	3/28/00	7	12.5	9.4	88	0	0	285.8	7.6
T15	4/4/00	7.1	12.8	9.4	88.8	0	0	316.1	4.5
T15	4/10/00	6.6	14	9.9	95.7	0	0	474	4.5
T15	4/18/00	7	16	9.72	98.5	0	0	275	30
T15	4/24/00	6.9	14.5	9.68	94.7	0	0	302.8	6.1
T15	5/2/00	6.7	14.6	9.01	88.6	0.007	0	334.1	4.1
T15	5/7/00	6.8	15.4	12.18	121.8	0	0	408.2	4.3
T15	5/16/00	6.8	15.6	10.29	103.2	0	0	582	6.4
T15	5/24/00	6.9	18.5	7.84	82.9	0	0	464	4.3
T15	5/31/00	7.1	17.8	7.35	76.6	0	0	786	4.5
T15	6/7/00	6.7	17.8	2.26	76.2	0	0	5180	6.5
T16	12/10/99	7.7	8.3	10.4	93	0.19	0.002	8	
T16	1/4/00	7.5	7.8	10.6	90	0.21	0.001	2027	5

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity , 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T16	2/1/00	7.3	12	9.78	90.5	0.0431	0	234	25
T16	2/17/00	7.1	11.5	9.72	88.9	0.124	0	132	48
T16	3/1/00	6.8	12.3	10.7	99.4	0.027	0	121	
T16	3/13/00	6.2	13.3	9.98	95.3	0.0099	0	149.2	20
T16	3/28/00	7.6	14.5	10.9	107.3	0	0	272	6.2
T16	4/4/00	7.9	15	9.2	93.1	0	0	7890	5.7
T16	4/10/00	7.6	16.9	11.6	120.6	0	0	349	5
T16	4/18/00	7.3	16.7	8.93	91.3	0.0835	0.0005	607	43
T16	4/24/00	7.5	13.6	9.76	99.7	0	0	244.5	7.9
T16	5/2/00	7.6	16.8	9.67	100.6	0.0392	0.0005	4410	15
T16	5/7/00	7.3	17.9	11.79	124.2	0.012	0.0001	382.9	7.2
T16	5/16/00	7.9	18.4	10.65	114.8	0	0		6.4
T16	5/24/00	7.5	21	8.14	91.8	0.0066	0	995	4.3
T16	5/31/00	7.8	20	8.57	97.4	0	0	14160	4.3
T16	6/7/00	7.9	20.5	9.7	97.3	0	0	1725	2.9
T17	12/10/99	7.6	8.2	10.8	93	0.15	0.001	3340	
T17	1/4/00	7.5	7.4	10.97	91	0.04	0	317.9	5
T17	2/1/00	7.2	12	9.74	90.8	0.0475	0	165	28
T17	2/17/00	7.1	11.6	9.71	89.4	0.135	0	131.8	50
T17	3/1/00	6.9	12	10.86	100.5	0	0	115	
T17	3/13/00	6.8	13.2	9.96	95	0.0071	0	141.3	20
T17	3/28/00	7.6	14.2	10.9	105.8	0	0	189	7.2

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T17	4/4/00	7.9	15	8.9	89.8	0	0	1944	5
T17	4/10/00	7.9	17.2	12.8	134.3	0	0	222	5.4
T17	4/18/00	7.2	15.5	9.2	92.3	0.0667	0.0003	221.3	40
T17	4/24/00	7.5	16.3	10.42	106.3	0	0	205.2	6
T17	5/2/00	7.6	16.5	8.73	89.6	0.0175	0.0002	697	6.5
T17	5/7/00	7.4	17.7	11.91	124.9	0.0069	0.0001	241.3	5.5
T17	5/16/00	7.7	17.9	10.54	111.7	0	0	2210	6.6
T17	5/24/00	7.7	21.1	9.21	103.8	0.0119	0.0002	344.3	3
T17	5/31/00	7.9	19.3	8.62	94.5	0	0	7160	3.4
T17	6/7/00	8.2	21.2	9.39	104.8	0	0	694	2.4
T18	12/10/99	8	7.8	11.7	99	0.08	0.001	366	7
T18	1/4/00	7.8	8.9	11.42	98.5	0.24	0.003	406.3	8
T18	2/1/00	7.2	13.4	9.78	94	0.0629	0	237	26
T18	2/17/00	7.1	12.9	9.81	92.9	0.042	0	173.6	30
T18	3/1/00	7	14.2	10.5	104	0	0	154	
T18	3/13/00	7.3	15.16	10.4	104	0.0067	0	198	16
T18	3/28/00	8	14.9	10.9	108.9	0	0	305.8	6.5
T18	4/4/00	8.1	14.8	9.4	93.5	0	0	390.1	5.3
T18	4/10/00	7.5	16.2	11.2	114.4	0	0	373	5.6
T18	4/18/00	7.4	17.5	9.98	104.9	0.0243	0.0002	251.6	34
T18	4/24/00	7.9	17.1	11.29	117.4	0	0	334.7	7.5
T18	5/2/00	7.8	16.8	10.58	109.4	0.0095	0.0002	382.4	4.5

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T18	5/7/00	7.7	18.8	13.04	140.2	0.0359	0.0007	353.4	18
T18	5/16/00	8	17.9	11.1	117	0	0	416.2	7.6
T18	5/24/00	7.4	19.4	7.8	84.6	0.0585	0.0006	419.7	2.8
T18	5/31/00	8.1	18.4	7.66	81.4	0.0484	0.0021	539	4
T18	6/7/00	8.2	19.3	8.92	96	0	0	530	3.5
T18	6/13/00	8.4	21.8	6.97	78.5	0.141	0.0145	475	6
T19	12/10/99	8	9.3	11.1	96	0.45	0.008	457	30
T19	2/1/00	7.2	13.2	9.94	95.4	0.065	0	243.7	25
T19	2/17/00	7.1	12.8	9.8	92.4	0.051	0	176.5	20
T19	3/1/00	7	14.5	10.3	102	0	0	196	
T19	3/13/00	7	15	10.5	104.3	0.0058	0	195.3	17
T19	3/28/00	7.7	15.4	10.2	101.9	0	0	324.5	10
T19	4/4/00	7.9	16.7	8.6	88.5	0	0	378.5	4.8
T19	4/10/00	7.7	19.2	10.7	115.5	0	0	421.1	6.4
T19	4/18/00	7.2	17.1	10.56	109.6	0.0248	0.0001	253.8	39
T19	4/24/00	7.8	17.8	10.91	115.1	0	0	355.2	17
T19	5/2/00	7.6	18.5	9.63	103.1	0.006	0	410.6	8
T19	5/7/00	7.4	20.2	12.39	137.2	0	0	364.7	22
T19	5/16/00	7.9	19.8	10.63	116.3	0	0	412.1	7.6
T19	5/24/00	7.6	22.6	8.37	96.9	0.0373	0.0007	463	4.5
T19	5/31/00	8.2	11.7	8.37	97.7	0.139	0.0108	532	6.3
T19	6/7/00	8.1	23.2	7.38	87.1	1.87	0.1094	664	33

