FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Environmental Assessment and Restoration, Bureau of Watershed Restoration

NORTHWEST DISTRICT • PENSACOLA BAY BASIN

Final TMDL Report

Appendix C:

Judges Bayou (freshwater) (WBID 493A) and (marine) (WBID 493B)

Data Figures/Tables

June 7, 2013

Contents

List of Tables

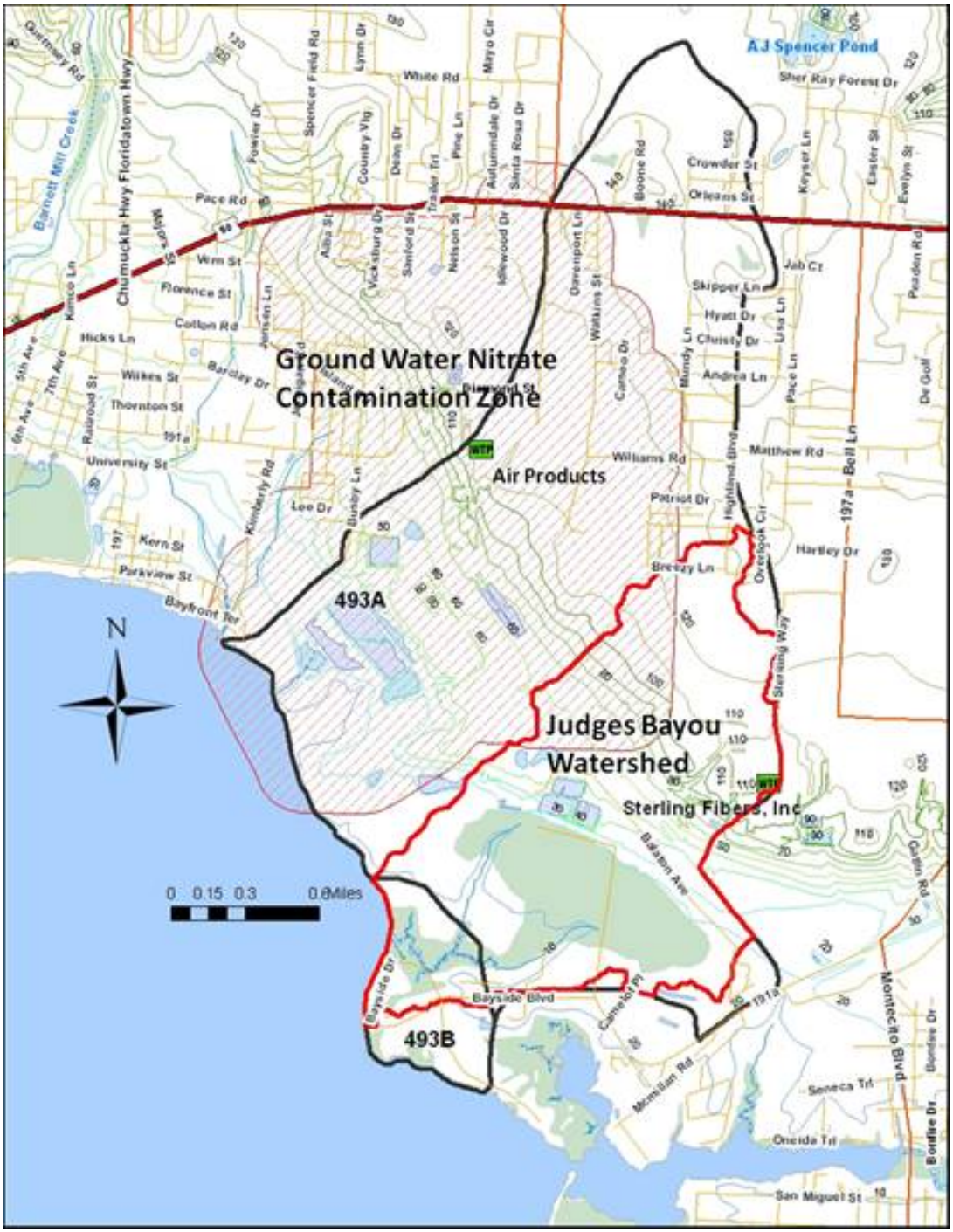
List of Figures

C.1 Judges Bayou (WBIDs 493A and 493B) Data Presentation

Judges Bayou

The original Judges Bayou WBIDs 493A (freshwater) and 493B (marine) included areas that appear to drain either directly to the bay or to features not connected to the Judges Bayou watershed. The Department utilized LiDar 1-foot elevation contour data provided by the NWFWMD, information provided by staff in the Department's Northwest District Office, and best professional judgment to delineate the area within these two WBIDs that drains to Judges Bayou (**Figure C.1**). **Figure C.1** shows the original WBID boundaries, ground water nitrate contamination zone, the new delineated watershed for Judges Bayou, the location of the Taminco (formally Air Products) and Sterling Fibers state-permitted facilities, and five-foot counter intervals.

Figure C.1. Judges Bayou (Original WBIDs 493A and 493B, and New Delineated Watershed)



Sterling Fibers Permit Information

NPDES Permit FL0002593

Issued October 10, 2011; expires October 9, 2016

Figure 2 depicts the location of ground water monitoring wells, sprayfield, Outfall D-002, and sampling locations for the Sterling Fibers effluent applied to the sprayfield located in the Judges Bayou watershed. The following text concerning surface water discharge and land application is from the recently issued Sterling Fibers permit.

The Santa Rosa Plant historically produced acrylic fiber from monomeric acrylonitrile and vinyl acetate. Since 2005, the facility has focused on downstream processing of purchased fiber, including fibrillation, fiber conductivity enhancements, and short fiber cutting. In addition to raw materials for manufacturing that are no longer required, the change in manufacturing operations has also lowered the volume and affected the composition of wastewater generated from the facility and the operational schedules for the wastewater disposal facilities.

The wastewater generated at the facility is normally treated in an aerated lagoon/stabilization pond, biological treatment system. Effluent disposal from the lagoons is accomplished through land application (R001 sprayfield). Sterling has the option of sending the wastewater to their deep underground injection treatment and disposal system as long as the discharge meets the conditions of UIC Permit No. 0066268. Following permit issuance, Sterling will have the option of accepting up to 1.4 mgd of highly treated effluent from Pace Water Systems (PWS) following DEP approval of an engineering plan to be submitted outlining the details of the project. Sterling's acceptance of the PWS effluent will be authorized once the engineering plan is reviewed and approved by the Department. Following approval, the engineering plan will become a part of the permitting documents for the Sterling Fibers Plant. No additional monitoring is anticipated to be necessary, as the PWS effluent is highly treated.

Effluent Disposal

Outfall D-001: Discharge via D-001 to Escambia Bay has been eliminated and is not allowed by this permit.

Outfall D-002: The permittee is authorized to discharge from Outfall D-002, stormwater and ground water from the lower landfill to an unnamed tributary, located approximately at Latitude 30° 33' 53" N, Longitude 87° 08' 38" W. The effluent consists of accumulated stormwater and ground water from the closed landfill, ground water from the spray irrigation site, and direct rainfall captured by a five-acre pond. The discharge is to an unnamed creek that flows to Escambia Bay and does not drain into Judges Bayou.

Land Application (R-001):
The facility uses a 1.9-MGD design capacity, spray irrigation system. Wastewater (and other stored water) from the treatment lagoons is spray irrigated to a 164.3-acre land application area. If the capacity of the sprayfield irrigation system is exceeded at any time for any reason, including, but not limited to, storm events in excess of a 25-year, 24-hour storm, chronic rainfall equivalent to a 25-year storm, or other catastrophic events, the permittee must notify the Department. Following notification, the permittee may direct discharges to its deep underground injection surface impoundment as long as the discharge meets the conditions of

UIC Permit 0066268. If for some reason, deep well discharge is not an option and sprayfield (R-001) capacity is exceeded, the permittee must cease generating wastewater or find other means of storing or disposing of the wastewater until sprayfield capacity is restored.

Discharge to R-001 may recommence once the event has passed and capacity is restored in the R-001 system. See Permit Condition I.C.1 for sprayfield flow limits that are based on hydraulic loading limits listed in Permit Condition I.C.3.

Land application system R-001 is located approximately at Latitude 30° 34' 11" N, Longitude 87° 07' 57" W.

2. The following monitoring wells shall be sampled for Land Application System, Spray Irrigation System R-001:

Monitoring Well ID	Description of Monitoring Location		Depth (Feet)	Aquifer Monitored	New or Existing
	Alternate Well Name	WAFR ID			
MWB-1	SI-1	1551	57	Surficial	Existing
MWC-6	SI-6	34621	20	Surficial	Existing
MWI-25	SI-5	1547	31	Surficial	Existing
MWI-7	SI-7	25849	18	Surficial	Existing
MWI-8	SI-8	25850	23	Surficial	Existing
MWI-9	SI-9	25851	19	Surficial	Existing
MWC-10	SI-10	25853	31	Surficial	Existing
MWC-11	SI-11	25854	32	Surficial	Existing

MWB = Background; MWI = Intermediate; MWC = Compliance

5. The following monitoring wells shall be sampled for closed and active landfills (WACS ID NWD/57/00013202)

Monitoring Well ID	Description of Monitoring Location			Depth (Feet)	Aquifer Monitored	New or Existing
	Alternate Well Name	WAFR ID	WACS ID			
MWB-1	SI-1	1551	10370	57	Surficial	Existing
MWC-6	SI-6	34621	21590	20	Surficial	Existing
MWC-23	MW-23	1539	10431	33	Surficial	Existing
MWC-24	MW-24	1540	10430	23	Surficial	Existing
MWC-26	Picnic Pavilion	1541	10429	103	Surficial	Existing
MWI-1	MW-1	1538	10432	15	Surficial	Existing
MWI-3	MW-3	1537	10433	9	Surficial	Existing
MWI-5	MW-5	1536	10434	20	Surficial	Existing
MWI-10	MW-10	1535	10435	20	Surficial	Existing
MWI-13	MW-13	1534	10436	14	Surficial	Existing
MWI-17	MW-17	1532	10438	16	Surficial	Existing
MWI-18	NW-18	1533	10437	18	Surficial	Existing

MWB = Background; MWI = Intermediate; MWC = Compliance

9. The following surface water monitoring points shall be sampled for the spray irrigation system, Land Application System R-001:

Monitoring Site ID	Description of Monitoring Location		New or Existing
	Alternate Site Name	WAFR ID	
SWD-1	SW-1	25855	Existing
SWD-2	SW-2	25856	Existing
SWD-3	SW-3	25857	Existing

The locations of the monitoring wells and the sampling locations for the sprayfield are depicted in **Figure C. 2**. Many of the monitored constituents had results reported as less than the method detection limit. **Figure 5**, above provides the monitoring well names and permit identification information and **Figure 9**, the surface water sampling locations to be used with **Figures C.2 and C.7, below**

Figure C.2. Judges Bayou Sprayfield and Monitoring Wells

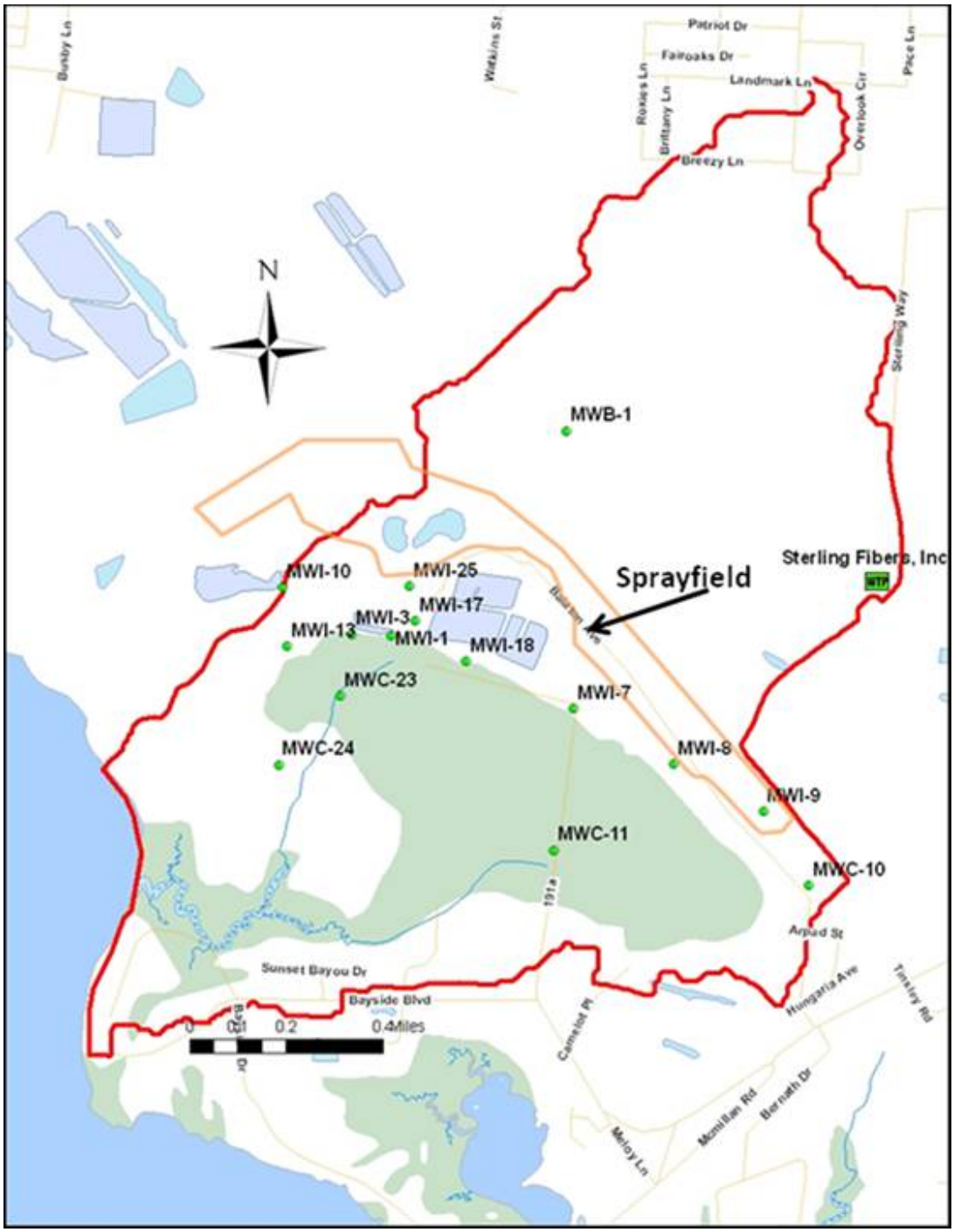


Figure C.3. Judges Bayou Wells Depth (ft) and Elevation of Land (ft)

Table C.1. Judges Bayou Wells Specific Conductance (µmhos/cm)

Graph Location	Constituent	Type	Station	Date Range	Number of Observations	Min	Max	Median	Average
Sprayf	Specific conductance	SprayF	SF-SWD-1	3/00-6/10	45	2.4	290.0	250.0	237.2
Sprayf	Specific conductance	SprayF	SF-SWD-2	3/00-3/11	48	48.0	250.0	113.5	126.8
Sprayf	Specific conductance	SprayF	SF-SWD-3	3/00-9/10	44	139.0	553.0	222.5	244.8
Backg	Specific conductance	Well	SF-MWB1	6/98-6/09	37	19.0	61.0	28.8	30.7
U-Slope	Specific conductance	Well	SF-MWC10	6/98-6/09	33	31.0	315.0	40.4	54.5
U-Slope	Specific conductance	Well	SF-MWI9	6/98-6/09	34	27.7	365.0	62.5	114.8
U-Slope	Specific conductance	Well	SF-MWI8	6/98-6/09	35	36.5	360.0	101.0	149.2
U-Slope	Specific conductance	Well	SF-MWI7	6/98-6/09	33	120.0	640.0	348.0	349.4
U-Slope	Specific conductance	Well	SF-MWI17	6/98-6/09	34	142.0	230.0	190.0	185.1
U-Slope	Specific conductance	Well	SF-MWI18	6/98-6/09	32	241.0	391.0	350.5	341.0
Area A	Specific conductance	Well	SF-MWI1	6/98-6/09	34	39.4	272.0	253.0	244.6
Area A	Specific conductance	Well	SF-MWI3	6/98-6/09	33	136.0	850.0	507.0	508.5
Area A	Specific conductance	Well	SF-MWI25	6/98-12/10	35	150.0	389.0	284.0	283.9
Area A	Specific conductance	Well	SF-MWI13	6/98-6/09	32	376.0	1233.0	942.0	855.0
Area A	Specific conductance	Well	SF-MWI10	6/98-6/09	32	35.0	405.0	324.0	320.7
N-Creek	Specific conductance	Well	SF-MWC23	6/98-6/08	32	44.0	69.0	60.1	59.1
N-Creek	Specific conductance	Well	SF-MWC11	6/98-6/09	34	50.0	195.0	110.5	119.5
N-Creek	Specific conductance	Well	SF-MWC24	6/98-6/09	36	615.0	811.0	736.0	729.6

Figure C.4. Judges Bayou Wells Median Specific Conductance (µmhos/cm)

Table C.2. Judges Bayou Wells Nitrate-N (mg/L)

Graph Location	Constituent	Type	Station	Date Range	Number of Observations	Min	Max	Median	Average
Backg	Nitrate-N	Well	SF-MWB1	6/98-12/10	43	0.005	3.97	0.11	0.28
U-Slope	Nitrate-N	Well	SF-MWC10	6/98-12/10	37	0.005	7.18	0.16	0.68
U-Slope	Nitrate-N	Well	SF-MWI9	6/98-12/10	38	0.24	7	0.71	1.95
U-Slope	Nitrate-N	Well	SF-MWI8	6/98-12/10	38	0.005	7.67	0.715	1.26
U-Slope	Nitrate-N	Well	SF-MWI7	6/98-12/10	37	0.24	18.38	6.82	6.13
U-Slope	Nitrate-N	Well	SF-MWI18	6/98-12/10	37	1.75	8.34	6.25	5.94
U-Slope	Nitrate-N	Well	SF-MWI17	6/98-12/10	38	0.005	3.18	1.365	1.49
Area A	Nitrate-N	Well	SF-MWI1	6/98-12/10	38	0.005	4.75	3.025	2.88
Area A	Nitrate-N	Well	SF-MWI3	6/98-12/10	35	0.005	0.16	0.01	0.02
Area A	Nitrate-N	Well	SF-MWI25	6/98-12/10	37	3.77	9.16	6.18	5.95
Area A	Nitrate-N	Well	SF-MWI13	6/98-12/10	35	0.005	0.11	0.01	0.02
Area A	Nitrate-N	Well	SF-MWI10	6/98-12/10	37	0.12	8.26	6.05	5.38
N-Creek	Nitrate-N	Well	SF-MWC23	6/98-12/10	33	0.005	0.03	0.005	0.01
N-Creek	Nitrate-N	Well	SF-MWC11	6/98-12/10	37	0.005	0.39	0.05	0.06
N-Creek	Nitrate-N	Well	SF-MWC24	6/98-12/10	34	0.005	0.02	0.005	0.01

Figure C.5. Judges Bayou Wells Median Nitrate-N (mg/L)

Table C.3 Judges Bayou Wells Ammonia-N (mg/L)

Graph Location	Constituent	Type	Station	Date Range	Number of Observations	Min	Max	Median	Average
Backg	Total Ammonia-N	Well	SF-MWB1	6/07-12/10	6	0.25	0.64	0.32	0.39
U-Slope	Total Ammonia-N	Well	SF-MWC10	12/06-12/10	5	0.25	0.64	0.5	0.46
U-Slope	Total Ammonia-N	Well	SF-MWI9	12/08-12/10	4	0.32	0.64	0.57	0.53
U-Slope	Total Ammonia-N	Well	SF-MWI8	12/08-12/10	5	0.32	0.64	0.5	0.48
U-Slope	Total Ammonia-N	Well	SF-MWI7	12/08-12/10	4	0.32	0.98	0.675	0.66
U-Slope	Total Ammonia-N	Well	SF-MWI17	12/08-12/10	4	0.32	0.64	0.57	0.53
U-Slope	Total Ammonia-N	Well	SF-MWI18	12/06-12/10	5	0.25	0.64	0.5	0.47
Area A	Total Ammonia-N	Well	SF-MWI1	6/07-12/10	5	0.32	10.9	0.64	2.60
Area A	Total Ammonia-N	Well	SF-MWI3	12/08-12/10	4	7.79	9.2	8.615	8.56
Area A	Total Ammonia-N	Well	SF-MWI25	12/08-12/10	4	0.32	0.64	0.57	0.53
Area A	Total Ammonia-N	Well	SF-MWI13	12/06-12/10	5	5.8	20.4	6.36	10.09
Area A	Total Ammonia-N	Well	SF-MWI10	12/08-12/10	5	0.32	0.64	0.5	0.48
N-Creek	Total Ammonia-N	Well	SF-MWC23	6/07-12/10	5	0.25	0.64	0.5	0.47
N-Creek	Total Ammonia-N	Well	SF-MWC11	12/08-12/10	4	0.32	0.64	0.57	0.53
N-Creek	Total Ammonia-N	Well	SF-MWC24	12/08-12/10	4	1.61	2.9	2.17	2.21

Figure C.6. Judges Bayou Wells Median Ammonia-N (mg/L)

Table C.4. Judges Bayou Wells Organic-N (mg/L)

Graph Location	Constituent	Type	Station	Date Range	Number of Observations	Min	Max	Median	Average
Backg	Organic-N	Well	SF-MWB1	6/07-12/10	6	0	0.08	0	0.01
U-Slope	Organic-N	Well	SF-MWC10	12/06-12/10	5	0	0	0	0.00
U-Slope	Organic-N	Well	SF-MWI9	12/08-12/10	4	0	0	0	0.00
U-Slope	Organic-N	Well	SF-MWI8	12/08-12/10	5	0	0	0	0.00
U-Slope	Organic-N	Well	SF-MWI7	12/08-12/10	4	0	0.31	0	0.08
U-Slope	Organic-N	Well	SF-MWI17	12/08-12/10	4	0	0	0	0.00
U-Slope	Organic-N	Well	SF-MWI18	12/06-12/10	5	0	0.26	0	0.05
Area A	Organic-N	Well	SF-MWI1	6/07-12/10	5	0	0.8	0	0.16
Area A	Organic-N	Well	SF-MWI3	12/08-12/10	4	0	0.03	0	0.01
Area A	Organic-N	Well	SF-MWI25	12/08-12/10	4	0	0	0	0.00
Area A	Organic-N	Well	SF-MWI13	12/06-12/10	5	0	6.1	1.83	2.25
Area A	Organic-N	Well	SF-MWI10	12/08-12/10	5	0	0.91	0	0.18
N-Creek	Organic-N	Well	SF-MWC23	6/07-12/10	5	0	0	0	0.00
N-Creek	Organic-N	Well	SF-MWC11	12/08-12/10	4	0	0.05	0	0.01
N-Creek	Organic-N	Well	SF-MWC24	12/08-12/10	4	0	0.35	0.2	0.19

Organic nitrogen was calculated as the difference between the reported TKN-N and the ammonia-N. For cases where the calculated value was negative, zero was assigned to that result.

