

Water Quality Information By Station

Station	Parameter	Available Data	Minimum Value	Maximum Value	Average Value	Median Value	# of Exceedances	Total # of Samples	% Exceedances
11124	Dissolved Oxygen (mg/L)	01/08/99-08/01/00	2.1	10.2	5.30	5.1	2	54	4%
	Temperature (°C)	01/08/99-08/01/00	6.5	31.1	22.07	23.25	0	54	0%
	Conductivity (umS/cm)	01/08/99-07/08/00	170	1870	533.45	476.5	N/A	42	N/A
	Total Suspended Solids (mg/L)	01/08/99-10/08/00	4	46	11.53	8	N/A	55	N/A
	Sulfate (mg/L)	01/08/99-09/08/00	8.48	82.9	16.04	11.6	1	55	2%
	Fecal Coliform (#/100mL)	01/08/99-10/08/00	120	190000	7404.55	810	45	55	82%
	Ammonia-N (mg/L)	1/8/99-10/26/00	0.05	3.29	0.42	0.083	18	43	42%
	TDS (mg/L)	1/8/99-10/26/00	150	1220	334.44	308	1	55	2%
	11125	Dissolved Oxygen (mg/L)	11/9/94-10/26/00	0.3	11.8	6.00	6	2	65
Temperature (°C)		11/9/94-10/26/00	10	30.7	22.83	25	0	65	0%
Conductivity (umS/cm)		11/9/94-8/22/00	200	4480	869.33	728	N/A	51	N/A
Total Suspended Solids (mg/L)		02/13/95-02/13/00	4	186	25.20	19	N/A	61	N/A
Sulfate (mg/L)		02/13/95-08/13/00	5.46	196	32.49	25.6	6	61	10%
Fecal Coliform (#/100mL)		01/21/99-09/21/00	9	200000	11229.95	430	31	57	54%
Ammonia-N (mg/L)		2/13/95-10/26/00	0.05	1.79	0.56	0.342	40	51	78%
TDS (mg/L)		2/13/95-10/26/00	145	2920	529.18	465	6	61	10%
11369		Dissolved Oxygen (mg/L)	02/06/92-02/06/00	5.1	10.5	6.69	6.4	0	39
	Temperature (°C)	02/06/92-02/06/00	12.4	31.2	25.54	27.6	0	39	0%
	Conductivity (umS/cm)	02/06/92-02/06/00	207	980	701.88	749.5	N/A	16	N/A
	Total Suspended Solids (mg/L)	02/06/92-02/06/00	13	788	71.70	26	N/A	27	N/A
	Sulfate (mg/L)	02/06/92-02/06/00	1	61.2	36.32	35.4	0	27	0%
	Fecal Coliform (#/100mL)	02/06/92-02/06/00	2.6	91000	2839.17	205	24	38	63%
	Ammonia-N (mg/L)	2/6/92-10/18/00	0.02	0.87	0.13	0.1	8	38	21%
	TDS (mg/L)	2/2/94-10/18/00	239	557	446.37	455	0	19	0%

Station information continued on next page

SUMMARY

Name: Greens Bayou Above Tidal

Segment: 1016

Segment Length: 24 miles

Description: From a point 0.7 kilometer (0.4 mile) above the confluence of Halls Bayou in Harris County to a point 100 meters (110 yards) above FM 1960 in Harris County.

Watershed Area: 139 square miles

Designated Uses: Contact Recreation
Limited Quality Aquatic Habitat

Standards: Dissolved Oxygen (mg/L): 3.0
Temperature (°F): 92
Fecal Coliform (#/100mL): 400
Sulfate (mg/L): 65
Chloride(mg/L): 110
TDS (Mg/L): 600
pH Range (SU): 6.5-9.0

Number of Active Surface Water Monitoring Stations: 10

Monitoring Agencies: USGS
Houston Health & Human Services
Houston Public Works & Eng. (historical)

Number of WWTP Outfalls: Domestic 120
Industrial 23

Parameter(s) of Concern:

303(d): Indicator bacteria (Fecal Coliform, E Coli, Enterococcus)

Priority: L

305(b): Nitrite + Nitrate Nitrogen, Orthophosphorus, Total Phosphorus, Chlorophyll a

Nutrient Screening Criteria:
Ammonia-N (mg/L): 0.16
Nitrite+Nitrate (mg/L): 3.50
Orthophosphorus (mg/L): 0.90
Total Phosphorus (mg/L): 1.10
Chlorophyll-a (ug/L): 13.7

Actions/Publications:

Greens Bayou Watershed Brochure (2001)

"Greens Bayou Intensive Survey and Wasteload Evaluation" (1999)

Narrative:

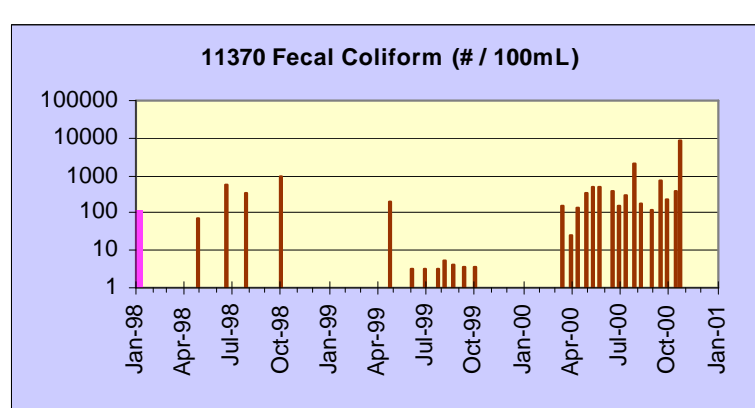
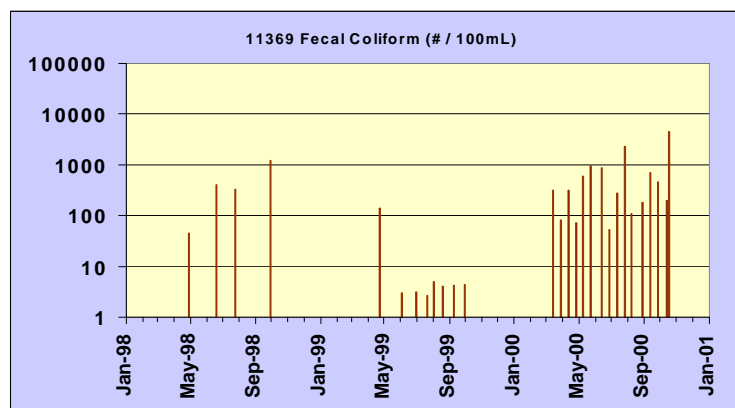
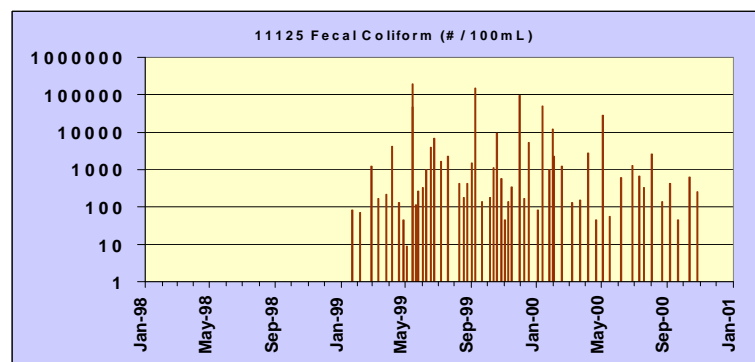
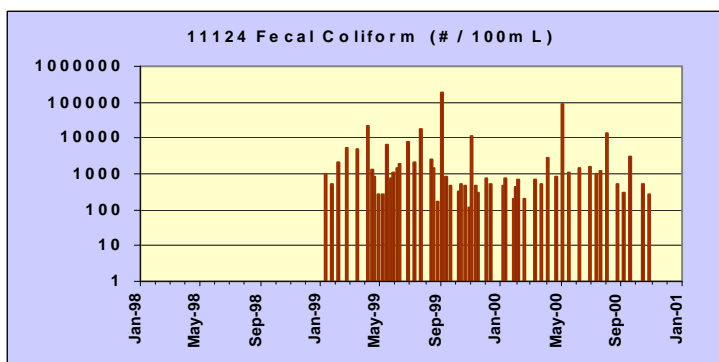
The watershed is heavily developed with predominantly residential and mixed commercial land uses. The T.H. Wharton power plant is at the headwaters of Greens Bayou and permits the bayou to flow year-round. Beltway 8 runs through the middle of the watershed, and large business districts can be found adjacent to and at the intersections of Interstate-45 and State Highway 59. Bush Intercontinental Airport is located in the central northern section of the watershed. The easternmost portion of the watershed is predominantly undeveloped.