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T19	6/13/00	8.4	25.2	6.29	76.3	0.623	0.0779	612	15
T19a	12/10/99	7.9	9	10.4	90	0.15	0.002	404	18
T19a	1/4/00	7.8	9.8	11.05	98	0.48	0.006	395.6	10
T19a	3/28/00	8	16	13.7	139.5	0	0	328.5	10
T19a	4/18/00	7.2	18.5	9.59	102.7	0.0283	0.0002	264.2	35
T19a	5/2/00	7.6	17.4	10.42	109	0.0092	0	404.2	5.5
T19a	6/13/00	9.3	22.4	6.49	74.9	0.0507	0.0247	570	2.6
T19s	1/24/00	7	13	9.91	93.3	0.875	0.002	157	65
T19sl	1/24/00	6.2	12.7	8.86	83.6	0.1	0	272	16
T20	12/10/99	7.6	8.7	8.5	73	0.18	0.001	834	12
T20	2/1/00	7.5	13.9	9.25	89.5	0.0842	0.001	505	22
T20	2/17/00	7.4	13.8	9.35	90.8	0.125	0.001	331.5	
T20	3/1/00	7.2	14.9	9.55	99.5	0.085	0	295	
T20	3/13/00	8.1	16.6	10.42	107.3	0.062	0	362.8	18
T20	3/28/00	8.3	15.5	10.6	106.6	0.007	0.0004	629	10
T20	4/4/00	7.9	14.4	9	87.6	0.158	0.0032	724	8
T20	4/10/00	7.6	18.6	11.9	127.6	0	0	830	7.5
T20	4/18/00	7.3	19.2	8.03	87.1	0.131	0.001	407.1	25
T20	4/24/00	7.8	17.5	9.71	99	0.0633	0.0013	706	13
T20	5/2/00	7.8	15.8	9.2	92.8	0.112	0.002	780	7.1
T20	5/7/00	7.8	18.3	11.41	121.1	0.113	0.0025	746	14
T20	5/16/00	7.5	18.5	9.24	98.5	0.09	0.0001	969	9.6

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity, 750 umh

STATION	DATE	PH	TEMP	DO	PERCENTSAT	NH3TOTAL	NH3TOXIC	COND	TURB
T20	5/24/00	7.3	21	3.92	43.5	0.277	0.0023	959	17
T21	6/21/00	7.8	18	9.8	103	0	0	268	1.3
T22	6/21/00	7.6	17	10	103	0	0	191	1.7
T23	6/21/00	7.3	17.1	9.8	101	0	0	154	1.3
T24	6/21/00	7.2	18	9.49	99	0	0	195	1.5
T25	6/21/00	7.5	17.1	9.96	101	0	0	179	1.7
W	1/10/00	7	11.3	1.91	17.7	15	0.31	805	48
W	2/1/00	7.2	12.1	8.57	79.2	1.05	0.004	289.7	40
W	2/7/00	7.1	13.2	8.7	83	0.76	0.002	335	25
W	2/22/00	7.3	11.3	9.26	84.5	1.36	0.006	257.1	64
W	3/20/00	7.1	14.8	9.2	90.8	0.0841	0	268	9.4
W	3/28/00	7.5	9.3	8.1	70.1	0.259	0.0014	275.1	5
W	4/4/00	7.3	13.1	4.2	40.3	0.237	0.0011	473	6.3
W	4/18/00	7.3	11.5	10	92.8	0.233	0.001	273	7.4
W	4/24/00	7	11.1	4.76	43.2	0.485	0.0011	534	8.4
W	5/2/00	7.3	14.2	7.26	70.9	0.0922	0.0005	298.9	7
W	5/7/00	7.3	13.4	8.89	85.5	0.133	0.0006	308.9	5.7
W	5/16/00	7.4	14.7	8.58	84.5	0.358	0.0024	368.9	7.8
W	5/24/00	7.3	15.3	3.87	38.7	0.29	0.0016	463	3.5
W	6/7/00	7.3	13.5	4.58	44	0.425	0.0021	503	3.7

Criteria: Dissolved oxygen > 5.0 ppm; Percent oxygen saturation 85% - 125%; NH3 Toxic (un-ionized ammonia) < 0.025 mg/L; Conductivity , 750 umh



## **Appendix B**

**1998-99**

**Descriptive Statistics**

















**MSCARII - 1999-2000 Station E 1**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.99	17.56	9.14	96.25	0.2030	0.0067		947.1	9.8
Standard Error	0.11	1.06	0.91	9.93	0.0877	0.0028		74.3	3.3
Median	8.00	17.20	9.67	103.25	0.0019	0.0009		865.0	4.3
Standard Deviation	0.41	3.97	3.41	37.14	0.3282	0.0106		278.1	12.2
Sample Variance	0.16	15.77	11.65	1379.20	0.1077	0.0001		77348.6	150.0
Range	1.70	15.70	12.82	131.40	0.9400	0.0324		949.0	42.6
Minimum	7.20	10.30	2.98	31.60	0.0000	0.0000		489.0	2.4
Maximum	8.90	26.00	15.80	163.00	0.9400	0.0324		1438.0	45.0
Count	14	14	14	14	14	14		14	14

**MSCARII - 1999-2000 Station E 2**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.92	17.20	15.33	94.41	0.1379	0.0034		1045.9	8.8
Standard Error	0.10	0.96	5.76	9.49	0.0606	0.0011		101.4	2.6
Median	7.90	17.30	9.82	95.60	0.0215	0.0005		949.0	5.0
Standard Deviation	0.39	3.73	22.33	36.74	0.2347	0.0043		392.7	10.3
Sample Variance	0.15	13.89	498.41	1349.59	0.0551	0.0000		154178.1	105.2
Range	1.30	13.10	90.08	150.70	0.7900	0.0100		1480.0	40.1
Minimum	7.50	10.70	5.42	9.80	0.0000	0.0000		500.0	1.9
Maximum	8.80	23.80	95.50	160.50	0.7900	0.0100		1980.0	42.0
Count	15	15	15	15	15	15		15	15