Table C.5. Judges Bayou Wells Orthophosphate-P (mg/L)

- = Empty cell/no data
ND = No data

Graph Location	Constituent	Type	Station	Date Range	Number of Observations	Min	Max	Median	Average
Backg	PO4-P	Well	SF-MWB1	6/98-12/10	39	0.005	0.09	0.01	0.015
U-Slope	PO4-P	Well	SF-MWC10	6/98-12/10	70	0.005	0.09	0.01	0.017
U-Slope	PO4-P	Well	SF-MWI9	6/98-12/10	36	0.005	0.09	0.01	0.016
U-Slope	PO4-P	Well	SF-MWI8	6/98-12/10	37	0.005	0.13	0.03	0.038
U-Slope	PO4-P	Well	SF-MWI7	6/98-12/10	34	0.005	0.05	0.015	0.016
U-Slope	PO4-P	Well	SF-MWI17	ND	-	-	-	-	-
U-Slope	PO4-P	Well	SF-MWI18	ND	-	-	-	-	-
Area A	PO4-P	Well	SF-MWI1	ND	-	-	-	-	-
Area A	PO4-P	Well	SF-MWI3	ND	-	-	-	-	-
Area A	PO4-P	Well	SF-MWI25	6/98-12/10	33	0.005	0.03	0.01	0.013
Area A	PO4-P	Well	SF-MWI13	ND	-	-	-	-	-
Area A	PO4-P	Well	SF-MWI10	6/2010	1	0.01	0.01	0.01	0.010
N-Creek	PO4-P	Well	SF-MWC23	ND	-	-	-	-	-
N-Creek	PO4-P	Well	SF-MWC11	6/98-12/10	33	0.005	0.2	0.01	0.025
N-Creek	PO4-P	Well	SF-MWC24	ND	-	-	-	-	-

The stations depicted below contain a mixture of stations that always have specific conductance less than 5,000 µmhos/cm and those stations that are fresh at times and marine at other times. To represent that gradient, stations are ordered in the figures/tables from upstream on the southern freshwater branch (Judges Branch) to the confluence with St. Regis Branch (northern stream) in Judges Bayou, and then from upstream along St. Regis Branch through Judges Bayou to Escambia Bay.

Table C.6. Judges Bayou Water Quality and Sprayfield Monitoring Locations

WBID	Station ID	Alias	Station Name	Lat	Long
493A	21FLPNS 33020154	154	North Fork Judges Branch blw St. Regis Rd. & SW1	30.56328	-87.127
493A	SWD-1	SWD-1	Judges Branch Sprayfield Monitoring Site 1	30.56313	-87.1274
493A	21FLPNS 33020153	153	Judges Branch @ St. Regis Road blw Sterling Fibers SW2 site	30.56108	-87.12747
493A	SWD-2	SWD-2	Judges Branch Sprayfield Monitoring Site 2	30.55992	-87.12716
493A	21FLA 33020AA4	AA4	JUDGES BAYOU HEAD	30.55833	-87.13472
493A	21FLBRA 493-C	493-C	493 - - 88m E of 493-A	30.55921	-87.13484
493A	21FLPNS 3302A4931	493-1	Judges Bayou WBID 493-1	30.55917	-87.1355
493B	21FLBRA 493-A	493-A	493 - - Easternmost point	30.55912	-87.13577
493B	21FLBRA 493-D	493-D	493 - Judges Bayou - 225m W of 493-C	30.55965	-87.13712
493A	SWD-3	SWD-3	St. Regis Branch Sprayfield Monitoring Site 3	30.56323	-87.13684
493A	21FLPNS 33020152	152	St. Regis Branch blw Sterling Fibers SW3 site	30.56233	-87.13678
493B	21FLPNS 3302A4932	493-2	Judges Bayou-- WBID 493-2	30.55922	-87.13808
493B	21FLBRA 493-B	493-B	493 - - near mouth	30.55921	-87.13847
493B	21FLA 33020AA6	AA6	JUDGES BAY 1/3 LENGTH	30.5569	-87.1375
493B	21FLNWFDS222	S222	Judges Bayou	30.5575	-87.13861
493B	21FLNWFD303327087081901	1901	Judges Bayou	30.5575	-87.1386
493B	21FLA 33020AA1	AA1	JUDGES BAYOU	30.5583	-87.1389
493B	21FLBRA 493-E	493-E	493 - - Mid-Bayou at bend	30.55855	-87.13915
493B	21FLA 33020A16	A16	JUDGES BYU AMER. CYANA.FILL STRE	30.55694	-87.14
493B	21FLA 33020A17	A17	ESCAMBI B AMER CYANAMID DIS PIPE	30.5583	-87.1417
493B	21FLBRA 493-F	493-F	493 - - Northern Branch	30.56145	-87.14052
493B	21FLPNS 3302A4933	493-3	Judges Bayou--WBID 493-3	30.56064	-87.14072
493B	21FLBRA 493-G	493-G	493 - Judges Bayou - 150m from mouth	30.56047	-87.14022

Figure C.7. Judges Bayou Water Quality and Sprayfield Monitoring Locations

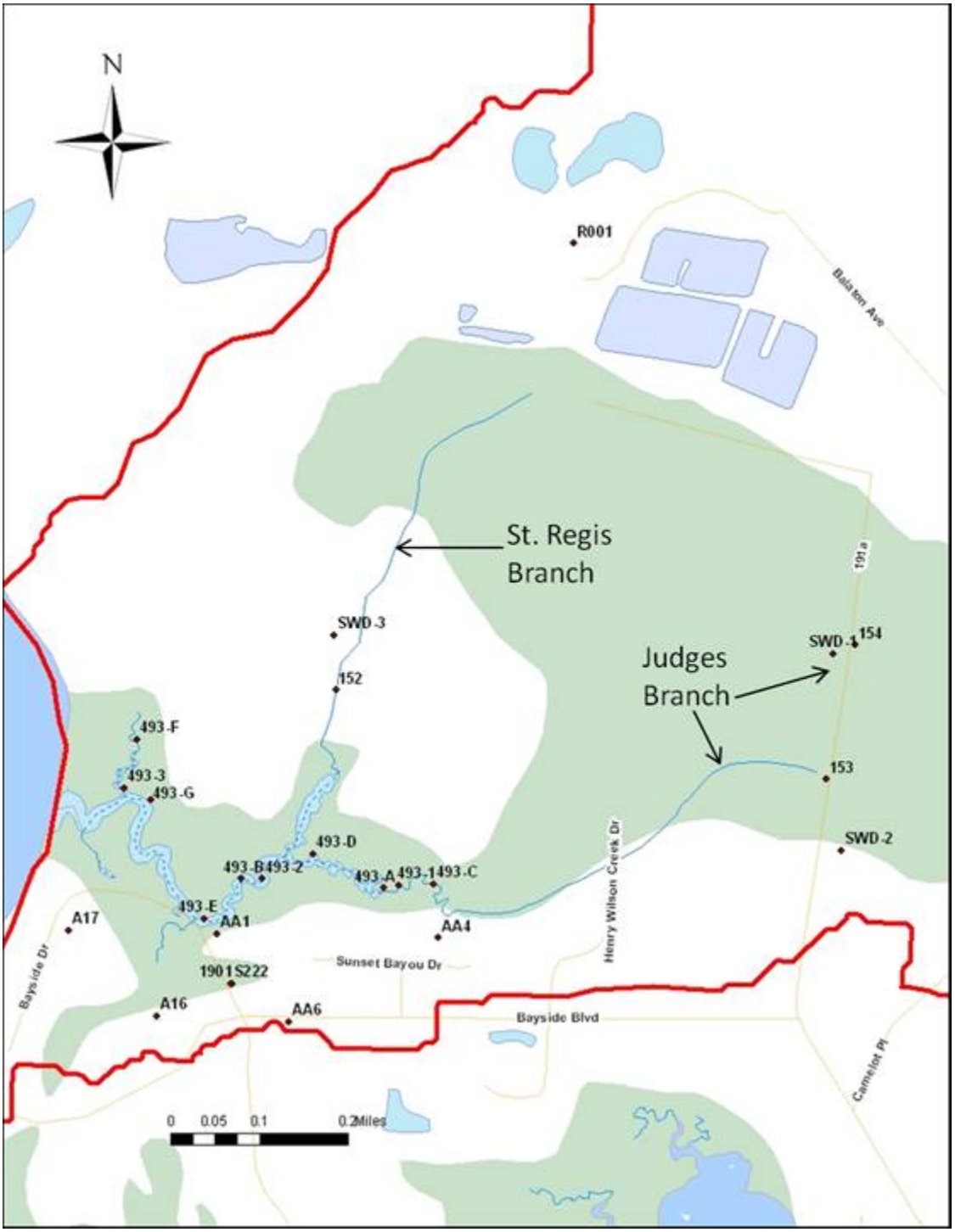


Figure C.8. St. Regis Branch Conductivity Daily Average

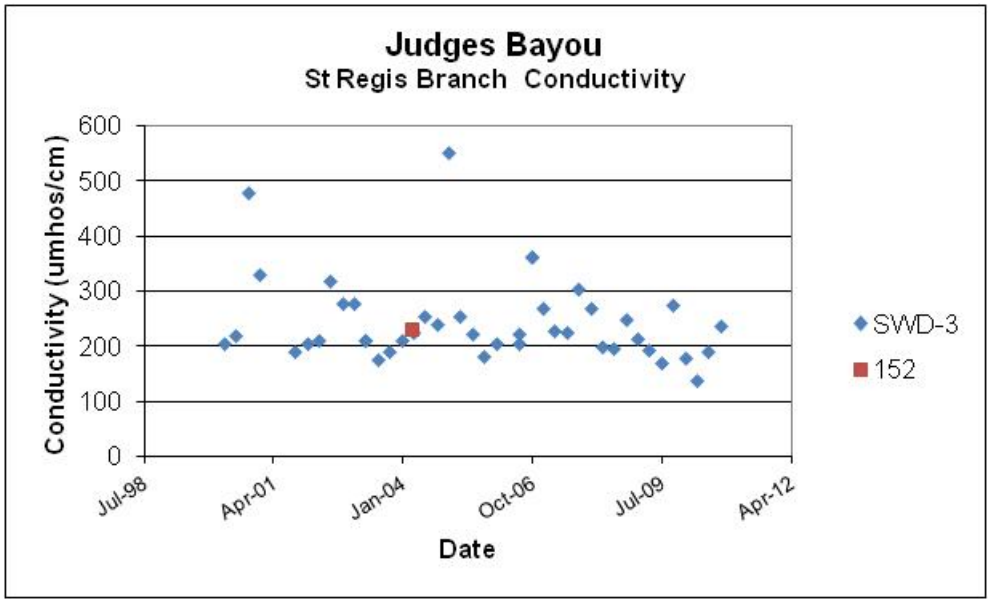


Figure C.9. Upper Judges Branch Conductivity Daily Average

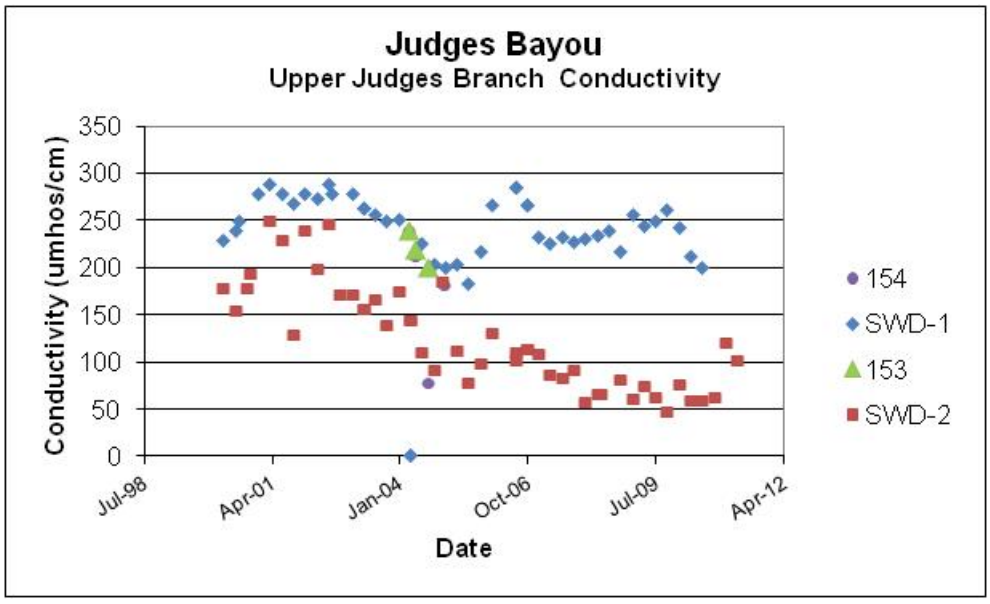


Figure C.10. Lower Judges Branch Conductivity Daily Average

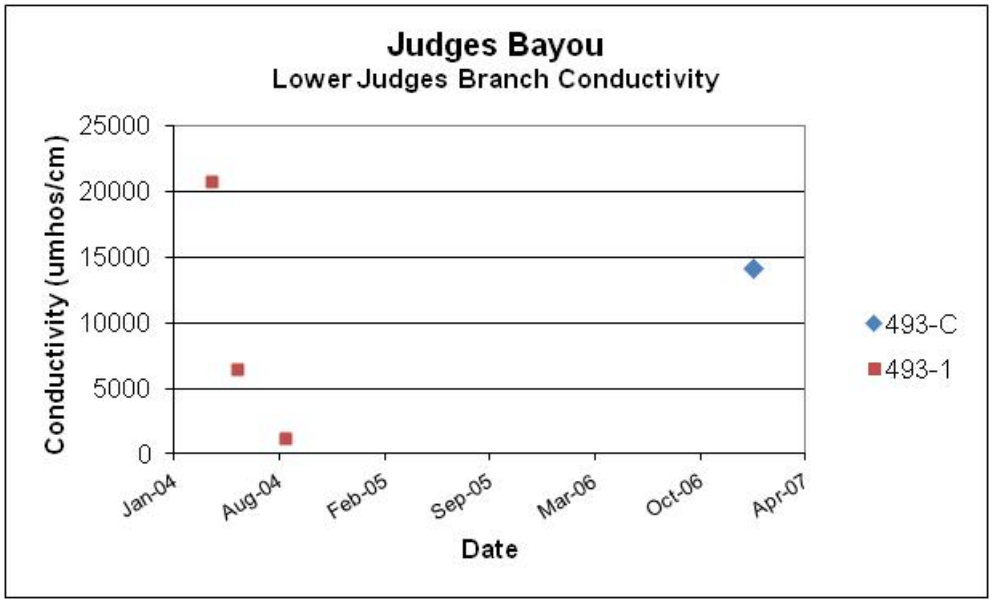


Figure C.11. Upper Judges Bayou Salinity Daily Average

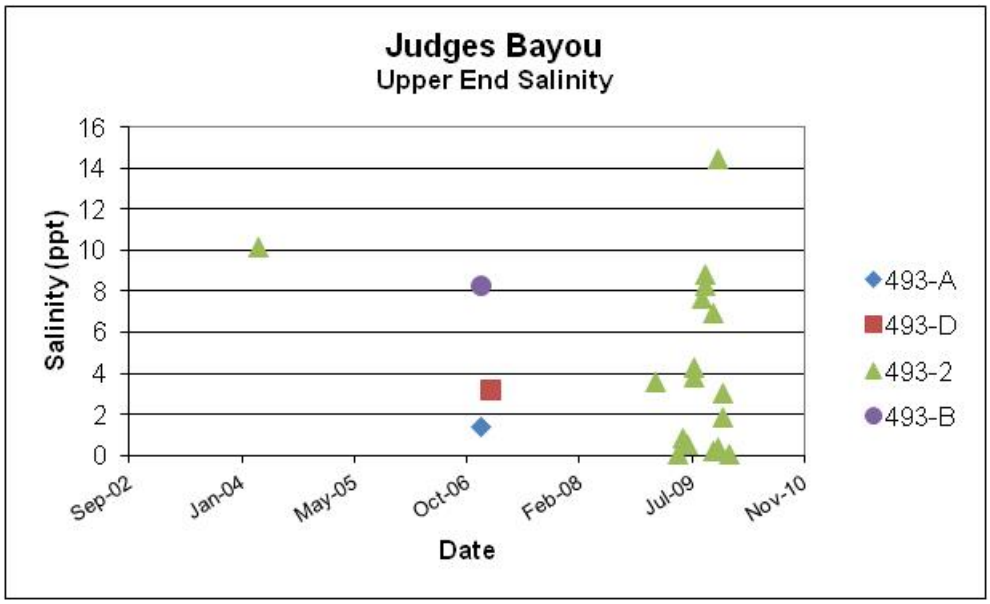


Figure C.12. Lower Judges Bayou Salinity Daily Average

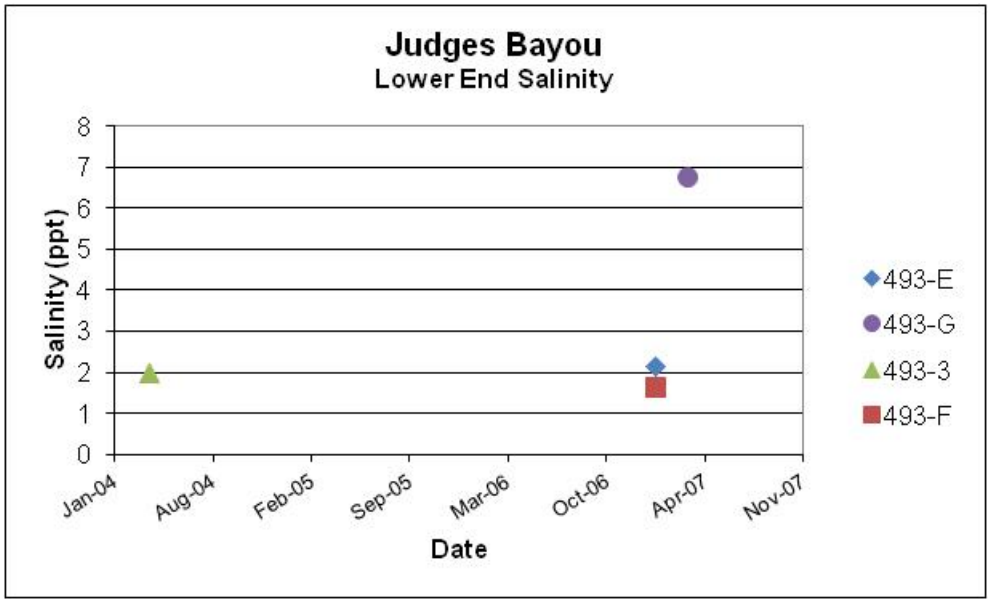


Table C.7. Judges Bayou Conductivity/Salinity

- = Empty cell/no data

Location	Constituent	Type	Station	Date Range	Count	Min (µmhos/cm)	Max (µmhos/cm)	Median (µmhos/cm)	Average (µmhos/cm)
Spray Field Effluent	Conductivity	SprayF-EFF	R001	No Data	-	-	-	-	-
St. Regis Branch	Conductivity	SprayF-M	SWD-3	3/00-9/10	44	139.00	553.00	222.50	244.80
St. Regis Branch	Conductivity	Ambient	152	3/04	1	232.00	232.00	232.00	232.00
Upper Judges Branch	Conductivity	Ambient	154	3/04-12/04	4	79.00	240.00	198.00	178.75
Upper Judges Branch	Conductivity	SprayF-M	SWD-1	3/00-6/10	45	2.44	290.00	250.00	237.15
Upper Judges Branch	Conductivity	Ambient	153	3/04-8/04	3	201.00	240.00	220.00	220.33
Upper Judges Branch	Conductivity	SprayF-M	SWD-2	3/00-3/11	48	48.00	250.00	113.50	126.80
Lower Judges Branch	Conductivity	Ambient	493-C	1/07	1	14,190.00	14,190.00	14,190.00	14,190.00
Lower Judges Branch	Conductivity	Ambient	493-1	3/04-8/04	3	1,233.00	20,800.00	6,449.00	9,494.00
Freshwater Median	**Conductivity**	**-**	**-**	**-**	**-**	**170.00**	**270.00**	**227.25**	**234.58**
Freshwater Average	**Conductivity**	**-**	**-**	**-**	**-**	**2,015.56**	**4,599.38**	**2,734.38**	**3,115.48**
Location	**Constituent**	**Type**	**Station**	**Date Range**	**Count**	**Min (ppt)**	**Max (ppt)**	**Median (ppt)**	**Average (ppt)**
Upper Judges Bayou	Salinity	Ambient	493-A	12/06	1	1.41	1.41	1.41	1.41
Upper Judges Bayou	Salinity	Ambient	493-D	1/07	1	3.24	3.24	3.24	3.24
Upper Judges Bayou	Salinity	Ambient	493-2	3/04-12/09	17	0.08	14.47	3.56	4.43
Upper Judges Bayou	Salinity	Ambient	493-B	12/06	1	8.30	8.30	8.30	8.30
Lower Judges Bayou	Salinity	Ambient	493-E	1/07	1	2.14	2.14	2.14	2.14
Lower Judges Bayou	Salinity	Ambient	493-G	3/07	1	6.77	6.77	6.77	6.77
Lower Judges Bayou	Salinity	Ambient	493-3	3/04	1	2.00	2.00	2.00	2.00
Lower Judges Bayou	Salinity	Ambient	493-F	1/07	1	1.66	1.66	1.66	1.66
Marine Median	**Salinity**	**-**	**-**	**-**	**-**	**2.07**	**2.69**	**2.69**	**2.69**
Marine Average	**Salinity**	**-**	**-**	**-**	**-**	**3.20**	**5.00**	**3.64**	**3.74**

