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**SABINE RIVER AUTHORITY OF TEXAS**

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**TO:** INTERESTED PARTIES  
**FROM:** WATER RESOURCES BRANCH  
**RE:** MARCH 2004 MONTHLY WATER QUALITY REPORT

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This is the Sabine River Authority Water Quality Report for March 2004. Water quality sampling was performed March 8<sup>th</sup> through March 11<sup>th</sup>. Recent weather (previous seven days) in the Sabine River Basin was cool, with daytime high air temperatures from the mid 60s to the high 70s at Lake Tawakoni and at Lake Fork. Toledo Bend Reservoir and Orange had daytime highs from the upper 50s to the low 80s. Lows ranged from the low 40s to the mid 60s at Lake Tawakoni and at Lake Fork. Toledo Bend and Orange had lows ranging from the mid 40s to the low 60s. Lake Tawakoni and Lake Fork exhibited weak stratification. During the 28 days since the February sample run, the Upper Basin received 4.26 and 4.47 inches of rainfall, as recorded at Lake Tawakoni and Lake Fork, respectively. The week prior to the sample run, Lake Tawakoni recorded 0.72 inches and Lake Fork recorded 0.83 inches of rain. Toledo Bend and Orange received 5.27 and 2.06 inches, respectively, during the 28 days preceding the sample run.

**UPPER SABINE BASIN ABOVE TOLEDO BEND INCLUDING LAKE FORK AND LAKE TAWAKONI**

For the March sample run, most parameter measurements at Upper Basin sites were consistent with water of high quality. Nitrate and nitrite levels at LT23C were above screening levels. Reservoir sites LT23C, LT23D, LT23A, LF4 and LF2 had high levels of dissolved oxygen with greater than 100 percent dissolved oxygen saturation, indicating algal activity. LT23D exceeded screening levels for chlorophyll *a*. Stream water at BS9 was slightly below stream standards for pH. SR22 exceeded the numeric criteria for the stream standards for *E. coli*.

**LOWER SABINE BASIN INCLUDING TOLEDO BEND TO MORGAN BLUFF**

The March monthly sampling results were indicative of water of high quality at most sites. The area received close to an inch of rain in the week prior to the sample run. The level of Toledo Bend Reservoir was recorded at 172.62 feet. Five gates at the spillway were discharging and both generators were operating at the time of sampling. Most reservoir sites were showing signs of stratification, with pH and dissolved oxygen differences throughout the water column. All parameters recorded were within the stream standards for this section of the Basin.

**TIDAL SECTION OF THE SABINE BASIN BELOW MORGAN BLUFF**

Most sites sampled in the tidal portion of the Sabine Basin had values that are consistent with water of high quality. The tidal stations only received a trace of rain in the week prior to the sampling event. Most sites in this section of the Basin showed signs of stratification, but no anoxic conditions were found at any tidal station. All salinity readings were less than 1.0 ppt due to good downstream flows from reservoir releases upstream. All parameters recorded were within the stream standards for this section of the Basin.

This Report and additional data for these monitoring stations are available on our World Wide Web site ([www.sra.dst.tx.us](http://www.sra.dst.tx.us)). If you have any questions or comments concerning this report, please contact:

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PRINTED WEDNESDAY, JUNE 23, 2004

# SABINE RIVER AUTHORITY OF TEXAS

## Monthly Water Quality Report

March 2004

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## FY 2004 Fixed Monitoring Stations

### Upper Sabine Basin

SW	Segment	Station	Location
7.00	0507	10440 (LT23C)	LAKE TAWAKONI NEAR WIND POINT PARK
7.00	0507	10435 (LT23D)	LAKE TAWAKONI IN KITSEE INLET NEAR WHITE POINT CAUSEWAY
7.00	0507	10434 (LT23A)	LAKE TAWAKONI IN THE MAIN LAKE NEAR THE DAM
6.12	0512	10461 (LF3)	LAKE FORK RESERVOIR MID-ARM IN CANEY CREEK ARM AT FM 515
6.12	0512	10462 (LF4)	LAKE FORK RESERVOIR MID-COVE IN LAKE FORK CREEK ARM AT FM 515
6.12	0512	10458 (LF2)	LAKE FORK RESERVOIR NEAR DAM IN CREEK CHANNEL
6.10	0515	10469 (LF20)	LAKE FORK CREEK AT US 80
6.02	0514	16011 (BS9)	BIG SANDY CREEK AT WHITE OAK ROAD
6.00	0506	17065 (SR22)	SABINE RIVER AT FM 17
6.00	0506	10430 (SR21)	SABINE RIVER AT US 69
6.00	0506	10429 (SR19)	SABINE RIVER AT SH 14 S. OF HAWKINS
5.00	0506	10428 (SR17)	SABINE RIVER AT US 271
5.00	0505	10427 (SR16)	SABINE RIVER AT SH 42
5.00	0505	10426 (SR15)	SABINE RIVER AT US 259
5.00	0505	10423 (SR14)	SABINE RIVER AT SH 149
5.00	0505	13628 (SR11)	SABINE RIVER AT US 59
5.00	0505	10415 (SR10)	SABINE RIVER AT FM 2517

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## Upper Sabine Basin Report

March 2004

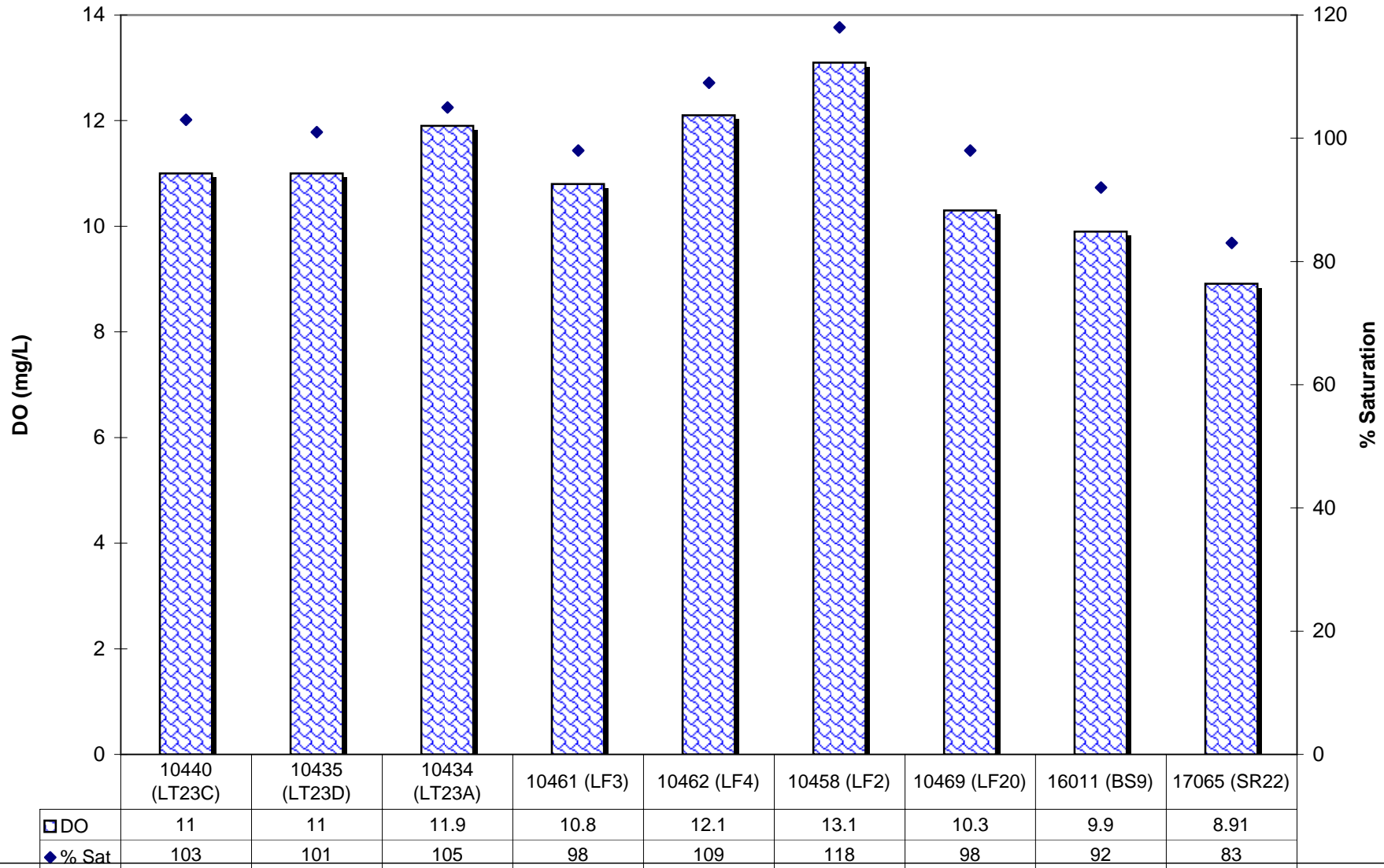
Date	SW ID	Station	Temperature °C 00010	pH Units 00400	DO mg/L 00300	% Saturation 00301	Conductivity µS/cm 00094	Salinity ppt 00480	Secchi Meters 00078	Turbidity NTU 82079	<i>E. coli</i> mpn/100ml 31699	Chlorophyll a µg/L 32211	Nitrite mg/L 00615	Nitrate mg/L 00620	Ortho- Phosphate 00671	TOC mg/L 00680	Total Alkalinity 00410	Total Hardness 00900	Chloride mg/L 00940	Sulfate mg/L 00945
3/10/04 11:24 AM	7.00	10440 (LT23C)	12.2	7.73	11	103	196	*	0.28	37.5	18	19	< 0.02	0.33	< 0.04	6	70	68	< 10	10.7
3/10/04 10:35 AM	7.00	10435 (LT23D)	11.7	7.96	11	101	203	*	0.34	33.5	11	57	< 0.02	0.14	< 0.04	7	70	68	< 10	13.1
3/10/04 9:40 AM	7.00	10434 (LT23A)	9.9	7.71	11.9	105	194	*	0.93	5.81	3	13	< 0.02	0.27	< 0.04	5	70	64	< 10	< 10
3/10/04 8:20 AM	6.12	10461 (LF3)	11.1	7.3	10.8	98	167	*	1.22	4.42	3	10	< 0.02	< 0.02	< 0.04	6	20	36	15.1	22.8
3/10/04 8:44 AM	6.12	10462 (LF4)	10.5	7.54	12.1	109	163	*	0.89	5.34	2	21	< 0.02	< 0.02	< 0.04	6	30	36	13.9	21.9
3/10/04 7:47 AM	6.12	10458 (LF2)	10.6	8.3	13.1	118	163	*	1.35	2.43	< 1	20	< 0.02	0.04	< 0.04	6	30	36	13.5	19.8
3/10/04 1:42 PM	6.10	10469 (LF20)	12.8	6.67	10.3	98	293	*	0.34	34.1	122	*	< 0.02	0.09	< 0.04	8	10	56	43.9	52.5
3/11/04 6:34 AM	6.02	16011 (BS9)	12.3	5.98	9.9	92	175	*	0.7	9.26	161	*	< 0.02	0.03	< 0.04	13	10	32	20	30.4
3/10/04 12:34 PM	6.00	17065 (SR22)	12.1	7.08	8.91	83	322	*	0.19	73.5	435	*	< 0.02	0.16	0.08	12	40	88	35.2	51.6
3/10/04 1:14 PM	6.00	10430 (SR21)	12.6	7.03	9.44	89	344	*	0.26	60.6	166	*	< 0.02	0.12	0.05	11	30	84	45.4	63.4
3/10/04 2:05 PM	6.00	10429 (SR19)	13.1	6.88	9.78	93	282	*	0.24	54.6	167	*	< 0.02	0.1	< 0.04	10	20	64	37	49.9
3/11/04 7:10 AM	5.00	10428 (SR17)	12.3	6.56	9.81	92	229	*	0.3	42.2	127	*	< 0.02	0.08	< 0.04	11	20	48	28.5	38.2
3/11/04 7:40 AM	5.00	10427 (SR16)	12.5	6.58	9.5	89	227	*	0.27	56.1	199	*	< 0.02	0.08	< 0.04	11	20	48	30	36.3
3/11/04 8:03 AM	5.00	10426 (SR15)	12.5	6.63	9.6	90	231	*	0.22	68.3	141	*	< 0.02	0.1	< 0.04	11	20	48	31	36.2
3/11/04 8:37 AM	5.00	10423 (SR14)	12.9	6.7	9.58	91	256	*	0.27	66	162	*	< 0.02	0.16	0.05	10	20	52	35.8	39.3
3/11/04 10:21 AM	5.00	13628 (SR11)	13	6.74	9.81	93	286	*	0.31	52.7	66	*	< 0.02	0.18	< 0.04	10	20	48	44	42.8
3/11/04 10:57 AM	5.00	10415 (SR10)	13.2	6.69	9.48	91	236	*	0.27	44.2	73	*	< 0.02	0.19	< 0.04	9	20	44	31.4	34.7

\*: Not sampled on this run

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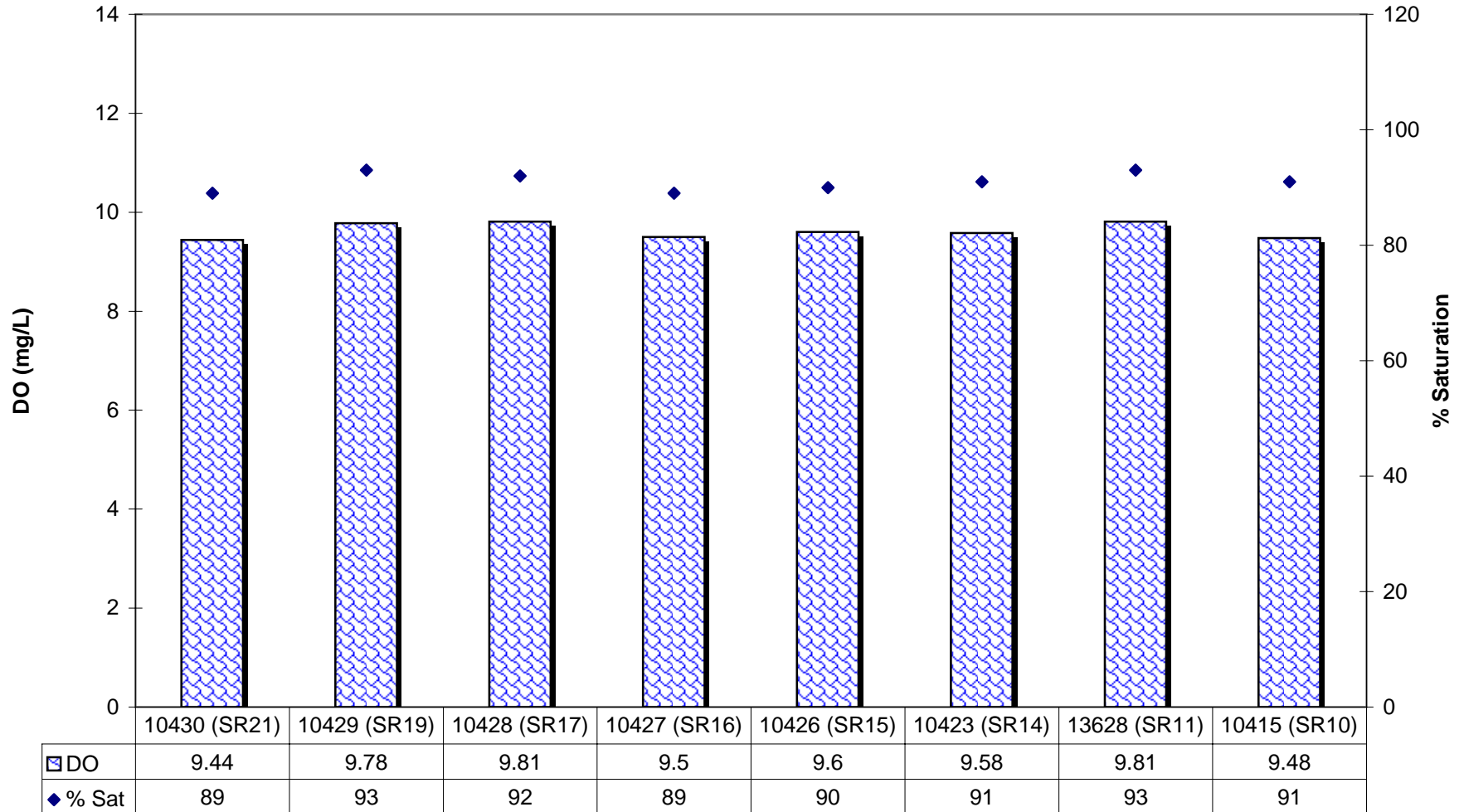
## Upper Sabine Basin DO / % Saturation (1 of 2)