**MSCARII - 1999-2000 Station T 1**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.44	12.95	10.72	100.82	0.0131	0.0000		191.0	6.1
Standard Error	0.09	0.65	0.28	2.73	0.0063	0.0000		6.9	2.2
Median	7.60	13.00	10.80	99.70	0.0000	0.0000		197.1	2.5
Standard Deviation	0.36	2.69	1.16	11.25	0.0258	0.0001		28.3	9.3
Sample Variance	0.13	7.21	1.34	126.53	0.0007	0.0000		801.1	85.9
Range	1.10	9.50	4.47	41.90	0.0900	0.0003		103.2	34.0
Minimum	6.70	7.90	8.83	86.60	0.0000	0.0000		129.6	1.0
Maximum	7.80	17.40	13.30	128.50	0.0900	0.0003		232.8	35.0
Count	17	17	17	17	17	17		17	16

**MSCARII - 1999-2000 Station T 2**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.40	12.66	15.23	99.29	0.0133	0.0000		169.2	10.9
Standard Error	0.10	0.63	4.68	2.64	0.0066	0.0000		9.8	3.7
Median	7.50	13.60	10.34	96.90	0.0000	0.0000		181.7	3.0
Standard Deviation	0.42	2.61	19.30	10.87	0.0272	0.0000		40.4	15.1
Sample Variance	0.18	6.79	372.59	118.19	0.0007	0.0000		1628.2	229.1
Range	1.10	9.40	81.24	42.40	0.0900	0.0002		124.6	45.0
Minimum	6.80	7.20	8.76	85.80	0.0000	0.0000		94.4	1.0
Maximum	7.90	16.60	90.00	128.20	0.0900	0.0002		219.0	46.0
Count	17	17	17	17	17	17		17	17

**MSCARII - 1999-2000 Station T 3**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.41	13.69	10.21	97.99	0.0119	0.0000		179.2	7.7
Standard Error	0.08	0.64	0.33	2.75	0.0066	0.0000		8.9	1.9
Median	7.40	14.10	10.20	96.50	0.0000	0.0000		194.8	3.5
Standard Deviation	0.34	2.64	1.38	11.35	0.0272	0.0001		36.8	7.8
Sample Variance	0.12	6.97	1.90	128.92	0.0007	0.0000		1354.0	61.5
Range	1.00	10.00	4.89	41.70	0.1000	0.0003		114.1	25.0
Minimum	6.80	8.50	7.77	82.50	0.0000	0.0000		115.9	1.0
Maximum	7.80	18.50	12.66	124.20	0.1000	0.0003		230.0	26.0
Count	17	17	17	17	17	17		17	17

**MSCARII - 1999-2000 Station T 4**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.34	13.34	10.23	97.25	0.0353	0.0002		282.8	13.1
Standard Error	0.08	0.65	0.33	3.13	0.0193	0.0002		25.1	4.2
Median	7.40	14.00	10.35	94.80	0.0000	0.0000		273.8	3.7
Standard Deviation	0.31	2.66	1.36	12.91	0.0798	0.0007		103.4	17.5
Sample Variance	0.10	7.08	1.84	166.67	0.0064	0.0000		10684.4	304.6
Range	1.10	9.80	5.01	59.40	0.2650	0.0029		307.0	48.0
Minimum	6.70	7.60	8.05	69.50	0.0000	0.0000		124.0	2.0
Maximum	7.80	17.40	13.06	128.90	0.2650	0.0029		431.0	50.0
Count	17	17	16	16	17	17		17	17

**MSCARII - 1999-2000 Station T 5**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.10	14.00	9.66	92.72	0.0136	0.0000		232.9	13.0
Standard Error	0.07	0.74	0.38	3.70	0.0068	0.0000		17.7	3.9
Median	7.10	13.70	10.10	95.00	0.0000	0.0000		227.7	4.2
Standard Deviation	0.29	3.07	1.55	15.24	0.0280	0.0000		72.8	16.2
Sample Variance	0.08	9.40	2.41	232.13	0.0008	0.0000		5299.1	262.5
Range	1.00	11.20	6.95	71.80	0.1000	0.0000		261.8	47.0
Minimum	6.60	8.40	5.35	53.60	0.0000	0.0000		121.0	1.0
Maximum	7.60	19.60	12.30	125.40	0.1000	0.0000		382.8	48.0
Count	17	17	17	17	17	17		17	17

**MSCARII - 1999-2000 Station T 6**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.13	13.16	8.87	84.65	0.1489	0.0005		535.9	13.1
Standard Error	0.05	0.57	0.52	5.22	0.0404	0.0002		41.8	3.9
Median	7.20	13.30	9.25	87.60	0.1010	0.0002		556.0	5.2
Standard Deviation	0.20	2.20	2.02	20.22	0.1566	0.0006		161.8	15.0
Sample Variance	0.04	4.85	4.09	408.70	0.0245	0.0000		26165.4	224.7
Range	0.70	8.00	7.69	76.30	0.5050	0.0020		567.0	47.0
Minimum	6.70	8.90	4.21	37.00	0.0000	0.0000		243.0	3.0
Maximum	7.40	16.90	11.90	113.30	0.5050	0.0020		810.0	50.0
Count	15	15	15	15	15	15		15	15

**MSCARII - 1999-2000 Station T 7**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.39	15.10	10.74	107.93	0.0174	0.0000		2399.5	11.2
Standard Error	0.09	0.94	0.46	4.64	0.0068	0.0000		1310.4	3.0
Median	7.40	14.60	10.70	101.20	0.0044	0.0000		293.6	4.2
Standard Deviation	0.36	3.86	1.89	19.14	0.0279	0.0001		5402.8	12.3
Sample Variance	0.13	14.89	3.58	366.51	0.0008	0.0000	#####		151.5
Range	1.30	12.60	6.29	67.80	0.1020	0.0003		21378.4	30.5
Minimum	6.70	9.50	7.91	84.20	0.0000	0.0000		121.6	2.5
Maximum	8.00	22.10	14.20	152.00	0.1020	0.0003		21500.0	33.0
Count	17	17	17	17	16	16		17	17

