

PROPOSED
TOTAL MAXIMUM DAILY LOAD (TMDL)

For
Dissolved Oxygen and Nutrients
In

Cockroach Bay

(WBID 1778)

Prepared by:

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Acknowledgments

EPA would like to acknowledge that the contents of this report and the total maximum daily load (TMDL) contained herein were developed by the Florida Department of Environmental Protection (FDEP). Many of the text and figures may not read as though EPA is the primary author for this reason, but EPA is officially proposing the TMDLs for Dissolved Oxygen and Nutrients for Cockroach Bay and soliciting comment. EPA is proposing this TMDL in order to meet consent decree requirements pursuant to the Consent Decree entered in the case of Florida Wildlife Federation, et al. v. Carol Browner, et al., Case No. 98-356-CIV-Stafford. EPA will accept comments on this proposed TMDL for 60 days in accordance with the public notice issued on September 30, 2009. Should EPA be unable to approve a TMDL established by FDEP for the 303(d) listed impairment addressed by this report, EPA will establish this TMDL in lieu of FDEP, after full review of public comment.

This TMDL analysis could not have been accomplished without significant contributions from staff in Hillsborough County, the Florida Department of Environmental Protection's Southwest District Office, and the Watershed Evaluation and TMDL Section.

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Web sites

Florida Department of Environmental Protection, Bureau of Watershed Restoration

TMDL Program

<http://www.dep.state.fl.us/water/tmdl/index.htm>

Identification of Impaired Surface Waters Rule

<http://www.dep.state.fl.us/water/tmdl/docs/AmendedIWR.pdf>

STORET Program

<http://www.dep.state.fl.us/water/storet/index.htm>

2008 Integrated Report

http://www.dep.state.fl.us/water/tmdl/docs/2008_Integrated_Report.pdf

Criteria for Surface Water Quality Classifications

<http://www.dep.state.fl.us/legal/rules/shared/62-302t.pdf>

Basin Status Report for the Tampa Bay Basin

http://www.dep.state.fl.us/water/tmdl/stat_rep.htm

Basin Water Quality Assessment Report for the Tampa Bay Basin

http://www.dep.state.fl.us/water/tmdl/stat_rep.htm

U.S. Environmental Protection Agency

Region 4: Total Maximum Daily Loads in Florida

<http://www.epa.gov/region4/water/tmdl/florida/>

National STORET Program

<http://www.epa.gov/storet/>

Chapter 1: INTRODUCTION

1.1 Purpose of Report

This report presents the Total Maximum Daily Load (TMDL) for nutrients and dissolved oxygen (DO) for the Cockroach Bay (WBID 1778) watershed in the Tampa Bay Basin. This waterbody was verified as impaired for nutrients and DO and therefore was included on the Verified List of impaired waters for the Tampa Bay Basin that was adopted by Secretarial Order on June 3, 2008. These TMDLs establish the allowable loadings to Cockroach Bay that would restore the waterbody so that it meets its applicable water quality criteria for nutrients and DO.

1.2 Identification of Waterbody

Cockroach Bay, is located in the south western portion of Hillsborough County just west of Sun City (**Figure 1.1**) and drains to Middle Tampa Bay (WBID 1558B). Additional information about Cockroach Bay is available in the Basin Status Report for the Tampa Bay Basin (Florida Department of Environmental Protection [Department], 2001).

For assessment purposes, the Department has divided the Tampa Bay Basin into water assessment polygons with a unique **waterbody identification** (WBID) number for each watershed or stream reach. Cockroach Bay is assigned to WBID 1778 (**Figure 1.2**).

1.3 Background

This report was developed as part of the Department's watershed management approach for restoring and protecting state waters and addressing TMDL Program requirements. The watershed approach, which is implemented using a cyclical management process that rotates through the state's 52 river basins over a 5-year cycle, provides a framework for implementing the TMDL Program-related requirements of the 1972 federal Clean Water Act and the 1999 Florida Watershed Restoration Act (FWRA) (Chapter 99-223, Laws of Florida).

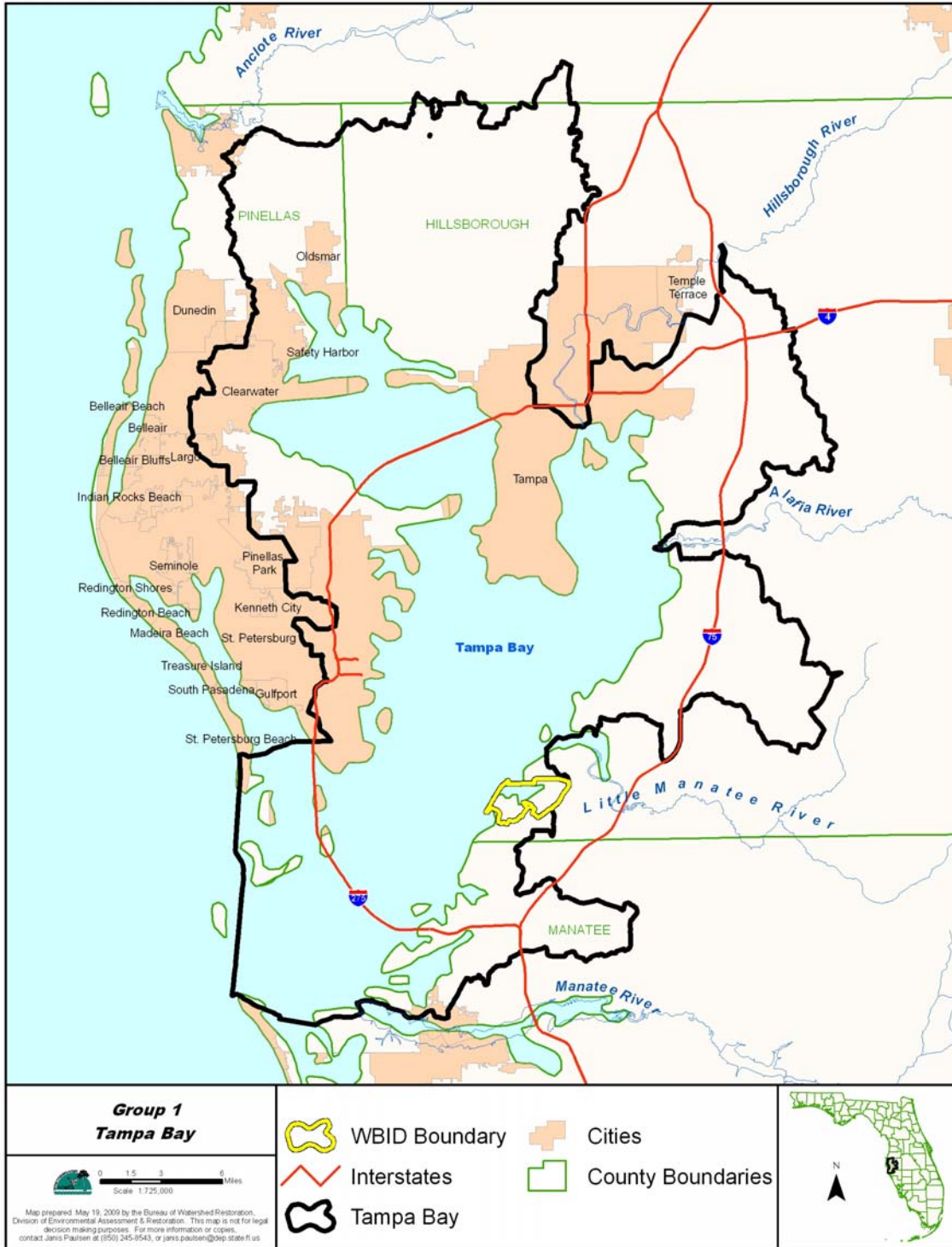


Figure 1.1. Location of Cockroach Bay in Hillsborough County and Major Geopolitical Features in the Area

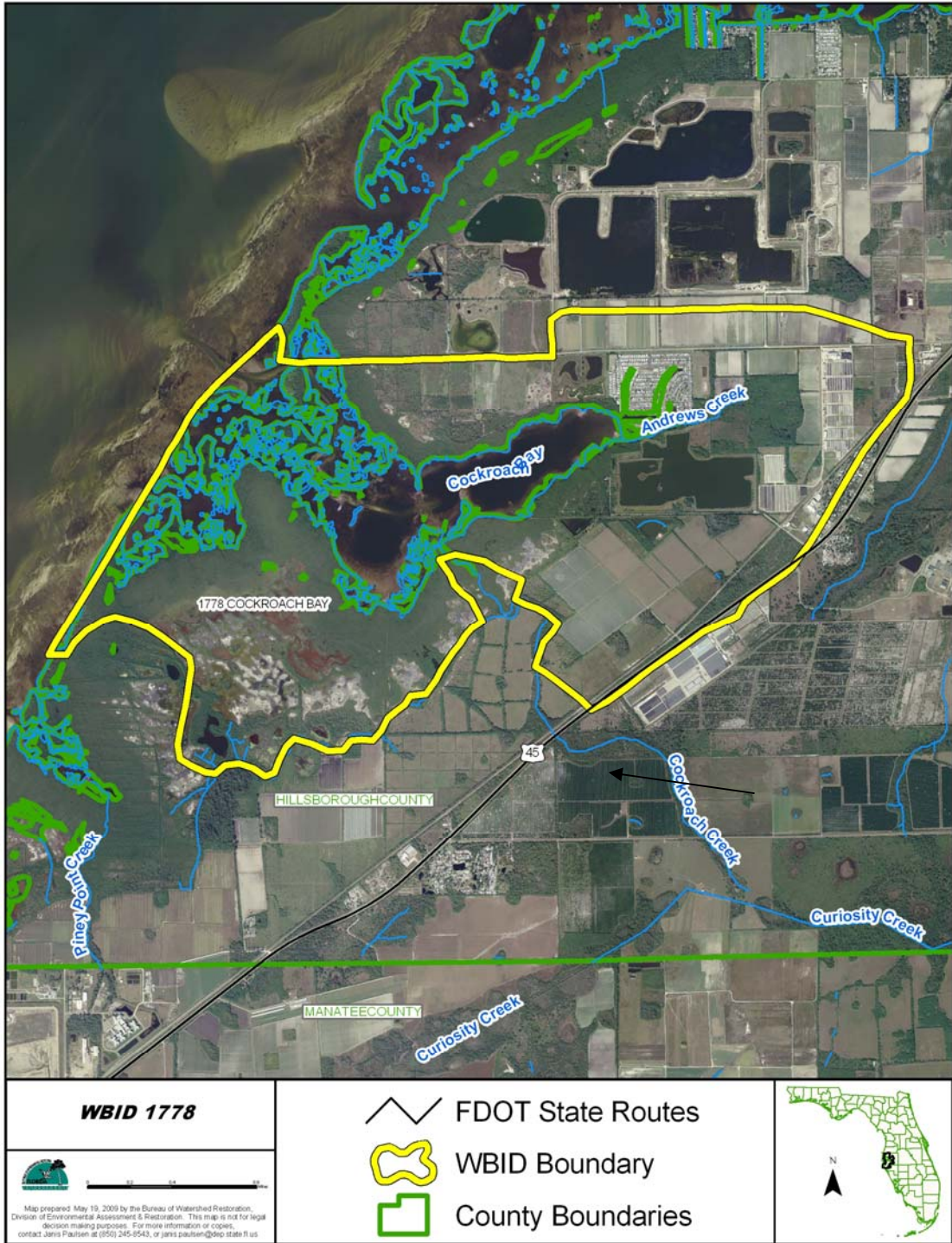


Figure 1.2 Location of Cockroach Bay (WBID 1778) subbasin boundaries

Note: FDOT state routes are for illustration purposes only and are not meant to depict roadways for which FDOT is responsible.

A TMDL represents the maximum amount of a given pollutant that a waterbody can assimilate and still meet water quality standards, including its applicable water quality criteria and its designated uses. TMDLs are developed for waterbodies that are verified as not meeting their water quality standards. They provide important water quality restoration goals that will guide restoration activities.

This TMDL Report will be followed by the development and implementation of a Basin Management Action Plan, or BMAP, designed to reduce the amount of nutrients and increase the DO that caused the verified impairment of Cockroach Bay. These activities will depend heavily on the active participation of the Southwest Florida Water Management District (SWFWMD), Hillsborough County, local governments, businesses, and other stakeholders. The Department will work with these organizations and individuals to undertake or continue reductions in the discharge of pollutants and achieve the established TMDLs for impaired waterbodies.

Chapter 2: DESCRIPTION OF WATER QUALITY PROBLEM

2.1 Statutory Requirements and Rulemaking History

Section 303(d) of the federal Clean Water Act requires states to submit to the U.S. Environmental Protection Agency (EPA) lists of surface waters that do not meet applicable water quality standards (impaired waters) and establish a TMDL for each pollutant causing impairment of listed waters on a schedule. The Department has developed such lists, commonly referred to as 303(d) lists, since 1992. The list of impaired waters in each basin, referred to as the Verified List, is also required by the FWRA (Subsection 403.067[4], Florida Statutes [F.S.]); the state's 303(d) list is amended annually to include basin updates.

Florida's 1998 303(d) list included 47 waterbodies in the Tampa Bay Basin. However, the FWRA (Section 403.067, F.S.) stated that all previous Florida 303(d) lists were for planning purposes only and directed the Department to develop, and adopt by rule, a new science-based methodology to identify impaired waters. After a long rulemaking process, the Environmental Regulation Commission adopted the new methodology as Rule 62-303, Florida Administrative Code (F.A.C.) (Identification of Impaired Surface Waters Rule, or IWR), in April 2001; the rule was modified in 2006 and 2007.

Data for Cockroach Bay that were used to place it on the 1998 303(d) list came from two time periods, historical (1980 – 1989) and “current” (1990-1995). At that time, only one station was assessed. (Station 21FLHILL240010015, aka 21FLHILL136) as indicated on **Figure 2.1**. The median values for the historical period were turbidity of 6.2 NTU, DO of 5.4 mg/L, BOD₅ of 2.9 mg/L, TN of 1.22 mg/L, phosphorus of 0.50 mg/L, and Chl *a* of 16.0 ug/L. For the 1990-1995 period, the median values were turbidity 7.0 NTU, DO 4.7 mg/L, BOD₅ of 2.6 mg/L, TN of 0.99 mg/L, phosphorus of 0.38 mg/L, and Chl *a* of 10.0 ug/L. Based on the water quality index used in during this period the historical period was given a poor rating and the current period was given a fair rating. Based on EPA practices, a rating of fair was sufficient to be determined as impaired and Cockroach Bay was placed on the 1998 303(d) list for nutrients and DO.

2.2 Information on Verified Impairment

The Department used the IWR to assess water quality impairments in the Cockroach Bay watershed and has verified that this waterbody segment is impaired for nutrients and DO (**Table 2.1**). The verification of nutrient impairment was based on the fact that the annual mean chlorophyll *a* concentrations in years 2000, 2001, 2002, 2003, 2004 and 2006 were greater than 11 ug/L state nutrient threshold for estuary during the verified period (January 1, 2000, through June 30, 2007) (Rule 62-302, F.A.C.) (**Table 2.2**). The verification of DO impairment was based on the fact that 23 out of 102 DO measurements were lower than the 4.0 mg/L state water quality criteria during the verified period (Rule 62-302, F.A.C.). Nutrients (TN and TP) and BOD were identified as the causative pollutants (**Table 2.3**). **Tables 2.2** and **2.3** summarize the water quality data that were the basis for the impairment determination. The projected year for the [1998 303(d) listed] DO TMDL for Cockroach Bay was 2008, but the Settlement Agreement between EPA and Earthjustice, which drives the TMDL development schedule for waters on the

1998 303(d) list, allows an additional nine months to complete the TMDLs. As such, these TMDLs must be adopted and submitted to EPA by September 30, 2009.

The verified impairment were based on data collected by Hillsborough County, Florida Game and Freshwater Fish Commission(FGFC), and the DEP Southwest District, WBID location and the STORET stations are shown in **Figure 2.1**. All of the station location locations not named were sampled only one time each by the FGFC and contributed only limited DO and salinity data.

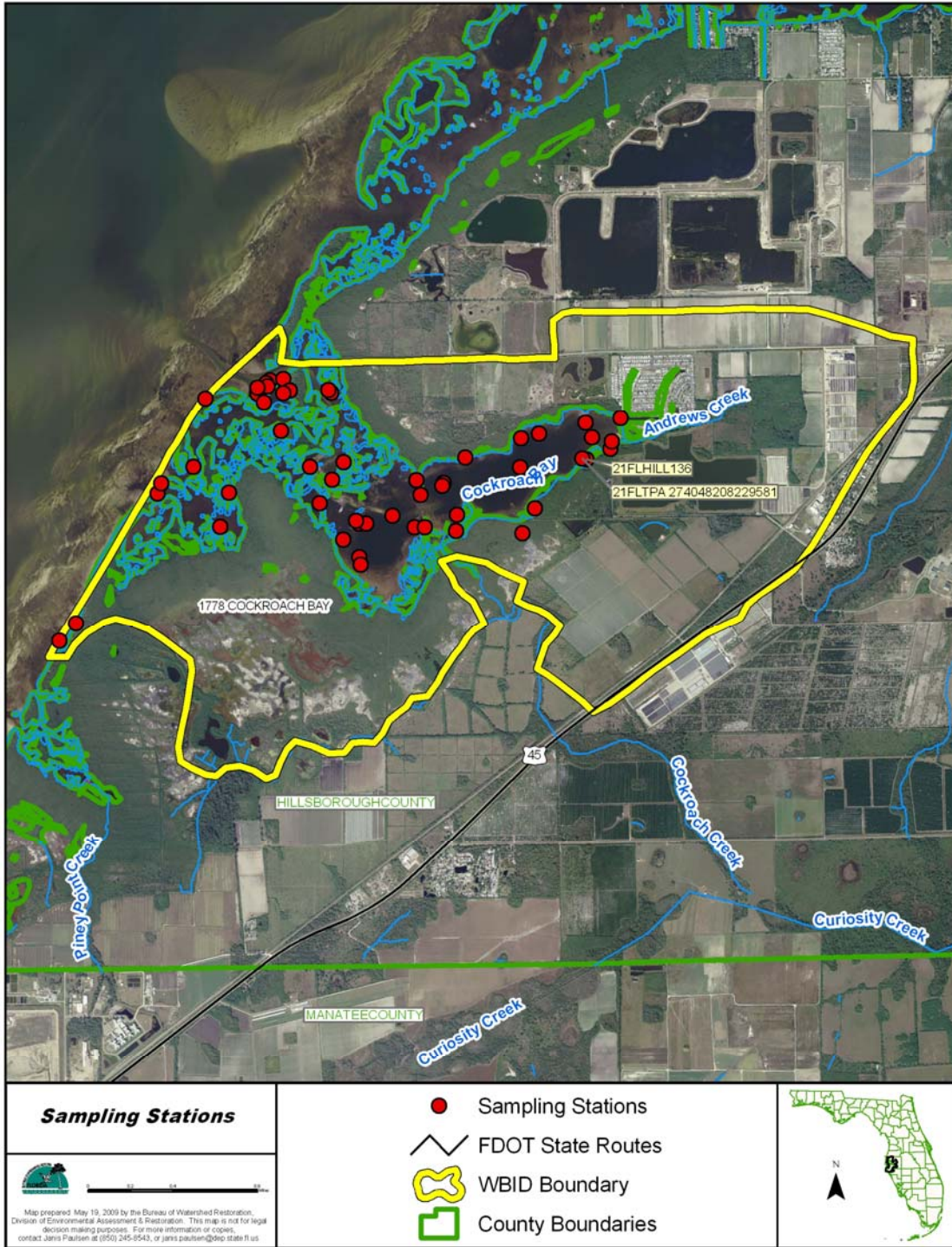


Figure 2.1 Locations of Major Stations.

Note: FDOT local roads are for illustration purposes only and are not meant to depict roadways for which FDOT is responsible].

Table 2.1 Verified Impairments for Cockroach Bay (WBID 1778)

WBID	Waterbody Segment	Parameters of Concern
1778	Cockroach Bay	Nutrients and DO

Unless specified otherwise, all graphs of Annual Average conditions were generated using only years that had data in all four calendar quarters of the year.

Table 2.2 Summary of nutrient data in the verified period for the Cockroach Bay (WBID 1778)

WBID	Parameter	Summary of observation
1778	Exceedance of annual <i>Chl a</i> concentration	6 (in years 2000, 2001, 2002, 2003, 2004 and 2006)
	Range of <i>Chl a</i> concentration (µg/L)	2.8 – 179.5
	Median <i>Chl a</i> concentration (µg/L)	20.4
	Range of TN concentration (mg/L)	0.46 – 4.14
	Median TN concentration (mg/L)	1.10
	Range of TP concentration (mg/L)	0.08 – 0.78
	Median of TP concentration (mg/L)	0.28
	Median TN/TP ratio	4.11

Table 2.3 Summary of DO Monitoring Data in the verified period for the Cockroach Bay (WBID 1778)

WBID	Parameter	Summary of observation
1778	Total number of samples	102
	IWR required number of exceedances for the verified list	15
	Number of observed exceedances	25
	Number of observed non-exceedances	77
	Number of seasons during which samples were collected	4
	Median observation (mg/L)	5.57
	Mean observation (mg/L)	6.24
	Median value for 93 BOD observations (mg/L)	3.0
	Median value for 91 TN observations (mg/L)	1.10
	Median value for 94 TP observations (mg/L)	0.28
	Possible causative pollutant by IWR	TN, TP, and BOD
	FINAL ASSESSMENT	Impaired

2.3 Presentation of Data

Rainfall:

Rainfall data for the period 1992 through 2007 was obtained for the NOAA station closest to Cockroach Bay. This rain station is located within the City of Parrish, about 7.9 miles east southeast of Cockroach Bay.

Figure 2.2 depicts the annual average rainfall from 1992 through 2007. Based on this period of record (POR), the annual average is 56.4 inches. The average during the verified period (2000-2007) is 54.1 inches, making the average rainfall during the verified period slightly drier than the POR. During the verified period, the years 2000 (30.1 in), 2006 (47.4 in), and 2007 (38.5 in) had lower than average rainfall with 2000 as the year with the least rainfall in the POR. The years 2001 (61.5 in), 2003 (wettest year, 85.8 in), 2004 (60.4 in), and 2005 (58.0 in) were wetter than average. Therefore, the verified period contained a good mix of wet and dry conditions. Additionally, from **Figure 2.2**, it can be seen that the first year of the verified period (2000) was at the end of three years of declining rainfall. The year 2003 at 80 inches of rain was the wettest year in the POR and preceded four years of declining rainfall.

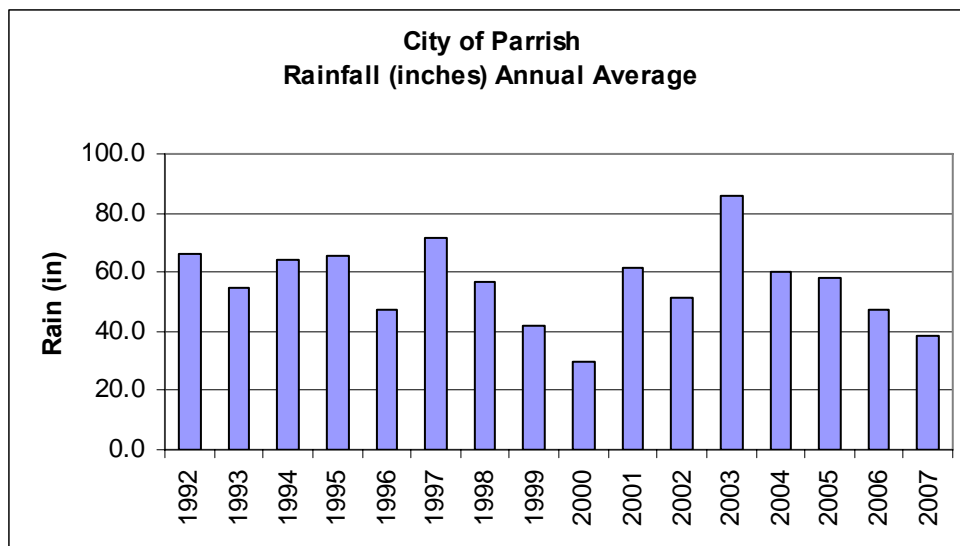


Figure 2.2 Annual Average Rainfall

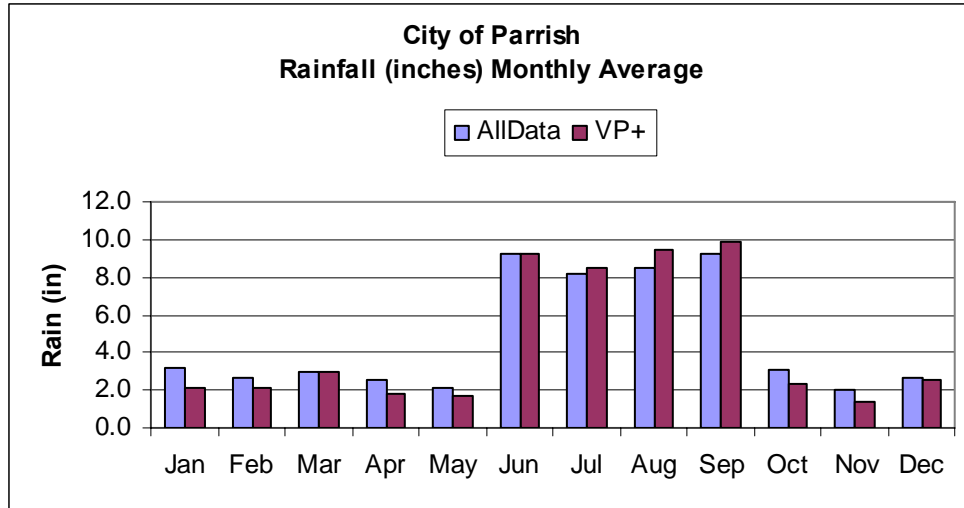


Figure 2.3 Monthly Average Rainfall

Figure 2.3 presents the monthly average rainfall. It is clear from these data that June, July, August, and September are much wetter than other months of the year. Additionally, from **Figure 2.3**, it can be seen that the monthly average rainfall during the verified period followed the same pattern as for the POR, but was slightly wetter during the wet season and dryer during the dry season.

Salinity:

Table 2.4 Salinity By Location

Salinity (ppt)	Period of Record	Count	Minimum	25th Percentile	Average (d)	Median	75th Percentile	Maximum
AllData (b)	Jan-78 - Dec-07	378	0.1	20.2	23.1	24.6	27.8	35.5
AllData-VerifiedP (a)	Jan-00 - Dec-07	56	7.1	24.4	27.0	28.5	30.6	35.5
HillsbCo-Fixed	Jan-78 - Dec-07	318	0.1	19.2	22.4	24.1	27.3	35.5
DEP-Fixed	Feb-06 - Nov-06	13	21.4	25.1	27.0	27.8	29.6	31.5
GWWF-Random (b)	Jan-83, Mar-96 - Aug-01	47	4.4	24.2	26.4	26.6	30.6	34.4

- (a) Verified Period ends June 2007, data was extended through Dec 2007 to complete year.
- (b) Includes three data points from HillsBCo-Random
- (c) compares same period of fixed to random
- (d) Straight arithmetic average

Data from 21FLTPA 274048208229581, a value of 76.57 ppt on 2/6/2006 was removed.

Salinity data were examined to verify that the sampling locations were all predominantly marine and not freshwater. As can be seen in **Table 2.4**, the median of the salinity data for each station indicates these stations are predominantly marine, given that greater than 50 percent of the time the salinities are above 20 ppt. Based on these data, all stations were considered predominantly marine and therefore part of Cockroach Bay. Over all stations, the salinity ranged from a minimum of 0.1 ppt to 35.5 ppt. Over 75 percent of the data are above 19 ppt.

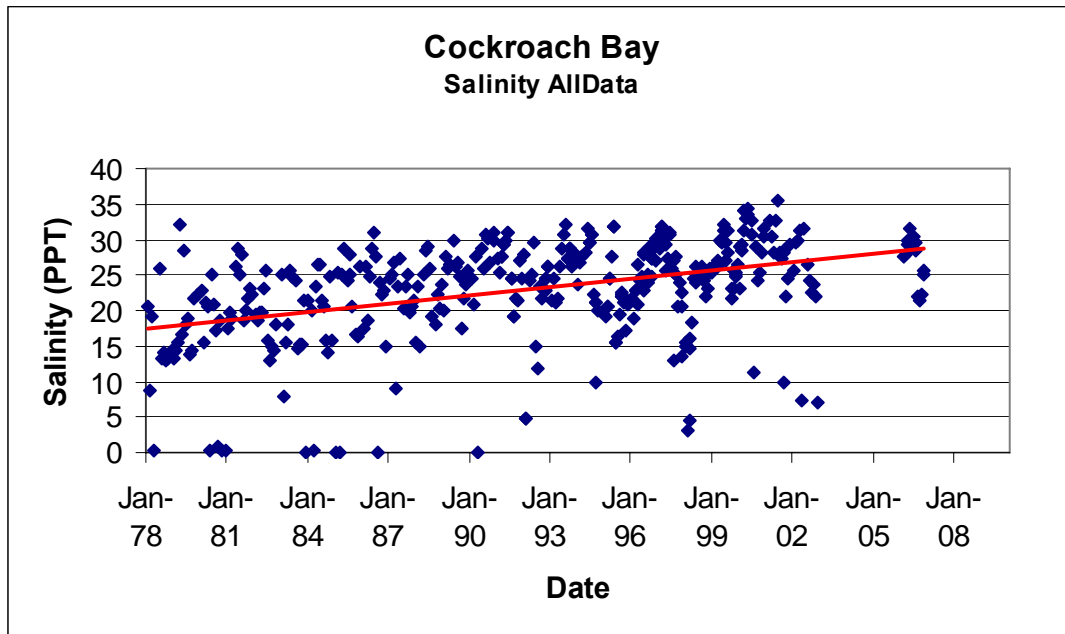


Figure 2.4 Salinity AllData

Figure 2.4 shows the data for all stations within Cockroach Bay and demonstrates that areas in the bay vary from salinities less than 1 ppt to over 35 ppt and the linear trend line indicates that there has been an increase in salinity over time. From 1978 – 1993 all data came from a single station. Changes in salinity during this period reflect changes at that location. After 1993, additional stations were added that are closer to Tampa Bay, these stations may account for some of the salinity changes after that time.

Figure 2.5 shows that the monthly average salinity for Cockroach Bay varies from lows around 19 ppt to highs of 32 ppt. We note that the salinities start to decrease in July at the beginning of the rainy season and bottom out during fall (September, and October); after the rainy season (June through September). These data demonstrate that salinity in Cockroach Bay responds to seasonal rainfall patterns.

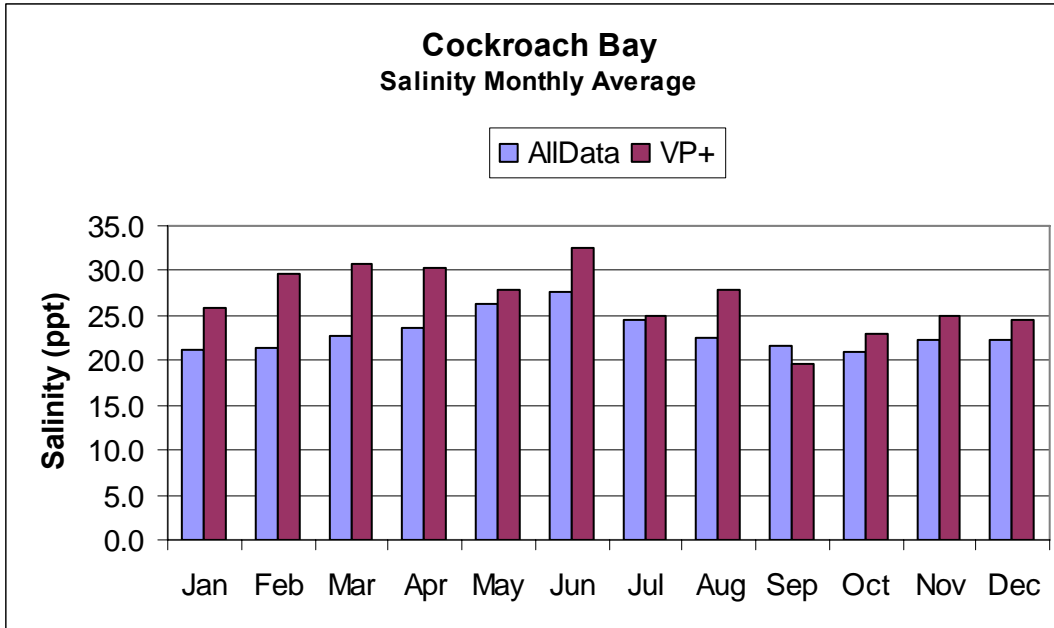


Figure 2.5 Salinity Monthly Average

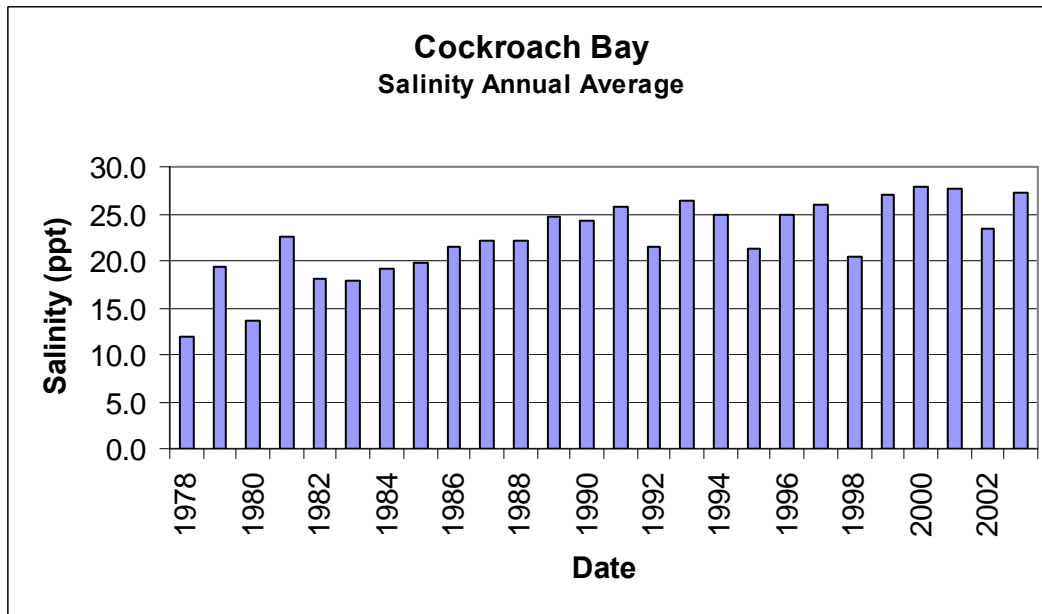


Figure 2.6 Salinity Annual Average

Figure 2.6 depicts the annual average salinity and shows a gradual increase in average salinity from 1978 – 1993, a period during which all data came from the same station. After 1993, salinity has continued to increase, but some part of this may be related to the addition of stations closer to Tampa Bay.

Color:

Table 2.5 Color by Location

Color (PCU)	Period of Record	Count	Minimum	25th Percentile	Average (d)	Median	75th Percentile	Maximum
AllData	Jan-78 - Dec-07	364	5.0	17.0	23.9	20.0	27.0	113.0
AllData-VerifiedP (a)	Jan-00 - Dec-07	99	11.0	17.0	26.8	21.5	31.0	112.0

(a) Verified Period ends June 2007, data was extended through Dec 2007 to complete year.

(d) Straight arithmetic average

Table 2.5 and **Figure 2.7** depict the data for color. From these data, it appears that the color during the verified period was slightly higher than the color over the POR.

Table 2.6 Color by Calendar Quarter and Year

Color (PCU)					
Year	Q1	Q2	Q3	Q4	Annual Average
1978	27.7	18.3	27.7	18.7	23.1
1979	48.3	17.7	29.3	29.8	31.3
1980	16.0	19.0	28.0	24.7	21.9
1981	16.3	17.0	25.5	13.0	18.0
1982	15.7	16.7	25.0	24.5	20.5
1983	33.8	22.7	31.0	25.0	28.1
1984	23.7	23.7	27.3	15.0	22.4
1985	15.3	24.0	29.7	22.0	22.8
1986	17.3	17.3	35.3	25.7	23.9
1987	15.3	22.3	29.0	19.0	21.4
1988	20.7	20.3	32.7	20.0	23.4
1989	18.0	21.3	42.3	24.7	26.6
1990	21.3	19.3	22.0	15.3	19.5
1991	27.0	19.7	29.7	17.0	23.3
1992	20.0	25.0	34.3	16.3	23.9
1993	17.7	17.7	20.3	17.7	18.3
1994	15.3	16.0	41.7	27.0	25.0
1995	18.3	29.0	36.3	19.5	25.8
1996	22.0	18.7	21.0	16.0	19.4
1997	12.7	14.7	24.7	40.7	23.2
1998	34.3	20.0	18.7	17.7	22.7
1999	14.0	15.3	20.0	20.3	17.4
2000	12.3	17.7	34.7	22.0	21.7
2001	14.5	27.0	61.0	33.7	34.0
2002	25.0	21.0	31.7	33.3	27.8
2003	23.0	21.3	46.0	20.0	27.6
2004	20.3	16.0	36.0	23.7	24.0
2005	15.6	20.8	24.8	16.9	19.5
2006	23.8	27.5	65.0	28.9	36.3
2007	13.6	19.4	24.7	15.9	18.4
Average AllData	20.6	20.2	31.8	22.1	23.7
Average (VP ⁺)	18.5	21.3	40.5	24.3	26.2

Table 2.7 Color Monthly Average

Month	AllData Color (PCU)	VP ⁺ Color (PCU)
Jan	22.4	21.7
Feb	20.3	16.5
Mar	20.3	18.2
Apr	19.5	20.9
May	18.5	19.4
Jun	22.8	23.7
Jul	30.3	40.7
Aug	28.9	35.3
Sep	36.3	47.1
Oct	29.1	33.2
Nov	20.1	21.9
Dec	18.2	22.1
Average	23.9	26.7

The monthly average color data in **Table 2.7** and shown on **Figure 2.9** depict the increase in color that occurs during the rainy season. This information indicates that as salinity decreases during the wet season, color increases.

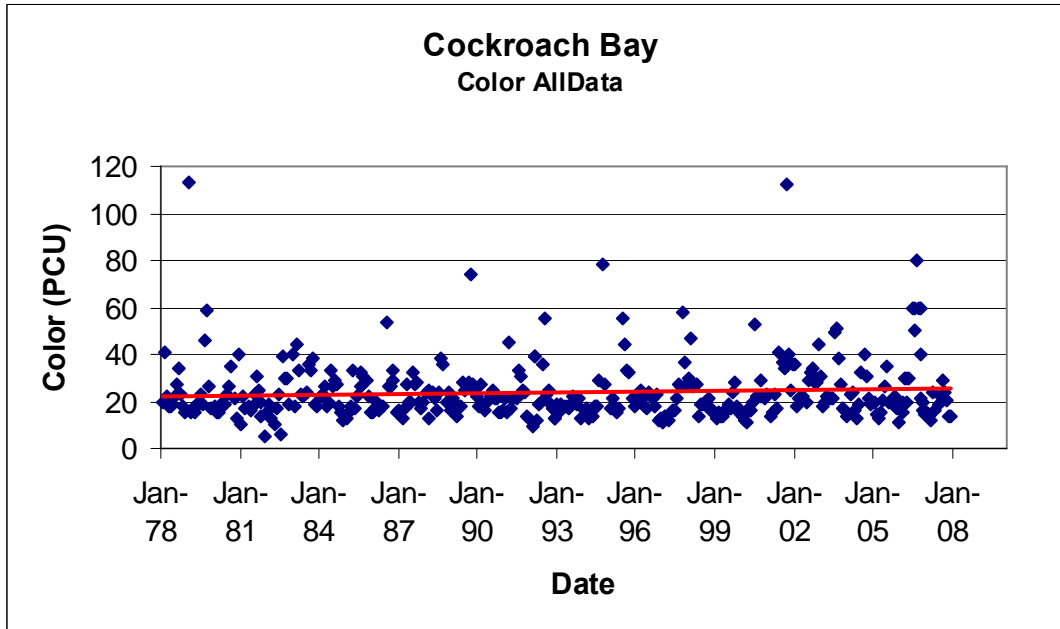


Figure 2.7 Color AllData

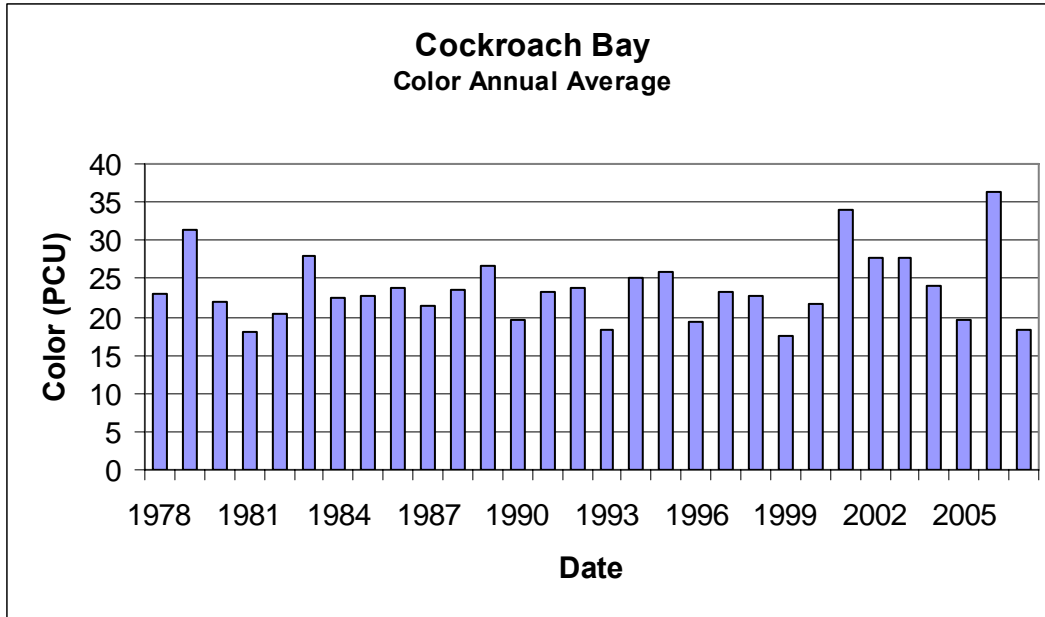


Figure 2.8 Color Annual Average

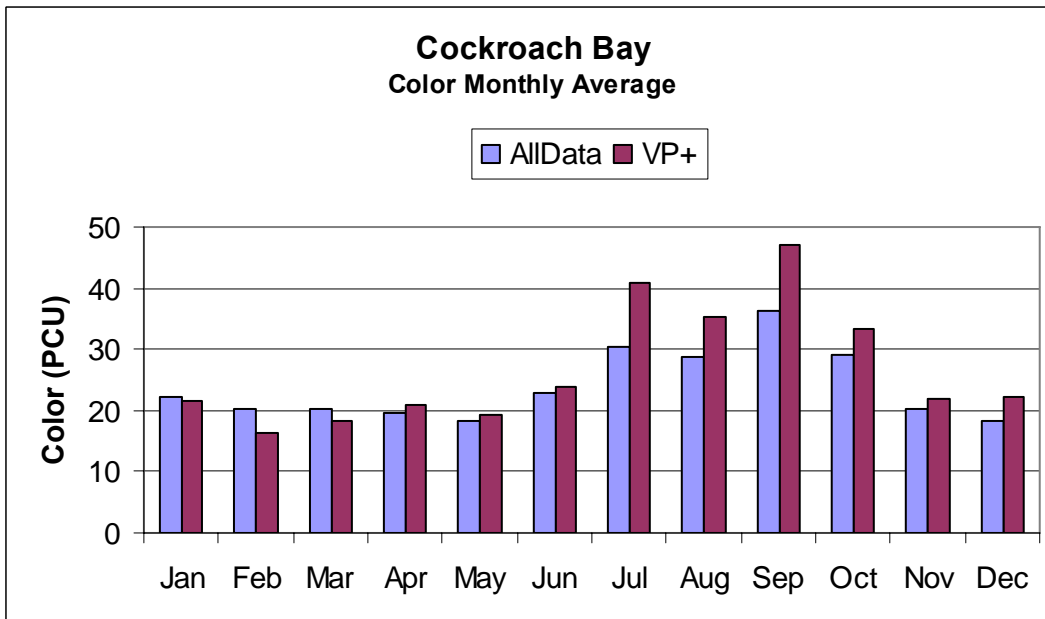


Figure 2.9 Color Monthly Average

Figure 2.9, shows that the monthly average color tracks well with seasonal salinity and rainfall data. The verified period (VP⁺) wet season was wetter than the POR and the VP⁺ dry season was dryer for rainfall, the VP⁺ color was higher during the wet season and lower than the POR in the dry season. This information indicates that Cockroach Bay is responding to inputs from the watershed.

Dissolved Oxygen:

Table 2.8 Dissolved Oxygen by Location

Dissolved Oxygen (mg/L)	Period of Record	Count	Minimum	25th Percentile	Average (d)	Median	75th Percentile	Maximum
AllData	Jan-78 - Dec-07	423	0.50	4.00	5.72	5.10	7.20	30.39
AllData-VerifiedP (a)	Jan-00 - Dec-07	109	0.5	3.91	6.06	5.40	7.26	30.39
HillsbCo-Fixed	Jan-78 - Dec-07	361	0.50	4.00	5.67	5.00	6.80	30.39
DEP-Fixed	Feb-06 - Nov-06	14	3.48	4.21	5.68	5.12	6.61	10.08
GFWF-Random (b)	Jan-83, Mar-96 - Aug-01	48	1.30	3.63	6.13	6.15	8.23	13.10
HillsbCo-Fixed (c)	Mar-96 - Aug-01	67	1.60	4.25	5.91	5.50	6.75	16.00

- (a) Verified Period ends June 2007, data was extended through Dec 2007 to complete year.
- (b) Includes three data points from HillsBCo-Random
- (c) compares same period of fixed to random
- (d) Straight arithmetic average

Table 2.8 indicates that 85 percent of the DO data came from the single Hillsborough County station (361 out of 423) total samples. The data indicate that at least 25 percent of the time, the DO is less than or equal to 4.00 mg/L. The average DO for Cockroach Bay is 6.06 mg/L during the verified period.

Evaluation of DO impairment.

For the purposes of this evaluation, each data point was included without considering the temporal and spatial requirements of the IWR. As such, the total number of observations (109) in **Table 2.9** may be different from that in **Table 2.3**.

Table 2.9 DO Exceedances

Dissolved Oxygen (mg/L)	Number of Results and IWR Required Number of Exceedances	Number less than 5.0 (mg/L)	Percent exceedance 5.0 (mg/L)	Number less than 4.0 (mg/L)	Percent exceedance 4.0 (mg/L)
AllData		193	45.6	102	24.1
AllData-VerifiedP	109 results requires 16 exceedances	40	36.7	24	22.0

This means that the 109 results in Cockroach Bay required 16 exceedances and had 24 exceedances. Therefore, Cockroach Bay would be considered as impaired for DO.

Table 2.10 DO Monthly Averages

Month	AllData Dissolved Oxygen (mg/L)	VP ⁺ Dissolved Oxygen (mg/L)
Jan	8.27	9.84
Feb	7.39	7.65
Mar	6.69	5.86
Apr	5.69	6.07
May	4.85	4.70
Jun	4.69	4.60
Jul	4.12	5.07
Aug	4.55	6.32
Sep	4.79	4.33
Oct	4.79	4.79
Nov	6.11	6.45
Dec	7.23	7.44
Average	5.76	6.09

The data in **Table 2.10** indicate that monthly average DO is below 5.0 mg/L during spring (May and June) and fall (September and October).

