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“PROTECTING AND PROMOTING THE OPTIMAL HEALTH AND
WELL-BEING OF GALVESTON COUNTY.”

A BRIEFING OF WATER ACTIVITIES PERFORMED FOR THE:
CITY OF LEAGUE CITY



FY19 ANNUAL WATER REPORT

The Galveston County Health District (GCHD) organized the Water Pollution and Abatement Control program in 1972. The Water Pollution Program designated with performing water quality monitoring and pollution abatement activities for Galveston County and its contracted political subdivisions, and is supported through the county general fund and contracted political subdivision contributions. The GCHD and the City of League City have agreed to contract water pollution control and abatement services. This contract serves to satisfy the requirements found under the Texas Water Code and outlines specific requirements and responsibilities of a water pollution control and abatement program. Our team consists of Program Managers, Senior Environmental Investigators and Basic Investigators.

The program effectively and efficiently implemented a comprehensive water pollution control and abatement effort. Objectives of this program can include Citizen Complaint Response, Waste Water Treatment Plant Inspections, Grease Trap Inspections and Ambient Storm Water Monitoring.

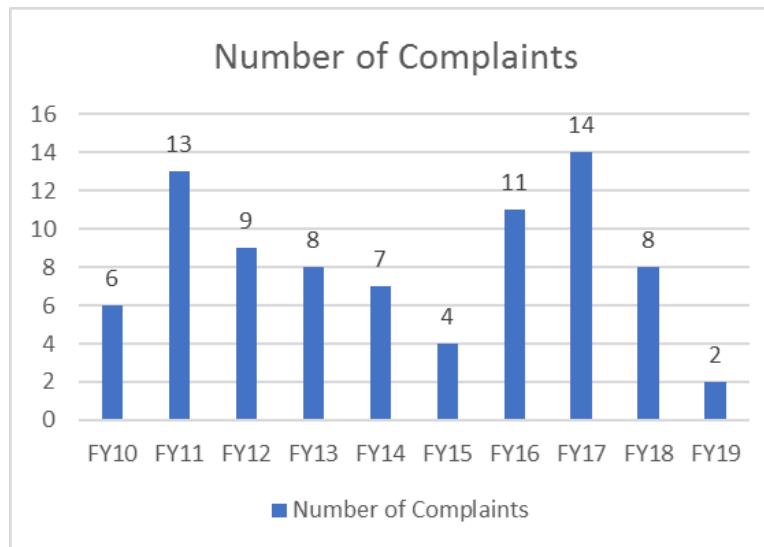


COMPLAINTS

The Water Pollution Services Division investigates and resolves complaints addressing water pollution issues. These issues can include illegal discharge of sewage, improper disposal of fats, oils and grease, chemical spills, and illegal disposal of used motor oil. The complaints are either initiated by citizens or referred to the Water Pollution Services Division by local government personnel. Each time GCHD receives a complaint within the City of League City, Wastewater Superintendent, Susie Blake, is notified to help coordinate the response.