**MSCARII - 1999-2000 Station T 8**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	6.67	12.53	8.54	79.87	0.0008	0.0000		157.0	23.9
Standard Error	0.07	0.44	0.43	3.80	0.0006	0.0000		15.1	6.5
Median	6.70	12.60	8.86	80.30	0.0000	0.0000		162.5	25.0
Standard Deviation	0.20	1.17	1.13	10.07	0.0016	0.0000		39.9	17.1
Sample Variance	0.04	1.37	1.28	101.34	0.0000	0.0000		1592.9	293.7
Range	0.60	3.50	3.56	32.20	0.0044	0.0000		112.4	50.4
Minimum	6.40	10.70	6.80	63.80	0.0000	0.0000		106.0	3.6
Maximum	7.00	14.20	10.36	96.00	0.0044	0.0000		218.4	54.0
Count	7	7	7	7	7	7		7	7

**MSCARII - 1999-2000 Station T 9**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.46	14.74	10.68	105.41	0.0104	0.0001		270.6	10.2
Standard Error	0.10	0.65	0.35	3.87	0.0060	0.0001		24.0	3.0
Median	7.55	14.60	10.63	103.35	0.0000	0.0000		259.0	3.4
Standard Deviation	0.39	2.61	1.39	15.49	0.0241	0.0003		96.2	12.0
Sample Variance	0.16	6.79	1.93	240.04	0.0006	0.0000		9245.8	144.6
Range	1.50	9.20	4.59	55.00	0.0900	0.0010		357.0	34.0
Minimum	6.70	9.60	8.74	81.00	0.0000	0.0000		132.0	1.0
Maximum	8.20	18.80	13.33	136.00	0.0900	0.0010		489.0	35.0
Count	16	16	16	16	16	16		16	16

**MSCARII - 1999-2000 Station T10**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.64	15.53	10.02	100.38	0.0026	0.0000		211.8	13.1
Standard Error	0.11	0.59	0.27	2.76	0.0013	0.0000		15.2	3.1
Median	7.80	16.10	9.92	96.70	0.0000	0.0000		222.3	7.2
Standard Deviation	0.41	2.29	1.06	10.68	0.0051	0.0001		58.7	12.0
Sample Variance	0.17	5.23	1.12	113.96	0.0000	0.0000		3448.8	144.9
Range	1.30	7.90	4.37	40.00	0.0146	0.0002		195.7	37.1
Minimum	6.90	11.50	8.21	90.00	0.0000	0.0000		114.9	3.9
Maximum	8.20	19.40	12.58	130.00	0.0146	0.0002		310.6	41.0
Count	15	15	15	15	15	15		15	15

**MSCARII - 1999-2000 Station T11**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.38	13.68	10.65	102.19	0.0065	0.0000		204.2	8.6
Standard Error	0.08	0.64	0.24	2.43	0.0043	0.0000		11.1	2.4
Median	7.40	13.70	10.45	100.25	0.0000	0.0000		213.6	3.6
Standard Deviation	0.33	2.55	0.96	9.72	0.0173	0.0000		44.5	9.6
Sample Variance	0.11	6.51	0.92	94.47	0.0003	0.0000		1983.4	91.9
Range	1.10	9.20	3.81	39.30	0.0700	0.0000		138.9	29.0
Minimum	6.80	8.80	9.25	91.60	0.0000	0.0000		116.0	1.0
Maximum	7.90	18.00	13.06	130.90	0.0700	0.0000		254.9	30.0
Count	16	16	16	16	16	16		16	16

**MSCARII - 1999-2000 Station T12**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.41	17.17	9.89	102.94	0.0772	0.0015		224.3	16.9
Standard Error	0.12	0.95	0.38	4.05	0.0631	0.0010		18.1	4.2
Median	7.55	16.65	9.89	103.70	0.0000	0.0000		222.6	7.7
Standard Deviation	0.43	3.57	1.41	15.15	0.2362	0.0039		67.6	15.6
Sample Variance	0.19	12.76	2.00	229.39	0.0558	0.0000		4565.2	244.4
Range	1.50	11.50	6.63	66.80	0.8820	0.0127		250.8	47.9
Minimum	6.70	12.00	5.79	67.00	0.0000	0.0000		119.0	3.1
Maximum	8.20	23.50	12.42	133.80	0.8820	0.0127		369.8	51.0
Count	14	14	14	14	14	14		14	14

**MSCARII - 1999-2000 Station T13**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	7.02	15.04	8.83	88.07	0.0295	0.0001		395.6	10.5
Standard Error	0.07	0.60	0.37	4.19	0.0163	0.0001		22.8	3.2
Median	6.90	14.40	8.60	87.70	0.0000	0.0000		383.6	3.3
Standard Deviation	0.24	2.15	1.33	15.12	0.0587	0.0003		82.1	11.6
Sample Variance	0.06	4.63	1.76	228.76	0.0035	0.0000		6746.0	133.7
Range	0.90	6.40	5.08	58.00	0.1800	0.0010		268.0	29.4
Minimum	6.60	12.10	6.60	62.30	0.0000	0.0000		287.0	2.6
Maximum	7.50	18.50	11.68	120.30	0.1800	0.0010		555.0	32.0
Count	13	13	13	13	13	13		13	13

**MSCARII - 1999-2000 Station T14**

	pH	Temp.	D.O.	Percent Sat.	NH3	Total NH3	Tox	Cond.	Turb.
Mean	6.80	15.69	9.25	93.67	0.0024	0.0000		1194.9	14.7
Standard Error	0.06	0.78	0.30	3.59	0.0015	0.0000		609.5	5.2
Median	6.80	15.00	9.31	91.80	0.0000	0.0000		395.4	5.5
Standard Deviation	0.21	3.03	1.17	13.92	0.0060	0.0000		2360.5	20.0
Sample Variance	0.05	9.20	1.38	193.86	0.0000	0.0000		5572141.8	400.5
Range	0.80	10.30	5.08	48.50	0.0231	0.0000		9431.5	68.4
Minimum	6.40	11.30	6.70	71.00	0.0000	0.0000		18.5	1.6
Maximum	7.20	21.60	11.78	119.50	0.0231	0.0000		9450.0	70.0
Count	15	15	15	15	15	15		15	15





## Appendix C

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### Summary Data by Watershed

**MSCARII - 1999-2000 All Data**

	pH	Temp.	D.O.	Percent Sat	NH3 Total	NH3 Tox.	Cond.	Turb.
Mean	7.56	14.84	9.29	92.20	0.4203	0.0068	577.5	14.5
Standard Error	0.02	0.12	0.09	1.01	0.0542	0.0015	31.0	0.8
Median	7.50	14.60	9.42	91.60	0.0252	0.0000	451.0	6.3
Standard Deviation	0.51	3.43	2.71	29.17	1.5633	0.0439	894.0	23.0
Sample Variance	0.26	11.74	7.33	851.06	2.4439	0.0019	799288.5	531.0
Range	4.10	23.40	26.96	290.50	25.2000	1.0710	14152.0	234.0
Minimum	6.20	5.50	0.75	7.50	0.0000	0.0000	8.0	1.0
Maximum	10.30	28.90	27.71	298.00	25.2000	1.0710	14160.0	235.0
Count	833	833	830	831	832	832	831	821