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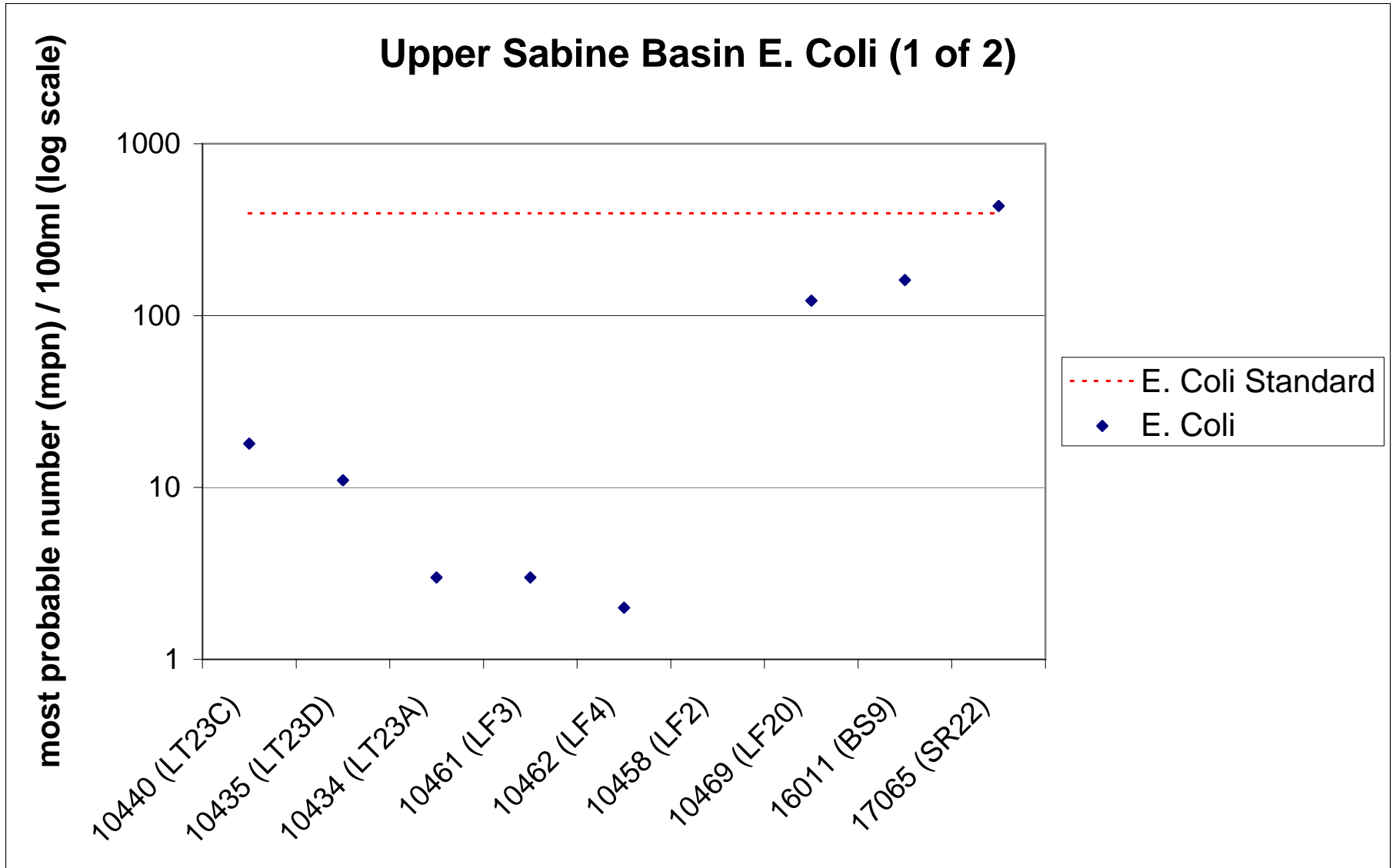
March 2004

## Upper Sabine Basin DO / % Saturation (2 of 2)



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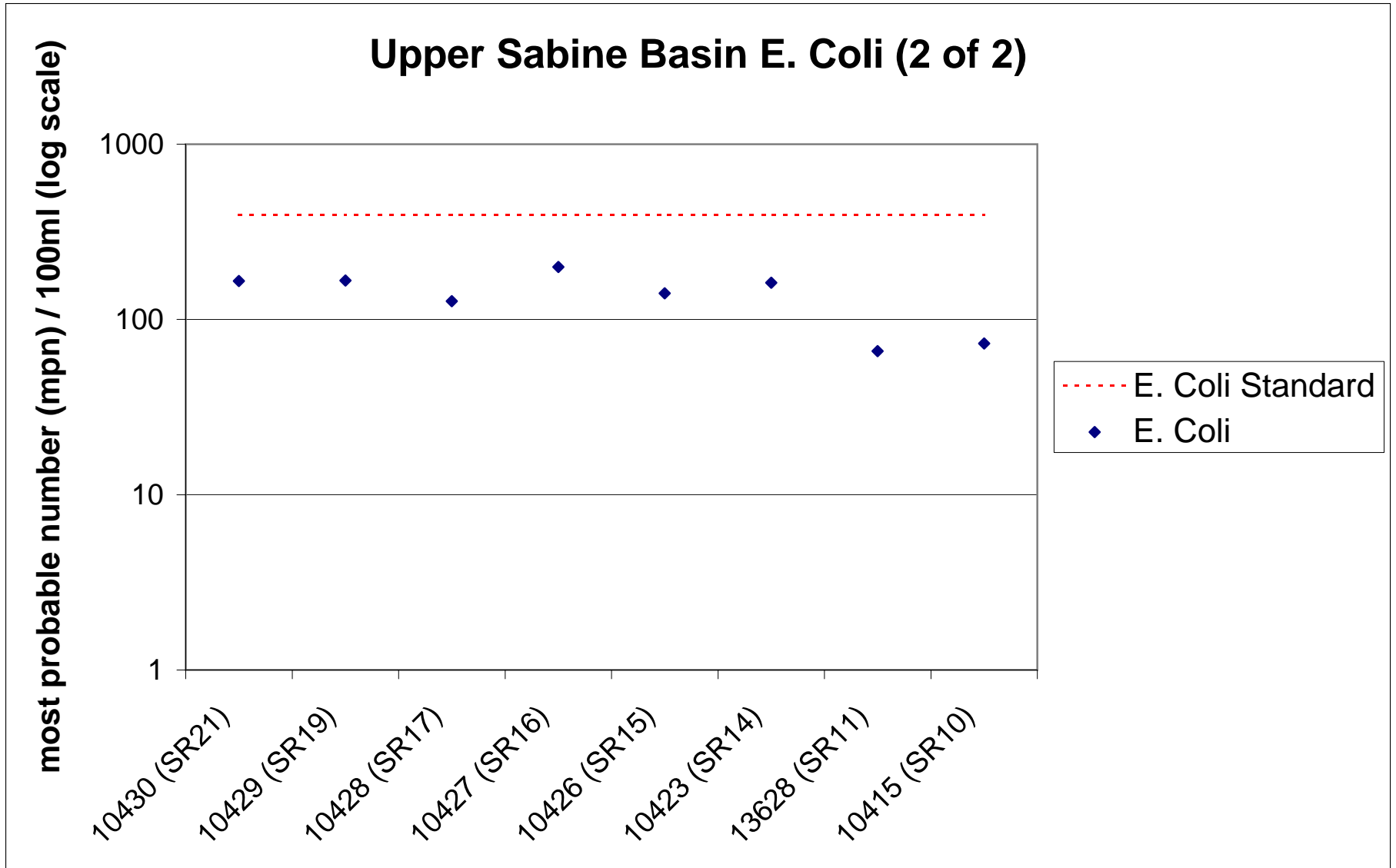
March 2004



Stations without values were below detection limit on this run (see page 2)

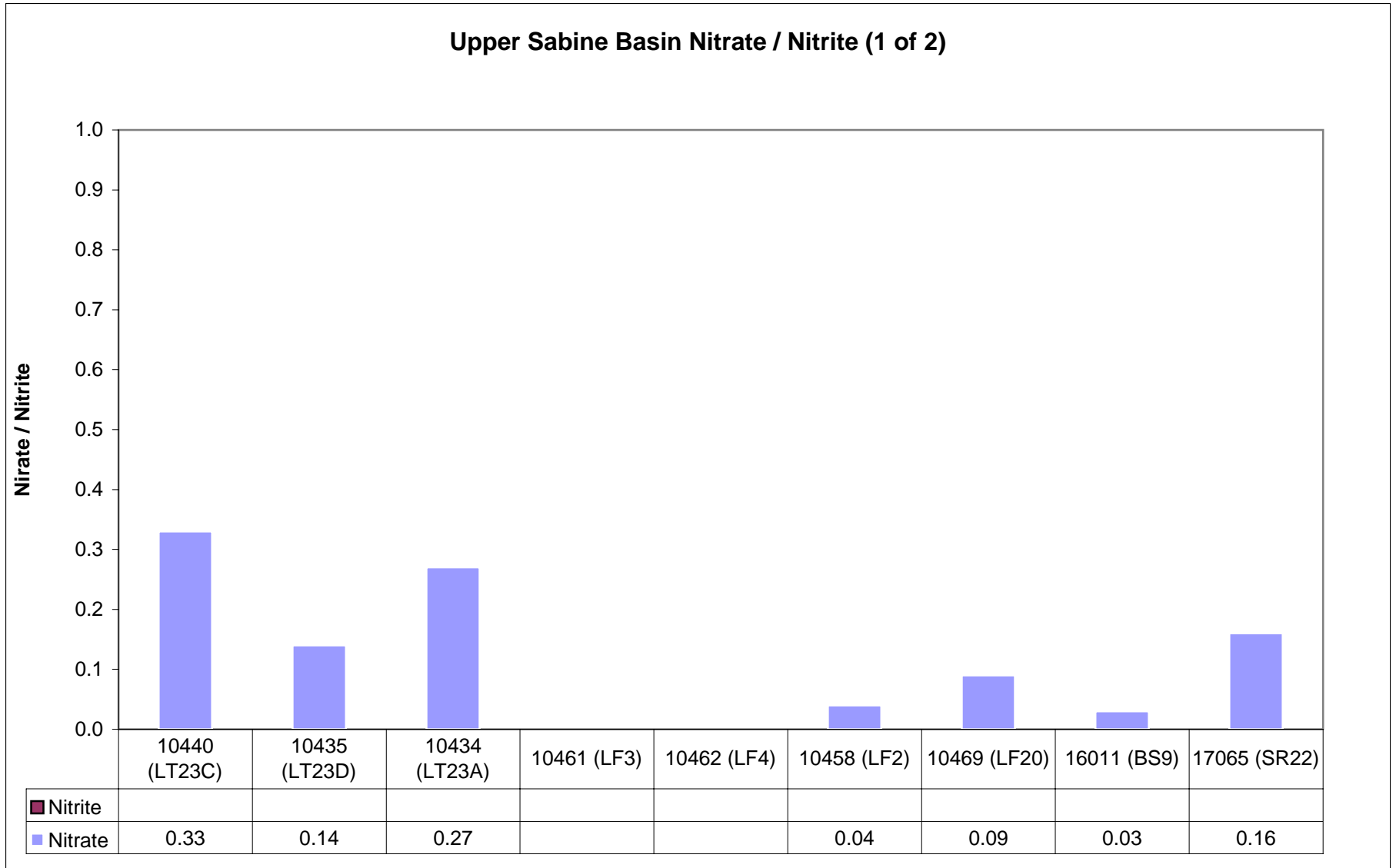
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March 2004

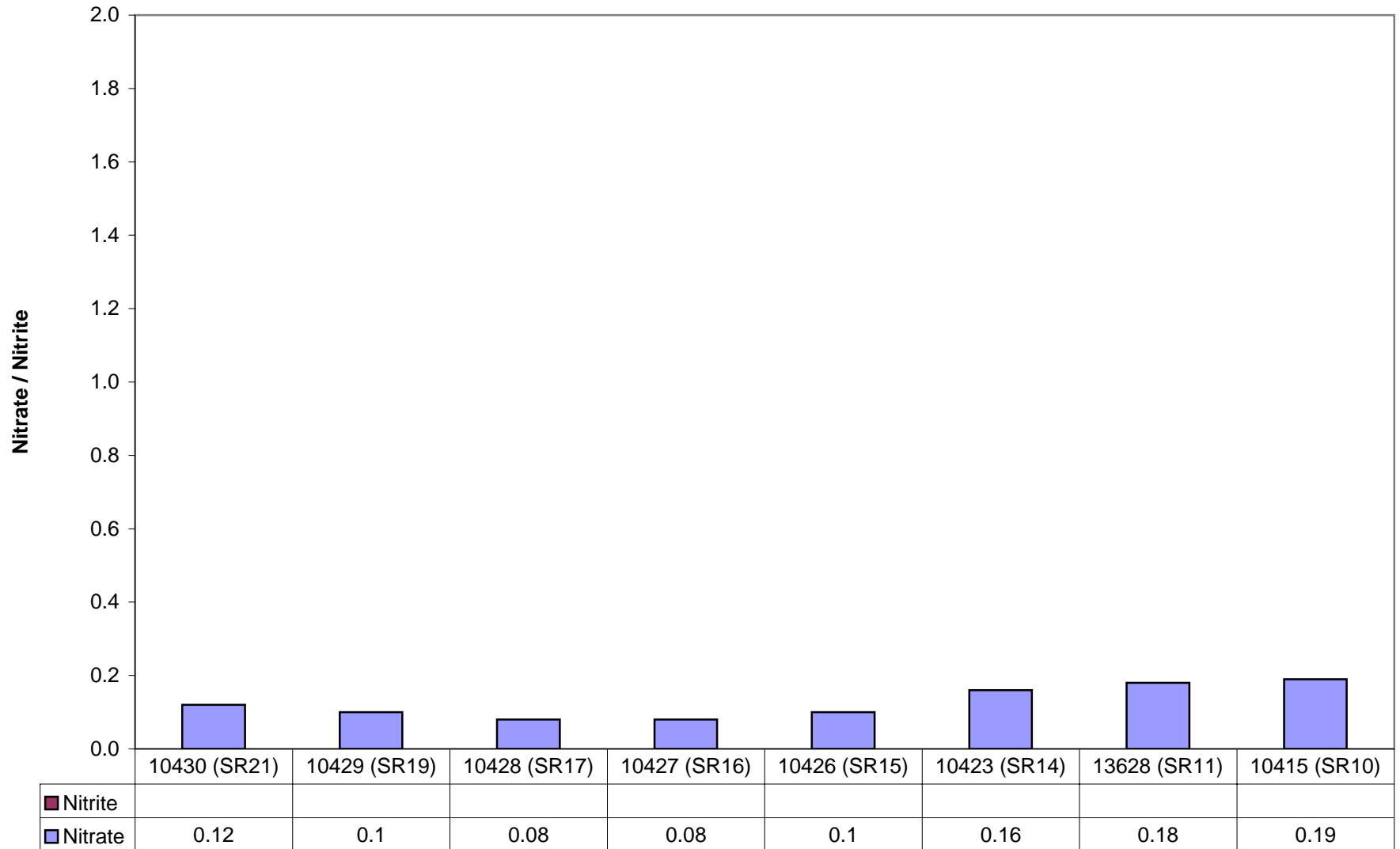


Stations without values were below detection limit (< 0.02 mg/L) on this run (see page 2)

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## Lower Sabine Basin Nitrate / Nitrite (2 of 2)



Stations without values were below detection limit (< 0.02 mg/L) on this run (see page 2)

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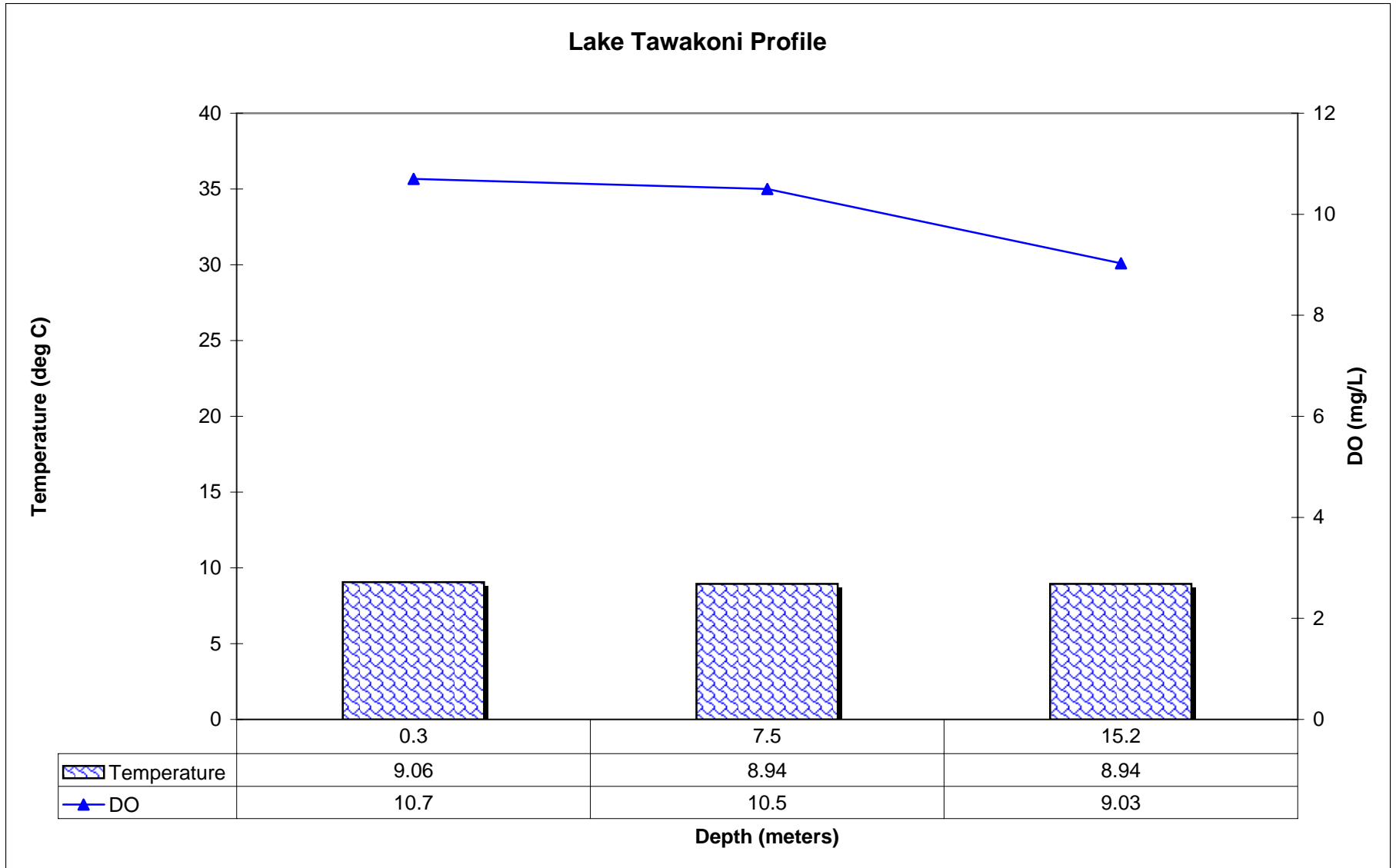
## Upper Basin Profiles