Figure C.13. Sterling R001 Flow and Nitrate-N Concentration Daily Average

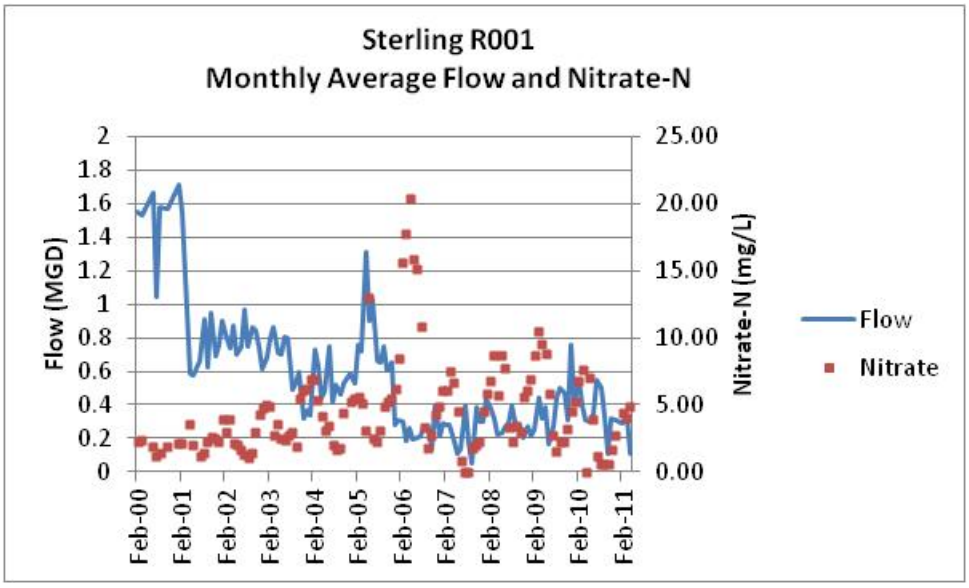


Figure C.14. Sterling R001 Flow and Nitrate-N Load (lbs/month)

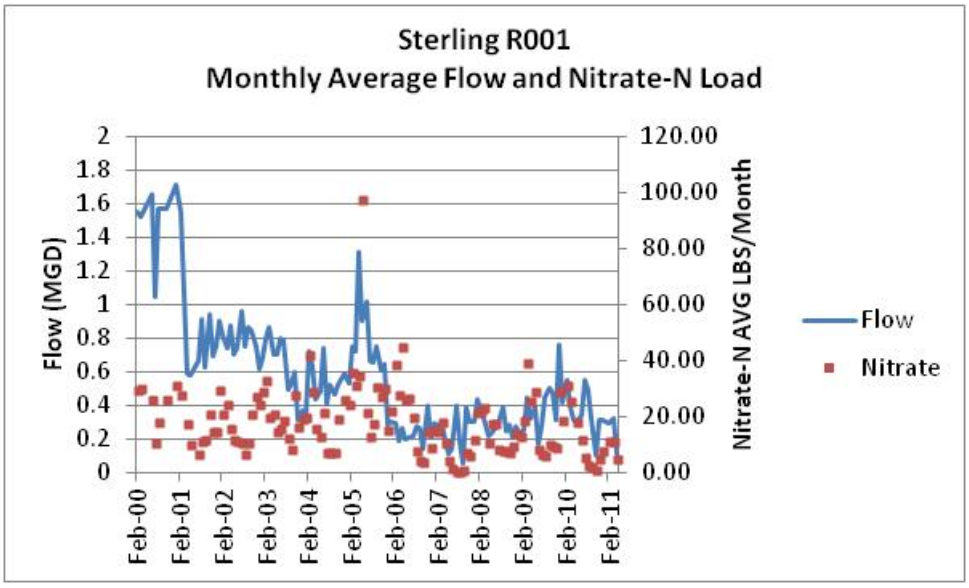


Figure C.15. St. Regis Branch Nitrate-N Daily Average

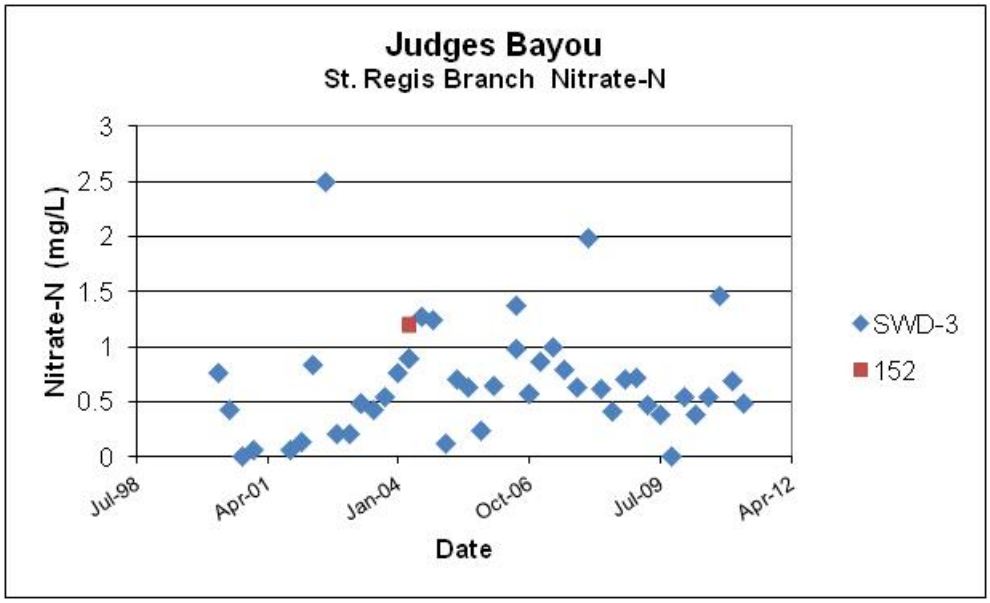


Figure C.16. Upper Judges Branch Nitrate-N Daily Average

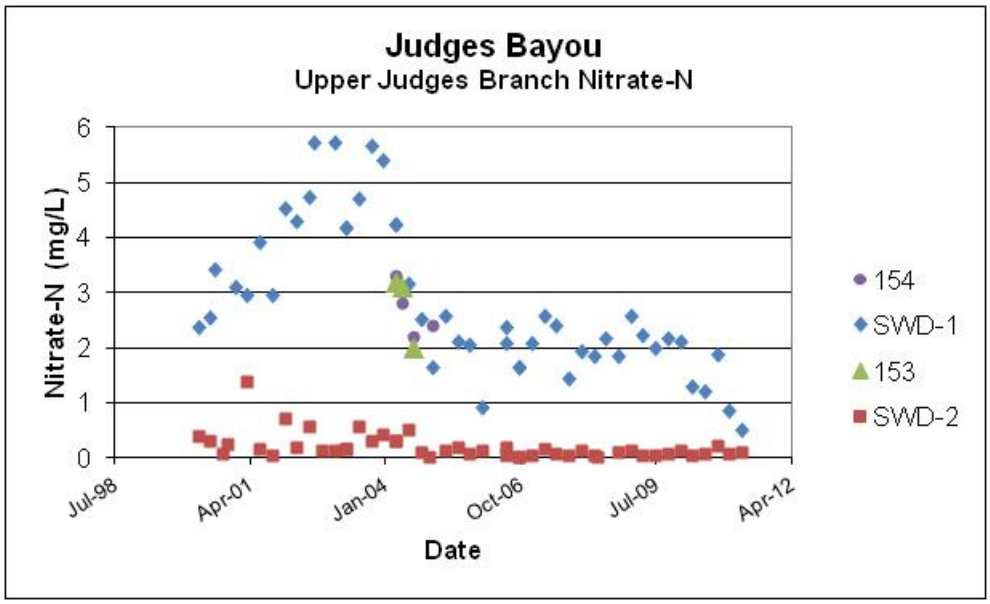


Figure C.17. Lower Judges Branch Nitrate-N Daily Average

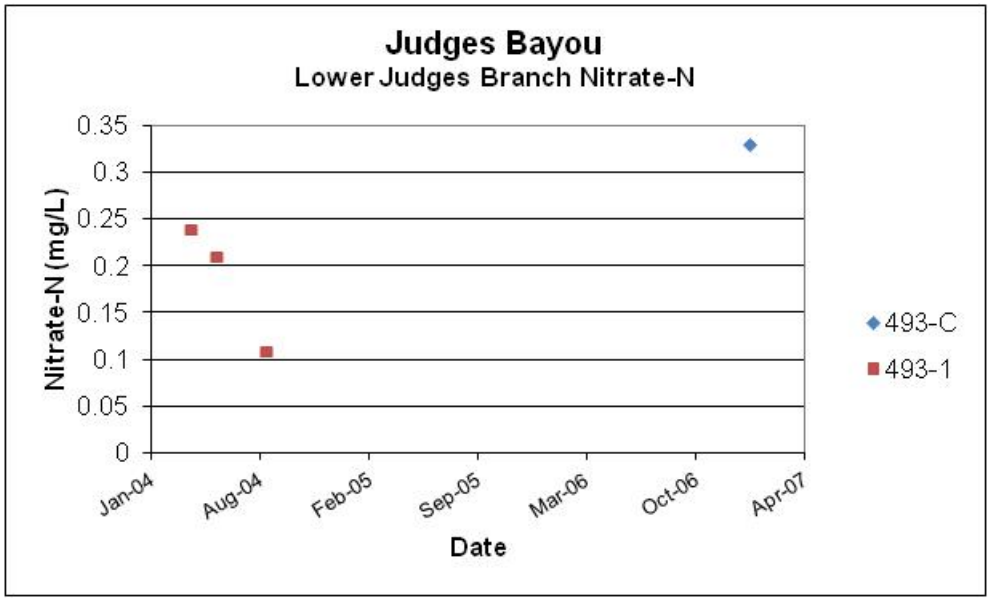


Figure C.18. Upper Judges Bayou Nitrate-N Daily Average

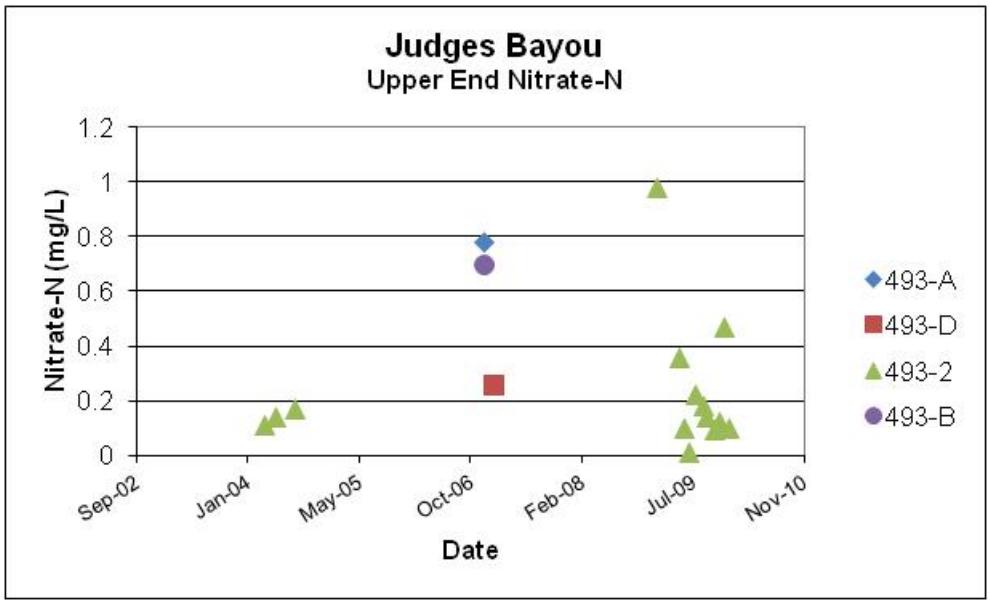


Figure C.19. Lower Judges Bayou Nitrate-N Daily Average

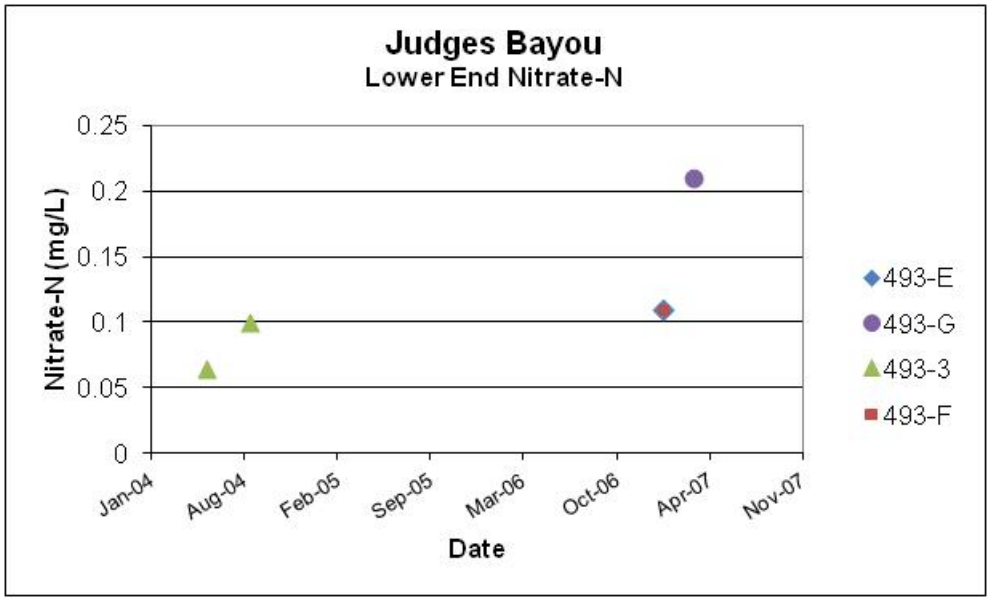


Table C.8. Judges Bayou Nitrate-N (mg/L)

- = Empty cell/no data

Location	Constituent	Type	Station	Date Range	Count	Min (mg/L)	Max (mg/L)	Median (mg/L)	Average (mg/L)
Spray Field Effluent	Nitrate-N	SprayF-EFF	R001	2/00-4/11	125	0.02	20.43	3.51	4.53
St. Regis Branch	Nitrate-N	SprayF-M	SWD-3	3/00-3/11	45	0.005	2.50	0.62	0.69
St. Regis Branch	Nitrate-N	Ambient	152	3/04	1	1.20	1.20	1.20	1.20
Upper Judges Branch	Nitrate-N	Ambient	154	3/04-12/04	4	2.20	3.30	2.60	2.68
Upper Judges Branch	Nitrate-N	SprayF-M	SWD-1	3/00-3/11	48	0.51	5.71	2.39	2.81
Upper Judges Branch	Nitrate-N	Ambient	153	3/04-8/04	3	2.00	3.20	3.10	2.77
Upper Judges Branch	Nitrate-N	SprayF-M	SWD-2	3/00-3/11	48	0.01	1.37	0.13	0.20
Lower Judges Branch	Nitrate-N	Ambient	493-C	1/07	1	0.33	0.33	0.33	0.33
Lower Judges Branch	Nitrate-N	Ambient	493-1	3/04-8/04	3	0.11	0.24	0.21	0.19
Freshwater Median	**Nitrate-N**	**-**	**-**	**-**	**-**	**0.42**	**1.94**	**0.91**	**0.94**
Freshwater Average	**Nitrate-N**	**-**	**-**	**-**	**-**	**0.80**	**2.23**	**1.32**	**1.36**
Upper Judges Bayou	Nitrate-N	Ambient	493-A	12/06	1	0.78	0.78	0.78	0.78
Upper Judges Bayou	Nitrate-N	Ambient	493-D	1/07	1	0.26	0.26	0.26	0.26
Upper Judges Bayou	Nitrate-N	Ambient	493-2	3/04-12/09	14	0.01	0.98	0.14	0.23
Upper Judges Bayou	Nitrate-N	Ambient	493-B	12/06	1	0.70	0.70	0.70	0.70
Lower Judges Bayou	Nitrate-N	Ambient	493-E	1/07	1	0.11	0.11	0.11	0.11
Lower Judges Bayou	Nitrate-N	Ambient	493-G	3/07	1	0.21	0.21	0.21	0.21
Lower Judges Bayou	Nitrate-N	Ambient	493-3	5/04-8/04	2	0.07	0.10	0.08	0.08
Lower Judges Bayou	Nitrate-N	Ambient	493-F	1/07	1	0.11	0.11	0.11	0.11
Marine Median	**Nitrate-N**	**-**	**-**	**-**	**-**	**0.16**	**0.24**	**0.18**	**0.22**
Marine Average	**Nitrate-N**	**-**	**-**	**-**	**-**	**0.28**	**0.41**	**0.30**	**0.31**