**MSCARII - 1998-1999 All Data**

	pH	Temp.	D.O.	Percent Sat	NH3 Total	NH3 Tox.	Cond.	Turb.
Mean	7.57	12.58	10.24	95.70	0.8695	0.0120	533.3	21.4
Standard Error	0.02	0.16	0.09	0.91	0.0775	0.0014	44.6	1.4
Median	7.50	12.00	10.40	96.00	0.3800	0.0030	348.0	13.0
Standard Deviation	0.51	3.51	1.94	19.51	1.6746	0.0306	964.6	29.7
Sample Variance	0.26	12.34	3.76	380.60	2.8041	0.0009	930422.0	885.0
Range	3.20	19.50	12.60	144.00	16.4000	0.3770	11915.0	369.0
Minimum	6.40	5.50	3.30	31.00	0.0000	0.0000	85.0	1.0
Maximum	9.60	25.00	15.90	175.00	16.4000	0.3770	12000.0	370.0
Count	469	457	457	457	467	467	467	467

**MSCARII - 1997-1998 All Data**

	pH	Temp.	D.O.	Percent Sat	NH3 Total	NH3 Tox.	Cond.	Turb.
Mean	7.86	16.06	9.54	96.28	1.2433	0.0373	407.4	29.9
Standard Error	0.02	0.17	0.12	1.32	0.1387	0.0045	19.3	1.9
Median	7.80	16.00	9.80	94.00	0.5000	0.0120	330.0	18.0
Standard Deviation	0.52	3.93	2.68	30.10	3.1621	0.1019	439.7	43.7
Sample Variance	0.27	15.43	7.17	906.28	9.9986	0.0104	193334.6	1911.8
Range	3.70	21.50	19.50	217.00	39.4000	1.3500	7425.0	550.0
Minimum	5.90	7.00	0.20	2.00	0.0000	0.0000	75.0	0.0
Maximum	9.60	28.50	19.70	219.00	39.4000	1.3500	7500.0	550.0
Count	521	523	521	521	520	520	521	521

**MSCARII - 1996-1997 All Data**

	pH	Temp.	D.O.	Percent Sat	NH3 Total	NH3 Tox.	Cond.	Turb.
Mean	7.37	16.59	9.50	97.31	0.9427	0.0174	574.5	31.7
Standard Error	0.04	0.43	0.20	2.39	0.0759	0.0039	56.9	2.3
Median	7.40	14.00	9.60	94.00	0.6400	0.0050	470.0	23.0
Standard Deviation	0.49	5.15	2.43	28.67	0.9041	0.0467	680.7	24.4
Sample Variance	0.24	26.50	5.92	822.15	0.8174	0.0022	463388.8	597.6
Range	2.70	19.00	12.80	158.00	6.5100	0.4740	7900.0	140.0
Minimum	6.30	8.00	2.20	21.00	0.0900	0.0000	100.0	0.0
Maximum	9.00	27.00	15.00	179.00	6.6000	0.4740	8000.0	140.0
Count	144	144	144	144	142	142	143	113







**MSCARII 1990- 1991 San Antonio Ck. Data**

	pH	Temp.	D.O.	Percent Sat	NH3 Total	NH3 Tox.	Cond.	Turb.
Mean	7.59	14.31	8.86	86.51	2.2085	0.0301	601.7	28.4
Standard Error	0.04	0.34	0.35	3.87	0.5662	0.0090	40.2	9.7
Median	7.60	14.00	9.60	91.00	0.8100	0.0095	530.0	11.5
Standard Deviation	0.35	3.01	3.10	34.39	5.0005	0.0796	357.5	85.7
Sample Variance	0.12	9.05	9.59	1182.38	25.0045	0.0063	127804.0	7344.9
Range	1.90	15.00	15.60	247.00	26.3900	0.5270	2100.0	545.0
Minimum	6.40	8.50	0.30	3.00	0.2100	0.0000	100.0	0.0
Maximum	8.30	23.50	15.90	250.00	26.6000	0.5270	2200.0	545.0
Count	79	79	79	79	79	79	79	79

**MSCARII - 1999-2000 Tomales Tribs. Data**

	pH	Temp.	D.O.	Percent Sat	NH3 Total	NH3 Toxi	Cond.	Turb.
Mean	7.37	14.71	9.87	102.45	0.0610	0.0011	624.0	12.9
Standard Error	0.02	0.18	0.09	3.65	0.0133	0.0004	97.0	0.8
Median	7.40	14.50	9.96	96.40	0.0000	0.0000	267.0	6.0
Standard Deviation	0.45	3.27	1.70	66.23	0.2406	0.0077	1759.4	15.0
Sample Variance	0.20	10.68	2.88	4386.26	0.0579	0.0001	#####	225.6
Range	3.10	18.00	13.80	999.30	3.4500	0.1094	21492.0	124.0
Minimum	6.20	7.20	0.40	7.70	0.0000	0.0000	8.0	1.0
Maximum	9.30	25.20	14.20	1007.00	3.4500	0.1094	21500.0	125.0
Count	330	330	329	329	329	329	329	321

**MSCARII - 1998-1999 Tomales Tribs. Data**

	pH	Temp.	D.O.	Percent Sat	NH3 Total	NH3 Toxi	Cond.	Turb.
Mean	7.49	11.95	10.15	93.21	0.6146	0.0068	768.4	21.4
Standard Error	0.03	0.17	0.10	0.83	0.0756	0.0012	170.3	2.2
Median	7.50	12.00	10.50	96.00	0.2600	0.0020	240.0	12.0
Standard Deviation	0.43	2.50	1.46	12.16	1.1341	0.0173	2553.9	33.7
Sample Variance	0.19	6.25	2.12	147.86	1.2863	0.0003	#####	1136.3
Range	2.60	15.50	9.70	99.00	8.4500	0.1900	24415.0	369.0
Minimum	6.40	6.00	3.30	31.00	0.0000	0.0000	85.0	1.0
Maximum	9.00	21.50	13.00	130.00	8.4500	0.1900	24500.0	370.0
Count	225	214	214	214	225	225	225	225