March 2004

Date	SW ID	Station	Depth Meters	Temperature °C 00010	pH Units 00400	DO mg/L 00300	% Saturation 00301	Conductivity μS/cm 00094
3/10/04 11:24 AM	7.00	10440 (LT23C)	0.3	12.2	7.73	11	103	196
			1.85	11.9	7.67	10.9	101	196
			3.52	11.8	7.59	10.8	100	196
3/10/04 10:35 AM	7.00	10435 (LT23D)	0.3	11.7	7.96	11	101	203
			4.49	11.4	7.86	11	101	201
			9.05	11.4	7.83	11.1	101	200
3/10/04 9:40 AM	7.00	10434 (LT23A)	0.3	9.9	7.71	11.9	105	194
			7.44	9.87	7.59	11.9	105	194
			15	9.37	7.37	10.7	94	194
3/10/04 8:20 AM	6.12	10461 (LF3)	0.3	11.1	7.3	10.8	98	167
			5	11	7.3	10.7	97	167
			9.13	9.47	7.49	10.2	89	164
3/10/04 8:44 AM	6.12	10462 (LF4)	0.3	10.5	7.54	12.1	109	163
			5.03	10.4	7.47	12.1	108	164
			10.6	9.09	7.37	10.6	92	164
3/10/04 7:47 AM	6.12	10458 (LF2)	0.3	10.6	8.3	13.1	118	163
			9.87	10	7.6	12.9	114	163
			18.8	7.79	7.12	9.92	83	165

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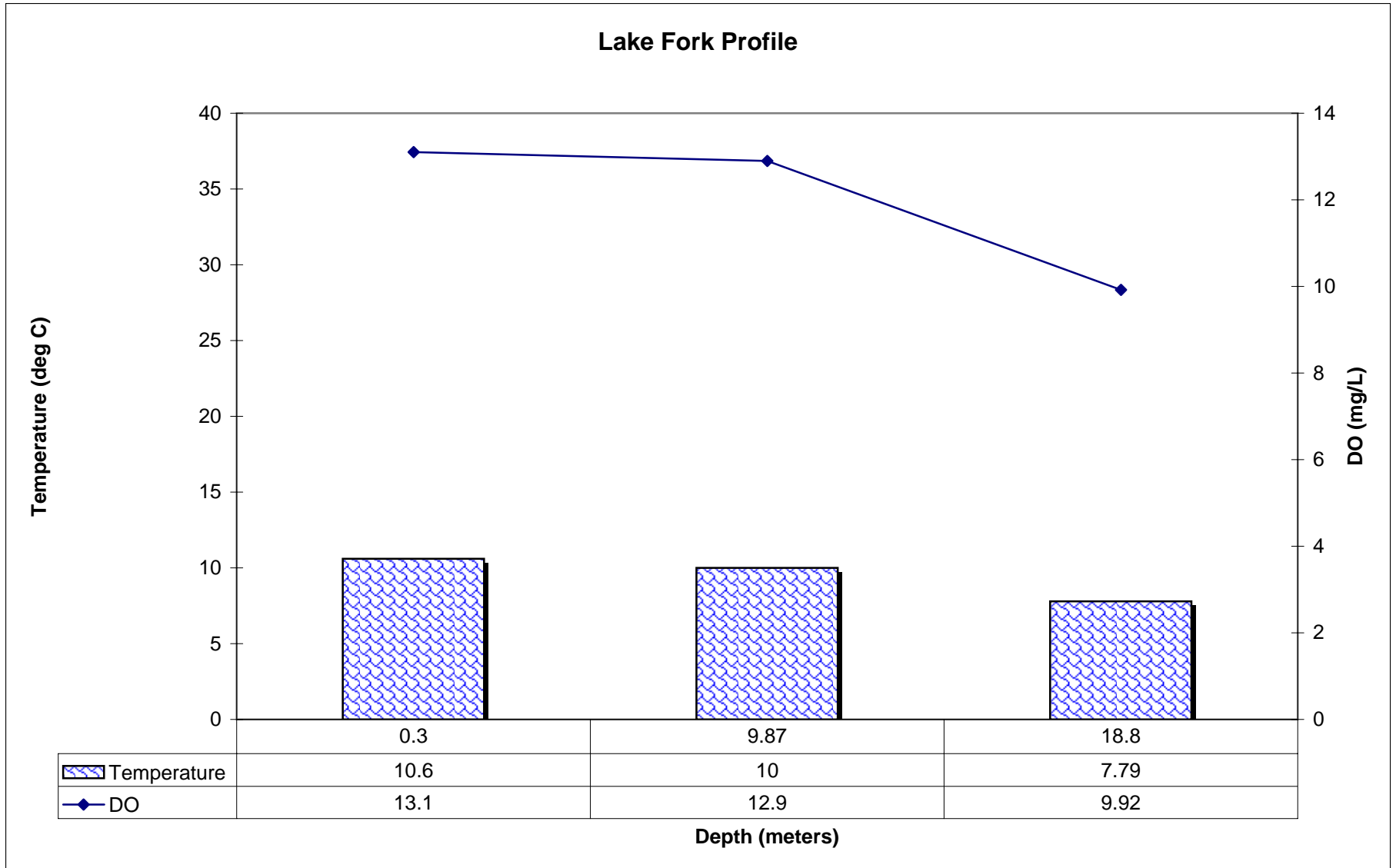
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For Station 10434 (LT23A): LAKE TAWAKONI IN THE MAIN LAKE NEAR THE DAM IN THE OLD RIVER CHANNEL

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## Lake Tawakoni Weather and Reservoir Data

March 2004

Date	Lake Elev	LE - TOP	Releases inst	Max Temp	Min Temp	Rainfall	Evap
3/1/2004	435.83	(1.67)	5	57	46	0.32	0.18
3/2/2004	435.86	(1.64)	5	71	46	0.00	0.20
3/3/2004	435.88	(1.62)	5	71	57	0.00	0.19
3/4/2004	435.86	(1.64)	5	76	57	0.03	0.11
3/5/2004	436.03	(1.47)	5	72	52	0.69	0.09
3/6/2004	436.18	(1.32)	5	68	45	0.00	0.13
3/7/2004	436.21	(1.29)	5	66	46	0.00	0.21
3/8/2004	436.21	(1.29)	5	69	41	0.00	0.21
3/9/2004	436.22	(1.28)	5	69	41	0.00	0.17
3/10/2004	436.16	(1.34)	5	66	42	0.00	0.26
3/11/2004	436.20	(1.30)	5	69	43	0.00	0.23
3/12/2004	436.19	(1.31)	5	68	46	0.00	0.16
3/13/2004	436.21	(1.29)	5	58	48	0.06	0.00
3/14/2004	436.28	(1.22)	5	62	48	1.43	0.00
3/15/2004	436.29	(1.21)	5	63	50	0.09	0.30
3/16/2004	436.36	(1.14)	5	66	45	0.00	0.28
3/17/2004	436.33	(1.17)	5	78	46	0.10	0.07
3/18/2004	436.31	(1.19)	5	79	50	0.00	0.27
3/19/2004	436.32	(1.18)	5	81	62	0.00	0.17
3/20/2004	436.34	(1.16)	5	72	64	0.00	0.08
3/21/2004	436.33	(1.17)	5	82	56	0.00	0.28
3/22/2004	436.27	(1.23)	5	68	49	0.00	0.40
3/23/2004	436.27	(1.23)	5	59	47	0.00	0.20
3/24/2004	436.25	(1.25)	5	73	48	0.00	0.25
3/25/2004	436.24	(1.26)	5	70	62	0.03	0.09
3/26/2004	436.27	(1.23)	5	77	62	0.00	0.16
3/27/2004	436.28	(1.22)	5	78	60	0.00	0.22
3/28/2004	436.27	(1.23)	5	77	67	0.00	0.18
3/29/2004	436.38	(1.12)	5	74	51	0.96	0.19
3/30/2004	436.42	(1.08)	5	71	50	0.00	0.26
3/31/2004	436.41	(1.09)	5	70	44	0.00	0.30
<b>Avg or Tot</b>	436.21	(1.29)	5	70	51	3.71	5.84

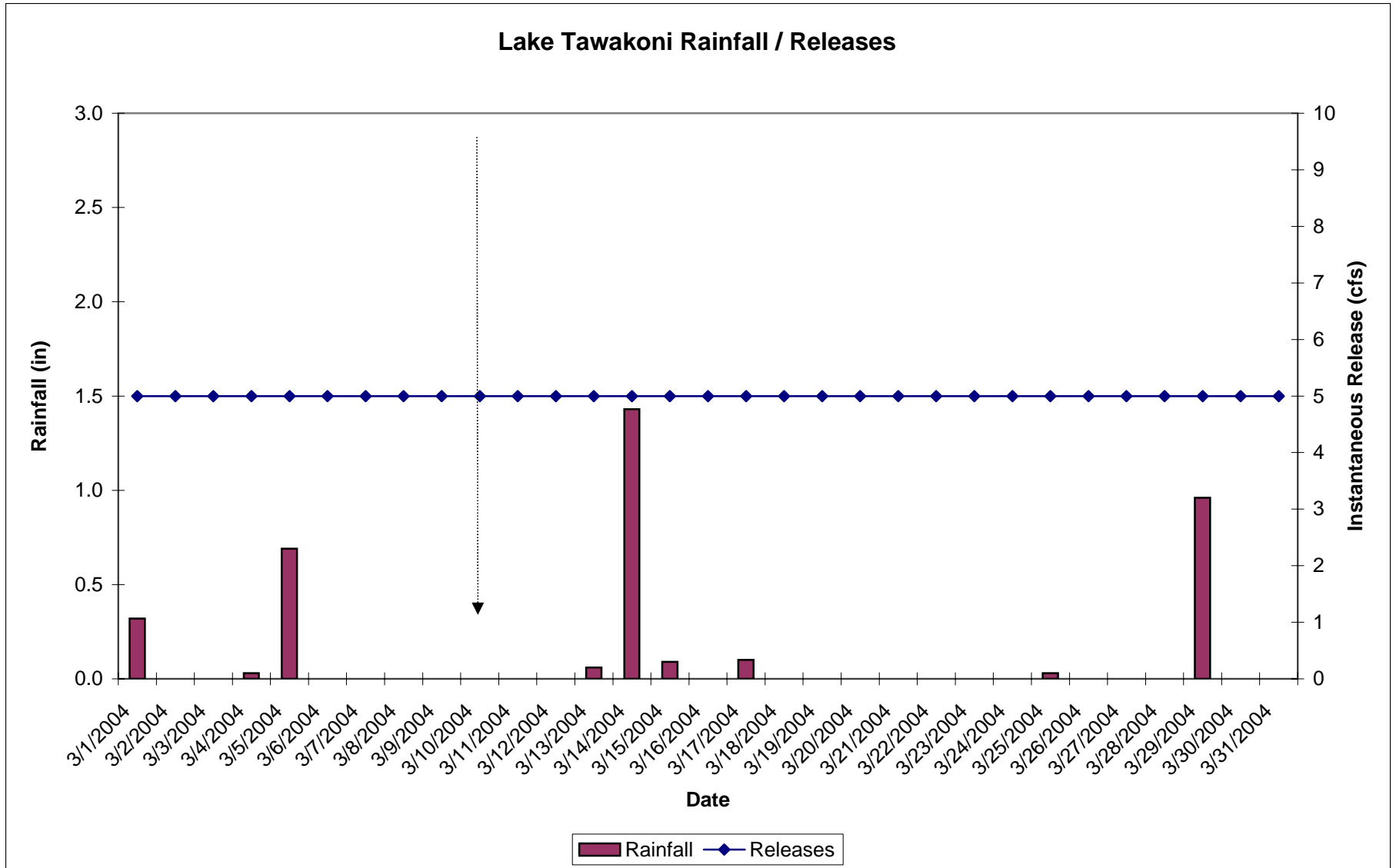
	Avg	Avg	Avg	Avg	Avg	Tot	Tot
Units	Feet M.S.L.	Feet	cfs	Deg F	Deg F	Inches	Inches
			Instantaneous				
			appx. 8 a.m.				

TOP: Top of Pool = 437.5 Feet M.S.L.

Lake Tawakoni Sampled on 3/10/2004

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March 2004



Please Note : Lake Tawakoni has an uncontrolled spillway.

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## Lake Fork Weather and Reservoir Data

March 2004

Date	Lake Elev	LE - TOP	Releases avg	Releases cur	Max Temp	Min Temp	Rainfall	Evap
3/1/2004	401.34	(1.66)	8	8	60	49	0.27	0.00
3/2/2004	401.33	(1.67)	8	8	64	48	0.00	0.20
3/3/2004	401.33	(1.67)	8	8	74	62	0.00	0.27
3/4/2004	401.33	(1.67)	8	8	78	66	0.00	0.15
3/5/2004	401.46	(1.54)	8	8	76	56	0.83	0.00
3/6/2004	401.57	(1.43)	8	8	70	46	0.00	0.21
3/7/2004	401.60	(1.40)	8	8	70	52	0.00	0.16
3/8/2004	401.58	(1.42)	8	8	72	42	0.00	0.06
3/9/2004	401.60	(1.40)	8	8	72	56	0.00	0.30
3/10/2004	401.60	(1.40)	8	8	70	43	0.00	0.33
3/11/2004	401.55	(1.45)	8	8	70	52	0.00	0.20
3/12/2004	401.55	(1.45)	8	8	72	50	0.00	0.14
3/13/2004	401.53	(1.47)	8	8	62	50	0.04	0.03
3/14/2004	401.64	(1.36)	8	8	66	50	0.74	0.00
3/15/2004	401.68	(1.32)	8	8	68	53	0.02	0.11
3/16/2004	401.74	(1.26)	8	8	68	50	0.01	0.05
3/17/2004	401.73	(1.27)	8	8	80	53	0.00	0.18
3/18/2004	401.73	(1.27)	8	8	80	64	0.00	0.30
3/19/2004	401.74	(1.26)	8	8	82	62	0.00	0.20
3/20/2004	401.74	(1.26)	8	8	75	56	0.00	0.05
3/21/2004	401.81	(1.19)	8	8	82	56	0.06	0.23
3/22/2004	401.71	(1.29)	8	8	82	50	0.00	0.28
3/23/2004	401.74	(1.26)	8	8	62	49	0.00	0.21
3/24/2004	401.73	(1.27)	8	8	86	58	0.13	0.21
3/25/2004	401.76	(1.24)	8	8	70	57	0.03	0.12
3/26/2004	401.76	(1.24)	8	8	80	66	0.00	0.18
3/27/2004	401.76	(1.24)	8	8	78	58	0.00	0.11
3/28/2004	401.76	(1.24)	8	8	80	66	0.00	0.22
3/29/2004	401.82	(1.18)	8	8	74	55	0.31	0.21
3/30/2004	401.85	(1.15)	8	8	76	56	0.00	0.24
3/31/2004	401.87	(1.13)	8	8	74	50	0.00	0.27
<b>Avg or Tot</b>	401.64	(1.36)	8	8	73	54	2.44	5.22

	Avg	Avg	Avg		Avg	Avg	Tot	Tot
Units	Feet M.S.L.	Feet	cfs	cfs	Deg F	Deg F	Inches	Inches
			Previous 24 hrs					

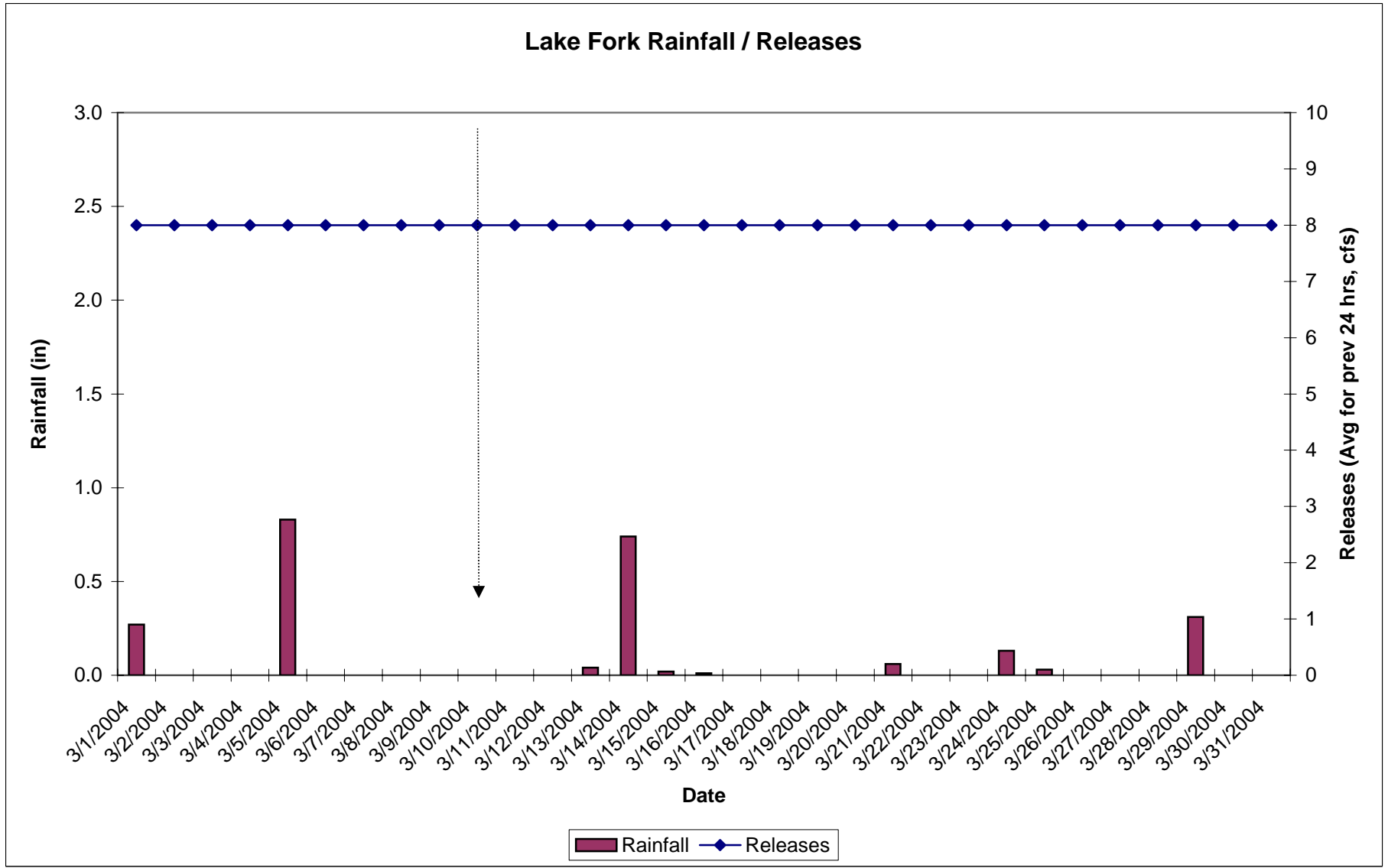
TOP: Top of Pool = 403 Feet M.S.L.