Figure C.20. St. Regis Branch Ammonia-N Daily Average

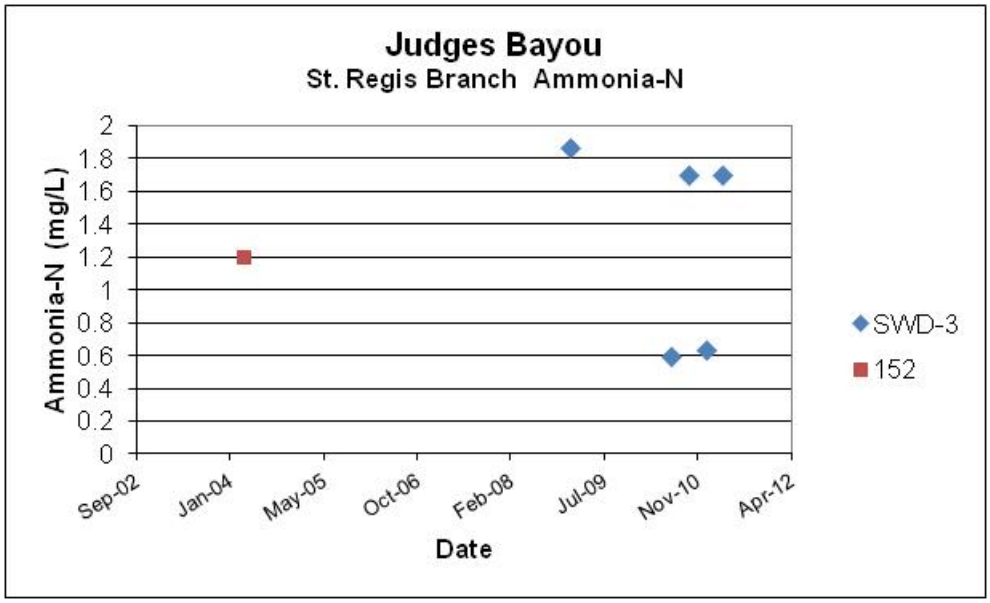


Figure C.21. Upper Judges Branch Ammonia-N Daily Average

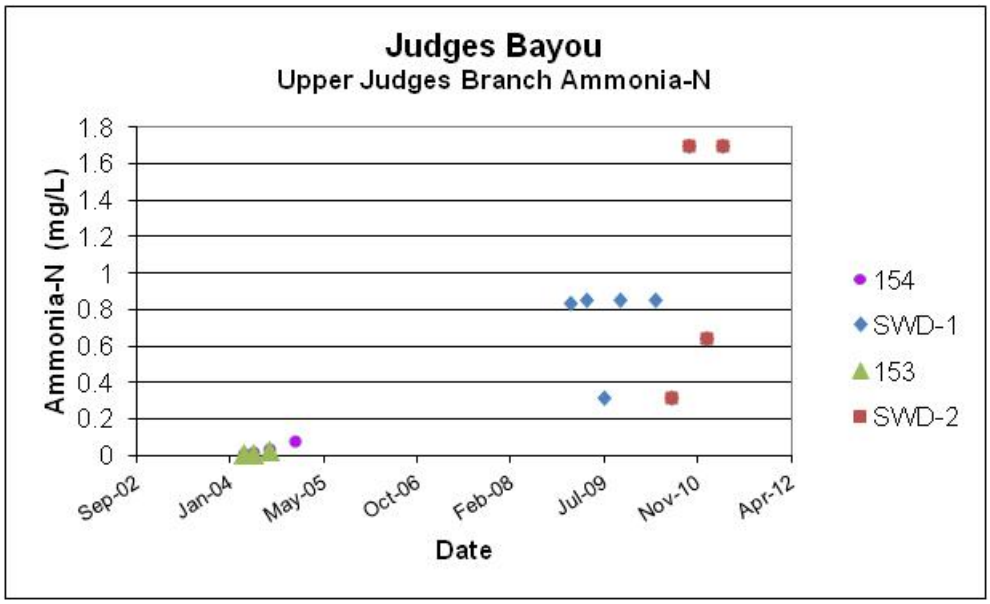


Figure C.22. Lower Judges Branch Ammonia-N Daily Average

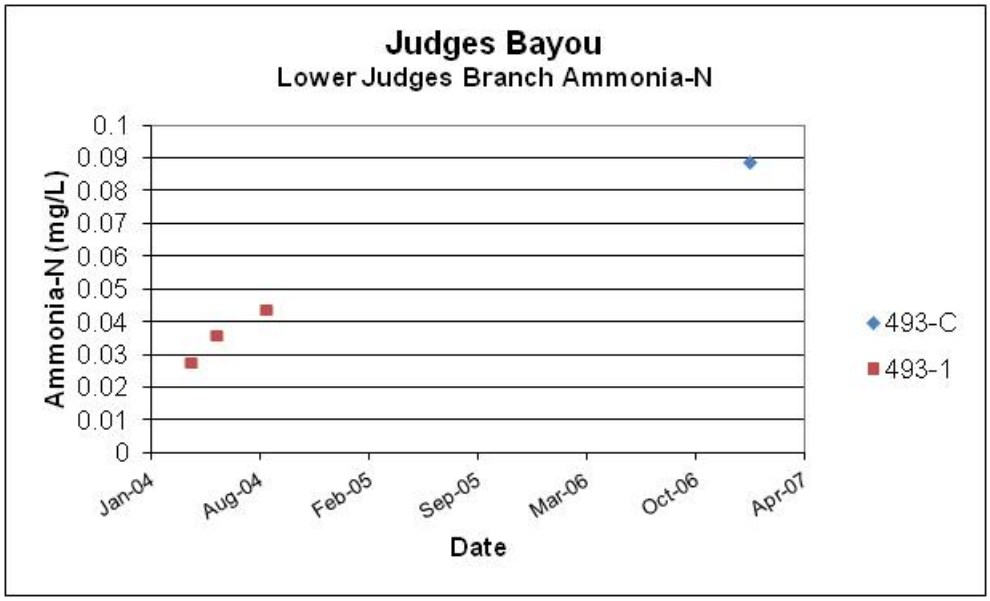


Figure C.23. Upper Judges Bayou Ammonia-N Daily Average

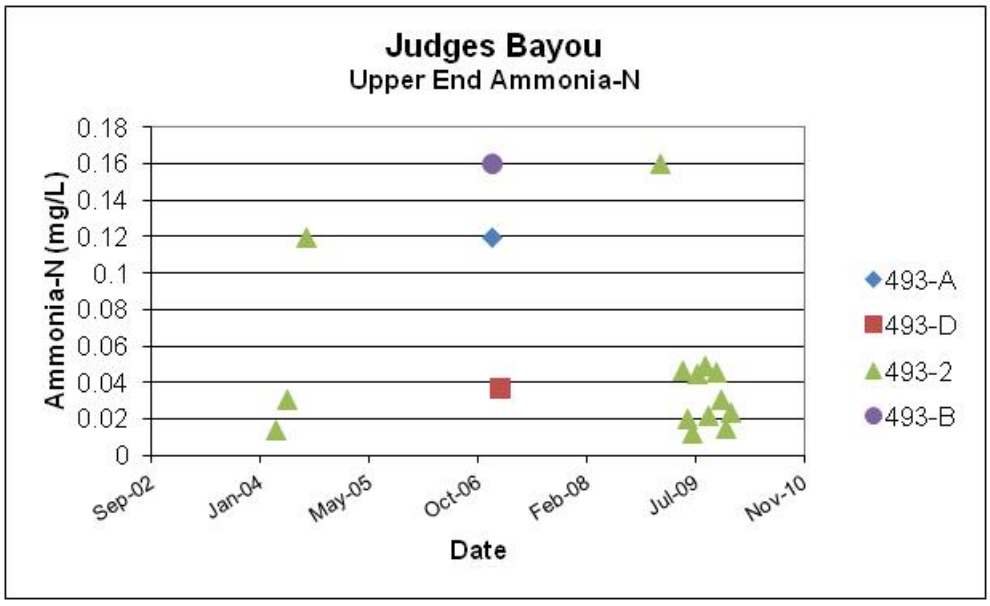


Figure C.24. Lower Judges Bayou Ammonia-N Daily Average

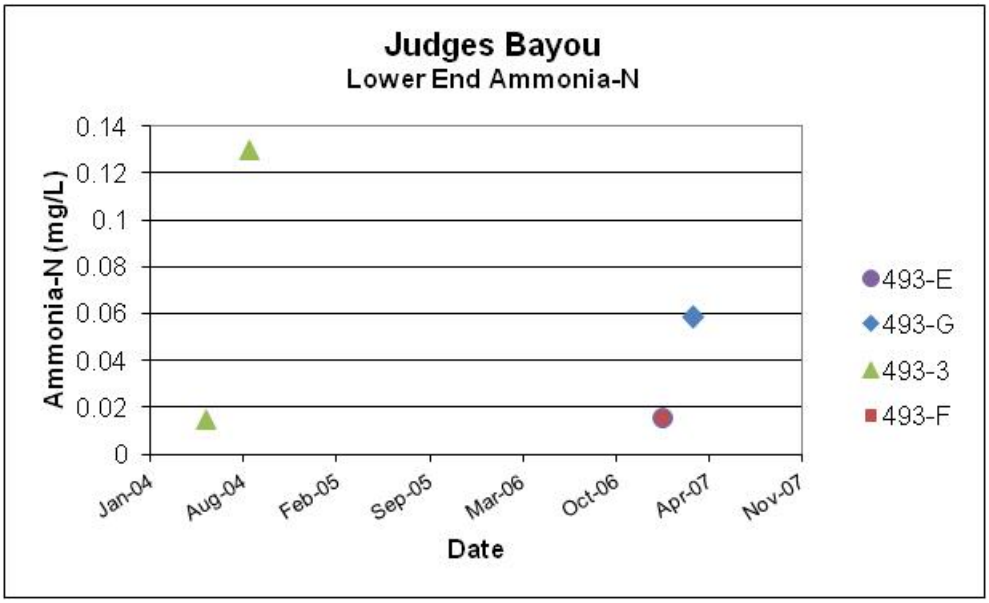


Table C.9. Judges Bayou Ammonia-N (mg/L)

- = Empty cell/no data

Location	Constituent	Type	Station	Date Range	Count	Min (mg/L)	Max (mg/L)	Median (mg/L)	Average (mg/L)
Spray Field Effluent	NH3-N	SprayF-EFF	R001	No Data	-	-	-	-	-
St. Regis Branch	NH3-N	SprayF-M	SWD-3	3/00-3/11	5	0.600	1.870	1.700	1.302
St. Regis Branch	NH3-N	Ambient	152	3/04	1	0.670	0.670	0.670	0.670
Upper Judges Branch	NH3-N	Ambient	154	3/04-12/04	4	0.005	0.076	0.026	0.033
Upper Judges Branch	NH3-N	SprayF-M	SWD-1	3/00-3/11	9	0.320	1.700	0.850	0.897
Upper Judges Branch	NH3-N	Ambient	153	3/04-8/04	3	0.005	0.027	0.005	0.012
Upper Judges Branch	NH3-N	SprayF-M	SWD-2	3/00-3/11	4	0.320	1.700	1.170	1.090
Lower Judges Branch	NH3-N	Ambient	493-C	1/07	1	0.089	0.089	0.089	0.089
Lower Judges Branch	NH3-N	Ambient	493-1	3/04-8/04	3	0.028	0.044	0.036	0.036
Freshwater Median	**NH3-N**	**-**	**-**	**-**	**-**	**0.205**	**0.380**	**0.380**	**0.380**
Freshwater Average	**NH3-N**	**-**	**-**	**-**	**-**	**0.255**	**0.772**	**0.568**	**0.516**
Upper Judges Bayou	NH3-N	Ambient	493-A	12/06	1	0.160	0.160	0.160	0.160
Upper Judges Bayou	NH3-N	Ambient	493-D	1/07	1	0.016	0.016	0.016	0.016
Upper Judges Bayou	NH3-N	Ambient	493-2	3/04-12/09	14	0.012	0.160	0.031	0.045
Upper Judges Bayou	NH3-N	Ambient	493-B	12/06	1	0.037	0.037	0.037	0.037
Lower Judges Bayou	NH3-N	Ambient	493-E	1/07	1	0.016	0.016	0.016	0.016
Lower Judges Bayou	NH3-N	Ambient	493-G	3/07	1	0.041	0.041	0.041	0.041
Lower Judges Bayou	NH3-N	Ambient	493-3	5/04-8/04	2	0.015	0.130	0.073	0.073
Lower Judges Bayou	NH3-N	Ambient	493-F	1/07	1	0.016	0.016	0.016	0.016
Marine Median	**NH3-N**	**-**	**-**	**-**	**-**	**0.02**	**0.04**	**0.03**	**0.04**
Marine Average	**NH3-N**	**-**	**-**	**-**	**-**	**0.04**	**0.07**	**0.05**	**0.05**

Figure C.25. St. Regis Branch Organic-N Daily Average

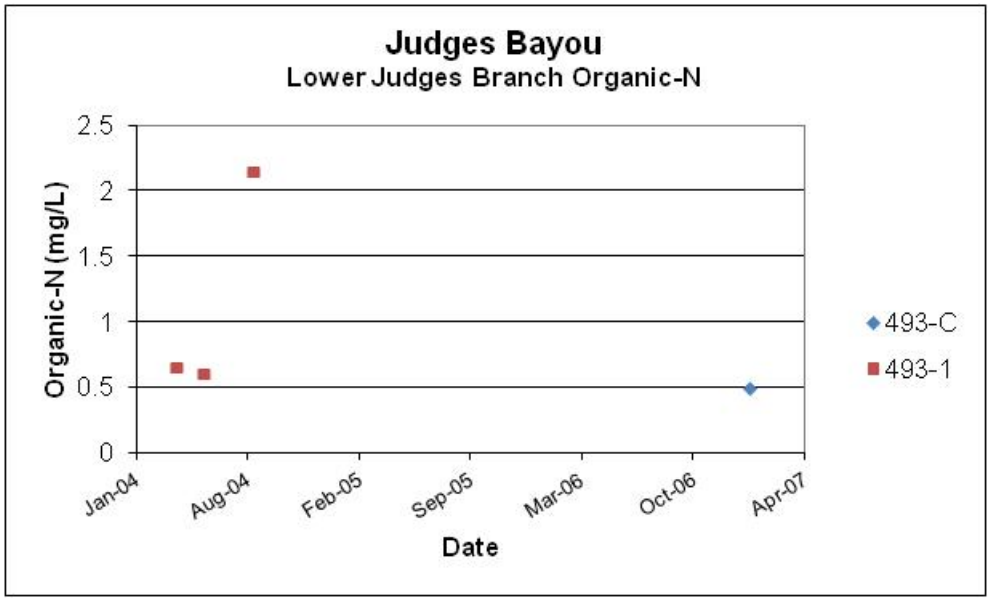


Figure C.26. Upper Judges Bayou Organic-N Daily Average

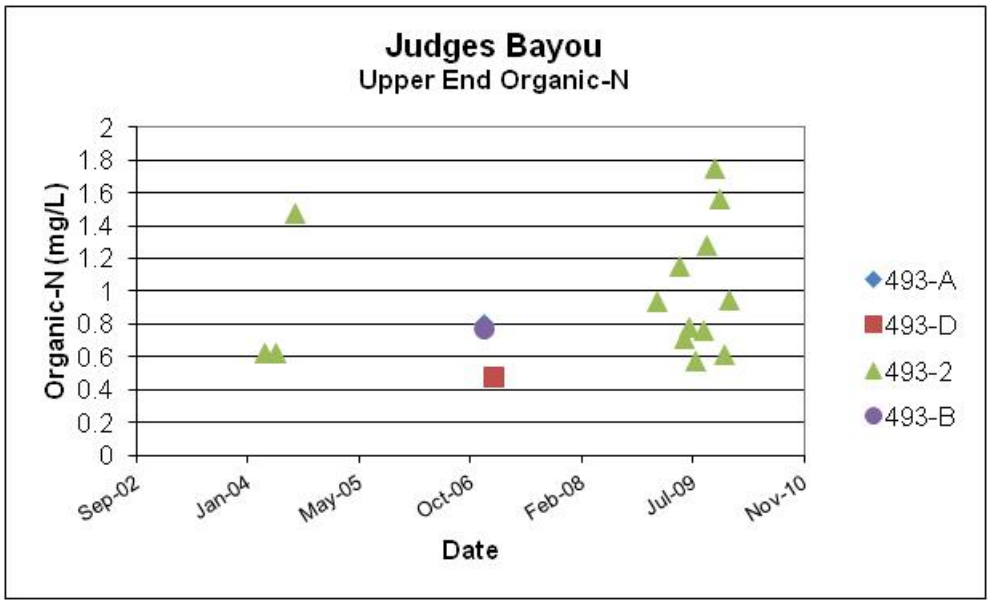


Figure C.27. Lower Judges Bayou Organic-N Daily Average

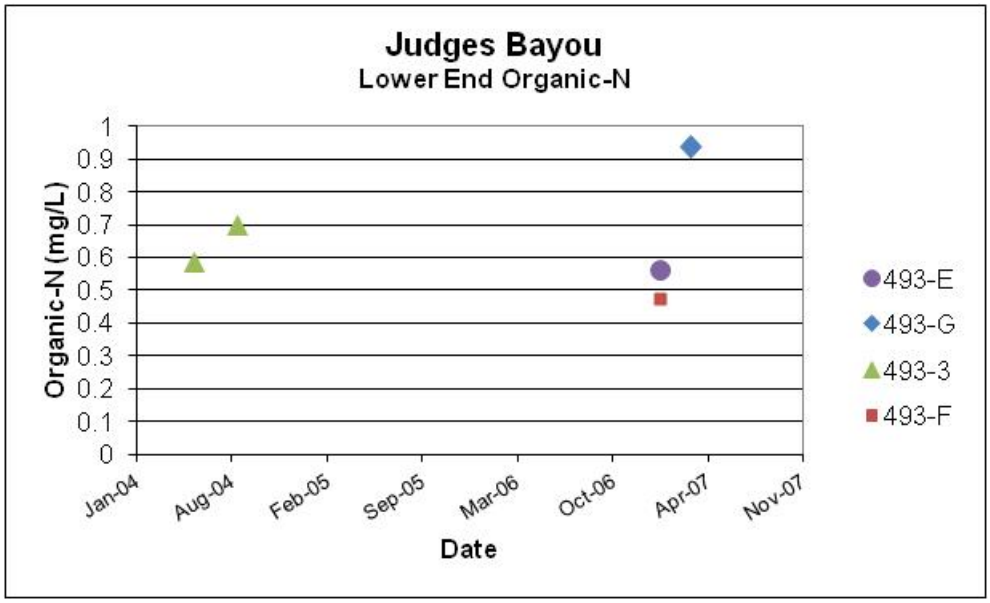


Table C.10. Judges Bayou Organic-N (mg/L)

- = Empty cell/no data

Location	Constituent	Type	Station	Date Range	Count	Min (mg/L)	Max (mg/L)	Median (mg/L)	Average (mg/L)
Spray Field Effluent	Organic-N	SprayF-EFF	R001	No Data	-	-	-	-	-
St. Regis Branch	Organic-N	SprayF-M	SWD-3	3/00-3/11	5	0.000	2.780	1.440	1.470
St. Regis Branch	Organic-N	Ambient	152	3/04	1	2.030	2.030	2.030	2.030
Upper Judges Branch	Organic-N	Ambient	154	3/04-12/04	4	0.575	1.685	0.864	0.997
Upper Judges Branch	Organic-N	SprayF-M	SWD-1	3/00-3/11	9	0.000	0.860	0.000	0.263
Upper Judges Branch	Organic-N	Ambient	153	3/04-8/04	3	0.495	1.073	0.645	0.738
Upper Judges Branch	Organic-N	SprayF-M	SWD-2	3/00-3/11	4	0.000	0.560	0.165	0.223
Lower Judges Branch	Organic-N	Ambient	493-C	1/07	1	0.501	0.501	0.501	0.501
Lower Judges Branch	Organic-N	Ambient	493-1	3/04-8/04	3	0.614	2.156	0.662	1.144
Freshwater Median	**Organic-N**	**-**	**-**	**-**	**-**	**0.498**	**1.379**	**0.654**	**0.867**
Freshwater Average	**Organic-N**	**-**	**-**	**-**	**-**	**0.527**	**1.456**	**0.788**	**0.921**
Upper Judges Bayou	Organic-N	Ambient	493-A	12/06	1	0.800	0.800	0.800	0.800
Upper Judges Bayou	Organic-N	Ambient	493-D	1/07	1	0.483	0.483	0.483	0.483
Upper Judges Bayou	Organic-N	Ambient	493-2	3/04-12/09	14	0.575	1.754	0.859	0.987
Upper Judges Bayou	Organic-N	Ambient	493-B	12/06	1	0.770	0.770	0.770	0.770
Lower Judges Bayou	Organic-N	Ambient	493-E	1/07	1	0.564	0.564	0.564	0.564
Lower Judges Bayou	Organic-N	Ambient	493-G	3/07	1	0.941	0.941	0.941	0.941
Lower Judges Bayou	Organic-N	Ambient	493-3	5/04-8/04	2	0.585	0.700	0.643	0.643
Lower Judges Bayou	Organic-N	Ambient	493-F	1/07	1	0.474	0.474	0.474	0.474
Marine Median	**Organic-N**	**-**	**-**	**-**	**-**	**0.58**	**0.74**	**0.71**	**0.71**
Marine Average	**Organic-N**	**-**	**-**	**-**	**-**	**0.65**	**0.81**	**0.69**	**0.71**