The main stem of the bayou as well as the eastern tributaries are heavily monitored. The predominant water quality issue throughout the watershed is the presence of indicator bacteria, which is well above the standard of 400 colonies/100mL for contact recreation. There are known areas of failing septic systems east of Highway 59, south of Beltway 8 as well as upstream of Halls Bayou, west of Interstate-45, just south of Beltway 8. Although maximum values reported in the water quality data table appear high for total suspended solids, many of these values are spikes and do not represent the range of the dataset. Total dissolved solids are not commonly above the state standard of 600 mg/L, and the average value at each station is below the standard. Sulfate concentrations are predominantly below the 65 mg/L standard, and average values are below the standard except for station 13778, in which the value is 65.71 mg/L, in the upper portion of the watershed. While the average values for TDS are below the state standard, stations 11125, 11371, 16589, and 16590 occasionally report concentrations above 600 mg/L. Ammonia concentrations frequently exceed the screening criteria of 0.16 mg/L for freshwater. The temperature/DO relationship looks normal and DO values are generally acceptable for support of aquatic habitat and species.

Next Steps:

H-GAC is working to expand the number of ambient stations in the existing monitoring program as well as expand the parameters suite to include chlorophyll-a and total phosphorus at all stations in the watershed. H-GAC will focus on elevated bacteria and ammonia levels by conducting detailed data analysis.

The Data Appendix contains the complete historical database and graphs of the parameters used in this report. The Statistics Appendix contains statistical information for each station and parameter exceeding 9 samples.