FZ: Gage Frozen

Lake Fork Sampled on 3/10/2004

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## FY 2004 Fixed Monitoring Stations

### Lower Sabine Basin

SW	Segment	Station	Location
4.00	0504	10403 (TB8)	TOLEDO BEND RESERVOIR AT US 84 NEAR LOGANSPO RT LA
4.00	0504	18051 (TB7A)	TOLEDO BEND RESERVOIR AT RECREATION SITE 1
4.00	0504	18052 (TB6R)	TOLEDO BEND RAGTOWN
4.00	0504	18053 (TB6LN)	TOLEDO BEND RESERVOIR SAN MIGUEL ARM BOAT LANE
4.00	0504	15655 (TB6J)	TOLEDO BEND RESERVOIR PATROON BAYOU BRANCH AT FM 276
4.00	0504	15659 (TB6K)	TOLEDO BEND RESERVOIR IN LANANA BAYOU AT LOUISIANA SH 191 IN SABINE PARISH LOUISIANA WEST OF MANY
4.00	0504	10402 (TB6H)	TOLEDO BEND RESERVOIR AT SH 21 NORTHEAST OF MILAM
4.00	0504	18054 (TB6Q)	TOLEDO BEND RESERVOIR IN NEGREET BAYOU
4.00	0504	10411 (TB6F)	TOLEDO BEND RESERVOIR IN SUNSHINE BAY NEAR FM 3121 BRIDGE
4.00	0504	10407 (TB6CN)	TOLEDO BEND RESERVOIR IN SIX MILE BOAT LANE AT SH 87
4.00	0504	10404 (TB6A)	TOLEDO BEND RESERVOIR MAIN LAKE ABOVE THE DAM AT THE OLD RIVER CHANNEL
3.03	0503	10340 (BA4)	ANACOCO BAYOU AT LOUISIANA HWY 111 CROSSING SOUTHWEST OF KNIGHT LA
3.00	0503	10401 (TB6S)	SABINE RIVER BELOW TOLEDO BEND RESERVOIR AT RIGHT ABUTMENT OF SPILLWAY FOR DAM
3.00	0503	10399 (SR5)	SABINE RIVER AT SH 63 EAST OF BURKEVILLE TX.
3.00	0503	10398 (SR3)	SABINE RIVER AT US 190 EAST OF BON WIER TX.
2.05	0513	10465 (BCC1)	BIG COW CREEK AT FM 1416 SOUTH OF BON WIER
2.00	0502	10397 (SR2)	SABINE RIVER AT SH 12 NORTH OF DEWEYVILLE TX.

**SABINE RIVER AUTHORITY OF TEXAS**

Lower Basin Report

March 2004

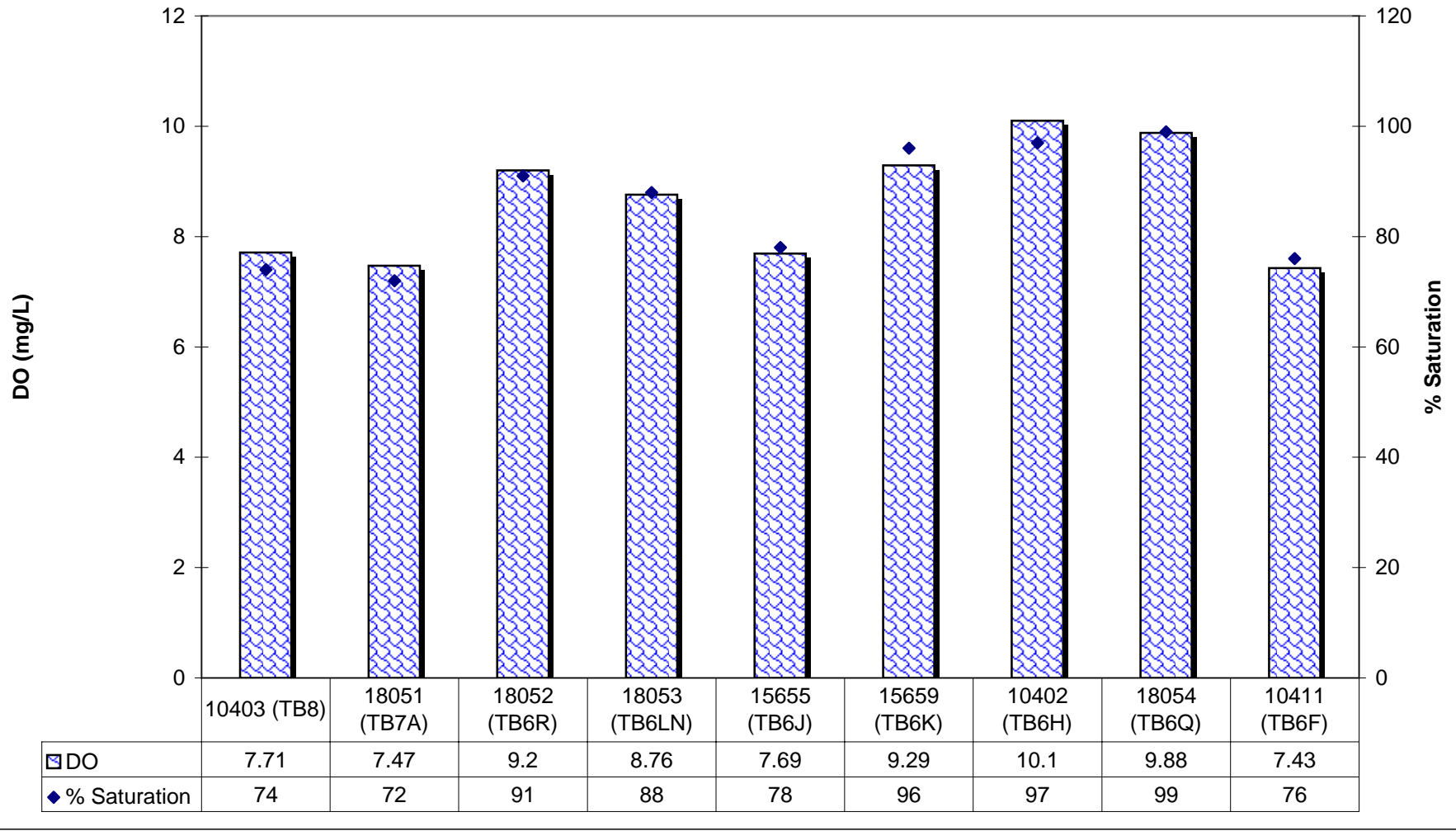
Date	SW ID	Station	Temperature °C 00010	pH Units 00400	DO mg/L 00300	% Saturation 00301	Conductivity µS/cm 00094	Salinity ppt 00480	Secchi Meters 00078	Turbidity NTU 82079	<i>E. coli</i> mpn/100ml 31699	Chlorophyll a µg/L 32211	Nitrite mg/L 00615	Nitrate mg/L 00620	Ortho- Phosphate 00671	TOC mg/L 00680	Total Alkalinity 00410	Total Hardness 00900	Chloride mg/L 00940	Sulfate mg/L 00945
3/11/04 11:35 AM	4.00	10403 (TB8)	13.3	6.46	7.71	74	183	*	0.37	26.6	66	*	< 0.02	0.08	< 0.04	14	20	32	22.5	22.7
3/11/04 12:15 PM	4.00	18051 (TB7A)	13.5	6.48	7.47	72	178	*	0.42	26.2	55	*	< 0.02	0.08	< 0.04	14	20	36	21.3	21.8
3/8/04 10:35 AM	4.00	18052 (TB6R)	14.8	6.68	9.2	91	135	*	0.4	24.3	10	*	< 0.02	0.15	0.1	11	20	28	16	17.6
3/8/04 12:42 PM	4.00	18053 (TB6LN)	15.4	6.55	8.76	88	83	*	0.4	22.9	7	*	< 0.02	0.07	0.07	11	10	20	< 10	< 10
3/9/04 10:28 AM	4.00	15655 (TB6J)	15.7	6.63	7.69	78	110	*	0.37	37.4	46	*	< 0.02	0.08	0.09	9	20	28	< 10	19.4
3/9/04 12:20 PM	4.00	15659 (TB6K)	15.9	6.97	9.29	96	108	*	0.56	20.8	1	*	< 0.02	0.09	< 0.04	9	20	28	< 10	14.8
3/9/04 11:15 AM	4.00	10402 (TB6H)	13.6	7.36	10.1	97	165	*	0.8	11.6	5	19	< 0.02	0.04	< 0.04	8	30	32	19.6	19.9
3/8/04 1:30 PM	4.00	18054 (TB6Q)	15.5	6.98	9.88	99	132	*	0.7	10.4	2	*	< 0.02	0.07	< 0.04	7	20	28	13.6	17.1
3/9/04 10:50 AM	4.00	10411 (TB6F)	16	6.56	7.43	76	71	*	0.3	39.3	18	< 5	< 0.02	0.08	< 0.04	7	20	20	< 10	< 10
3/9/04 9:50 AM	4.00	10407 (TB6CN)	15.7	6.45	7.58	77	73	*	0.6	17.5	4	*	< 0.02	0.03	< 0.04	11	10	24	< 10	11.1
3/8/04 2:30 PM	4.00	10404 (TB6A)	14.6	7.51	10.6	105	138	*	1.9	3.18	< 1	< 5	< 0.02	0.04	< 0.04	6	20	32	14.3	15.1
3/10/04 12:25 PM	3.03	10340 (BA4)	16.6	6.92	8.53	87	215	*	0.26	33.6	14	*	< 0.02	0.08	< 0.04	11	40	28	< 10	53
3/10/04 10:30 AM	3.00	10401 (TB6S)	13.1	7.39	11.2	107	138	*	1.19	3.24	< 1	*	< 0.02	0.04	< 0.04	6	20	32	14.6	15.4
3/10/04 11:55 AM	3.00	10399 (SR5)	13.5	7.44	10.8	103	117	*	1.1	11.9	3	*	< 0.02	0.04	< 0.04	6	20	32	14.5	15.9
3/10/04 12:50 PM	3.00	10398 (SR3)	13.8	7.17	10.4	101	139	*	0.67	3.68	< 1	*	< 0.02	0.06	< 0.04	6	20	28	14.4	15.3
3/10/04 9:20 AM	2.05	10465 (BCC1)	14.9	6.02	8.9	88	49	*	0.51	17.6	34	*	< 0.02	0.06	< 0.04	9	< 10	16	< 10	< 10
3/10/04 8:35 AM	2.00	10397 (SR2)	14.5	6.84	8.96	88	130	*	0.51	14.2	39	*	< 0.02	< 0.02	< 0.04	6	20	28	13.4	14.6

\*: Not sampled on this run

# SABINE RIVER AUTHORITY OF TEXAS

March 2004

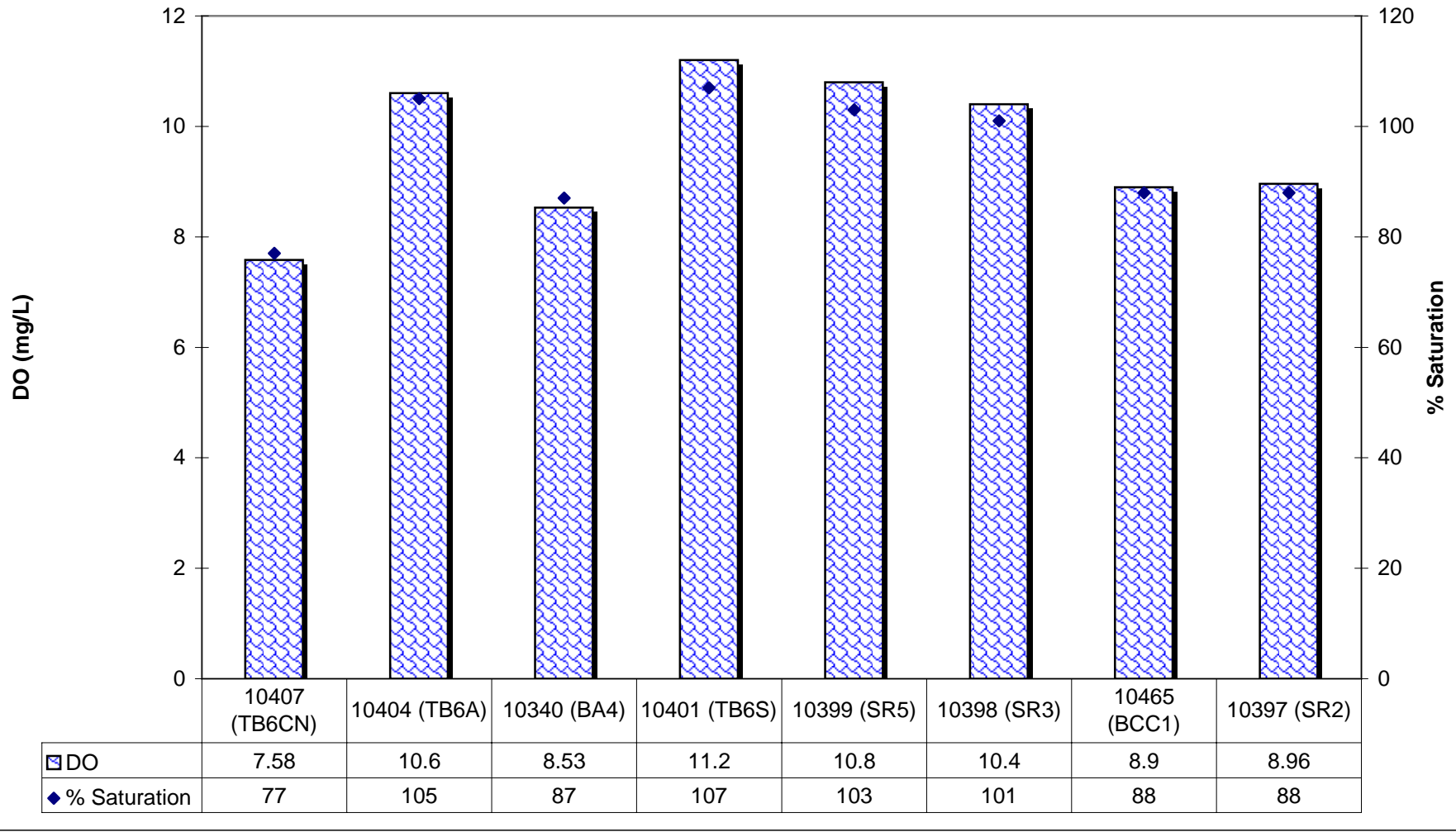
## Lower Sabine Basin DO / % Saturation (1 of 2)