Figure C.28. Sterling R001 Flow and TN Concentration Daily Average

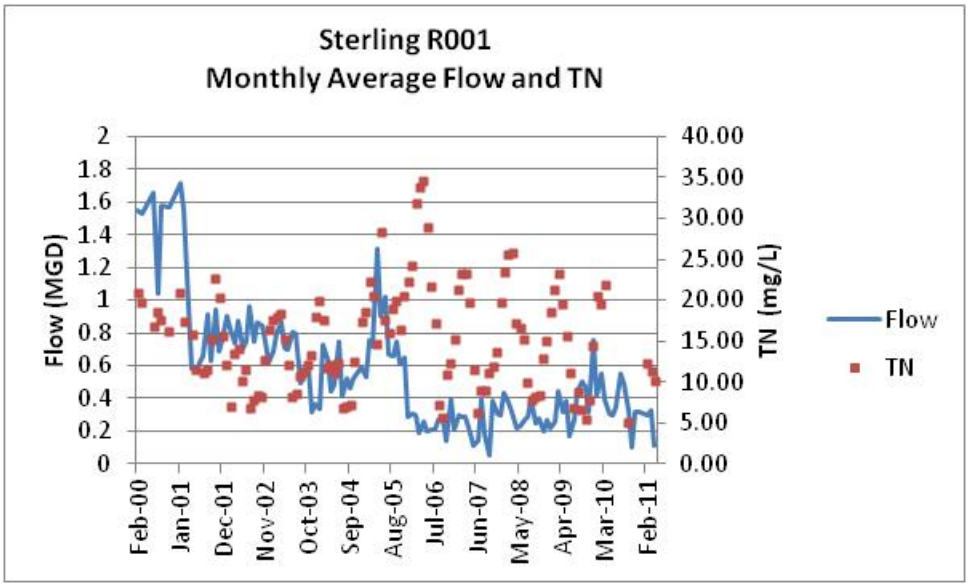


Figure C.29. Sterling R001 Flow and TN Load Monthly Average

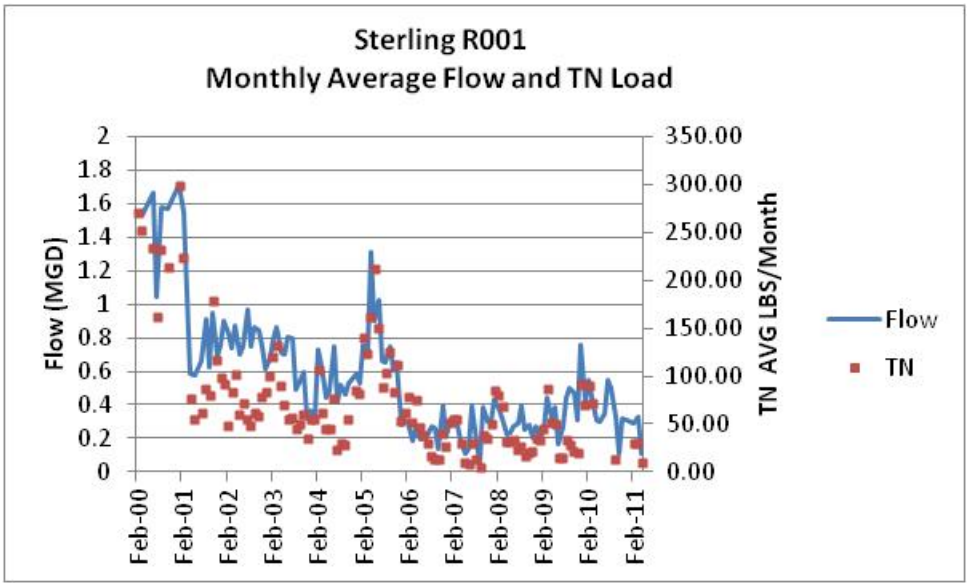


Figure C.30. St. Regis Branch TN Daily Average

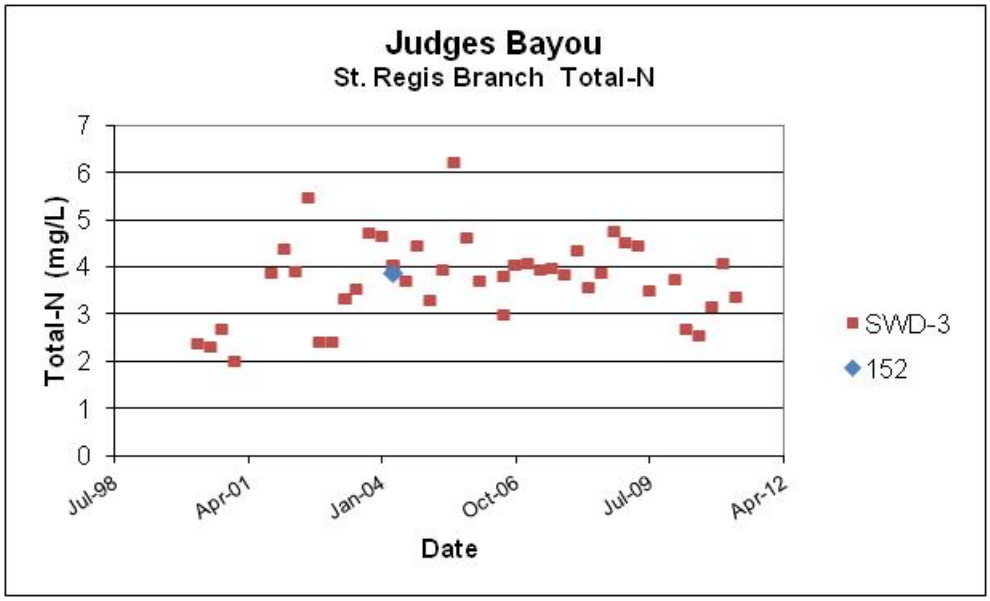


Figure C.31. Upper Judges Branch TN Daily Average

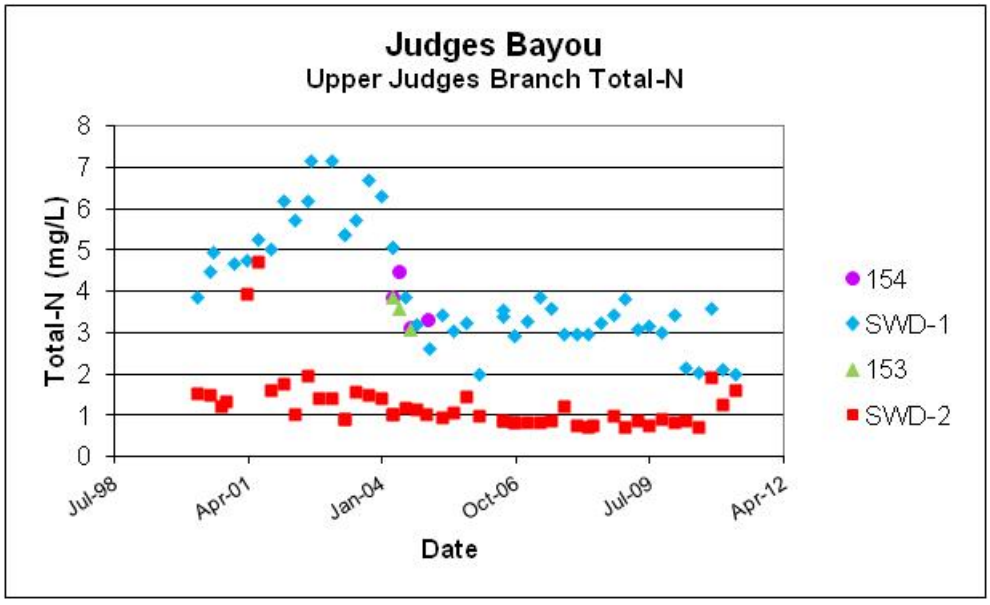


Figure C.32. Lower Judges Branch TN Daily Average

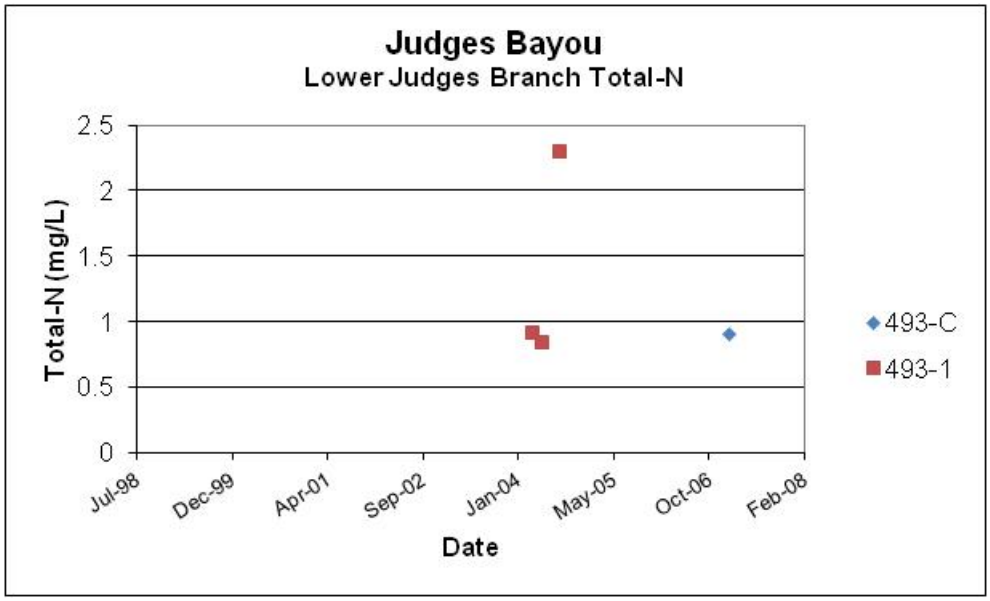


Figure C.33. Upper Judges Bayou TN Daily Average

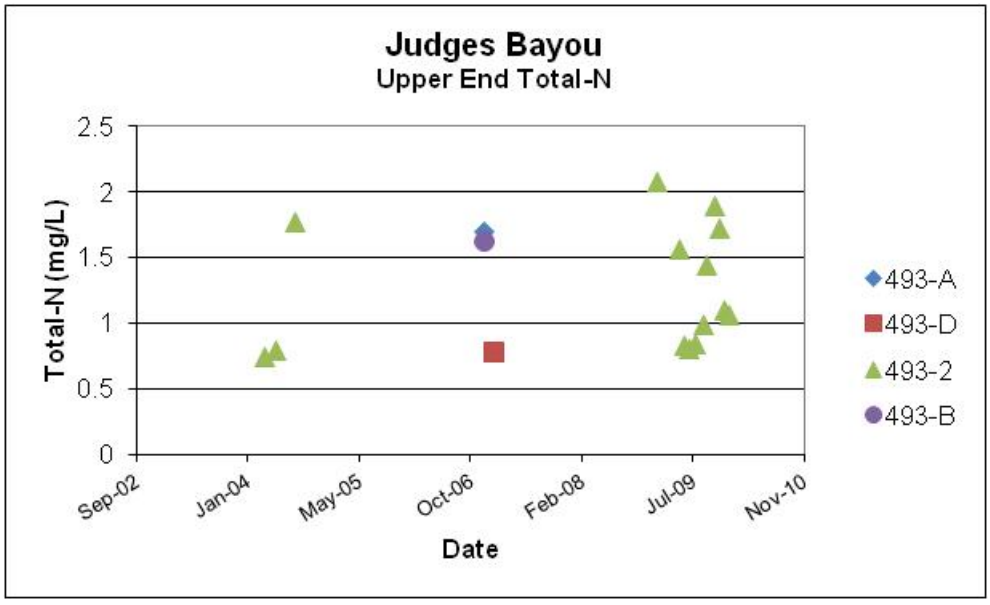


Figure C.34. Lower Judges Bayou TN Daily Average

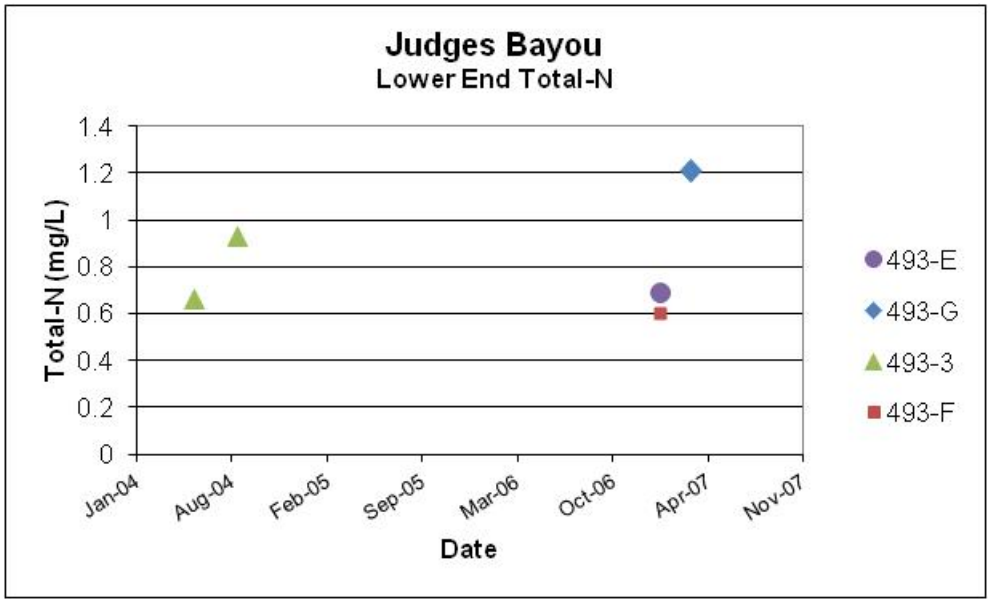


Table C.11. Judges Bayou TN (mg/L)

- = Empty cell/no data

Location	Constituent	Type	Station	Date Range	Count	Min (mg/L)	Max (mg/L)	Median (mg/L)	Average (mg/L)
Spray Field Effluent	TN	SprayF-EFF	R001	2/00-4/11	118	5.03	34.63	15.17	15.29
St. Regis Branch	TN	SprayF-M	SWD-3	3/00-3/11	45	2.02	6.25	3.88	3.77
St. Regis Branch	TN	Ambient	152	3/04	1	3.90	3.90	3.90	3.90
Upper Judges Branch	TN	Ambient	154	3/04-12/04	4	3.12	4.50	3.60	3.71
Upper Judges Branch	TN	SprayF-M	SWD-1	3/00-3/11	48	2.01	7.16	3.57	4.04
Upper Judges Branch	TN	Ambient	153	3/04-8/04	3	3.10	3.85	3.60	3.52
Upper Judges Branch	TN	SprayF-M	SWD-2	3/00-3/11	48	0.71	4.70	1.02	1.26
Lower Judges Branch	TN	Ambient	493-C	1/07	1	0.92	0.92	0.92	0.92
Lower Judges Branch	TN	Ambient	493-1	3/04-8/04	3	0.86	2.31	0.93	1.37
Freshwater Median	**TN**	**-**	**-**	**-**	**-**	**2.02**	**4.20**	**3.59**	**3.61**
Freshwater Average	**TN**	**-**	**-**	**-**	**-**	**2.08**	**4.20**	**2.68**	**2.81**
Upper Judges Bayou	TN	Ambient	493-A	12/06	1	1.70	1.70	1.70	1.70
Upper Judges Bayou	TN	Ambient	493-D	1/07	1	0.78	0.78	0.78	0.78
Upper Judges Bayou	TN	Ambient	493-2	3/04-12/09	14	0.75	2.08	1.08	1.26
Upper Judges Bayou	TN	Ambient	493-B	12/06	1	1.63	1.63	1.63	1.63
Lower Judges Bayou	TN	Ambient	493-E	1/07	1	0.69	0.69	0.69	0.69
Lower Judges Bayou	TN	Ambient	493-G	3/07	1	1.21	1.21	1.21	1.21
Lower Judges Bayou	TN	Ambient	493-3	5/04-8/04	2	0.67	0.93	0.80	0.80
Lower Judges Bayou	TN	Ambient	493-F	1/07	1	0.60	0.60	0.60	0.60
Marine Median	**TN**	**-**	**-**	**-**	**-**	**0.77**	**1.07**	**0.94**	**1.00**
Marine Average	**TN**	**-**	**-**	**-**	**-**	**1.00**	**1.20**	**1.06**	**1.08**