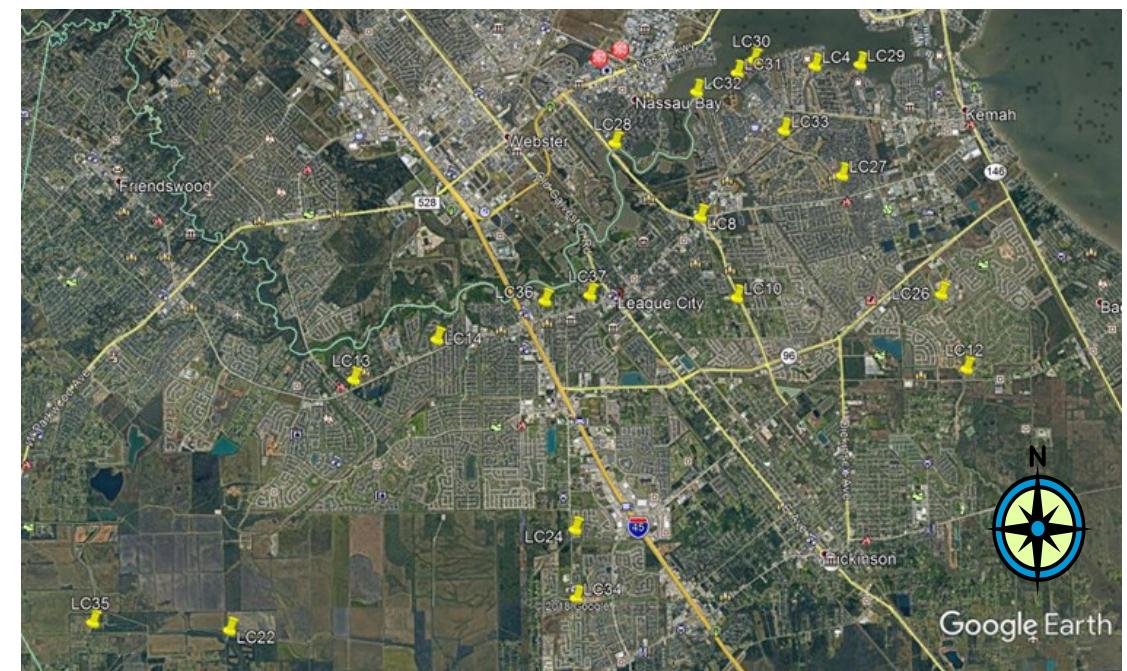
In FY19, 2 water pollution complaints were investigated in the City of League City. Of the 2 complaints received, both were classified as illegal runoff/discharge contamination. As a result of the investigations, 0 Notice of Violations were issued.

On certain occasions GCHD and the City of League City will coordinate on complaints to ensure the issue is resolved properly and in a timely manner. When GCHD and the City work together it helps increase compliance throughout the jurisdiction and in turn minimizes our impact on the environment.



STORM WATER

Storm Water Sampling Map



Citizens can submit a complaint electronically by visiting our website at www.gchd.org and clicking the environmental online forms button or by telephone at 409-938-2251, by fax at 409-938-2271, or by mail.

STORM WATER

During FY 2019, the Water Pollution Services Division monitored twenty sites within the city of League City. The GCHD reviews the historical storm water data and analyzed the sampling sites attempting to locate pollution sources. Sampled water bodies include various storm water drainage ditches located throughout the city which directly or indirectly flow into the waters of the state.

The bacterial analysis for freshwater and storm water is compared to the Texas Water Quality Standards and other parameter results are also evaluated, such as Dissolved Oxygen, pH, Chlorine, Biochemical Oxygen Demand, and Ammonia. These laboratory and field tests are used to assist staff in understanding water pollution impacts and possible sources of that pollution.