Table 2.11 DO Calendar Quarters and Annual Average

Dissolved Oxygen (mg/L)					
Year	Q1	Q2	Q3	Q4	Annual Average
1978	9.17	5.53	5.87	5.87	6.61
1979	6.65	5.83	3.93	7.03	5.86
1980	8.43	4.97	3.93	6.57	5.98
1981	8.17	3.75	4.18	8.00	6.03
1982	7.17	4.50	3.83	5.15	5.16
1983	7.05	5.00		5.90	
1984	6.43	4.77	3.90	8.40	5.88
1985	6.93	5.77	2.83	5.43	5.24
1986	7.20	4.73	3.03	5.03	5.00
1987	7.43	4.35	4.43		
1988	9.57	5.63	3.43	6.90	6.38
1989	6.53	4.03	2.83	6.70	5.03
1990	5.80	4.05	3.58	4.67	4.52
1991	6.93	4.47	3.53	5.23	5.04
1992	7.20	4.43	3.70	6.33	5.42
1993	5.73	4.37	4.00	4.27	4.59
1994	5.20	4.47	5.03	1.40	4.03
1995	7.27	5.97	5.06	5.90	6.05
1996	9.20	5.47	4.61	6.18	6.36
1997	8.37	6.72	4.84	5.95	6.47
1998	7.05	4.73	3.88	3.83	4.87
1999	6.45	3.97	3.73	5.66	4.95
2000	8.80	6.10	7.80	7.07	7.44
2001	6.00	6.60	3.74	9.20	6.38
2002	8.30	4.50	3.87	8.50	6.29
2003	9.43	5.03	5.50	6.03	6.50
2004	9.36	5.90	14.05	5.95	8.82
2005	5.80	2.86	2.16	4.31	3.78
2006	6.05	5.09	5.30	6.12	5.64
2007	5.45	4.42	1.74	3.36	3.74
Average AllData	7.30	4.93	4.42	5.89	5.64
Average (VP ⁺)	7.40	5.06	5.52	6.32	6.07

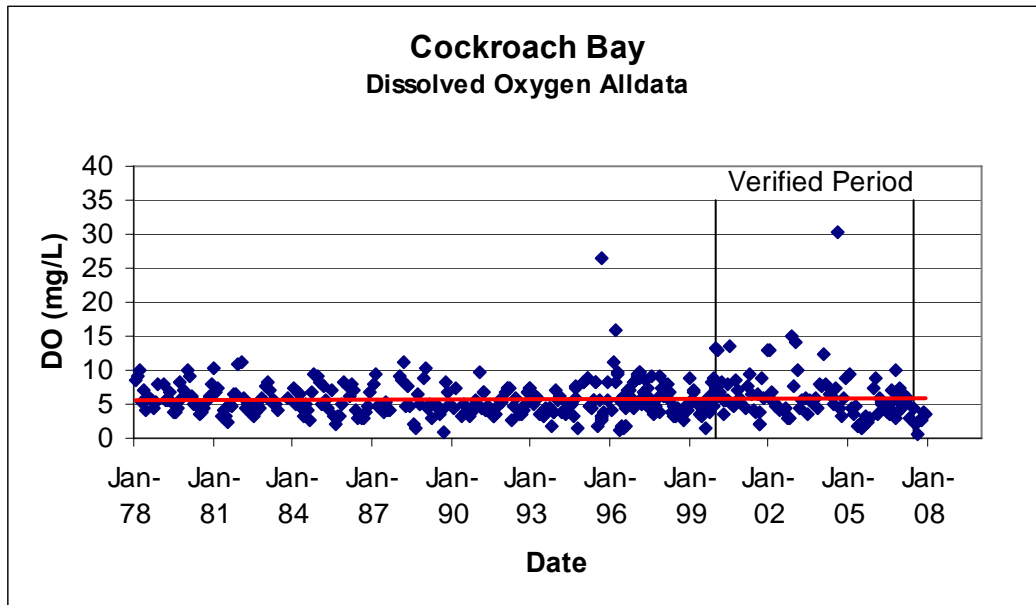


Figure 2.10 Dissolved Oxygen AllData

Figure 2.10 depicts all of the data recorded from within Cockroach Bay with a simple linear trend line through the data. Based on these data, it appears that DO is slightly increasing over time. Additionally, the graph clearly shows that frequently, there are areas of the bay with DO below 4.0 mg/L. It should be noted that the value of 30.39 mg/L DO report at station 21FLHILL136 on August 18, 2004 is suspect.

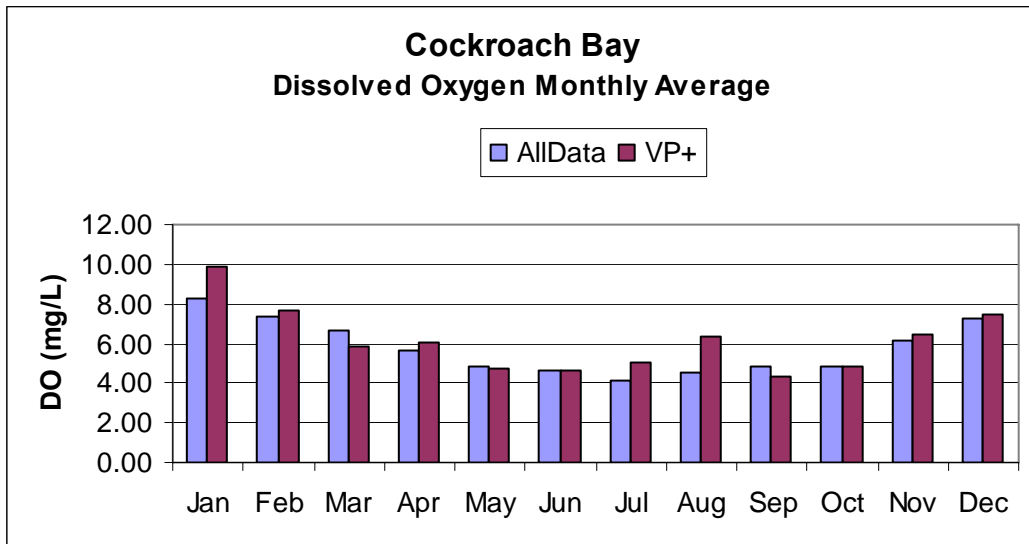


Figure 2.11 Dissolved Oxygen Monthly Average

Figure 2.11 depicts the monthly average DO for the entire period of record (POR) and the verified period. From this graph it can be seen that during the months May-October, POR DO in the bay averages below 5.0 mg/L.

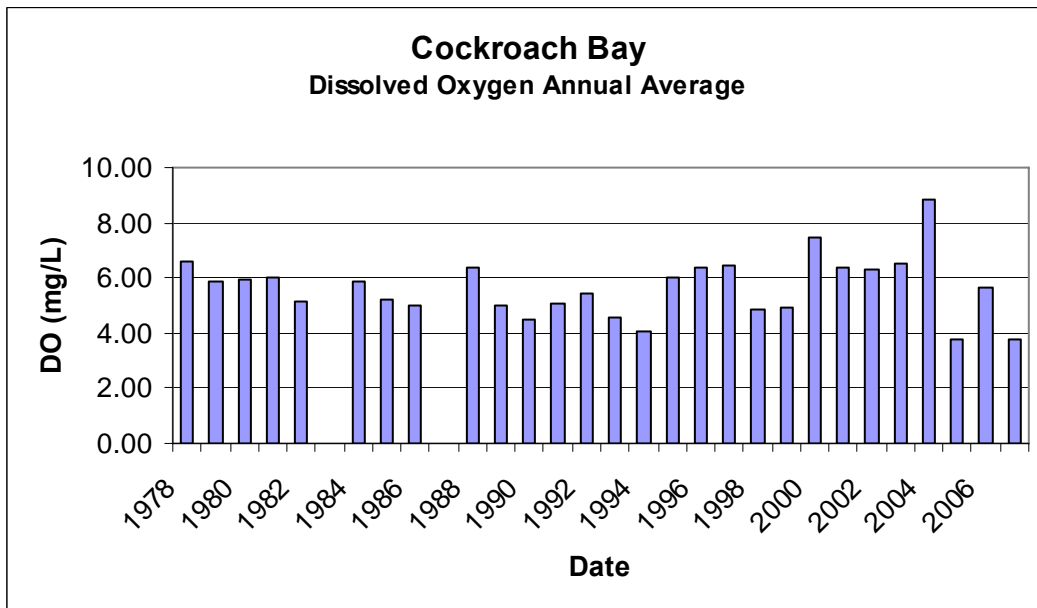


Figure 2.12 Dissolved Oxygen Annual Average

Figure 2.12 depicts the annual average DO of the total dataset. From this graph, it can be seen that the annual average DO hovers between 5.0 to 6.0 mg/L for most of the period of record. However, in years 2005 and 2007, the annual average DO was below 4.0 mg/L.

Chlorophyll A (Chl a);

Table 2.12 Un-corrected Chlorophyll A (UChl a):

Uncorrected Chla (ug/L)	Period of Record	Count	Min	25th Percentile	Avg	Median	75th Percentile	Max
AllData-IWR	Jan-78-Dec04, Feb05, Jan07-Dec-07	392	1.00	8.00	19.55	15.35	25.15	179.50
AllData-VerifiedP (a)	Jan00-Dec04, Feb05, Jan07-Dec-07	72	2.80	9.88	23.98	19.04	26.60	179.50

Only one station from Hillsborough County EPC

Data from 21FLHILL136, on August 18, 1999 of 14300, ug/l was removed from this analysis based on suspect quality assurance.

Table 2.13 Corrected Chlorophyll a (CChl a)

Corrected Chla (ug/L)	Period of Record	Count	Min	25th Percentile	Avg	Median	75Th Percentile	Max
AllData-IWR	Feb05, Jan06-Dec-07	27	1.00	2.45	12.06	7.30	16.20	60.00
AllData-VerifiedP (a)	Feb05, Jan06-Dec-07	same as above						
HillsbCo-EPC	Feb05, Jan07-Dec-07	13	2.20	5.50	10.39	7.70	11.40	34.00
DEP-Fixed	Feb06-Nov-06	14	1.00	1.00	13.25	4.70	19.75	60.00

Table 2.13 indicates that data for CChl a from Cockroach Bay during the verified period is limited to year 2006 (2007 completed for TMDL assessment). All other years contain only uncorrected Chl a data (UChl a). During the year 2006 (the only year with corrected Chl a data) the annual average CChl a was 13.25 ug/L. CChl a in Cockroach Bay during the verified period ranges from less than detect to 60.0 ug/L. It is the CChl a data that were used to make the determination that Cockroach Bay is impaired for nutrients and as the annual average CChl a for 2006 (13.25 ug/L) was greater than the IWR threshold of 11.0 ug/L and Cockroach Bay was impaired for nutrients.

Table 2.14 Chlorophyll a Monthly Average

Month	AllData UChla (ug/L)	VP+ UChla (ug/L)	VP+ Cchla (ug/L)
Jan	11.51	10.59	2.20
Feb	10.44	8.55	8.45
Mar	12.90	11.64	3.25
Apr	18.45	29.93	2.53
May	20.29	20.71	4.15
Jun	21.56	27.57	11.40
Jul	31.87	51.03	15.97
Aug	31.15	29.06	20.70
Sep	32.03	56.07	47.00
Oct	20.94	20.26	19.17
Nov	13.64	16.33	4.07
Dec	8.87	6.39	2.70
Average	19.47	24.01	11.80

Table 2.14 and **Figure 2.15** contain a comparison of the monthly average UChl a to CChl a during the verified period to the POR data. These data indicate that during the verified period, July and September UChl a concentrations were approximately 20 ug/L greater the POR averages. Additionally, the data indicate that CChl a concentrations are generally less than 50 percent of the UChl a concentrations.

Table 2.15 Chlorophyll a Calendar Quarter and Annual Average

Chla (ug/L)					
Year	Q1	Q2	Q3	Q4	Annual Average
1978	18.33	22.33	36.00	12.00	22.17
1979	4.33	17.00	21.33	27.25	17.48
1980	15.00	10.67	11.67	8.33	11.42
1981	3.33	13.50	31.50	16.33	16.17
1982	14.33	20.33	46.33	25.50	26.63
1983	46.50	25.33	40.00	34.33	36.54
1984	24.67	18.00	18.67	6.00	16.83
1985	9.67	24.67	24.67	6.67	16.42
1986	17.88	11.55	28.93	10.80	17.29
1987	5.12	20.42	25.80	19.82	17.79
1988	5.57	36.38	32.47	12.93	21.84
1989	15.40	21.27	40.48	26.60	25.94
1990	23.73	35.67	22.45	22.07	25.98
1991	8.40	10.73	14.50	1.70	8.83
1992	6.92	12.29	30.57	9.36	14.78
1993	8.51	8.60	11.60	3.90	8.15
1994	4.59	14.33	53.50	1.00	18.36
1995	8.97	15.57	62.40	7.43	23.59
1996	10.27	8.91	24.03	10.10	13.33
1997	9.77	10.90	13.87	14.20	12.18
1998	11.63	10.97	17.70	7.50	11.95
1999	3.57	10.53	16.05	10.97	10.28
2000	4.97	30.97	104.17	20.80	40.23
2001	14.55	46.90	38.37	11.53	27.84
2002	8.24	16.27	41.43	18.83	21.19
2003	18.94	34.82	27.88	19.06	25.17
2004	5.33	17.23	26.43	7.37	14.09
2005	11.70				
2005	8.70				
2006	6.00	1.00	32.67	13.35	13.25
2007	3.60	8.10	24.10	6.33	10.53
2007	9.80	10.23	34.03	8.37	15.61
Average AllData	12.07	19.16	32.03	13.60	19.22
Average (VP ⁺)	9.64	23.85	41.19	13.85	22.06
Average (VP ⁺)	8.30	12.47	32.80	11.10	16.13

Highlighted data are for Corrected Chl a, all other data are un-corrected Chl a. The 13.25 ug/L concentration in year 2006 was responsible for Cockroach Bay being listed as impaired for nutrients.

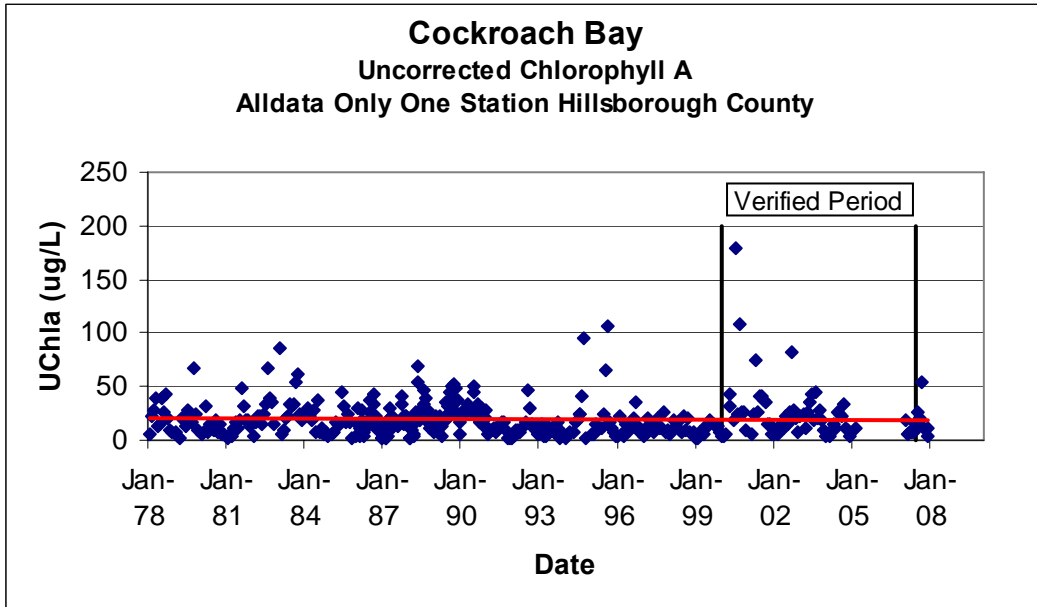


Figure 2.13 Un-corrected Chlorophyll A AllData

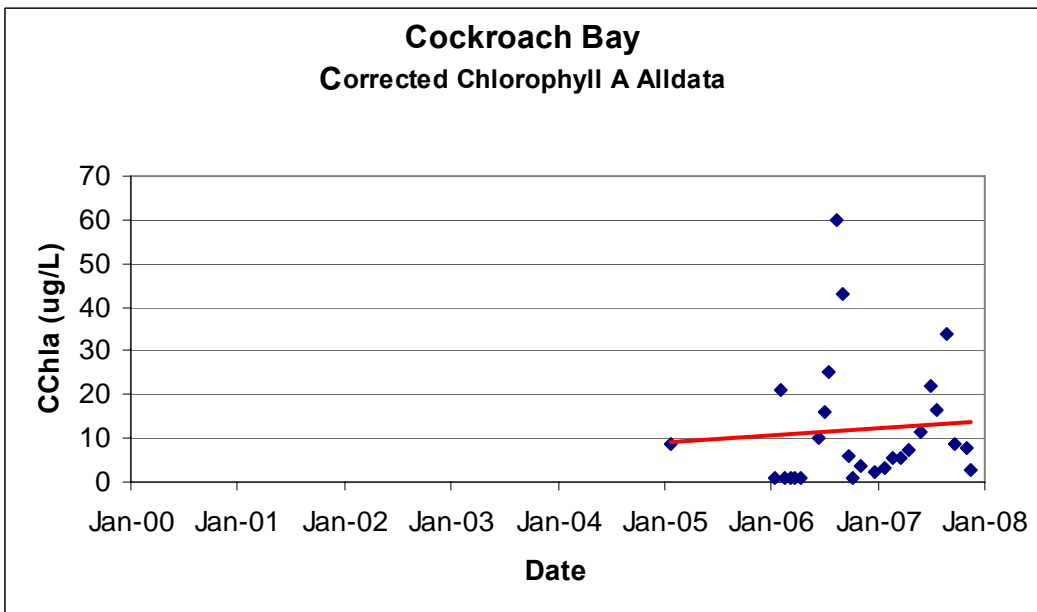


Figure 2.14 Corrected Chlorophyll a AllData

Figure 2.13 depicts all of the data for Cockroach Bay and a linear trend line. Based on these data, there has not been any significant change in UChl a over the period of record. Although, data for UChl a during the verified period has higher concentrations than during the POR.

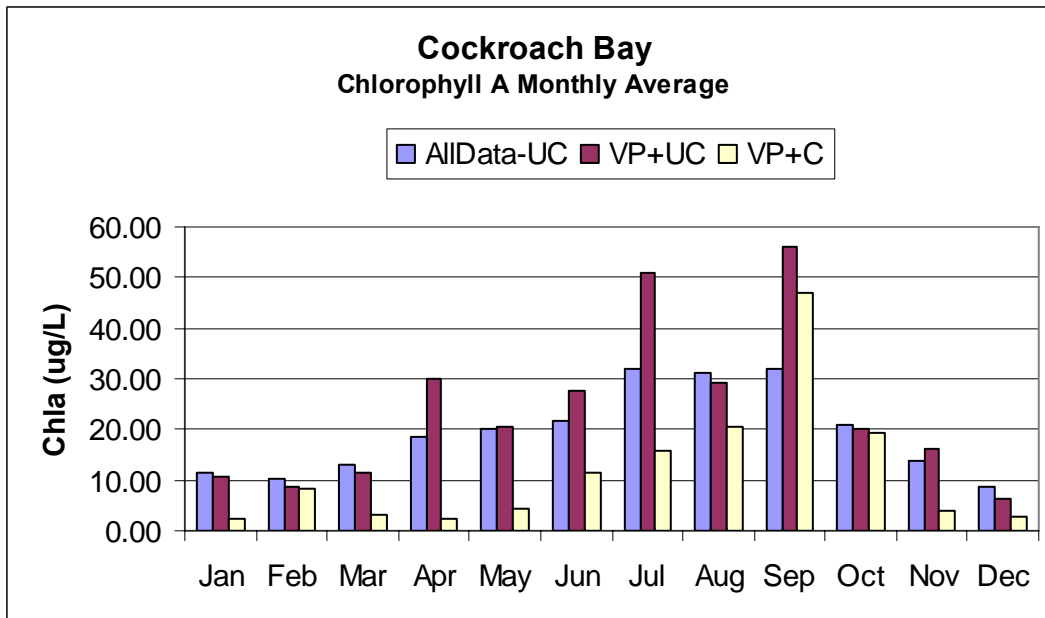


Figure 2.15 Chlorophyll a Monthly Average

Data shown on **Figure 2.15** clearly indicate that late spring (April) through early fall (October) is a period of elevated algal production, with September as the month with peak algal production. Data indicate, that with the exception of December, the monthly average UChl a concentrations in Cockroach Bay never fall below the 8.5 ug/L target for Middle Tampa Bay.

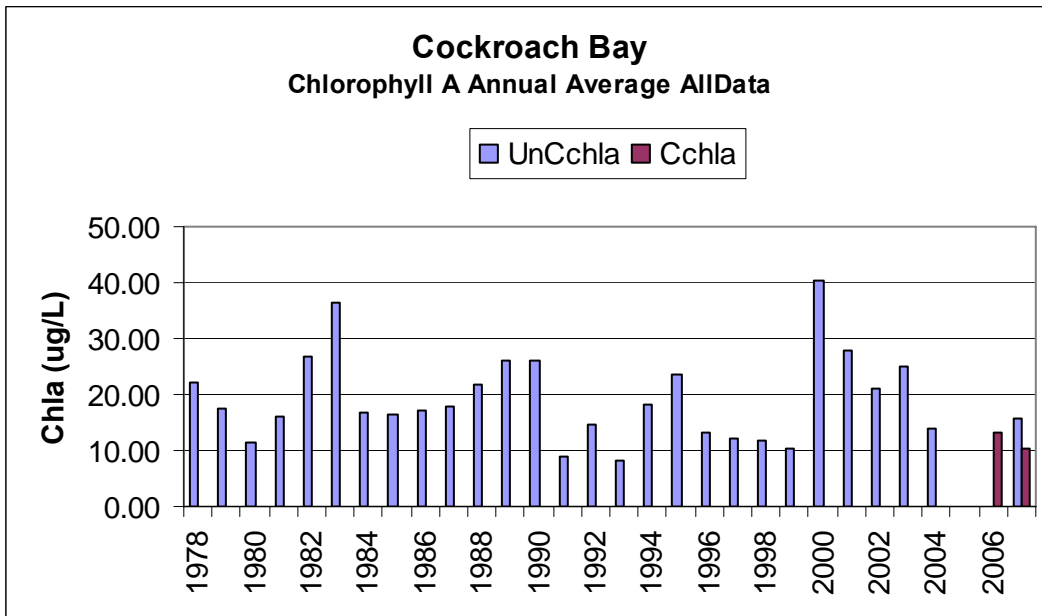


Figure 2.16 Chlorophyll a Annual Average

The data in **Figure 2.16** clearly show that there was only one year (1993) when the annual average UChl \bar{a} is below the 8.5 ug/L target for Middle Tampa Bay.

Five Day Biological Oxygen Demand (BOD₅):

Table 2.16 Five Day Biological Oxygen Demand

BOD ₅ (mg/L)	Period of Record	Count	Minimum	25th Percentile	Average (d)	Median	75th Percentile	Maximum
AllData	Jan-78 - Dec-07	365	0.10	1.90	3.09	2.80	3.90	9.10
AllData-VerifiedP (a)	Jan-00 - Dec-07	99	0.50	1.75	3.18	2.70	4.15	9.00
HillsbCo-Fixed	Jan-78 - Dec-07	351	0.10	1.94	3.07	2.80	3.90	9.10
DEP-Fixed	Feb-06 - Nov-06	14	1.40	1.70	3.56	2.90	5.05	8.00

- (a) Verified Period ends June 2007, data was extended through Dec 2007 to complete year.
- (b) Includes three data points from HillsBCo-Random
- (c) compares same period of fixed to random
- (d) Straight arithmetic average

Table 2.16, indicates that the majority (351 out of 365) of the BOD₅ observations are from the single Hillsborough County station. The average BOD₅ for AllData is 3.09 mg/L with a maximum of 9.1 mg/L. The BOD₅ during the VP⁺ period averages slightly higher at 3.18 mg/L, with a maximum of 9.0 mg/L.

Table 2.17 BOD₅ Monthly Average

Month	AllData BOD ₅ (mg/L)	VP ⁺ BOD ₅ (mg/L)
Jan	2.20	2.17
Feb	2.56	2.66
Mar	2.96	2.38
Apr	2.82	2.90
May	3.25	3.31
Jun	3.57	3.41
Jul	3.68	3.97
Aug	3.98	4.45
Sep	4.03	4.65
Oct	2.92	2.99
Nov	2.76	3.21
Dec	2.17	1.90
Average	3.08	3.17

Data in **Table 2.17** and shown on **Figure 2.18** for monthly average BOD₅ generally follow the pattern of algal production (Chl *a*) data, increasing from a seasonal low in December (2.17 mg/L) to a maximum in September (4.03 mg/L). The same pattern is seen in both the POR data and the VP⁺ data, with a note that during the VP⁺, BOD₅ was elevated over the POR data during July – September. This information may indicate that one of the major sources of BOD₅ within Cockroach Bay is degradation of algal cells.

Table 2.18 BOD₅ Calendar Quarter and Annual Average

BOD ₅ (mg/L)					
Year	Q1	Q2	Q3	Q4	Annual Average
1978	4.20	3.97	7.13	3.30	4.65
1979	2.87	2.47	2.87	2.88	2.77
1980	2.83	2.90	3.23	2.63	2.90
1981	1.50	1.60	3.07	4.00	2.54
1982	3.23	3.87	5.57	3.40	4.02
1983	5.90	3.90	3.57	2.67	4.01
1984	3.47	2.87	2.73	1.43	2.63
1985	2.07	4.07	3.50	2.10	2.93
1986	2.27	2.40	3.10	2.27	2.51
1987	1.03	4.03	4.07	3.13	3.07
1988	2.03	5.17	4.60	2.73	3.63
1989	2.70	3.47	4.10	2.90	3.29
1990	3.63	3.60	3.75	2.93	3.48
1991	2.80	1.93	2.87	0.73	2.08
1992	1.77	3.80	4.50	2.03	3.03
1993	2.27	2.13	3.17	2.23	2.45
1994	2.79	4.30	2.83	3.00	3.23
1995	2.50	4.27	5.57	2.63	3.74
1996	2.18	1.79	5.17	2.57	2.93
1997	2.37	3.43	2.93	3.60	3.08
1998	2.87	2.53	3.00	1.97	2.59
1999	1.87	1.73	2.07	2.50	2.04
2000	1.87	4.20	6.27	4.57	4.23
2001	2.90	4.85	5.23	2.53	3.88
2002	2.00	4.00	5.33	3.67	3.75
2003	5.67	4.33	3.33	3.33	4.17
2004	1.27	3.57	2.47	1.20	2.13
2005	1.80	1.67	2.50	1.33	1.83
2006	2.05	1.70	6.07	3.16	3.24
2007	2.23	1.87	3.37	1.43	2.23
Average AllData	2.63	3.21	3.93	2.63	3.10
Average (VP ⁺)	2.47	3.27	4.32	2.65	3.18

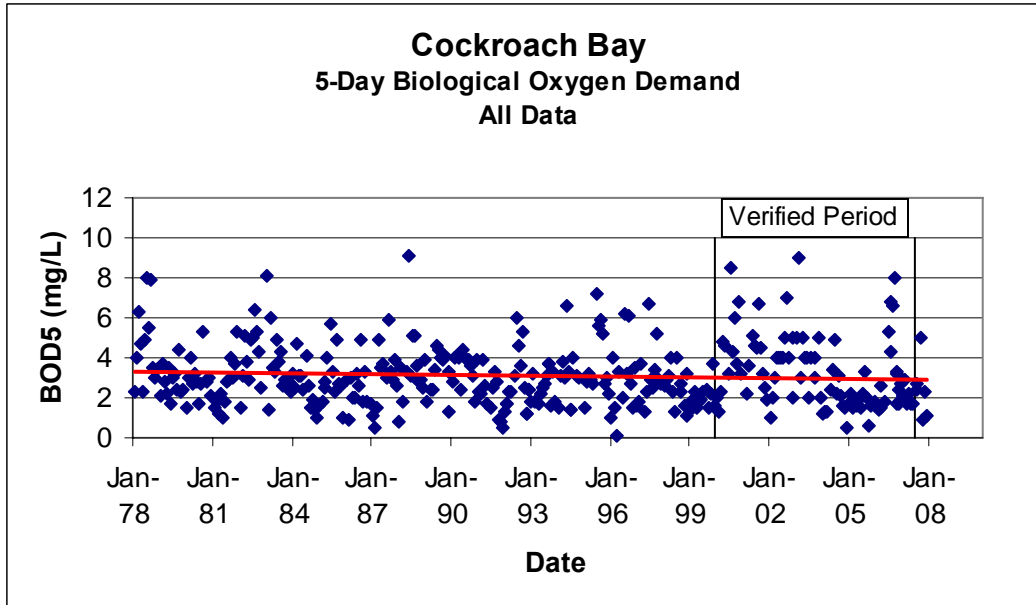


Figure 2.17 BOD₅ AllData

Figure 2.17 depicts all of the BOD₅ data and indicates that while much of the time the BOD₅ is less than typical detection limit of 2.0 mg/L, there are recurring BOD₅ values at levels that could result in DO depletion.

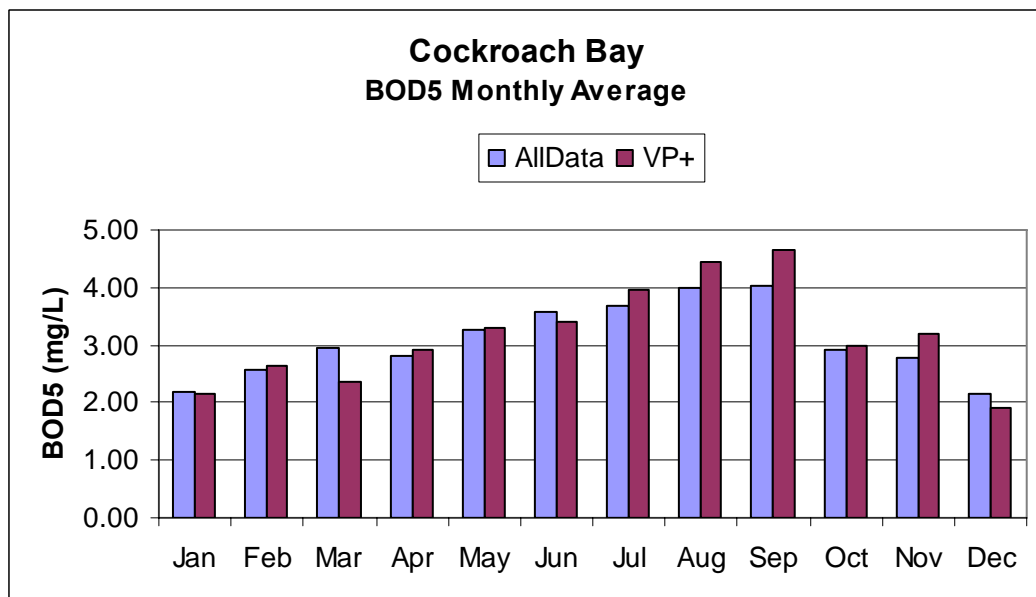


Figure 2.18 BOD₅ Monthly Average

Figure 2.18 depicts the monthly average BOD₅ and indicates that the BOD₅ starts to increase each year during May, reaching an annual maximum during August and September and

remaining elevated through November. This seasonal pattern is very similar to the pattern of Chl a.

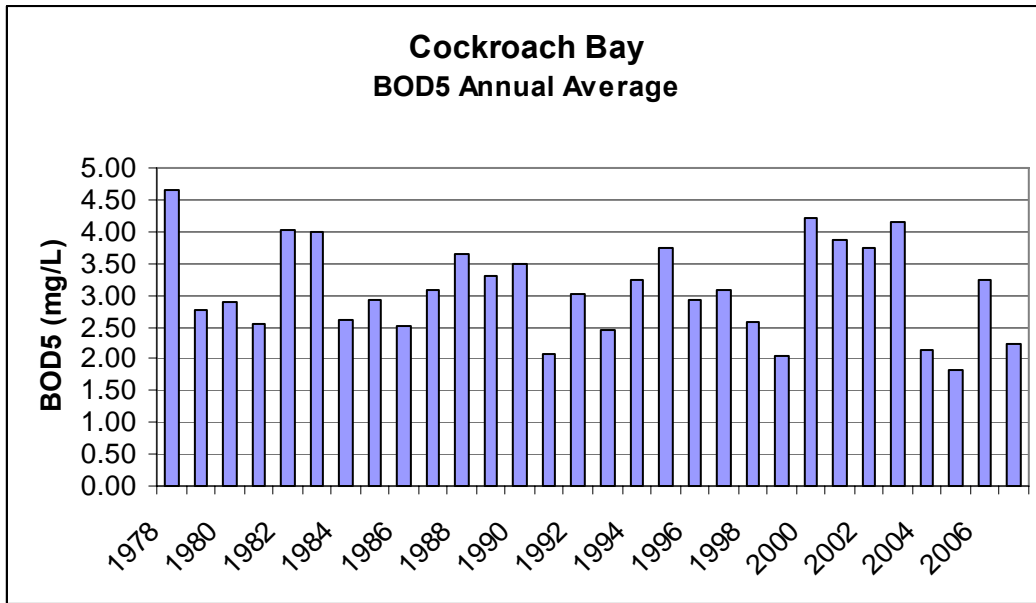


Figure 2.19 BOD₅ Annual Average

Figure 2.19 depicts the annual average BOD₅ data. From this graph, it can be seen that years 2001 through 2004 had elevated BOD₅ when compared to the POR averages. These data indicate that the BOD₅ data during the verified period is slightly higher than most other years in the period of record.

Total Nitrogen (TN):

Table 2.19 Total Nitrogen

Total Nitrogen (mg/L)	Period of Record	Count	Minimum	25th Percentile	Average	Median	75th Percentile	Maximum
AllData (b)	Jan-78 - Dec-07	360	0.10	0.78	1.15	1.06	1.39	5.02
AllData-VerifiedP (a)	Jan-00 - Jun-07	97	0.34	0.74	1.16	1.01	1.51	4.14
HillsbCo-Fixed	Jan-78 - Dec-07	346	0.10	0.77	1.14	1.04	1.39	5.02
DEP-Fixed	Feb-06 - Nov-06	14	0.75	1.10	1.22	1.21	1.34	1.70

- (a) Verified Period ends June 2007, data was extended through Dec 2007 to complete year.
- (b) Includes three data points from HillsBCo-Random
- (c) compares same period of fixed to random
- (d) Straight arithmetic average

Station 21FLHILL24010015 on 11/4/1981, 9.06 mg/l was removed as greater than 3 STD from the mean

Table 2.19 indicates that the average TN concentration for AllData is 1.15 mg/L and 1.16 mg/L for the VP⁺. The range of TN in Cockroach Bay for AllData is from 0.10 to 5.02 mg/L, while the range for the VP⁺ is from 0.34 to 4.14 mg/L. These data indicate that the average TN for the verified period (1.16 mg/L) is essentially the same as for the entire period (1.15 mg/L).

Table 2.20 TN Monthly Average

Month	AllData Total Nitrogen (mg/L)	VP ⁺ Total Nitrogen (mg/L)
Jan	0.96	0.80
Feb	1.15	0.93
Mar	1.26	1.04
Apr	1.12	1.21
May	1.17	1.25
Jun	1.15	1.10
Jul	1.38	1.66
Aug	1.36	1.74
Sep	1.31	1.38
Oct	1.00	1.04
Nov	1.03	0.90
Dec	0.85	0.90
Average	1.1	1.2

Table 2.21 TN calendar Quarter and Annual Average

Total Nitrogen (mg/L)					
Year	Q1	Q2	Q3	Q4	Annual Average
1978	1.03	0.32	0.17	0.79	0.58
1979	0.23	0.22	0.33	0.19	0.24
1980	1.78	1.38	1.50	1.24	1.48
1981	0.95	1.22	1.24	1.12	1.13
1982	1.09	1.18	1.32	1.27	1.21
1983	1.79	1.02	1.46	1.30	1.39
1984	1.96	1.56	1.32	0.94	1.44
1985	0.66	1.13	1.18	1.00	0.99
1986	0.77	0.60	0.85	0.88	0.78
1987	0.82	2.06	2.09	1.89	1.72
1988	1.27	1.05	1.67	0.92	1.23
1989	1.32	1.47	1.60	1.33	1.43
1990	1.16	1.05	0.89	0.81	0.98
1991	0.67	0.76	0.93	0.70	0.77
1992	1.88	1.30	1.44	0.78	1.35
1993	0.89	0.86	1.11	0.72	0.90
1994	1.47	1.66	1.74	0.87	1.43
1995	1.15	1.49	1.78	0.86	1.32
1996	1.10	1.20	1.44	0.93	1.17
1997	1.10	1.31	1.43	1.12	1.24
1998	1.29	1.04	1.15	0.93	1.10
1999	0.84	1.02	1.09	0.86	0.95
2000	0.73	1.56	2.46	1.73	1.62
2001	1.46	1.80	1.82	1.16	1.56
2002	0.91	1.78	1.86	1.24	1.45
2003	0.95	1.07	2.09	0.84	1.24
2004	0.90	0.81	0.96	0.69	0.84
2005	0.67	0.65	1.12	0.59	0.76
2006	1.20	1.40	1.33	0.79	1.18
2007	0.69	0.58	0.86	0.61	0.69
Average AllData	1.09	1.15	1.34	0.97	1.14
Average (VP ⁺)	0.94	1.21	1.56	0.96	1.17

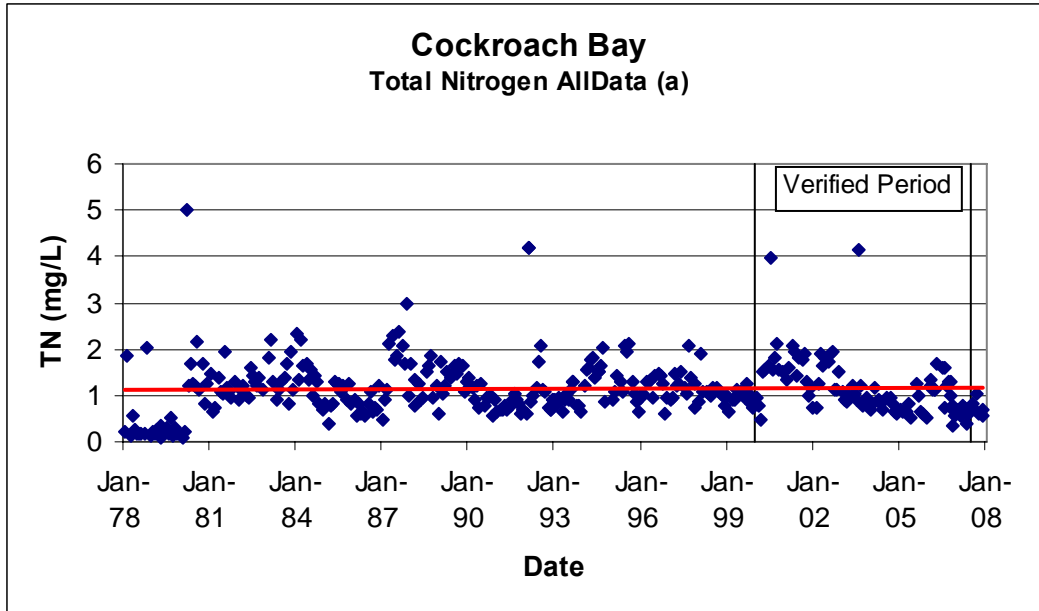


Figure 2.20 Total Nitrogen AllData

Figure 2.20 depicts all the data for TN. From this graph, it can be seen that slightly less than half the TN data are below 1.00 mg/L (median 1.06 mg/L). The linear trend line does not indicate any real change in TN over time.

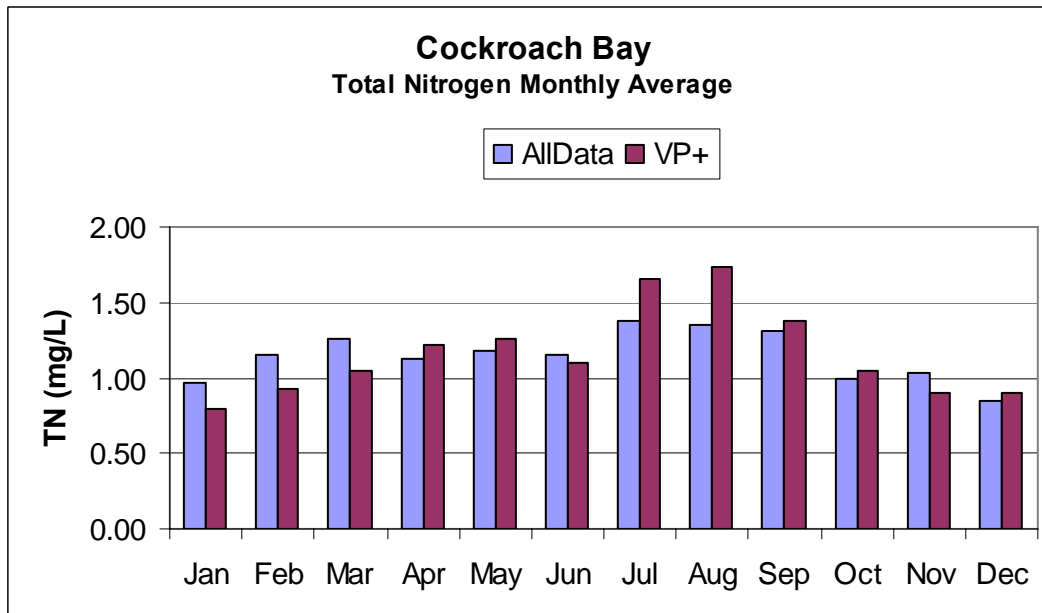


Figure 2.21 Total Nitrogen Monthly Average

Figure 2.21 depicts the monthly average TN for Cockroach Bay. This graph shows a general rise and fall of TN during the summer and fall, with peaks in July and October.

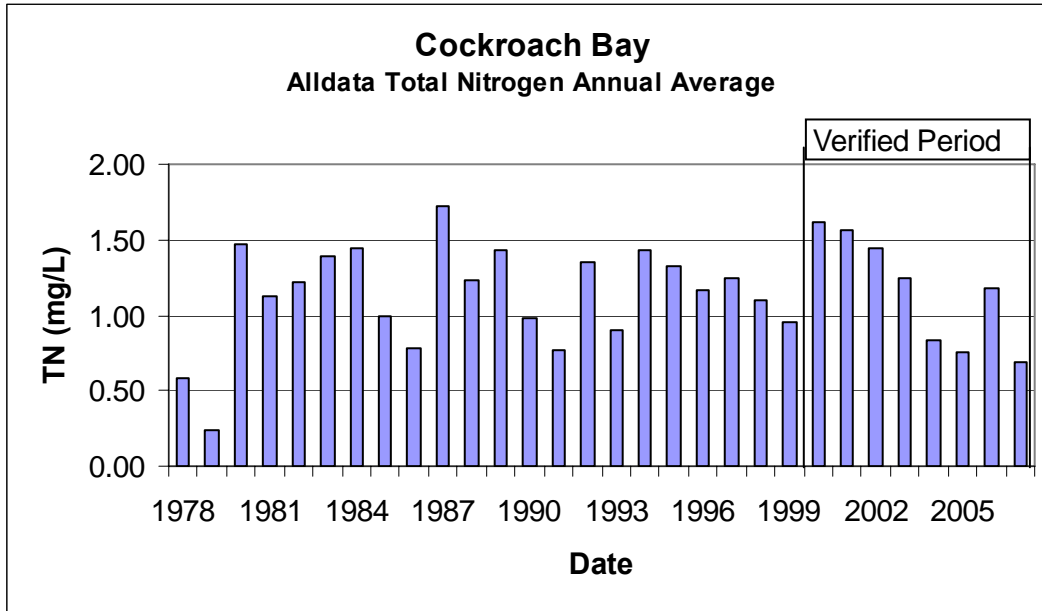


Figure 2.22 Total Nitrogen Annual Average

Figure 2.22 depicts the annual average TN. From this graph it can be seen that the ebb and flow of TN seems to follow a recurring pattern of a year with high concentrations (1987, 1994, 2000) followed by several years of declining concentrations. This pattern is not following wet-dry year patterns of rainfall.

Total Phosphorus (TP):

Table 2.22 Total Phosphorus

Total Phosphorus (mg/L)	Period of Record	Count	Minimum	25th Percentile	Average	Median	75th Percentile	Maximum
AllData (b)	Jan-78 - Dec-07	366	0.120	0.290	0.434	0.390	0.530	1.370
AllData-VerifiedP (a)	Jan-00 - Dec-07	100	0.120	0.210	0.288	0.265	0.330	0.780
HillsbCo-Fixed	Jan-78 - Dec-07	352	0.120	0.300	0.441	0.400	0.540	1.370
DEP-Fixed	Feb-06 - Nov-06	14	0.140	0.195	0.237	0.225	0.270	0.350

(a) Verified Period ends June 2007, data was extended through Dec 2007 to complete year.

(b) Includes three data points from HillsBCo-Random

(c) compares same period of fixed to random

(d) Straight arithmetic average

Data from Station 21FLHILL24010015 on 2/28/1990, of 8.18 mg/l was removed as three STD greater than the mean

Table 2.22 indicates that almost all of the data comes from the Hillsborough County station. The average TP for AllData is 0.434 mg/L and for the VP⁺ is 0.288 mg/L. The range in TP for AllData in Cockroach Bay is from 0.120 to 1.370 mg/L, while the range during the VP⁺ is from 0.120 to 0.780 mg/L. Overall, Cockroach Bay has seen a significant reduction in TP over the POR.