Figure C.35. Sterling R001 Flow and Orthophosphate-P Concentration Daily Average

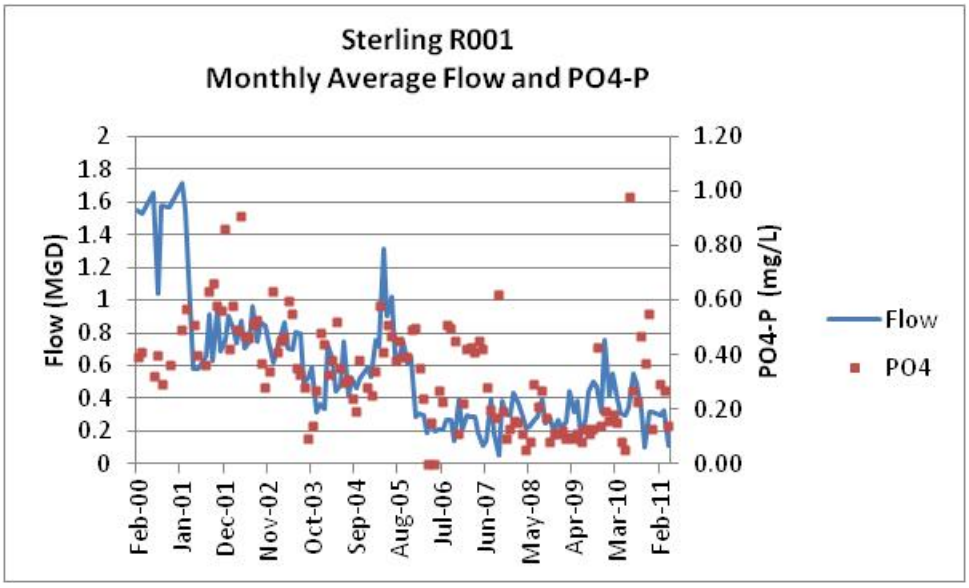


Figure C.36. Sterling R001 Flow and Orthophosphate-P Load Monthly Average

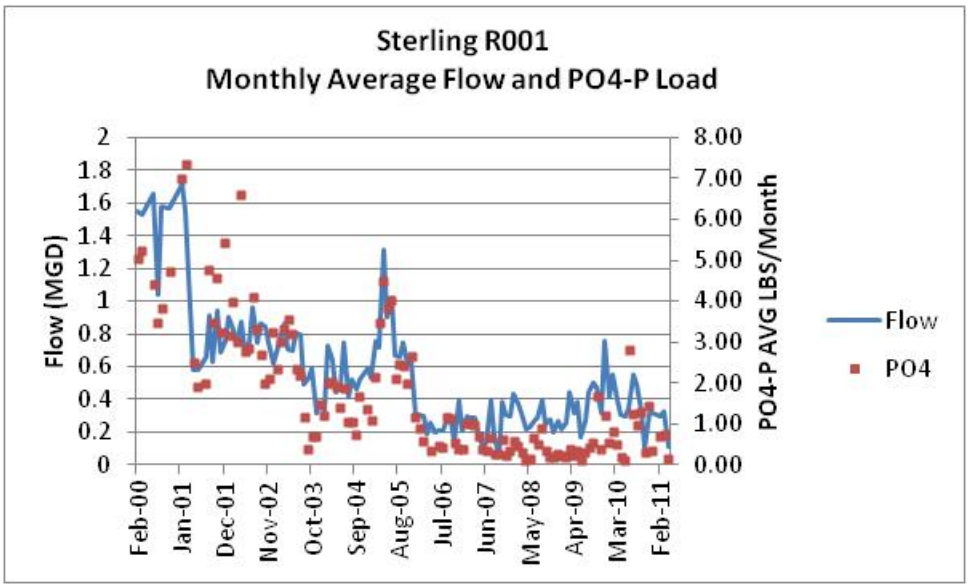


Figure C.37. St. Regis Branch Orthophosphate-P Daily Average

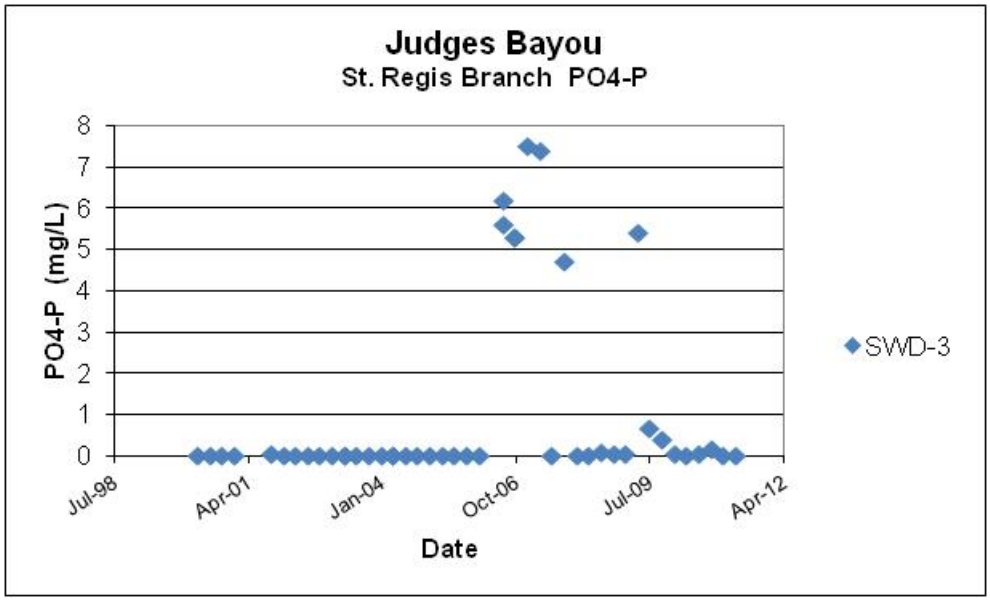


Figure C.38. St. Regis Branch Orthophosphate-P (Rescaled) Daily Average

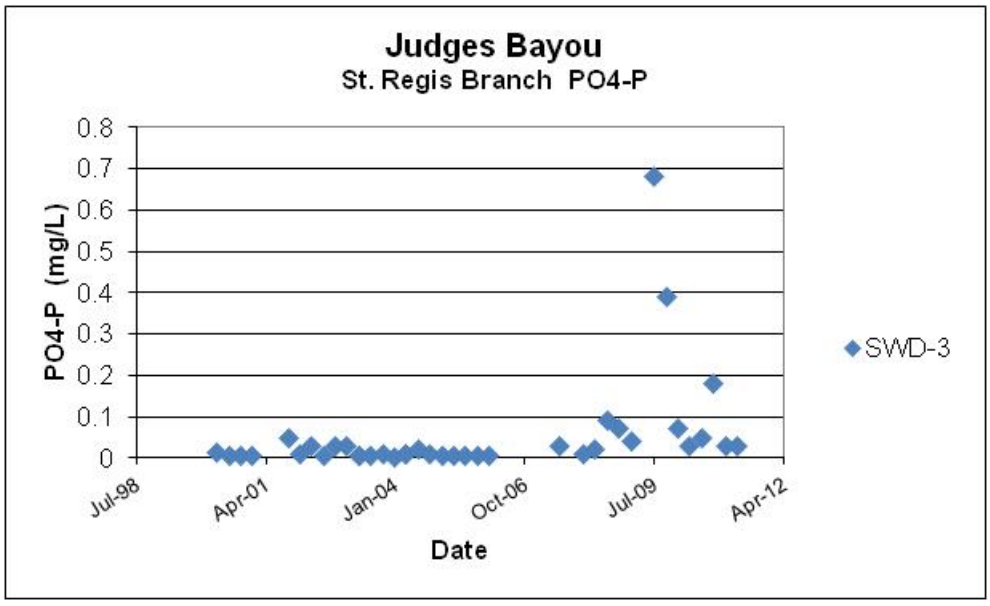


Figure C.39. Upper Judges Branch Orthophosphate-P Daily Average

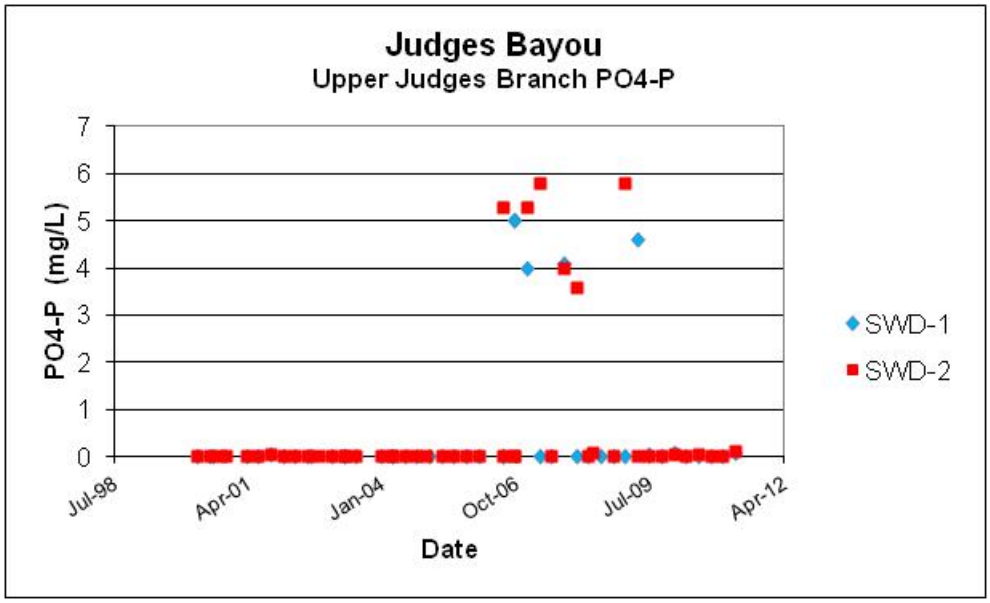


Figure C.40. Upper Judges Branch Orthophosphate-P (Rescaled) Daily Average

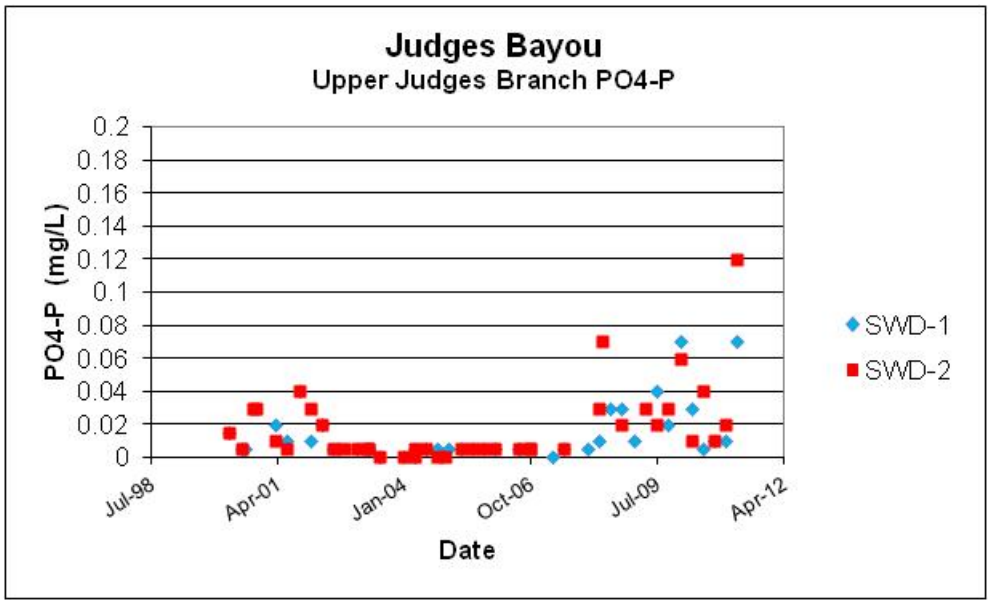


Figure C.41. Lower Judges Branch Orthophosphate-P Daily Average

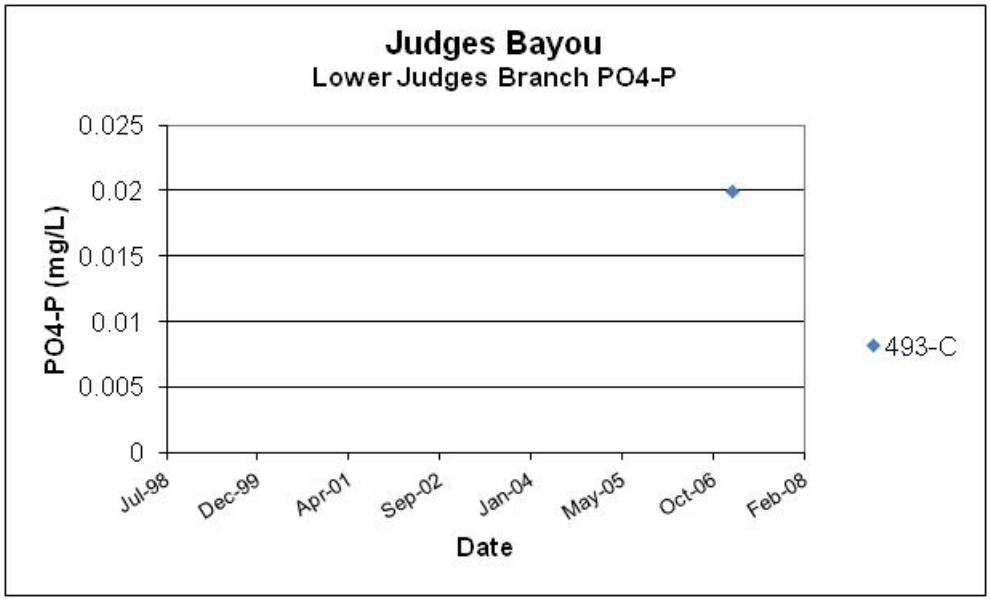


Figure C.42. Upper Judges Bayou Orthophosphate-P Daily Average

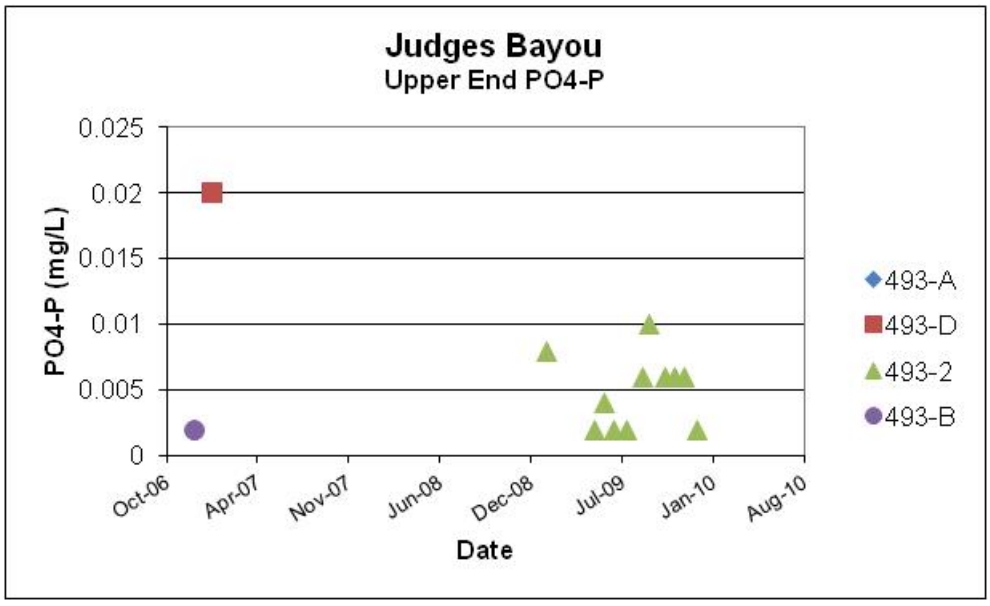


Figure C.43. Lower Judges Bayou Orthophosphate-P Daily Average

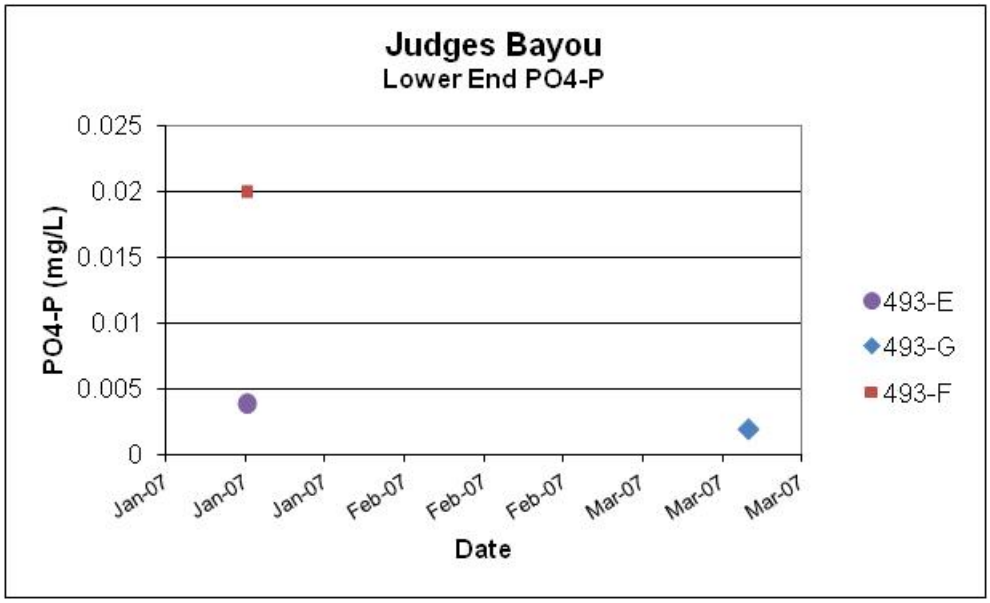


Table C.12. Judges Bayou Orthophosphate-P (mg/L)

- = Empty cell/no data

Location	Constituent	Type	Station	Date Range	Count	Min (mg/L)	Max (mg/L)	Median (mg/L)	Average (mg/L)
Spray Field Effluent	PO4-P	SprayF-EFF	R001	2/00-4/11	124	0.05	0.98	0.34	0.34
St. Regis Branch	PO4-P	SprayF-M	SWD-3	3/00-3/11	45	0.004	7.500	0.030	1.098
St. Regis Branch	PO4-P	Ambient	152	No Data	-	-	-	-	-
Upper Judges Branch	PO4-P	Ambient	154	No Data	-	-	-	-	-
Upper Judges Branch	PO4-P	SprayF-M	SWD-1	3/00-3/11	42	0.005	5.000	0.010	0.553
Upper Judges Branch	PO4-P	Ambient	153	No Data	-	-	-	-	-
Upper Judges Branch	PO4-P	SprayF-M	SWD-2	3/00-3/11	44	0.001	5.800	0.013	0.694
Lower Judges Branch	PO4-P	Ambient	493-C	1/07	1	0.020	0.020	0.020	0.020
Lower Judges Branch	PO4-P	Ambient	493-1	No Data	-	-	-	-	-
Freshwater Median	**PO4-P**	**-**	**-**	**-**	**-**	**0.005**	**5.400**	**0.016**	**0.624**
Freshwater Average	**PO4-P**	**-**	**-**	**-**	**-**	**0.007**	**4.580**	**0.018**	**0.591**
Upper Judges Bayou	PO4-P	Ambient	493-A	12/06	1	0.002	0.002	0.002	0.002
Upper Judges Bayou	PO4-P	Ambient	493-D	1/07	1	0.020	0.020	0.020	0.020
Upper Judges Bayou	PO4-P	Ambient	493-2	3/04-12/09	11	0.002	0.010	0.006	0.005
Upper Judges Bayou	PO4-P	Ambient	493-B	12/06	1	0.002	0.002	0.002	0.002
Lower Judges Bayou	PO4-P	Ambient	493-E	1/07	1	0.004	0.004	0.004	0.004
Lower Judges Bayou	PO4-P	Ambient	493-G	3/07	1	0.002	0.002	0.002	0.002
Lower Judges Bayou	PO4-P	Ambient	493-3	No Data	-	-	-	-	-
Lower Judges Bayou	PO4-P	Ambient	493-F	1/07	1	0.020	0.020	0.020	0.020
Marine Median	**PO4-P**	**-**	**-**	**-**	**-**	**0.002**	**0.004**	**0.004**	**0.004**
Marine Average	**PO4-P**	**-**	**-**	**-**	**-**	**0.007**	**0.009**	**0.008**	**0.008**

Figure C.44. St. Regis Branch TP Daily Average

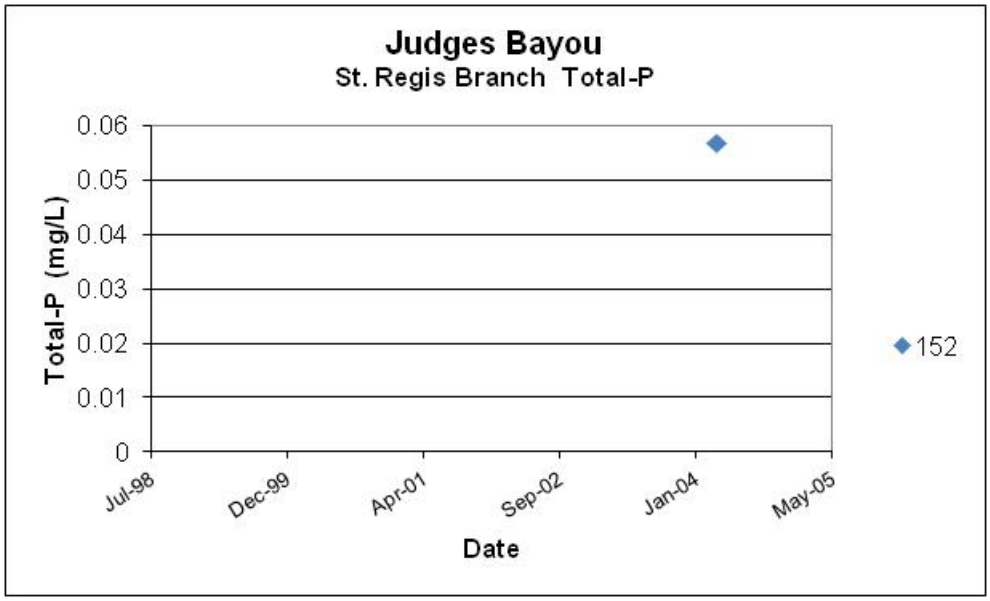


Figure C.45. Upper Judges Branch TP Daily Average

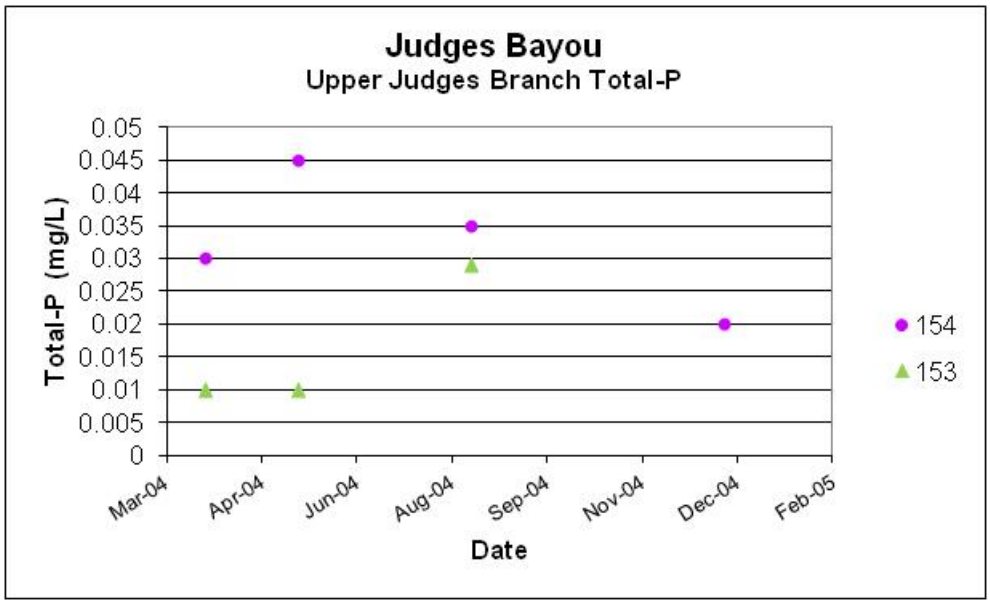


Figure C.46. Lower Judges Branch TP Daily Average

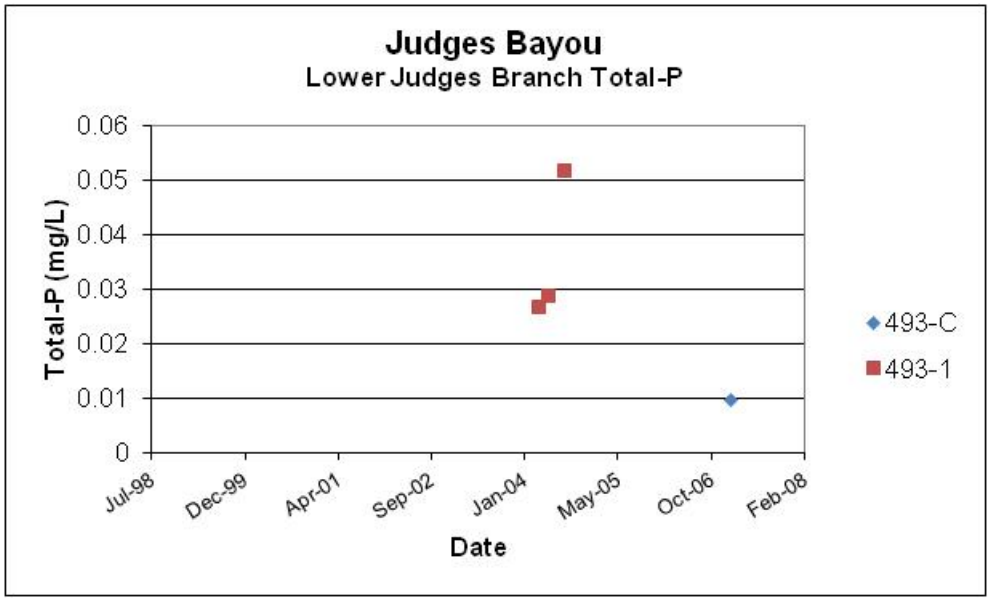


Figure C.47. Upper Judges Bayou TP Daily Average

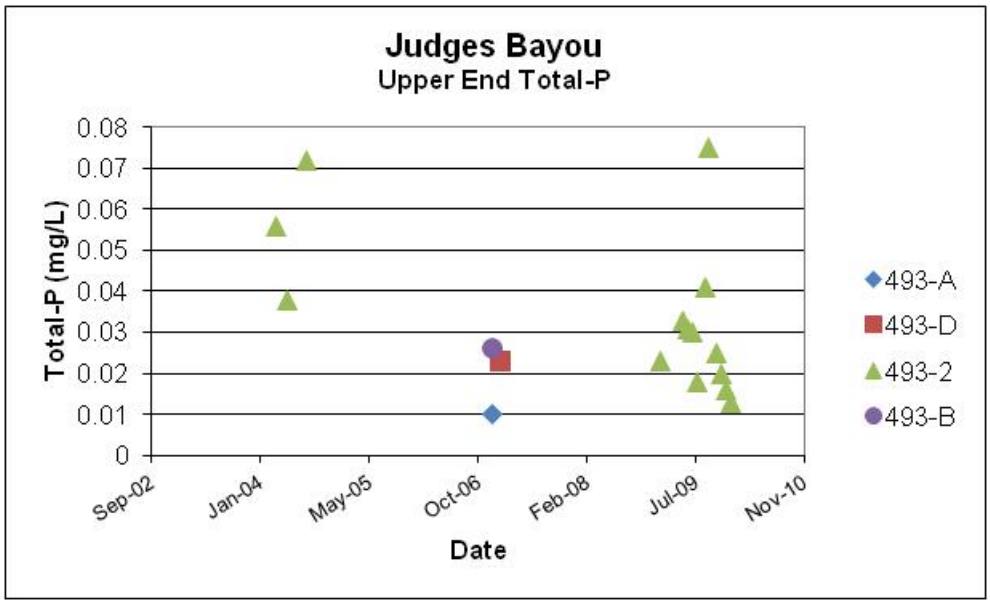


Figure C.48. Lower Judges Bayou TP Daily Average

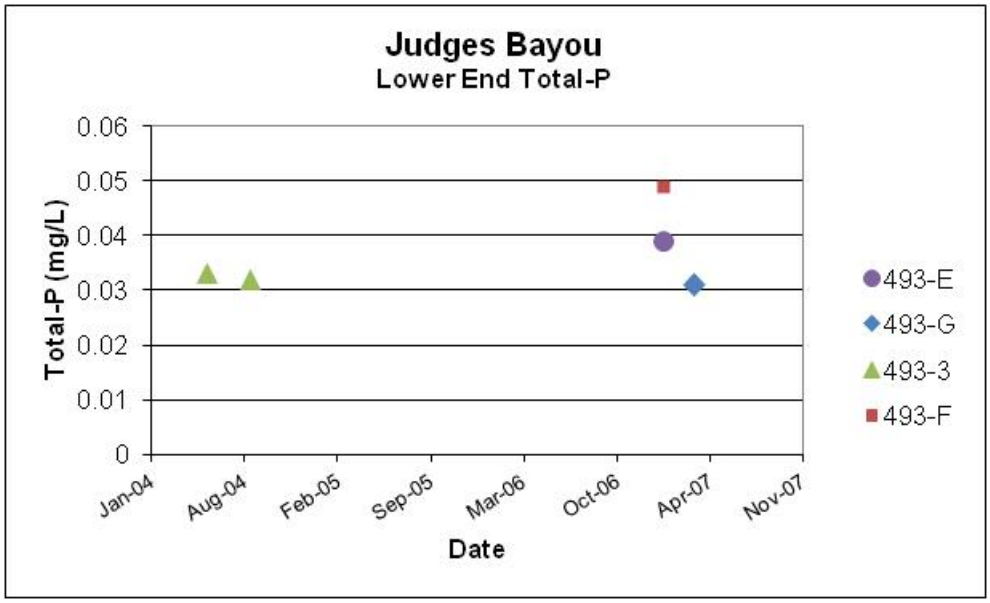


Table C.13 Judges Bayou TP (mg/L)