# SABINE RIVER AUTHORITY OF TEXAS

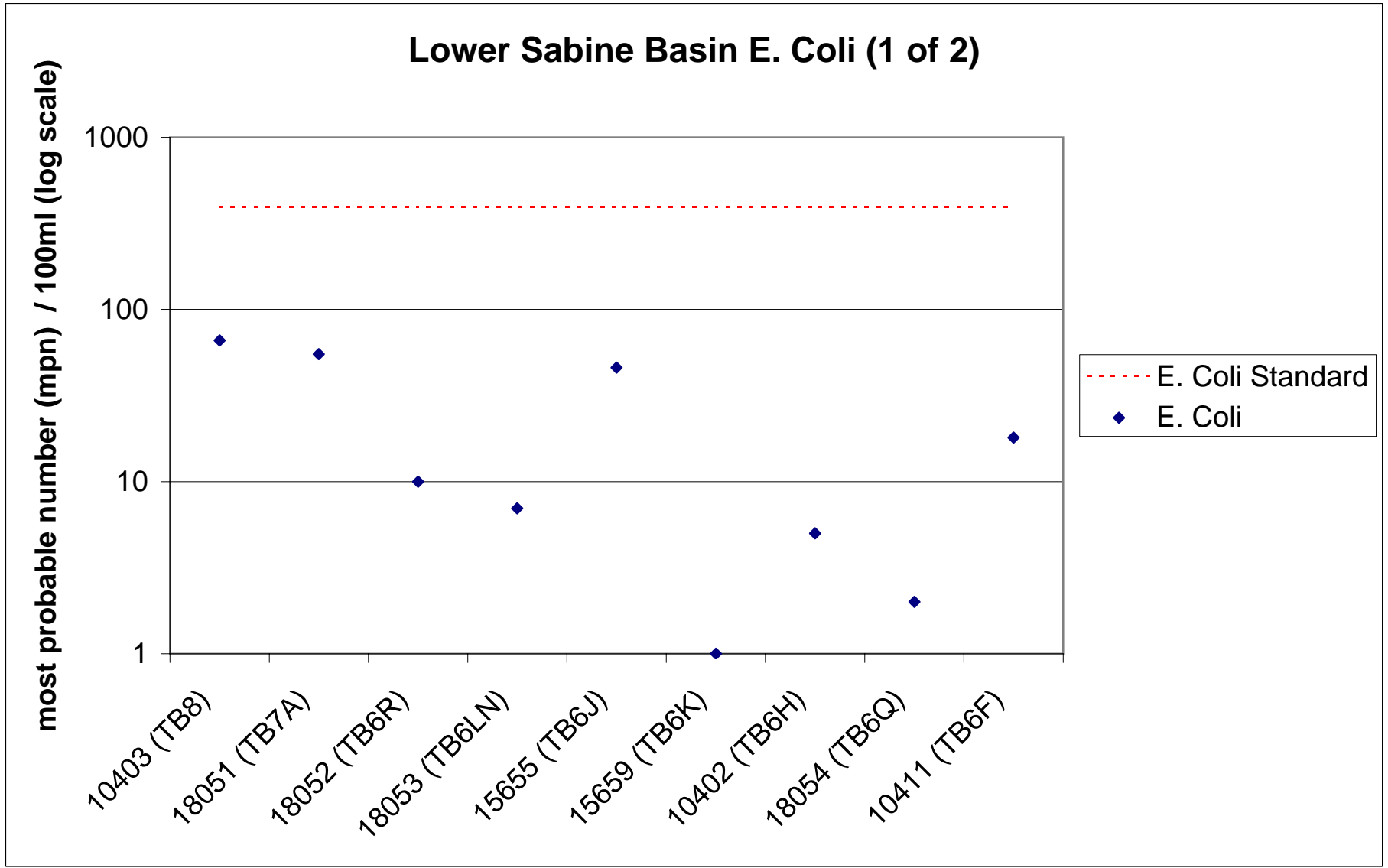
March 2004

### Lower Sabine Basin DO / % Saturation (2 of 2)



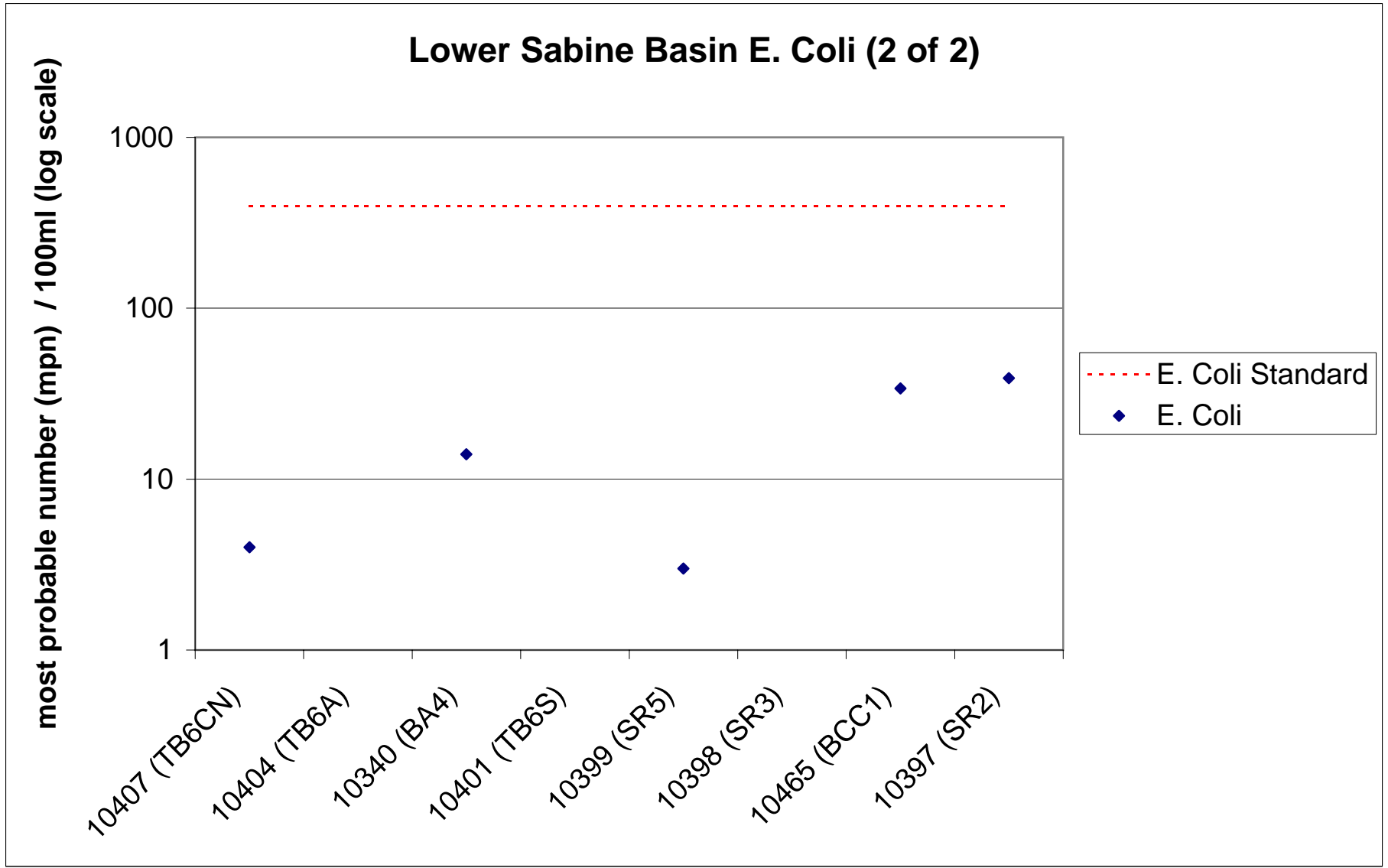
# SABINE RIVER AUTHORITY OF TEXAS

March 2004



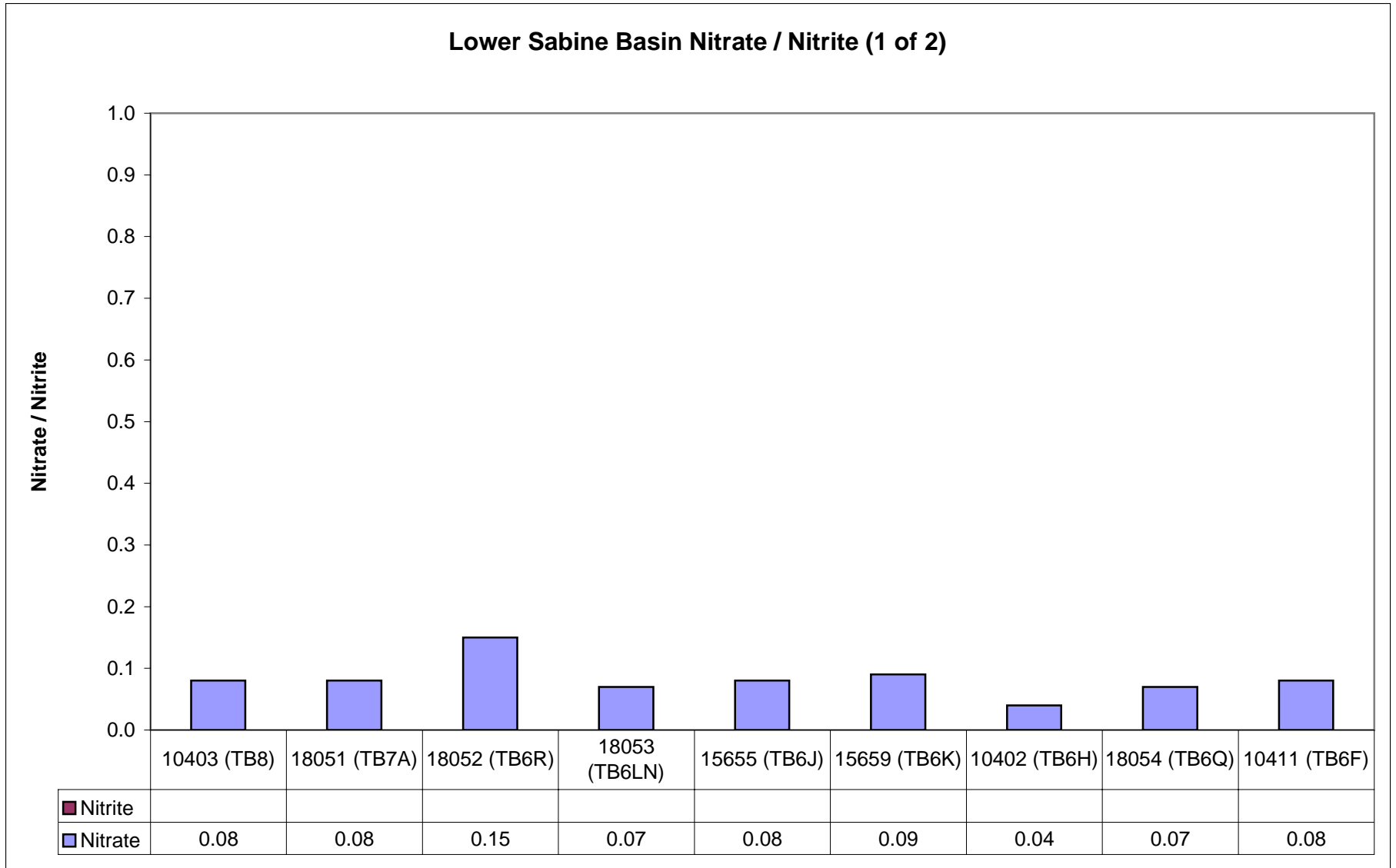
# SABINE RIVER AUTHORITY OF TEXAS

March 2004



# SABINE RIVER AUTHORITY OF TEXAS

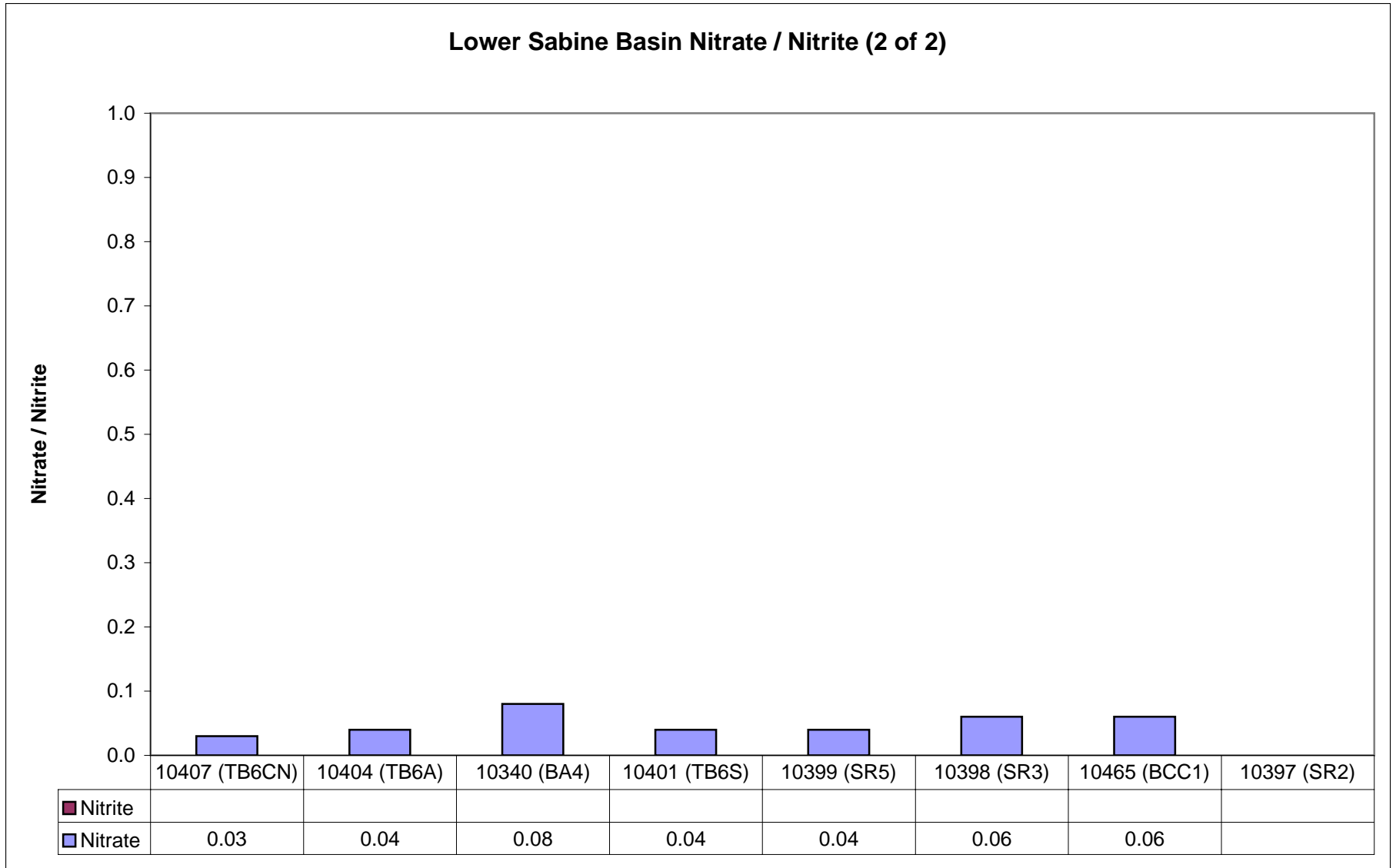
March 2004



Stations without values were below detection limit (< 0.02 mg/L) on this run (see page 18)

# SABINE RIVER AUTHORITY OF TEXAS

March 2004



Stations without values were below detection limit (< 0.02 mg/L) on this run (see page 18)

# SABINE RIVER AUTHORITY OF TEXAS

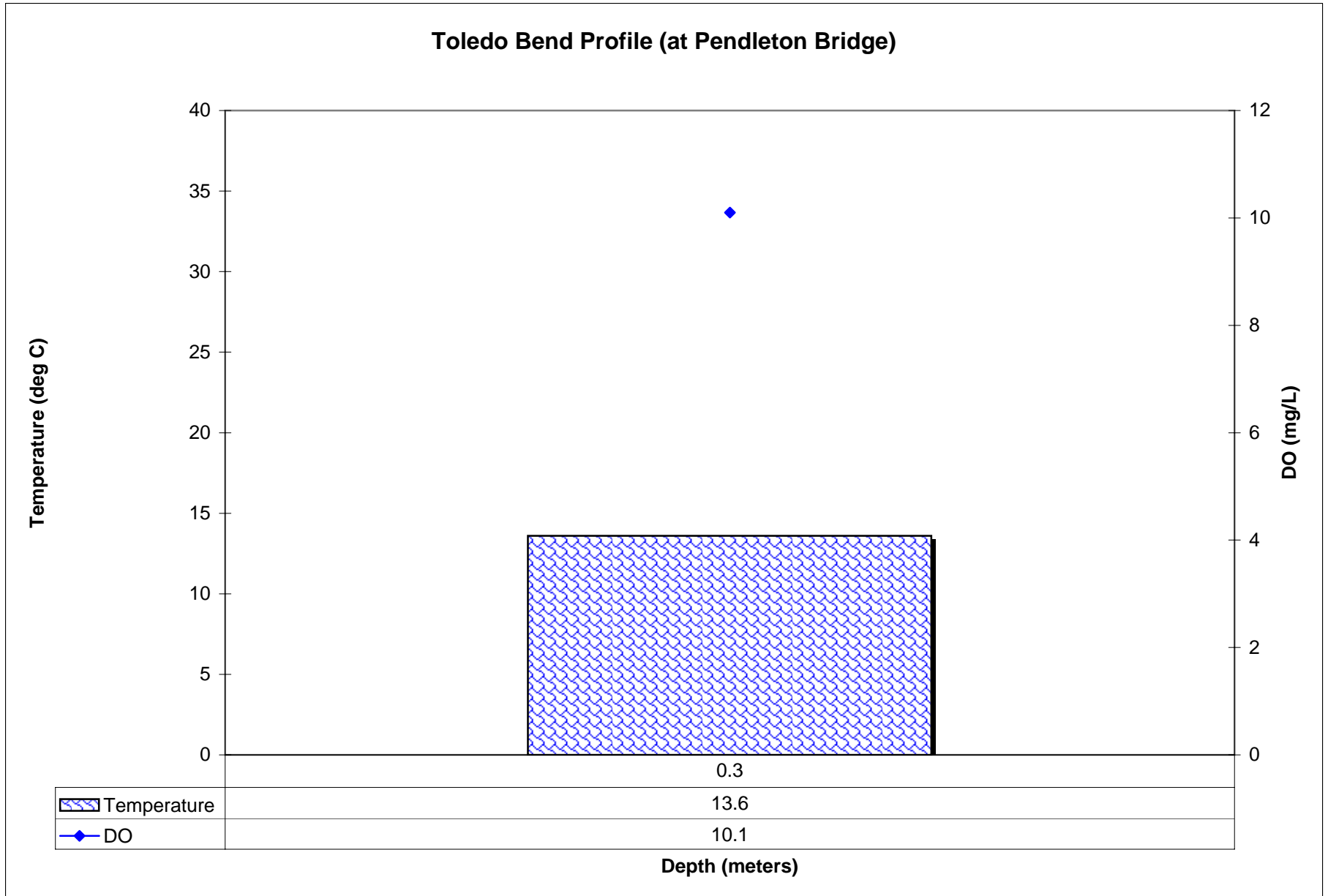
## Lower Basin Profiles

March 2004

Date	SW ID	Station	Depth Meters	Temperature °C 00010	pH Units 00400	DO mg/L 00300	% Saturation 00301	Conductivity μS/cm 00094
3/11/04 11:35 AM	4.00	10403 (TB8)	0.3	13.3	6.46	7.71	74	183
			4.56	13.3	6.44	8.09	78	184
3/11/04 12:15 PM	4.00	18051 (TB7A)	0.3	13.5	6.48	7.47	72	178
			5.55	13.4	6.46	7.48	72	178
			11.1	13.4	6.41	7.51	72	178
3/8/04 10:35 AM	4.00	18052 (TB6R)	0.3	14.8	6.68	9.2	91	135
			5	14.1	6.54	8.58	84	128
			10	13	6.47	8.37	79	129
			14.9	12.8	6.41	8.24	78	121
3/8/04 12:42 PM	4.00	18053 (TB6LN)	0.3	15.4	6.55	8.76	88	83
			4	12.8	6.48	7.68	72	110
			7.1	12.7	6.38	7.56	71	103
3/9/04 10:28 AM	4.00	15655 (TB6J)	0.3	15.7	6.63	7.69	78	110
			2.5	15.5	6.64	7.6	77	117
			5.1	12.8	6.76	6.97	66	147
3/9/04 11:15 AM	4.00	10402 (TB6H)	0.3	13.6	7.36	10.1	97	165
3/9/04 12:20 PM	4.00	15659 (TB6K)	0.3	15.9	6.97	9.29	96	108
			5	12.5	6.81	7.41	70	124
			9.8	12.1	6.87	7.11	66	123
3/8/04 1:30 PM	4.00	18054 (TB6Q)	0.3	15.5	6.98	9.88	99	132
			5	11.8	6.69	8.57	79	149
			9.4	11.5	6.6	8.94	82	149
3/9/2004 10:50	4.00	10411 (TB6F)	0.3	16	6.56	7.43	76	71
			2.5	15.9	6.49	7.28	75	71
			5.8	13.1	6.28	6.14	58	64
3/9/04 9:50 AM	4.00	10407 (TB6CN)	0.3	15.7	6.45	7.58	77	73
			3.5	15.5	6.28	6.41	63	81
			7.4	14.4	6.16	5.41	53	86
3/8/04 2:30 PM	4.00	10404 (TB6A)	0.3	14.6	7.51	10.6	105	138
			5	12.9	7.28	10.4	98	141
			10	12.8	7.17	10.2	97	133
			15	10.9	6.8	9.11	83	148
			22.7	10.4	6.76	8.83	79	126