Table 2.23 TP Monthly Average

Month	AllData Total Phosphorus (mg/L)	VP ⁺ Total Phosphorus (mg/L)
Jan	0.344	0.226
Feb	0.427	0.219
Mar	0.417	0.303
Apr	0.438	0.270
May	0.440	0.281
Jun	0.470	0.314
Jul	0.500	0.375
Aug	0.521	0.346
Sep	0.531	0.378
Oct	0.443	0.287
Nov	0.334	0.214
Dec	0.323	0.252
Average	0.432	0.289

Table 2.24 TP Calendar Quarter and Annual Average

Total Phosphorus (mg/L)					
Year	Q1	Q2	Q3	Q4	Annual Average
1978	0.643	0.687	0.780	0.717	0.707
1979	0.627	0.597	0.763	0.598	0.646
1980	0.813	0.820	0.910	0.583	0.782
1981	0.587	0.455	0.522	0.430	0.498
1982	0.387	0.383	0.757	0.540	0.517
1983	0.453	0.633	0.567	0.643	0.574
1984	0.480	0.417	0.473	0.267	0.409
1985	0.233	0.550	0.597	0.497	0.469
1986	0.377	0.517	0.503	0.457	0.463
1987	0.357	0.567	0.717	0.407	0.512
1988	0.383	0.510	0.733	0.487	0.528
1989	0.447	0.627	0.750	0.510	0.583
1990	0.495	0.553	0.523	0.437	0.502
1991	0.323	0.543	0.407	0.260	0.383
1992	0.613	0.390	0.430	0.243	0.419
1993	0.350	0.360	0.430	0.290	0.358
1994	0.333	0.403	0.597	0.370	0.426
1995	0.263	0.520	0.723	0.303	0.453
1996	0.327	0.447	0.360	0.250	0.346
1997	0.297	0.347	0.357	0.390	0.348
1998	0.523	0.490	0.403	0.313	0.433
1999	0.237	0.370	0.383	0.320	0.328
2000	0.213	0.307	0.440	0.283	0.311
2001	0.315	0.383	0.480	0.287	0.366
2002	0.250	0.280	0.380	0.367	0.319
2003	0.283	0.313	0.447	0.287	0.333
2004	0.330	0.287	0.330	0.257	0.301
2005	0.230	0.290	0.343	0.147	0.253
2006	0.220	0.200	0.295	0.234	0.237
2007	0.179	0.238	0.253	0.191	0.215
Average AllData	0.386	0.449	0.522	0.379	0.434
Average (VP ⁺)	0.253	0.287	0.371	0.257	0.292

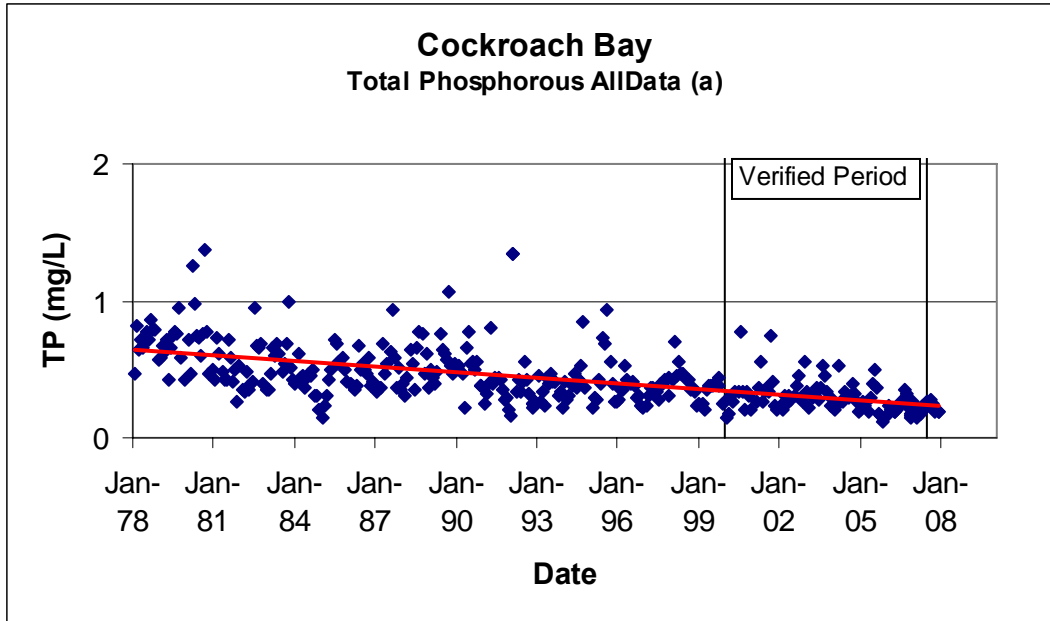


Figure 2.23 Total Phosphorus AllData

Figure 2.23 depicts all the data for TP and **Figure 2.25** shows the annual averages. From these graphs, it can be seen that the linear trend line seems to indicate a substantial downward trend in TP from an annual average in 1978 of 0.707 mg/L to the year 2007 of 0.215 mg/L, nearly a 70 percent reduction in TP.

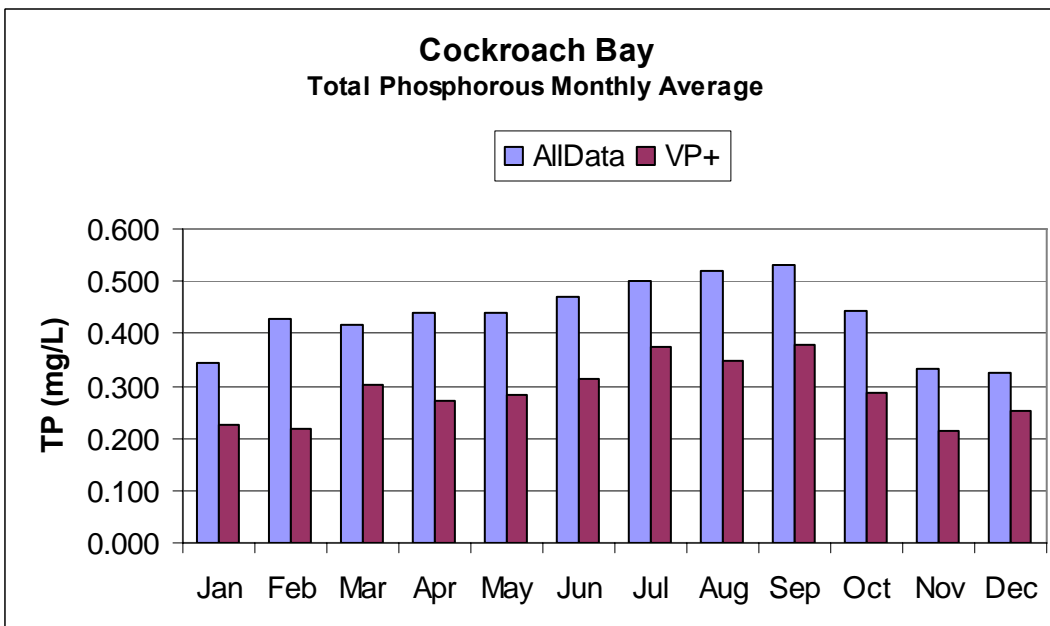


Figure 2.24 Total Phosphorus Monthly Average

Figure 2.24 depicts the monthly average TP concentrations. Overall, the pattern is more similar to the Chl a pattern than to the TN distribution with increases in TP during the period when Chl a production is increasing.

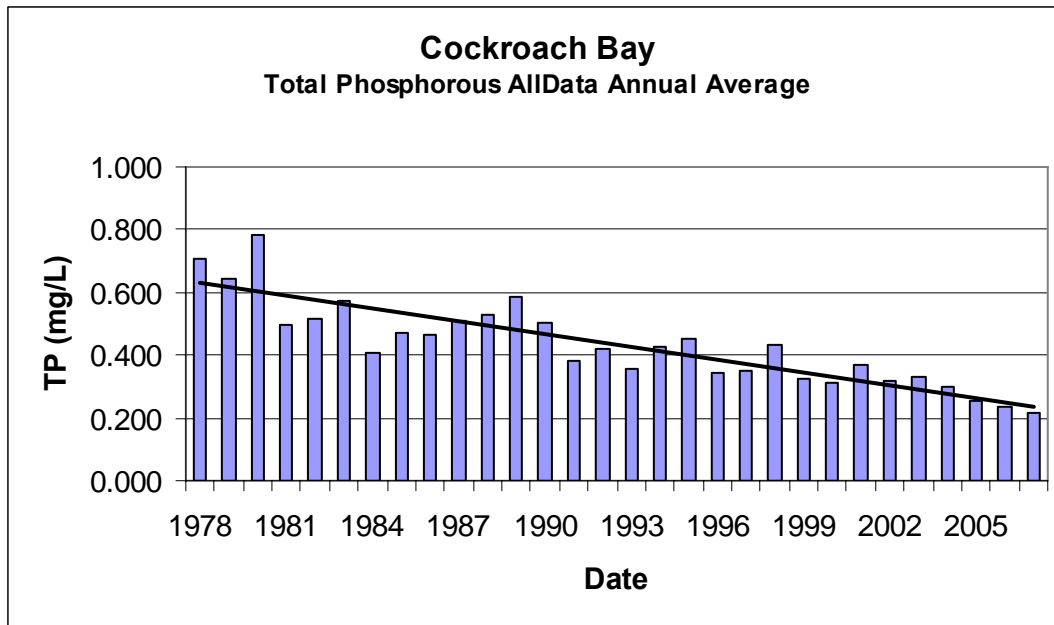


Figure 2.25 Total Phosphorus Annual Average

Figure 2.25 depicts the annual average concentration of TP. From this graph it can be seen that annual average TP has declined through the POR. The trend in the TP is the opposite of the trend in salinity and does not follow the rainfall pattern or the pattern for TN. As a point of speculation, it may be that a significant source of freshwater, high in TP has been gradually removed from the system resulting in the nearly doubling of the annual average salinity and a 70 percent decrease in TP.

Total Nitrogen to Total Phosphorus Ratio (TN/TP):

Table 2.25 TN to TP Ratio

TN/TP Ratio	Period of Record	Count	Minimum	25th Percentile	Average	Median	75th Percentile	Maximum
AllData (b)	Jan-78 - Dec-07	358	0.1	2.2	3.0	2.8	3.7	8.7
AllData-VerifiedP (a)	Jan-00 - Dec-07	97	1.4	3.1	4.1	3.7	5.1	8.7

Table 2.25 contains a summary of the information for identifying a limiting nutrient. From this data it can be determined that Cockroach Bay is always TN limited, as the ratio never exceeds 8.7. Although, as pointed out previously, TP has significantly decreased over time and this has resulted in an increasing trend in the TN to TP ratio over the POR.

Table 2.26 TN to TP Ratio Monthly Average

Month	AllData TN/TP Ratio	VP ⁺ TN/TP Ratio
Jan	3.2	3.7
Feb	3.0	4.3
Mar	3.2	3.6
Apr	3.1	4.7
May	3.0	4.6
Jun	2.7	3.6
Jul	3.0	4.4
Aug	2.9	4.8
Sep	3.0	4.3
Oct	2.7	3.6
Nov	3.3	4.3
Dec	2.9	3.8
Average	3.0	4.1

Table 2.27 TN to TP Ratio Calendar Quarter and Annual Average

TN/TP Ratio					
Year	Q1	Q2	Q3	Q4	Annual Average
1978	1.3	0.5	0.2	1.0	0.8
1979	0.4	0.4	0.4	0.4	0.4
1980	1.5	1.7	1.9	2.1	1.8
1981	1.9	2.7	2.4	2.2	2.3
1982	2.9	3.0	1.8	2.5	2.5
1983	4.3	1.6	2.6	2.4	2.7
1984	4.4	3.8	2.8	3.5	3.6
1985	3.2	2.1	2.0	2.0	2.3
1986	2.0	1.2	1.7	2.0	1.7
1987	2.3	3.7	3.0	4.5	3.4
1988	3.3	2.1	2.3	1.9	2.4
1989	2.9	2.4	2.3	2.6	2.6
1990	2.3	2.7	1.7	1.9	2.1
1991	2.1	1.5	2.3	2.8	2.2
1992	3.1	3.4	3.3	3.2	3.3
1993	2.6	2.5	2.6	2.5	2.6
1994	4.6	4.1	3.1	2.4	3.5
1995	4.3	2.9	2.5	2.8	3.1
1996	3.4	2.7	4.1	3.7	3.5
1997	3.7	3.8	4.0	2.8	3.6
1998	2.4	2.1	2.9	3.0	2.6
1999	3.6	2.8	2.8	2.8	3.0
2000	4.0	5.1	6.2	6.2	5.4
2001	4.7	5.1	4.3	4.3	4.6
2002	3.6	6.5	5.0	3.6	4.7
2003	3.4	3.4	4.4	3.0	3.6
2004	2.9	2.9	2.8	2.7	2.8
2005	3.0	2.5	4.6	4.1	3.5
2006	5.5	7.0	4.6	3.6	5.1
2007	3.9	2.4	3.4	3.2	3.2
Average AllData	3.1	3.0	2.9	2.9	3.0
Average (VP ⁺)	3.9	4.4	4.4	3.8	4.1

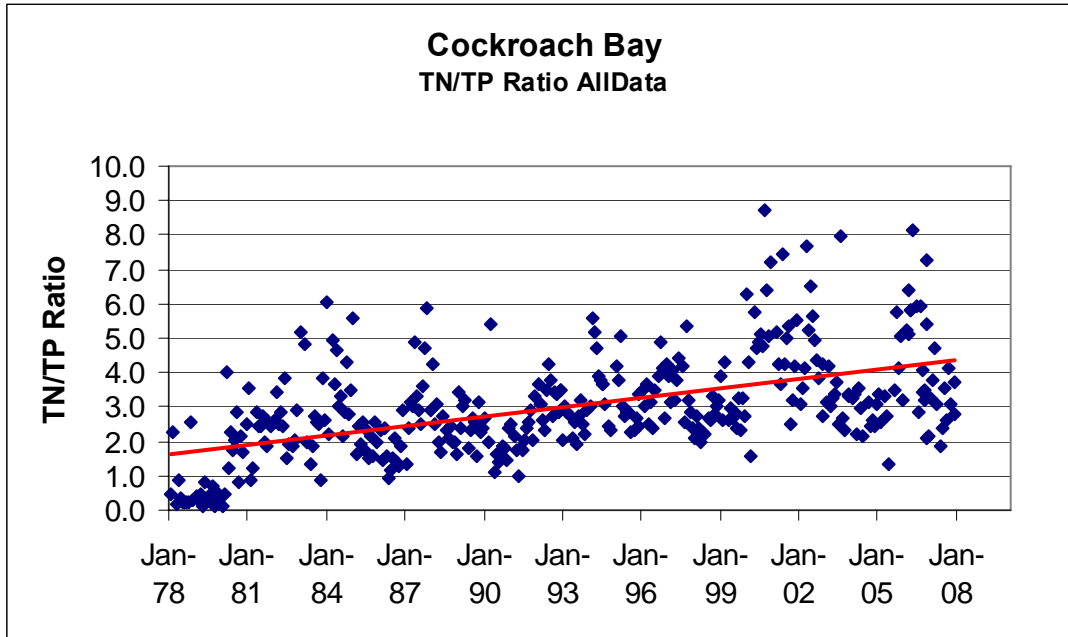


Figure 2.26 Total Nitrogen to Total Phosphorus Ratio

Figure 2.26 depicts the TN/TP ratio for AllData. This graph depicts ratios only as high as 8.7 and an increasing trend in TN/TP ratio that is the inverse of the decreasing trend in TP.

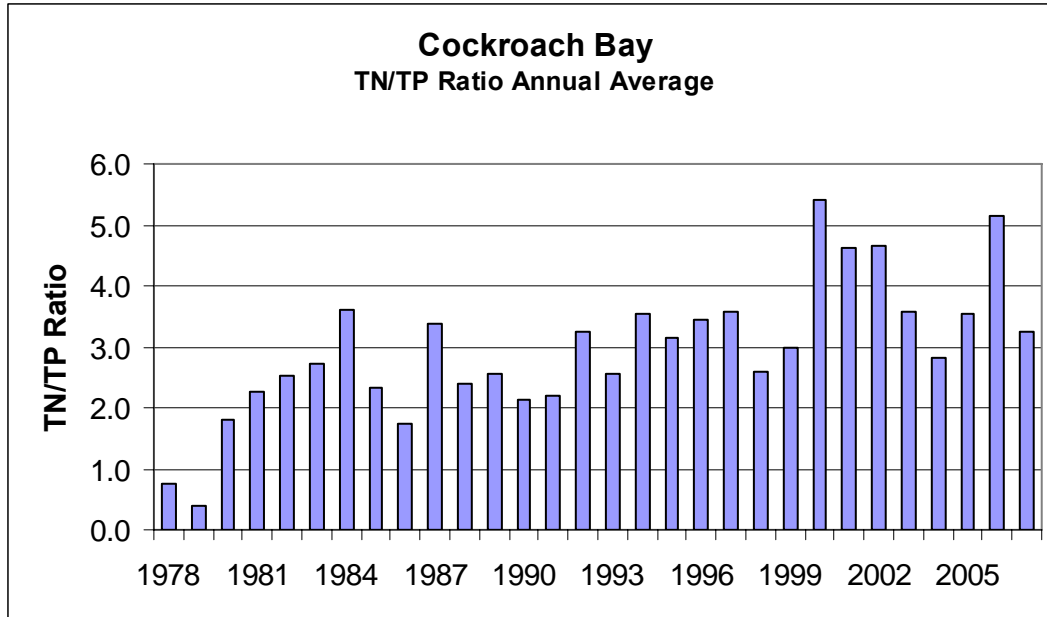


Figure 2.27 Total Nitrogen to Total Phosphorus Ratio

The year to year pattern in annual average TN/TP Ratio is depicted on **Figure 2.27** most closely resembles the pattern in annual average TN (without the increasing trend caused by decreases in TP). The data indicate an increase in the TN/TP ratio over time. This is a result of the decreases in TP over the same time period.

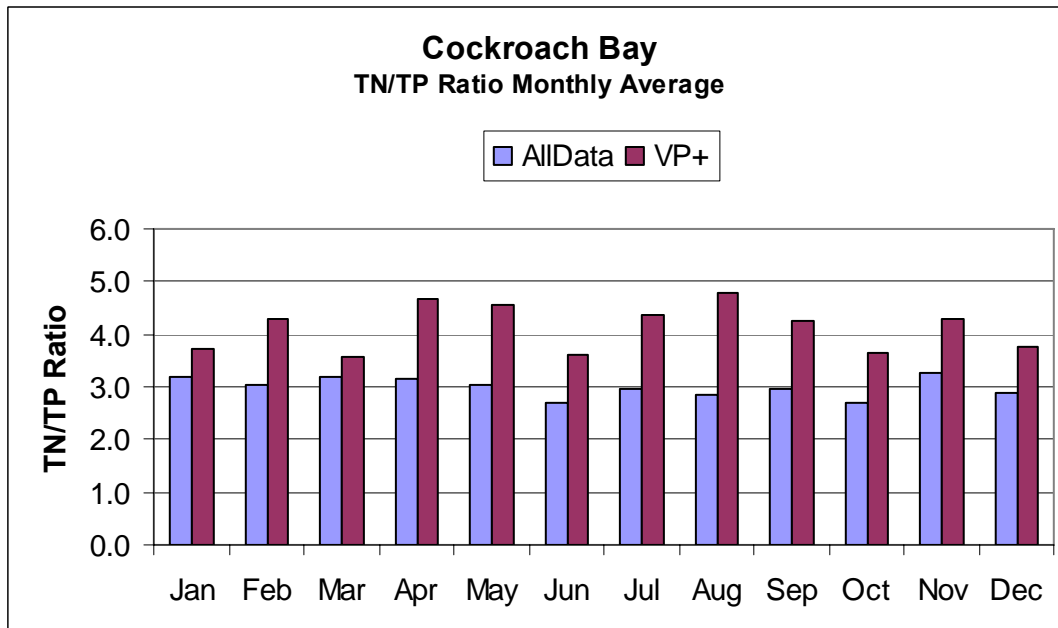


Figure 2.28 TN/TP Ratio Monthly Average

Figure 2.28 depicts the seasonal changes in TN/TP Ratio for both all the data and the VP⁺. These data indicate that the TN/TP ratio is lower during the growing season.

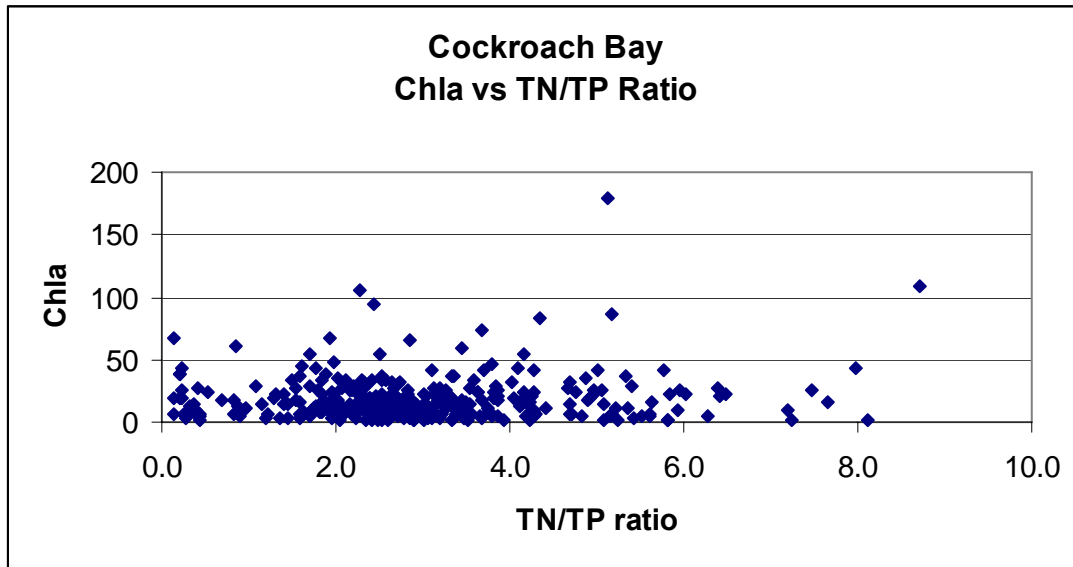


Figure 2.29 Chlorophyll a vs. TN/TP Ratio

Figure 2.29 depicts the TN/TP ratio vs. Chl a concentration. These data indicate that the CChl a can be above 50 ug/L throughout the range of limited nutrient.

Evaluation of Nutrients in Middle Tampa Bay WBID 1558B (connects to Cockroach Bay):

Total Nitrogen:

Table 2.28 TN Middle Tampa Bay WBID 1558B Calendar Quarters and Annual Average

WBID 1558B Middle TBay TN (mg/L)					
year	Q1	Q2	Q3	Q4	annual average
1990	0.48	0.50	0.44	0.40	0.45
1991	0.37	0.32	0.51	0.51	0.43
1992	0.42	0.60	0.71	0.52	0.56
1993	0.70	0.59	0.60	0.52	0.60
1994	0.87				
1995	0.60	0.59	0.77	0.89	0.71
1996	0.53	0.60	0.59	0.26	0.49
1997	0.48	0.62	0.49	0.45	0.51
1998	0.66	0.53	0.35	0.36	0.47
1999	0.37	0.34	0.42	0.47	0.40
2000	0.52	0.73	0.97	0.87	0.77
2001	0.85	0.81	0.77	0.65	0.77
2002	0.68	0.77	0.76	0.43	0.66
2003	0.42	0.41	0.49	0.39	0.43
2004	0.40	0.47	0.41	0.40	0.42
2005	0.41	0.41	0.41	0.41	0.41
2006	0.40	0.37	0.41	0.35	0.38
2007	0.34	0.33	0.42	0.44	0.38
2008	0.51	0.47	0.51	0.44	0.48
AVG	0.53	0.52	0.56	0.49	0.52
Median	0.48	0.51	0.50	0.44	0.48
VP ⁺ Avg	0.50	0.53	0.57	0.49	0.52
VP ⁺ - med	0.42	0.47	0.49	0.43	0.43

Table 2.28 contains the quarterly and annual average TN data for Middle Tampa Bay WBID 1558B. These data show very little change in TN over the seasons, with a maximum value occurring during the third quarter (July, August, and September). The annual average TN for the VP⁺ is the same as the average for the POR (0.52 mg/L).

Table 2.29 TN Middle Tampa Bay WBID 1558B Monthly Average

Month	AllData TN (mg/L)	VP ⁺ TN (mg/L)
Jan	0.47	0.46
Feb	0.52	0.47
Mar	0.59	0.59
Apr	0.51	0.53
May	0.49	0.49
Jun	0.57	0.57
Jul	0.54	0.56
Aug	0.54	0.55
Sep	0.60	0.58
Oct	0.54	0.51
Nov	0.46	0.46
Dec	0.42	0.41
Average	0.52	0.52

Table 2.29 and **Figure 2.33** depict the monthly average TN concentrations. These data show a slight increase in TN during the rainy season. Additionally, there does not appear to be any difference between the POR and the VP⁺.

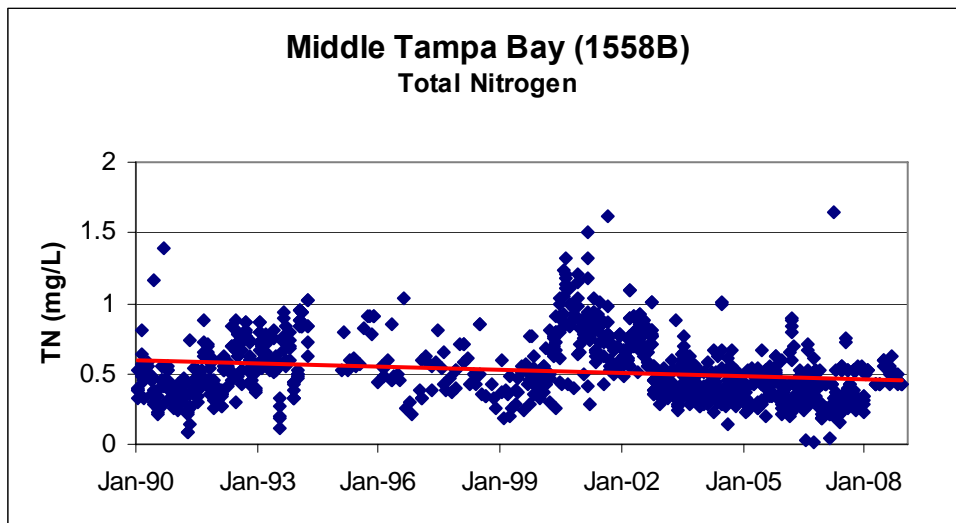


Figure 2.30 Total Nitrogen Middle Tampa Bay WBID 1558B

Figure 2.30 depicts the TN in the Tampa Bay WBID 1558B associated with Cockroach Bay. This graph shows that the TN in Middle Tampa Bay has been slightly declining during this period.

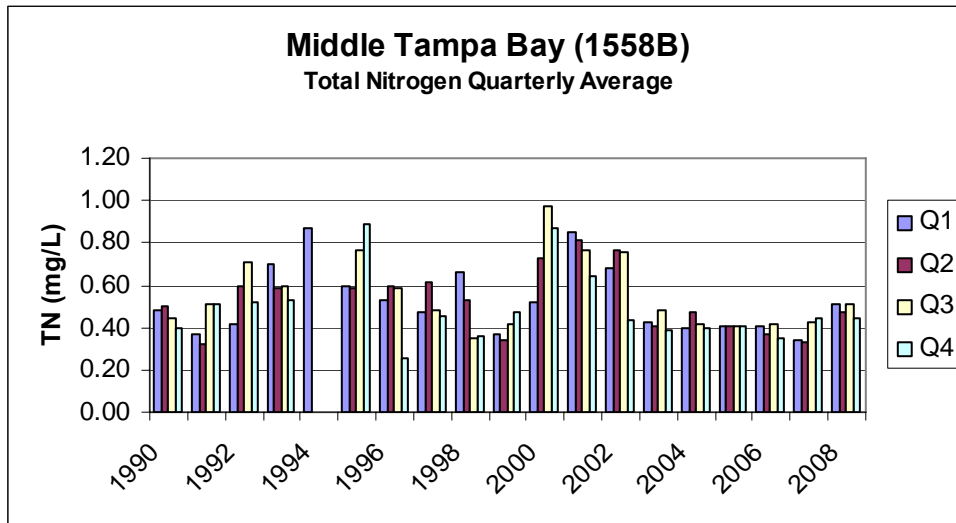


Figure 2.31 TN Middle Tampa Bay Calendar Quarters

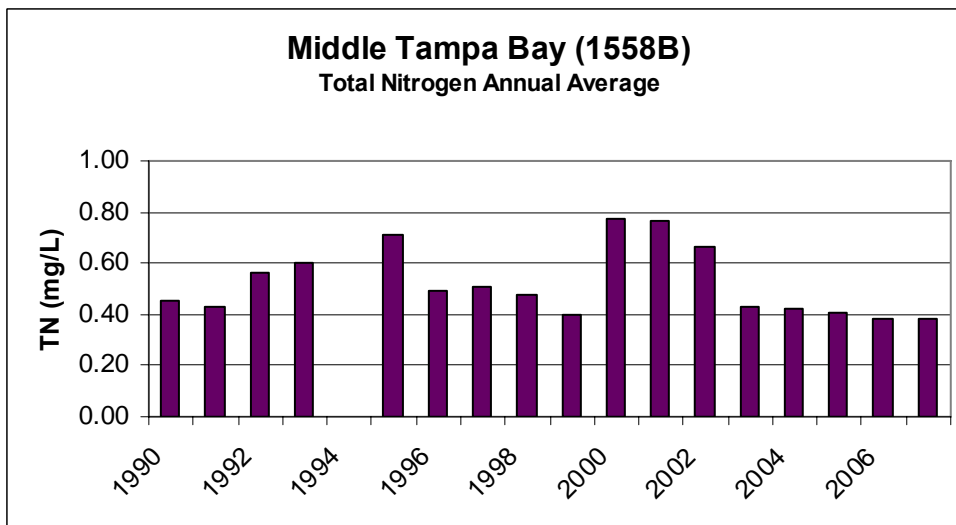


Figure 2.32 TN Middle Tampa Bay Annual Average

Figures 2.31 and 2.32 depict the seasonal and annual averages for TN in Middle Tampa Bay. TN averaged 0.52 mg/L for both the VP⁺ and the POR. These data indicate that TN was elevated above 0.60 mg/L during years 2000 – 2003 and dropped to ~ 0.40 or less after 2003. Data for TN in Cockroach Bay, indicate an average during the VP⁺ of 1.17 mg/L, with elevated

values during the same period (2000 – 2003). Based on these data, TN varies in Cockroach Bay as it does in Tampa Bay, but is elevated in Cockroach Bay.

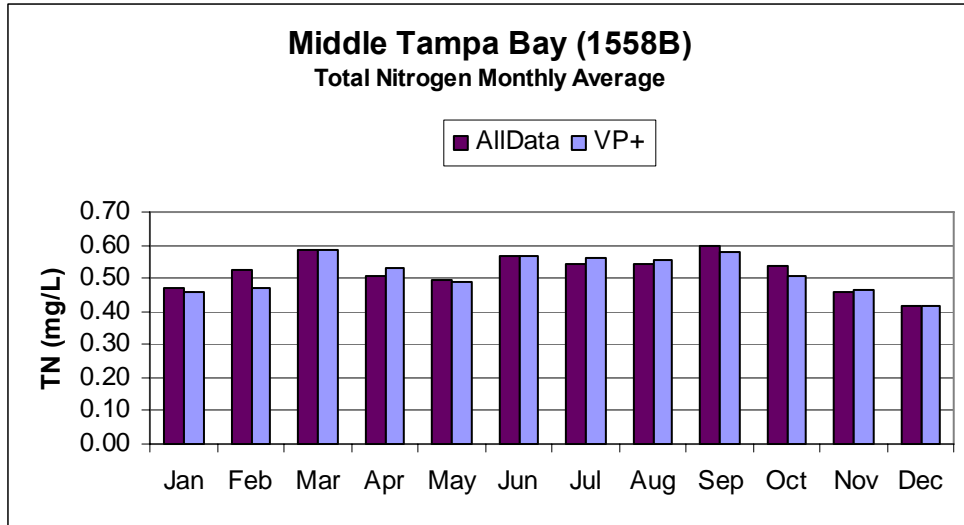


Figure 2.33 TN Middle Tampa Bay Monthly Average

Total Phosphorus:

Table 2.30 TP Middle Tampa Bay Calendar Quarters and Annual Average

WBID 1558B Middle TBay TP (mg/L)					
year	Q1	Q2	Q3	Q4	annual average
1990	0.305	0.230	0.389	0.246	0.293
1991	0.202	0.184	0.269	0.259	0.228
1992	0.175	0.210	0.189	0.218	0.198
1993	0.151	0.132	0.193	0.254	0.182
1994	0.146	0.166	0.265	0.265	0.210
1995	0.191	0.194	0.238	0.217	0.210
1996	0.114	0.167	0.158	0.088	0.132
1997	0.124	0.114	0.188	0.304	0.183
1998	0.350	0.228	0.189	0.153	0.230
1999	0.120	0.092	0.137	0.158	0.127
2000	0.115	0.079	0.074	0.083	0.088
2001	0.083	0.074	0.113	0.140	0.102
2002	0.122	0.095	0.127	0.131	0.118
2003	0.125	0.117	0.156	0.115	0.128
2004	0.085	0.091	0.165	0.155	0.124
2005	0.095	0.123	0.170	0.116	0.126
2006	0.088	0.101	0.145	0.140	0.118
2007	0.094	0.094	0.122	0.096	0.101
2008	0.100	0.095	0.151	0.092	0.109
AVG	0.146	0.136	0.181	0.170	0.158
Median	0.122	0.117	0.165	0.153	0.128
VP ⁺ Avg	0.10	0.10	0.14	0.12	0.11
VP ⁺ - med	0.10	0.09	0.14	0.12	0.12

Table 2.30 and **Figures 2.34, 2.35, and 2.36** depict the quarterly and annual average TP data for Middle Tampa Bay WBID 1558B. These data show some change in TP over the seasons with a maximum value (0.181 mg/L) occurring during the third quarter (July, August, and September) and a minimum of 0.136 in the second quarter (April, May, and June). The annual average TP for the VP⁺ of 0.110 is slightly less than the concentration for the POR (0.158 mg/L).

Table 2.31 TP Middle Tampa Bay (1558B) Monthly Average

Month	AllData TP (mg/L)	VP ⁺ TP (mg/L)
Jan	0.141	0.103
Feb	0.145	0.093
Mar	0.144	0.108
Apr	0.128	0.093
May	0.136	0.098
Jun	0.132	0.104
Jul	0.160	0.126
Aug	0.170	0.129
Sep	0.192	0.154
Oct	0.199	0.148
Nov	0.157	0.115
Dec	0.155	0.110
Average	0.15	0.12

Table 2.31 and **Figure 2.37** depict the monthly average TP concentrations. These data, similar to TN, show a slight increase in TN during the rainy season. Additionally, there does appear to be a slight reduction in TP during the VP⁺ and the POR.

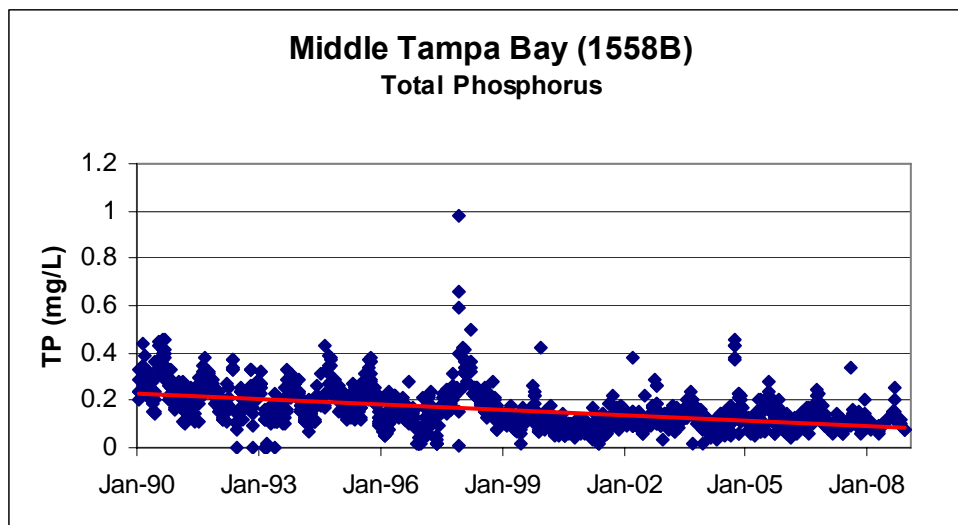


Figure 2.34 TP Middle Tampa Bay (1558B) AllData

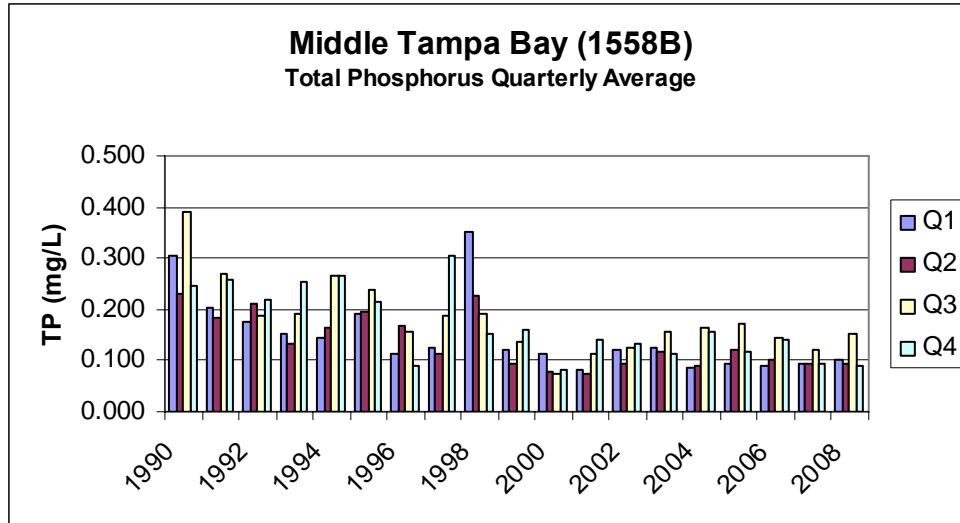


Figure 2.35 TP Middle Tampa Bay (1558B) Quarterly Average

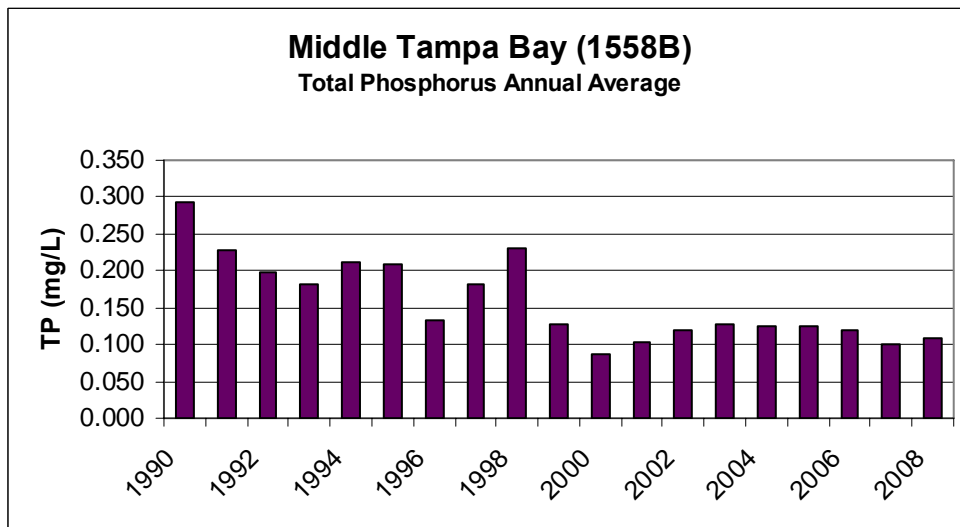


Figure 2.36 TP Middle Tampa Bay (1558B) Annual Average

Figure 2.36 depicts the change in time (annual average) for TP in this segment of Middle Tampa Bay. From these data, it appears that TP has decreased from 0.293 mg/L in 1978, to a low in 2000 of 0.088. Over the VP⁺, the TP increased slightly to a maximum of 0.126 mg/L in 2005 and then declined slightly to end the VP⁺ at 0.109 mg/L. Data for TP in Cockroach Bay follow a slightly different pattern for the VP⁺. The VP⁺ started in 2000 with a TP concentration of 0.311, increased slightly in 2001, then declined throughout the rest of the period to a concentration of 0.215 mg/L in 2007.

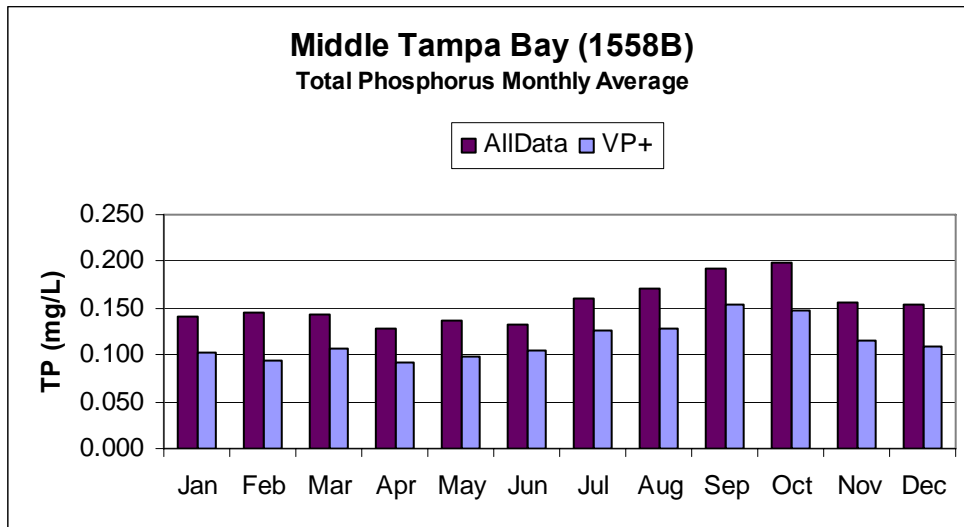


Figure 2.37 TP Middle Tampa Bay (1558B) Monthly Average

Chapter 3. DESCRIPTION OF APPLICABLE WATER QUALITY STANDARDS AND TARGETS

3.1 Classification of the Waterbody and Criteria Applicable to the TMDL

Florida's surface waters are protected for five designated use classifications, as follows:

Class I	Potable water supplies
Class II	Shellfish propagation or harvesting
Class III	Recreation, propagation, and maintenance of a healthy, well-balanced population of fish and wildlife
Class IV	Agricultural water supplies
Class V	Navigation, utility, and industrial use (there are no state waters currently in this class)

Cockroach Bay is a Class II waterbody, with a designated use of shellfish propagation or harvesting and includes all Class III uses of recreation, propagation, and the maintenance of a healthy, well-balanced population of fish and wildlife. Additionally, Cockroach Bay has been designated as an Outstanding Florida Water (OFW) and is part of the Cockroach Bay Aquatic Preserve. The criteria applicable to these TMDLs are the Class II criteria for dissolved oxygen and nutrients.

3.2 Applicable Water Quality Standards and Numeric Water Quality Target

3.2.1 Nutrients

Florida's nutrient criterion is narrative only, i.e., nutrient concentrations of a body of water shall not be altered so as to cause an imbalance in natural populations of aquatic flora or fauna. Accordingly, a nutrient-related target was needed to represent levels at which an imbalance in flora or fauna is expected to occur. While the IWR provides a threshold for nutrient impairment for estuaries based on annual average Chl *a* levels, these thresholds are not standards and need not be used as the nutrient-related water quality target for TMDLs. In fact, in recognition that the IWR thresholds were developed using statewide average conditions, the IWR (Section 62-303.450, F.A.C.) specifically allows the use of alternative, site-specific thresholds that more accurately reflect conditions beyond which an imbalance in flora or fauna occurs in the waterbody. The IWR used the threshold concentration of 11.0 ug/L CChl *a* for assessing Cockroach Bay for nutrient impairment. As discussed previously, the bay exceeded this threshold in the year 2000 of the verified period and was determined to be impaired for nutrients.

Narrative Nutrient Criteria Definitions

Chlorophyll a

Chlorophyll, a green pigment found in plants, is an essential component in the process of converting light energy (sunlight) into chemical energy through the process of photosynthesis. In photosynthesis, the energy absorbed by chlorophyll transforms carbon dioxide and water into carbohydrates and oxygen. The chemical energy stored by photosynthesis in carbohydrates drives biochemical reactions in nearly all living organisms. Thus, chlorophyll is at the center of the photosynthetic oxidation-reduction reaction between carbon dioxide and water.

There are several types of chlorophyll; however, the predominant form is chlorophyll a (Chl a). The measurement of Chl a in a water sample is a useful indicator of phytoplankton biomass, especially when used in conjunction with an analysis of algal growth potential and species abundance. The greater the abundance of Chl a, typically the greater the abundance of algae. Algae are the primary producers in the aquatic food web, and thus are very important in characterizing the productivity of estuarine systems.

Total Nitrogen as N

TN is the combined measurement of nitrate (NO₃), nitrite (NO₂), ammonia, and organic nitrogen found in water. Nitrogen compounds function as important nutrients for many aquatic organisms and are essential to the chemical processes that exist between land, air, and water. The most readily bioavailable forms of nitrogen are ammonia and nitrate. These compounds, in conjunction with other nutrients, serve as an important base for primary productivity.

The major sources of excessive amounts of nitrogen in surface water are the effluent from municipal treatment plants and runoff from urban and agricultural sites. When nutrient concentrations consistently exceed natural levels, the resulting nutrient imbalance can cause undesirable changes in a waterbody's biological community and drive an aquatic system into an accelerated rate of eutrophication. Usually, the eutrophication process is observed as a change in the structure of the algal community and includes severe algal blooms that may cover large areas for extended periods. Large algal blooms are generally followed by depletion in DO concentrations as a result of algal decomposition.

Total Phosphorus as P

Phosphorus is one of the primary nutrients that regulates algal and macrophyte growth in natural waters, particularly in fresh water. Phosphate, the form in which almost all phosphorus is found in the water column, can enter the aquatic environment in a number of ways. Natural processes transport phosphate to water through atmospheric deposition, ground water percolation, and terrestrial runoff. Municipal treatment plants, industries, agriculture, and domestic activities also contribute to phosphate loading through direct discharge and natural transport mechanisms. The very high levels of phosphorus in some Florida streams and estuaries are usually caused by phosphate mining and fertilizer processing activities.

High phosphorus concentrations are frequently responsible for accelerating the process of eutrophication, or accelerated aging, of a waterbody. Once phosphorus and other important nutrients enter the ecosystem, they are extremely difficult to remove. They become tied up in biomass or deposited in sediments. Nutrients, particularly phosphates, deposited in sediments generally are redistributed to the water column. This type of cycling compounds the difficulty of halting the eutrophication process.

3.2.2 Dissolved Oxygen

Florida's DO criterion for Class II marine water bodies states that DO "shall not average less than 5.0 mg/L in a 24-hour period and shall never be less than 4.0 mg/L. Normal daily and seasonal fluctuations above these levels shall be maintained." However, DO concentrations in ambient waters can be controlled by many factors, including DO solubility, which is controlled by temperature and salinity; DO enrichment processes influenced by reaeration, which is controlled by flow velocity; the photosynthesis of phytoplankton, periphyton, and other aquatic plants; DO consumption from the decomposition of organic materials in the water column and sediment and oxidation of some reductants such as ammonia and metals; and respiration by aquatic organisms. In order to address that portion of the low DO resulting from the decomposition of anthropogenically derived organic material in the water, reductions in BOD₅ are proposed.

3.3 Nutrient Target Development

Cockroach Bay drains into Middle Tampa Bay (WBID 1558B). The Tampa Bay Estuary Program and the FDEP have established a target Chl a concentration of 8.5 ug/L as the appropriate annual average Chl a level necessary to maintain water quality standards in this portion of Tampa Bay. The Department selected the target established for WBID 1558B (Middle Tampa Bay) as the target Chl a concentration for establishing this TMDL. Using this target value for establishing the TMDL should result in Cockroach Bay meeting water quality standards. Additionally, WBID 1558B is meeting its annual average Chl a target of 8.5 ug/L, with an annual average CChl a during the verified period of 4.68 ug/L and a maximum of 6.14 ug/L (2003). The Middle Tampa Bay WBID has a verified period average TN of 0.53 mg/L (median of 0.42 mg/L) and a TP annual average of 0.11 (median 0.12 mg/l). These concentrations are lower than the verified period annual averages in Cockroach Bay of 1.16 mg/L (TN) and 0.288 mg/L (TP). Given the degree of nitrogen limitation (4.1 average, 3.7 median) in Cockroach Bay, the nutrient target for Cockroach Bay was established for TN without a TMDL for TP. Given the uncertainty of nutrient reactions within estuaries, the Department applied the target Chl a 8.5 ug/L, and ultimately (see Chapter 5) a TN concentration of 0.54 mg/L in Cockroach Bay to account for uncertainty and as part of the implicit Margin of Safety.

Chapter 4: ASSESSMENT OF SOURCES

4.1 Types of Sources

An important part of the TMDL analysis is the identification of pollutant source categories, source subcategories, or individual sources of pollutants in the impaired waterbody and the amount of pollutant loadings contributed by each of these sources. Sources are broadly classified as either “point sources” or “nonpoint sources.” Historically, the term point sources has meant discharges to surface waters that typically have a continuous flow via a discernable, confined, and discrete conveyance, such as a pipe. Domestic and industrial wastewater treatment facilities (WWTFs) are examples of traditional point sources. In contrast, the term “nonpoint sources” was used to describe intermittent, rainfall-driven, diffuse sources of pollution associated with everyday human activities, including runoff from urban land uses, agriculture, silviculture, and mining; discharges from failing septic systems; and atmospheric deposition.