- = Empty cell/no data

Location	Constituent	Type	Station	Date Range	Count	Min (mg/L)	Max (mg/L)	Median (mg/L)	Average (mg/L)
Spray Field Effluent	TP	SprayF-EFF	R001	No Data	-	-	-	-	-
St. Regis Branch	TP	SprayF-M	SWD-3	No Data	-	-	-	-	-
St. Regis Branch	TP	Ambient	152	3/04	1	0.023	0.023	0.023	0.023
Upper Judges Branch	TP	Ambient	154	3/04-12/04	4	0.020	0.045	0.033	0.033
Upper Judges Branch	TP	SprayF-M	SWD-1	No Data		-	-	-	-
Upper Judges Branch	TP	Ambient	153	3/04-8/04	3	0.010	0.029	0.010	0.016
Upper Judges Branch	TP	SprayF-M	SWD-2	No Data	-	-	-	-	-
Lower Judges Branch	TP	Ambient	493-C	1/07	1	0.010	0.010	0.010	0.010
Lower Judges Branch	TP	Ambient	493-1	3/04-8/04	3	0.027	0.052	0.029	0.036
Freshwater Median	**TP**	**-**	**-**	**-**	**-**	**0.020**	**0.029**	**0.023**	**0.023**
Freshwater Average	**TP**	**-**	**-**	**-**	**-**	**0.018**	**0.032**	**0.021**	**0.024**
Upper Judges Bayou	TP	Ambient	493-A	12/06	1	0.010	0.010	0.010	0.010
Upper Judges Bayou	TP	Ambient	493-D	1/07	1	0.023	0.023	0.023	0.023
Upper Judges Bayou	TP	Ambient	493-2	3/04-11/09	14	0.013	0.075	0.031	0.035
Upper Judges Bayou	TP	Ambient	493-B	12/06	1	0.026	0.026	0.026	0.026
Lower Judges Bayou	TP	Ambient	493-E	1/07	1	0.039	0.039	0.039	0.039
Lower Judges Bayou	TP	Ambient	493-G	3/07	1	0.031	0.031	0.031	0.031
Lower Judges Bayou	TP	Ambient	493-3	5/04-8/04	2	0.032	0.033	0.033	0.033
Lower Judges Bayou	TP	Ambient	493-F	1/07	1	0.049	0.049	0.049	0.049
Marine Median	**TP**	**-**	**-**	**-**	**-**	**0.029**	**0.032**	**0.031**	**0.032**
Marine Average	**TP**	**-**	**-**	**-**	**-**	**0.028**	**0.036**	**0.030**	**0.031**

Figure C.49. St. Regis Branch CChla Daily Average

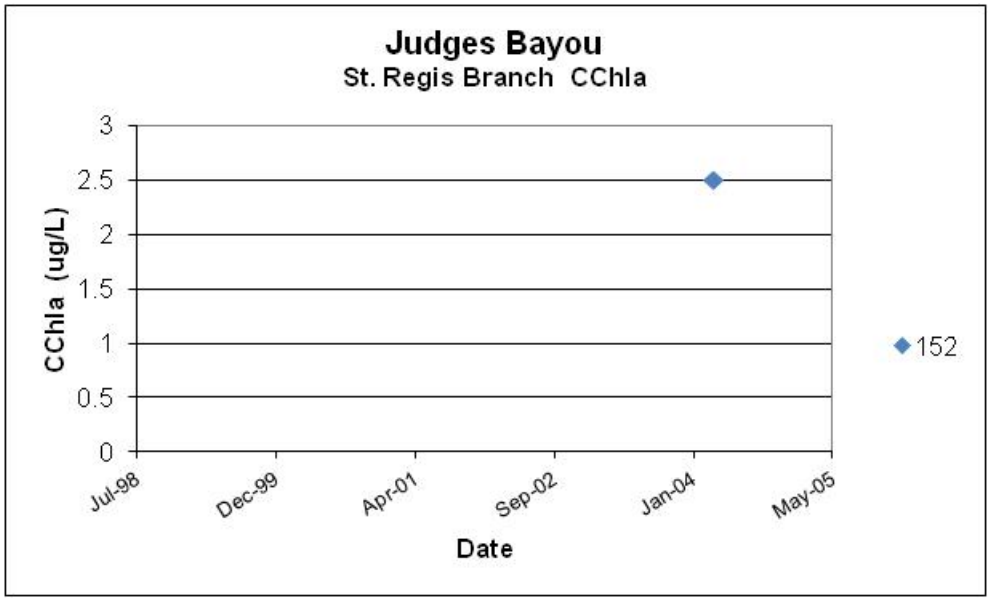


Figure C.50. Upper Judges Branch CChla Daily Average

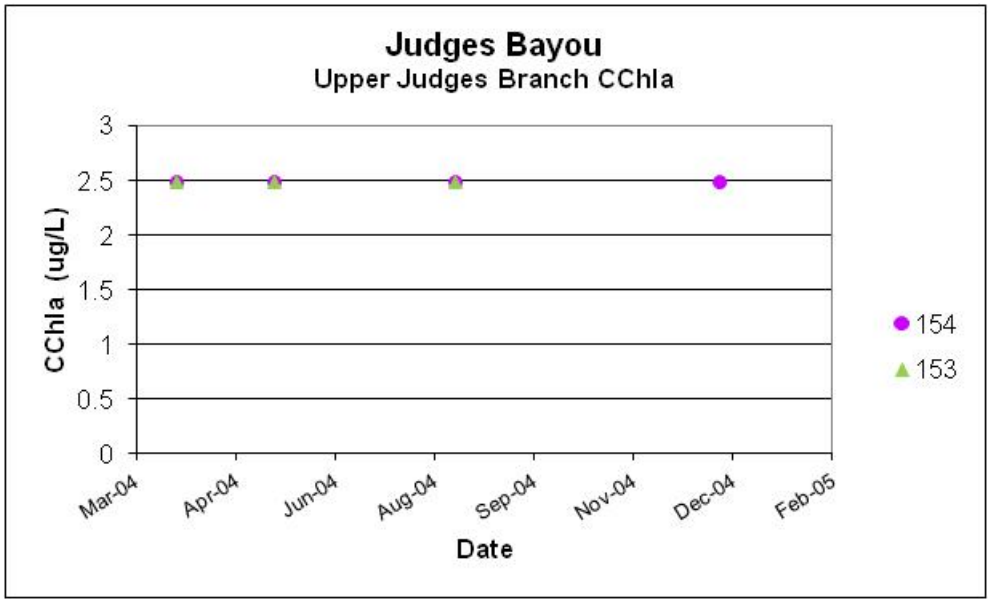


Figure C.51. Lower Judges Branch CChla Daily Average

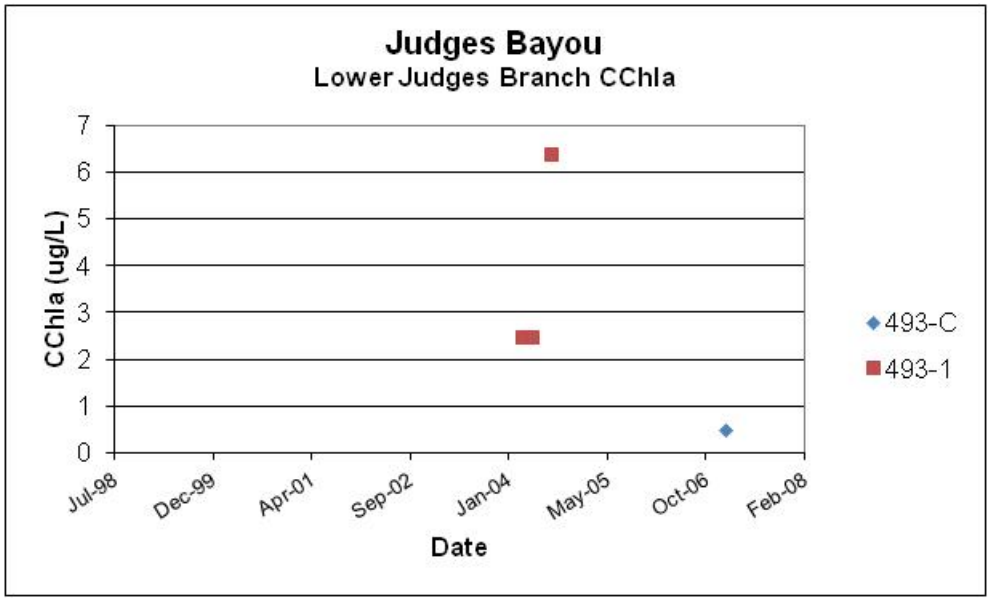


Figure C.52. Upper Judges Bayou CChla Daily Average

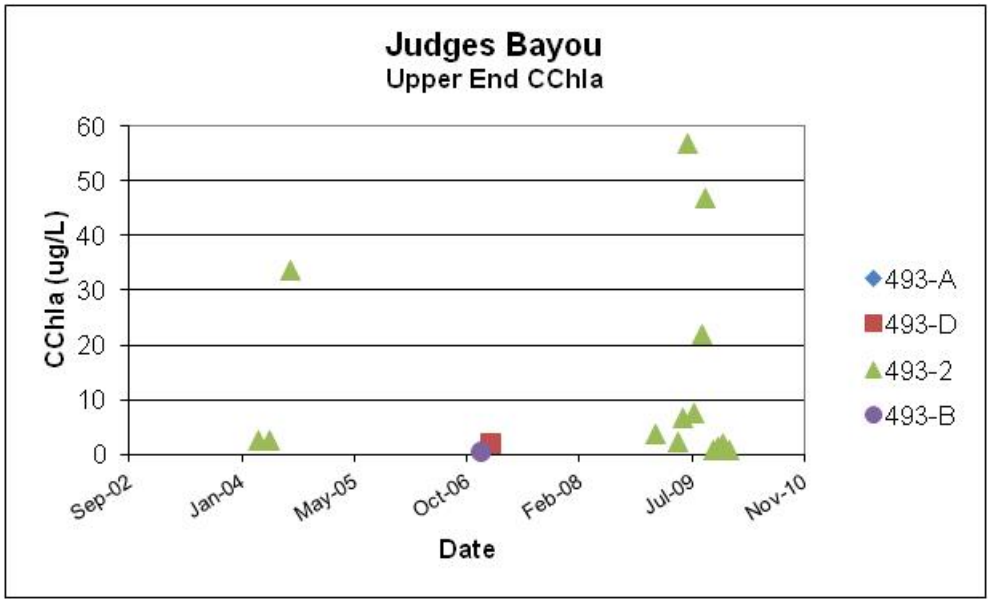


Figure C.53. Lower Judges Bayou CChla Daily Average

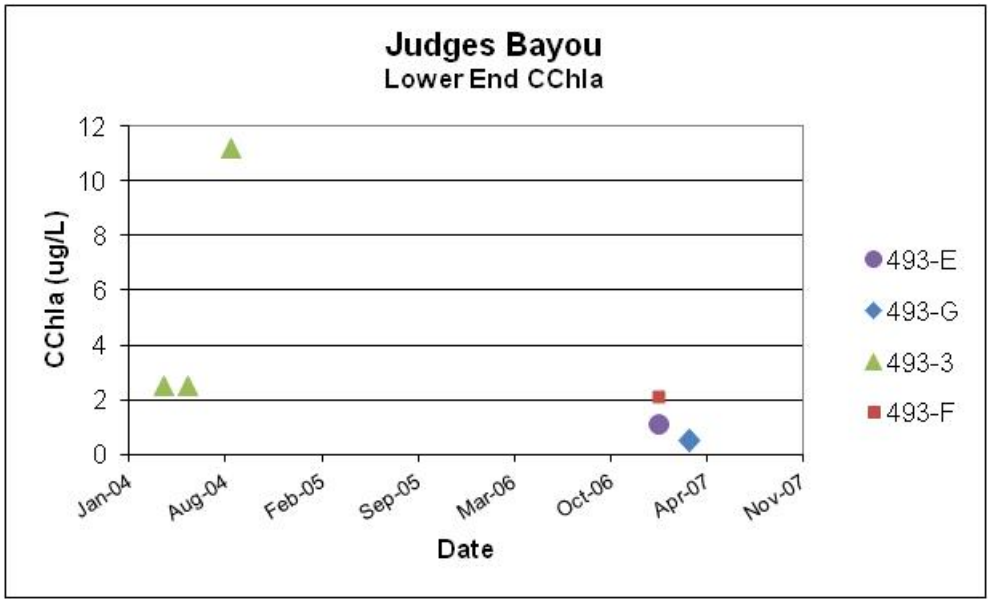


Table C.14. Judges Bayou Corrected Chlorophyll a (µg/L)

- = Empty cell/no data

Location	Constituent	Type	Station	Date Range	Count	Min (µg/L)	Max (µg/L)	Median (µg/L)	Average (µg/L)
Spray Field Effluent	CChla	SprayF-EFF	R001	No Data	-	-	-	-	-
St. Regis Branch	CChla	SprayF-M	SWD-3	No Data	-	-	-	-	-
St. Regis Branch	CChla	Ambient	152	3/04	1	2.50	2.50	2.50	2.50
Upper Judges Branch	CChla	Ambient	154	3/04-12/04	4	2.50	2.50	2.50	2.50
Upper Judges Branch	CChla	SprayF-M	SWD-1	No Data	-	-	-	-	-
Upper Judges Branch	CChla	Ambient	153	3/04-8/04	3	2.50	2.50	2.50	2.50
Upper Judges Branch	CChla	SprayF-M	SWD-2	No Data	-	-	-	-	-
Lower Judges Branch	CChla	Ambient	493-C	1/07	1	0.50	0.50	0.50	0.50
Lower Judges Branch	CChla	Ambient	493-1	3/04-8/04	3	2.50	6.40	2.50	3.80
Freshwater Median	**CChla**	**-**	**-**	**-**	**-**	**2.50**	**2.50**	**2.50**	**2.50**
Freshwater Average	**CChla**	**-**	**-**	**-**	**-**	**2.10**	**2.88**	**2.10**	**2.36**
Upper Judges Bayou	CChla	Ambient	493-A	12/06	1	0.50	0.50	0.50	0.50
Upper Judges Bayou	CChla	Ambient	493-D	1/07	1	2.10	2.10	2.10	2.10
Upper Judges Bayou	CChla	Ambient	493-2	3/04-11/09	14	1.00	57.00	3.15	13.59
Upper Judges Bayou	CChla	Ambient	493-B	12/06	1	0.50	0.50	0.50	0.50
Lower Judges Bayou	CChla	Ambient	493-E	1/07	1	1.10	1.10	1.10	1.10
Lower Judges Bayou	CChla	Ambient	493-G	3/07	1	0.50	0.50	0.50	0.50
Lower Judges Bayou	CChla	Ambient	493-3	5/04-8/04	3	2.50	11.20	2.50	5.40
Lower Judges Bayou	CChla	Ambient	493-F	1/07	1	2.10	2.10	2.10	2.10
Marine Median	**CChla**	**-**	**-**	**-**	**-**	**1.05**	**1.60**	**1.60**	**1.60**
Marine Average	**CChla**	**-**	**-**	**-**	**-**	**1.29**	**9.38**	**1.56**	**3.22**