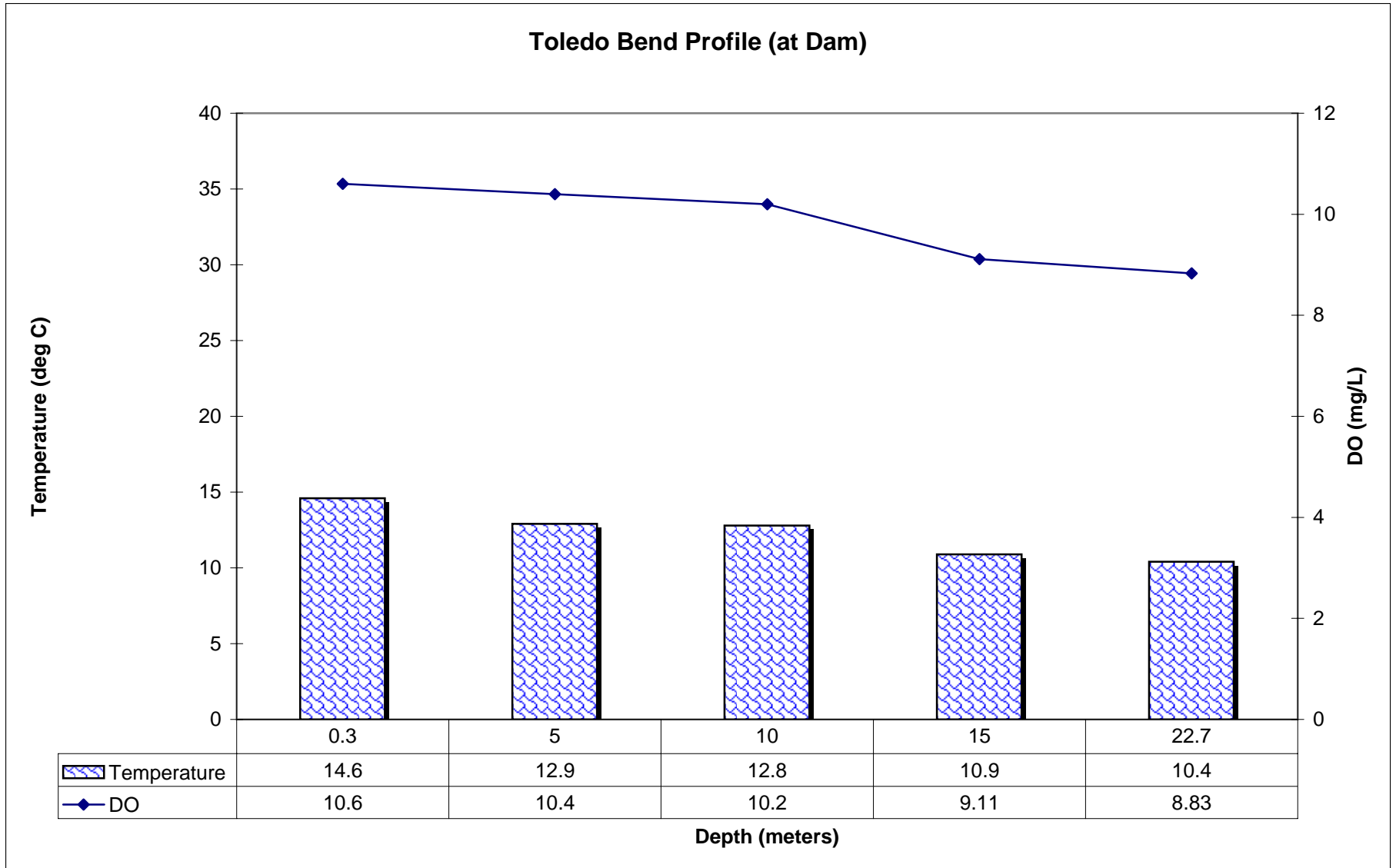
# SABINE RIVER AUTHORITY OF TEXAS

March 2004



# SABINE RIVER AUTHORITY OF TEXAS

March 2004



# SABINE RIVER AUTHORITY OF TEXAS

## Toledo Bend Weather and Reservoir Data

March 2004

Date	Lake Elev	LE - TOP	Max Temp	Min Temp	Rainfall	Evaporation	Daily Releases cfs	Daily Releases ac ft	Current Release
3/1/2004	172.34	0.34	66	55	0.26	NR	21,300	42,248	21,944
3/2/2004	172.49	0.49	71	59	0.12	0.10	21,082	41,605	21,144
3/3/2004	172.55	0.55	69	59	0.17	0.07	21,019	41,690	20,944
3/4/2004	172.55	0.55	77	64	0.06	0.13	21,054	41,760	20,994
3/5/2004	172.57	0.57	75	57	0.12	0.18	20,997	41,647	21,099
3/6/2004	172.63	0.63	64	52	0.10	0.01	21,500	42,645	20,894
3/7/2004	172.62	0.62	70	45	0.00	0.14	21,100	41,851	21,119
3/8/2004	172.62	0.62	76	44	0.00	0.28	20,957	41,568	21,144
3/9/2004	172.57	0.57	70	41	0.00	0.21	20,927	41,508	21,019
3/10/2004	172.48	0.48	69	40	0.00	0.36	19,588	38,852	20,844
3/11/2004	172.38	0.38	69	37	0.00	0.18	18,832	37,353	18,794
3/12/2004	172.32	0.32	68	38	0.00	0.16	18,819	37,327	18,844
3/13/2004	172.14	0.14	71	45	0.00	0.19	15,420	30,585	18,819
3/14/2004	172.04	0.04	70	52	0.02	0.10	13,582	26,939	13,544
3/15/2004	171.97	(0.03)	64	54	0.40	0.01	13,619	27,013	13,219
3/16/2004	171.91	(0.09)	68	56	0.04	0.02	13,572	26,920	13,544
3/17/2004	171.72	(0.28)	68	46	0.00	0.21	13,609	26,993	13,599
3/18/2004	171.58	(0.42)	81	47	0.00	0.21	13,719	27,211	13,619
3/19/2004	171.47	(0.53)	83	62	0.00	0.25	13,777	27,326	13,794
3/20/2004	171.30	(0.70)	80	58	0.00	0.09	13,761	27,295	13,744
3/21/2004	171.23	(0.77)	84	60	0.41	0.29	13,794	27,360	13,938
3/22/2004	171.14	(0.86)	73	45	0.00	0.33	13,845	27,461	13,794
3/23/2004	170.95	(1.05)	68	41	0.00	0.19	13,844	27,459	13,894
3/24/2004	170.75	(1.25)	74	41	0.00	NR	13,820	27,412	13,794
3/25/2004	170.67	(1.33)	72	41	0.00	RN	13,751	27,275	13,744
3/26/2004	170.53	(1.47)	72	63	0.04	0.17	13,686	27,145	13,684
3/27/2004	170.28	(1.72)	80	63	0.00	0.24	13,779	27,370	13,704
3/28/2004	170.08	(1.92)	79	60	0.00	0.19	13,799	27,370	13,854
3/29/2004	170.38	(1.62)	80	59	0.04	0.17	13,819	27,410	13,744
3/30/2004	170.04	(1.96)	62	45	0.30	0.15	13,957	27,683	14,019
3/31/2004	169.91	(2.09)	74	41	0.00	0.28	4,698	9,318	13894
<b>Avg or Tot</b>	171.62	(0.38)	72	51	2.08	4.91	16,162	993,599	

Units	Avg Feet M.S.L.	Avg Feet	Avg Deg. F	Avg Deg. F	Tot Inches	Tot Inches	Avg cfs	Tot Ac. Ft.	cfs approx. 8:00 a.m.
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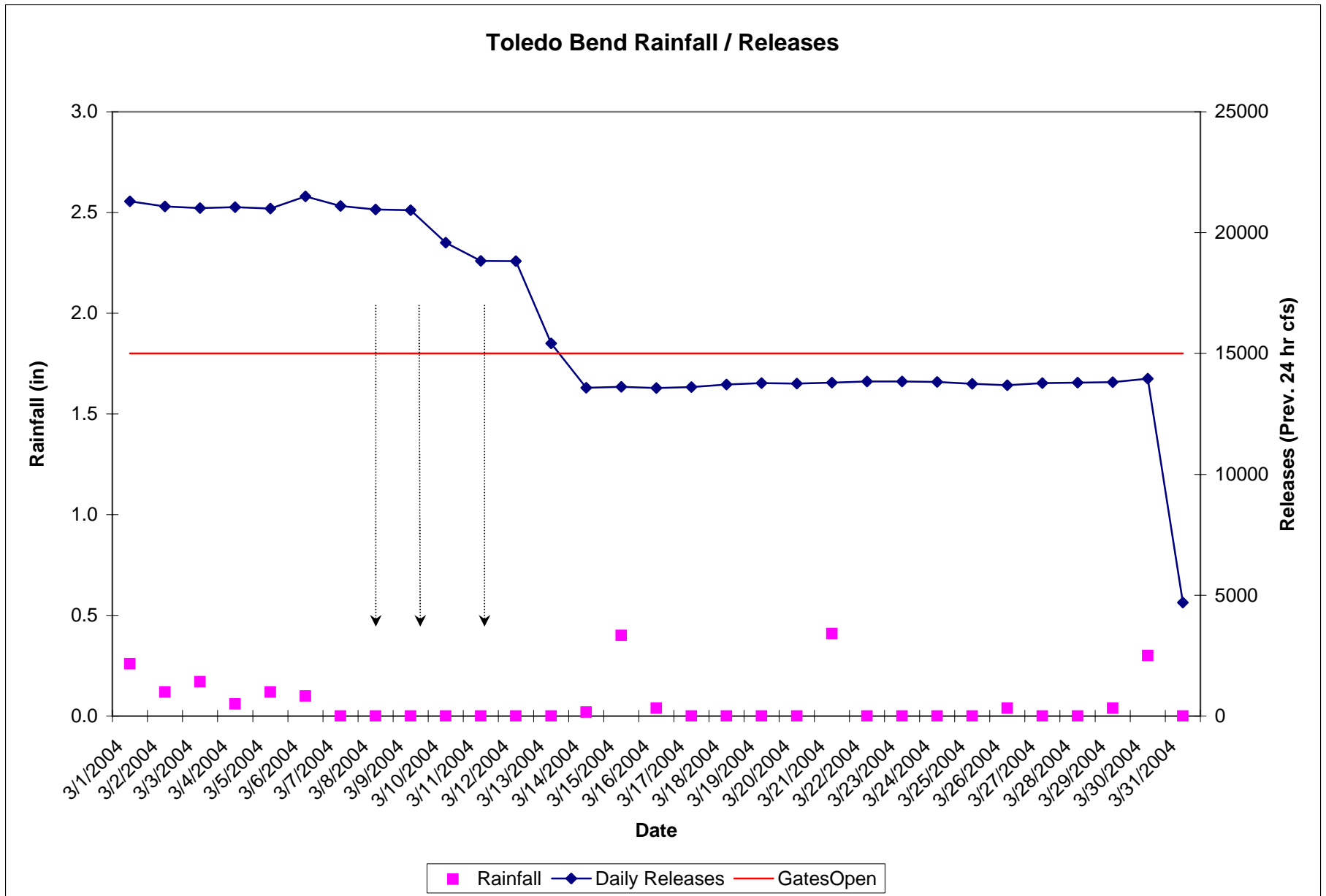
TOP: Top of Pool = 172 Feet M.S.L.

NR: No Reading

Toledo Bend Sampled on 3/8,9,11/2004

# SABINE RIVER AUTHORITY OF TEXAS

March 2004



Toledo Bend sampled on 3/8,9,11/2004

Flood gates open when flow greater than approximately 15,000 cfs

# SABINE RIVER AUTHORITY OF TEXAS

## Burkeville Weather and River Data

March 2004

<b>Date</b>	<i>Rainfall</i>	<i>Gauge Height</i>	<i>GH - FS</i>	<i>Flow</i>
3/1/2004	0.06	29.36	(8.64)	21,800
3/2/2004	0.04	29.03	(8.97)	21,100
3/3/2004	0.15	29.10	(8.90)	21,300
3/4/2004	0.01	29.08	(8.92)	21,200
3/5/2004	0.00	29.07	(8.93)	21,200
3/6/2004	0.00	29.04	(8.96)	21,200
3/7/2004	0.00	29.11	(8.89)	21,300
3/8/2004	0.00	29.02	(8.98)	21,100
3/9/2004	0.00	28.97	(9.03)	21,000
3/10/2004	0.00	28.87	(9.13)	20,800
3/11/2004	0.00	27.99	(10.01)	19,000
3/12/2004	0.00	27.91	(10.09)	18,800
3/13/2004	0.00	27.85	(10.15)	18,700
3/14/2004	0.00	25.43	(12.57)	13,900
3/15/2004	0.28	25.41	(12.59)	13,900
3/16/2004	0.00	25.36	(12.64)	13,800
3/17/2004	0.00	25.26	(12.74)	13,700
3/18/2004	0.00	25.25	(12.75)	13,700
3/19/2004	0.00	25.16	(12.84)	13,500
3/20/2004	0.00	25.22	(12.78)	13,600
3/21/2004	OUT	OUT	OUT	OUT
3/22/2004	0.00	25.22	(12.78)	13,600
3/23/2004	0.00	25.21	(12.79)	13,600
3/24/2004	0.00	25.26	(12.74)	13,700
3/25/2004	0.00	25.27	(12.73)	13,700
3/26/2004	0.03	25.28	(12.72)	13,700
3/27/2004	0.00	25.24	(12.76)	13,600
3/28/2004	0.00	25.28	(12.72)	13,700
3/29/2004	0.01	25.31	(12.69)	13,800
3/30/2004	0.72	25.65	(12.35)	14,400
3/31/2004	0.00	25.55	(12.45)	14,200
<b>Avg or Tot</b>	1.30	26.83	(11.17)	16,753

