



## Environmental Microbiology Laboratory Report

Waterborne Disease Prevention Branch  
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### I. Sample Identifiers

*Location:* Lake Jackson, TX

*Description:* Environmental sampling of the Lake Jackson, Texas municipal water system after a 60 day chlorine burn in response to a primary amebic meningoencephalitis case caused by *Naegleria fowleri*

*Report Issue Date:* December 11, 2020

*Sample Collection Date:* December 1-2, 2020

*Sample Receipt Date(s) and Notes:* December 2-3, 2020

### II. Summary of Findings

The environmental sample testing results, including physical and chemical water quality and biological test results, are described in Table 1. Fifteen large-volume ultrafiltration samples were collected from the distributed municipal drinking water system on December 1 and 2, 2020.

*Naegleria fowleri* was not detected in any sample collected from the distribution system.

The free chlorine levels ranged from 2.72 to 3.19 ppm, indicating that the desired disinfectant levels were achieved at each sampling location.

**Report authorized by:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
[Signatures may be handwritten or electronic]

**Table 1.** Environmental sample results including physical and chemical water quality and biological test results.

Sample Site <sup>1</sup>	Water Quality Parameters	Disinfectant Residuals (ppm) <sup>2</sup>	<i>N. fowleri</i> PCR Result		Result Interpretation <sup>3</sup>
			Pre-culture	Post-culture	
Beechwood Tower GPS: N29.055371, W95.4334995	Temperature (°C):	20.9	Free chlorine:	3.19	Not detected
	pH:	7.8			
	Conductivity (µS/cm):	1018	Total chlorine:	3.49	
	Total dissolved solids (ppm):	724			
	Free ammonia (ppm) <sup>2</sup> :	0.05	Monochloramine:	0.03	
Nitrite (ppm) <sup>2</sup> :	0.009				
Lift Station 13 GPS: N29.0434558, W95.4150922	Temperature (°C):	22.0	Free chlorine:	3.13	Not detected
	pH:	7.93			
	Conductivity (µS/cm):	1012	Total chlorine:	3.37	
	Total dissolved solids (ppm):	720			
	Free ammonia (ppm) <sup>2</sup> :	0.21	Monochloramine:	0.01	
Nitrite (ppm) <sup>2</sup> :	0.007				
103 Fir (SP2) GPS: N29.0441561, W95.4353558	Temperature (°C):	22.9	Free chlorine:	3.04	Not detected
	pH:	7.97			
	Conductivity (µS/cm):	1010	Total chlorine:	3.29	
	Total dissolved solids (ppm):	717			
	Free ammonia (ppm) <sup>2</sup> :	<0.05	Monochloramine:	0.05	
Nitrite (ppm) <sup>2</sup> :	0.008				
109 Arrowhead Drive GPS: N29.0673602, W95.4493800	Temperature (°C):	21.7	Free chlorine:	2.73	Not detected
	pH:	7.86			
	Conductivity (µS/cm):	1166	Total chlorine:	3.03	
	Total dissolved solids (ppm):	825			
	Free ammonia (ppm) <sup>2</sup> :	0.01	Monochloramine:	0.03	
Nitrite (ppm) <sup>2</sup> :	0.006				
296 Timer Creek (290 Block SP25) GPS: N29.0590401, W95.4620903	Temperature (°C):	21.2	Free chlorine:	3.01	Not detected
	pH:	7.85			
	Conductivity (µS/cm):	1037	Total chlorine:	3.15	
	Total dissolved solids (ppm):	736			
	Free ammonia (ppm) <sup>2</sup> :	0.04	Monochloramine:	0.03	
Nitrite (ppm) <sup>2</sup> :	0.029				
100 Spanish Oak Drive (SP27) GPS: N29.0675329,	Temperature (°C):	21.0	Free chlorine:	2.87	Not detected
	pH:	7.75			

Results listed within the report relate only to samples received on dates indicated. Distribution of the data and/or results provided here shall not be distributed to a third party or published, in the form of a poster, abstract, manuscript, report, press release or other public presentation, without the notification and approval of CDC WDPB Environmental Microbiology Laboratory.