**MSCARII - 1997-1998 Tomales Tribs. Data**

	pH	Temp.	D.O.	Percent Sat	NH3 Total	NH3 Toxi	Cond.	Turb.
Mean	7.76	15.26	9.55	94.59	0.9206	0.0188	514.6	34.0
Standard Error	0.03	0.22	0.09	0.91	0.1955	0.0038	112.3	3.6
Median	7.80	15.00	9.80	95.00	0.3300	0.0040	211.0	18.0
Standard Deviation	0.38	3.35	1.30	13.76	2.9715	0.0574	1709.9	54.8
Sample Variance	0.15	11.20	1.68	189.34	8.8300	0.0033	#####	2997.9
Range	2.50	20.00	12.20	135.00	39.4000	0.7900	21025.0	550.0
Minimum	6.50	7.00	1.80	16.00	0.0000	0.0000	75.0	0.0
Maximum	9.00	27.00	14.00	151.00	39.4000	0.7900	21100.0	550.0
Count	230	232	230	230	231	231	232	231

**MSCARII - 1999-2000 Stemple Ck.**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.68	15.25	8.90	90.26	0.8769	0.0180		546.5	18.0
Standard Error	0.05	0.28	0.28	3.15	0.1604	0.0068		16.9	1.9
Median	7.50	14.85	8.45	80.70	0.2405	0.0012		515.0	8.9
Standard Deviation	0.63	3.67	3.70	41.22	2.1034	0.0890		222.1	25.2
Sample Variance	0.39	13.47	13.66	1699.28	4.4242	0.0079		49344.5	635.3
Range	3.60	21.00	26.96	290.50	17.4000	1.0710		1783.0	233.6
Minimum	6.70	5.50	0.75	7.50	0.0000	0.0000		6.0	1.4
Maximum	10.30	26.50	27.71	298.00	17.4000	1.0710		1789.0	235.0
Count	172	172	170	171	172	172		172	172

**MSCARII - 1998-1999 Stemple Ck.**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.71	13.70	9.79	94.09	1.0553	0.0194		437.5	26.9
Standard Error	0.06	0.39	0.24	2.58	0.1122	0.0030		16.1	2.6
Median	7.60	13.00	10.00	90.00	0.6700	0.0080		420.0	21.0
Standard Deviation	0.60	4.12	2.48	26.92	1.1932	0.0318		171.7	27.6
Sample Variance	0.37	16.97	6.14	724.84	1.4238	0.0010		29467.1	759.9
Range	3.30	18.00	13.20	146.00	8.8800	0.2290		760.0	158.0
Minimum	6.50	7.00	2.70	27.00	0.0700	0.0000		140.0	2.0
Maximum	9.80	25.00	15.90	173.00	8.9500	0.2290		900.0	160.0
Count	113	109	109	109	113	113		113	112

**MSCARII - 1997-1998 Stemple Ck.**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.87	17.28	8.86	92.69	1.2511	0.0367		415.1	27.5
Standard Error	0.06	0.41	0.31	3.70	0.1431	0.0059		18.2	2.3
Median	7.70	17.00	8.40	84.00	0.7200	0.0130		380.0	22.0
Standard Deviation	0.55	4.04	3.12	36.80	1.4234	0.0590		181.4	23.1
Sample Variance	0.30	16.30	9.72	1353.91	2.0260	0.0035		32895.1	532.4
Range	2.20	15.00	15.20	182.00	8.5800	0.3290		900.0	137.0
Minimum	7.10	10.50	0.80	8.00	0.0600	0.0040		150.0	3.0
Maximum	9.30	25.50	16.00	190.00	8.6400	0.3330		1050.0	140.0
Count	99	99	99	99	99	99		99	99

**MSCARII - 1996-1997 Stemple Ck.**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.47	16.98	9.21	95.91	1.1751	0.0268		636.0	35.1
Standard Error	0.06	0.64	0.32	4.12	0.1188	0.0082		121.1	4.0
Median	7.50	14.00	9.00	93.00	0.8900	0.0070		472.5	25.0
Standard Deviation	0.50	5.17	2.60	33.22	0.9431	0.0649		969.0	28.9
Sample Variance	0.25	26.71	6.75	1103.80	0.8894	0.0042		938895.4	833.7
Range	2.40	18.00	12.60	156.00	3.7600	0.4730		7810.0	140.0
Minimum	6.60	9.00	2.40	23.00	0.2400	0.0010		190.0	0.0
Maximum	9.00	27.00	15.00	179.00	4.0000	0.4740		8000.0	140.0
Count	65	65	65	65	63	63		64	53

**MSCARII - 1994-1995 Stemple Ck.**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	6.87	10.90	9.32	83.11	2.2026	0.0049		321.0	39.1
Standard Error	0.04	0.34	0.29	2.45	0.3967	0.0012		16.6	5.1
Median	6.80	10.00	9.40	84.00	1.2700	0.0020		330.0	27.0
Standard Deviation	0.36	2.74	2.39	19.75	3.2231	0.0096		133.7	27.8
Sample Variance	0.13	7.52	5.70	389.91	10.3882	9.2700		17885.0	769.8
Range	1.30	9.50	13.00	107.00	18.0000	0.0640		705.0	113.0
Minimum	6.30	7.50	3.00	29.00	0.0000	0.0000		95.0	12.0
Maximum	7.60	17.00	16.00	136.00	18.0000	0.0640		800.0	125.0
Count	66	66	66	65	66	65		65	30

**MSCARII - 1993-1994 Stemple Ck.**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.76	15.14	8.40	83.02	2.7834	0.0870		755.5	28.1
Standard Error	0.03	0.34	0.27	2.72	0.9805	0.0438		162.5	2.4
Median	7.70	15.50	8.40	85.00	1.0000	0.0140		550.0	22.0
Standard Deviation	0.35	3.42	2.65	26.82	9.8046	0.4380		1624.7	24.1
Sample Variance	0.12	11.72	7.03	719.08	96.1300	0.1918			582.9
Range	2.00	16.00	14.10	153.00	91.9100	4.2810		16275.0	118.0
Minimum	7.00	8.00	1.80	19.00	0.0900	0.0010		225.0	2.0
Maximum	9.00	24.00	15.90	172.00	92.0000	4.2820		16500.0	120.0
Count	100	100	97	97	100	100		100	99