However, the 1987 amendments to the Clean Water Act redefined certain nonpoint sources of pollution as point sources subject to regulation under the EPA’s National Pollutant Discharge Elimination System (NPDES) Program. These nonpoint sources included certain urban stormwater discharges, including those from local government master drainage systems, construction sites over five acres, and a wide variety of industries (see **Appendix A** for background information on the federal and state stormwater programs).

To be consistent with Clean Water Act definitions, the term “point source” will be used to describe traditional point sources (such as domestic and industrial wastewater discharges) *and* stormwater systems requiring an NPDES stormwater permit when allocating pollutant load reductions required by a TMDL (see **Section 6.1**). However, the methodologies used to estimate nonpoint source loads do not distinguish between NPDES stormwater discharges and non-NPDES stormwater discharges, and as such, this source assessment section does not make any distinction between the two types of stormwater.

4.2 Potential Sources of Nutrients and BOD in the Cockroach Bay Watershed

4.2.1 Point Sources

There are no NPDES permitted domestic or Industrial wastewater facilities that discharge within the watershed.

There are two non-NPDES facilities within the watershed.

1. Hawaiian Isles MHP (FLA012255).
A domestic wastewater facility with a rapid infiltration basin within the watershed.
2. Speedling Inc.
FLA016526 and FLA551562.
Type = IW
NPDES = No
Active

Neither of these facilities is expected to make a significant contribute to the nutrient loading in Cockroach Bay.

Municipal Separate Storm Sewer System Permittees

The stormwater collection systems owned and operated by Hillsborough County and Co Permittees, including FDOT District 7 are covered by a Phase I NPDES municipal separate storm sewer system (MS4) permit (FLS000006). There are no Phase II MS4 permits identified for this watershed.

4.2.2 Land Uses and Nonpoint Sources

Nonpoint source pollution, unlike pollution from industrial and sewage treatment plants, comes from many diffuse sources. Nonpoint pollution is caused by rainfall moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water (EPA, 1994). Potential nonpoint sources of BOD and nutrients include loadings from surface runoff, wildlife, livestock, pets, leaking sewer lines, and leaking septic tanks.

Land Uses

The spatial distribution and acreage of different land use categories were identified using the SWFWMD's 2006 land use coverage (scale 1:40,000) contained in the Department's geographic information system (GIS) library. Land use categories in the watershed were aggregated using the simplified Level 1 codes and tabulated in **Tables 4.1**. **Figure 4.1** shows the acreage of the principal land uses in the watershed.

As shown in **Table 4.1**, the Cockroach Bay watershed drains about 3380 acres of land. The dominant land use category is wetlands (44.3 percent, followed by agriculture at 25.1 percent, open water with 21.7 percent, and urban land (urban and built-up; low-, medium-, and high-density residential; and transportation, communication, and utilities), which accounts for about 5.3%, of the watersheds' total area, and upland forest at just under 2 percent of the total area.

Table 4.1 Classification of Land Use Categories for Cockroach Bay, WBID 1778

Description	Area (acre)	Percent Area
Urban and Built-Up	153	4.5%
Agriculture	848	25.1%
Rangeland	0	0.0%
Upland Forest	65	1.9%
Water	734	21.7%
Wetlands	1496	44.3%
Barren Land	57	1.7%
Transportation, Communication, and Utilities	27	0.8%
Total	3380	100.0%

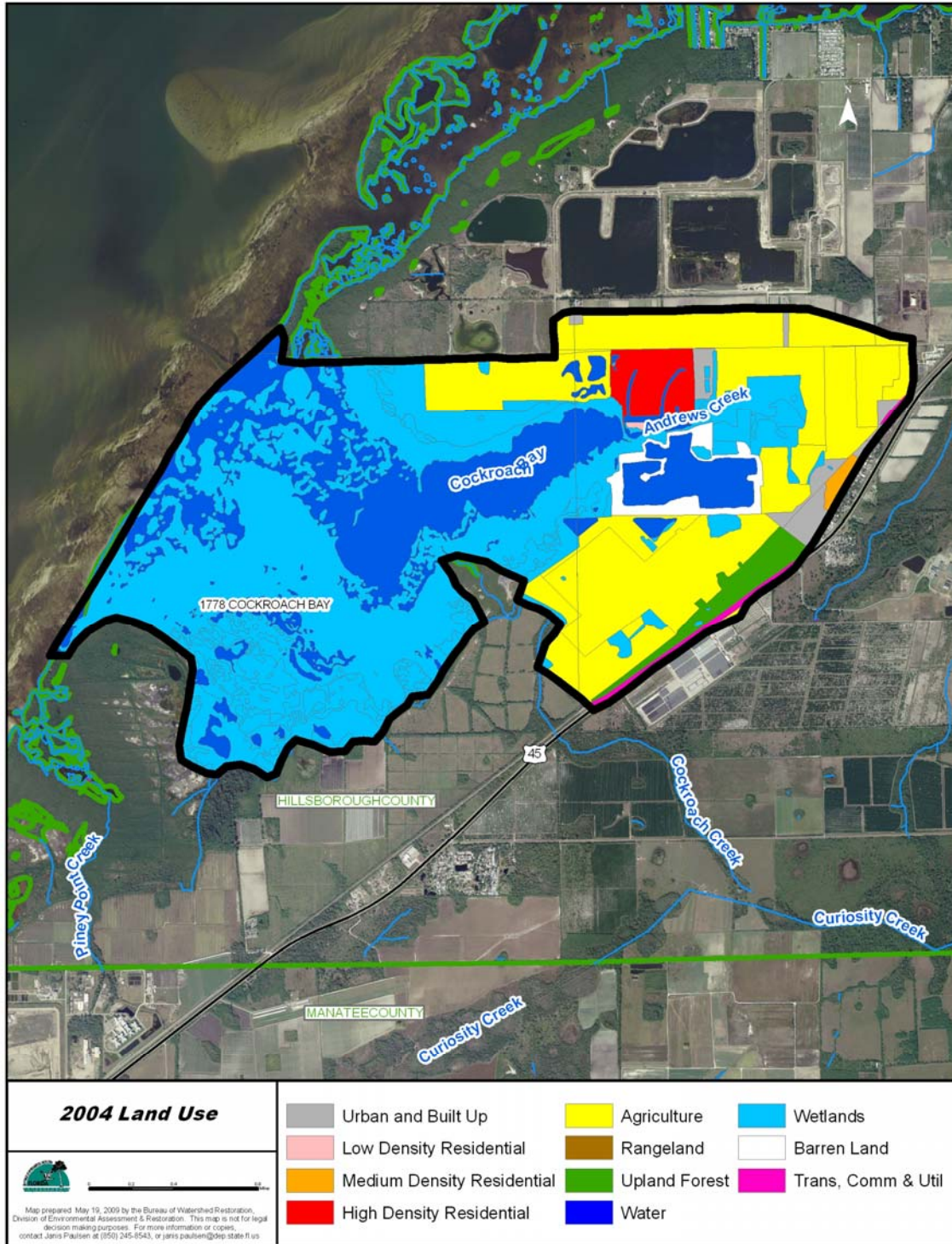


Figure 4.1 Principal Land Uses in the Cockroach Bay watershed, in 2006

Septic Tanks

Septic tanks are another potentially important source of BOD and nutrients. In areas with a relatively high ground water table, the drainage field can be flooded during the rainy season, and pollutants can be transported to the surface water through storm runoff. Additionally, any well that is installed in the surficial aquifer system will cause a drawdown around the well. If the septic tank system is built too close to the well (e.g., less than 75 feet), the septic tank discharge will be within the cone of influence of the well. As a result, septic tank effluent may go into the well and once the polluted water is used to irrigate lawns, pollutants may reach the land surface and wash into surface waters during rain events.

However, based on 2009 Florida Department of Health (FDOH) onsite sewage GIS coverage (<http://www.doh.state.fl.us/environment/programs/EhGis/EhGisDownload.htm>), only 8 housing units (*N*) were identified as being on septic tanks in the Cockroach Bay watershed. Therefore, contribution of septic tanks for BOD and nutrients to Cockroach Bayou is expected to be insignificant.

Sanitary Sewer Overflows

Sanitary sewer overflows (SSOs) can also be a potential source of nutrients and BOD pollution. Human sewage can be introduced into surface waters even when storm and sanitary sewers are separated. Leaks and overflows are common in many older sanitary sewers where capacity is exceeded, high rates of infiltration and inflow occur (i.e., outside water gets into pipes, reducing capacity), frequent blockages occur, or sewers are simply falling apart due to poor joints or pipe materials. Power failures at pumping stations are also a common cause of SSOs. The greatest risk of an SSO occurs during storm events; however, few comprehensive data are available to quantify SSO frequency and nutrient loads in most watersheds.

Chapter 5: DETERMINATION OF ASSIMILATIVE CAPACITY

5.1 Determination of Loading Capacity

The nutrient and BOD₅ TMDLs were developed using a percent reduction approach based on the data from all stations sampled during the verified period plus (2000 – 2008). The percent reductions for TN and BOD₅ make up the nutrient and DO TMDLs for Cockroach Bay needed to meet the applicable criteria for DO and nutrients.

5.1.1 Data Used in the Determination of the TMDL

The data used to develop this TMDL were obtained through the IWR dataset “Run 35-3.”

5.1.2 TMDL Development Process for Cockroach Bay

As described in **Section 5.1**, the percent reduction method was used to determine the TMDLs as explained below.

Table 5.1 Middle Tampa Bay WBID 1558B TN and Cchl_a

Year	TN (mg/L)	Cchl _a (ug/L)
1995	0.71	8.09
1996	0.49	4.65
1997	0.51	6.43
1998	0.47	10.37
1999	0.40	7.06
2000	0.77	5.58
2001	0.77	5.70
2002	0.66	3.73
2003	0.43	6.05
2004	0.42	4.55
2005	0.41	4.42
2006	0.38	3.08
Average*	0.54	

The DEP used 0.54 mg/L TN (the average of the annual averages for TN in Middle Tampa Bay that correspond to years with corrected chlorophyll a concentrations less than 8.5 ug/L, years highlighted in table) as the target for the TN TMDL for Cockroach Bay. The BOD₅ target was established as 2.00 mg/L. The impairment concentration to reduce from was calculated as the

average of the TN and BOD₅ data from the impaired WBID during the verified period, 1.16 mg/L and 3.18 mg/L respectively.

We note that these reductions in Chl a will result in some degree of reduction in algal derived BOD₅. However, based on the DEP experience assessing DO impairments, if the BOD₅ is elevated above 2.0 mg/L it may be considered as causing or contributing to low DO conditions in the water. Therefore, to address uncertainty and provide for margin of safety for the DO impairment, the BOD TMDL was established as an annual average of 2.00 mg/L, a 38 percent reduction from the current verified period average of 3.18 mg/L as shown on **Table 5.2**.

Percent Reduction:

$$\text{Percent reduction} = ((\text{Impairment} - \text{TMDL}) / \text{Impairment}) * 100$$

Table 5.2 Percent Reductions for TN and BOD₅ required to meet Water Quality Standards for DO and Nutrients

	TMDL	VP ⁺ average	Percent Reduction
TN (mg/L)	0.54	1.16	54
BOD ₅ (mg/L)	2.00	3.18	38

Note: Percent reduction was rounded up.

5.1.3 Critical Conditions/Seasonality

The critical conditions for nutrient and BOD₅ loadings in a given watershed depend on the existence of point sources, land use patterns, and rainfall in the watershed. Typically, the critical condition for nonpoint sources is an extended dry period, followed by a rainfall runoff event. During wet weather periods, pollutants that have built up on the land surface under dry weather conditions are washed off by rainfall, resulting in wet weather loadings. However, significant nonpoint source contributions could also occur under dry weather conditions without any major surface runoff event. This usually happens when nonpoint sources contaminate the surficial aquifer, and pollutants are brought into the receiving waters through baseflow. Animals with direct access to the receiving water could also contribute to the exceedances during dry weather conditions. The critical condition for point source loading typically occurs during periods of low stream flow, when dilution is minimized. As previously noted, there are no point source discharges within the watershed.

Chapter 6: DETERMINATION OF THE TMDL

6.1 Expression and Allocation of the TMDL

The objective of a TMDL is to provide a basis for allocating acceptable loads among all of the known pollutant sources in a watershed so that appropriate control measures can be implemented and water quality standards achieved. A TMDL is expressed as the sum of all point source loads (Wasteload Allocations, or WLAs), nonpoint source loads (Load Allocations, or LAs), and an appropriate margin of safety (MOS), which takes into account any uncertainty concerning the relationship between effluent limitations and water quality:

$$\text{TMDL} = \sum \text{WLAs} + \sum \text{LAs} + \text{MOS}$$

As discussed earlier, the WLA is broken out into separate subcategories for wastewater discharges and stormwater discharges regulated under the NPDES Program:

$$\text{TMDL} \cong \sum \text{WLAs}_{\text{wastewater}} + \sum \text{WLAs}_{\text{NPDES Stormwater}} + \sum \text{LAs} + \text{MOS}$$

It should be noted that the various components of the revised TMDL equation may not sum up to the value of the TMDL because (a) the WLA for NPDES stormwater is typically based on the percent reduction needed for nonpoint sources and is also accounted for within the LA, and (b) TMDL components can be expressed in different terms (for example, the WLA for stormwater is typically expressed as a percent reduction, and the WLA for wastewater is typically expressed as mass per day).

WLAs for stormwater discharges are typically expressed as “percent reduction” because it is very difficult to quantify the loads from MS4s (given the numerous discharge points) and to distinguish loads from MS4s from other nonpoint sources (given the nature of stormwater transport). The permitting of stormwater discharges also differs from the permitting of most wastewater point sources. Because stormwater discharges cannot be centrally collected, monitored, and treated, they are not subject to the same types of effluent limitations as wastewater facilities, and instead are required to meet a performance standard of providing treatment to the “maximum extent practical” through the implementation of best management practices (BMPs).

This approach is consistent with federal regulations (40 CFR § 130.2[i]), which state that TMDLs can be expressed in terms of mass per time (e.g., pounds per day), toxicity, or **other appropriate measure**. The TMDLs for Cockroach Bay are expressed in terms of a percent reduction, these TMDLs represent the maximum daily loads that Cockroach Bay can assimilate and maintain the nutrient and DO criteria (**Table 6.1**).

Table 6.1 TMDL Components for Nutrients and BOD in Cockroach Bay (WBID 1778)

WBID	Parameter	WLA		LA (% reduction)	MOS
		Wastewater	NPDES Stormwater (% reduction)		
1778	Total Nitrogen	N/A	54	54	Implicit
1778	BOD ₅	N/A	38	38	Implicit

N/A – Not applicable.

6.2 Load Allocation

A reduction in TN of 54 percent and BOD₅ of 38 percent is needed from nonpoint sources in the Cockroach Bay watershed. It should be noted that the LA includes loading from stormwater discharges regulated by the Department and the water management districts that are not part of the NPDES Stormwater Program (see **Appendix A**).

6.3 Wasteload Allocation

6.3.1 NPDES Wastewater Discharges

There are no NPDES surface water dischargers within the Cockroach Bay Watershed

6.3.2 NPDES Stormwater Discharges

The WLA for stormwater discharges with an MS4 permit is a reduction in TN of 54 percent and BOD₅ of 38 percent. These reductions are needed from nonpoint sources in the Cockroach Bay watershed. It should be noted that any MS4 permittee is only responsible for reducing the anthropogenic loads associated with stormwater outfalls that it owns or otherwise has responsible control over, and it is not responsible for reducing other nonpoint source loads in its jurisdiction.

6.4 Margin of Safety

Consistent with the recommendations of the Allocation Technical Advisory Committee (Department, February 2001), an implicit MOS was used in the development of this TMDL. An MOS was included in the TMDL by meeting the water quality targets established for Middle Tampa Bay within Cockroach Bay and establishing the percent reduction for BOD₅ based on achieving an annual average of 2.00 mg/L.

6.5 Evaluating Effects of the TMDL on DO

Cockroach Bay is expected to attain water quality standards following the implementation of the TMDL for nutrients and BOD₅, because the TMDL will require a 54 percent reduction in TN

loadings and a 38 percent reduction in BOD₅. The nutrient reductions will result in an annual average reduction in CChl a of 35.9 percent reduction (from 13.25 ug/L to 8.50 µg/L). These reductions will significantly improve overall water quality in the bay, including DO levels. These reductions will have a positive effect on reducing the diurnal fluctuations in DO and will improve the DO levels of water in the bay. These reductions in algal biomass (35.9 percent) will reduce the DO fluctuations and the BOD that results from the breakdown of the algal cells in the canals by a relative amount. As the total BOD is composed of both a carbonaceous fraction and a nitrogenous fraction, additional reductions in BOD will occur as a result of reducing the mass of TN entering the bay by 54 percent.

6.6 Evaluating Effects of the TMDL on BOD

The elevated BOD₅ measured in Cockroach Bay is contributing to the low DO. These values (as high as 9.0 mg/L) could in part be related to the occasionally high Chl a concentrations measured in the bay. Additionally, portions of the bay and its tributaries are overhung by trees; it could be that some fraction of the total BOD is also related to senescing of “natural” derived biomass. Once the external sources of BOD and nutrients from stormwater contributions into the bay are reduced through the implementation of the TMDL, it is expected that any remaining DO values below the Class II marine criteria can be attributed to pollution (as a result of the man-made conditions) and the bay will attain water quality standards.

Chapter 7: TMDL IMPLEMENTATION

Following the adoption of this TMDL by rule, the Department will determine the best course of action regarding its implementation. Basin Management Action Plans are the primary mechanism through which TMDLs are implemented in Florida (see Subsection 403.067[7] F.S.). However, other Department-initiated options are available including a decision document and direct NPDES permit modifications. These options are described below. The Department also has the discretion to defer TMDL implementation to a later date if insufficient resources are available to develop an appropriate implementation plan. In some instances where the Department has deferred action, local agencies may work together to develop local implementation plans to meet the TMDL. Such plans should be developed in close consultation with the Department.

7.1 NPDES Permit Modifications

In a case where TMDL requirements are applicable to permitted sources only, the Department may opt to implement the TMDL solely through NPDES permit requirements. This may include modifications to municipal stormwater, domestic wastewater, or industrial wastewater permits. Because of the extent to which nonpoint non-permitted sources (such as agriculture) affect water resources in Florida, this option is unlikely to be used often.

7.2 Decision Document

Absent the need for pollutant reductions to be allocated to specific stakeholders, a decision document may be developed. This implementation approach is applicable if sufficient projects and restoration efforts are ongoing that target the TMDL pollutant of concern such that no additional efforts would be expected of the local stakeholders. This implementation approach documents stakeholder implementation efforts and identifies the expected benefits of such, relative to the TMDL. Developing a decision document instead of a BMAP is appropriate where the universe of projects being implemented is extensive enough that the resources needed for BMAP development would not result in significant additional projects being implemented. No formal action is required of the Department to adopt a decision document.

7.3 Basin Management Action Plan

Basin Management Action Plans (BMAPs) are the most comprehensive approach to TMDL implementation. BMAPs are developed through collaborative processes with the cooperation of local stakeholders and are applicable where multiple sources are affecting a waterbody. Goals of this process are to reach consensus on the scientific foundation, whether or not detailed allocations are necessary and viable, if needed, how detailed allocations will be calculated, and how load reductions will be accomplished.

Once adopted by order of the Department Secretary, BMAPs are enforceable through wastewater and municipal stormwater permits for point sources and through BMP implementation for nonpoint sources. Among other components, BMAPs typically include:

- Water quality goals (based directly on the TMDL);
- Refined source identification;

- Load reduction requirements for stakeholders (quantitative detailed allocations, if technically feasible);
- A description of the load reduction activities to be undertaken, including structural projects, nonstructural BMPs, and public education and outreach;
- A description of further research, data collection, or source identification needed in order to achieve the TMDL;
- Timetables for implementation;
- Implementation funding mechanisms;
- An evaluation of future increases in pollutant loading due to population growth;
- Implementation milestones, project tracking, water quality monitoring, and adaptive management procedures; and
- Stakeholder statements of commitment (typically a local government resolution).

BMAPs are updated through annual meetings and may be officially revised every five years. Completed BMAPs in the state have improved communication and cooperation among local stakeholders and state agencies, improved internal communication within local governments, applied high-quality science and local information in managing water resources, clarified obligations of wastewater point source, MS4 and non-MS4 stakeholders in TMDL implementation, enhanced transparency in DEP decision-making, and built strong relationships between DEP and local stakeholders that have benefitted other program areas. If the Department chooses to move forward with a BMAP, it will be developed through a transparent stakeholder-driven process intended to result in a plan that is cost-effective, technically feasible, and meets the restoration needs of the applicable waterbodies.

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Appendices

Appendix A: Background Information on Federal and State Stormwater Programs

In 1982, Florida became the first state in the country to implement statewide regulations to address the issue of nonpoint source pollution by requiring new development and redevelopment to treat stormwater before it is discharged. The Stormwater Rule, as authorized in Chapter 403, F.S., was established as a technology-based program that relies on the implementation of BMPs that are designed to achieve a specific level of treatment (i.e., performance standards) as set forth in Rule 62-40, F.A.C. In 1994, the Department's stormwater treatment requirements were integrated with the stormwater flood control requirements of the water management districts, along with wetland protection requirements, into the Environmental Resource Permit regulations.

Rule 62-40 also requires the state's water management districts to establish stormwater pollutant load reduction goals (PLRGs) and adopt them as part of a Surface Water Improvement and Management (SWIM) plan, other watershed plan, or rule. Stormwater PLRGs are a major component of the load allocation part of a TMDL. To date, stormwater PLRGs have been established for Tampa Bay, Lake Thonotosassa, the Winter Haven Chain of Lakes, the Everglades, Lake Okeechobee, and Lake Apopka.

In 1987, the U.S. Congress established Section 402(p) as part of the federal Clean Water Act Reauthorization. This section of the law amended the scope of the federal NPDES permitting program to designate certain stormwater discharges as "point sources" of pollution. The EPA promulgated regulations and began implementing the Phase I NPDES stormwater program in 1990. These stormwater discharges include certain discharges that are associated with industrial activities designated by specific standard industrial classification (SIC) codes, construction sites disturbing 5 or more acres of land, and master drainage systems of local governments with a population above 100,000, which are better known as MS4s. However, because the master drainage systems of most local governments in Florida are interconnected, the EPA implemented Phase I of the MS4 permitting program on a countywide basis, which brought in all cities (incorporated areas), Chapter 298 urban water control districts, and the Florida Department of Transportation throughout the 15 counties meeting the population criteria. The Department received authorization to implement the NPDES stormwater program in 2000.

An important difference between the federal NPDES and the state's stormwater/environmental resource permitting programs is that the NPDES Program covers both new and existing discharges, while the state's program focus on new discharges only. Additionally, Phase II of the NPDES Program, implemented in 2003, expands the need for these permits to construction sites between 1 and 5 acres, and to local governments with as few as 1,000 people. While these urban stormwater discharges are now technically referred to as "point sources" for the purpose of regulation, they are still diffuse sources of pollution that cannot be easily collected and treated by a central treatment facility, as are other point sources of pollution such as domestic and industrial wastewater discharges. It should be noted that all MS4 permits issued in Florida include a reopener clause that allows permit revisions to implement TMDLs when the implementation plan is formally adopted.

Appendix B: Raw Data for Corrected Chlorophyll a, Biological Oxygen Demand (5-Day), Dissolved Oxygen, Total Nitrogen, Total Phosphorus, Color, and Salinity

Un-Corrected Chlorophyll a:

sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLHILL24010015	1978	1	25	1045	1.00	5	ug/l		
21FLHILL24010015	1978	2	22	1100	1.00	22	ug/l		
21FLHILL24010015	1978	3	21	1200	1.00	28	ug/l		
21FLHILL24010015	1978	4	19	1120	1.00	39	ug/l		
21FLHILL24010015	1978	5	17	1030	1.00	13	ug/l		
21FLHILL24010015	1978	6	14	1055	1.00	15	ug/l		
21FLHILL24010015	1978	7	12	1125	1.00	39	ug/l		
21FLHILL24010015	1978	8	9	1130	1.00	26	ug/l		
21FLHILL24010015	1978	9	6	1135	1.00	43	ug/l		
21FLHILL24010015	1978	10	4	1130	0.80	20	ug/l		
21FLHILL24010015	1978	11	15	1130	1.30	9	ug/l		
21FLHILL24010015	1978	12	18	1130	0.80	7	ug/l		
21FLHILL24010015	1979	1	24	1115	1.30	7	ug/l		
21FLHILL24010015	1979	2	21	1145	1.00	4	ug/l		
21FLHILL24010015	1979	3	20	1115	1.00	2	ug/l		
21FLHILL24010015	1979	4	24	1130	1.00	20	ug/l		
21FLHILL24010015	1979	5	17	1115	1.00	18	ug/l		
21FLHILL24010015	1979	6	13	1200	1.00	13	ug/l		
21FLHILL24010015	1979	7	11	1055	1.00	28	ug/l		
21FLHILL24010015	1979	8	8	1125	0.80	19	ug/l		
21FLHILL24010015	1979	9	5	1120	0.80	17	ug/l		
21FLHILL24010015	1979	10	3	1100	1.30	67	ug/l		
21FLHILL24010015	1979	10	31	1345	0.50	24	ug/l		
21FLHILL24010015	1979	12	5	1100	0.50	9	ug/l		
21FLHILL24010015	1980	1	31	1120	0.80	6	ug/l		
21FLHILL24010015	1980	2	27	1130	0.80	7	ug/l		
21FLHILL24010015	1980	3	27	1145	1.00	32	ug/l		
21FLHILL24010015	1980	4	23	1104	1.00	7	ug/l		
21FLHILL24010015	1980	5	21	1125	1.00	14	ug/l		
21FLHILL24010015	1980	6	18	1130	1.00	11	ug/l		
21FLHILL24010015	1980	7	16	1110	0.80	10	ug/l		
21FLHILL24010015	1980	8	13	1045	1.00	18	ug/l		
21FLHILL24010015	1980	9	10	1120	0.80	7	ug/l		
21FLHILL24010015	1980	10	15	1130	1.00	15	ug/l		
21FLHILL24010015	1980	11	13	1035	1.00	5	ug/l		
21FLHILL24010015	1980	12	17	1105	1.50	5	ug/l		
21FLHILL24010015	1981	1	28	1120	1.00	2	ug/l		

21FLHILL24010015	1981	2	25	1115	1.00	5	ug/l		
21FLHILL24010015	1981	3	25	1110	1.00	3	ug/l		
21FLHILL24010015	1981	5	6	1110	1.00	11	ug/l		
21FLHILL24010015	1981	6	3	1115	1.00	16	ug/l		
21FLHILL24010015	1981	7	1	1100	1.50	11	ug/l		
21FLHILL24010015	1981	7	29	1115	1.30	18	ug/l		
21FLHILL24010015	1981	8	26	1100	1.50	48	ug/l		
21FLHILL24010015	1981	9	23	1105	1.00	32	ug/l		
21FLHILL24010015	1981	10	15	1100	0.80	18	ug/l		
21FLHILL24010015	1981	11	4	1300	1.00	18	ug/l		
21FLHILL24010015	1981	12	9	1300	1.00	13	ug/l		
21FLHILL24010015	1982	1	27	1300	0.50	3	ug/l		
21FLHILL24010015	1982	2	24	1100	0.80	17	ug/l		
21FLHILL24010015	1982	3	24	1100	1.00	23	ug/l		
21FLHILL24010015	1982	4	21	1100	1.00	22	ug/l		
21FLHILL24010015	1982	5	19	1130	0.50	14	ug/l		
21FLHILL24010015	1982	6	16	1115	1.00	25	ug/l		
21FLHILL24010015	1982	7	14	1105	1.00	33	ug/l		
21FLHILL24010015	1982	8	11	1130	1.00	67	ug/l		
21FLHILL24010015	1982	9	15	1105	1.50	39	ug/l		
21FLHILL24010015	1982	10	13	1120	1.80	36	ug/l		
21FLHILL24010015	1982	11	17	1115	0.80	15	ug/l		
21FLHILL24010015	1983	1	26	1115	0.80	86	ug/l		
21FLHILL24010015	1983	3	2	1200	0.80	5	ug/l		
21FLHILL24010015	1983	3	30	1230	1.00	9	ug/l		
21FLHILL24010015	1983	4	27	1110	0.80	20	ug/l		
21FLHILL24010015	1983	5	25	1130	1.20	22	ug/l		
21FLHILL24010015	1983	6	22	1105	1.50	34	ug/l		
21FLHILL24010015	1983	7	20	1210	1.50	32	ug/l		
21FLHILL24010015	1983	8	17	1300	1.50	34	ug/l		
21FLHILL24010015	1983	9	14	1130	1.00	54	ug/l		
21FLHILL24010015	1983	10	12	1130	1.30	61	ug/l		
21FLHILL24010015	1983	11	16	1120	1.00	24	ug/l		
21FLHILL24010015	1983	12	14	1115	1.00	18	ug/l		
21FLHILL24010015	1984	1	25	1130	1.00	22	ug/l		
21FLHILL24010015	1984	2	22	1120	0.80	29	ug/l		
21FLHILL24010015	1984	3	28	1106	1.00	23	ug/l		
21FLHILL24010015	1984	4	25	1115	0.50	18	ug/l		
21FLHILL24010015	1984	5	23	1115	1.00	28	ug/l		
21FLHILL24010015	1984	6	20	1100	1.00	8	ug/l		
21FLHILL24010015	1984	7	18	1130	1.00	37	ug/l		
21FLHILL24010015	1984	8	15	1125	1.00	7	ug/l		
21FLHILL24010015	1984	9	12	1050	0.50	12	ug/l		
21FLHILL24010015	1984	10	10	1100	1.00	6	ug/l		
21FLHILL24010015	1984	11	7	1130	0.80	8	ug/l		
21FLHILL24010015	1984	12	12	1130	1.00	4	ug/l		
21FLHILL24010015	1985	1	16	1105	0.80	5	ug/l		
21FLHILL24010015	1985	2	27	1100	1.00	7	ug/l		

21FLHILL24010015	1985	3	27	1140	1.00	17	ug/l		
21FLHILL24010015	1985	4	17	1105	0.80	15	ug/l		
21FLHILL24010015	1985	5	15	1130	0.80	15	ug/l		
21FLHILL24010015	1985	6	26	1200	1.00	44	ug/l		
21FLHILL24010015	1985	7	24	1120	1.50	32	ug/l		
21FLHILL24010015	1985	8	14	1125	1.50	17	ug/l		
21FLHILL24010015	1985	9	11	1100	1.50	25	ug/l		
21FLHILL24010015	1985	10	16	1125	0.80	16	ug/l		
21FLHILL24010015	1985	11	13	1140	0.70	1	ug/l		
21FLHILL24010015	1985	12	18	1140	0.80	3	ug/l		
21FLHILL24010015	1986	1	29	1115	0.00	30.3	ug/l		
21FLHILL24010015	1986	1	29	1115	1.00	15	ug/l		
21FLHILL24010015	1986	2	26	1120	0.00	11.2	ug/l		
21FLHILL24010015	1986	2	26	1120	0.80	3.8	ug/l		
21FLHILL24010015	1986	3	26	1143	0.00	28	ug/l		
21FLHILL24010015	1986	3	26	1143	1.00	19	ug/l		
21FLHILL24010015	1986	4	23	1057	0.00	7.3	ug/l		
21FLHILL24010015	1986	4	23	1057	0.80	4	ug/l		
21FLHILL24010015	1986	5	21	1138	0.00	16.3	ug/l		
21FLHILL24010015	1986	5	21	1138	1.30	10.3	ug/l		
21FLHILL24010015	1986	6	18	1149	0.00	16.8	ug/l		
21FLHILL24010015	1986	6	18	1149	1.80	14.6	ug/l		
21FLHILL24010015	1986	7	23	1136	0.00	37.8	ug/l		
21FLHILL24010015	1986	7	23	1136	1.50	26.7	ug/l		
21FLHILL24010015	1986	8	27	1023	0.00	42.1	ug/l		
21FLHILL24010015	1986	8	27	1023	0.80	33.4	ug/l		
21FLHILL24010015	1986	9	24	1114	0.00	19.4	ug/l		
21FLHILL24010015	1986	9	24	1114	1.30	14.2	ug/l		
21FLHILL24010015	1986	10	15	1135	0.00	21.9	ug/l		
21FLHILL24010015	1986	10	15	1135	1.00	20	ug/l		
21FLHILL24010015	1986	11	5	1115	0.00	11.6	ug/l		
21FLHILL24010015	1986	11	5	1115	0.50	8.9	ug/l		
21FLHILL24010015	1986	12	17	1135	0.00	1.2	ug/l		
21FLHILL24010015	1986	12	17	1135	0.50	1.2	ug/l		
21FLHILL24010015	1987	1	28	1105	0.00	12.6	ug/l		
21FLHILL24010015	1987	1	28	1105	0.80	2.8	ug/l		
21FLHILL24010015	1987	2	25	1105	0.00	1.9	ug/l		
21FLHILL24010015	1987	2	25	1105	0.50	1.5	ug/l		
21FLHILL24010015	1987	3	25	1225	0.00	7.5	ug/l		
21FLHILL24010015	1987	3	25	1225	1.30	4.4	ug/l		
21FLHILL24010015	1987	4	22	1030	0.00	29.4	ug/l		
21FLHILL24010015	1987	4	22	1030	1.00	21	ug/l		
21FLHILL24010015	1987	5	27	1105	0.00	21.5	ug/l		
21FLHILL24010015	1987	5	27	1105	1.30	17	ug/l		
21FLHILL24010015	1987	6	24	1116	0.00	19.8	ug/l		
21FLHILL24010015	1987	6	24	1116	1.30	13.8	ug/l		
21FLHILL24010015	1987	7	29	1204	0.00	15.7	ug/l		
21FLHILL24010015	1987	7	29	1204	0.50	12.5	ug/l		

21FLHILL24010015	1987	9	23	1131	0.00	41	ug/l		
21FLHILL24010015	1987	9	23	1131	1.00	34	ug/l		
21FLHILL24010015	1987	10	21	1210	0.00	23.1	ug/l		
21FLHILL24010015	1987	10	21	1210	1.00	15	ug/l		
21FLHILL24010015	1987	11	18	1122	0.00	23.3	ug/l		
21FLHILL24010015	1987	11	18	1122	1.00	23	ug/l		
21FLHILL24010015	1987	12	16	1100	0.00	20.5	ug/l		
21FLHILL24010015	1987	12	16	1100	1.00	14	ug/l		
21FLHILL24010015	1988	1	27	1226	0.00	1	ug/l	&	
21FLHILL24010015	1988	1	27	1226	0.50	1	ug/l	&	
21FLHILL24010015	1988	2	24	1110	0.00	12.9	ug/l		
21FLHILL24010015	1988	2	24	1110	1.00	9	ug/l		
21FLHILL24010015	1988	3	16	1246	0.00	6.5	ug/l		
21FLHILL24010015	1988	3	16	1246	1.00	3	ug/l		
21FLHILL24010015	1988	4	27	1220	0.00	26.6	ug/l		
21FLHILL24010015	1988	4	27	1220	1.00	22	ug/l		
21FLHILL24010015	1988	5	25	1250	0.00	69.5	ug/l		
21FLHILL24010015	1988	5	25	1250	1.00	54	ug/l		
21FLHILL24010015	1988	6	22	1220	0.00	27.2	ug/l		
21FLHILL24010015	1988	6	22	1220	1.00	19	ug/l		
21FLHILL24010015	1988	7	26	1236	0.00	46.8	ug/l		
21FLHILL24010015	1988	7	26	1236	1.00	33	ug/l		
21FLHILL24010015	1988	8	24	1115	0.00	39.4	ug/l		
21FLHILL24010015	1988	8	24	1115	1.00	27	ug/l		
21FLHILL24010015	1988	9	28	1220	0.00	27.6	ug/l		
21FLHILL24010015	1988	9	28	1220	1.00	21	ug/l		
21FLHILL24010015	1988	10	26	1115	0.00	15.4	ug/l		
21FLHILL24010015	1988	10	26	1115	1.00	12	ug/l		
21FLHILL24010015	1988	11	30	1228	0.00	15.5	ug/l		
21FLHILL24010015	1988	11	30	1228	1.00	12	ug/l		
21FLHILL24010015	1988	12	28	1331	0.00	14.7	ug/l		
21FLHILL24010015	1988	12	28	1331	1.00	8	ug/l		
21FLHILL24010015	1989	1	25	1226	0.00	22.4	ug/l		
21FLHILL24010015	1989	1	25	1226	1.00	13	ug/l		
21FLHILL24010015	1989	2	22	1105	0.00	12.4	ug/l		
21FLHILL24010015	1989	2	22	1105	1.00	8	ug/l		
21FLHILL24010015	1989	3	22	1136	0.00	22.6	ug/l		
21FLHILL24010015	1989	3	22	1136	1.00	14	ug/l		
21FLHILL24010015	1989	4	26	1150	0.00	12.8	ug/l		
21FLHILL24010015	1989	4	26	1150	1.00	4	ug/l		
21FLHILL24010015	1989	5	31	1200	0.00	35.8	ug/l		
21FLHILL24010015	1989	5	31	1200	1.00	22	ug/l		
21FLHILL24010015	1989	6	28	1135	0.00	32	ug/l		
21FLHILL24010015	1989	6	28	1135	1.00	21	ug/l		
21FLHILL24010015	1989	7	26	1126	0.00	44.1	ug/l		
21FLHILL24010015	1989	7	26	1126	1.00	27	ug/l		
21FLHILL24010015	1989	8	30	1117	0.00	49.9	ug/l		
21FLHILL24010015	1989	8	30	1117	1.00	33	ug/l		

21FLHILL24010015	1989	9	27	1039	0.00	51.9	ug/l		
21FLHILL24010015	1989	9	27	1039	1.00	37	ug/l		
21FLHILL24010015	1989	10	25	1040	0.00	49	ug/l		
21FLHILL24010015	1989	10	25	1040	1.00	27	ug/l		
21FLHILL24010015	1989	11	29	1110	0.00	37.6	ug/l		
21FLHILL24010015	1989	11	29	1110	1.00	24	ug/l		
21FLHILL24010015	1989	12	20	1048	0.00	16	ug/l		
21FLHILL24010015	1989	12	20	1048	1.00	6	ug/l		
21FLHILL24010015	1990	1	31	1112	0.00	22.9	ug/l		
21FLHILL24010015	1990	1	31	1112	1.00	20.7	ug/l	J	
21FLHILL24010015	1990	2	28	1110	0.00	27.9	ug/l		
21FLHILL24010015	1990	2	28	1110	1.00	23.4	ug/l	J	
21FLHILL24010015	1990	4	25	1047	0.00	34.1	ug/l		
21FLHILL24010015	1990	4	25	1047	1.00	28.3	ug/l	J	
21FLHILL24010015	1990	5	30	1115	0.00	28	ug/l		
21FLHILL24010015	1990	5	30	1115	1.00	28.6	ug/l	J	
21FLHILL24010015	1990	6	27	1109	0.00	49.9	ug/l		
21FLHILL24010015	1990	6	27	1109	1.00	45.1	ug/l	J	
21FLHILL24010015	1990	8	1	1108	0.00	26.8	ug/l		
21FLHILL24010015	1990	8	1	1108	1.00	22.7	ug/l	J	
21FLHILL24010015	1990	8	29	1130	0.00	33	ug/l		
21FLHILL24010015	1990	8	29	1130	1.00	29.1	ug/l	J	
21FLHILL24010015	1990	9	26	1100	0.00	17.2	ug/l		
21FLHILL24010015	1990	9	26	1100	1.00	16.8	ug/l	J	
21FLHILL24010015	1990	10	24	1038	0.00	30.1	ug/l		
21FLHILL24010015	1990	10	24	1038	1.00	25.1	ug/l	J	
21FLHILL24010015	1990	11	28	1040	0.00	13.9	ug/l		
21FLHILL24010015	1990	11	28	1040	1.00	14.8	ug/l	J	
21FLHILL24010015	1990	12	19	1040	0.00	28.9	ug/l		
21FLHILL24010015	1990	12	19	1040	1.00	19.6	ug/l	J	
21FLHILL24010015	1991	1	23	1040	1.00	5.7	ug/l	J	
21FLHILL24010015	1991	2	26	1052	1.00	9.8	ug/l	J	
21FLHILL24010015	1991	3	27	1025	1.00	9.7	ug/l	J	
21FLHILL24010015	1991	4	24	1030	1.00	10.9	ug/l	J	
21FLHILL24010015	1991	5	22	1020	1.00	8.2	ug/l	J	
21FLHILL24010015	1991	6	26	1107	1.00	13.1	ug/l	J	
21FLHILL24010015	1991	7	31	1045	1.00	17	ug/l	J	
21FLHILL24010015	1991	8	28	1050	1.00	17.1	ug/l	J	
21FLHILL24010015	1991	9	25	1030	1.00	9.4	ug/l	J	
21FLHILL24010015	1991	10	23	1050	1.00	1.5	ug/l	J	
21FLHILL24010015	1991	11	20	1020	1.00	1.2	ug/l	J	
21FLHILL24010015	1991	12	11	1137	1.00	2.4	ug/l	J	
21FLHILL24010015	1992	1	29	1040	1.00	3.6	ug/l	J	
21FLHILL24010015	1992	2	26	1055	0.75	6.32814	ug/l		
21FLHILL24010015	1992	2	26	1055	0.80	9.2	ug/l	J	
21FLHILL24010015	1992	3	25	1025	0.50	9.39368	ug/l		
21FLHILL24010015	1992	4	22	1045	1.00	8.3	ug/l	J	
21FLHILL24010015	1992	5	27	1100	1.00	12.5	ug/l	J	

21FLHILL24010015	1992	6	24	1045	1.50	16.0576	ug/l		
21FLHILL24010015	1992	7	29	1040	1.00	46.7	ug/l	J	
21FLHILL24010015	1992	8	26	1100	1.00	30.6	ug/l	J	
21FLHILL24010015	1992	9	23	1120	1.50	14.4102	ug/l		
21FLHILL24010015	1992	10	28	1045	0.50	11.7898	ug/l		
21FLHILL24010015	1992	11	18	1055	0.75	8.43721	ug/l		
21FLHILL24010015	1992	11	18	1055	0.80	12.3	ug/l	J	
21FLHILL24010015	1992	12	16	1050	0.75	4.8255	ug/l		
21FLHILL24010015	1992	12	16	1050	0.80	7	ug/l	J	
21FLHILL24010015	1993	1	20	1045	1.00	7.5	ug/l	J	
21FLHILL24010015	1993	2	17	1104	1.00	14.8	ug/l	J	
21FLHILL24010015	1993	3	17	1045	0.30	3.24027	ug/l		
21FLHILL24010015	1993	4	21	1030	1.00	4.1	ug/l	J	
21FLHILL24010015	1993	5	19	1027	1.00	13.5	ug/l	J	
21FLHILL24010015	1993	6	16	1052	0.50	8.21495	ug/l		
21FLHILL24010015	1993	7	21	1025	0.50	7.67868	ug/l		
21FLHILL24010015	1993	8	18	1040	0.50	12.6801	ug/l		
21FLHILL24010015	1993	9	15	1040	0.50	11.8657	ug/l		
21FLHILL24010015	1993	9	15	1040	1.00	17	ug/l	J	
21FLHILL24010015	1993	10	20	1040	0.50	2.3	ug/l	J	
21FLHILL24010015	1993	11	17	1042	0.50	3.89	ug/l		
21FLHILL24010015	1993	12	15	1030	0.50	5.52	ug/l		
21FLHILL24010015	1994	1	26	1040	0.30	1	ug/l	&	
21FLHILL24010015	1994	2	23	1105	0.50	5.82752	ug/l		
21FLHILL24010015	1994	3	23	1100	0.30	6.9478	ug/l		
21FLHILL24010015	1994	4	27	1035	1.00	6.6	ug/l		
21FLHILL24010015	1994	5	25	1124	1.00	17.4	ug/l		
21FLHILL24010015	1994	6	22	1110	1.00	19	ug/l		
21FLHILL24010015	1994	7	27	1115	0.75	24.6	ug/l		
21FLHILL24010015	1994	7	27	1115	0.80	24.6	ug/l		
21FLHILL24010015	1994	8	24	1040	1.00	41.6	ug/l		
21FLHILL24010015	1994	9	28	1040	1.00	94.3	ug/l		
21FLHILL24010015	1994	10	26	1045	0.50	1	ug/l	&	
21FLHILL24010015	1995	1	25	1115	1.00	5.4	ug/l		
21FLHILL24010015	1995	2	22	1100	1.00	6.3	ug/l		
21FLHILL24010015	1995	3	22	1049	1.00	15.2	ug/l		
21FLHILL24010015	1995	4	26	1127	1.00	10.3	ug/l		
21FLHILL24010015	1995	5	24	1102	1.00	11.5	ug/l		
21FLHILL24010015	1995	6	28	1035	1.00	24.9	ug/l		
21FLHILL24010015	1995	7	26	1020	1.00	65.1	ug/l		
21FLHILL24010015	1995	8	23	1038	1.00	105.8	ug/l		
21FLHILL24010015	1995	9	27	1105	1.00	16.3	ug/l		
21FLHILL24010015	1995	10	25	1120	1.00	10.7	ug/l		
21FLHILL24010015	1995	11	29	1127	1.00	7.1	ug/l		
21FLHILL24010015	1995	12	13	1145	1.00	4.5	ug/l		
21FLHILL24010015	1996	1	24	1051	1.00	3.2	ug/l		
21FLHILL24010015	1996	2	21	1130	0.50	22.3974	ug/l		
21FLHILL24010015	1996	3	20	1130	0.50	5.20723	ug/l		

21FLHILL24010015	1996	4	17	1140	1.00	3.3	ug/l		
21FLHILL24010015	1996	5	15	1100	0.50	14.5936	ug/l		
21FLHILL24010015	1996	6	19	1100	0.50	8.84515	ug/l		
21FLHILL24010015	1996	7	17	1110	0.50	15.6	ug/l		
21FLHILL24010015	1996	8	21	1044	1.00	21.3	ug/l		
21FLHILL24010015	1996	9	25	1128	1.00	35.2	ug/l		
21FLHILL24010015	1996	10	16	1100	0.50	13.7	ug/l		
21FLHILL24010015	1996	11	20	1105	1.00	6.6	ug/l		
21FLHILL24010015	1996	12	11	1140	0.30	10	ug/l		
21FLHILL24010015	1997	1	22	1115	0.50	4.3	ug/l		
21FLHILL24010015	1997	2	19	1123	0.50	5.2	ug/l		
21FLHILL24010015	1997	3	19	1122	0.50	19.8	ug/l		
21FLHILL24010015	1997	4	16	1115	0.30	14.4	ug/l		
21FLHILL24010015	1997	5	21	1140	0.80	7.6	ug/l		
21FLHILL24010015	1997	6	18	1135	1.00	10.7	ug/l		
21FLHILL24010015	1997	7	23	1058	0.50	20.1	ug/l		
21FLHILL24010015	1997	8	20	1100	0.50	11	ug/l		
21FLHILL24010015	1997	9	17	1102	0.50	10.5	ug/l		
21FLHILL24010015	1997	10	15	1104	0.50	26.8	ug/l		
21FLHILL24010015	1997	11	19	1100	0.50	7.4	ug/l		
21FLHILL24010015	1997	12	10	1015	0.50	8.4	ug/l		
21FLHILL24010015	1998	1	21	1034	0.50	5.9	ug/l		
21FLHILL24010015	1998	2	18	1050	0.80	10.2	ug/l		
21FLHILL24010015	1998	3	18	1050	0.80	18.8	ug/l		
21FLHILL24010015	1998	4	22	1030	0.50	16.9	ug/l		
21FLHILL24010015	1998	5	20	1030	0.50	8.5	ug/l		
21FLHILL24010015	1998	6	17	1028	0.80	7.5	ug/l		
21FLHILL24010015	1998	7	22	1024	1.00	22.5	ug/l		
21FLHILL24010015	1998	8	26	1055	0.80	10	ug/l		
21FLHILL24010015	1998	9	16	1030	1.00	20.6	ug/l		
21FLHILL24010015	1998	10	21	1010	0.50	8.1	ug/l		
21FLHILL24010015	1998	12	9	1025	0.50	6.9	ug/l		
sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLHILL136	1999	1	20	1130	0.30	1	ug/l	&	
21FLHILL136	1999	2	17	1000	0.50	2.2	ug/l		
21FLHILL136	1999	3	17	1034	0.30	7.5	ug/l		
21FLHILL136	1999	4	21	1120	0.50	5.5	ug/l		
21FLHILL136	1999	5	19	1041	1.00	13.4	ug/l		
21FLHILL136	1999	6	16	1050	0.80	12.7	ug/l		
21FLHILL136	1999	7	21	1115	0.80	18	ug/l		
21FLHILL136	1999	9	23	1120	1.00	14.1	ug/l		
21FLHILL136	1999	10	13	1130	0.50	13	ug/l		
21FLHILL136	1999	11	17	1105	0.50	13.2	ug/l		
21FLHILL136	1999	12	15	1120	0.50	6.7	ug/l		
21FLHILL136	2000	1	19	1105	0.50	4.5	ug/l		
21FLHILL136	2000	2	16	1147	0.50	4.5	ug/l		
21FLHILL136	2000	3	15	1110	0.30	5.9	ug/l		
21FLHILL136	2000	4	19	1052	0.50	42	ug/l		