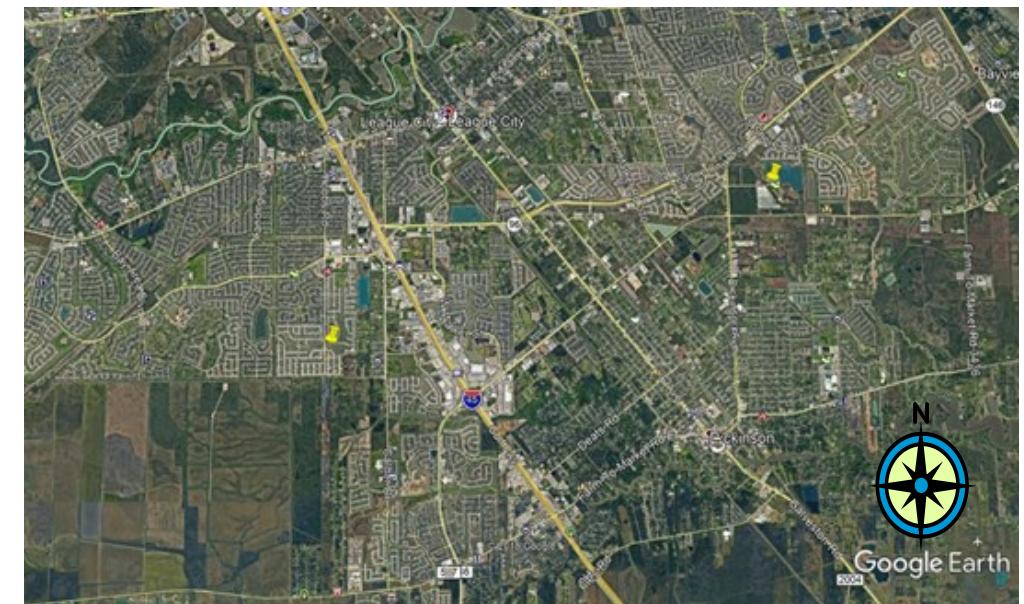
During FY 2019 in League City, bacterial levels at the twenty sites exceeded the standard for single grab samples 40% of the time. Samples in FY 2018 exceeded the rate 25% of the time and FY 2017 exceeded the rate 30% of the time. In June, three sites were relocated. Many of these exceedances occurred within three days of a rainfall event or were due to stagnant pools of water. Sites LC10, located off Austin St from FM518, LC12, located on FM646 past South Shore Blvd, and LC34, by the park on Calder Dr in Bay Colony West, exceeded the limit five times.



COMPLAINTS



Complaint Location Map



Citizens can submit a complaint at www.gchd.org and choosing the environmental online forms button, at 409- 938-2251, or by mail.

WASTE WATER TREATMENT INSPECTIONS

Overview

The Texas Commission on Environmental Quality (TCEQ) administers the Texas Pollutant Discharge Elimination System (TPDES) program in Texas and has federal regulatory authority over discharges of pollutants to Texas' surface water, including those coming from wastewater treatment plants (WWTP).

The Water Pollution Services Division contracts with the city of League City to provide WWTP inspections assuring compliance with their TPDES discharge permit. Each fiscal year, GCHD conducts multiple inspections as required by contract in order to assist in maintaining compliance with their TPDES permits. This role is played out in the form of three spot checks and one comprehensive compliance inspection (CCI) being conducted each fiscal year as defined by contract. During these visits the wastewater processing units are observed to verify that everything is operating as it should and to offer advice when appropriate. Additionally, to substantiate proper operation and verify TPDES permit limits, influent and effluent samples are collected. During the CCI, Pollution Services staff additionally review records maintained at the plant and copies of those submitted to TCEQ as required by the permits.

The staff of League City's WWTP continually keep the plants in great condition and is knowledgeable with the operations and maintenance of the facilities. Suggestions and/or recommendations made by GCHD investigators are given immediate consideration.



OUTREACH



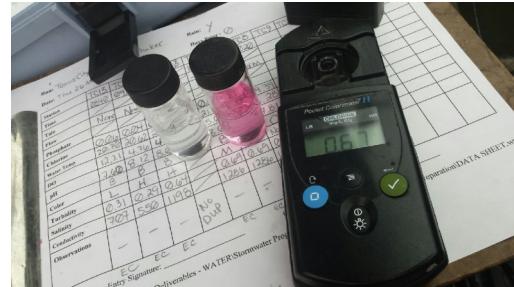
STORM WATER

The Clean Water Act regulates the discharge of pollutants into the nation's surface waters, sets water quality standards for these same waters and allows states and local governments to develop their own pollution control plans. The EPA requires permitting and management of storm water discharges from large, medium and smaller sized municipalities under the National Pollutant Discharge Elimination System (NPDES) making this a federally enforceable program.

NPDES requires storm water controls in cities such as League City, industries, and construction sites disturbing 1 to 5 acres, to implement various storm water controls. The goals are to reduce the discharge of pollutants to Texas surface water, to protect water quality, and to meet the water quality requirements of the Clean Water Act. To determine the effectiveness of the storm water controls around the city, GCHD conducts storm water monitoring. This also assures compliance with established water quality standards.