W95.4715042	Conductivity (µS/cm): 1167 Total dissolved solids (ppm): 729 Free ammonia (ppm) <sup>2</sup> : <0.05 Nitrite (ppm) <sup>2</sup> : 0.006	Total chlorine: 3.22 Monochloramine: 0.01			
Lift Station 37 GPS: N29.0489457, W95.4669427	Temperature (°C): 21.0 pH: 7.88 Conductivity (µS/cm): 1209 Total dissolved solids (ppm): 859 Free ammonia (ppm) <sup>2</sup> : 0.01 Nitrite (ppm) <sup>2</sup> : 0.010	Free chlorine: 3.12 Total chlorine: 3.55 Monochloramine: 0.04	Not detected	Not detected	Not detected
237 Mango Street GPS: N29.0351347, W95.4632910	Temperature (°C): 21.6 pH: 7.93 Conductivity (µS/cm): 1225 Total dissolved solids (ppm): 869 Free ammonia (ppm) <sup>2</sup> : 0.05 Nitrite (ppm) <sup>2</sup> : 0.011	Free chlorine: 2.72 Total chlorine: 2.58 Monochloramine: 0.03	Not detected	Not detected	Not detected
Lift Station 19 GPS: N29.01455430, W95.4401627	Temperature (°C): 22.2 pH: 7.95 Conductivity (µS/cm): 1159 Total dissolved solids (ppm): 822 Free ammonia (ppm) <sup>2</sup> : 0.06 Nitrite (ppm) <sup>2</sup> : 0.01	Free chlorine: 2.8 Total chlorine: 3.10 Monochloramine: 0.00	Not detected	Not detected	Not detected
Balsom Tower GPS: N29.0157689, W95.4299231	Temperature (°C): 21.7 pH: 7.85 Conductivity (µS/cm): 1183 Total dissolved solids (ppm): 839 Free ammonia (ppm) <sup>2</sup> : <0.05 Nitrite (ppm) <sup>2</sup> : 0.01	Free chlorine: 2.79 Total chlorine: 3.14 Monochloramine: 0.06	Not detected	Not detected	Not detected
129 Talisman GPS: N29.0182602, W95.4247634	Temperature (°C): 22.1 pH: 7.95 Conductivity (µS/cm): 1217 Total dissolved solids (ppm): 864 Free ammonia (ppm) <sup>2</sup> : 0.01 Nitrite (ppm) <sup>2</sup> : 0.012	Free chlorine: 2.88 Total chlorine: 3.31 Monochloramine: 0.04	Not detected	Not detected	Not detected
305 Narcissus GPS: N29.0291655, W95.4300207	Temperature (°C): 22.4 pH: 8.01 Conductivity (µS/cm): 1020 Total dissolved solids (ppm): 726	Free chlorine: 2.85 Total chlorine: 2.98	Not detected	Not detected	Not detected

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Oak Tower GPS: N29.0371228, W95.4478879	Free ammonia (ppm) <sup>2</sup> :	<0.05	Monochloramine:	0.03		
	Nitrite (ppm) <sup>2</sup> :	0.006				
	Temperature (°C):	22.6	Free chlorine:	2.98		
	pH:	7.89				
	Conductivity (µS/cm):	1213	Total chlorine:	3.32	Not detected	Not detected
	Total dissolved solids (ppm):	861				Not detected
Westway Court GPS: N29.0452415, W95.4510812	Free ammonia (ppm) <sup>2</sup> :	0.23	Monochloramine:	0.03		
	Nitrite (ppm) <sup>2</sup> :	0.00				
	Temperature (°C):	23.0	Free chlorine:	2.92		
	pH:	7.86				
	Conductivity (µS/cm):	1216	Total chlorine:	3.26	Not detected	Not detected
	Total dissolved solids (ppm):	863				Not detected
Tulip Trail/Any Way GPS: N29.0475572, W95.4537725	Free ammonia (ppm) <sup>2</sup> :	0.01	Monochloramine:	0.03		
	Nitrite (ppm) <sup>2</sup> :	0.007				
	Temperature (°C):	22.6	Free chlorine:	3.07		
	pH:	7.90				
	Conductivity (µS/cm):	1203	Total chlorine:	3.36	Not detected	Not detected
	Total dissolved solids (ppm):	854				Not detected
	Free ammonia (ppm) <sup>2</sup> :	0.06	Monochloramine:	0.04		
	Nitrite (ppm) <sup>2</sup> :	0.007				

<sup>1</sup> Collected 100-L by dead-end ultrafiltration at each sample site.

<sup>2</sup> Measured using Hach SL1000 meter.

<sup>3</sup> Testing included direct real time polymerase chain reaction (PCR) for *Naegleria fowleri*, followed by culture for thermophilic amebas. Amebic growth on culture plates was confirmed with the *N. fowleri* PCR assay. If no growth was observed, entire plate was harvested for PCR testing.

NA: data not available