21FLHILL136	2000	5	16	1043	0.30	31.6	ug/l		
21FLHILL136	2000	6	21	1230	1.00	19.3	ug/l		
21FLHILL136	2000	7	19	1120	0.80	179.5	ug/l		
21FLHILL136	2000	8	16	1138	0.50	24.2	ug/l		
21FLHILL136	2000	9	20	1112	0.80	108.8	ug/l		
21FLHILL136	2000	10	11	1113	M	26.9	ug/l		
21FLHILL136	2000	11	15	1115	M	25.4	ug/l		
21FLHILL136	2000	12	13	1100	M	10.1	ug/l		
21FLHILL136	2001	2	21	1105	M	4.9	ug/l		
21FLHILL136	2001	3	21	1052	M	24.2	ug/l		
21FLHILL136	2001	4	18	1320	M	74.1	ug/l		
21FLHILL136	2001	5	16	1043	M	25.5	ug/l		
21FLHILL136	2001	6	20	1055	M	41.1	ug/l		
21FLHILL136	2001	7	25	1121	M	41.5	ug/l		
21FLHILL136	2001	8	22	1358	M	37.4	ug/l		
21FLHILL136	2001	9	19	1115	M	36.2	ug/l		
21FLHILL136	2001	10	17	1132	M	15.4	ug/l		
21FLHILL136	2001	11	14	1154	M	14.4	ug/l		
21FLHILL136	2001	12	12	1141	M	4.8	ug/l		
21FLHILL136	2002	1	16	1153	0.00	5.847732	ug/l		
21FLHILL136	2002	2	20	1120	0.66	6.207456	ug/l		
21FLHILL136	2002	3	20	1145	0.66	12.66457	ug/l		
21FLHILL136	2002	4	17	1058	0.66	15.3	ug/l		
21FLHILL136	2002	5	15	1041	0.33	11.4	ug/l		
21FLHILL136	2002	6	19	1044	0.98	22.1	ug/l		
21FLHILL136	2002	7	24	1215	0.98	15.8	ug/l		
21FLHILL136	2002	8	21	1139	0.98	25.9	ug/l		
21FLHILL136	2002	9	18	1027	0.66	82.6	ug/l		
21FLHILL136	2002	10	16	1108	1.31	28.7	ug/l		
21FLHILL136	2002	11	20	1127	0.33	20.4	ug/l		
21FLHILL136	2002	12	11	1130	0.66	7.4	ug/l		
21FLHILL136	2003	1	15	1157	0.10	21.99	ug/l		
21FLHILL136	2003	2	19	1230	0.10	23.82	ug/l		
21FLHILL136	2003	3	19	1321	0.30	11	ug/l		
21FLHILL136	2003	4	16	1358	0.40	26.3	ug/l		
21FLHILL136	2003	5	21	1345	0.20	36.07	ug/l		
21FLHILL136	2003	6	18	1115	0.20	42.1	ug/l		
21FLHILL136	2003	7	16	1234	0.30	19.38	ug/l		
21FLHILL136	2003	8	13	1335	0.30	43.85	ug/l		
21FLHILL136	2003	9	17	1327	0.10	20.4	ug/l		
21FLHILL136	2003	10	8	1310	0.40	28.15	ug/l		
21FLHILL136	2003	11	19	1341	0.30	18.78	ug/l		
21FLHILL136	2003	12	10	1348	0.00	10.25	ug/l		
21FLHILL136	2004	1	14	0	0.00	2.8	ug/l		0.5
21FLHILL136	2004	2	18	0	0.10	4	ug/l		0.5
21FLHILL136	2004	3	17	0	0.10	9.2	ug/l		0.5
21FLHILL136	2004	4	21	0	0.30	14.7	ug/l		0.5
21FLHILL136	2004	5	19	0	0.40	11.7	ug/l		0.5

21FLHILL136	2004	6	16	0	0.50	25.3	ug/l		0.5
21FLHILL136	2004	7	21	0	0.10	23.5	ug/l		0.5
21FLHILL136	2004	8	18	0	0.30	22.2	ug/l		0.5
21FLHILL136	2004	9	15	0	0.50	33.6	ug/l		0.5
21FLHILL136	2004	10	20	0	0.20	10.7	ug/l		0.5
21FLHILL136	2004	11	17	0	0.20	8.5	ug/l		0.5
21FLHILL136	2004	12	15	0	0.10	2.9	ug/l		0.5
21FLHILL136	2005	2	16	0	0.10	11.7	ug/l		4.21
21FLHILL136	2007	1	17	0	0.10	17.8	ug/l		1.6
21FLHILL136	2007	2	21	0	0.10	4.7	ug/l	l	1.6
21FLHILL136	2007	3	21	0	0.10	6.9	ug/l		1.6
21FLHILL136	2007	4	18	0	0.10	7.2	ug/l		1.6
21FLHILL136	2007	5	16	0	0.30	8	ug/l		1.6
21FLHILL136	2007	6	20	0	0.30	15.5	ug/l		1.6
21FLHILL136	2007	7	25	0	0.40	26.5	ug/l		1.6m
21FLHILL136	2007	8	15	0	0.20	20.8	ug/l		1.6m
21FLHILL136	2007	9	19	0	0.35	54.8	ug/l		1.6m
21FLHILL136	2007	10	17	0	0.25	11.7	ug/l		1.6m
21FLHILL136	2007	11	28	0	0.15	10.5	ug/l		1.6m
21FLHILL136	2007	12	12	0	0.15	2.9	ug/l	l	1.6m
Data Not Used									
sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLHILL136	1999	8	18	1100	0.50	14300	ug/l		

Corrected Chlorophyll a:

sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLHILL136	2005	2	16	0	0.10	8.7	ug/l		2.1
21FLHILL136	2007	1	17	0	0.10	2.2	ug/l	I	1.4
21FLHILL136	2007	2	21	0	0.10	3.1	ug/l	I	1.4
21FLHILL136	2007	3	21	0	0.10	5.5	ug/l	I	1.4
21FLHILL136	2007	4	18	0	0.10	5.6	ug/l		1.4
21FLHILL136	2007	5	16	0	0.30	7.3	ug/l		1.4
21FLHILL136	2007	6	20	0	0.30	11.4	ug/l		1.4
21FLHILL136	2007	7	25	0	0.40	21.9	ug/l		1.4
21FLHILL136	2007	8	15	0	0.20	16.4	ug/l		1.4
21FLHILL136	2007	9	19	0	0.35	34	ug/l		1.4
21FLHILL136	2007	10	17	0	0.25	8.6	ug/l		1.4
21FLHILL136	2007	11	28	0	0.15	7.7	ug/l		1.4
21FLHILL136	2007	12	12	0	0.15	2.7	ug/l	I	1.4
21FLTPA 274048208229581	2006	2	6	1045	0.20	1	ug/l	&	2
21FLTPA 274048208229581	2006	2	28	1205	0.80	21	ug/l		0.85
21FLTPA 274048208229581	2006	3	14	1120	0.20	1	ug/l	&	2
21FLTPA 274048208229581	2006	4	4	1000	0.20	1	ug/l	&	2
21FLTPA 274048208229581	2006	4	18	910	0.20	1	ug/l	&	2
21FLTPA 274048208229581	2006	5	8	1120	0.20	1	ug/l	&	2
21FLTPA 274048208229581	2006	7	10	955	0.20	10	ug/l		0.85
21FLTPA 274048208229581	2006	7	31	1125	0.20	16	ug/l		0.85
21FLTPA 274048208229581	2006	8	14	955	0.20	25	ug/l		0.85
21FLTPA 274048208229581	2006	9	11	1245	0.20	60	ug/l		1.1
21FLTPA 274048208229581	2006	10	2	955	0.20	43	ug/l	A	1.2
21FLTPA 274048208229581	2006	10	23	1210	0.20	5.9	ug/l		1.4
21FLTPA 274048208229581	2006	11	6	1245	0.20	1	ug/l	&	2
21FLTPA 274048208229581	2006	11	27	935	0.20	3.5	ug/l		0.85

Biological Oxygen Demand (5-Day):

sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLHILL24010015	1978	1	25	1045	1.00	2.3	mg/l		
21FLHILL24010015	1978	2	22	1100	1.00	4	mg/l		
21FLHILL24010015	1978	3	21	1200	1.00	6.3	mg/l		
21FLHILL24010015	1978	4	19	1120	1.00	4.7	mg/l		
21FLHILL24010015	1978	5	17	1030	1.00	2.3	mg/l		
21FLHILL24010015	1978	6	14	1055	1.00	4.9	mg/l		
21FLHILL24010015	1978	7	12	1125	1.00	8	mg/l		
21FLHILL24010015	1978	8	9	1130	1.00	5.5	mg/l		
21FLHILL24010015	1978	9	6	1135	1.00	7.9	mg/l		
21FLHILL24010015	1978	10	4	1130	0.80	3.5	mg/l		
21FLHILL24010015	1978	11	15	1130	1.30	3	mg/l		
21FLHILL24010015	1978	12	18	1130	0.80	3.4	mg/l		
21FLHILL24010015	1979	1	24	1115	1.30	2.1	mg/l		
21FLHILL24010015	1979	2	21	1145	1.00	3.7	mg/l		
21FLHILL24010015	1979	3	20	1115	1.00	2.8	mg/l		
21FLHILL24010015	1979	4	24	1130	1.00	2.2	mg/l		
21FLHILL24010015	1979	5	17	1115	1.00	3.5	mg/l		
21FLHILL24010015	1979	6	13	1200	1.00	1.7	mg/l		
21FLHILL24010015	1979	7	11	1055	1.00	3	mg/l		
21FLHILL24010015	1979	8	8	1125	0.80	3.2	mg/l		
21FLHILL24010015	1979	9	5	1120	0.80	2.4	mg/l		
21FLHILL24010015	1979	10	3	1100	1.30	4.4	mg/l		
21FLHILL24010015	1979	10	31	1345	0.50	2.3	mg/l		
21FLHILL24010015	1979	12	5	1100	0.50	2.4	mg/l		
21FLHILL24010015	1980	1	31	1120	0.80	1.5	mg/l		
21FLHILL24010015	1980	2	27	1130	0.80	3	mg/l		
21FLHILL24010015	1980	3	27	1145	1.00	4	mg/l		
21FLHILL24010015	1980	4	23	1104	1.00	2.7	mg/l		
21FLHILL24010015	1980	5	21	1125	1.00	3.2	mg/l		
21FLHILL24010015	1980	6	18	1130	1.00	2.8	mg/l		
21FLHILL24010015	1980	7	16	1110	0.80	1.7	mg/l		
21FLHILL24010015	1980	8	13	1045	1.00	2.7	mg/l		
21FLHILL24010015	1980	9	10	1120	0.80	5.3	mg/l		
21FLHILL24010015	1980	10	15	1130	1.00	2.8	mg/l		
21FLHILL24010015	1980	11	13	1035	1.00	3	mg/l		
21FLHILL24010015	1980	12	17	1105	1.50	2.1	mg/l		
21FLHILL24010015	1981	1	28	1120	1.00	1.5	mg/l		
21FLHILL24010015	1981	2	25	1115	1.00	1.8	mg/l		
21FLHILL24010015	1981	3	25	1110	1.00	1.2	mg/l		
21FLHILL24010015	1981	5	6	1110	1.00	2.2	mg/l		
21FLHILL24010015	1981	6	3	1115	1.00	1	mg/l		
21FLHILL24010015	1981	7	1	1100	1.50	1.8	mg/l		
21FLHILL24010015	1981	7	29	1115	1.30	2.8	mg/l		

21FLHILL24010015	1981	8	26	1100	1.50	2.9	mg/l		
21FLHILL24010015	1981	9	23	1105	1.00	4	mg/l		
21FLHILL24010015	1981	10	15	1100	0.80	3	mg/l		
21FLHILL24010015	1981	11	4	1300	1.00	3.7	mg/l		
21FLHILL24010015	1981	12	9	1300	1.00	5.3	mg/l		
21FLHILL24010015	1982	1	27	1300	0.50	1.5	mg/l		
21FLHILL24010015	1982	2	24	1100	0.80	3.1	mg/l		
21FLHILL24010015	1982	3	24	1100	1.00	5.1	mg/l		
21FLHILL24010015	1982	4	21	1100	1.00	3.8	mg/l		
21FLHILL24010015	1982	5	19	1130	0.50	2.9	mg/l		
21FLHILL24010015	1982	6	16	1115	1.00	4.9	mg/l		
21FLHILL24010015	1982	7	14	1105	1.00	5	mg/l		
21FLHILL24010015	1982	8	11	1130	1.00	6.4	mg/l		
21FLHILL24010015	1982	9	15	1105	1.50	5.3	mg/l		
21FLHILL24010015	1982	10	13	1120	1.80	4.3	mg/l		
21FLHILL24010015	1982	11	17	1115	0.80	2.5	mg/l		
21FLHILL24010015	1983	1	26	1115	0.80	8.1	mg/l		
21FLHILL24010015	1983	3	2	1200	0.80	1.4	mg/l		
21FLHILL24010015	1983	3	30	1230	1.00	6	mg/l		
21FLHILL24010015	1983	4	27	1110	0.80	3.5	mg/l		
21FLHILL24010015	1983	5	25	1130	1.20	3.3	mg/l		
21FLHILL24010015	1983	6	22	1105	1.50	4.9	mg/l		
21FLHILL24010015	1983	7	20	1210	1.50	3.8	mg/l		
21FLHILL24010015	1983	8	17	1300	1.50	4.3	mg/l		
21FLHILL24010015	1983	9	14	1130	1.00	2.6	mg/l		
21FLHILL24010015	1983	10	12	1130	1.30	2.9	mg/l		
21FLHILL24010015	1983	11	16	1120	1.00	2.8	mg/l		
21FLHILL24010015	1983	12	14	1115	1.00	2.3	mg/l		
21FLHILL24010015	1984	1	25	1130	1.00	3.2	mg/l		
21FLHILL24010015	1984	2	22	1120	0.80	2.5	mg/l		
21FLHILL24010015	1984	3	28	1106	1.00	4.7	mg/l		
21FLHILL24010015	1984	4	25	1115	0.50	3.1	mg/l		
21FLHILL24010015	1984	5	23	1115	1.00	3.1	mg/l		
21FLHILL24010015	1984	6	20	1100	1.00	2.4	mg/l		
21FLHILL24010015	1984	7	18	1130	1.00	4.1	mg/l		
21FLHILL24010015	1984	8	15	1125	1.00	2.6	mg/l		
21FLHILL24010015	1984	9	12	1050	0.50	1.5	mg/l		
21FLHILL24010015	1984	10	10	1100	1.00	1.9	mg/l		
21FLHILL24010015	1984	11	7	1130	0.80	1.4	mg/l		
21FLHILL24010015	1984	12	12	1130	1.00	1	mg/l		
21FLHILL24010015	1985	1	16	1105	0.80	1.6	mg/l		
21FLHILL24010015	1985	2	27	1100	1.00	1.8	mg/l		
21FLHILL24010015	1985	3	27	1140	1.00	2.8	mg/l		
21FLHILL24010015	1985	4	17	1105	0.80	2.5	mg/l		
21FLHILL24010015	1985	5	15	1130	0.80	4	mg/l		
21FLHILL24010015	1985	6	26	1200	1.00	5.7	mg/l		
21FLHILL24010015	1985	7	24	1120	1.50	3.3	mg/l		
21FLHILL24010015	1985	8	14	1125	1.50	2.3	mg/l		

21FLHILL24010015	1985	9	11	1100	1.50	4.9	mg/l		
21FLHILL24010015	1985	10	16	1125	0.80	2.7	mg/l		
21FLHILL24010015	1985	11	13	1140	0.70	2.6	mg/l		
21FLHILL24010015	1985	12	18	1140	0.80	1	mg/l		
21FLHILL24010015	1986	1	29	1115	1.00	2.9	mg/l		
21FLHILL24010015	1986	2	26	1120	0.80	0.9	mg/l		
21FLHILL24010015	1986	3	26	1143	1.00	3	mg/l		
21FLHILL24010015	1986	4	23	1057	0.80	2	mg/l		
21FLHILL24010015	1986	5	21	1138	1.30	2	mg/l		
21FLHILL24010015	1986	6	18	1149	1.80	3.2	mg/l		
21FLHILL24010015	1986	7	23	1136	1.50	2.6	mg/l		
21FLHILL24010015	1986	8	27	1023	0.80	4.9	mg/l		
21FLHILL24010015	1986	9	24	1114	1.30	1.8	mg/l		
21FLHILL24010015	1986	10	15	1135	1.00	3.3	mg/l		
21FLHILL24010015	1986	11	5	1115	0.50	1.8	mg/l		
21FLHILL24010015	1986	12	17	1135	0.50	1.7	mg/l		
21FLHILL24010015	1987	1	28	1105	0.80	1.1	mg/l		
21FLHILL24010015	1987	2	25	1105	0.50	0.5	mg/l		
21FLHILL24010015	1987	3	25	1225	1.30	1.5	mg/l		
21FLHILL24010015	1987	4	22	1030	1.00	4.9	mg/l		
21FLHILL24010015	1987	5	27	1105	1.30	3.5	mg/l		
21FLHILL24010015	1987	6	24	1116	1.30	3.7	mg/l		
21FLHILL24010015	1987	7	29	1204	0.50	3	mg/l		
21FLHILL24010015	1987	8	26	1058	1.00	5.9	mg/l	L	
21FLHILL24010015	1987	9	23	1131	1.00	3.3	mg/l		
21FLHILL24010015	1987	10	21	1210	1.00	2.9	mg/l		
21FLHILL24010015	1987	11	18	1122	1.00	3.9	mg/l		
21FLHILL24010015	1987	12	16	1100	1.00	2.6	mg/l		
21FLHILL24010015	1988	1	27	1226	0.50	0.8	mg/l		
21FLHILL24010015	1988	2	24	1110	1.00	3.5	mg/l		
21FLHILL24010015	1988	3	16	1246	1.00	1.8	mg/l		
21FLHILL24010015	1988	4	27	1220	1.00	3.3	mg/l		
21FLHILL24010015	1988	5	25	1250	1.00	9.1	mg/l		
21FLHILL24010015	1988	6	22	1220	1.00	3.1	mg/l		
21FLHILL24010015	1988	7	26	1236	1.00	5.1	mg/l		
21FLHILL24010015	1988	8	24	1115	1.00	5.1	mg/l		
21FLHILL24010015	1988	9	28	1220	1.00	3.6	mg/l		
21FLHILL24010015	1988	10	26	1115	1.00	2.8	mg/l		
21FLHILL24010015	1988	11	30	1228	1.00	2.9	mg/l		
21FLHILL24010015	1988	12	28	1331	1.00	2.5	mg/l		
21FLHILL24010015	1989	1	25	1226	1.00	3.9	mg/l		
21FLHILL24010015	1989	2	22	1105	1.00	1.8	mg/l		
21FLHILL24010015	1989	3	22	1136	1.00	2.4	mg/l		
21FLHILL24010015	1989	4	26	1150	1.00	2.4	mg/l		
21FLHILL24010015	1989	5	31	1200	1.00	3.4	mg/l		
21FLHILL24010015	1989	6	28	1135	1.00	4.6	mg/l		
21FLHILL24010015	1989	7	26	1126	1.00	4.4	mg/l		
21FLHILL24010015	1989	8	30	1117	1.00	4	mg/l		

21FLHILL24010015	1989	9	27	1039	1.00	3.9	mg/l		
21FLHILL24010015	1989	10	25	1040	1.00	4.1	mg/l		
21FLHILL24010015	1989	11	29	1110	1.00	3.3	mg/l		
21FLHILL24010015	1989	12	20	1048	1.00	1.3	mg/l		
21FLHILL24010015	1990	1	31	1112	1.00	2.8	mg/l		
21FLHILL24010015	1990	2	28	1110	1.00	4	mg/l		
21FLHILL24010015	1990	3	28	1140	1.00	4.1	mg/l		
21FLHILL24010015	1990	4	25	1047	1.00	4	mg/l		
21FLHILL24010015	1990	5	30	1115	1.00	2.4	mg/l		
21FLHILL24010015	1990	6	27	1109	1.00	4.4	mg/l	L	
21FLHILL24010015	1990	8	1	1108	1.00	3.9	mg/l		
21FLHILL24010015	1990	8	29	1130	1.00	3.9	mg/l		
21FLHILL24010015	1990	9	26	1100	1.00	3.6	mg/l		
21FLHILL24010015	1990	10	24	1038	1.00	3.1	mg/l		
21FLHILL24010015	1990	11	28	1040	1.00	1.8	mg/l		
21FLHILL24010015	1990	12	19	1040	1.00	3.9	mg/l		
21FLHILL24010015	1991	1	23	1040	1.00	2.3	mg/l		
21FLHILL24010015	1991	2	26	1052	1.00	2.2	mg/l		
21FLHILL24010015	1991	3	27	1025	1.00	3.9	mg/l		
21FLHILL24010015	1991	4	24	1030	1.00	2.6	mg/l		
21FLHILL24010015	1991	5	22	1020	1.00	1.7	mg/l		
21FLHILL24010015	1991	6	26	1107	1.00	1.5	mg/l		
21FLHILL24010015	1991	7	31	1045	1.00	2.5	mg/l		
21FLHILL24010015	1991	8	28	1050	1.00	3.3	mg/l		
21FLHILL24010015	1991	9	25	1030	1.00	2.8	mg/l		
21FLHILL24010015	1991	10	23	1050	1.00	0.9	mg/l		
21FLHILL24010015	1991	11	20	1020	1.00	0.8	mg/l		
21FLHILL24010015	1991	12	11	1137	1.00	0.5	mg/l		
21FLHILL24010015	1992	1	29	1040	1.00	1.3	mg/l		
21FLHILL24010015	1992	2	26	1055	0.75	1.7	mg/l		
21FLHILL24010015	1992	2	26	1055	0.80	1.7	mg/l		
21FLHILL24010015	1992	3	25	1025	0.50	2.3	mg/l		
21FLHILL24010015	1992	4	22	1045	1.00	2.3	mg/l		
21FLHILL24010015	1992	5	27	1100	1.00	3.1	mg/l		
21FLHILL24010015	1992	6	24	1045	1.50	6	mg/l		
21FLHILL24010015	1992	7	29	1040	1.00	4.6	mg/l		
21FLHILL24010015	1992	8	26	1100	1.00	3.6	mg/l		
21FLHILL24010015	1992	9	23	1120	1.50	5.3	mg/l		
21FLHILL24010015	1992	10	28	1045	0.50	2.5	mg/l		
21FLHILL24010015	1992	11	18	1055	0.75	1.2	mg/l		
21FLHILL24010015	1992	11	18	1055	0.80	1.2	mg/l		
21FLHILL24010015	1992	12	16	1050	0.75	2.4	mg/l		
21FLHILL24010015	1992	12	16	1050	0.80	2.4	mg/l		
21FLHILL24010015	1993	1	20	1045	1.00	1.8	mg/l		
21FLHILL24010015	1993	2	17	1104	1.00	3.2	mg/l		
21FLHILL24010015	1993	3	17	1045	0.30	1.8	mg/l		
21FLHILL24010015	1993	4	21	1030	1.00	1.7	mg/l		
21FLHILL24010015	1993	5	19	1027	1.00	2.2	mg/l		

21FLHILL24010015	1993	6	16	1052	0.50	2.5	mg/l		
21FLHILL24010015	1993	7	21	1025	0.50	2.7	mg/l		
21FLHILL24010015	1993	8	18	1040	0.50	3.1	mg/l		
21FLHILL24010015	1993	9	15	1040	0.50	3.7	mg/l		
21FLHILL24010015	1993	9	15	1040	1.00	3.7	mg/l		
21FLHILL24010015	1993	10	20	1040	0.50	1.6	mg/l		
21FLHILL24010015	1993	11	17	1042	0.50	3.3	mg/l		
21FLHILL24010015	1993	12	15	1030	0.50	1.8	mg/l		
21FLHILL24010015	1994	1	26	1040	0.30	1.5	mg/l		
21FLHILL24010015	1994	2	23	1105	0.50	3.06	mg/l		
21FLHILL24010015	1994	3	23	1100	0.30	3.8	mg/l		
21FLHILL24010015	1994	4	27	1035	1.00	3	mg/l		
21FLHILL24010015	1994	5	25	1124	1.00	6.6	mg/l		
21FLHILL24010015	1994	6	22	1110	1.00	3.3	mg/l		
21FLHILL24010015	1994	7	27	1115	0.75	1.4	mg/l		
21FLHILL24010015	1994	7	27	1115	0.80	1.4	mg/l		
21FLHILL24010015	1994	8	24	1040	1.00	4	mg/l		
21FLHILL24010015	1994	9	28	1040	1.00	3.1	mg/l		
21FLHILL24010015	1994	10	26	1045	0.50	3	mg/l		
21FLHILL24010015	1995	1	25	1115	1.00	1.5	mg/l		
21FLHILL24010015	1995	2	22	1100	1.00	2.8	mg/l		
21FLHILL24010015	1995	3	22	1049	1.00	3.2	mg/l		
21FLHILL24010015	1995	4	26	1127	1.00	2.9	mg/l		
21FLHILL24010015	1995	5	24	1102	1.00	2.7	mg/l		
21FLHILL24010015	1995	6	28	1035	1.00	7.2	mg/l	L	
21FLHILL24010015	1995	7	26	1020	1.00	5.6	mg/l	L	
21FLHILL24010015	1995	8	23	1038	1.00	5.9	mg/l	L	
21FLHILL24010015	1995	9	27	1105	1.00	5.2	mg/l	L	
21FLHILL24010015	1995	10	25	1120	1.00	2.7	mg/l		
21FLHILL24010015	1995	11	29	1127	1.00	3	mg/l		
21FLHILL24010015	1995	12	13	1145	1.00	2.2	mg/l		
21FLHILL24010015	1996	1	24	1051	1.00	1	mg/l		
21FLHILL24010015	1996	2	21	1130	0.50	4	mg/l		
21FLHILL24010015	1996	3	20	1130	0.50	1.55	mg/l		
21FLHILL24010015	1996	4	17	1140	1.00	0.1	mg/l		
21FLHILL24010015	1996	5	15	1100	0.50	3.3	mg/l		
21FLHILL24010015	1996	6	19	1100	0.50	1.98	mg/l		
21FLHILL24010015	1996	7	17	1110	0.50	6.2	mg/l		
21FLHILL24010015	1996	8	21	1044	1.00	3.2	mg/l		
21FLHILL24010015	1996	9	25	1128	1.00	6.1	mg/l		
21FLHILL24010015	1996	10	16	1100	0.50	2.7	mg/l		
21FLHILL24010015	1996	11	20	1105	1.00	1.5	mg/l		
21FLHILL24010015	1996	12	11	1140	0.30	3.5	mg/l		
21FLHILL24010015	1997	1	22	1115	0.50	1.6	mg/l		
21FLHILL24010015	1997	2	19	1123	0.50	1.8	mg/l		
21FLHILL24010015	1997	3	19	1122	0.50	3.7	mg/l		
21FLHILL24010015	1997	4	16	1115	0.30	1.3	mg/l		
21FLHILL24010015	1997	5	21	1140	0.80	2.3	mg/l		

21FLHILL24010015	1997	6	18	1135	1.00	6.7	mg/l	L	
21FLHILL24010015	1997	7	23	1058	0.50	2.9	mg/l		
21FLHILL24010015	1997	8	20	1100	0.50	2.5	mg/l		
21FLHILL24010015	1997	9	17	1102	0.50	3.4	mg/l		
21FLHILL24010015	1997	10	15	1104	0.50	5.2	mg/l		
21FLHILL24010015	1997	11	19	1100	0.50	2.9	mg/l		
21FLHILL24010015	1997	12	10	1015	0.50	2.7	mg/l		
21FLHILL24010015	1998	1	21	1034	0.50	2.6	mg/l		
21FLHILL24010015	1998	2	18	1050	0.80	2.9	mg/l		
21FLHILL24010015	1998	3	18	1050	0.80	3.1	mg/l		
21FLHILL24010015	1998	4	22	1030	0.50	4	mg/l		
21FLHILL24010015	1998	5	20	1030	0.50	2.3	mg/l		
21FLHILL24010015	1998	6	17	1028	0.80	1.3	mg/l		
21FLHILL24010015	1998	7	22	1024	1.00	4	mg/l		
21FLHILL24010015	1998	8	26	1055	0.80	2.3	mg/l		
21FLHILL24010015	1998	9	16	1030	1.00	2.7	mg/l		
21FLHILL24010015	1998	10	21	1010	0.50	1.6	mg/l		
21FLHILL24010015	1998	11	18	1105	0.50	3.2	mg/l		
21FLHILL24010015	1998	12	9	1025	0.50	1.1	mg/l		
21FLHILL136	1999	1	20	1130	0.30	1.8	mg/l		
21FLHILL136	1999	2	17	1000	0.50	1.5	mg/l		
21FLHILL136	1999	3	17	1034	0.30	2.3	mg/l		
21FLHILL136	1999	4	21	1120	0.50	1.5	mg/l		
21FLHILL136	1999	5	19	1041	1.00	1.8	mg/l		
21FLHILL136	1999	6	16	1050	0.80	1.9	mg/l		
21FLHILL136	1999	7	21	1115	0.80	2.3	mg/l		
21FLHILL136	1999	8	18	1100	0.50	2.4	mg/l		
21FLHILL136	1999	9	23	1120	1.00	1.5	mg/l		
21FLHILL136	1999	10	13	1130	0.50	2.2	mg/l		
21FLHILL136	1999	11	17	1105	0.50	3.7	mg/l		
21FLHILL136	1999	12	15	1120	0.50	1.6	mg/l		
21FLHILL136	2000	1	19	1105	0.50	2	mg/l		
21FLHILL136	2000	2	16	1147	0.50	1.3	mg/l		
21FLHILL136	2000	3	15	1110	0.30	2.3	mg/l		
21FLHILL136	2000	4	19	1052	0.50	4.8	mg/l		
21FLHILL136	2000	5	16	1043	0.30	4.6	mg/l		
21FLHILL136	2000	6	21	1230	1.00	3.2	mg/l		
21FLHILL136	2000	7	19	1120	0.80	8.5	mg/l		
21FLHILL136	2000	8	16	1138	0.50	4.3	mg/l		
21FLHILL136	2000	9	20	1112	0.80	6	mg/l		
21FLHILL136	2000	10	11	1113	M	3.7	mg/l		
21FLHILL136	2000	11	15	1115	M	6.8	mg/l		
21FLHILL136	2000	12	13	1100	M	3.2	mg/l		
21FLHILL136	2001	2	21	1105	M	2.2	mg/l		
21FLHILL136	2001	3	21	1052	M	3.6	mg/l		
21FLHILL136	2001	5	16	1043	M	5.1	mg/l		
21FLHILL136	2001	6	20	1055	M	4.6	mg/l		
21FLHILL136	2001	7	25	1121	M	4.5	mg/l		

21FLHILL136	2001	8	22	1358	M	6.7	mg/l		
21FLHILL136	2001	9	19	1115	M	4.5	mg/l		
21FLHILL136	2001	10	17	1132	M	3.2	mg/l		
21FLHILL136	2001	11	14	1154	M	2.5	mg/l		
21FLHILL136	2001	12	12	1141	M	1.9	mg/l		
21FLHILL136	2002	1	16	1153	0.00	1	mg/l		
21FLHILL136	2002	2	20	1120	0.66	2	mg/l		
21FLHILL136	2002	3	20	1145	0.66	3	mg/l		
21FLHILL136	2002	4	17	1058	0.66	4	mg/l		
21FLHILL136	2002	5	15	1041	0.33	4	mg/l		
21FLHILL136	2002	6	19	1044	0.98	4	mg/l		
21FLHILL136	2002	7	24	1215	0.98	4	mg/l		
21FLHILL136	2002	8	21	1139	0.98	5	mg/l		
21FLHILL136	2002	9	18	1027	0.66	7	mg/l		
21FLHILL136	2002	10	16	1108	1.31	4	mg/l		
21FLHILL136	2002	11	20	1127	0.33	5	mg/l		
21FLHILL136	2002	12	11	1130	0.66	2	mg/l		
21FLHILL136	2003	1	15	1157	0.10	5	mg/l		
21FLHILL136	2003	2	19	1230	0.10	9	mg/l		
21FLHILL136	2003	3	19	1321	0.30	3	mg/l		
21FLHILL136	2003	4	16	1358	0.40	5	mg/l		
21FLHILL136	2003	5	21	1345	0.20	4	mg/l		
21FLHILL136	2003	6	18	1115	0.20	4	mg/l		
21FLHILL136	2003	7	16	1234	0.30	2	mg/l		
21FLHILL136	2003	8	13	1335	0.30	4	mg/l		
21FLHILL136	2003	9	17	1327	0.10	4	mg/l		
21FLHILL136	2003	10	8	1310	0.40	3	mg/l		
21FLHILL136	2003	11	19	1341	0.30	5	mg/l		
21FLHILL136	2003	12	10	1348	0.00	2	mg/l		
21FLHILL136	2004	1	14	0	0.00	1.2	mg/l		0.2
21FLHILL136	2004	2	18	0	0.10	1.3	mg/l		0.2
21FLHILL136	2004	3	17	0	0.10	1.3	mg/l		0.2
21FLHILL136	2004	4	21	0	0.30	2.4	mg/l		0.2
21FLHILL136	2004	5	19	0	0.40	3.4	mg/l		0.2
21FLHILL136	2004	6	16	0	0.50	4.9	mg/l		0.2
21FLHILL136	2004	7	21	0	0.10	2.2	mg/l		0.2
21FLHILL136	2004	8	18	0	0.30	3.1	mg/l		0.2
21FLHILL136	2004	9	15	0	0.50	2.1	mg/l		0.2
21FLHILL136	2004	10	20	0	0.20	1.6	mg/l		0.2
21FLHILL136	2004	11	17	0	0.20	1.5	mg/l		0.2
21FLHILL136	2004	12	15	0	0.10	0.5	mg/l		0.2
21FLHILL136	2005	1	19	0	0.20	1.7	mg/l		0.2
21FLHILL136	2005	2	16	0	0.10	2.2	mg/l		0.2
21FLHILL136	2005	3	16	0	0.10	1.5	mg/l		0.2
21FLHILL136	2005	4	20	0	0.10	1.6	mg/l		0.2
21FLHILL136	2005	5	18	0	0.10	1.9	mg/l		0.2
21FLHILL136	2005	6	15	0	0.20	1.5	mg/l		0.2
21FLHILL136	2005	7	20	0	0.30	2.2	mg/l		0.2

21FLHILL136	2005	8	17	0	0.30	3.3	mg/l		0.2
21FLHILL136	2005	9	21	0	0.10	2	mg/l		0.2
21FLHILL136	2005	10	19	0	0.30	0.6	mg/l		0.2
21FLHILL136	2005	11	16	0	0.10	1.6	mg/l		0.2
21FLHILL136	2005	12	21	0	0.20	1.8	mg/l		0.2
21FLHILL136	2006	10	18	0	0.20	1.7	mg/l		0.1
21FLHILL136	2006	11	15	0	0.10	2.4	mg/l		0.1
21FLHILL136	2006	12	20	0	0.10	2.7	mg/l		0.1
21FLHILL136	2007	1	17	0	0.10	2.1	mg/l		0.1
21FLHILL136	2007	2	21	0	0.10	2.9	mg/l		0.1
21FLHILL136	2007	3	21	0	0.10	1.7	mg/l		0.1
21FLHILL136	2007	4	18	0	0.10	2.2	mg/l		0.1
21FLHILL136	2007	5	16	0	0.30	1.7	mg/l		0.1
21FLHILL136	2007	6	20	0	0.30	1.7	mg/l		0.1
21FLHILL136	2007	7	25	0	0.40	2.7	mg/l		0.1m
21FLHILL136	2007	8	15	0	0.20	2.4	mg/l	J	0.1m
21FLHILL136	2007	9	19	0	0.35	5	mg/l		0.1m
21FLHILL136	2007	10	17	0	0.25	0.9	mg/l	J	0.1m
21FLHILL136	2007	11	28	0	0.15	2.3	mg/l		0.1m
21FLHILL136	2007	12	12	0	0.15	1.1	mg/l		0.1m
sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLTPA 274048208229581	2006	2	6	1045	0.20	1.6	mg/l	A	0.52
21FLTPA 274048208229581	2006	2	28	1205	0.80	1.4	mg/l	I	0.52
21FLTPA 274048208229581	2006	3	14	1120	0.20	2.6	mg/l		0.52
21FLTPA 274048208229581	2006	4	4	1000	0.20	1.5	mg/l	I	0.52
21FLTPA 274048208229581	2006	4	18	910	0.20	1.7	mg/l	I	0.52
21FLTPA 274048208229581	2006	5	8	1120	0.20	1.8	mg/l	I	0.52
21FLTPA 274048208229581	2006	7	10	955	0.20	5.3	mg/l		0.52
21FLTPA 274048208229581	2006	7	31	1125	0.20	4.3	mg/l		0.52
21FLTPA 274048208229581	2006	8	14	955	0.20	6.8	mg/l		0.52
21FLTPA 274048208229581	2006	9	11	1245	0.20	6.6	mg/l		0.52
21FLTPA 274048208229581	2006	10	2	955	0.20	8	mg/l		0.52
21FLTPA 274048208229581	2006	10	23	1210	0.20	3.2	mg/l		0.2
21FLTPA 274048208229581	2006	11	6	1245	0.20	3.3	mg/l		0.2
21FLTPA 274048208229581	2006	11	27	935	0.20	1.7	mg/l	I	0.2

Dissolved Oxygen:

sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLHILL24010015	1978	1	25	1045	1.00	8.5	mg/l		
21FLHILL24010015	1978	2	22	1100	1.00	9.1	mg/l		
21FLHILL24010015	1978	3	21	1200	1.00	9.9	mg/l		
21FLHILL24010015	1978	4	19	1120	1.00	5.4	mg/l		
21FLHILL24010015	1978	5	17	1030	1.00	7.2	mg/l		
21FLHILL24010015	1978	6	14	1055	1.00	4	mg/l		
21FLHILL24010015	1978	7	12	1125	1.00	5.9	mg/l		
21FLHILL24010015	1978	8	9	1130	1.00	6	mg/l		
21FLHILL24010015	1978	9	6	1135	1.00	5.7	mg/l		
21FLHILL24010015	1978	10	4	1130	0.80	4.5	mg/l		
21FLHILL24010015	1978	11	15	1130	1.30	5.3	mg/l		
21FLHILL24010015	1978	12	18	1130	0.80	7.8	mg/l		
21FLHILL24010015	1979	2	21	1145	1.00	7.8	mg/l		
21FLHILL24010015	1979	3	20	1115	1.00	5.5	mg/l		
21FLHILL24010015	1979	4	24	1130	1.00	5.5	mg/l		
21FLHILL24010015	1979	5	17	1115	1.00	6.8	mg/l		
21FLHILL24010015	1979	6	13	1200	1.00	5.2	mg/l		
21FLHILL24010015	1979	7	11	1055	1.00	3.8	mg/l		
21FLHILL24010015	1979	8	8	1125	0.80	3.7	mg/l		
21FLHILL24010015	1979	9	5	1120	0.80	4.3	mg/l		
21FLHILL24010015	1979	10	3	1100	1.30	8.2	mg/l		
21FLHILL24010015	1979	10	31	1345	0.50	5.9	mg/l		
21FLHILL24010015	1979	12	5	1100	0.50	7	mg/l		
21FLHILL24010015	1980	1	31	1120	0.80	10.1	mg/l		
21FLHILL24010015	1980	2	27	1130	0.80	9	mg/l		
21FLHILL24010015	1980	3	27	1145	1.00	6.2	mg/l		
21FLHILL24010015	1980	4	23	1104	1.00	5	mg/l		
21FLHILL24010015	1980	5	21	1125	1.00	5.3	mg/l		
21FLHILL24010015	1980	6	18	1130	1.00	4.6	mg/l		
21FLHILL24010015	1980	7	16	1110	0.80	3.6	mg/l		
21FLHILL24010015	1980	8	13	1045	1.00	3.7	mg/l		
21FLHILL24010015	1980	9	10	1120	0.80	4.5	mg/l		
21FLHILL24010015	1980	10	15	1130	1.00	5.5	mg/l		
21FLHILL24010015	1980	11	13	1035	1.00	6.3	mg/l		
21FLHILL24010015	1980	12	17	1105	1.50	7.9	mg/l		
21FLHILL24010015	1981	1	28	1120	1.00	10.2	mg/l		
21FLHILL24010015	1981	2	25	1115	1.00	6.9	mg/l		
21FLHILL24010015	1981	3	25	1110	1.00	7.4	mg/l		
21FLHILL24010015	1981	5	6	1110	1.00	3.3	mg/l		
21FLHILL24010015	1981	6	3	1115	1.00	4.2	mg/l		
21FLHILL24010015	1981	7	1	1100	1.50	3.2	mg/l		
21FLHILL24010015	1981	7	29	1115	1.30	2.5	mg/l		
21FLHILL24010015	1981	8	26	1100	1.50	5.1	mg/l		
21FLHILL24010015	1981	9	23	1105	1.00	4.6	mg/l		

21FLHILL24010015	1981	10	15	1100	0.80	6.5	mg/l		
21FLHILL24010015	1981	11	4	1300	1.00	6.5	mg/l		
21FLHILL24010015	1981	12	9	1300	1.00	11	mg/l		
21FLHILL24010015	1982	1	27	1300	0.50	11.2	mg/l		
21FLHILL24010015	1982	2	24	1100	0.80	6	mg/l		
21FLHILL24010015	1982	3	24	1100	1.00	4.3	mg/l		
21FLHILL24010015	1982	4	21	1100	1.00	4.9	mg/l		
21FLHILL24010015	1982	5	19	1130	0.50	5.1	mg/l		
21FLHILL24010015	1982	6	16	1115	1.00	3.5	mg/l		
21FLHILL24010015	1982	7	14	1105	1.00	3.1	mg/l		
21FLHILL24010015	1982	8	11	1130	1.00	3.8	mg/l		
21FLHILL24010015	1982	9	15	1105	1.50	4.6	mg/l		
21FLHILL24010015	1982	10	13	1120	1.80	4.4	mg/l		
21FLHILL24010015	1982	11	17	1115	0.80	5.9	mg/l		
21FLHILL24010015	1983	1	26	1115	0.80	8.1	mg/l		
21FLHILL24010015	1983	3	2	1200	0.80	7.2	mg/l		
21FLHILL24010015	1983	3	30	1230	1.00	5.3	mg/l		
21FLHILL24010015	1983	4	27	1110	0.80	5.7	mg/l		
21FLHILL24010015	1983	5	25	1130	1.20	5.1	mg/l		
21FLHILL24010015	1983	6	22	1105	1.50	4.2	mg/l		
21FLHILL24010015	1983	11	16	1120	1.00	5.9	mg/l		
21FLHILL24010015	1984	1	25	1130	1.00	7.5	mg/l		
21FLHILL24010015	1984	2	22	1120	0.80	5	mg/l		
21FLHILL24010015	1984	3	28	1106	1.00	6.8	mg/l		
21FLHILL24010015	1984	4	25	1115	0.50	6.5	mg/l		
21FLHILL24010015	1984	5	23	1115	1.00	4.5	mg/l		
21FLHILL24010015	1984	6	20	1100	1.00	3.3	mg/l		
21FLHILL24010015	1984	7	18	1130	1.00	5.1	mg/l		
21FLHILL24010015	1984	8	15	1125	1.00	4	mg/l		
21FLHILL24010015	1984	9	12	1050	0.50	2.6	mg/l		
21FLHILL24010015	1984	10	10	1100	1.00	6.7	mg/l		
21FLHILL24010015	1984	11	7	1130	0.80	9.3	mg/l		
21FLHILL24010015	1984	12	12	1130	1.00	9.2	mg/l		
21FLHILL24010015	1985	1	16	1105	0.80	8.3	mg/l		
21FLHILL24010015	1985	2	27	1100	1.00	4.9	mg/l		
21FLHILL24010015	1985	3	27	1140	1.00	7.6	mg/l		
21FLHILL24010015	1985	4	17	1105	0.80	5.7	mg/l		
21FLHILL24010015	1985	5	15	1130	0.80	4.4	mg/l		
21FLHILL24010015	1985	6	26	1200	1.00	7.2	mg/l		
21FLHILL24010015	1985	7	24	1120	1.50	3.3	mg/l		
21FLHILL24010015	1985	8	14	1125	1.50	2.1	mg/l		
21FLHILL24010015	1985	9	11	1100	1.50	3.1	mg/l		
21FLHILL24010015	1985	10	16	1125	0.80	3.1	mg/l		
21FLHILL24010015	1985	11	13	1140	0.70	5.1	mg/l		
21FLHILL24010015	1985	12	18	1140	0.80	8.1	mg/l		
21FLHILL24010015	1986	1	29	1115	1.00	7.7	mg/l		
21FLHILL24010015	1986	2	26	1120	0.80	6.1	mg/l		
21FLHILL24010015	1986	3	26	1143	1.00	7.8	mg/l		
21FLHILL24010015	1986	4	23	1057	0.80	7.2	mg/l		