Sampled water bodies include various storm water drainage ditches located throughout the city, which directly or indirectly flow into Dickinson Bayou and Highland Bayou.

The water bodies sampled in League City are deemed "contact recreation" waters by the Texas Administrative Code. Contact recreation involves bodily contact with water, and therefore the potential for increased risk to health when contaminants or pathogens are present. Some activities deemed contact recreation are fishing, boating, and swimming.



WASTE WATER TREATMENT INSPECTIONS

Dallas Salmon Wastewater Treatment Facility

The Dallas Salmon Wastewater Treatment Facility is located at 703 North Wisconsin Avenue and discharges into Clear Creek. The permitted annual average flow limit for the Dallas Salmon Plant is 12.0 MGD. Average removal rates at the Dallas Salmon facility for the parameters requiring measurement per permit were as follows: 99.0% Ammonia Nitrogen (NH₃) and 98.4% for Carbonaceous Biochemical Oxygen Demand (cBOD). The permit requires that the average removal rates for all parameters be at least 85%. The average Enterococcus quantity was less than 15.3mpn/100mL, with only one sample returning above the minimum reporting level. The plant's administrative and lab support building is still under remediation for damages incurred by Hurricane Harvey. Basic lab operations occur in the plant's control building, but more complex procedures are performed by the City's other treatment plant. Administrative functions are provided from an off-site building within League City. The City continues to work with the Federal Emergency Management Agency (FEMA) and look at long term options for replacement or repair of damaged facilities. The plant received its renewal of their Texas Commission on Environmental Quality (TCEQ) permit, with modification for the new outfall location. The new permit extends until April 2024.



WASTE WATER TREATMENT INSPECTIONS

Southwest Water Reclamation Facility

The Southwest Water Reclamation Facility is located at 1220 South Maple Leaf Drive and discharges into Magnolia Creek, and ultimately into Clear Creek. The permitted annual flow for the plant is 4.0 million gallons per day (MGD). The average rates for effluent parameters were as follows: 2.1mg/L Total Suspended Solids (TSS), 2.3mg/L for carbonaceous biological oxygen demand (cBOD) and less than 0.1mg/L for Ammonia Nitrogen (NH₃). Additionally, the average E. coli quantity was less than 10.0mpn/100 mL, the minimum reporting value for the test method. The facility has continued to supplement the Dallas Salmon facility's lab operations in the wake of Hurricane Harvey. The plant also completed its Texas Commission on Environmental Quality (TCEQ) discharge permit renewal, extending the permit until November 2023.



WASTE WATER TREATMENT INSPECTIONS

Lab Data and Permit Limits for FY2019

| Parameter | <u>Dallas Salmon</u> | | | | |
|----------------------------------|----------------------|-----------|-----------|-----------|--------------|
| | <u>Date</u> | | | | |
| | 11/07/2018 | 3/20/2019 | 6/20/2019 | 9/25/2019 | Permit Limit |
| CBOD (mg/L) | 2.0 | 3.1 | <2.0 | <2.0 | 30 |
| TSS (mg/L) | 3.0 | 5.3 | 2.6 | 3.0 | 60 |
| Ammonia (mg/L) | <0.1 | 0.2 | <0.1 | 0.8 | 15 |
| <i>Enterococcus</i> (mpn/100 mL) | <10 | <10 | <10 | 31 | 104* |

| Parameter | <u>SWWRF</u> | | | | |
|-----------------------------|--------------|-----------|-----------|-----------|--------------|
| | <u>Date</u> | | | | |
| | 11/15/2018 | 3/21/2019 | 6/19/2019 | 9/27/2019 | Permit Limit |
| CBOD (mg/L) | <2.0 | <2.0 | 3.0 | <2.0 | 30 |
| TSS (mg/L) | 5.2 | <1.0 | <1.0 | <1.0 | 30 |
| Ammonia (mg/L) | <0.1 | <0.1 | <0.1 | <0.1 | 15 |
| <i>E. coli</i> (mpn/100 mL) | <10 | <10 | <10 | <10 | 399 |

*Daily Max limit