**MSCARII - 1992-1993 Stemple Ck.**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.82	15.87	9.07	92.10	2.3911	0.0946		626.8	31.2
Standard Error	0.04	0.38	0.24	2.83	0.4621	0.0204		82.3	2.9
Median	7.80	16.50	9.35	88.00	1.0900	0.0180		450.0	23.5
Standard Deviation	0.55	5.20	3.14	37.59	6.2677	0.2761		1118.8	39.1
Sample Variance	0.31	27.07	9.84	1413.30	39.2836	0.0762			1529.3
Range	5.60	23.00	15.10	219.00	47.9400	2.6990		13880.0	472.0
Minimum	3.30	6.00	0.80	7.00	0.0600	0.0010		120.0	3.0
Maximum	8.90	29.00	15.90	226.00	48.0000	2.7000		14000.0	475.0
Count	185	184	176	176	184	184		185	184

**MSCARII - 1991-1992 Stemple Ck.**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.90	19.23	8.39	91.11	4.9547	0.3831		796.1	45.0
Standard Error	0.08	0.77	0.46	5.68	1.6857	0.2066		72.8	6.1
Median	7.90	20.00	8.30	87.00	2.0000	0.0500		700.0	26.0
Standard Deviation	0.57	5.25	3.16	38.94	11.5570	1.4166		498.8	41.6
Sample Variance	0.32	27.54	9.98	1516.49	133.5520	2.0067		248826.0	1729.7
Range	2.60	18.00	14.50	185.00	75.9000	8.5880		2315.0	157.0
Minimum	7.00	10.00	0.50	5.00	0.1000	0.0020		135.0	3.0
Maximum	9.60	28.00	15.00	190.00	76.0000	8.5900		2450.0	160.0
Count	47	47	47	47	47	47		47	47

**MSCARII - 1990-1991 Stemple Ck.**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.71	16.31	9.02	92.00	2.1003	0.0399		631.4	37.0
Standard Error	0.04	0.31	0.42	4.83	0.2689	0.0059		38.0	3.9
Median	7.60	16.50	8.70	86.50	1.2900	0.0190		600.0	30.0
Standard Deviation	0.34	2.61	3.52	40.38	2.2498	0.0490		317.9	32.6
Sample Variance	0.12	6.83	12.38	1630.38	5.0614	0.0024		101058.6	1064.9
Range	1.80	12.50	14.90	177.00	11.7700	0.2250		1465.0	175.0
Minimum	7.00	10.50	1.00	0.00	0.0300	0.0000		235.0	0.0
Maximum	8.80	23.00	15.90	177.00	11.8000	0.2250		1700.0	175.0
Count	70	70	70	70	70	70		70	70

**MSCARII - 1999-2000 Bloomfield Trib. To Americano Ck. Data**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.41	12.83	7.68	72.82	1.9379	0.0096		447.3	21.3
Standard Error	0.06	0.46	0.40	3.84	0.7270	0.0053		30.5	5.9
Median	7.40	12.85	7.53	72.45	0.1360	0.0010		388.6	6.2
Standard Deviation	0.39	2.81	2.47	23.68	4.4818	0.0328		188.1	36.1
Sample Variance	0.15	7.90	6.10	560.88	20.0868	0.0011		35386.6	1306.3
Range	2.40	13.00	10.98	111.70	25.2000	0.2010		937.0	153.0
Minimum	6.70	7.00	1.62	14.80	0.0000	0.0000		190.0	2.0
Maximum	9.10	20.00	12.60	126.50	25.2000	0.2010		1127.0	155.0
Count	38	38	38	38	38	38		38	38

**MSCARII - 1998-1999 Bloomfield Trib. To Americano Ck.**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.55	13.66	9.93	95.12	0.6264	0.0065		341.0	20.3
Standard Error	0.09	0.91	0.33	3.36	0.1221	0.0018		32.6	4.5
Median	7.50	12.00	10.30	96.00	0.4400	0.0040		340.0	17.0
Standard Deviation	0.43	4.54	1.65	16.80	0.6103	0.0089		163.2	22.7
Sample Variance	0.19	20.60	2.72	282.36	0.3724	0.0001		26635.3	514.6
Range	1.80	15.50	6.80	78.00	2.6300	0.0420		555.0	88.0
Minimum	6.70	7.00	6.00	56.00	0.1000	0.0010		95.0	1.0
Maximum	8.50	22.50	12.80	134.00	2.7300	0.0430		650.0	89.0
Count	25	25	25	25	25	25		25	25

**MSCARII - 1997-1998 Bloomfield Trib. To Americano Ck.**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.91	16.81	9.82	100.14	0.7390	0.0231		319.6	26.9
Standard Error	0.10	0.83	0.63	7.05	0.1351	0.0057		32.3	6.5
Median	7.80	17.00	9.80	95.00	0.4800	0.0160		320.0	18.0
Standard Deviation	0.47	3.81	2.88	32.31	0.6193	0.0263		148.2	29.6
Sample Variance	0.22	14.51	8.31	1044.23	0.3835	0.0007		21971.5	876.6
Range	2.00	12.50	14.40	159.00	2.3400	0.1170		525.0	116.0
Minimum	7.20	11.00	2.30	22.00	0.1600	0.0000		85.0	4.0
Maximum	9.20	23.50	16.70	181.00	2.5000	0.1170		610.0	120.0
Count	21	21	21	21	21	21		21	21

**MSCARII - 1999-2000 Walker Rd. Data**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.24	12.77	6.99	66.09	1.4833	0.0238		389.5	17.2
Standard Error	0.04	0.46	0.69	6.48	1.0445	0.0220		41.0	5.2
Median	7.30	13.15	8.34	75.05	0.3240	0.0015		322.0	7.6
Standard Deviation	0.15	1.73	2.57	24.25	3.9082	0.0824		153.4	19.4
Sample Variance	0.02	2.98	6.62	588.04	15.2743	0.0068		23522.2	378.2
Range	0.50	6.00	8.09	75.10	14.9159	0.3100		547.9	60.5
Minimum	7.00	9.30	1.91	17.70	0.0841	0.0000		257.1	3.5
Maximum	7.50	15.30	10.00	92.80	15.0000	0.3100		805.0	64.0
Count	14	14	14	14	14	14		14	14

**MSCARII - 1999-2000 Spring Hill Rd. Data**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.69	15.41	8.61	86.72	0.1889	0.0047		536.8	11.3
Standard Error	0.11	0.34	0.72	7.83	0.0406	0.0034		32.9	2.2
Median	7.50	15.10	8.00	75.80	0.0848	0.0006		571.0	5.3
Standard Deviation	0.62	1.97	4.16	44.99	0.2332	0.0193		189.0	12.4
Sample Variance	0.38	3.89	17.31	2024.50	0.0544	0.0004		35739.3	153.2
Range	2.10	8.00	17.07	179.30	0.8740	0.1117		655.5	48.1
Minimum	6.80	12.40	1.73	17.70	0.0000	0.0000		158.5	1.9
Maximum	8.90	20.40	18.80	197.00	0.8740	0.1117		814.0	50.0
Count	33	33	33	33	33	33		33	33