21FLHILL24010015	1986	5	21	1138	1.30	4.1	mg/l		
21FLHILL24010015	1986	6	18	1149	1.80	2.9	mg/l		
21FLHILL24010015	1986	7	23	1136	1.50	3.1	mg/l		
21FLHILL24010015	1986	8	27	1023	0.80	3	mg/l		
21FLHILL24010015	1986	9	24	1114	1.30	3	mg/l		
21FLHILL24010015	1986	10	15	1135	1.00	3.7	mg/l		
21FLHILL24010015	1986	11	5	1115	0.50	4.7	mg/l		
21FLHILL24010015	1986	12	17	1135	0.50	6.7	mg/l		
21FLHILL24010015	1987	1	28	1105	0.80	8	mg/l		
21FLHILL24010015	1987	2	25	1105	0.50	9.5	mg/l		
21FLHILL24010015	1987	3	25	1225	1.30	4.8	mg/l		
21FLHILL24010015	1987	5	27	1105	1.30	4.8	mg/l		
21FLHILL24010015	1987	6	24	1116	1.30	3.9	mg/l		
21FLHILL24010015	1987	7	29	1204	0.50	5.3	mg/l		
21FLHILL24010015	1987	8	26	1058	1.00	4	mg/l		
21FLHILL24010015	1987	9	23	1131	1.00	4	mg/l		
21FLHILL24010015	1988	1	27	1226	0.50	9	mg/l		
21FLHILL24010015	1988	2	24	1110	1.00	8.6	mg/l		
21FLHILL24010015	1988	3	16	1246	1.00	11.1	mg/l		
21FLHILL24010015	1988	4	27	1220	1.00	4.7	mg/l		
21FLHILL24010015	1988	5	25	1250	1.00	7.6	mg/l		
21FLHILL24010015	1988	6	22	1220	1.00	4.6	mg/l		
21FLHILL24010015	1988	7	26	1236	1.00	2.1	mg/l		
21FLHILL24010015	1988	8	24	1115	1.00	1.6	mg/l		
21FLHILL24010015	1988	9	28	1220	1.00	6.6	mg/l		
21FLHILL24010015	1988	10	26	1115	1.00	4.9	mg/l		
21FLHILL24010015	1988	12	28	1331	1.00	8.9	mg/l		
21FLHILL24010015	1989	1	25	1226	1.00	10.4	mg/l		
21FLHILL24010015	1989	2	22	1105	1.00	4.3	mg/l		
21FLHILL24010015	1989	3	22	1136	1.00	4.9	mg/l		
21FLHILL24010015	1989	4	26	1150	1.00	2.8	mg/l		
21FLHILL24010015	1989	5	31	1200	1.00	4.7	mg/l		
21FLHILL24010015	1989	6	28	1135	1.00	4.6	mg/l		
21FLHILL24010015	1989	7	26	1126	1.00	3.5	mg/l		
21FLHILL24010015	1989	8	30	1117	1.00	4.1	mg/l		
21FLHILL24010015	1989	9	27	1039	1.00	0.9	mg/l		
21FLHILL24010015	1989	10	25	1040	1.00	8.3	mg/l		
21FLHILL24010015	1989	11	29	1110	1.00	6.8	mg/l		
21FLHILL24010015	1989	12	20	1048	1.00	5	mg/l		
21FLHILL24010015	1990	1	31	1112	1.00	4.3	mg/l		
21FLHILL24010015	1990	2	28	1110	1.00	7.3	mg/l		
21FLHILL24010015	1990	5	30	1115	1.00	3.1	mg/l		
21FLHILL24010015	1990	6	27	1109	1.00	5	mg/l		
21FLHILL24010015	1990	8	1	1108	1.00	3.7	mg/l		
21FLHILL24010015	1990	8	29	1130	1.00	4.2	mg/l		
21FLHILL24010015	1990	9	26	1100	1.00	3.2	mg/l		
21FLHILL24010015	1990	10	24	1038	1.00	3.8	mg/l		
21FLHILL24010015	1990	11	28	1040	1.00	4.6	mg/l		
21FLHILL24010015	1990	12	19	1040	1.00	5.6	mg/l		

21FLHILL24010015	1991	1	23	1040	1.00	9.8	mg/l		
21FLHILL24010015	1991	2	26	1052	1.00	4.3	mg/l		
21FLHILL24010015	1991	3	27	1025	0.75	6.7	mg/l		
21FLHILL24010015	1991	3	27	1025	1.00	6.7	mg/l		
21FLHILL24010015	1991	4	24	1030	0.75	4.2	mg/l		
21FLHILL24010015	1991	4	24	1030	1.00	4.2	mg/l		
21FLHILL24010015	1991	5	22	1020	1.00	4.7	mg/l		
21FLHILL24010015	1991	6	26	1107	1.00	4.5	mg/l		
21FLHILL24010015	1991	6	26	1107	1.50	4.5	mg/l		
21FLHILL24010015	1991	7	31	1045	1.00	4.1	mg/l		
21FLHILL24010015	1991	7	31	1045	1.25	4.1	mg/l		
21FLHILL24010015	1991	8	28	1050	0.75	3.1	mg/l		
21FLHILL24010015	1991	8	28	1050	1.00	3.1	mg/l		
21FLHILL24010015	1991	9	25	1030	1.00	3.4	mg/l		
21FLHILL24010015	1991	10	23	1050	1.00	4.6	mg/l		
21FLHILL24010015	1991	11	20	1020	1.00	5.7	mg/l		
21FLHILL24010015	1991	12	11	1137	1.00	5.4	mg/l		
21FLHILL24010015	1992	1	29	1040	1.00	6.8	mg/l		
21FLHILL24010015	1992	2	26	1055	0.75	7.3	mg/l		
21FLHILL24010015	1992	2	26	1055	0.80	7.3	mg/l		
21FLHILL24010015	1992	3	25	1025	0.50	7.5	mg/l		
21FLHILL24010015	1992	4	22	1045	1.00	2.7	mg/l		
21FLHILL24010015	1992	5	27	1100	1.00	4.8	mg/l		
21FLHILL24010015	1992	6	24	1045	1.50	5.8	mg/l		
21FLHILL24010015	1992	7	29	1040	1.00	3.6	mg/l		
21FLHILL24010015	1992	8	26	1100	1.00	3.5	mg/l		
21FLHILL24010015	1992	9	23	1120	1.50	4	mg/l		
21FLHILL24010015	1992	10	28	1045	0.50	4.9	mg/l		
21FLHILL24010015	1992	11	18	1055	0.75	6.8	mg/l		
21FLHILL24010015	1992	11	18	1055	0.80	6.8	mg/l		
21FLHILL24010015	1992	12	16	1050	0.75	7.3	mg/l		
21FLHILL24010015	1992	12	16	1050	0.80	7.3	mg/l		
21FLHILL24010015	1993	1	20	1045	1.00	6.2	mg/l		
21FLHILL24010015	1993	2	17	1104	1.00	4.9	mg/l		
21FLHILL24010015	1993	3	17	1045	0.30	6.1	mg/l		
21FLHILL24010015	1993	4	21	1030	1.00	5.9	mg/l		
21FLHILL24010015	1993	5	19	1027	1.00	3.6	mg/l		
21FLHILL24010015	1993	6	16	1052	0.50	3.6	mg/l		
21FLHILL24010015	1993	7	21	1025	0.50	3.2	mg/l		
21FLHILL24010015	1993	8	18	1040	0.50	4.5	mg/l		
21FLHILL24010015	1993	9	15	1040	0.50	4	mg/l		
21FLHILL24010015	1993	9	15	1040	1.00	4	mg/l		
21FLHILL93MTB54A	1993	9	20	1104	0.10	4.42	mg/l		
21FLHILL93MTB54B	1993	9	20	1104	0.10	4.42	mg/l		
21FLHILL93MTB54A	1993	9	20	1104	0.50	4.47	mg/l		
21FLHILL93MTB54B	1993	9	20	1104	0.50	4.47	mg/l		
21FLHILL24010015	1993	10	20	1040	0.50	1.9	mg/l		
21FLHILL24010015	1993	11	17	1042	0.25	3.8	mg/l		
21FLHILL24010015	1993	11	17	1042	0.50	3.8	mg/l		

21FLHILL24010015	1993	12	15	1030	0.50	7.1	mg/l		
21FLHILL24010015	1994	1	26	1040	0.30	5.5	mg/l		
21FLHILL24010015	1994	2	23	1105	0.50	6.2	mg/l		
21FLHILL24010015	1994	3	23	1100	0.30	3.9	mg/l		
21FLHILL24010015	1994	4	27	1035	1.00	3.6	mg/l		
21FLHILL24010015	1994	5	25	1124	1.00	5	mg/l		
21FLHILL24010015	1994	6	22	1110	1.00	4.8	mg/l		
21FLHILL24010015	1994	6	22	1110	1.25	4.8	mg/l		
21FLHILL24010015	1994	7	27	1115	0.75	4.9	mg/l		
21FLHILL24010015	1994	7	27	1115	0.80	4.9	mg/l		
21FLHILL24010015	1994	8	24	1040	1.00	3.3	mg/l		
21FLHILL94MTB54	1994	9	14	1226	1.00	7.3	mg/l		
21FLHILL94MTB54	1994	9	14	1226	0.10	7.6	mg/l		
21FLHILL24010015	1994	9	28	1040	1.00	5.8	mg/l		
21FLHILL24010015	1994	10	26	1045	0.50	1.4	mg/l		
21FLHILL24010015	1995	1	25	1115	0.50	8.2	mg/l		
21FLHILL24010015	1995	1	25	1115	1.00	8.2	mg/l		
21FLHILL24010015	1995	2	22	1100	0.50	8.9	mg/l		
21FLHILL24010015	1995	2	22	1100	1.00	8.9	mg/l		
21FLHILL24010015	1995	3	22	1049	0.50	4.7	mg/l		
21FLHILL24010015	1995	3	22	1049	1.00	4.7	mg/l		
21FLHILL24010015	1995	4	26	1127	1.00	4.3	mg/l		
21FLHILL24010015	1995	5	24	1102	0.50	5.5	mg/l		
21FLHILL24010015	1995	5	24	1102	1.00	5.5	mg/l		
21FLHILL24010015	1995	6	28	1035	0.50	8.1	mg/l		
21FLHILL24010015	1995	6	28	1035	1.00	8.1	mg/l		
21FLHILL24010015	1995	7	26	1020	1.00	1.9	mg/l		
21FLHILL24010015	1995	8	23	1038	1.00	5.6	mg/l		
21FLHILL95MTB30	1995	9	19	945	0.50	2.6	mg/l		
21FLHILL95MTB30	1995	9	19	945	0.10	3.01	mg/l		
21FLHILL95MTB34	1995	9	19	1100	0.10	3.11	mg/l		
21FLHILL95MTB34	1995	9	19	1100	0.50	3.14	mg/l		
21FLHILL24010015	1995	9	27	1105	1.00	26.6	mg/l		
21FLHILL24010015	1995	10	25	1120	1.00	3.9	mg/l		
21FLHILL24010015	1995	11	29	1127	1.00	5.5	mg/l		
21FLHILL24010015	1995	12	13	1145	1.00	8.3	mg/l		
21FLHILL24010015	1996	1	24	1051	1.00	4.2	mg/l		
21FLHILL24010015	1996	2	21	1130	0.50	11.3	mg/l		
21FLHILL24010015	1996	3	20	1130	0.50	16	mg/l		
21FLHILL24010015	1996	4	17	1140	1.00	9.3	mg/l		
21FLHILL24010015	1996	5	15	1100	0.50	5.5	mg/l		
21FLHILL24010015	1996	6	19	1100	0.50	5.3	mg/l		
21FLHILL24010015	1996	7	17	1110	0.50	6.1	mg/l		
21FLHILL24010015	1996	8	21	1044	1.00	4.5	mg/l		
21FLHILL24010015	1996	9	25	1128	1.00	7.2	mg/l		
21FLHILL24010015	1996	10	16	1100	0.50	5	mg/l		
21FLHILL24010015	1996	11	20	1105	1.00	4.5	mg/l		
21FLHILL24010015	1996	12	11	1140	0.30	8.2	mg/l		
21FLHILL24010015	1997	1	22	1115	0.50	9.4	mg/l		

21FLHILL24010015	1997	2	19	1123	0.50	8.8	mg/l		
21FLHILL24010015	1997	3	19	1122	0.50	5.9	mg/l		
21FLHILL24010015	1997	4	16	1115	0.30	6.7	mg/l		
21FLHILL24010015	1997	5	21	1140	0.80	4.9	mg/l		
21FLHILL24010015	1997	6	18	1135	1.00	6.1	mg/l		
21FLHILL24010015	1997	7	23	1058	0.50	4.5	mg/l		
21FLHILL24010015	1997	8	20	1100	0.50	4	mg/l		
21FLHILL24010015	1997	9	17	1102	0.50	3.5	mg/l		
21FLHILL24010015	1997	10	15	1104	0.50	4.8	mg/l		
21FLHILL24010015	1997	11	19	1100	0.50	9	mg/l		
21FLHILL24010015	1997	12	10	1015	0.50	7.3	mg/l		
21FLHILL24010015	1998	1	21	1034	0.50	6.7	mg/l		
21FLHILL24010015	1998	2	18	1050	0.80	7.8	mg/l		
21FLHILL24010015	1998	3	18	1050	0.80	5.8	mg/l		
21FLHILL24010015	1998	4	22	1030	0.50	6.7	mg/l		
21FLHILL24010015	1998	5	20	1030	0.50	3.8	mg/l		
21FLHILL24010015	1998	6	17	1028	0.80	3.1	mg/l		
21FLHILL24010015	1998	7	22	1024	1.00	4.3	mg/l		
21FLHILL24010015	1998	8	26	1055	0.80	3.9	mg/l		
21FLHILL24010015	1998	9	16	1030	1.00	3.8	mg/l		
21FLHILL24010015	1998	10	21	1010	0.50	2.7	mg/l		
21FLHILL24010015	1998	11	18	1105	0.50	4.8	mg/l		
21FLHILL24010015	1998	12	9	1025	0.50	4	mg/l		
21FLHILL136	1999	1	20	1130	0.30	5	mg/l		
21FLHILL136	1999	2	17	1000	0.50	5.6	mg/l		
21FLHILL136	1999	3	17	1034	0.30	6.8	mg/l		
21FLHILL136	1999	4	21	1120	0.50	4.9	mg/l		
21FLHILL136	1999	5	19	1041	1.00	3.5	mg/l		
21FLHILL136	1999	6	16	1050	0.80	3.5	mg/l		
21FLHILL136	1999	7	21	1115	0.80	3.7	mg/l		
21FLHILL136	1999	8	18	1100	0.50	1.6	mg/l		
21FLHILL136	1999	9	23	1120	1.00	4.2	mg/l		
21FLHILL136	1999	10	13	1130	0.50	3.7	mg/l		
21FLHILL136	1999	11	17	1105	0.50	5.2	mg/l		
21FLHILL136	1999	12	15	1120	0.50	4.7	mg/l		
21FLHILL136	2000	1	19	1105	0.50	7.3	mg/l		
21FLHILL136	2000	2	16	1147	0.50	6.6	mg/l		
21FLHILL136	2000	3	15	1110	0.30	6.7	mg/l		
21FLHILL136	2000	4	19	1052	0.50	5.6	mg/l		
21FLHILL136	2000	5	16	1043	0.30	5.6	mg/l		
21FLHILL136	2000	6	21	1230	1.00	5.7	mg/l		
21FLHILL136	2000	7	19	1120	0.80	13.6	mg/l		
21FLHILL136	2000	8	16	1138	0.50	5	mg/l		
21FLHILL136	2000	9	20	1112	0.80	4.8	mg/l		
21FLHILL136	2000	10	11	1113	M	8.4	mg/l		
21FLHILL136	2000	11	15	1115	M	7.2	mg/l		
21FLHILL136	2000	12	13	1100	M	5.8	mg/l		
21FLHILL136	2001	2	21	1105	M	4.4	mg/l		
21FLHILL136	2001	3	21	1052	M	7.6	mg/l		

21FLHILL136	2001	4	18	1320	M	9.3	mg/l		
21FLHILL136	2001	5	16	1043	M	6.5	mg/l		
21FLHILL136	2001	6	20	1055	M	4	mg/l		
21FLHILL136	2001	7	25	1121	M	3.8	mg/l		
21FLHILL136	2001	8	22	1358	M	6.5	mg/l		
21FLHILL136	2001	9	19	1115	M	3.8	mg/l		
21FLHILL136	2001	10	17	1132	M	8.9	mg/l		
21FLHILL136	2001	11	14	1154	M	5.8	mg/l		
21FLHILL136	2001	12	12	1141	M	12.9	mg/l		
21FLHILL136	2002	1	16	1153	0.00	12.9	mg/l		
21FLHILL136	2002	2	20	1120	0.66	6.8	mg/l		
21FLHILL136	2002	3	20	1145	0.66	5.2	mg/l		
21FLHILL136	2002	4	17	1058	0.66	4.7	mg/l		
21FLHILL136	2002	5	15	1041	0.33	4.7	mg/l		
21FLHILL136	2002	6	19	1044	0.98	4.1	mg/l		
21FLHILL136	2002	7	24	1215	0.98	4.1	mg/l		
21FLHILL136	2002	8	21	1139	0.98	4.5	mg/l		
21FLHILL136	2002	9	18	1027	0.66	3	mg/l		
21FLHILL136	2002	10	16	1108	1.31	2.8	mg/l		
21FLHILL136	2002	11	20	1127	0.33	15	mg/l		
21FLHILL136	2002	12	11	1130	0.66	7.7	mg/l		
21FLHILL136	2003	1	15	1157	0.10	14	mg/l		
21FLHILL136	2003	2	19	1230	0.10	9.9	mg/l		
21FLHILL136	2003	3	19	1321	0.30	4.4	mg/l		
21FLHILL136	2003	4	16	1358	0.40	5.5	mg/l		
21FLHILL136	2003	5	21	1345	0.20	6	mg/l		
21FLHILL136	2003	6	18	1115	0.20	3.6	mg/l		
21FLHILL136	2003	7	16	1234	0.30	5.6	mg/l		
21FLHILL136	2003	8	13	1335	0.30	5.2	mg/l		
21FLHILL136	2003	9	17	1327	0.10	5.7	mg/l		
21FLHILL136	2003	10	8	1310	0.40	5.8	mg/l		
21FLHILL136	2003	11	19	1341	0.30	4.27	mg/l		
21FLHILL136	2003	12	10	1348	0.00	8.02	mg/l		
21FLHILL136	2004	1	14	0	0.00	7.6	mg/l		
21FLHILL136	2004	2	18	0	0.10	12.5	mg/l		
21FLHILL136	2004	3	17	0	0.10	7.99	mg/l		
21FLHILL136	2004	4	21	0	0.30	6.52	mg/l		
21FLHILL136	2004	5	19	0	0.40	6.09	mg/l		
21FLHILL136	2004	6	16	0	0.50	5.09	mg/l		
21FLHILL136	2004	7	21	0	0.10	7.34	mg/l		
21FLHILL136	2004	8	18	0	0.30	30.39	mg/l		
21FLHILL136	2004	9	15	0	0.50	4.42	mg/l		
21FLHILL136	2004	10	20	0	0.20	3.21	mg/l		
21FLHILL136	2004	11	17	0	0.20	5.77	mg/l		
21FLHILL136	2004	12	15	0	0.10	8.86	mg/l		
21FLHILL136	2005	1	19	0	0.20	9.41	mg/l		
21FLHILL136	2005	2	16	0	0.10	4.33	mg/l		
21FLHILL136	2005	3	16	0	0.10	3.67	mg/l		
21FLHILL136	2005	4	20	0	0.10	4.75	mg/l		

21FLHILL136	2005	5	18	0	0.10	1.88	mg/l		
21FLHILL136	2005	6	15	0	0.20	1.94	mg/l		
21FLHILL136	2005	7	20	0	0.30	1.51	mg/l		
21FLHILL136	2005	8	17	0	0.30	1.86	mg/l		
21FLHILL136	2005	9	21	0	0.10	3.1	mg/l		
21FLHILL136	2005	10	19	0	0.30	2.47	mg/l		
21FLHILL136	2005	11	16	0	0.10	2.98	mg/l		
21FLHILL136	2005	12	21	0	0.20	7.47	mg/l		
21FLHILL136	2006	10	18	856	0.20	3.04	mg/l		
21FLHILL136	2006	11	15	827	0.10	3.93	mg/l		
21FLHILL136	2006	12	20	919	0.10	7.26	mg/l		
21FLHILL136	2007	1	17	834	0.10	4.55	mg/l		
21FLHILL136	2007	2	21	908	0.10	6.56	mg/l		
21FLHILL136	2007	3	21	906	0.10	5.23	mg/l		
21FLHILL136	2007	4	18	911	0.10	5.83	mg/l		
21FLHILL136	2007	5	16	931	0.30	3.08	mg/l		
21FLHILL136	2007	6	20	908	0.30	4.35	mg/l		
21FLHILL136	2007	7	25	914	0.40	2.12	mg/l		m
21FLHILL136	2007	8	15	857	0.10	0.5	mg/l		m
21FLHILL136	2007	9	19	845	0.40	2.6	mg/l		m
21FLHILL136	2007	10	17	848	0.30	2.58	mg/l		m
21FLHILL136	2007	11	28	857	0.10	3.91	mg/l		m
21FLHILL136	2007	12	12	900	0.10	3.59	mg/l		m

sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLA 24010015	1983	1	10	1030	.	7.6	mg/l		
21FLGFWFTBM960250	1996	3	15	1220	0.50	8.2	mg/l		
21FLGFWFTBA960005	1996	4	22	1314	1.00	9.6	mg/l		
21FLGFWFTBM960480	1996	5	23	800	0.40	1.3	mg/l		
21FLGFWFTBA960052	1996	6	17	750	0.70	1.8	mg/l		
21FLGFWFTBA960061	1996	7	9	910	1.00	1.6	mg/l		
21FLGFWFTBM960746	1996	8	19	823	0.50	1.9	mg/l		
21FLGFWFTBM960747	1996	8	19	850	0.50	1.9	mg/l		
21FLGFWFTBA960112	1996	9	10	1252	0.90	7.2	mg/l		
21FLGFWFTBA960126	1996	10	8	1347	0.90	6.3	mg/l		
21FLGFWFTBM960978	1996	10	22	1120	0.90	5.6	mg/l		
21FLGFWFTBM961171	1996	12	17	1408	0.40	8.6	mg/l		
21FLGFWFTBA970328	1997	2	3	1420	1.20	9	mg/l		
21FLGFWFTBM970219	1997	3	7	1536	0.50	9.7	mg/l		
21FLGFWFTBM970220	1997	3	7	1545	0.50	9.7	mg/l		
21FLGFWFTBA970045	1997	3	13	853	1.50	5	mg/l		
21FLGFWFTBA970046	1997	3	13	935	1.10	5.2	mg/l		
21FLGFWFTBA970047	1997	3	13	1040	0.80	5.3	mg/l		
21FLGFWFTBA970404	1997	5	6	1415	1.80	8.4	mg/l		
21FLGFWFTBM970510	1997	6	11	743	0.50	7.5	mg/l		
21FLGFWFTBA970160	1997	8	15	1220	1.00	5.2	mg/l		
21FLGFWFTBM970788	1997	8	21	1135	0.30	9	mg/l		
21FLGFWFTBA970161	1997	9	10	935	0.80	4.4	mg/l		

21FLGFWFTBM970999	1997	11	12	1100	0.80	6.1	mg/l		
21FLGFWFTBM971107	1997	12	5	827	0.70	3.7	mg/l		
21FLGFWFTBM980038	1998	1	16	845	1.50	6.2	mg/l		
21FLGFWFTBM980246	1998	3	23	1120	0.80	8	mg/l		
21FLGFWFTBM980436	1998	6	5	1222	1.30	4.8	mg/l		
21FLGFWFTBM980515	1998	6	22	1040	0.70	3.2	mg/l		
21FLGFWFTBM980784	1998	9	15	1000	0.80	3.2	mg/l		
21FLGFWFTBM980783	1998	9	15	930	1.20	3.3	mg/l		
21FLGFWFTBM990018	1999	1	8	830	0.90	8.7	mg/l		
21FLGFWFTBM990230	1999	3	23	1330	0.60	7	mg/l		
21FLGFWFTBM990626	1999	7	6	956	0.80	3.1	mg/l		
21FLGFWFTBM990772	1999	8	11	1551	0.60	5.6	mg/l		
21FLGFWFTBM991043	1999	11	5	1239	0.70	6.5	mg/l		
21FLGFWFTBM991042	1999	11	5	1153	0.70	8.1	mg/l		
21FLGFWFTBM991151	1999	12	2	1205	0.40	6.4	mg/l		
21FLGFWFTBM991150	1999	12	2	1100	0.90	8.9	mg/l		
21FLGFWFTBM000046	2000	1	10	1350	0.60	13.1	mg/l		
21FLGFWFTBM000171	2000	2	16	1354	0.80	13	mg/l		
21FLGFWFTBM000230	2000	3	9	920	0.40	6.1	mg/l		
21FLGFWFTBM000420	2000	4	5	1115	1.10	8.3	mg/l		
21FLGFWFTBM000525	2000	5	11	755	0.80	3.4	mg/l		
21FLGFWFTBM000716	2000	6	19	1318	1.00	8	mg/l		
21FLGFWFTBM001296	2000	12	12	1328	0.50	5.4	mg/l		
21FLHILL01MTB6495	2001	8	27	931	0.90	2.14	mg/l		
21FLHILL01MTB6495	2001	8	27	931	0.10	2.19	mg/l		
sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLTPA 274048208229581	2006	2	6	1045	0.20	8.92	mg/l		
21FLTPA 274048208229581	2006	2	28	1205	0.20	3.48	mg/l		
21FLTPA 274048208229581	2006	3	14	1120	0.20	5.89	mg/l		
21FLTPA 274048208229581	2006	4	4	1000	0.20	5.08	mg/l		
21FLTPA 274048208229581	2006	4	18	910	0.20	5.16	mg/l		
21FLTPA 274048208229581	2006	5	8	1120	0.20	5.05	mg/l		
21FLTPA 274048208229581	2006	7	10	955	0.20	3.97	mg/l		
21FLTPA 274048208229581	2006	7	31	1125	0.20	3.55	mg/l		
21FLTPA 274048208229581	2006	8	14	955	0.20	4.93	mg/l		
21FLTPA 274048208229581	2006	9	11	1245	0.20	7.2	mg/l		
21FLTPA 274048208229581	2006	10	2	955	0.20	3.87	mg/l		
21FLTPA 274048208229581	2006	10	23	1210	0.20	6.85	mg/l		
21FLTPA 274048208229581	2006	11	6	1245	0.20	10.08	mg/l		
21FLTPA 274048208229581	2006	11	27	935	0.20	5.53	mg/l		

Total Nitrogen:

sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLHILL24010015	1978	1	25	1045	1.00	0.21	mg/l	+	
21FLHILL24010015	1978	2	22	1100	1.00	1.84	mg/l	+	
21FLHILL24010015	1978	4	19	1120	1.00	0.14	mg/l	+	
21FLHILL24010015	1978	5	17	1030	1.00	0.57	mg/l	+	
21FLHILL24010015	1978	6	14	1055	1.00	0.26	mg/l	+	
21FLHILL24010015	1978	7	12	1125	1.00	0.16	mg/l	+	
21FLHILL24010015	1978	8	9	1130	1.00	0.17	mg/l	+	
21FLHILL24010015	1978	9	6	1135	1.00	0.19	mg/l	+	
21FLHILL24010015	1978	10	4	1130	0.80	0.19	mg/l	+	
21FLHILL24010015	1978	11	15	1130	1.30	2.03	mg/l	+	
21FLHILL24010015	1978	12	18	1130	0.80	0.15	mg/l	+	
21FLHILL24010015	1979	1	24	1115	1.30	0.23	mg/l	+	
21FLHILL24010015	1979	2	21	1145	1.00	0.19	mg/l	+	
21FLHILL24010015	1979	3	20	1115	1.00	0.28	mg/l	+	
21FLHILL24010015	1979	4	24	1130	1.00	0.1	mg/l	+	
21FLHILL24010015	1979	5	17	1115	1.00	0.35	mg/l	+	
21FLHILL24010015	1979	6	13	1200	1.00	0.21	mg/l	+	
21FLHILL24010015	1979	7	11	1055	1.00	0.31	mg/l	+	
21FLHILL24010015	1979	8	8	1125	0.80	0.17	mg/l	+	
21FLHILL24010015	1979	9	5	1120	0.80	0.52	mg/l	+	
21FLHILL24010015	1979	10	3	1100	1.30	0.13	mg/l	+	
21FLHILL24010015	1979	10	31	1345	0.50	0.3	mg/l	+	
21FLHILL24010015	1979	12	5	1100	0.50	0.17	mg/l	+	
21FLHILL24010015	1980	1	31	1120	0.80	0.1	mg/l	+	
21FLHILL24010015	1980	2	27	1130	0.80	0.21	mg/l	+	
21FLHILL24010015	1980	3	27	1145	1.00	5.02	mg/l	+	
21FLHILL24010015	1980	4	23	1104	1.00	1.19	mg/l	+	
21FLHILL24010015	1980	5	21	1125	1.00	1.68	mg/l	+	
21FLHILL24010015	1980	6	18	1130	1.00	1.27	mg/l	+	
21FLHILL24010015	1980	7	16	1110	0.80	1.21	mg/l	+	
21FLHILL24010015	1980	8	13	1045	1.00	2.15	mg/l	+	
21FLHILL24010015	1980	9	10	1120	0.80	1.14	mg/l	+	
21FLHILL24010015	1980	10	15	1130	1.00	1.68	mg/l	+	
21FLHILL24010015	1980	11	13	1035	1.00	0.8	mg/l	+	
21FLHILL24010015	1980	12	17	1105	1.50	1.25	mg/l	+	
21FLHILL24010015	1981	1	28	1120	1.00	1.48	mg/l		
21FLHILL24010015	1981	2	25	1115	1.00	0.65	mg/l		
21FLHILL24010015	1981	3	25	1110	1.00	0.73	mg/l		
21FLHILL24010015	1981	5	6	1110	1.00	1.37	mg/l		
21FLHILL24010015	1981	6	3	1115	1.00	1.06	mg/l		
21FLHILL24010015	1981	7	1	1100	1.50	1.02	mg/l		
21FLHILL24010015	1981	7	29	1115	1.30	1.96	mg/l		
21FLHILL24010015	1981	8	26	1100	1.50	1.16	mg/l		
21FLHILL24010015	1981	9	23	1105	1.00	1.08	mg/l		

21FLHILL24010015	1981	10	15	1100	0.80	0.93	mg/l		
21FLHILL24010015	1981	11	4	1300	1.00	9.06	mg/l		
21FLHILL24010015	1981	12	9	1300	1.00	1.3	mg/l		
21FLHILL24010015	1982	1	27	1300	0.50	0.92	mg/l		
21FLHILL24010015	1982	2	24	1100	0.80	1.14	mg/l		
21FLHILL24010015	1982	3	24	1100	1.00	1.21	mg/l		
21FLHILL24010015	1982	4	21	1100	1.00	0.99	mg/l		
21FLHILL24010015	1982	5	19	1130	0.50	0.96	mg/l		
21FLHILL24010015	1982	6	16	1115	1.00	1.58	mg/l		
21FLHILL24010015	1982	7	14	1105	1.00	1.43	mg/l		
21FLHILL24010015	1982	8	11	1130	1.00	1.3	mg/l		
21FLHILL24010015	1982	9	15	1105	1.50	1.22	mg/l		
21FLHILL24010015	1982	10	13	1120	1.80	1.39	mg/l		
21FLHILL24010015	1982	11	17	1115	0.80	1.14	mg/l		
21FLHILL24010015	1983	1	26	1115	0.80	1.81	mg/l		
21FLHILL24010015	1983	3	2	1200	0.80	2.22	mg/l		
21FLHILL24010015	1983	3	30	1230	1.00	1.3	mg/l		
21FLHILL24010015	1983	5	25	1130	1.20	0.89	mg/l		
21FLHILL24010015	1983	6	22	1105	1.50	1.14	mg/l		
21FLHILL24010015	1983	7	20	1210	1.50	1.31	mg/l		
21FLHILL24010015	1983	8	17	1300	1.50	1.37	mg/l		
21FLHILL24010015	1983	9	14	1130	1.00	1.7	mg/l		
21FLHILL24010015	1983	10	12	1130	1.30	0.84	mg/l		
21FLHILL24010015	1983	11	16	1120	1.00	1.95	mg/l		
21FLHILL24010015	1983	12	14	1115	1.00	1.12	mg/l		
21FLHILL24010015	1984	1	25	1130	1.00	2.35	mg/l		
21FLHILL24010015	1984	2	22	1120	0.80	1.34	mg/l		
21FLHILL24010015	1984	3	28	1106	1.00	2.18	mg/l		
21FLHILL24010015	1984	4	25	1115	0.50	1.65	mg/l		
21FLHILL24010015	1984	5	23	1115	1.00	1.68	mg/l		
21FLHILL24010015	1984	6	20	1100	1.00	1.34	mg/l		
21FLHILL24010015	1984	7	18	1130	1.00	1.57	mg/l	C	
21FLHILL24010015	1984	8	15	1125	1.00	0.98	mg/l		
21FLHILL24010015	1984	9	12	1050	0.50	1.41	mg/l		
21FLHILL24010015	1984	10	10	1100	1.00	1.29	mg/l		
21FLHILL24010015	1984	11	7	1130	0.80	0.83	mg/l		
21FLHILL24010015	1984	12	12	1130	1.00	0.7	mg/l		
21FLHILL24010015	1985	1	16	1105	0.80	0.84	mg/l		
21FLHILL24010015	1985	2	27	1100	1.00	0.39	mg/l		
21FLHILL24010015	1985	3	27	1140	1.00	0.76	mg/l		
21FLHILL24010015	1985	4	17	1105	0.80	0.82	mg/l		
21FLHILL24010015	1985	5	15	1130	0.80	1.29	mg/l		
21FLHILL24010015	1985	6	26	1200	1.00	1.27	mg/l		
21FLHILL24010015	1985	7	24	1120	1.50	1.26	mg/l		
21FLHILL24010015	1985	8	14	1125	1.50	1.06	mg/l		
21FLHILL24010015	1985	9	11	1100	1.50	1.22	mg/l		
21FLHILL24010015	1985	10	16	1125	0.80	0.92	mg/l		
21FLHILL24010015	1985	11	13	1140	0.70	1.27	mg/l		
21FLHILL24010015	1985	12	18	1140	0.80	0.8	mg/l		

21FLHILL24010015	1986	1	29	1115	1.00	0.92	mg/l	C	
21FLHILL24010015	1986	2	26	1120	0.80	0.55	mg/l	C	
21FLHILL24010015	1986	3	26	1143	1.00	0.84	mg/l	C	
21FLHILL24010015	1986	4	23	1057	0.80	0.6	mg/l	C	
21FLHILL24010015	1986	5	21	1138	1.30	0.63	mg/l	C	
21FLHILL24010015	1986	6	18	1149	1.80	0.58	mg/l	C	
21FLHILL24010015	1986	7	23	1136	1.50	0.83	mg/l	C	
21FLHILL24010015	1986	8	27	1023	0.80	1.06	mg/l	C	
21FLHILL24010015	1986	9	24	1114	1.30	0.66	mg/l	C	
21FLHILL24010015	1986	10	15	1135	1.00	0.74	mg/l	C	
21FLHILL24010015	1986	11	5	1115	0.50	0.7	mg/l	C	
21FLHILL24010015	1986	12	17	1135	0.50	1.19	mg/l	C	
21FLHILL24010015	1987	1	28	1105	0.80	0.46	mg/l	C	
21FLHILL24010015	1987	2	25	1105	0.50	0.89	mg/l	C	
21FLHILL24010015	1987	3	25	1225	1.30	1.12	mg/l	C	
21FLHILL24010015	1987	4	22	1030	1.00	2.1	mg/l	C	
21FLHILL24010015	1987	5	27	1105	1.30	2.3	mg/l	C	
21FLHILL24010015	1987	6	24	1116	1.30	1.78	mg/l	C	
21FLHILL24010015	1987	7	29	1204	0.50	1.84	mg/l	C	
21FLHILL24010015	1987	8	26	1058	1.00	2.36	mg/l	C	
21FLHILL24010015	1987	9	23	1131	1.00	2.08	mg/l	C	
21FLHILL24010015	1987	10	21	1210	1.00	1.69	mg/l	C	
21FLHILL24010015	1987	11	18	1122	1.00	2.98	mg/l	C	
21FLHILL24010015	1987	12	16	1100	1.00	1.01	mg/l	C	
21FLHILL24010015	1988	1	27	1226	0.50	1.69	mg/l	C	
21FLHILL24010015	1988	2	24	1110	1.00	0.78	mg/l	C	
21FLHILL24010015	1988	3	16	1246	1.00	1.35	mg/l	C	
21FLHILL24010015	1988	4	27	1220	1.00	1.27	mg/l	C	
21FLHILL24010015	1988	5	25	1250	1.00	0.92	mg/l	C	
21FLHILL24010015	1988	6	22	1220	1.00	0.95	mg/l	C	
21FLHILL24010015	1988	7	26	1236	1.00	1.52	mg/l	C	
21FLHILL24010015	1988	8	24	1115	1.00	1.62	mg/l	C	
21FLHILL24010015	1988	9	28	1220	1.00	1.87	mg/l	C	
21FLHILL24010015	1988	10	26	1115	1.00	0.93	mg/l	C	
21FLHILL24010015	1988	11	30	1228	1.00	1.23	mg/l	C	
21FLHILL24010015	1988	12	28	1331	1.00	0.6	mg/l	C	
21FLHILL24010015	1989	1	25	1226	1.00	1.72	mg/l	C	
21FLHILL24010015	1989	2	22	1105	1.00	1.04	mg/l	C	
21FLHILL24010015	1989	3	22	1136	1.00	1.21	mg/l	C	
21FLHILL24010015	1989	4	26	1150	1.00	1.53	mg/l	C	
21FLHILL24010015	1989	5	31	1200	1.00	1.39	mg/l	C	
21FLHILL24010015	1989	6	28	1135	1.00	1.48	mg/l	C	
21FLHILL24010015	1989	7	26	1126	1.00	1.65	mg/l	C	
21FLHILL24010015	1989	8	30	1117	1.00	1.47	mg/l	C	
21FLHILL24010015	1989	9	27	1039	1.00	1.68	mg/l	C	
21FLHILL24010015	1989	10	25	1040	1.00	1.63	mg/l	C	
21FLHILL24010015	1989	11	29	1110	1.00	1.06	mg/l	C	
21FLHILL24010015	1989	12	20	1048	1.00	1.29	mg/l	C	
21FLHILL24010015	1990	1	31	1112	1.00	1.38	mg/l	C	

21FLHILL24010015	1990	2	28	1110	1.00	1.17	mg/l	C	
21FLHILL24010015	1990	3	28	1140	1.00	0.92	mg/l	C	
21FLHILL24010015	1990	4	25	1047	1.00	1.19	mg/l	C	
21FLHILL24010015	1990	5	30	1115	1.00	0.72	mg/l	C	
21FLHILL24010015	1990	6	27	1109	1.00	1.25	mg/l	C	
21FLHILL24010015	1990	8	1	1108	1.00	0.76	mg/l	C	
21FLHILL24010015	1990	8	29	1130	1.00	0.93	mg/l	C	
21FLHILL24010015	1990	9	26	1100	1.00	0.93	mg/l	C	
21FLHILL24010015	1990	10	24	1038	1.00	0.98	mg/l	C	
21FLHILL24010015	1990	11	28	1040	1.00	0.55	mg/l	C	
21FLHILL24010015	1990	12	19	1040	1.00	0.91	mg/l	C	
21FLHILL24010015	1991	1	23	1040	1.00	0.63	mg/l	C	
21FLHILL24010015	1991	2	26	1052	1.00	0.69	mg/l	C	
21FLHILL24010015	1991	3	27	1025	1.00	0.69	mg/l	C	
21FLHILL24010015	1991	4	24	1030	1.00	0.78	mg/l	C	
21FLHILL24010015	1991	5	22	1020	1.00	0.71	mg/l	C	
21FLHILL24010015	1991	6	26	1107	1.00	0.78	mg/l	C	
21FLHILL24010015	1991	7	31	1045	1.00	0.89	mg/l	C	
21FLHILL24010015	1991	8	28	1050	1.00	1.02	mg/l	C	
21FLHILL24010015	1991	9	25	1030	1.00	0.89	mg/l	C	
21FLHILL24010015	1991	10	23	1050	1.00	0.81	mg/l	C	
21FLHILL24010015	1991	11	20	1020	1.00	0.59	mg/l	C	
21FLHILL24010015	1991	12	11	1137	1.00	0.7	mg/l	C	
21FLHILL24010015	1992	1	29	1040	1.00	0.59	mg/l	C	
21FLHILL24010015	1992	2	26	1055	0.75	4.18	mg/l	C	
21FLHILL24010015	1992	2	26	1055	0.80	4.18	mg/l	C	
21FLHILL24010015	1992	3	25	1025	0.50	0.87	mg/l	C	
21FLHILL24010015	1992	4	22	1045	1.00	1.01	mg/l	C	
21FLHILL24010015	1992	5	27	1100	1.00	1.15	mg/l	C	
21FLHILL24010015	1992	6	24	1045	1.50	1.73	mg/l	C	
21FLHILL24010015	1992	7	29	1040	1.00	2.08	mg/l	C	
21FLHILL24010015	1992	8	26	1100	1.00	1.14	mg/l	C	
21FLHILL24010015	1992	9	23	1120	1.50	1.09	mg/l	C	
21FLHILL24010015	1992	10	28	1045	0.50	0.74	mg/l	C	
21FLHILL24010015	1992	11	18	1055	0.75	0.71	mg/l	C	
21FLHILL24010015	1992	11	18	1055	0.80	0.71	mg/l	C	
21FLHILL24010015	1992	12	16	1050	0.75	0.9	mg/l	C	
21FLHILL24010015	1992	12	16	1050	0.80	0.9	mg/l	C	
21FLHILL24010015	1993	1	20	1045	1.00	0.91	mg/l	C	
21FLHILL24010015	1993	2	17	1104	1.00	0.81	mg/l	C	
21FLHILL24010015	1993	3	17	1045	0.30	0.94	mg/l	C	
21FLHILL24010015	1993	4	21	1030	1.00	0.65	mg/l	C	
21FLHILL24010015	1993	5	19	1027	1.00	0.91	mg/l	C	
21FLHILL24010015	1993	6	16	1052	0.50	1.03	mg/l	C	
21FLHILL24010015	1993	7	21	1025	0.50	0.91	mg/l	C	
21FLHILL24010015	1993	8	18	1040	0.50	1.13	mg/l	C	
21FLHILL24010015	1993	9	15	1040	0.50	1.3	mg/l	C	
21FLHILL24010015	1993	9	15	1040	1.00	1.3	mg/l	C	
21FLHILL24010015	1993	10	20	1040	0.50	0.77	mg/l	C	

21FLHILL24010015	1993	11	17	1042	0.50	0.76	mg/l	C	
21FLHILL24010015	1993	12	15	1030	0.50	0.64	mg/l	C	
21FLHILL24010015	1994	1	26	1040	0.30	1.23	mg/l	C	
21FLHILL24010015	1994	2	23	1105	0.50	1.57	mg/l	C	
21FLHILL24010015	1994	3	23	1100	0.30	1.6	mg/l	C	
21FLHILL24010015	1994	4	27	1035	1.00	1.79	mg/l	C	
21FLHILL24010015	1994	5	25	1124	1.00	1.82	mg/l	C	
21FLHILL24010015	1994	6	22	1110	1.00	1.37	mg/l	C	
21FLHILL24010015	1994	7	27	1115	0.75	1.53	mg/l	C	
21FLHILL24010015	1994	7	27	1115	0.80	1.53	mg/l	C	
21FLHILL24010015	1994	8	24	1040	1.00	1.64	mg/l	C	
21FLHILL24010015	1994	9	28	1040	1.00	2.05	mg/l	C	
21FLHILL24010015	1994	10	26	1045	0.50	0.87	mg/l	C	
21FLHILL24010015	1995	1	25	1115	1.00	0.92	mg/l	C	
21FLHILL24010015	1995	2	22	1100	1.00	1.1	mg/l	C	
21FLHILL24010015	1995	3	22	1049	1.00	1.42	mg/l	C	
21FLHILL24010015	1995	4	26	1127	1.00	1.29	mg/l	C	
21FLHILL24010015	1995	5	24	1102	1.00	1.1	mg/l	C	
21FLHILL24010015	1995	6	28	1035	1.00	2.07	mg/l	C	
21FLHILL24010015	1995	7	26	1020	1.00	1.96	mg/l	C	
21FLHILL24010015	1995	8	23	1038	1.00	2.11	mg/l	C	
21FLHILL24010015	1995	9	27	1105	1.00	1.28	mg/l	C	
21FLHILL24010015	1995	10	25	1120	1.00	1.05	mg/l	C	
21FLHILL24010015	1995	11	29	1127	1.00	0.88	mg/l	C	
21FLHILL24010015	1995	12	13	1145	1.00	0.64	mg/l	C	
21FLHILL24010015	1996	1	24	1051	1.00	0.97	mg/l	C	
21FLHILL24010015	1996	2	21	1130	0.50	1.05	mg/l	C	
21FLHILL24010015	1996	3	20	1130	0.50	1.28	mg/l	C	
21FLHILL24010015	1996	4	17	1140	1.00	1.31	mg/l	C	
21FLHILL24010015	1996	5	15	1100	0.50	1.32	mg/l	C	
21FLHILL24010015	1996	6	19	1100	0.50	0.96	mg/l	C	
21FLHILL24010015	1996	7	17	1110	0.50	1.43	mg/l	C	
21FLHILL24010015	1996	8	21	1044	1.00	1.47	mg/l	C	
21FLHILL24010015	1996	9	25	1128	1.00	1.41	mg/l	C	
21FLHILL24010015	1996	10	16	1100	0.50	1.24	mg/l	C	
21FLHILL24010015	1996	11	20	1105	1.00	0.62	mg/l	C	
21FLHILL24010015	1996	12	11	1140	0.30	0.94	mg/l	C	
21FLHILL24010015	1997	1	22	1115	0.50	0.89	mg/l	C	
21FLHILL24010015	1997	2	19	1123	0.50	0.95	mg/l	C	
21FLHILL24010015	1997	3	19	1122	0.50	1.46	mg/l	C	
21FLHILL24010015	1997	4	16	1115	0.30	1.19	mg/l	C	
21FLHILL24010015	1997	5	21	1140	0.80	1.24	mg/l	C	
21FLHILL24010015	1997	6	18	1135	1.00	1.5	mg/l	C	
21FLHILL24010015	1997	7	23	1058	0.50	1.17	mg/l	C	
21FLHILL24010015	1997	8	20	1100	0.50	1.03	mg/l	C	
21FLHILL24010015	1997	9	17	1102	0.50	2.09	mg/l	C	
21FLHILL24010015	1997	10	15	1104	0.50	1.37	mg/l	C	
21FLHILL24010015	1997	11	19	1100	0.50	1.26	mg/l	C	
21FLHILL24010015	1997	12	10	1015	0.50	0.72	mg/l	C	