	Tot	Avg	Avg	Avg
Units	Inches	Feet	Feet	cfs

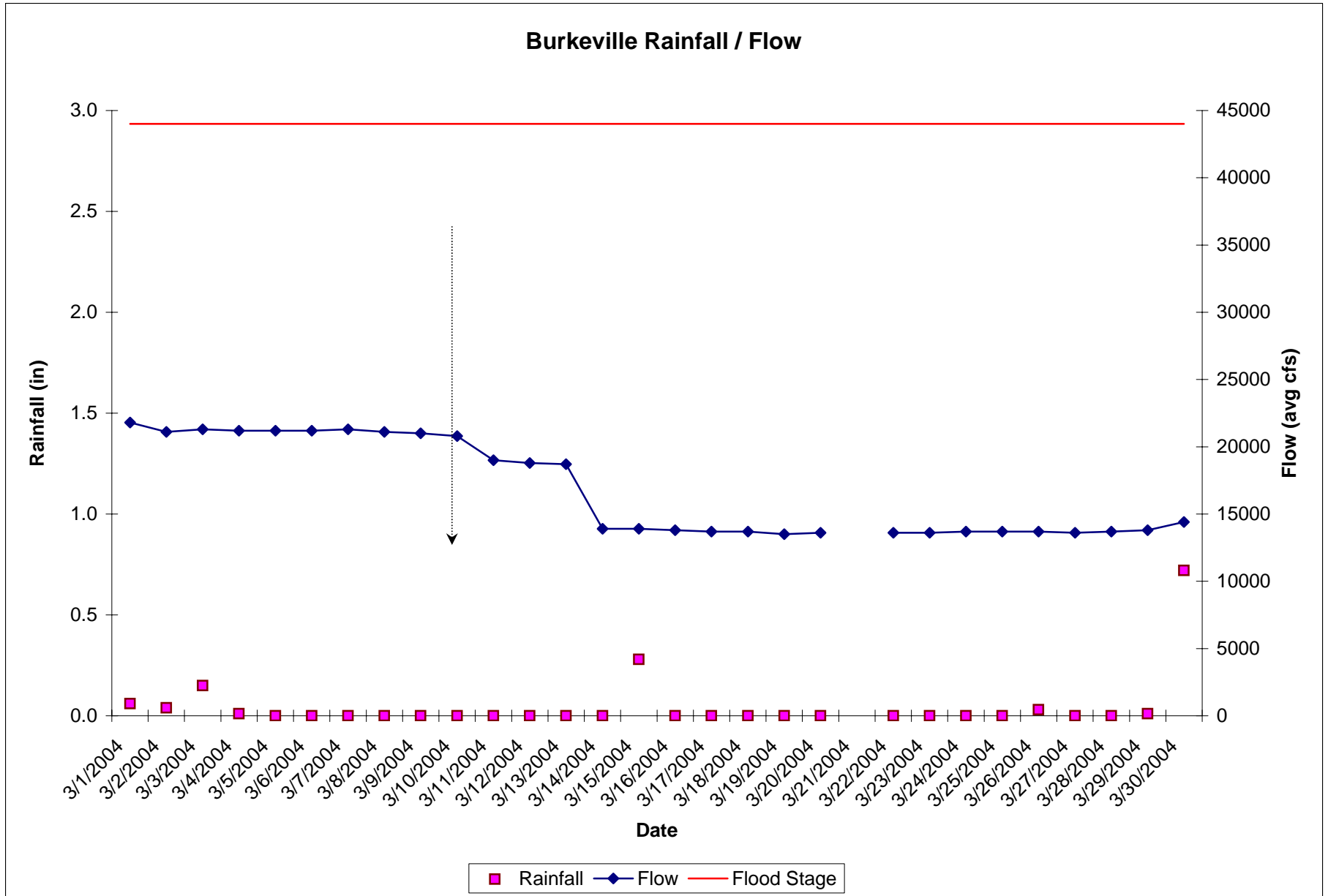
FS: Flood Stage = 38 feet

OUT: Gage Out

Lower Sabine Basin Sampled on 3/10/2004

# SABINE RIVER AUTHORITY OF TEXAS

March 2004



Flood stage flow of 44,000 cfs calculated from flood stage gage height, 38 ft msl.

# SABINE RIVER AUTHORITY OF TEXAS

## Bon Wier Weather and River Data

March 2004

<b>Date</b>	<i>Gauge Height</i>	<i>GH - FS</i>	<i>Flow Avg</i>	<i>308 Rainfall</i>
3/1/2004	29.17	(0.83)	25,600	0.01
3/2/2004	29.20	(0.80)	25,700	0.08
3/3/2004	29.10	(0.90)	25,500	0.12
3/4/2004	29.07	(0.93)	25,400	0.00
3/5/2004	28.94	(1.06)	25,000	0.02
3/6/2004	29.00	(1.00)	25,200	0.06
3/7/2004	29.01	(0.99)	25,200	0.00
3/8/2004	28.97	(1.03)	25,100	0.00
3/9/2004	28.89	(1.11)	24,900	0.00
<b>3/10/2004</b>	<b>28.77</b>	<b>(1.23)</b>	<b>24,600</b>	<b>0.00</b>
3/11/2004	28.61	(1.39)	24,100	0.00
3/12/2004	28.07	(1.93)	22,700	0.00
3/13/2004	27.85	(2.15)	22,100	0.00
3/14/2004	27.24	(2.76)	20,600	0.00
3/15/2004	26.15	(3.85)	18,200	0.73
3/16/2004	26.23	(3.77)	18,400	0.01
3/17/2004	25.97	(4.03)	17,800	0.00
3/18/2004	25.93	(4.07)	17,800	0.00
3/19/2004	25.71	(4.29)	17,300	0.00
3/20/2004	25.65	(4.35)	17,200	0.00
3/21/2004	25.58	(4.42)	17,000	0.05
3/22/2004	25.61	(4.39)	17,100	0.00
3/23/2004	25.58	(4.42)	17,000	0.00
3/24/2004	25.56	(4.44)	17,000	0.00
3/25/2004	25.54	(4.46)	17,000	0.00
3/26/2004	25.55	(4.45)	17,000	0.10
3/27/2004	25.50	(4.50)	16,900	0.00
3/28/2004	25.40	(4.60)	16,700	0.00
3/29/2004	25.52	(4.48)	16,900	0.00
3/30/2004	25.81	(4.19)	17,500	0.22
3/31/2004	26.00	(4.00)	17,900	0.00
<b>Avg or Tot</b>	<b>27.07</b>	<b>(2.93)</b>	<b>20,529</b>	<b>1.40</b>

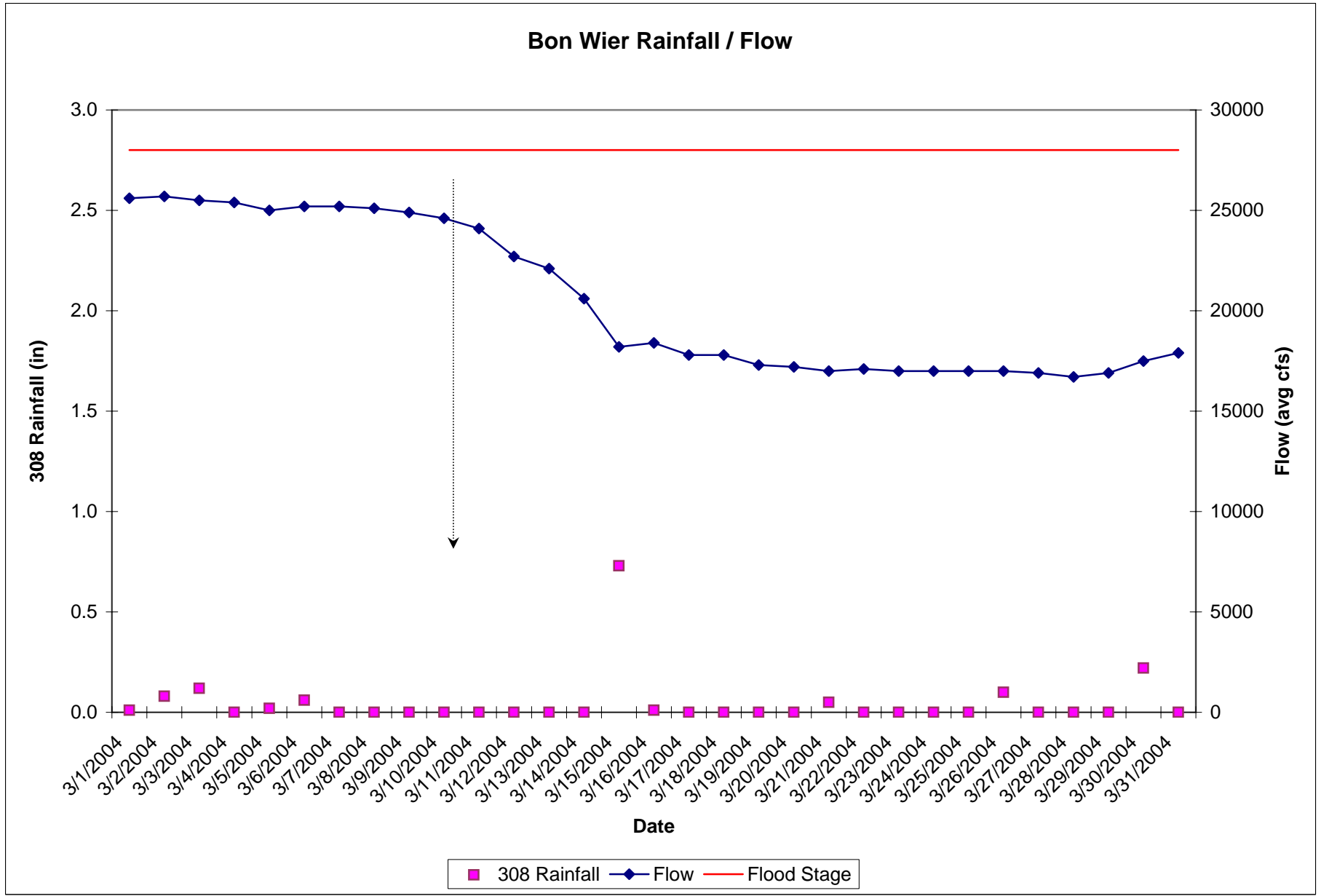
Units	Avg Feet	Avg Feet	Avg	Tot Inches
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FS: Flood Stage = 30 feet

Lower Sabine Basin Sampled on 3/10/2004

# SABINE RIVER AUTHORITY OF TEXAS

March 2004



Lower Sabine Basin sampled on 3/10/2004

Flood stage flow of 28,000 cfs calculated from flood stage gage height, 30 ft msl.

# SABINE RIVER AUTHORITY OF TEXAS

## Ruliff Weather and River Data

March 2004

<b>Date</b>	<b>Gauge Height</b>	<b>GH - FS</b>	<b>Flow cfs</b>	<b>Flow acft</b>	<b>Flow avg</b>	<b>309 Rainfall</b>
3/1/2004	24.30	0.30	21,600	42,843	21,600	OUT
3/2/2004	24.33	0.33	22,000	43,636	21,800	OUT
3/3/2004	24.31	0.31	21,700	43,041	21,767	OUT
3/4/2004	24.28	0.28	21,300	42,248	21,650	OUT
3/5/2004	24.27	0.27	21,200	42,050	17,560	OUT
3/6/2004	24.24	0.24	20,800	41,256	18,100	OUT
3/7/2004	24.24	0.24	20,800	41,256	18,486	OUT
3/8/2004	24.20	0.20	20,200	40,066	18,700	OUT
3/9/2004	24.19	0.19	20,100	39,868	18,856	OUT
3/10/2004	24.18	0.18	20,000	39,669	18,970	OUT
3/11/2004	24.16	0.16	19,700	39,074	19,036	OUT
3/12/2004	24.13	0.13	19,400	38,479	19,067	OUT
3/13/2004	24.13	0.13	19,400	38,479	19,092	OUT
3/14/2004	24.11	0.11	19,100	37,884	19,093	OUT
3/15/2004	24.12	0.12	19,200	38,083	19,100	OUT
3/16/2004	24.07	0.07	18,600	36,893	19,069	OUT
3/17/2004	24.01	0.01	17,900	35,504	19,000	OUT
3/18/2004	23.95	(0.05)	17,300	34,314	18,906	OUT
3/19/2004	23.89	(0.11)	16,700	33,124	18,789	OUT
3/20/2004	23.84	(0.16)	16,300	32,331	18,665	OUT
3/21/2004	23.80	(0.20)	15,900	31,537	18,533	OUT
3/22/2004	23.75	(0.25)	15,400	30,545	18,391	OUT
3/23/2004	23.73	(0.27)	15,200	30,149	18,252	OUT
3/24/2004	23.72	(0.28)	15,200	30,149	18,125	OUT
3/25/2004	23.71	(0.29)	15,100	29,950	18,004	OUT
3/26/2004	23.70	(0.30)	15,000	29,752	17,889	OUT
3/27/2004	23.69	(0.31)	14,900	29,553	17,778	OUT
3/28/2004	23.68	(0.32)	14,800	29,355	17,671	OUT
3/29/2004	23.69	(0.31)	14,900	29,554	17,576	OUT
3/30/2004	23.68	(0.32)	14,800	29,355	17,483	OUT
3/31/2004	23.67	(0.33)	14,700	29,157	17,394	OUT
<b>Avg or Tot</b>	23.99	(0.01)	18,039	1,109,154		OUT

Units	Avg Feet	Avg Feet	Avg cfs	Tot ac ft	Tot Inches
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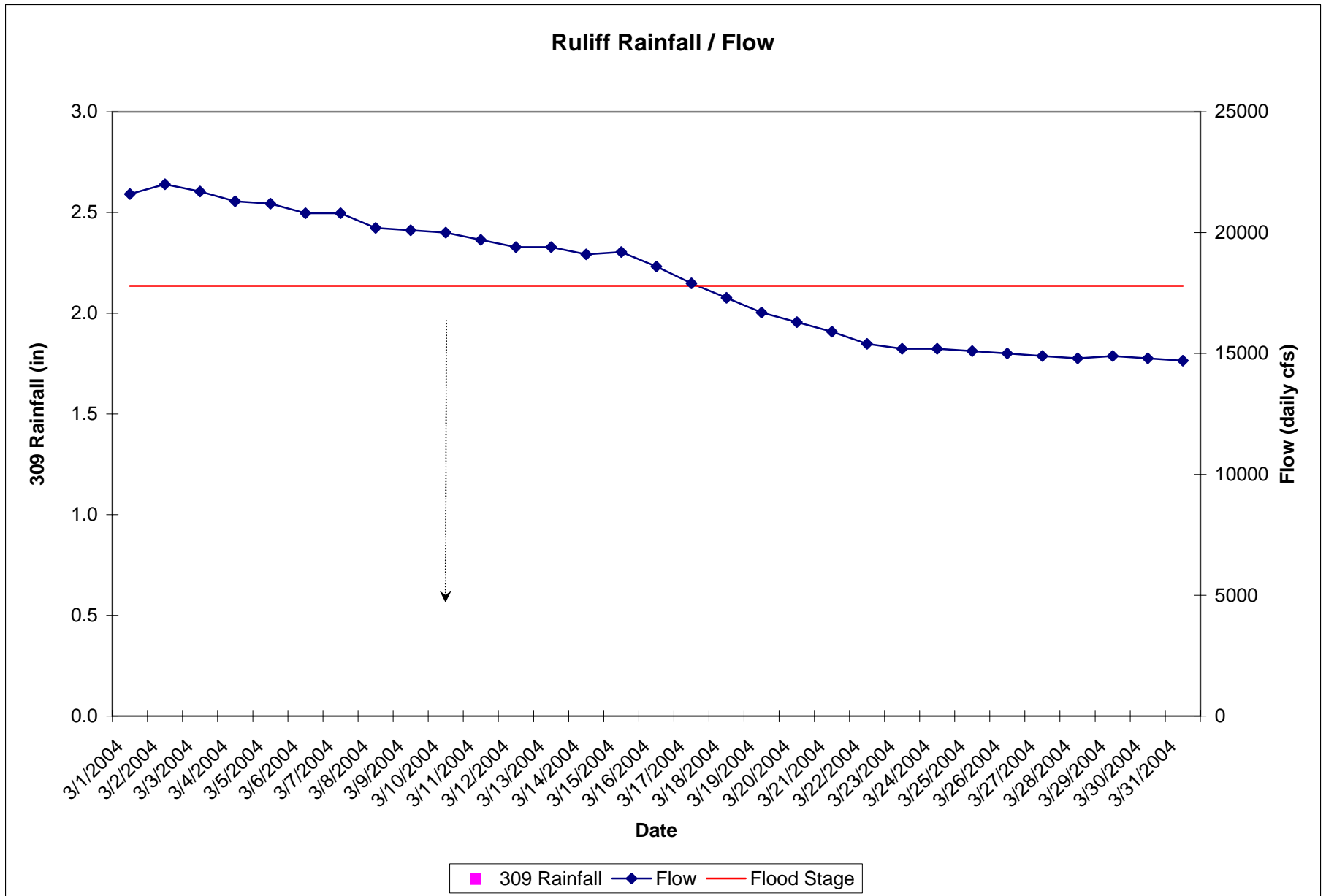
FS: Flood Stage 24 feet with 10 foot datum

OUT: Gage Out

Lower Sabine Basin Sampled on 3/10/2004

# SABINE RIVER AUTHORITY OF TEXAS

March 2004



Lower Sabine Basin sampled on 3/10/2004

Flood stage flow of 17,800 cfs calculated from flood stage gage height, 24 ft msl.