Figure C.54. Sterling R001 Flow and BOD5 Concentration Daily Average

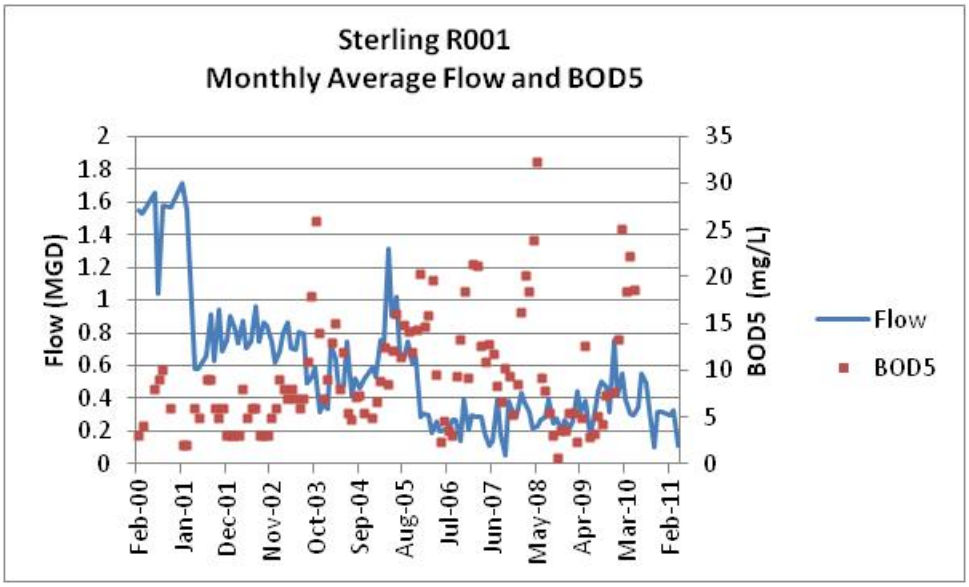


Figure C.55. Sterling R001 Flow and BOD5 Load Monthly Average

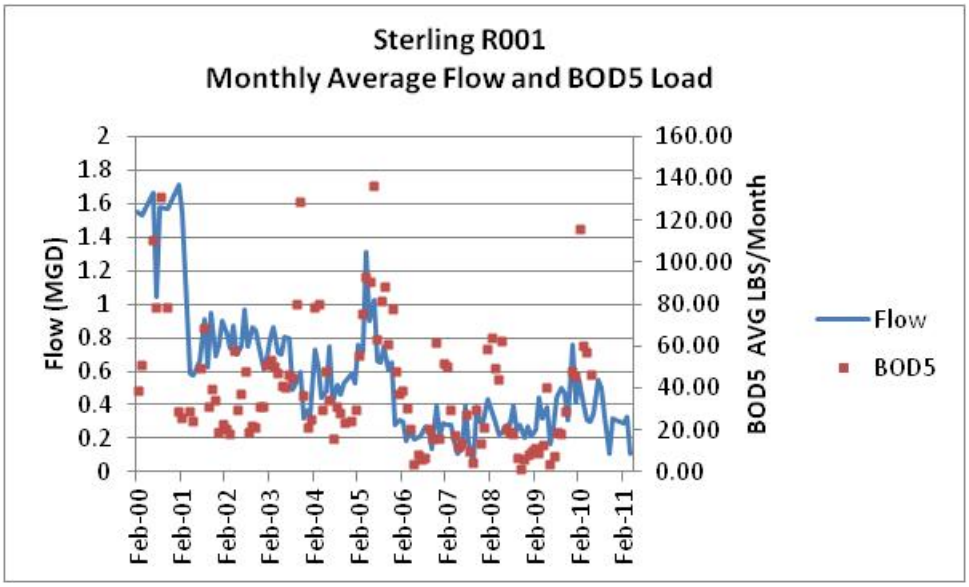


Figure C.56. St. Regis Branch BOD5 Daily Average

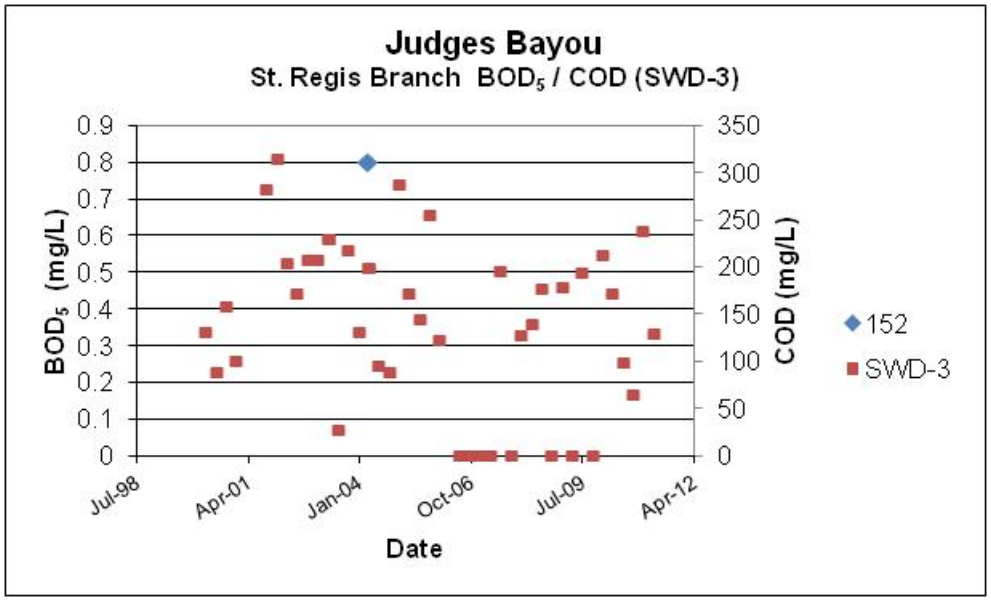


Figure C.57. Upper Judges Branch BOD5 Daily Average

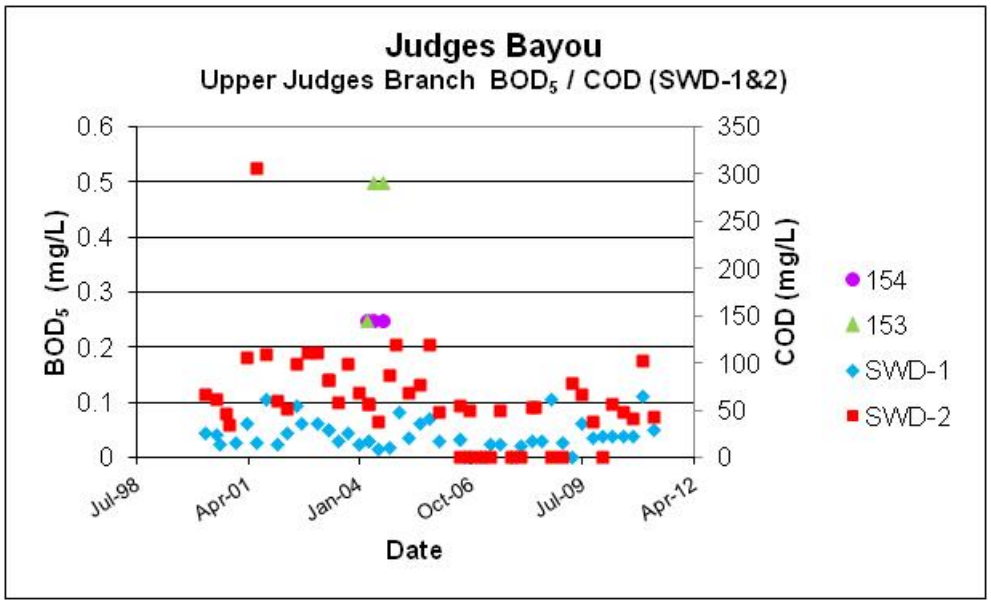


Figure C.58. Lower Judges Branch BOD5 Daily Average

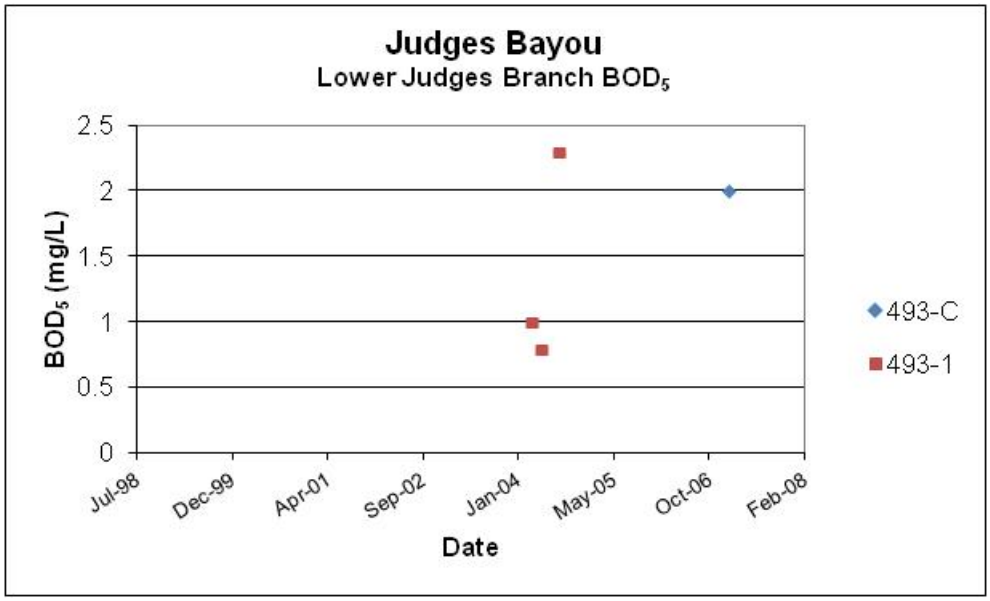


Figure C.59. Upper Judges Bayou BOD5 Daily Average

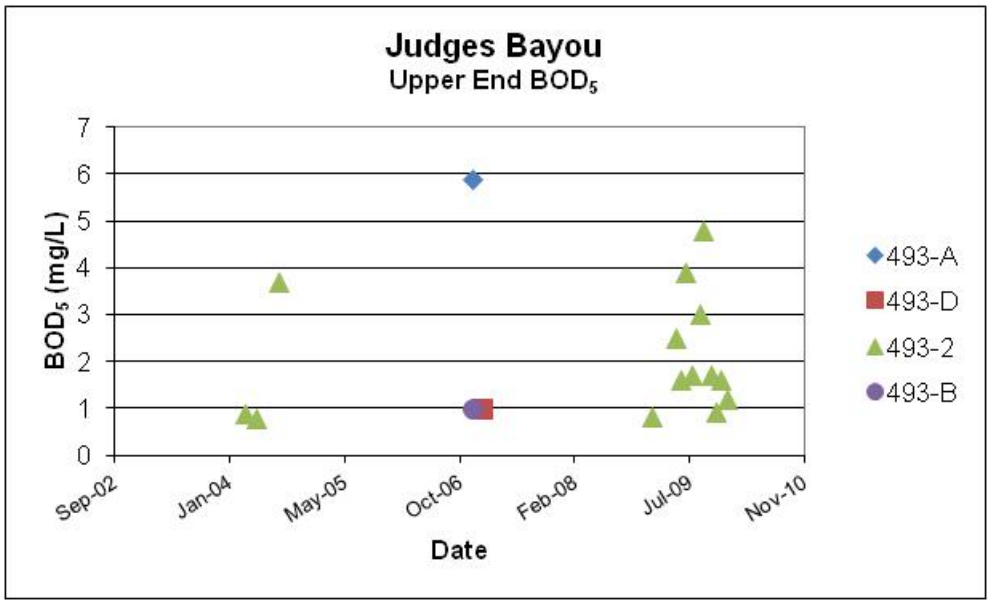


Figure C.60. Lower Judges Bayou BOD5 Daily Average

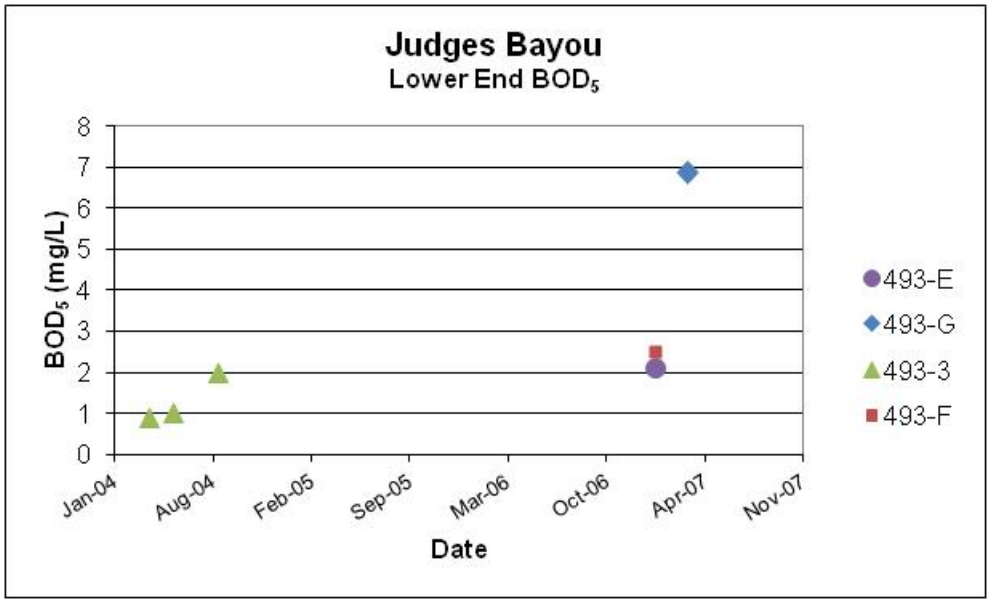


Table C.15. Judges Bayou BOD5 (mg/L)

- = Empty cell/no data
Chemical Oxygen Demand (COD) is presented for informational purposes and is not compared to or combined with biological oxygen demand (BOD).

Location	Constituent	Type	Station	Date Range	Count	Min (µg/L)	Max (µg/L)	Median (µg/L)	Average (µg/L)
Spray Field Effluent (monthly avg)	BOD_5	SprayF-EFF	R001	2/00 - 4/11	115	0.60	32.40	8.00	9.44
St. Regis Branch	*COD_5*	SprayF-M	SWD-3	3/00 - 3/11	44	0.58	316.00	152.00	141.41
St. Regis Branch	BOD_5	Ambient	152	3/04	1	0.80	0.80	0.80	0.80
Upper Judges Branch	BOD_5	Ambient	154	3/04 - 8/04	3	0.25	0.25	0.25	0.25
Upper Judges Branch	*COD_5*	SprayF-M	SWD-1	3/00 - 3/11	46	0.58	65.30	21.00	24.77
Upper Judges Branch	BOD_5	Ambient	153	3/04 - 8/04	3	0.25	0.50	0.50	0.42
Upper Judges Branch	*COD_5*	SprayF-M	SWD-2	3/00 - 3/11	44	0.19	307.00	58.15	67.65
Lower Judges Branch	BOD_5	Ambient	493-C	1/07	1	1.00	1.00	1.00	1.00
Lower Judges Branch	BOD_5	Ambient	493-1	3/04 - 8/04	3	0.80	2.30	1.00	1.37
Freshwater Median	**BOD_5**	**-**	**-**	**-**	**-**	**0.80**	**0.80**	**0.80**	**0.80**
Freshwater Average	**BOD_5**	**-**	**-**	**-**	**-**	**0.62**	**0.97**	**0.71**	**0.77**
Upper Judges Bayou	BOD_5	Ambient	493-A	12/6	1	5.90	5.90	5.90	5.90
Upper Judges Bayou	BOD_5	Ambient	493-D	1/07	1	1.00	1.00	1.00	1.00
Upper Judges Bayou	BOD_5	Ambient	493-2	3/04 - 12/09	14	0.80	4.80	1.65	2.08
Upper Judges Bayou	BOD_5	Ambient	493-B	12/06	1	1.00	1.00	1.00	1.00
Lower Judges Bayou	BOD_5	Ambient	493-E	1/07	1	2.10	2.10	2.10	2.10
Lower Judges Bayou	BOD_5	Ambient	493-G	3/07	1	6.90	6.90	6.90	6.90
Lower Judges Bayou	BOD_5	Ambient	493-3	5/04 - 8/04	3	0.90	2.00	1.00	1.30
Lower Judges Bayou	BOD_5	Ambient	493-F	1/07	1	2.50	2.50	2.50	2.50
Marine Median	**BOD_5**	**-**	**-**	**-**	**-**	**1.55**	**2.30**	**1.88**	**2.09**
Marine Average	**BOD_5**	**-**	**-**	**-**	**-**	**2.64**	**3.28**	**2.76**	**2.85**

Figure C.61. St. Regis Branch DO Daily Average

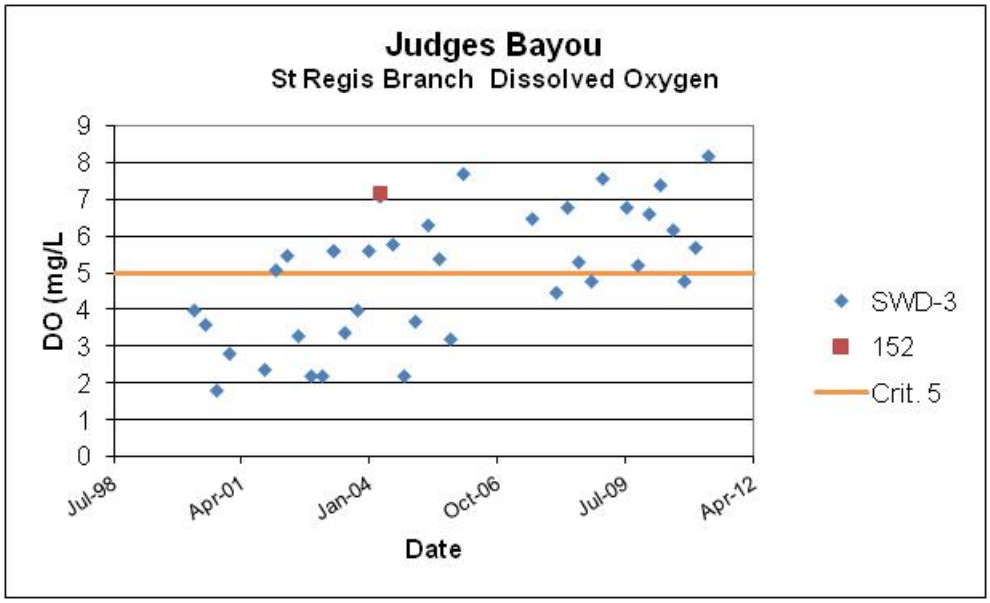


Figure C.62. Upper Judges Branch DO Daily Average

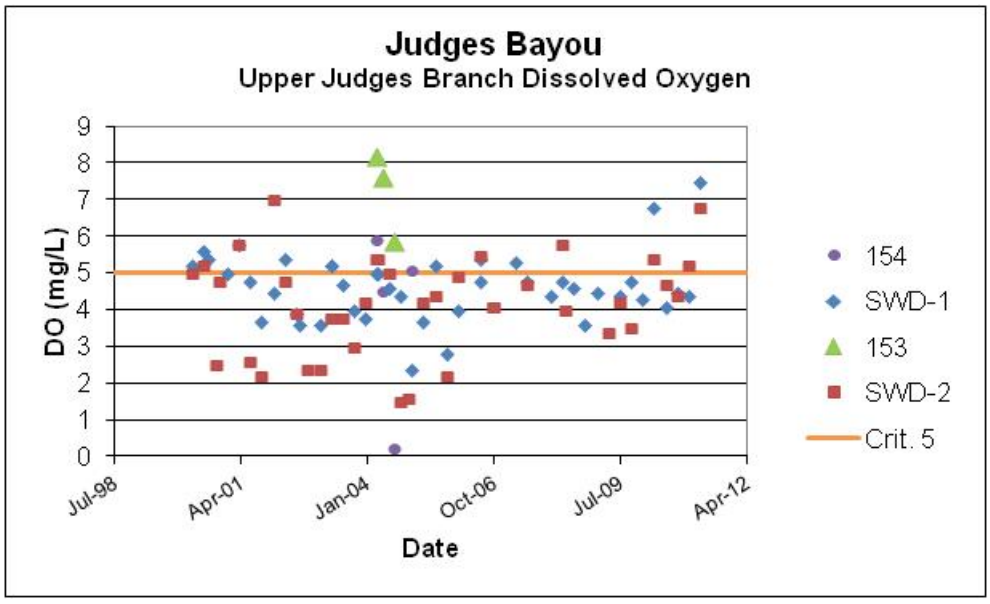


Figure C.63. Lower Judges Branch DO Daily Average

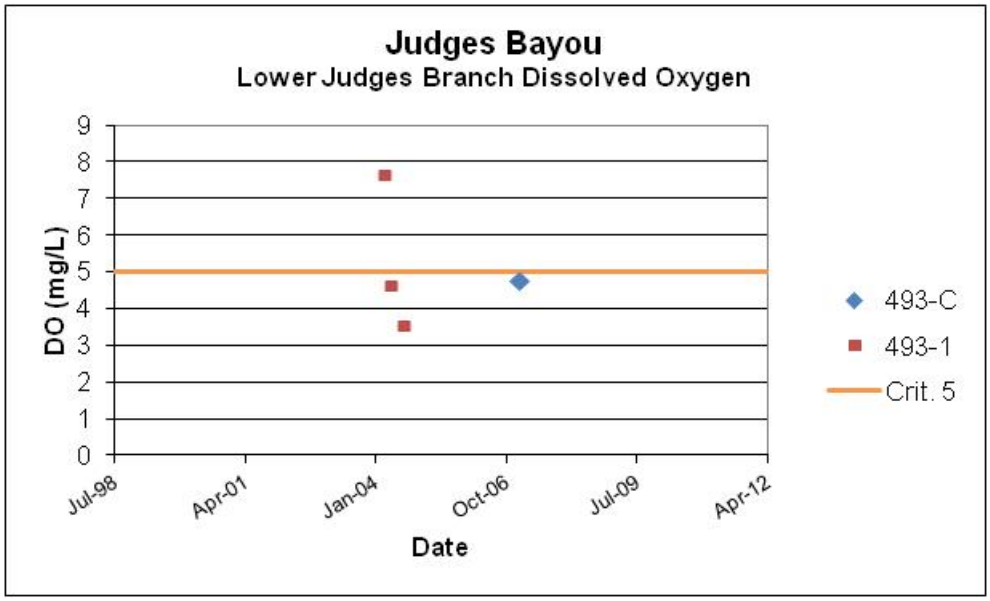


Figure C.64. Upper Judges Bayou DO Daily Average

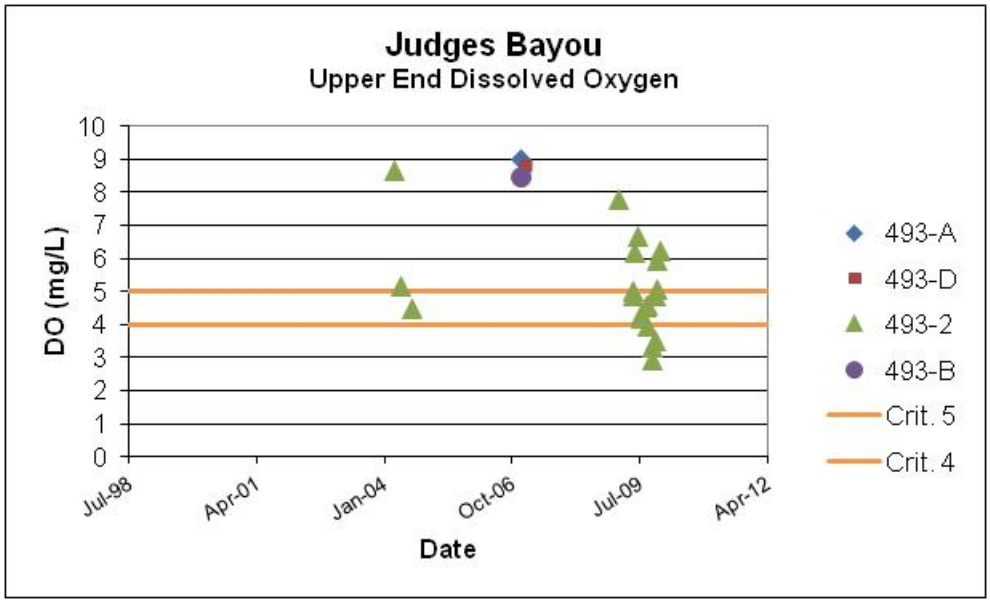


Figure C.65. Lower Judges Bayou DO Daily Average

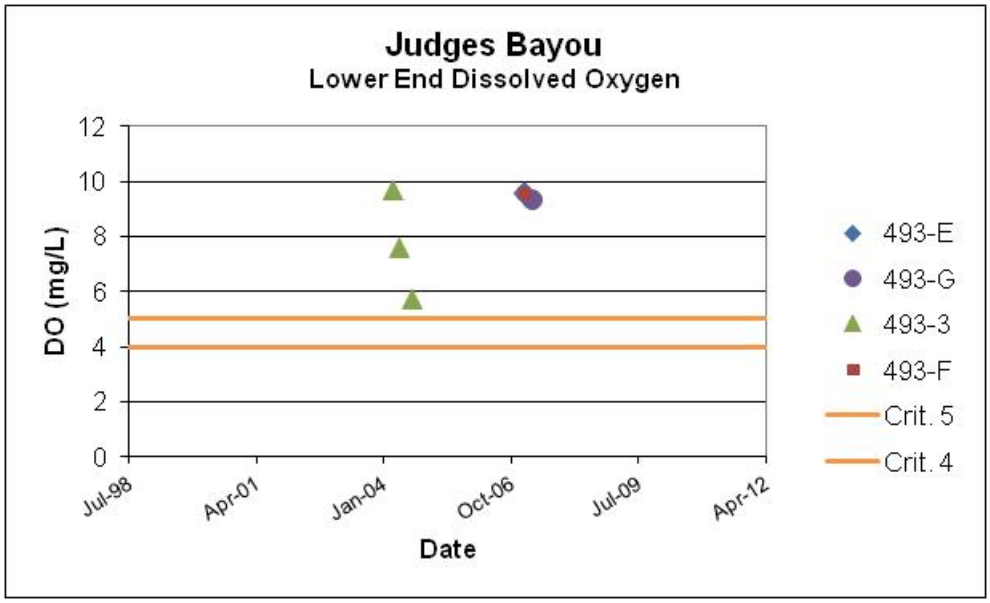


Table C.16. Judges Bayou DO (mg/L)

- = Empty cell/no data

Location	Constituent	Type	Station	Date Range	Count	Min (mg/L)	Max (mg/L)	Median (mg/L)	Average (mg/L)
Spray Field Effluent	DO	SprayF-EFF	R001	No Data	-	-	-	-	-
St. Regis Branch	DO	SprayF-M	SWD-3	3/00-3/11	38	1.8	8.20	5.35	5.05
St. Regis Branch	DO	Ambient	152	3/04	1	7.17	7.17	7.17	7.17
Upper Judges Branch	DO	Ambient	154	3/04-12/04	4	0.25	5.90	4.82	3.95
Upper Judges Branch	DO	SprayF-M	SWD-1	3/00-3/11	23	2.40	7.50	4.50	4.59
Upper Judges Branch	DO	Ambient	153	3/04-8/04	3	5.87	8.19	7.63	7.23
Upper Judges Branch	DO	SprayF-M	SWD-2	3/00-3/11	40	1.50	7.00	4.20	4.19
Lower Judges Branch	DO	Ambient	493-C	1/07	1	4.79	4.79	4.79	4.79
Lower Judges Branch	DO	Ambient	493-1	3/04-8/04	3	3.58	7.65	4.66	5.30
Freshwater Median	**DO**	**-**	**-**	**-**	**-**	**2.99**	**7.34**	**4.80**	**4.92**
Freshwater Average	**DO**	**-**	**-**	**-**	**-**	**3.42**	**7.05**	**5.39**	**5.28**
Upper Judges Bayou	DO	Ambient	493-A	12/06	1	9.01	9.01	9.01	9.01
Upper Judges Bayou	DO	Ambient	493-D	1/07	1	8.83	8.83	8.83	8.83
Upper Judges Bayou	DO	Ambient	493-2	3/04-12/09	20	2.92	8.66	4.89	5.12
Upper Judges Bayou	DO	Ambient	493-B	12/06	1	8.48	8.48	8.48	8.48
Lower Judges Bayou	DO	Ambient	493-E	1/07	1	9.61	9.61	9.61	9.61
Lower Judges Bayou	DO	Ambient	493-G	3/07	1	9.35	9.35	9.35	9.35
Lower Judges Bayou	DO	Ambient	493-3	5/04-8/04	3	5.76	9.71	7.59	7.69
Lower Judges Bayou	DO	Ambient	493-F	1/07	1	9.61	9.61	9.61	9.61
Marine Median	**DO**	**-**	**-**	**-**	**-**	**8.92**	**9.18**	**8.92**	**8.92**
Marine Average	**DO**	**-**	**-**	**-**	**-**	**7.95**	**9.16**	**8.42**	**8.46**

Florida Department of Environmental Protection
Division of Environmental Assessment and Restoration
Bureau of Watershed Restoration
2600 Blair Stone Road, Mail Station 3565
Tallahassee, FL 32399-2400