21FLHILL24010015	1998	1	21	1034	0.50	0.88	mg/l	C	
21FLHILL24010015	1998	2	18	1050	0.80	1.91	mg/l	C	
21FLHILL24010015	1998	3	18	1050	0.80	1.08	mg/l	C	
21FLHILL24010015	1998	4	22	1030	0.50	1.08	mg/l	C	
21FLHILL24010015	1998	5	20	1030	0.50	1.04	mg/l	C	
21FLHILL24010015	1998	6	17	1028	0.80	1.01	mg/l	C	
21FLHILL24010015	1998	7	22	1024	1.00	1.15	mg/l	C	
21FLHILL24010015	1998	8	26	1055	0.80	1.13	mg/l	C	
21FLHILL24010015	1998	9	16	1030	1.00	1.16	mg/l	C	
21FLHILL24010015	1998	10	21	1010	0.50	1.03	mg/l	C	
21FLHILL24010015	1998	11	18	1105	0.50	0.99	mg/l	C	
21FLHILL24010015	1998	12	9	1025	0.50	0.77	mg/l	C	
21FLHILL136	1999	1	20	1130	0.30	0.98	mg/l		
21FLHILL136	1999	2	17	1000	0.50	0.65	mg/l		
21FLHILL136	1999	3	17	1034	0.30	0.9	mg/l		
21FLHILL136	1999	4	21	1120	0.50	0.92	mg/l		
21FLHILL136	1999	5	19	1041	1.00	1.12	mg/l		
21FLHILL136	1999	6	16	1050	0.80	1.02	mg/l		
21FLHILL136	1999	7	21	1115	0.80	1.09	mg/l		
21FLHILL136	1999	8	18	1100	0.50	0.93	mg/l		
21FLHILL136	1999	9	23	1120	1.00	1.24	mg/l		
21FLHILL136	1999	10	13	1130	0.50	1.02	mg/l		
21FLHILL136	1999	11	17	1105	0.50	0.82	mg/l		
21FLHILL136	1999	12	15	1120	0.50	0.73	mg/l		
21FLHILL136	2000	1	19	1105	0.50	0.94	mg/l		
21FLHILL136	2000	2	16	1147	0.50	0.77	mg/l		
21FLHILL136	2000	3	15	1110	0.30	0.49	mg/l		
21FLHILL136	2000	4	19	1052	0.50	1.5	mg/l		
21FLHILL136	2000	5	16	1043	0.30	1.55	mg/l		
21FLHILL136	2000	6	21	1230	1.00	1.62	mg/l		
21FLHILL136	2000	7	19	1120	0.80	3.99	mg/l		
21FLHILL136	2000	8	16	1138	0.50	1.57	mg/l		
21FLHILL136	2000	9	20	1112	0.80	1.83	mg/l		
21FLHILL136	2000	10	11	1113	M	2.11	mg/l		
21FLHILL136	2000	11	15	1115	M	1.57	mg/l		
21FLHILL136	2000	12	13	1100	M	1.51	mg/l		
21FLHILL136	2001	2	21	1105	M	1.34	mg/l		
21FLHILL136	2001	3	21	1052	M	1.58	mg/l		
21FLHILL136	2001	4	18	1320	M	2.06	mg/l		
21FLHILL136	2001	5	16	1043	M	1.94	mg/l		
21FLHILL136	2001	6	20	1055	M	1.41	mg/l		
21FLHILL136	2001	7	25	1121	M	1.8	mg/l		
21FLHILL136	2001	8	22	1358	M	1.76	mg/l		
21FLHILL136	2001	9	19	1115	M	1.89	mg/l		
21FLHILL136	2001	10	17	1132	M	1.3	mg/l		
21FLHILL136	2001	11	14	1154	M	1.01	mg/l		
21FLHILL136	2001	12	12	1141	M	1.16	mg/l		
21FLHILL136	2002	1	16	1153	0.00	0.736	mg/l		
21FLHILL136	2002	2	20	1120	0.66	0.749	mg/l		

21FLHILL136	2002	3	20	1145	0.66	1.232	mg/l		
21FLHILL136	2002	4	17	1058	0.66	1.913	mg/l		
21FLHILL136	2002	5	15	1041	0.33	1.621	mg/l		
21FLHILL136	2002	6	19	1044	0.98	1.817	mg/l		
21FLHILL136	2002	7	24	1215	0.98	1.744	mg/l		
21FLHILL136	2002	8	21	1139	0.98	1.883	mg/l		
21FLHILL136	2002	9	18	1027	0.66	1.956	mg/l		
21FLHILL136	2002	10	16	1108	1.31	1.11	mg/l		
21FLHILL136	2002	11	20	1127	0.33	1.104	mg/l		
21FLHILL136	2002	12	11	1130	0.66	1.513	mg/l		
21FLHILL136	2003	1	15	1157	0.10	1.064	mg/l		
21FLHILL136	2003	2	19	1230	0.10	0.916	mg/l		
21FLHILL136	2003	3	19	1321	0.30	0.882	mg/l		
21FLHILL136	2003	4	16	1358	0.40	0.979	mg/l		
21FLHILL136	2003	5	21	1345	0.20	1.209	mg/l		
21FLHILL136	2003	6	18	1115	0.20	1.036	mg/l		
21FLHILL136	2003	7	16	1234	0.30	0.923	mg/l		
21FLHILL136	2003	8	13	1335	0.30	4.144	mg/l		
21FLHILL136	2003	9	17	1327	0.10	1.199	mg/l		
21FLHILL136	2003	10	8	1310	0.40	0.798	mg/l		
21FLHILL136	2003	11	19	1341	0.30	0.966	mg/l		
21FLHILL136	2003	12	10	1348	0.00	0.77	mg/l		
21FLHILL136	2004	1	14	0	0.00	0.68	mg/l		0.02
21FLHILL136	2004	2	18	0	0.10	0.84	mg/l		0.02
21FLHILL136	2004	3	17	0	0.10	1.18	mg/l		0.02
21FLHILL136	2004	4	21	0	0.30	0.92	mg/l		0.02
21FLHILL136	2004	5	19	0	0.40	0.8	mg/l		0.02
21FLHILL136	2004	6	16	0	0.50	0.71	mg/l		0.02
21FLHILL136	2004	8	18	0	0.30	0.95	mg/l		0.02
21FLHILL136	2004	9	15	0	0.50	0.97	mg/l		0.02
21FLHILL136	2004	10	20	0	0.20	0.84	mg/l		0.02
21FLHILL136	2004	11	17	0	0.20	0.63	mg/l		0.02
21FLHILL136	2004	12	15	0	0.10	0.59	mg/l		0.02
21FLHILL136	2005	1	19	0	0.20	0.68	mg/l		0.02
21FLHILL136	2005	2	16	0	0.10	0.66	mg/l		0.02
21FLHILL136	2005	4	20	0	0.10	0.63	mg/l		0.02
21FLHILL136	2005	5	18	0	0.10	0.8	mg/l		0.02
21FLHILL136	2005	6	15	0	0.20	0.53	mg/l		0.02
21FLHILL136	2005	8	17	0	0.30	1.25	mg/l		0.02
21FLHILL136	2005	9	21	0	0.10	0.98	mg/l		0.02
21FLHILL136	2005	10	19	0	0.30	0.66	mg/l		0.02
21FLHILL136	2005	11	16	0	0.10	0.61	mg/l		0.02
21FLHILL136	2005	12	21	0	0.20	0.51	mg/l		0.02
21FLHILL136	2006	10	18	0	0.20	0.716	mg/l		0.03
21FLHILL136	2006	11	15	0	0.10	0.335	mg/l		0.03
21FLHILL136	2006	12	20	0	0.10	0.574	mg/l		0.03
21FLHILL136	2007	1	17	0	0.10	0.707	mg/l		0.03
21FLHILL136	2007	2	21	0	0.10	0.568	mg/l		0.03
21FLHILL136	2007	3	21	0	0.10	0.797	mg/l		0.03

21FLHILL136	2007	4	18	0	0.10	0.718	mg/l		0.03
21FLHILL136	2007	5	16	0	0.30	0.407	mg/l		0.03
21FLHILL136	2007	6	20	0	0.30	0.61	mg/l		0.03
21FLHILL136	2007	7	25	0	0.40	0.827	mg/l		0.03m
21FLHILL136	2007	8	15	0	0.20	0.737	mg/l		0.03m
21FLHILL136	2007	9	19	0	0.35	1.022	mg/l		0.03m
21FLHILL136	2007	10	17	0	0.25	0.598	mg/l		0.03m
21FLHILL136	2007	11	28	0	0.15	0.692	mg/l		0.03m
21FLHILL136	2007	12	12	0	0.15	0.541	mg/l		0.03m
sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLTPA 274048208229581	2006	2	6	1045	0.20	1.208	mg/l	+	
21FLTPA 274048208229581	2006	2	28	1205	0.80	1.348	mg/l	+	
21FLTPA 274048208229581	2006	3	14	1120	0.20	1.12	mg/l	+	
21FLTPA 274048208229581	2006	4	4	1000	0.20	1.107	mg/l	+	
21FLTPA 274048208229581	2006	4	18	910	0.20	1.104	mg/l	+	
21FLTPA 274048208229581	2006	5	8	1120	0.20	1.704	mg/l	+	
21FLTPA 274048208229581	2006	7	10	955	0.20	1.604	mg/l	+	
21FLTPA 274048208229581	2006	7	31	1125	0.20	0.745	mg/l	+	
21FLTPA 274048208229581	2006	8	14	955	0.20	1.606	mg/l	+	
21FLTPA 274048208229581	2006	9	11	1245	0.20	1.204	mg/l	+	
21FLTPA 274048208229581	2006	10	2	955	0.20	1.306	mg/l	+	
21FLTPA 274048208229581	2006	10	23	1210	0.20	0.984	mg/l	+	
21FLTPA 274048208229581	2006	11	6	1245	0.20	1.305	mg/l	+	
21FLTPA 274048208229581	2006	11	27	935	0.20	0.758	mg/l	+	

Total Phosphorus:

sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLHILL24010015	1978	1	25	1045	1.00	0.47	mg/l		
21FLHILL24010015	1978	2	22	1100	1.00	0.82	mg/l		
21FLHILL24010015	1978	3	21	1200	1.00	0.64	mg/l		
21FLHILL24010015	1978	4	19	1120	1.00	0.71	mg/l		
21FLHILL24010015	1978	5	17	1030	1.00	0.65	mg/l		
21FLHILL24010015	1978	6	14	1055	1.00	0.7	mg/l		
21FLHILL24010015	1978	7	12	1125	1.00	0.77	mg/l		
21FLHILL24010015	1978	8	9	1130	1.00	0.71	mg/l		
21FLHILL24010015	1978	9	6	1135	1.00	0.86	mg/l		
21FLHILL24010015	1978	10	4	1130	0.80	0.79	mg/l		
21FLHILL24010015	1978	11	15	1130	1.30	0.79	mg/l		
21FLHILL24010015	1978	12	18	1130	0.80	0.57	mg/l		
21FLHILL24010015	1979	1	24	1115	1.30	0.58	mg/l		
21FLHILL24010015	1979	2	21	1145	1.00	0.67	mg/l		
21FLHILL24010015	1979	3	20	1115	1.00	0.63	mg/l		
21FLHILL24010015	1979	4	24	1130	1.00	0.71	mg/l		
21FLHILL24010015	1979	5	17	1115	1.00	0.42	mg/l		
21FLHILL24010015	1979	6	13	1200	1.00	0.66	mg/l		
21FLHILL24010015	1979	7	11	1055	1.00	0.75	mg/l		
21FLHILL24010015	1979	8	8	1125	0.80	0.78	mg/l		
21FLHILL24010015	1979	9	5	1120	0.80	0.76	mg/l		
21FLHILL24010015	1979	10	3	1100	1.30	0.95	mg/l		
21FLHILL24010015	1979	10	31	1345	0.50	0.58	mg/l		
21FLHILL24010015	1979	12	5	1100	0.50	0.43	mg/l		
21FLHILL24010015	1980	1	31	1120	0.80	0.72	mg/l		
21FLHILL24010015	1980	2	27	1130	0.80	0.47	mg/l		
21FLHILL24010015	1980	3	27	1145	1.00	1.25	mg/l		
21FLHILL24010015	1980	4	23	1104	1.00	0.98	mg/l		
21FLHILL24010015	1980	5	21	1125	1.00	0.75	mg/l		
21FLHILL24010015	1980	6	18	1130	1.00	0.73	mg/l		
21FLHILL24010015	1980	7	16	1110	0.80	0.6	mg/l		
21FLHILL24010015	1980	8	13	1045	1.00	0.76	mg/l		
21FLHILL24010015	1980	9	10	1120	0.80	1.37	mg/l		
21FLHILL24010015	1980	10	15	1130	1.00	0.78	mg/l		
21FLHILL24010015	1980	11	13	1035	1.00	0.47	mg/l		
21FLHILL24010015	1980	12	17	1105	1.50	0.5	mg/l		
21FLHILL24010015	1981	1	28	1120	1.00	0.42	mg/l		
21FLHILL24010015	1981	2	25	1115	1.00	0.73	mg/l		
21FLHILL24010015	1981	3	25	1110	1.00	0.61	mg/l		
21FLHILL24010015	1981	5	6	1110	1.00	0.48	mg/l		
21FLHILL24010015	1981	6	3	1115	1.00	0.43	mg/l		
21FLHILL24010015	1981	7	1	1100	1.50	0.42	mg/l		
21FLHILL24010015	1981	7	29	1115	1.30	0.71	mg/l		
21FLHILL24010015	1981	8	26	1100	1.50	0.59	mg/l		

21FLHILL24010015	1981	9	23	1105	1.00	0.41	mg/l		
21FLHILL24010015	1981	10	15	1100	0.80	0.5	mg/l		
21FLHILL24010015	1981	11	4	1300	1.00	0.26	mg/l		
21FLHILL24010015	1981	12	9	1300	1.00	0.53	mg/l		
21FLHILL24010015	1982	1	27	1300	0.50	0.35	mg/l		
21FLHILL24010015	1982	2	24	1100	0.80	0.33	mg/l		
21FLHILL24010015	1982	3	24	1100	1.00	0.48	mg/l		
21FLHILL24010015	1982	4	21	1100	1.00	0.35	mg/l		
21FLHILL24010015	1982	5	19	1130	0.50	0.39	mg/l		
21FLHILL24010015	1982	6	16	1115	1.00	0.41	mg/l		
21FLHILL24010015	1982	7	14	1105	1.00	0.95	mg/l		
21FLHILL24010015	1982	8	11	1130	1.00	0.67	mg/l		
21FLHILL24010015	1982	9	15	1105	1.50	0.65	mg/l		
21FLHILL24010015	1982	10	13	1120	1.80	0.69	mg/l		
21FLHILL24010015	1982	11	17	1115	0.80	0.39	mg/l		
21FLA 24010015	1983	1	10	1030	.	0.35	mg/l		
21FLHILL24010015	1983	1	26	1115	0.80	0.35	mg/l		
21FLHILL24010015	1983	3	2	1200	0.80	0.46	mg/l		
21FLHILL24010015	1983	3	30	1230	1.00	0.65	mg/l		
21FLHILL24010015	1983	4	27	1110	0.80	0.6	mg/l		
21FLHILL24010015	1983	5	25	1130	1.20	0.68	mg/l		
21FLHILL24010015	1983	6	22	1105	1.50	0.62	mg/l		
21FLHILL24010015	1983	7	20	1210	1.50	0.48	mg/l		
21FLHILL24010015	1983	8	17	1300	1.50	0.54	mg/l		
21FLHILL24010015	1983	9	14	1130	1.00	0.68	mg/l		
21FLHILL24010015	1983	10	12	1130	1.30	0.99	mg/l		
21FLHILL24010015	1983	11	16	1120	1.00	0.51	mg/l		
21FLHILL24010015	1983	12	14	1115	1.00	0.43	mg/l		
21FLHILL24010015	1984	1	25	1130	1.00	0.39	mg/l		
21FLHILL24010015	1984	2	22	1120	0.80	0.61	mg/l		
21FLHILL24010015	1984	3	28	1106	1.00	0.44	mg/l		
21FLHILL24010015	1984	4	25	1115	0.50	0.45	mg/l		
21FLHILL24010015	1984	5	23	1115	1.00	0.36	mg/l		
21FLHILL24010015	1984	6	20	1100	1.00	0.44	mg/l		
21FLHILL24010015	1984	7	18	1130	1.00	0.47	mg/l		
21FLHILL24010015	1984	8	15	1125	1.00	0.45	mg/l		
21FLHILL24010015	1984	9	12	1050	0.50	0.5	mg/l		
21FLHILL24010015	1984	10	10	1100	1.00	0.3	mg/l		
21FLHILL24010015	1984	11	7	1130	0.80	0.3	mg/l		
21FLHILL24010015	1984	12	12	1130	1.00	0.2	mg/l		
21FLHILL24010015	1985	1	16	1105	0.80	0.15	mg/l		
21FLHILL24010015	1985	2	27	1100	1.00	0.24	mg/l		
21FLHILL24010015	1985	3	27	1140	1.00	0.31	mg/l		
21FLHILL24010015	1985	4	17	1105	0.80	0.43	mg/l		
21FLHILL24010015	1985	5	15	1130	0.80	0.5	mg/l		
21FLHILL24010015	1985	6	26	1200	1.00	0.72	mg/l		
21FLHILL24010015	1985	7	24	1120	1.50	0.54	mg/l		
21FLHILL24010015	1985	8	14	1125	1.50	0.69	mg/l		
21FLHILL24010015	1985	9	11	1100	1.50	0.56	mg/l		

21FLHILL24010015	1985	10	16	1125	0.80	0.58	mg/l		
21FLHILL24010015	1985	11	13	1140	0.70	0.5	mg/l		
21FLHILL24010015	1985	12	18	1140	0.80	0.41	mg/l		
21FLHILL24010015	1986	1	29	1115	1.00	0.4	mg/l		
21FLHILL24010015	1986	2	26	1120	0.80	0.38	mg/l		
21FLHILL24010015	1986	3	26	1143	1.00	0.35	mg/l		
21FLHILL24010015	1986	4	23	1057	0.80	0.38	mg/l		
21FLHILL24010015	1986	5	21	1138	1.30	0.67	mg/l		
21FLHILL24010015	1986	6	18	1149	1.80	0.5	mg/l		
21FLHILL24010015	1986	7	23	1136	1.50	0.54	mg/l		
21FLHILL24010015	1986	8	27	1023	0.80	0.5	mg/l		
21FLHILL24010015	1986	9	24	1114	1.30	0.47	mg/l		
21FLHILL24010015	1986	10	15	1135	1.00	0.58	mg/l		
21FLHILL24010015	1986	11	5	1115	0.50	0.38	mg/l		
21FLHILL24010015	1986	12	17	1135	0.50	0.41	mg/l		
21FLHILL24010015	1987	1	28	1105	0.80	0.34	mg/l		
21FLHILL24010015	1987	2	25	1105	0.50	0.37	mg/l		
21FLHILL24010015	1987	3	25	1225	1.30	0.36	mg/l		
21FLHILL24010015	1987	4	22	1030	1.00	0.69	mg/l		
21FLHILL24010015	1987	5	27	1105	1.30	0.47	mg/l		
21FLHILL24010015	1987	6	24	1116	1.30	0.54	mg/l		
21FLHILL24010015	1987	7	29	1204	0.50	0.63	mg/l		
21FLHILL24010015	1987	8	26	1058	1.00	0.94	mg/l		
21FLHILL24010015	1987	9	23	1131	1.00	0.58	mg/l		
21FLHILL24010015	1987	10	21	1210	1.00	0.36	mg/l		
21FLHILL24010015	1987	11	18	1122	1.00	0.51	mg/l		
21FLHILL24010015	1987	12	16	1100	1.00	0.35	mg/l		
21FLHILL24010015	1988	1	27	1226	0.50	0.4	mg/l		
21FLHILL24010015	1988	2	24	1110	1.00	0.31	mg/l		
21FLHILL24010015	1988	3	16	1246	1.00	0.44	mg/l		
21FLHILL24010015	1988	4	27	1220	1.00	0.64	mg/l		
21FLHILL24010015	1988	5	25	1250	1.00	0.54	mg/l		
21FLHILL24010015	1988	6	22	1220	1.00	0.35	mg/l		
21FLHILL24010015	1988	7	26	1236	1.00	0.66	mg/l		
21FLHILL24010015	1988	8	24	1115	1.00	0.78	mg/l		
21FLHILL24010015	1988	9	28	1220	1.00	0.76	mg/l		
21FLHILL24010015	1988	10	26	1115	1.00	0.47	mg/l		
21FLHILL24010015	1988	11	30	1228	1.00	0.62	mg/l		
21FLHILL24010015	1988	12	28	1331	1.00	0.37	mg/l		
21FLHILL24010015	1989	1	25	1226	1.00	0.5	mg/l		
21FLHILL24010015	1989	2	22	1105	1.00	0.44	mg/l		
21FLHILL24010015	1989	3	22	1136	1.00	0.4	mg/l		
21FLHILL24010015	1989	4	26	1150	1.00	0.48	mg/l		
21FLHILL24010015	1989	5	31	1200	1.00	0.76	mg/l		
21FLHILL24010015	1989	6	28	1135	1.00	0.64	mg/l		
21FLHILL24010015	1989	7	26	1126	1.00	0.62	mg/l		
21FLHILL24010015	1989	8	30	1117	1.00	0.57	mg/l		
21FLHILL24010015	1989	9	27	1039	1.00	1.06	mg/l		
21FLHILL24010015	1989	10	25	1040	1.00	0.52	mg/l		

21FLHILL24010015	1989	11	29	1110	1.00	0.47	mg/l		
21FLHILL24010015	1989	12	20	1048	1.00	0.54	mg/l		
21FLHILL24010015	1990	1	31	1112	1.00	0.52	mg/l		
21FLHILL24010015	1990	2	28	1110	1.00	8.18	mg/l		
21FLHILL24010015	1990	3	28	1140	1.00	0.47	mg/l		
21FLHILL24010015	1990	4	25	1047	1.00	0.22	mg/l		
21FLHILL24010015	1990	5	30	1115	1.00	0.66	mg/l		
21FLHILL24010015	1990	6	27	1109	1.00	0.78	mg/l		
21FLHILL24010015	1990	8	1	1108	1.00	0.54	mg/l		
21FLHILL24010015	1990	8	29	1130	1.00	0.55	mg/l		
21FLHILL24010015	1990	9	26	1100	1.00	0.5	mg/l		
21FLHILL24010015	1990	10	24	1038	1.00	0.55	mg/l		
21FLHILL24010015	1990	11	28	1040	1.00	0.38	mg/l		
21FLHILL24010015	1990	12	19	1040	1.00	0.38	mg/l		
21FLHILL24010015	1991	1	23	1040	1.00	0.25	mg/l		
21FLHILL24010015	1991	2	26	1052	1.00	0.32	mg/l		
21FLHILL24010015	1991	3	27	1025	1.00	0.4	mg/l		
21FLHILL24010015	1991	4	24	1030	1.00	0.8	mg/l		
21FLHILL24010015	1991	5	22	1020	1.00	0.39	mg/l		
21FLHILL24010015	1991	6	26	1107	1.00	0.44	mg/l		
21FLHILL24010015	1991	7	31	1045	1.00	0.44	mg/l		
21FLHILL24010015	1991	8	28	1050	1.00	0.43	mg/l		
21FLHILL24010015	1991	9	25	1030	1.00	0.35	mg/l		
21FLHILL24010015	1991	10	23	1050	1.00	0.28	mg/l		
21FLHILL24010015	1991	11	20	1020	1.00	0.29	mg/l		
21FLHILL24010015	1991	12	11	1137	1.00	0.21	mg/l		
21FLHILL24010015	1992	1	29	1040	1.00	0.16	mg/l		
21FLHILL24010015	1992	2	26	1055	0.75	1.35	mg/l		
21FLHILL24010015	1992	2	26	1055	0.80	1.35	mg/l		
21FLHILL24010015	1992	3	25	1025	0.50	0.33	mg/l		
21FLHILL24010015	1992	4	22	1045	1.00	0.43	mg/l		
21FLHILL24010015	1992	5	27	1100	1.00	0.33	mg/l		
21FLHILL24010015	1992	6	24	1045	1.50	0.41	mg/l		
21FLHILL24010015	1992	7	29	1040	1.00	0.55	mg/l		
21FLHILL24010015	1992	8	26	1100	1.00	0.42	mg/l		
21FLHILL24010015	1992	9	23	1120	1.50	0.32	mg/l		
21FLHILL24010015	1992	10	28	1045	0.50	0.22	mg/l		
21FLHILL24010015	1992	11	18	1055	0.75	0.25	mg/l		
21FLHILL24010015	1992	11	18	1055	0.80	0.25	mg/l		
21FLHILL24010015	1992	12	16	1050	0.75	0.26	mg/l		
21FLHILL24010015	1992	12	16	1050	0.80	0.26	mg/l		
21FLHILL24010015	1993	1	20	1045	1.00	0.45	mg/l		
21FLHILL24010015	1993	2	17	1104	1.00	0.27	mg/l		
21FLHILL24010015	1993	3	17	1045	0.30	0.33	mg/l		
21FLHILL24010015	1993	4	21	1030	1.00	0.24	mg/l		
21FLHILL24010015	1993	5	19	1027	1.00	0.44	mg/l		
21FLHILL24010015	1993	6	16	1052	0.50	0.4	mg/l		
21FLHILL24010015	1993	7	21	1025	0.50	0.47	mg/l		
21FLHILL24010015	1993	8	18	1040	0.50	0.41	mg/l		

21FLHILL24010015	1993	9	15	1040	0.50	0.41	mg/l		
21FLHILL24010015	1993	9	15	1040	1.00	0.41	mg/l		
21FLHILL24010015	1993	10	20	1040	0.50	0.31	mg/l		
21FLHILL24010015	1993	11	17	1042	0.50	0.34	mg/l		
21FLHILL24010015	1993	12	15	1030	0.50	0.22	mg/l		
21FLHILL24010015	1994	1	26	1040	0.30	0.41	mg/l		
21FLHILL24010015	1994	2	23	1105	0.50	0.28	mg/l		
21FLHILL24010015	1994	3	23	1100	0.30	0.31	mg/l		
21FLHILL24010015	1994	4	27	1035	1.00	0.38	mg/l		
21FLHILL24010015	1994	5	25	1124	1.00	0.47	mg/l		
21FLHILL24010015	1994	6	22	1110	1.00	0.36	mg/l		
21FLHILL24010015	1994	7	27	1115	0.75	0.42	mg/l		
21FLHILL24010015	1994	7	27	1115	0.80	0.42	mg/l		
21FLHILL24010015	1994	8	24	1040	1.00	0.53	mg/l		
21FLHILL24010015	1994	9	28	1040	1.00	0.84	mg/l		
21FLHILL24010015	1994	10	26	1045	0.50	0.37	mg/l		
21FLHILL24010015	1995	1	25	1115	1.00	0.22	mg/l		
21FLHILL24010015	1995	2	22	1100	1.00	0.29	mg/l		
21FLHILL24010015	1995	3	22	1049	1.00	0.28	mg/l		
21FLHILL24010015	1995	4	26	1127	1.00	0.43	mg/l		
21FLHILL24010015	1995	5	24	1102	1.00	0.4	mg/l		
21FLHILL24010015	1995	6	28	1035	1.00	0.73	mg/l		
21FLHILL24010015	1995	7	26	1020	1.00	0.69	mg/l		
21FLHILL24010015	1995	8	23	1038	1.00	0.93	mg/l		
21FLHILL24010015	1995	9	27	1105	1.00	0.55	mg/l		
21FLHILL24010015	1995	10	25	1120	1.00	0.39	mg/l		
21FLHILL24010015	1995	11	29	1127	1.00	0.26	mg/l		
21FLHILL24010015	1995	12	13	1145	1.00	0.26	mg/l		
21FLHILL24010015	1996	1	24	1051	1.00	0.28	mg/l		
21FLHILL24010015	1996	2	21	1130	0.50	0.35	mg/l		
21FLHILL24010015	1996	3	20	1130	0.50	0.35	mg/l		
21FLHILL24010015	1996	4	17	1140	1.00	0.52	mg/l		
21FLHILL24010015	1996	5	15	1100	0.50	0.42	mg/l		
21FLHILL24010015	1996	6	19	1100	0.50	0.4	mg/l		
21FLHILL24010015	1996	7	17	1110	0.50	0.41	mg/l		
21FLHILL24010015	1996	8	21	1044	1.00	0.38	mg/l		
21FLHILL24010015	1996	9	25	1128	1.00	0.29	mg/l		
21FLHILL24010015	1996	10	16	1100	0.50	0.3	mg/l		
21FLHILL24010015	1996	11	20	1105	1.00	0.23	mg/l		
21FLHILL24010015	1996	12	11	1140	0.30	0.22	mg/l		
21FLHILL24010015	1997	1	22	1115	0.50	0.23	mg/l		
21FLHILL24010015	1997	2	19	1123	0.50	0.3	mg/l		
21FLHILL24010015	1997	3	19	1122	0.50	0.36	mg/l		
21FLHILL24010015	1997	4	16	1115	0.30	0.37	mg/l		
21FLHILL24010015	1997	5	21	1140	0.80	0.33	mg/l		
21FLHILL24010015	1997	6	18	1135	1.00	0.34	mg/l		
21FLHILL24010015	1997	7	23	1058	0.50	0.28	mg/l		
21FLHILL24010015	1997	8	20	1100	0.50	0.4	mg/l		
21FLHILL24010015	1997	9	17	1102	0.50	0.39	mg/l		

21FLHILL24010015	1997	10	15	1104	0.50	0.43	mg/l		
21FLHILL24010015	1997	11	19	1100	0.50	0.44	mg/l		
21FLHILL24010015	1997	12	10	1015	0.50	0.3	mg/l		
21FLHILL24010015	1998	1	21	1034	0.50	0.42	mg/l		
21FLHILL24010015	1998	2	18	1050	0.80	0.7	mg/l		
21FLHILL24010015	1998	3	18	1050	0.80	0.45	mg/l		
21FLHILL24010015	1998	4	22	1030	0.50	0.55	mg/l		
21FLHILL24010015	1998	5	20	1030	0.50	0.46	mg/l		
21FLHILL24010015	1998	6	17	1028	0.80	0.46	mg/l		
21FLHILL24010015	1998	7	22	1024	1.00	0.43	mg/l		
21FLHILL24010015	1998	8	26	1055	0.80	0.43	mg/l		
21FLHILL24010015	1998	9	16	1030	1.00	0.35	mg/l		
21FLHILL24010015	1998	10	21	1010	0.50	0.37	mg/l		
21FLHILL24010015	1998	11	18	1105	0.50	0.33	mg/l		
21FLHILL24010015	1998	12	9	1025	0.50	0.24	mg/l		
21FLHILL136	1999	1	20	1130	0.30	0.25	mg/l		
21FLHILL136	1999	2	17	1000	0.50	0.25	mg/l		
21FLHILL136	1999	3	17	1034	0.30	0.21	mg/l		
21FLHILL136	1999	4	21	1120	0.50	0.35	mg/l		
21FLHILL136	1999	5	19	1041	1.00	0.38	mg/l		
21FLHILL136	1999	6	16	1050	0.80	0.38	mg/l		
21FLHILL136	1999	7	21	1115	0.80	0.38	mg/l		
21FLHILL136	1999	8	18	1100	0.50	0.39	mg/l		
21FLHILL136	1999	9	23	1120	1.00	0.38	mg/l		
21FLHILL136	1999	10	13	1130	0.50	0.44	mg/l		
21FLHILL136	1999	11	17	1105	0.50	0.25	mg/l		
21FLHILL136	1999	12	15	1120	0.50	0.27	mg/l		
21FLHILL136	2000	1	19	1105	0.50	0.15	mg/l		
21FLHILL136	2000	2	16	1147	0.50	0.18	mg/l		
21FLHILL136	2000	3	15	1110	0.30	0.31	mg/l		
21FLHILL136	2000	4	19	1052	0.50	0.26	mg/l		
21FLHILL136	2000	5	16	1043	0.30	0.33	mg/l		
21FLHILL136	2000	6	21	1230	1.00	0.33	mg/l		
21FLHILL136	2000	7	19	1120	0.80	0.78	mg/l		
21FLHILL136	2000	8	16	1138	0.50	0.33	mg/l		
21FLHILL136	2000	9	20	1112	0.80	0.21	mg/l		
21FLHILL136	2000	10	11	1113	M	0.33	mg/l		
21FLHILL136	2000	11	15	1115	M	0.31	mg/l		
21FLHILL136	2000	12	13	1100	M	0.21	mg/l		
21FLHILL136	2001	2	21	1105	M	0.26	mg/l		
21FLHILL136	2001	3	21	1052	M	0.37	mg/l		
21FLHILL136	2001	4	18	1320	M	0.56	mg/l		
21FLHILL136	2001	5	16	1043	M	0.26	mg/l		
21FLHILL136	2001	6	20	1055	M	0.33	mg/l		
21FLHILL136	2001	7	25	1121	M	0.36	mg/l		
21FLHILL136	2001	8	22	1358	M	0.33	mg/l		
21FLHILL136	2001	9	19	1115	M	0.75	mg/l		
21FLHILL136	2001	10	17	1132	M	0.41	mg/l		
21FLHILL136	2001	11	14	1154	M	0.24	mg/l		

21FLHILL136	2001	12	12	1141	M	0.21	mg/l		
21FLHILL136	2002	1	16	1153	0.00	0.24	mg/l		
21FLHILL136	2002	2	20	1120	0.66	0.21	mg/l		
21FLHILL136	2002	3	20	1145	0.66	0.3	mg/l		
21FLHILL136	2002	4	17	1058	0.66	0.25	mg/l		
21FLHILL136	2002	5	15	1041	0.33	0.31	mg/l		
21FLHILL136	2002	6	19	1044	0.98	0.28	mg/l		
21FLHILL136	2002	7	24	1215	0.98	0.31	mg/l		
21FLHILL136	2002	8	21	1139	0.98	0.38	mg/l		
21FLHILL136	2002	9	18	1027	0.66	0.45	mg/l		
21FLHILL136	2002	10	16	1108	1.31	0.29	mg/l		
21FLHILL136	2002	11	20	1127	0.33	0.26	mg/l		
21FLHILL136	2002	12	11	1130	0.66	0.55	mg/l		
21FLHILL136	2003	1	15	1157	0.10	0.34	mg/l		
21FLHILL136	2003	2	19	1230	0.10	0.22	mg/l		
21FLHILL136	2003	3	19	1321	0.30	0.29	mg/l		
21FLHILL136	2003	4	16	1358	0.40	0.3	mg/l		
21FLHILL136	2003	5	21	1345	0.20	0.36	mg/l		
21FLHILL136	2003	6	18	1115	0.20	0.28	mg/l		
21FLHILL136	2003	7	16	1234	0.30	0.37	mg/l		
21FLHILL136	2003	8	13	1335	0.30	0.52	mg/l		
21FLHILL136	2003	9	17	1327	0.10	0.45	mg/l		
21FLHILL136	2003	10	8	1310	0.40	0.34	mg/l		
21FLHILL136	2003	11	19	1341	0.30	0.29	mg/l		
21FLHILL136	2003	12	10	1348	0.00	0.23	mg/l		
21FLHILL136	2004	1	14	0	0.00	0.21	mg/l		0.02
21FLHILL136	2004	2	18	0	0.10	0.25	mg/l		0.02
21FLHILL136	2004	3	17	0	0.10	0.53	mg/l		0.02
21FLHILL136	2004	4	21	0	0.30	0.26	mg/l		0.02
21FLHILL136	2004	5	19	0	0.40	0.27	mg/l		0.02
21FLHILL136	2004	6	16	0	0.50	0.33	mg/l		0.02
21FLHILL136	2004	7	21	0	0.10	0.29	mg/l		0.02
21FLHILL136	2004	8	18	0	0.30	0.3	mg/l		0.02
21FLHILL136	2004	9	15	0	0.50	0.4	mg/l		0.02
21FLHILL136	2004	10	20	0	0.20	0.32	mg/l		0.02
21FLHILL136	2004	11	17	0	0.20	0.26	mg/l		0.02
21FLHILL136	2004	12	15	0	0.10	0.19	mg/l		0.02
21FLHILL136	2005	1	19	0	0.20	0.2	mg/l		0.02
21FLHILL136	2005	2	16	0	0.10	0.26	mg/l		0.02
21FLHILL136	2005	3	16	0	0.10	0.23	mg/l		0.02
21FLHILL136	2005	4	20	0	0.10	0.19	mg/l		0.02
21FLHILL136	2005	5	18	0	0.10	0.29	mg/l		0.02
21FLHILL136	2005	6	15	0	0.20	0.39	mg/l		0.02
21FLHILL136	2005	7	20	0	0.30	0.5	mg/l		0.02
21FLHILL136	2005	8	17	0	0.30	0.36	mg/l		0.02
21FLHILL136	2005	9	21	0	0.10	0.17	mg/l		0.02
21FLHILL136	2005	10	19	0	0.30	0.16	mg/l		0.02
21FLHILL136	2005	11	16	0	0.10	0.12	mg/l		0.02
21FLHILL136	2005	12	21	0	0.20	0.16	mg/l		0.02

21FLHILL136	2006	10	18	0	0.20	0.223	mg/l		0.012
21FLHILL136	2006	11	15	0	0.10	0.159	mg/l		0.012
21FLHILL136	2006	12	20	0	0.10	0.269	mg/l		0.012
21FLHILL136	2007	1	17	0	0.10	0.216	mg/l		0.012
21FLHILL136	2007	2	21	0	0.10	0.15	mg/l		0.012
21FLHILL136	2007	3	21	0	0.10	0.17	mg/l		0.012
21FLHILL136	2007	4	18	0	0.10	0.234	mg/l		0.012
21FLHILL136	2007	5	16	0	0.30	0.22	mg/l		0.012
21FLHILL136	2007	6	20	0	0.30	0.259	mg/l		0.012
21FLHILL136	2007	7	25	0	0.40	0.233	mg/l		0.012m
21FLHILL136	2007	8	15	0	0.20	0.281	mg/l		0.012m
21FLHILL136	2007	9	19	0	0.35	0.246	mg/l		0.012m
21FLHILL136	2007	10	17	0	0.25	0.194	mg/l		0.012m
21FLHILL136	2007	11	28	0	0.15	0.185	mg/l		0.012m
21FLHILL136	2007	12	12	0	0.15	0.194	mg/l		0.012m
sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLTPA 274048208229581	2006	2	6	1045	0.20	0.23	mg/l		0.02
21FLTPA 274048208229581	2006	2	28	1205	0.80	0.21	mg/l		0.02
21FLTPA 274048208229581	2006	3	14	1120	0.20	0.22	mg/l		0.02
21FLTPA 274048208229581	2006	4	4	1000	0.20	0.19	mg/l		0.02
21FLTPA 274048208229581	2006	4	18	910	0.20	0.19	mg/l		0.02
21FLTPA 274048208229581	2006	5	8	1120	0.20	0.21	mg/l		0.02
21FLTPA 274048208229581	2006	7	10	955	0.20	0.27	mg/l		0.02
21FLTPA 274048208229581	2006	7	31	1125	0.20	0.26	mg/l		0.02
21FLTPA 274048208229581	2006	8	14	955	0.20	0.27	mg/l		0.02
21FLTPA 274048208229581	2006	9	11	1245	0.20	0.35	mg/l		0.02
21FLTPA 274048208229581	2006	10	2	955	0.20	0.32	mg/l		0.02
21FLTPA 274048208229581	2006	10	23	1210	0.20	0.28	mg/l		0.02
21FLTPA 274048208229581	2006	11	6	1245	0.20	0.18	mg/l		0.02
21FLTPA 274048208229581	2006	11	27	935	0.20	0.14	mg/l		0.02

Color:

sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLHILL24010015	1978	1	25	1045	1.00	20	PCU		
21FLHILL24010015	1978	2	22	1100	1.00	41	PCU		
21FLHILL24010015	1978	3	21	1200	1.00	22	PCU		
21FLHILL24010015	1978	4	19	1120	1.00	18	PCU		
21FLHILL24010015	1978	5	17	1030	1.00	18	PCU		
21FLHILL24010015	1978	6	14	1055	1.00	19	PCU		
21FLHILL24010015	1978	7	12	1125	1.00	22	PCU		
21FLHILL24010015	1978	8	9	1130	1.00	27	PCU		
21FLHILL24010015	1978	9	6	1135	1.00	34	PCU		
21FLHILL24010015	1978	10	4	1130	0.80	23	PCU		
21FLHILL24010015	1978	11	15	1130	1.30	18	PCU		
21FLHILL24010015	1978	12	18	1130	0.80	15	PCU		
21FLHILL24010015	1979	1	24	1115	1.30	113	PCU		
21FLHILL24010015	1979	2	21	1145	1.00	15	PCU		
21FLHILL24010015	1979	3	20	1115	1.00	17	PCU		
21FLHILL24010015	1979	4	24	1130	1.00	15	PCU		
21FLHILL24010015	1979	5	17	1115	1.00	18	PCU		
21FLHILL24010015	1979	6	13	1200	1.00	20	PCU		
21FLHILL24010015	1979	7	11	1055	1.00	23	PCU		
21FLHILL24010015	1979	8	8	1125	0.80	19	PCU		
21FLHILL24010015	1979	9	5	1120	0.80	46	PCU		
21FLHILL24010015	1979	10	3	1100	1.30	59	PCU		
21FLHILL24010015	1979	10	31	1345	0.50	26	PCU		
21FLHILL24010015	1979	12	5	1100	0.50	17	PCU		
21FLHILL24010015	1980	1	31	1120	0.80	18	PCU		
21FLHILL24010015	1980	2	27	1130	0.80	15	PCU		
21FLHILL24010015	1980	3	27	1145	1.00	15	PCU		
21FLHILL24010015	1980	4	23	1104	1.00	19	PCU		
21FLHILL24010015	1980	5	21	1125	1.00	19	PCU		
21FLHILL24010015	1980	6	18	1130	1.00	19	PCU		
21FLHILL24010015	1980	7	16	1110	0.80	23	PCU		
21FLHILL24010015	1980	8	13	1045	1.00	26	PCU		
21FLHILL24010015	1980	9	10	1120	0.80	35	PCU		
21FLHILL24010015	1980	10	15	1130	1.00	21	PCU		
21FLHILL24010015	1980	11	13	1035	1.00	13	PCU		
21FLHILL24010015	1980	12	17	1105	1.50	40	PCU		
21FLHILL24010015	1981	1	28	1120	1.00	10	PCU		
21FLHILL24010015	1981	2	25	1115	1.00	22	PCU		
21FLHILL24010015	1981	3	25	1110	1.00	17	PCU		
21FLHILL24010015	1981	5	6	1110	1.00	18	PCU		
21FLHILL24010015	1981	6	3	1115	1.00	16	PCU		
21FLHILL24010015	1981	7	1	1100	1.50	18	PCU		
21FLHILL24010015	1981	7	29	1115	1.30	23	PCU		
21FLHILL24010015	1981	8	26	1100	1.50	31	PCU		

21FLHILL24010015	1981	9	23	1105	1.00	25	PCU		
21FLHILL24010015	1981	10	15	1100	0.80	20	PCU		
21FLHILL24010015	1981	11	4	1300	1.00	14	PCU		
21FLHILL24010015	1981	12	9	1300	1.00	5	PCU		
21FLHILL24010015	1982	1	27	1300	0.50	15	PCU		
21FLHILL24010015	1982	2	24	1100	0.80	19	PCU		
21FLHILL24010015	1982	3	24	1100	1.00	13	PCU		
21FLHILL24010015	1982	4	21	1100	1.00	10	PCU		
21FLHILL24010015	1982	5	19	1130	0.50	17	PCU		
21FLHILL24010015	1982	6	16	1115	1.00	23	PCU		
21FLHILL24010015	1982	7	14	1105	1.00	6	PCU		
21FLHILL24010015	1982	8	11	1130	1.00	39	PCU		
21FLHILL24010015	1982	9	15	1105	1.50	30	PCU		
21FLHILL24010015	1982	10	13	1120	1.80	30	PCU		
21FLHILL24010015	1982	11	17	1115	0.80	19	PCU		
21FLA 24010015	1983	1	10	1030	.	40	PCU		
21FLHILL24010015	1983	1	26	1115	0.80	18	PCU		
21FLHILL24010015	1983	3	2	1200	0.80	44	PCU		
21FLHILL24010015	1983	3	30	1230	1.00	33	PCU		
21FLHILL24010015	1983	4	27	1110	0.80	23	PCU		
21FLHILL24010015	1983	5	25	1130	1.20	22	PCU		
21FLHILL24010015	1983	6	22	1105	1.50	23	PCU		
21FLHILL24010015	1983	7	20	1210	1.50	24	PCU		
21FLHILL24010015	1983	8	17	1300	1.50	36	PCU		
21FLHILL24010015	1983	9	14	1130	1.00	33	PCU		
21FLHILL24010015	1983	10	12	1130	1.30	38	PCU		
21FLHILL24010015	1983	11	16	1120	1.00	19	PCU		
21FLHILL24010015	1983	12	14	1115	1.00	18	PCU		
21FLHILL24010015	1984	1	25	1130	1.00	22	PCU		
21FLHILL24010015	1984	2	22	1120	0.80	23	PCU		
21FLHILL24010015	1984	3	28	1106	1.00	26	PCU		
21FLHILL24010015	1984	4	25	1115	0.50	18	PCU		
21FLHILL24010015	1984	5	23	1115	1.00	20	PCU		
21FLHILL24010015	1984	6	20	1100	1.00	33	PCU		
21FLHILL24010015	1984	7	18	1130	1.00	26	PCU		
21FLHILL24010015	1984	8	15	1125	1.00	29	PCU		
21FLHILL24010015	1984	9	12	1050	0.50	27	PCU		
21FLHILL24010015	1984	10	10	1100	1.00	18	PCU		
21FLHILL24010015	1984	11	7	1130	0.80	15	PCU		
21FLHILL24010015	1984	12	12	1130	1.00	12	PCU		
21FLHILL24010015	1985	1	16	1105	0.80	13	PCU		
21FLHILL24010015	1985	2	27	1100	1.00	15	PCU		
21FLHILL24010015	1985	3	27	1140	1.00	18	PCU		
21FLHILL24010015	1985	4	17	1105	0.80	33	PCU		
21FLHILL24010015	1985	5	15	1130	0.80	17	PCU		
21FLHILL24010015	1985	6	26	1200	1.00	22	PCU		
21FLHILL24010015	1985	7	24	1120	1.50	32	PCU		
21FLHILL24010015	1985	8	14	1125	1.50	26	PCU		
21FLHILL24010015	1985	9	11	1100	1.50	31	PCU		

21FLHILL24010015	1985	10	16	1125	0.80	29	PCU		
21FLHILL24010015	1985	11	13	1140	0.70	22	PCU		
21FLHILL24010015	1985	12	18	1140	0.80	15	PCU		
21FLHILL24010015	1986	1	29	1115	1.00	15	PCU		
21FLHILL24010015	1986	2	26	1120	0.80	17	PCU		
21FLHILL24010015	1986	3	26	1143	1.00	20	PCU		
21FLHILL24010015	1986	4	23	1057	0.80	16	PCU		
21FLHILL24010015	1986	5	21	1138	1.30	18	PCU		
21FLHILL24010015	1986	6	18	1149	1.80	18	PCU		
21FLHILL24010015	1986	7	23	1136	1.50	54	PCU		
21FLHILL24010015	1986	8	27	1023	0.80	26	PCU		
21FLHILL24010015	1986	9	24	1114	1.30	26	PCU		
21FLHILL24010015	1986	10	15	1135	1.00	33	PCU		
21FLHILL24010015	1986	11	5	1115	0.50	29	PCU		
21FLHILL24010015	1986	12	17	1135	0.50	15	PCU		
21FLHILL24010015	1987	1	28	1105	0.80	16	PCU		
21FLHILL24010015	1987	2	25	1105	0.50	13	PCU		
21FLHILL24010015	1987	3	25	1225	1.30	17	PCU		
21FLHILL24010015	1987	4	22	1030	1.00	27	PCU		
21FLHILL24010015	1987	5	27	1105	1.30	20	PCU		
21FLHILL24010015	1987	6	24	1116	1.30	20	PCU		
21FLHILL24010015	1987	7	29	1204	0.50	32	PCU		
21FLHILL24010015	1987	8	26	1058	1.00	27	PCU		
21FLHILL24010015	1987	9	23	1131	1.00	28	PCU		
21FLHILL24010015	1987	10	21	1210	1.00	20	PCU		
21FLHILL24010015	1987	11	18	1122	1.00	17	PCU		
21FLHILL24010015	1987	12	16	1100	1.00	20	PCU		
21FLHILL24010015	1988	1	27	1226	0.50	24	PCU		
21FLHILL24010015	1988	2	24	1110	1.00	13	PCU		
21FLHILL24010015	1988	3	16	1246	1.00	25	PCU		
21FLHILL24010015	1988	4	27	1220	1.00	24	PCU		
21FLHILL24010015	1988	5	25	1250	1.00	21	PCU		
21FLHILL24010015	1988	6	22	1220	1.00	16	PCU		
21FLHILL24010015	1988	7	26	1236	1.00	24	PCU		
21FLHILL24010015	1988	8	24	1115	1.00	38	PCU		
21FLHILL24010015	1988	9	28	1220	1.00	36	PCU		
21FLHILL24010015	1988	10	26	1115	1.00	20	PCU		
21FLHILL24010015	1988	11	30	1228	1.00	24	PCU		
21FLHILL24010015	1988	12	28	1331	1.00	16	PCU		
21FLHILL24010015	1989	1	25	1226	1.00	21	PCU		
21FLHILL24010015	1989	2	22	1105	1.00	19	PCU		
21FLHILL24010015	1989	3	22	1136	1.00	14	PCU		
21FLHILL24010015	1989	4	26	1150	1.00	18	PCU		
21FLHILL24010015	1989	5	31	1200	1.00	18	PCU		
21FLHILL24010015	1989	6	28	1135	1.00	28	PCU		
21FLHILL24010015	1989	7	26	1126	1.00	25	PCU		
21FLHILL24010015	1989	8	30	1117	1.00	28	PCU		
21FLHILL24010015	1989	9	27	1039	1.00	74	PCU		
21FLHILL24010015	1989	10	25	1040	1.00	27	PCU		