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## FY 2004 Fixed Monitoring Stations

### Tidal Sabine Basin

SW	Segment	Station	Location
1.05	0501	15653 (ICW1)	INTERCOASTAL WATERWAY AT PERRY RIDGE
1.01	0501	15654 (BB1)	BLACK BAYOU IN CAMERON PARISH
1.00	0501	10395 (SR1)	SABINE RIVER 12.00 KM UPSTREAM OF IH 10
1.00	0501	10394 (SRT2)	SABINE RIVER AT IH 10
1.00	0501	18056 (SRT1C)	OLD HWY 90
1.00	0501	18055 (SRT1B)	SABINE RIVER AT CHANNEL LIGHT 20
1.00	0501	10393 (SRT1A)	SABINE RIVER AT CHANNEL LIGHT 13
1.00	0501	10391 (SRT1)	SABINE RIVER AT CHANNEL CAN 3

# SABINE RIVER AUTHORITY OF TEXAS

## Tidal Report

March 2004

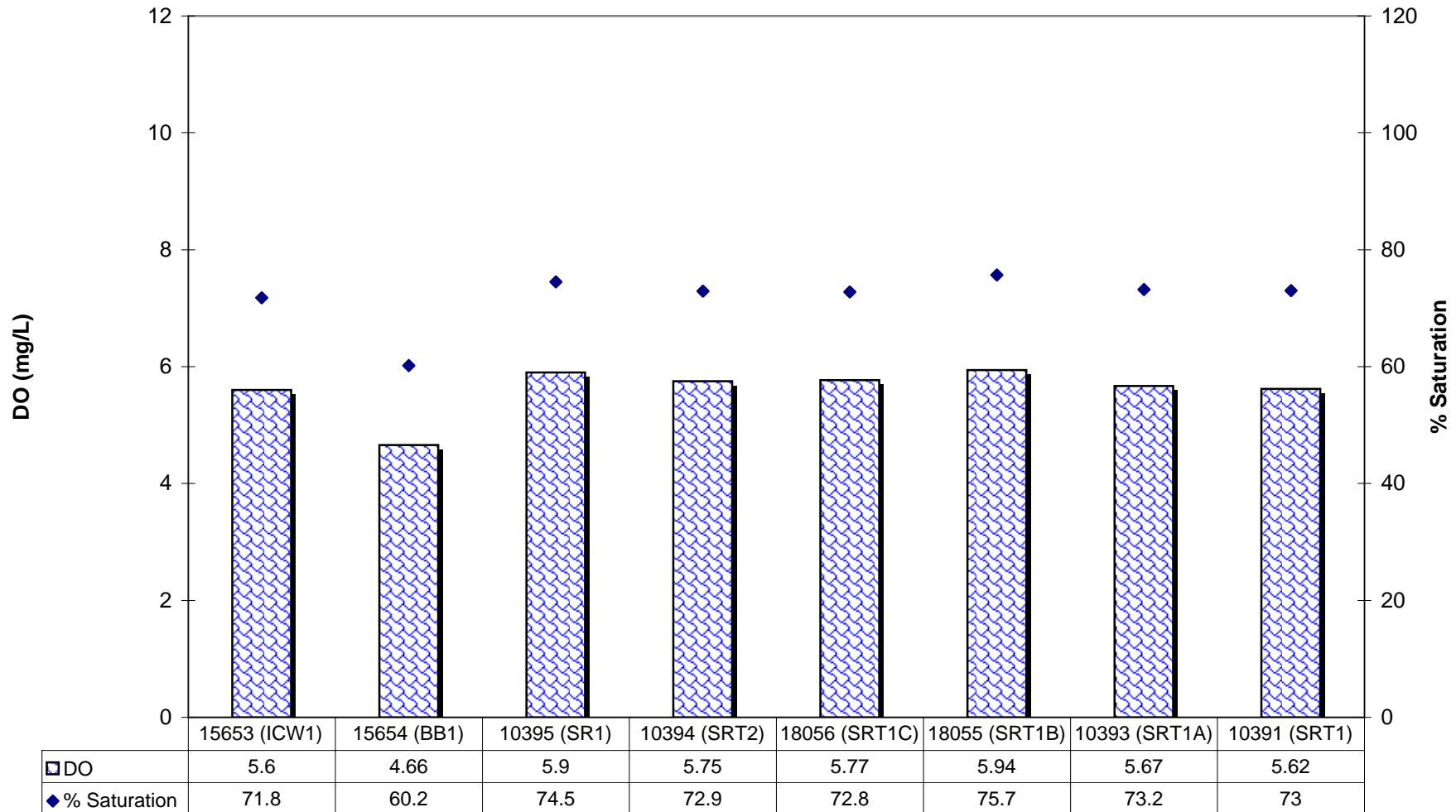
Date	SW ID	Station	Temperature °C 00010	pH Units 00400	DO mg/L 00300	% Saturation 00301	Conductivity µS/cm 00094	Salinity ppt 00480	Secchi Meters 00078	Turbidity NTU 82079	<i>E. coli</i> mpn/100ml 31699	<i>Enterococcus</i> mpn/100ml 31701	Chlorophyll a µg/L 32211	Nitrite mg/L 00615	Nitrate mg/L 00620	Ortho- Phosphate 00671	TOC mg/L 00680	Total Alkalinity 00410	Total Hardness 00900
3/11/04 10:12 AM	1.05	15653 (ICW1)	15.5	6.79	8.26	83	151	< 1	0.36	20	23	11	*	< 0.02	0.03	< 0.04	7	20	28
3/11/04 10:55 AM	1.01	15654 (BB1)	17.2	7.06	7.42	77	1250	< 1	0.19	29	31	21	*	< 0.02	0.17	< 0.04	12	30	100
3/11/04 9:15 AM	1.00	10395 (SR1)	14.8	6.8	8.49	84	143	*	0.44	16	40	14	*	< 0.02	0.02	< 0.04	8	20	28
3/11/04 9:40 AM	1.00	10394 (SRT2)	14.9	6.71	8.48	82	138	< 1	0.47	15.1	33	11	*	< 0.02	0.02	< 0.04	7	20	28
3/11/04 9:53 AM	1.00	18056 (SRT1C)	15.2	6.77	8.32	83	138	< 1	0.5	16.5	42	8	*	< 0.02	0.02	< 0.04	7	20	28
3/11/04 10:30 AM	1.00	18055 (SRT1B)	15.5	6.85	8.48	85	141	< 1	0.48	16.7	20	11	*	< 0.02	0.02	< 0.04	7	20	28
3/11/04 10:40 AM	1.00	10393 (SRT1A)	15.7	6.83	8.48	85	147	< 1	0.45	14.8	27	4	*	< 0.02	0.04	< 0.04	7	20	28
3/11/04 11:05 AM	1.00	10391 (SRT1)	16.1	6.99	8.75	86	144	< 1	0.47	14.3	13	4	*	< 0.02	0.06	< 0.04	7	20	24

\*: Not sampled on this run

# SABINE RIVER AUTHORITY OF TEXAS

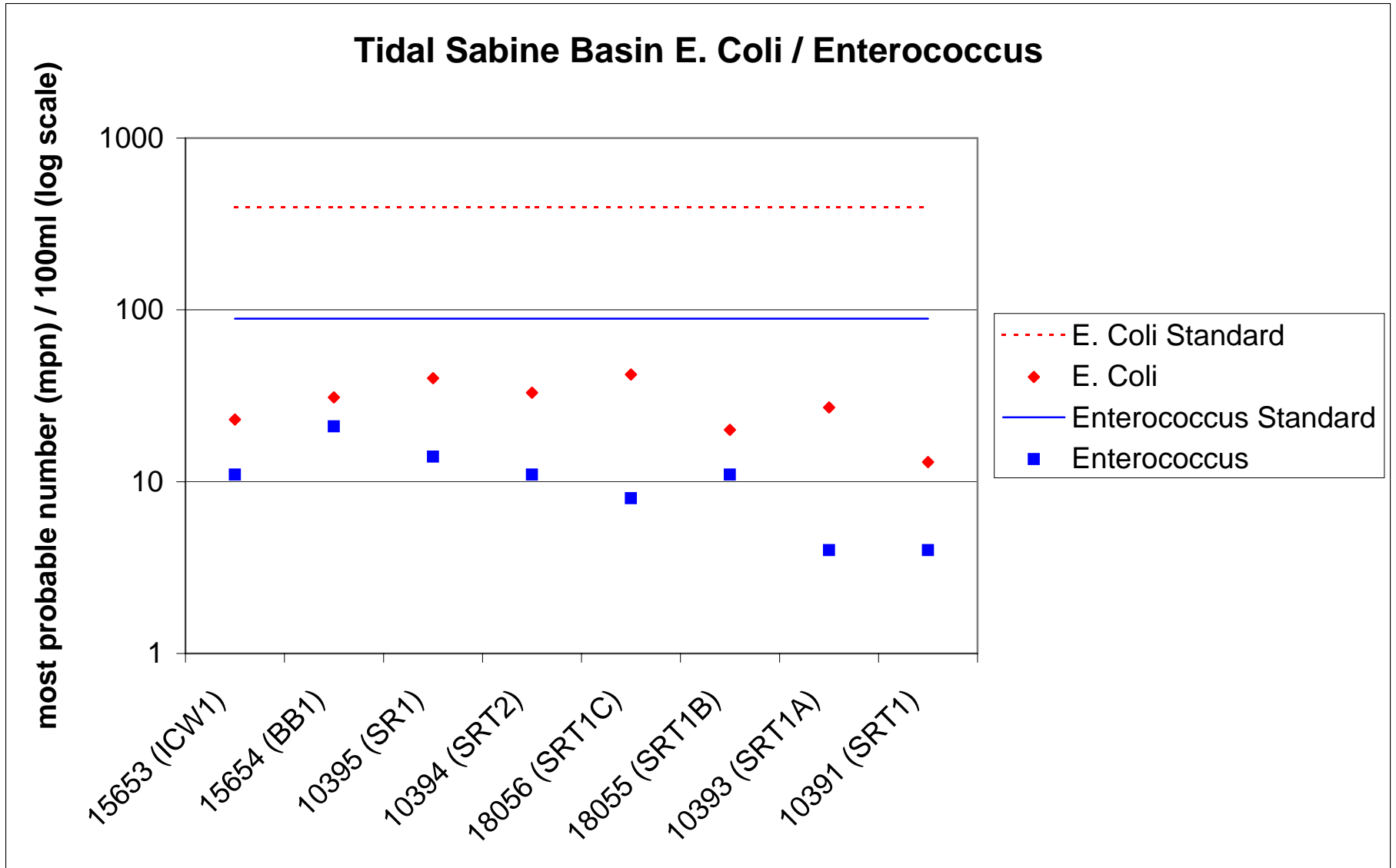
March 2004

## Tidal Sabine Basin DO / % Saturation



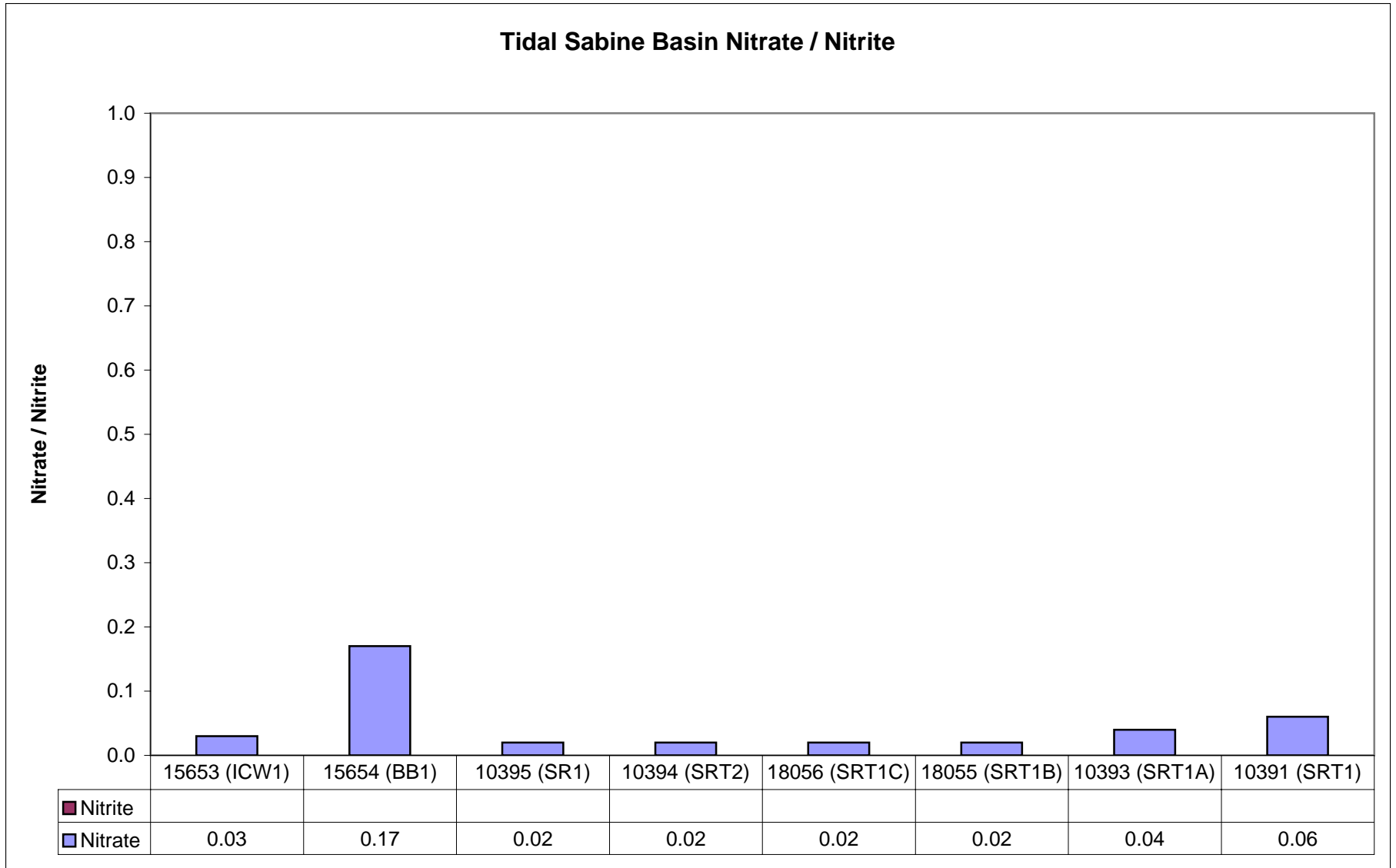
# SABINE RIVER AUTHORITY OF TEXAS

March 2004



# SABINE RIVER AUTHORITY OF TEXAS

March 2004



Stations without values were below detection limit (< 0.02 mg/L) on this run (see page 38)

# SABINE RIVER AUTHORITY OF TEXAS

## Tidal Profiles

March 2004

Date	SW ID	Station	Depth Meters	Temperature	pH	DO	%	Conductivity	Salinity
				°C	Units	mg/L	Saturation	μS/cm	ppt
				00010	00400	00300	00301	00094	00480
3/11/04 10:12 AM	1.05	15653 (ICW1)	0.3	15.5	6.79	8.26	83	151	< 1
			5.9	15.4	6.7	8.16	82	155	< 1
3/11/04 10:55 AM	1.01	15654 (BB1)	0.3	17.2	7.06	7.42	77	1250	< 1
			4.1	16.6	7	7.28	75	1243	< 1
3/11/04 9:40 AM	1.00	10394 (SRT2)	0.3	14.9	6.71	8.48	82	138	< 1
			6.4	14.9	6.57	8.13	81	130	< 1
3/11/04 9:53 AM	1.00	18056 (SRT1C)	0.3	15.2	6.77	8.32	83	138	< 1
			6	15.2	6.67	8.13	81	141	< 1
			12.4	15.2	6.59	8.14	81	124	< 1
3/11/04 10:30 AM	1.00	18055 (SRT1B)	0.3	15.5	6.85	8.48	85	141	< 1
			6	15.5	6.68	8.3	83	133	< 1
3/11/04 10:40 AM	1.00	10393 (SRT1A)	0.3	15.7	6.83	8.48	85	147	< 1
			7.2	15.5	6.71	8.36	84	150	< 1

# SABINE RIVER AUTHORITY OF TEXAS

## Orange Weather and River Data

March 2004

<b>Date</b>	<b>310 (Orange) Rainfall</b>	<b>Gauge Height</b>	<b>GH - FS</b>	<b>Max Temp</b>	<b>Min Temp</b>	<b>Cur Temp</b>	<b>293 (GCD) Rainfall</b>
3/1/2004	OUT	OUT	OUT	58	44	57	0.02
3/2/2004	OUT	OUT	OUT	78	56	60	0.07
3/3/2004	OUT	OUT	OUT	69	53	57	0.12
3/4/2004	OUT	OUT	OUT	67	59	65	0.03
3/5/2004	OUT	OUT	OUT	69	54	58	0.01
3/6/2004	OUT	OUT	OUT	69	53	55	0.03
3/7/2004	OUT	OUT	OUT	78	50	51	0.00
3/8/2004	OUT	OUT	OUT	84	51	53	0.00
3/9/2004	OUT	OUT	OUT	71	46	47	0.00
3/10/2004	OUT	OUT	OUT	78	45	45	0.00
3/11/2004	OUT	OUT	OUT	64	41	44	0.00
3/12/2004	OUT	OUT	OUT	69	43	45	0.00
3/13/2004	OUT	OUT	OUT	68	42	43	0.00
3/14/2004	OUT	OUT	OUT	68	43	57	0.03
3/15/2004	OUT	OUT	OUT	56	51	53	2.74
3/16/2004	OUT	OUT	OUT	69	53	58	0.04
3/17/2004	OUT	OUT	OUT	76	46	51	0.03
3/18/2004	OUT	OUT	OUT	74	50	62	0.00
3/19/2004	OUT	OUT	OUT	79	60	67	0.00
3/20/2004	OUT	OUT	OUT	80	53	59	0.00
3/21/2004	OUT	OUT	OUT	82	52	62	0.00
3/22/2004	OUT	OUT	OUT	74	46	47	0.00
3/23/2004	OUT	OUT	OUT	68	46	49	0.00
3/24/2004	OUT	OUT	OUT	71	48	58	0.00
3/25/2004	OUT	OUT	OUT	69	53	66	0.00
3/26/2004	OUT	OUT	OUT	75	65	65	0.00
3/27/2004	OUT	OUT	OUT	77	64	66	0.00
3/28/2004	OUT	OUT	OUT	78	57	68	0.00
3/29/2004	OUT	OUT	OUT	79	59	67	0.00
3/30/2004	OUT	OUT	OUT	71	46	49	0.05
3/31/2004	OUT	OUT	OUT	81	44	45	0.00
<b>Avg or Tot</b>	OUT	OUT	OUT	73	51	56	3.17

Units	Tot Inches	Avg Feet	Avg Feet	Avg Deg F	Avg Deg F	Avg Deg F	Tot Inches
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Appx. 8 am

310 Rainfall: Old Navy Base, City of Orange

293: SRA Gulf Coast Division Office, Northern Orange County

FS: Flood Stage = 4 Feet

OUT: Gage Out

Tidal Sabine Basin Sampled on 3/11/2004

# SABINE RIVER AUTHORITY OF TEXAS

March 2004