**MSCARII - 1998-1999 Spring Hill Rd. Data**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.75	14.64	11.15	109.95	0.8354	0.0227		513.5	15.5
Standard Error	0.11	0.60	0.46	5.15	0.0898	0.0062		35.0	2.0
Median	7.60	13.50	10.80	105.00	0.7600	0.0060		472.5	13.0
Standard Deviation	0.71	3.91	3.00	33.37	0.5752	0.0399		227.0	12.5
Sample Variance	0.50	15.28	9.01	1113.46	0.3308	0.0016		51519.3	156.8
Range	2.70	14.50	11.40	132.00	3.1000	0.2220		1015.0	57.0
Minimum	6.90	10.00	4.50	43.00	0.1500	0.0010		185.0	1.0
Maximum	9.60	24.50	15.90	175.00	3.2500	0.2230		1200.0	58.0
Count	42	42	42	42	41	41		42	41

**MSCARII - 1997-1998 Spring Hill Rd. Data**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	8.15	19.49	9.35	100.55	2.2474	0.0893		562.1	18.7
Standard Error	0.09	0.38	0.77	8.36	0.4321	0.0152		26.9	1.7
Median	8.10	19.50	9.90	103.00	0.7600	0.0540		580.0	15.0
Standard Deviation	0.59	2.61	5.27	57.29	2.9624	0.1041		184.2	11.8
Sample Variance	0.35	6.81	27.81	3281.95	8.7759	0.0108		33939.6	139.3
Range	2.50	10.50	15.70	178.00	12.2900	0.4880		785.0	42.0
Minimum	7.10	13.00	0.20	2.00	0.2100	0.0020		215.0	3.0
Maximum	9.60	23.50	15.90	180.00	12.5000	0.4900		1000.0	45.0
Count	47	47	47	47	47	47		47	47

**MSCARII - 1999-2000 King Rd. Data**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.67	14.46	8.31	80.31	0.6617	0.0087		746.5	20.3
Standard Error	0.06	0.49	0.31	2.72	0.2235	0.0036		20.0	6.6
Median	7.60	13.80	8.45	79.90	0.1960	0.0020		757.5	7.5
Standard Deviation	0.34	2.75	1.75	15.38	1.2645	0.0206		113.0	37.6
Sample Variance	0.12	7.55	3.06	236.55	1.5990	0.0004		12758.5	1413.1
Range	1.50	12.70	7.03	59.20	5.3900	0.0860		507.0	206.6
Minimum	7.20	10.20	4.67	47.50	0.0000	0.0000		459.0	3.4
Maximum	8.70	22.90	11.70	106.70	5.3900	0.0860		966.0	210.0
Count	32	32	32	32	32	32		32	32

**MSCARII - 1998-1999 King Rd. Data**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.65	14.24	8.07	78.05	2.7509	0.0481		723.4	26.6
Standard Error	0.10	0.84	0.41	3.88	0.9765	0.0205		39.8	6.3
Median	7.75	13.00	8.30	84.00	0.7700	0.0100		735.0	18.5
Standard Deviation	0.48	3.85	1.87	17.78	4.5800	0.0964		186.8	29.4
Sample Variance	0.23	14.79	3.49	316.05	20.9764	0.0093		34884.3	864.5
Range	1.60	15.00	6.80	71.00	16.1700	0.3760		720.0	137.0
Minimum	6.80	9.00	3.80	34.00	0.2300	0.0010		380.0	3.0
Maximum	8.40	24.00	10.60	105.00	16.4000	0.3770		1100.0	140.0
Count	22	21	21	21	22	22		22	22

**MSCARII - 1999-2000 Ellis Ck. Data**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	7.69	17.37	12.34	98.34	0.1693	0.0050		998.2	9.3
Standard Error	0.11	0.70	3.02	6.00	0.0521	0.0015		63.1	2.1
Median	7.50	17.30	9.74	97.60	0.0048	0.0005		895.0	4.5
Standard Deviation	0.62	3.78	16.26	32.34	0.2805	0.0080		339.9	11.1
Sample Variance	0.38	14.30	264.51	1045.61	0.0787	0.0001		115521.5	122.5
Range	2.10	15.70	92.52	131.40	0.9400	0.0324		1491.0	43.1
Minimum	6.80	10.30	2.98	31.60	0.0000	0.0000		489.0	1.9
Maximum	8.90	26.00	95.50	163.00	0.9400	0.0324		1980.0	45.0
Count	33	29	29	29	29	29		29	29

**MSCARII - 1998-1999 Ellis Ck. Data**

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	8.14	15.64	11.25	111.83	0.5335	0.0226		790.8	20.3
Standard Error	0.12	1.11	0.53	5.30	0.1406	0.0044		79.6	4.6
Median	8.10	13.25	11.15	108.50	0.3100	0.0210		780.0	17.0
Standard Deviation	0.49	4.70	2.25	22.49	0.5798	0.0183		337.7	19.1
Sample Variance	0.24	22.05	5.04	505.91	0.3361	0.0003		114071.3	366.5
Range	1.70	14.50	7.90	70.00	2.3800	0.0570		1070.0	65.0
Minimum	7.30	10.50	8.00	82.00	0.0700	0.0010		330.0	1.0
Maximum	9.00	25.00	15.90	152.00	2.4500	0.0580		1400.0	66.0
Count	18	18	18	18	17	17		18	17



## MSCARII - 1998-1999 Ellis Ck. Data

	pH	Temp.	D.O.	Percent Sat	NH3	Total NH3	Toxi	Cond.	Turb.
Mean	8.41	19.94	10.91	119.11	0.8844	0.0854		585.6	53.7
Standard Error	0.13	1.07	0.56	7.35	0.2426	0.0212		81.3	15.5
Median	8.30	20.00	10.25	106.00	0.5100	0.0665		580.0	30.5
Standard Deviation	0.55	4.53	2.37	31.17	1.0294	0.0899		344.8	65.6
Sample Variance	0.30	20.56	5.63	971.52	1.0596	0.0081		118911.4	4309.1
Range	1.70	15.50	8.10	98.00	3.7900	0.3270		1055.0	246.0
Minimum	7.70	13.00	7.80	87.00	0.0100	0.0000		145.0	4.0
Maximum	9.40	28.50	15.90	185.00	3.8000	0.3270		1200.0	250.0
Count	18	18	18	18	18	18		18	18