21FLHILL24010015	1989	11	29	1110	1.00	25	PCU		
21FLHILL24010015	1989	12	20	1048	1.00	22	PCU		
21FLHILL24010015	1990	1	31	1112	1.00	18	PCU		
21FLHILL24010015	1990	2	28	1110	1.00	27	PCU		
21FLHILL24010015	1990	3	28	1140	1.00	19	PCU		
21FLHILL24010015	1990	4	25	1047	1.00	16	PCU		
21FLHILL24010015	1990	5	30	1115	1.00	20	PCU		
21FLHILL24010015	1990	6	27	1109	1.00	22	PCU		
21FLHILL24010015	1990	8	1	1108	1.00	25	PCU		
21FLHILL24010015	1990	8	29	1130	1.00	21	PCU		
21FLHILL24010015	1990	9	26	1100	1.00	21	PCU		
21FLHILL24010015	1990	10	24	1038	1.00	15	PCU		
21FLHILL24010015	1990	11	28	1040	1.00	15	PCU		
21FLHILL24010015	1990	12	19	1040	1.00	16	PCU		
21FLHILL24010015	1991	1	23	1040	1.00	21	PCU		
21FLHILL24010015	1991	2	26	1052	1.00	15	PCU		
21FLHILL24010015	1991	3	27	1025	1.00	45	PCU		
21FLHILL24010015	1991	4	24	1030	1.00	17	PCU		
21FLHILL24010015	1991	5	22	1020	1.00	21	PCU		
21FLHILL24010015	1991	6	26	1107	1.00	21	PCU		
21FLHILL24010015	1991	7	31	1045	1.00	33	PCU		
21FLHILL24010015	1991	8	28	1050	1.00	31	PCU		
21FLHILL24010015	1991	9	25	1030	1.00	25	PCU		
21FLHILL24010015	1991	10	23	1050	1.00	24	PCU		
21FLHILL24010015	1991	11	20	1020	1.00	14	PCU		
21FLHILL24010015	1991	12	11	1137	1.00	13	PCU		
21FLHILL24010015	1992	1	29	1040	1.00	9	PCU		
21FLHILL24010015	1992	2	26	1055	0.75	39	PCU		
21FLHILL24010015	1992	2	26	1055	0.80	39	PCU		
21FLHILL24010015	1992	3	25	1025	0.50	12	PCU		
21FLHILL24010015	1992	4	22	1045	1.00	19	PCU		
21FLHILL24010015	1992	5	27	1100	1.00	20	PCU		
21FLHILL24010015	1992	6	24	1045	1.50	36	PCU		
21FLHILL24010015	1992	7	29	1040	1.00	55	PCU		
21FLHILL24010015	1992	8	26	1100	1.00	23	PCU		
21FLHILL24010015	1992	9	23	1120	1.50	25	PCU		
21FLHILL24010015	1992	10	28	1045	0.50	19	PCU		
21FLHILL24010015	1992	11	18	1055	0.75	17	PCU		
21FLHILL24010015	1992	11	18	1055	0.80	17	PCU		
21FLHILL24010015	1992	12	16	1050	0.75	13	PCU		
21FLHILL24010015	1992	12	16	1050	0.80	13	PCU		
21FLHILL24010015	1993	1	20	1045	1.00	19	PCU		
21FLHILL24010015	1993	2	17	1104	1.00	15	PCU		
21FLHILL24010015	1993	3	17	1045	0.30	19	PCU		
21FLHILL24010015	1993	4	21	1030	1.00	18	PCU		
21FLHILL24010015	1993	5	19	1027	1.00	18	PCU		
21FLHILL24010015	1993	6	16	1052	0.50	17	PCU		
21FLHILL24010015	1993	7	21	1025	0.50	19	PCU		
21FLHILL24010015	1993	8	18	1040	0.50	22	PCU		

21FLHILL24010015	1993	9	15	1040	1.00	20	PCU		
21FLHILL24010015	1993	10	20	1040	0.50	19	PCU		
21FLHILL24010015	1993	11	17	1042	0.50	21	PCU		
21FLHILL24010015	1993	12	15	1030	0.50	13	PCU		
21FLHILL24010015	1994	1	26	1040	0.30	16	PCU		
21FLHILL24010015	1994	2	23	1105	0.50	17	PCU		
21FLHILL24010015	1994	3	23	1100	0.30	13	PCU		
21FLHILL24010015	1994	4	27	1035	1.00	16	PCU		
21FLHILL24010015	1994	5	25	1124	1.00	14	PCU		
21FLHILL24010015	1994	6	22	1110	1.00	18	PCU		
21FLHILL24010015	1994	7	27	1115	0.75	18	PCU		
21FLHILL24010015	1994	7	27	1115	0.80	18	PCU		
21FLHILL24010015	1994	8	24	1040	1.00	29	PCU		
21FLHILL24010015	1994	9	28	1040	1.00	78	PCU		
21FLHILL24010015	1994	10	26	1045	0.50	27	PCU		
21FLHILL24010015	1995	1	25	1115	1.00	17	PCU		
21FLHILL24010015	1995	2	22	1100	1.00	21	PCU		
21FLHILL24010015	1995	3	22	1049	1.00	17	PCU		
21FLHILL24010015	1995	4	26	1127	1.00	15	PCU		
21FLHILL24010015	1995	5	24	1102	1.00	17	PCU		
21FLHILL24010015	1995	6	28	1035	1.00	55	PCU		
21FLHILL24010015	1995	7	26	1020	1.00	44	PCU		
21FLHILL24010015	1995	8	23	1038	1.00	33	PCU		
21FLHILL24010015	1995	9	27	1105	1.00	32	PCU		
21FLHILL24010015	1995	11	29	1127	1.00	21	PCU		
21FLHILL24010015	1995	12	13	1145	1.00	18	PCU		
21FLHILL24010015	1996	1	24	1051	1.00	20	PCU		
21FLHILL24010015	1996	2	21	1130	0.50	21	PCU		
21FLHILL24010015	1996	3	20	1130	0.50	25	PCU		
21FLHILL24010015	1996	4	17	1140	1.00	21	PCU		
21FLHILL24010015	1996	5	15	1100	0.50	18	PCU		
21FLHILL24010015	1996	6	19	1100	0.50	17	PCU		
21FLHILL24010015	1996	7	17	1110	0.50	24	PCU		
21FLHILL24010015	1996	8	21	1044	1.00	21	PCU		
21FLHILL24010015	1996	9	25	1128	1.00	18	PCU		
21FLHILL24010015	1996	10	16	1100	0.50	23	PCU		
21FLHILL24010015	1996	11	20	1105	1.00	12	PCU		
21FLHILL24010015	1996	12	11	1140	0.30	13	PCU		
21FLHILL24010015	1997	1	22	1115	0.50	11	PCU		
21FLHILL24010015	1997	2	19	1123	0.50	14	PCU		
21FLHILL24010015	1997	3	19	1122	0.50	13	PCU		
21FLHILL24010015	1997	4	16	1115	0.30	12	PCU		
21FLHILL24010015	1997	5	21	1140	0.80	16	PCU		
21FLHILL24010015	1997	6	18	1135	1.00	16	PCU		
21FLHILL24010015	1997	7	23	1058	0.50	21	PCU		
21FLHILL24010015	1997	8	20	1100	0.50	27	PCU		
21FLHILL24010015	1997	9	17	1102	0.50	26	PCU		
21FLHILL24010015	1997	10	15	1104	0.50	58	PCU		
21FLHILL24010015	1997	11	19	1100	0.50	37	PCU		

21FLHILL24010015	1997	12	10	1015	0.50	27	PCU		
21FLHILL24010015	1998	1	21	1034	0.50	30	PCU		
21FLHILL24010015	1998	2	18	1050	0.80	47	PCU		
21FLHILL24010015	1998	3	18	1050	0.80	26	PCU		
21FLHILL24010015	1998	4	22	1030	0.50	27	PCU		
21FLHILL24010015	1998	5	20	1030	0.50	14	PCU		
21FLHILL24010015	1998	6	17	1028	0.80	19	PCU		
21FLHILL24010015	1998	7	22	1024	1.00	19	PCU		
21FLHILL24010015	1998	8	26	1055	0.80	19	PCU		
21FLHILL24010015	1998	9	16	1030	1.00	18	PCU		
21FLHILL24010015	1998	10	21	1010	0.50	21	PCU		
21FLHILL24010015	1998	11	18	1105	0.50	17	PCU		
21FLHILL24010015	1998	12	9	1025	0.50	15	PCU		
21FLHILL136	1999	1	20	1130	0.30	13	PCU		
21FLHILL136	1999	2	17	1000	0.50	15	PCU		
21FLHILL136	1999	3	17	1034	0.30	14	PCU		
21FLHILL136	1999	4	21	1120	0.50	14	PCU		
21FLHILL136	1999	5	19	1041	1.00	15	PCU		
21FLHILL136	1999	6	16	1050	0.80	17	PCU		
21FLHILL136	1999	7	21	1115	0.80	19	PCU		
21FLHILL136	1999	8	18	1100	0.50	17	PCU		
21FLHILL136	1999	9	23	1120	1.00	24	PCU		
21FLHILL136	1999	10	13	1130	0.50	28	PCU		
21FLHILL136	1999	11	17	1105	0.50	18	PCU		
21FLHILL136	1999	12	15	1120	0.50	15	PCU		
21FLHILL136	2000	1	19	1105	0.50	14	PCU		
21FLHILL136	2000	2	16	1147	0.50	12	PCU		
21FLHILL136	2000	3	15	1110	0.30	11	PCU		
21FLHILL136	2000	4	19	1052	0.50	17	PCU		
21FLHILL136	2000	5	16	1043	0.30	16	PCU		
21FLHILL136	2000	6	21	1230	1.00	20	PCU		
21FLHILL136	2000	7	19	1120	0.80	53	PCU		
21FLHILL136	2000	8	16	1138	0.50	22	PCU		
21FLHILL136	2000	9	20	1112	0.80	29	PCU		
21FLHILL136	2000	10	11	1113	M	22	PCU		
21FLHILL136	2000	11	15	1115	M	21	PCU		
21FLHILL136	2000	12	13	1100	M	23	PCU		
21FLHILL136	2001	2	21	1105	M	14	PCU		
21FLHILL136	2001	3	21	1052	M	15	PCU		
21FLHILL136	2001	4	18	1320	M	23	PCU		
21FLHILL136	2001	5	16	1043	M	17	PCU		
21FLHILL136	2001	6	20	1055	M	41	PCU		
21FLHILL136	2001	7	25	1121	M	37	PCU		
21FLHILL136	2001	8	22	1358	M	34	PCU		
21FLHILL136	2001	9	19	1115	M	112	PCU		
21FLHILL136	2001	10	17	1132	M	40	PCU		
21FLHILL136	2001	11	14	1154	M	25	PCU		
21FLHILL136	2001	12	12	1141	M	36	PCU		
21FLHILL136	2002	1	16	1153	0.00	36	PCU		

21FLHILL136	2002	2	20	1120	0.66	18	PCU		
21FLHILL136	2002	3	20	1145	0.66	21	PCU		
21FLHILL136	2002	4	17	1058	0.66	21	PCU		
21FLHILL136	2002	5	15	1041	0.33	22	PCU		
21FLHILL136	2002	6	19	1044	0.98	20	PCU		
21FLHILL136	2002	7	24	1215	0.98	29	PCU		
21FLHILL136	2002	8	21	1139	0.98	32	PCU		
21FLHILL136	2002	9	18	1027	0.66	34	PCU		
21FLHILL136	2002	10	16	1108	1.31	28	PCU		
21FLHILL136	2002	11	20	1127	0.33	28	PCU		
21FLHILL136	2002	12	11	1130	0.66	44	PCU		
21FLHILL136	2003	1	15	1157	0.10	31	PCU		
21FLHILL136	2003	2	19	1230	0.10	18	PCU		
21FLHILL136	2003	3	19	1321	0.30	20	PCU		
21FLHILL136	2003	4	16	1358	0.40	22	PCU		
21FLHILL136	2003	5	21	1345	0.20	21	PCU		
21FLHILL136	2003	6	18	1115	0.20	21	PCU		
21FLHILL136	2003	7	16	1234	0.30	49	PCU		
21FLHILL136	2003	8	13	1335	0.30	51	PCU		
21FLHILL136	2003	9	17	1327	0.10	38	PCU		
21FLHILL136	2003	10	8	1310	0.40	27	PCU		
21FLHILL136	2003	11	19	1341	0.30	17	PCU		
21FLHILL136	2003	12	10	1348	0.00	16	PCU		
21FLHILL136	2004	1	14	0	0.00	14	PCU		1
21FLHILL136	2004	2	18	0	0.10	23	PCU		1
21FLHILL136	2004	3	17	0	0.10	24	PCU		1
21FLHILL136	2004	4	21	0	0.30	16	PCU		1
21FLHILL136	2004	5	19	0	0.40	13	PCU		1
21FLHILL136	2004	6	16	0	0.50	19	PCU		1
21FLHILL136	2004	7	21	0	0.10	32	PCU		1
21FLHILL136	2004	9	15	0	0.50	40	PCU		1
21FLHILL136	2004	10	20	0	0.20	31	PCU		1
21FLHILL136	2004	11	17	0	0.20	21	PCU		1
21FLHILL136	2004	12	15	0	0.10	19	PCU		1
21FLHILL136	2005	1	19	0	0.20	19.3	PCU		0.3
21FLHILL136	2005	2	16	0	0.10	14.5	PCU		0.3
21FLHILL136	2005	3	16	0	0.10	13.1	PCU		0.3
21FLHILL136	2005	4	20	0	0.10	15.4	PCU		0.3
21FLHILL136	2005	5	18	0	0.10	20.1	PCU		0.3
21FLHILL136	2005	6	15	0	0.20	26.8	PCU		0.3
21FLHILL136	2005	7	20	0	0.30	34.9	PCU		0.3
21FLHILL136	2005	8	17	0	0.30	19.4	PCU		0.3
21FLHILL136	2005	9	21	0	0.10	20	PCU		0.3
21FLHILL136	2005	10	19	0	0.30	22.1	PCU		0.3
21FLHILL136	2005	11	16	0	0.10	17.4	PCU		0.3
21FLHILL136	2005	12	21	0	0.20	11.3	PCU		0.3
21FLHILL136	2006	10	18	0	0.20	21.5	PCU		0.5
21FLHILL136	2006	11	15	0	0.10	16.4	PCU		0.5
21FLHILL136	2006	12	20	0	0.10	14.1	PCU		0.5

21FLHILL136	2007	1	17	0	0.10	15.7	PCU		0.5
21FLHILL136	2007	2	21	0	0.10	13.6	PCU		0.5
21FLHILL136	2007	3	21	0	0.10	11.5	PCU		0.5
21FLHILL136	2007	4	18	0	0.10	24.1	PCU		0.5
21FLHILL136	2007	5	16	0	0.30	15.8	PCU		0.5
21FLHILL136	2007	6	20	0	0.30	18.3	PCU		0.5
21FLHILL136	2007	7	25	0	0.40	21.8	PCU		0.5m
21FLHILL136	2007	8	15	0	0.20	28.8	PCU		0.5m
21FLHILL136	2007	9	19	0	0.35	23.5	PCU		0.5m
21FLHILL136	2007	10	17	0	0.25	20.8	PCU		0.5m
21FLHILL136	2007	11	28	0	0.15	13.5	PCU		0.5m
21FLHILL136	2007	12	12	0	0.15	13.3	PCU		0.5m
sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLTPA 274048208229581	2006	2	6	1045	0.20	15	PCU		5
21FLTPA 274048208229581	2006	2	28	1205	0.80	20	PCU		5
21FLTPA 274048208229581	2006	3	14	1120	0.20	30	PCU		5
21FLTPA 274048208229581	2006	4	4	1000	0.20	30	PCU		5
21FLTPA 274048208229581	2006	4	18	910	0.20	20	PCU		5
21FLTPA 274048208229581	2006	5	8	1120	0.20	30	PCU		5
21FLTPA 274048208229581	2006	7	10	955	0.20	60	PCU		10
21FLTPA 274048208229581	2006	7	31	1125	0.20	50	PCU		5
21FLTPA 274048208229581	2006	8	14	955	0.20	60	PCU		10
21FLTPA 274048208229581	2006	9	11	1245	0.20	80	PCU		10
21FLTPA 274048208229581	2006	10	2	955	0.20	60	PCU		10
21FLTPA 274048208229581	2006	10	23	1210	0.20	60	PCU		10
21FLTPA 274048208229581	2006	11	6	1245	0.20	40	PCU		5
21FLTPA 274048208229581	2006	11	27	935	0.20	20	PCU		5

Salinity:

sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLGFWFTBA960005	1996	4	22	1314	1.00	26.6	ppt		
21FLGFWFTBA960052	1996	6	17	750	0.70	27.9	ppt		
21FLGFWFTBA960061	1996	7	9	910	1.00	22.7	ppt		
21FLGFWFTBA960112	1996	9	10	1252	0.90	29.1	ppt		
21FLGFWFTBA960126	1996	10	8	1347	0.90	27.2	ppt		
21FLGFWFTBA970045	1997	3	13	853	1.50	31.3	ppt		
21FLGFWFTBA970046	1997	3	13	935	1.10	30.5	ppt		
21FLGFWFTBA970047	1997	3	13	1040	0.80	31.4	ppt		
21FLGFWFTBA970160	1997	8	15	1220	1.00	25.4	ppt		
21FLGFWFTBA970161	1997	9	10	935	0.80	25.1	ppt		
21FLGFWFTBA970328	1997	2	3	1420	1.20	29.4	ppt		
21FLGFWFTBA970404	1997	5	6	1415	1.80	25.7	ppt		
21FLGFWFTBM000046	2000	1	10	1350	0.60	29	ppt		
21FLGFWFTBM000171	2000	2	16	1354	0.80	29.4	ppt		
21FLGFWFTBM000230	2000	3	9	920	0.40	34.1	ppt		
21FLGFWFTBM000420	2000	4	5	1115	1.10	32.9	ppt		
21FLGFWFTBM000525	2000	5	11	755	0.80	34.4	ppt		
21FLGFWFTBM000716	2000	6	19	1318	1.00	32.6	ppt		
21FLGFWFTBM001296	2000	12	12	1328	0.50	31.5	ppt		
21FLGFWFTBM960250	1996	3	15	1220	0.50	22.7	ppt		
21FLGFWFTBM960480	1996	5	23	800	0.40	24.8	ppt		
21FLGFWFTBM960746	1996	8	19	823	0.50	24	ppt		
21FLGFWFTBM960747	1996	8	19	850	0.50	24	ppt		
21FLGFWFTBM960978	1996	10	22	1120	0.90	27.3	ppt		
21FLGFWFTBM961171	1996	12	17	1408	0.40	30.2	ppt		
21FLGFWFTBM970219	1997	3	7	1536	0.50	31.9	ppt		
21FLGFWFTBM970220	1997	3	7	1545	0.50	31.9	ppt		
21FLGFWFTBM970510	1997	6	11	743	0.50	30.7	ppt		
21FLGFWFTBM970788	1997	8	21	1135	0.30	13	ppt		
21FLGFWFTBM970999	1997	11	12	1100	0.80	23.9	ppt		
21FLGFWFTBM971107	1997	12	5	827	0.70	22.6	ppt		
21FLGFWFTBM980038	1998	1	16	845	1.50	15.5	ppt		
21FLGFWFTBM980201	1998	3	10	1230	1.00	14.6	ppt		
21FLGFWFTBM980246	1998	3	23	1120	0.80	4.4	ppt		
21FLGFWFTBM980436	1998	6	5	1222	1.30	23.9	ppt		
21FLGFWFTBM980515	1998	6	22	1040	0.70	25	ppt		
21FLGFWFTBM980783	1998	9	15	930	1.20	24.6	ppt		
21FLGFWFTBM980784	1998	9	15	1000	0.80	24.3	ppt		
21FLGFWFTBM990018	1999	1	8	830	0.90	25.5	ppt		
21FLGFWFTBM990230	1999	3	23	1330	0.60	27	ppt		
21FLGFWFTBM990548	1999	6	8	1306	1.00	32	ppt		
21FLGFWFTBM990626	1999	7	6	956	0.80	29.6	ppt		
21FLGFWFTBM990772	1999	8	11	1551	0.60	31.3	ppt		
21FLGFWFTBM991042	1999	11	5	1153	0.70	23.2	ppt		
21FLGFWFTBM991043	1999	11	5	1239	0.70	25.7	ppt		
21FLGFWFTBM991150	1999	12	2	1100	0.90	25.1	ppt		

21FLGFWFTBM991151	1999	12	2	1205	0.40	25.4	ppt		
21FLHILL01MTB6495	2001	8	27	931	0.10	28.3	ppt		
21FLHILL01MTB6495	2001	8	27	931	0.90	28.5	ppt		
sta	year	month	day	time	depth	result	Units	rcode	mdl
21FLHILL24010015	1978	1	25	1045	1.00	20.6	ppt	C	
21FLHILL24010015	1978	2	22	1100	1.00	8.7	ppt	C	
21FLHILL24010015	1978	3	21	1200	1.00	19.1	ppt	C	
21FLHILL24010015	1978	4	19	1120	1.00	0.2	ppt	K	
21FLHILL24010015	1978	7	12	1125	1.00	26	ppt	C	
21FLHILL24010015	1978	8	9	1130	1.00	13.2	ppt	C	
21FLHILL24010015	1978	9	6	1135	1.00	14	ppt	C	
21FLHILL24010015	1978	10	4	1130	0.80	12.9	ppt	C	
21FLHILL24010015	1978	11	15	1130	1.30	13.1	ppt	C	
21FLHILL24010015	1978	12	18	1130	0.80	14.3	ppt	C	
21FLHILL24010015	1979	1	24	1115	1.30	13.2	ppt	C	
21FLHILL24010015	1979	2	21	1145	1.00	14.5	ppt	C	
21FLHILL24010015	1979	3	20	1115	1.00	15.4	ppt	C	
21FLHILL24010015	1979	4	24	1130	1.00	32	ppt	C	
21FLHILL24010015	1979	5	17	1115	1.00	16.7	ppt	C	
21FLHILL24010015	1979	6	13	1200	1.00	28.5	ppt	C	
21FLHILL24010015	1979	7	11	1055	1.00	17.9	ppt	C	
21FLHILL24010015	1979	8	8	1125	0.80	18.8	ppt	C	
21FLHILL24010015	1979	9	5	1120	0.80	13.9	ppt	C	
21FLHILL24010015	1979	10	3	1100	1.30	14.5	ppt	C	
21FLHILL24010015	1979	10	31	1345	0.50	21.7	ppt	C	
21FLHILL24010015	1979	12	5	1100	0.50	22.3	ppt	C	
21FLHILL24010015	1980	1	31	1120	0.80	22.8	ppt	C	
21FLHILL24010015	1980	2	27	1130	0.80	15.4	ppt	C	
21FLHILL24010015	1980	3	27	1145	1.00	21.1	ppt	C	
21FLHILL24010015	1980	4	23	1104	1.00	20.7	ppt	C	
21FLHILL24010015	1980	5	21	1125	1.00	0.2	ppt	K	
21FLHILL24010015	1980	6	18	1130	1.00	25.2	ppt	C	
21FLHILL24010015	1980	7	16	1110	0.80	20.8	ppt	C	
21FLHILL24010015	1980	8	13	1045	1.00	17.1	ppt	C	
21FLHILL24010015	1980	9	10	1120	0.80	0.8	ppt	C	
21FLHILL24010015	1980	10	15	1130	1.00	18.7	ppt	C	
21FLHILL24010015	1980	11	13	1035	1.00	0.2	ppt	K	
21FLHILL24010015	1980	12	17	1105	1.50	0.2	ppt	K	
21FLHILL24010015	1981	1	28	1120	1.00	17.6	ppt	C	
21FLHILL24010015	1981	2	25	1115	1.00	19.7	ppt	C	
21FLHILL24010015	1981	3	25	1110	1.00	18.9	ppt	C	
21FLHILL24010015	1981	5	6	1110	1.00	26.2	ppt		
21FLHILL24010015	1981	6	3	1115	1.00	28.7	ppt	C	
21FLHILL24010015	1981	7	1	1100	1.50	25	ppt	C	
21FLHILL24010015	1981	7	29	1115	1.30	27.9	ppt		
21FLHILL24010015	1981	8	26	1100	1.50	18.5	ppt	C	
21FLHILL24010015	1981	9	23	1105	1.00	20.1	ppt	C	
21FLHILL24010015	1981	10	15	1100	0.80	21.7	ppt	C	
21FLHILL24010015	1981	11	4	1300	1.00	23	ppt	C	

21FLHILL24010015	1981	12	9	1300	1.00	22.3	ppt	C	
21FLHILL24010015	1982	1	27	1300	0.50	19.5	ppt	C	
21FLHILL24010015	1982	2	24	1100	0.80	18.5	ppt	C	
21FLHILL24010015	1982	3	24	1100	1.00	19.7	ppt	C	
21FLHILL24010015	1982	4	21	1100	1.00	19.6	ppt	C	
21FLHILL24010015	1982	5	19	1130	0.50	23	ppt	C	
21FLHILL24010015	1982	6	16	1115	1.00	25.7	ppt		
21FLHILL24010015	1982	7	14	1105	1.00	15.8	ppt	C	
21FLHILL24010015	1982	8	11	1130	1.00	13	ppt	C	
21FLHILL24010015	1982	9	15	1105	1.50	15	ppt	C	
21FLHILL24010015	1982	10	13	1120	1.80	14.3	ppt	C	
21FLHILL24010015	1982	11	17	1115	0.80	17.9	ppt	C	
21FLHILL24010015	1983	1	26	1115	0.80	25.1	ppt	C	
21FLHILL24010015	1983	3	2	1200	0.80	7.8	ppt	C	
21FLHILL24010015	1983	3	30	1230	1.00	15.4	ppt	C	
21FLHILL24010015	1983	4	27	1110	0.80	17.9	ppt	C	
21FLHILL24010015	1983	5	25	1130	1.20	25.6	ppt	C	
21FLHILL24010015	1983	6	22	1105	1.50	24.8	ppt	C	
21FLHILL24010015	1983	7	20	1210	1.50	24.2	ppt	C	
21FLHILL24010015	1983	8	17	1300	1.50	14.7	ppt	C	
21FLHILL24010015	1983	9	14	1130	1.00	15.2	ppt	C	
21FLHILL24010015	1983	10	12	1130	1.30	15.3	ppt	C	
21FLHILL24010015	1983	11	16	1120	1.00	21.4	ppt	C	
21FLHILL24010015	1983	12	14	1115	1.00	0.1	ppt	C	
21FLHILL24010015	1984	1	25	1130	1.00	21.4	ppt		
21FLHILL24010015	1984	2	22	1120	0.80	20	ppt		
21FLHILL24010015	1984	3	28	1106	1.00	0.3	ppt	C	
21FLHILL24010015	1984	4	25	1115	0.50	23.4	ppt	C	
21FLHILL24010015	1984	5	23	1115	1.00	26.4	ppt	C	
21FLHILL24010015	1984	6	20	1100	1.00	26.4	ppt	C	
21FLHILL24010015	1984	7	18	1130	1.00	21.4	ppt	C	
21FLHILL24010015	1984	8	15	1125	1.00	20.7	ppt	C	
21FLHILL24010015	1984	9	12	1050	0.50	15.8	ppt	C	
21FLHILL24010015	1984	10	10	1100	1.00	14.1	ppt	C	
21FLHILL24010015	1984	11	7	1130	0.80	24.7	ppt	C	
21FLHILL24010015	1984	12	12	1130	1.00	15.9	ppt	C	
21FLHILL24010015	1985	1	16	1105	0.80	0.1	ppt	C	
21FLHILL24010015	1985	2	27	1100	1.00	25.4	ppt	C	
21FLHILL24010015	1985	3	27	1140	1.00	0.1	ppt	C	
21FLHILL24010015	1985	4	17	1105	0.80	25.1	ppt	C	
21FLHILL24010015	1985	5	15	1130	0.80	28.8	ppt	C	
21FLHILL24010015	1985	6	26	1200	1.00	24.2	ppt	C	
21FLHILL24010015	1985	7	24	1120	1.50	27.8	ppt	C	
21FLHILL24010015	1985	8	14	1125	1.50	25.2	ppt	C	
21FLHILL24010015	1985	9	11	1100	1.50	20.6	ppt	C	
21FLHILL24010015	1985	10	16	1125	0.80	16.6	ppt	C	
21FLHILL24010015	1985	11	13	1140	0.70	16.4	ppt	C	
21FLHILL24010015	1985	12	18	1140	0.80	26.1	ppt	C	
21FLHILL24010015	1986	1	29	1115	1.00	17.5	ppt	C	

21FLHILL24010015	1986	2	26	1120	0.80	26.3	ppt	C	
21FLHILL24010015	1986	3	26	1143	1.00	18.7	ppt	C	
21FLHILL24010015	1986	4	23	1057	0.80	24.7	ppt	C	
21FLHILL24010015	1986	5	21	1138	1.30	28.7	ppt	C	
21FLHILL24010015	1986	6	18	1149	1.80	31.1	ppt	C	
21FLHILL24010015	1986	7	23	1136	1.50	27.7	ppt	C	
21FLHILL24010015	1986	8	27	1023	0.80	0.1	ppt	K	
21FLHILL24010015	1986	9	24	1114	1.30	24	ppt	C	
21FLHILL24010015	1986	10	15	1135	1.00	22.3	ppt	C	
21FLHILL24010015	1986	11	5	1115	0.50	22.7	ppt	C	
21FLHILL24010015	1986	12	17	1135	0.50	14.8	ppt	C	
21FLHILL24010015	1987	1	28	1105	0.80	24.4	ppt	C	
21FLHILL24010015	1987	2	25	1105	0.50	25.1	ppt	C	
21FLHILL24010015	1987	3	25	1225	1.30	26.8	ppt	C	
21FLHILL24010015	1987	4	22	1030	1.00	9.1	ppt	C	
21FLHILL24010015	1987	5	27	1105	1.30	23.5	ppt	C	
21FLHILL24010015	1987	6	24	1116	1.30	27.3	ppt	C	
21FLHILL24010015	1987	7	29	1204	0.50	20.3	ppt	C	
21FLHILL24010015	1987	8	26	1058	1.00	23.3	ppt	C	
21FLHILL24010015	1987	9	23	1131	1.00	25.1	ppt	C	
21FLHILL24010015	1987	10	21	1210	1.00	19.7	ppt	C	
21FLHILL24010015	1987	11	18	1122	1.00	20.6	ppt	C	
21FLHILL24010015	1987	12	16	1100	1.00	21.4	ppt	C	
21FLHILL24010015	1988	1	27	1226	0.50	15.4	ppt	C	
21FLHILL24010015	1988	2	24	1110	1.00	23.4	ppt	C	
21FLHILL24010015	1988	3	16	1246	1.00	15	ppt	C	
21FLHILL24010015	1988	4	27	1220	1.00	25.2	ppt	C	
21FLHILL24010015	1988	5	25	1250	1.00	28.4	ppt	C	
21FLHILL24010015	1988	6	22	1220	1.00	29	ppt	C	
21FLHILL24010015	1988	7	26	1236	1.00	25.8	ppt	C	
21FLHILL24010015	1988	8	24	1115	1.00	19.2	ppt	C	
21FLHILL24010015	1988	9	28	1220	1.00	18.1	ppt	C	
21FLHILL24010015	1988	10	26	1115	1.00	22.3	ppt	C	
21FLHILL24010015	1988	11	30	1228	1.00	20.2	ppt	C	
21FLHILL24010015	1988	12	28	1331	1.00	23.6	ppt		
21FLHILL24010015	1989	1	25	1226	1.00	19.9	ppt		
21FLHILL24010015	1989	2	22	1105	1.00	27.5	ppt	C	
21FLHILL24010015	1989	3	22	1136	1.00	25.9	ppt		
21FLHILL24010015	1989	4	26	1150	1.00	26.5	ppt		
21FLHILL24010015	1989	5	31	1200	1.00	29.9	ppt		
21FLHILL24010015	1989	6	28	1135	1.00	26.1	ppt		
21FLHILL24010015	1989	7	26	1126	1.00	26.9	ppt		
21FLHILL24010015	1989	8	30	1117	1.00	24.7	ppt		
21FLHILL24010015	1989	9	27	1039	1.00	17.4	ppt		
21FLHILL24010015	1989	10	25	1040	1.00	21.6	ppt	K	
21FLHILL24010015	1989	11	29	1110	1.00	23.8	ppt		
21FLHILL24010015	1989	12	20	1048	1.00	25.5	ppt		
21FLHILL24010015	1990	1	31	1112	1.00	24.6	ppt		
21FLHILL24010015	1990	2	28	1110	1.00	20.8	ppt		

21FLHILL24010015	1990	3	28	1140	1.00	27.5	ppt	C	
21FLHILL24010015	1990	4	25	1047	1.00	0.1	ppt	K	
21FLHILL24010015	1990	6	27	1109	1.00	28.8	ppt		
21FLHILL24010015	1990	8	1	1108	1.00	25.8	ppt		
21FLHILL24010015	1990	8	29	1130	1.00	30.7	ppt		
21FLHILL24010015	1990	9	26	1100	1.00	30.2	ppt		
21FLHILL24010015	1990	10	24	1038	1.00	26.8	ppt		
21FLHILL24010015	1990	11	28	1040	1.00	30	ppt		
21FLHILL24010015	1990	12	19	1040	1.00	31	ppt		
21FLHILL24010015	1991	1	23	1040	1.00	27.4	ppt		
21FLHILL24010015	1991	2	26	1052	1.00	25.4	ppt		
21FLHILL24010015	1991	3	27	1025	0.75	27.6	ppt		
21FLHILL24010015	1991	3	27	1025	1.00	27.6	ppt		
21FLHILL24010015	1991	4	24	1030	0.75	29.4	ppt		
21FLHILL24010015	1991	4	24	1030	1.00	29.4	ppt		
21FLHILL24010015	1991	5	22	1020	1.00	30	ppt		
21FLHILL24010015	1991	6	26	1107	1.00	31	ppt		
21FLHILL24010015	1991	6	26	1107	1.50	31	ppt		
21FLHILL24010015	1991	7	31	1045	1.00	24.6	ppt		
21FLHILL24010015	1991	7	31	1045	1.25	24.6	ppt		
21FLHILL24010015	1991	8	28	1050	0.75	19.1	ppt		
21FLHILL24010015	1991	8	28	1050	1.00	19.1	ppt		
21FLHILL24010015	1991	9	25	1030	1.00	21.6	ppt		
21FLHILL24010015	1991	10	23	1050	1.00	21.5	ppt		
21FLHILL24010015	1991	11	20	1020	1.00	27	ppt		
21FLHILL24010015	1991	12	11	1137	1.00	24.4	ppt		
21FLHILL24010015	1992	1	29	1040	1.00	28	ppt		
21FLHILL24010015	1992	2	26	1055	0.75	4.7	ppt		
21FLHILL24010015	1992	2	26	1055	0.80	4.7	ppt		
21FLHILL24010015	1992	3	25	1025	0.50	24.1	ppt		
21FLHILL24010015	1992	4	22	1045	1.00	25.2	ppt		
21FLHILL24010015	1992	5	27	1100	1.00	29.5	ppt		
21FLHILL24010015	1992	6	24	1045	1.50	15	ppt		
21FLHILL24010015	1992	7	29	1040	1.00	11.8	ppt		
21FLHILL24010015	1992	8	26	1100	1.00	23.4	ppt		
21FLHILL24010015	1992	9	23	1120	1.50	21.7	ppt		
21FLHILL24010015	1992	10	28	1045	0.50	22.7	ppt		
21FLHILL24010015	1992	11	18	1055	0.75	24.6	ppt		
21FLHILL24010015	1992	11	18	1055	0.80	24.6	ppt		
21FLHILL24010015	1992	12	16	1050	0.75	26.1	ppt		
21FLHILL24010015	1992	12	16	1050	0.80	26.1	ppt		
21FLHILL24010015	1993	1	20	1045	1.00	21.4	ppt		
21FLHILL24010015	1993	2	17	1104	1.00	24.5	ppt		
21FLHILL24010015	1993	3	17	1045	0.30	21.2	ppt		
21FLHILL24010015	1993	4	21	1030	1.00	21.6	ppt		
21FLHILL24010015	1993	5	19	1027	1.00	26.1	ppt		
21FLHILL24010015	1993	6	16	1052	0.50	28.8	ppt		
21FLHILL24010015	1993	7	21	1025	0.50	30.6	ppt		
21FLHILL24010015	1993	8	18	1040	0.50	32.1	ppt		

21FLHILL24010015	1993	9	15	1040	0.50	27.2	ppt		
21FLHILL24010015	1993	9	15	1040	1.00	27.2	ppt		
21FLHILL24010015	1993	10	20	1040	0.50	26.2	ppt		
21FLHILL24010015	1993	11	17	1042	0.25	26.7	ppt		
21FLHILL24010015	1993	11	17	1042	0.50	26.7	ppt		
21FLHILL24010015	1993	12	15	1030	0.50	28	ppt		
21FLHILL24010015	1994	1	26	1040	0.30	23.6	ppt		
21FLHILL24010015	1994	2	23	1105	0.50	26.8	ppt		
21FLHILL24010015	1994	3	23	1100	0.30	27.7	ppt		
21FLHILL24010015	1994	4	27	1035	1.00	28.2	ppt		
21FLHILL24010015	1994	5	25	1124	1.00	31.5	ppt		
21FLHILL24010015	1994	6	22	1110	1.00	29.7	ppt		
21FLHILL24010015	1994	6	22	1110	1.25	29.7	ppt		
21FLHILL24010015	1994	7	27	1115	0.75	30.8	ppt		
21FLHILL24010015	1994	7	27	1115	0.80	30.8	ppt		
21FLHILL24010015	1994	8	24	1040	1.00	22.3	ppt		
21FLHILL24010015	1994	9	28	1040	1.00	10	ppt		
21FLHILL24010015	1994	10	26	1045	0.50	19.9	ppt		
21FLHILL24010015	1995	1	25	1115	1.00	19.2	ppt		
21FLHILL24010015	1995	2	22	1100	0.50	20.6	ppt		
21FLHILL24010015	1995	2	22	1100	1.00	20.6	ppt		
21FLHILL24010015	1995	3	22	1049	0.50	24.5	ppt		
21FLHILL24010015	1995	3	22	1049	1.00	24.5	ppt		
21FLHILL24010015	1995	4	26	1127	1.00	27.7	ppt		
21FLHILL24010015	1995	5	24	1102	0.50	31.9	ppt		
21FLHILL24010015	1995	5	24	1102	1.00	31.9	ppt		
21FLHILL24010015	1995	6	28	1035	0.50	15.5	ppt		
21FLHILL24010015	1995	6	28	1035	1.00	15.5	ppt		
21FLHILL24010015	1995	7	26	1020	1.00	16.3	ppt		
21FLHILL24010015	1995	8	23	1038	1.00	19.3	ppt		
21FLHILL24010015	1995	9	27	1105	1.00	21.1	ppt		
21FLHILL24010015	1995	10	25	1120	1.00	17.2	ppt		
21FLHILL24010015	1995	11	29	1127	1.00	20.8	ppt		
21FLHILL24010015	1995	12	13	1145	1.00	21.1	ppt		
21FLHILL24010015	1996	1	24	1051	1.00	21.6	ppt		
21FLHILL24010015	1996	2	21	1130	0.50	18.8	ppt		
21FLHILL24010015	1996	3	20	1130	0.50	22.9	ppt		
21FLHILL24010015	1996	4	17	1140	1.00	20.9	ppt		
21FLHILL24010015	1996	5	15	1100	0.50	24.1	ppt		
21FLHILL24010015	1996	6	19	1100	0.50	28.1	ppt		
21FLHILL24010015	1996	7	17	1110	0.50	24.3	ppt		
21FLHILL24010015	1996	8	21	1044	1.00	25.1	ppt		
21FLHILL24010015	1996	9	25	1128	1.00	28.2	ppt		
21FLHILL24010015	1996	10	16	1100	0.50	24.8	ppt		
21FLHILL24010015	1996	12	11	1140	0.30	27.1	ppt		
21FLHILL24010015	1997	1	22	1115	0.50	28.8	ppt		
21FLHILL24010015	1997	3	19	1122	0.50	30.7	ppt		
21FLHILL24010015	1997	4	16	1115	0.30	29.3	ppt		
21FLHILL24010015	1997	5	21	1140	0.80	27.4	ppt		

21FLHILL24010015	1997	6	18	1135	1.00	31.1	ppt		
21FLHILL24010015	1997	7	23	1058	0.50	26	ppt		
21FLHILL24010015	1997	8	20	1100	0.50	27.1	ppt		
21FLHILL24010015	1997	9	17	1102	0.50	27.6	ppt		
21FLHILL24010015	1997	10	15	1104	0.50	20.7	ppt		
21FLHILL24010015	1997	11	19	1100	0.50	13.6	ppt		
21FLHILL24010015	1997	12	10	1015	0.50	20.7	ppt		
21FLHILL24010015	1998	1	21	1034	0.50	15	ppt		
21FLHILL24010015	1998	2	18	1050	0.80	3.2	ppt		
21FLHILL24010015	1998	3	18	1050	0.80	16	ppt		
21FLHILL24010015	1998	4	22	1030	0.50	18.2	ppt		
21FLHILL24010015	1998	5	20	1030	0.50	24.6	ppt		
21FLHILL24010015	1998	6	17	1028	0.80	26.3	ppt		
21FLHILL24010015	1998	7	22	1024	1.00	25.3	ppt		
21FLHILL24010015	1998	8	26	1055	0.80	26.2	ppt		
21FLHILL24010015	1998	9	16	1030	1.00	24.1	ppt		
21FLHILL24010015	1998	10	21	1010	0.50	22	ppt		
21FLHILL24010015	1998	11	18	1105	0.50	23.1	ppt		
21FLHILL24010015	1998	12	9	1025	0.50	25.9	ppt		
21FLHILL136	1999	1	20	1130	0.30	25.4	ppt		
21FLHILL136	1999	2	17	1000	0.50	26.5	ppt		
21FLHILL136	1999	3	17	1034	0.30	26.3	ppt		
21FLHILL136	1999	4	21	1120	0.50	30	ppt		
21FLHILL136	1999	5	19	1041	1.00	29.7	ppt		
21FLHILL136	1999	6	16	1050	0.80	31.4	ppt		
21FLHILL136	1999	7	21	1115	0.80	27.1	ppt		
21FLHILL136	1999	8	18	1100	0.50	28.2	ppt		
21FLHILL136	1999	9	23	1120	1.00	23.1	ppt		
21FLHILL136	1999	10	13	1130	0.50	21.6	ppt		
21FLHILL136	1999	11	17	1105	0.50	24.7	ppt		
21FLHILL136	1999	12	15	1120	0.50	26.5	ppt		
21FLHILL136	2000	1	19	1105	0.50	23	ppt		
21FLHILL136	2000	2	16	1147	0.50	28.5	ppt		
21FLHILL136	2000	3	15	1110	0.30	31.4	ppt		
21FLHILL136	2000	5	16	1043	0.30	33.6	ppt		
21FLHILL136	2000	6	21	1230	1.00	30.6	ppt		
21FLHILL136	2000	7	19	1120	0.80	11.3	ppt		
21FLHILL136	2000	8	16	1138	0.50	28.9	ppt		
21FLHILL136	2000	9	20	1112	0.80	24.1	ppt		
21FLHILL136	2000	10	11	1113	M	25.3	ppt		
21FLHILL136	2000	11	15	1115	M	28.2	ppt		
21FLHILL136	2000	12	13	1100	M	30.5	ppt		
21FLHILL136	2001	2	21	1105	M	32.6	ppt		
21FLHILL136	2001	3	21	1052	M	30.5	ppt		
21FLHILL136	2001	4	18	1320	M	28.3	ppt		
21FLHILL136	2001	5	16	1043	M	32.7	ppt		
21FLHILL136	2001	6	20	1055	M	35.5	ppt		
21FLHILL136	2001	7	25	1121	M	28.2	ppt		
21FLHILL136	2001	8	22	1358	M	27.2	ppt		

21FLHILL136	2001	9	19	1115	M	10	ppt		
21FLHILL136	2001	10	17	1132	M	21.9	ppt		
21FLHILL136	2001	11	14	1154	M	24.4	ppt		
21FLHILL136	2001	12	12	1141	M	29.3	ppt		
21FLHILL136	2002	1	16	1153	0.00	25.6	ppt		
21FLHILL136	2002	2	20	1120	0.66	29.6	ppt		
21FLHILL136	2002	3	20	1145	0.66	30	ppt		
21FLHILL136	2002	4	17	1058	0.66	31.4	ppt		
21FLHILL136	2002	5	15	1041	0.33	7.4	ppt		
21FLHILL136	2002	6	19	1044	0.98	31.5	ppt		
21FLHILL136	2002	7	24	1215	0.98	26.6	ppt		
21FLHILL136	2002	8	21	1139	0.98	24.3	ppt		
21FLHILL136	2002	9	18	1027	0.66	22.5	ppt		
21FLHILL136	2002	10	16	1108	1.31	23.7	ppt		
21FLHILL136	2002	11	20	1127	0.33	22.1	ppt		
21FLHILL136	2002	12	11	1130	0.66	7.1	ppt		
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21FLHILL93MTB54A	1993	9	20	1104	0.10	28.8	ppt		
21FLHILL93MTB54A	1993	9	20	1104	0.50	28.8	ppt		
21FLHILL93MTB54B	1993	9	20	1104	0.10	28.8	ppt		
21FLHILL93MTB54B	1993	9	20	1104	0.50	28.8	ppt		
21FLHILL94MTB54	1994	9	14	1226	0.10	21.2	ppt		
21FLHILL94MTB54	1994	9	14	1226	1.00	21.2	ppt		
21FLHILL95MTB30	1995	9	19	945	0.10	22	ppt		
21FLHILL95MTB30	1995	9	19	945	0.50	22.1	ppt		
21FLHILL95MTB34	1995	9	19	1100	0.10	22.4	ppt		
21FLHILL95MTB34	1995	9	19	1100	0.50	22.3	ppt		
21FLTPA 274048208229581	2006	2	28	1205	0.20	27.61	ppt		
21FLTPA 274048208229581	2006	3	14	1120	0.20	27.78	ppt		
21FLTPA 274048208229581	2006	4	4	1000	0.20	29.3	ppt		
21FLTPA 274048208229581	2006	4	18	910	0.20	29.72	ppt		
21FLTPA 274048208229581	2006	5	8	1120	0.20	31.45	ppt		
21FLTPA 274048208229581	2006	7	10	955	0.20	30.54	ppt		
21FLTPA 274048208229581	2006	7	31	1125	0.20	28.57	ppt		
21FLTPA 274048208229581	2006	8	14	955	0.20	29.57	ppt		
21FLTPA 274048208229581	2006	9	11	1245	0.20	22.11	ppt		
21FLTPA 274048208229581	2006	10	2	955	0.20	21.37	ppt		
21FLTPA 274048208229581	2006	10	23	1210	0.20	22.22	ppt		
21FLTPA 274048208229581	2006	11	6	1245	0.20	25.11	ppt		
21FLTPA 274048208229581	2006	11	27	935	0.20	25.53	ppt		