Water Quality Information By Station

Station	Parameter	Available Data	Minimum Value	Maximum Value	Average Value	Median Value	# of Exceedances	Total # of Samples	% Exceedances
11370	Dissolved Oxygen (mg/L)	04/27/98-10/18/00	5	9.8	6.65	6.15	0	29	0%
	Temperature (°C)	04/27/98-10/18/00	18.6	31.6	26.95	28.1	0	29	0%
	Total Suspended Solids (mg/L)	03/14/00-10/14/00	14	65	24.50	22.5	N/A	16	N/A
	Sulfate (mg/L)	03/14/00-10/14/00	15.8	64.6	41.54	37.1	0	16	0%
	Ammonia-N (mg/L)	4/27/98-10/18/00	0.05	0.297	0.11	0.1	5	28	18%
	TDS (mg/L)	3/14/00-10/18/00	226	588	438.75	455.5	0	16	0%
11371	Dissolved Oxygen (mg/L)	2/25/92-2/25/00	2.5	10.8	7.10	6.85	1	78	1%
	Temperature (°C)	2/25/92-2/25/00	11.8	32.4	23.49	24	0	78	0%
	Conductivity (umS/cm)	01/07/99-07/07/00	274	1079	691.51	728	N/A	47	N/A
	Total Suspended Solids (mg/L)	02/25/92-02/25/00	6	430	42.07	23.5	N/A	84	N/A
	Sulfate (mg/L)	02/25/92-02/25/00	6.09	95.8	45.39	47	17	84	20%
	Fecal Coliform (#/100mL)	01/07/99-09/07/00	3.7	120000	3501.09	330	31	67	46%
	Ammonia-N (mg/L)	2/25/92-10/26/00	0.05	2.53	0.35	0.256	36	62	58%
	TDS (mg/L)	1/7/99-10/26/00	113	668	450.53	472	4	60	7%
13778	Dissolved Oxygen (mg/L)	05/25/94-05/25/00	4.1	12.7	7.79	7.5	0	55	0%
	Temperature (°C)	05/25/94-05/25/00	11	34.2	24.03	25.8	3	55	5%
	Conductivity (umS/cm)	05/25/94-05/25/00	101	1234	688.26	752	N/A	35	N/A
	Total Suspended Solids (mg/L)	02/02/94-02/02/00	5	106	24.57	19	N/A	23	N/A
	Sulfate (mg/L)	02/02/94-02/02/00	7.23	153	67.51	57	8	23	35%
	Fecal Coliform (#/100mL)	02/02/94-02/02/00	2.9	42000	8589.46	3000	19	29	66%
	Ammonia-N (mg/L)	2/2/94-10/26/00	0.12	1.56	0.59	0.5	29	31	94%
	TDS (mg/L)	2/2/94-10/26/00	141	741	480.48	483	4	23	17%
16589	Dissolved Oxygen (mg/L)	01/07/99-07/18/00	2.3	8.2	5.07	5	4	52	8%
	Temperature (°C)	01/07/99-07/18/00	6	29.5	23.33	24.75	0	52	0%
	Conductivity (umS/cm)	01/07/99-07/07/00	137	5200	843.45	759.5	N/A	40	N/A
	Total Suspended Solids (mg/L)	01/07/99-10/07/00	4	182	20.19	11	N/A	53	N/A
	Fecal Coliform (#/100mL)	01/07/99-09/07/00	54	200000	20462.38	1020	25	42	60%
	Ammonia-N (mg/L)	1/7/99-10/26/00	0.05	7.12	2.14	1.97	36	38	95%
	TDS (mg/L)	1/7/99-10/26/00	122	3270	507.79	452	5	53	9%
16590	Dissolved Oxygen (mg/L)	01/05/99-07/18/00	1.8	11.8	6.17	6	3	56	5%
	Temperature (°C)	01/05/99-07/18/00	8.3	31.3	23.09	24.25	0	56	0%
	Conductivity (umS/cm)	01/05/99-07/05/00	254	3370	757.92	559.5	N/A	44	N/A
	Total Suspended Solids (mg/L)	01/05/99-09/05/00	1	348	19.37	9	N/A	57	N/A
	Sulfate (mg/L)	01/05/99-09/05/00	5.89	48.2	23.59	23.3	0	57	0%
	Fecal Coliform (#/100mL)	01/05/99-10/05/00	9	200000	18400.47	480	33	57	58%
	Ammonia-N (mg/L)	1/5/99-10/26/00	0.05	2.3	0.18	0.05	9	42	21%
	TDS (mg/L)	1/5/99-10/26/00	150	2530	510.74	312	15	57	26%
16676	Dissolved Oxygen (mg/L)	01/12/99-10/11/00	1.8	10.8	4.40	4	12	56	21%
	Temperature (°C)	01/12/99-10/11/00	7.5	28.5	22.01	23	0	56	0%
	Conductivity (umS/cm)	01/21/99-7/21/00	171	826	633.66	675	N/A	45	N/A
	BOD5 (mg/L)	01/21/99-07/21/00	4	20	5.58	5	N/A	50	N/A
	Total Suspended Solids (mg/L)	01/21/99-10/21/00	4	101	12.89	10	N/A	57	N/A
	Sulfate (mg/L)	01/21/99-09/21/00	7.06	30	16.16	16	0	57	0%
	Fecal Coliform (#/100mL)	01/21/99-10/21/00	63	150000	11068.98	795	40	56	71%
	Ammonia-N (mg/L)	1/21/99-10/26/00	0.05	7.12	2.14	1.68	48	51	94%
	TDS (mg/L)	1/21/99-10/26/00	144	475	385.86	413	0	57	0%

