

# dog days of summer

West Harris County Regional Water Authority

www.whcrwa.com

2023

SUMMER EDITION



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> **Operator: Bryan Thomas,** Inframark

**Communications: Barbara Payne**, Payne Communications & Associates

Graphics & Layout: Russell Lambert, The Texas Network

### UPDATED WEBSITE



The West Harris County Regional Water Authority is proud to announce the launch of its updated website located at www.whcrwa.com.

The updated website showcases a wealth of information about the history of the Authority, Subsidence, the Board's commitment to keeping the cost of water as low as possible, ongoing construction projects and much more.

Visitors to the site can sign up to receive email alerts from the Authority, and emergency alerts via the Authority's SMS alert system.



### www.whcrwa.com

### **JOIN US**

### **Attend a WHCRWA Board Meeting**



The WHCRWA Board meets in-person on the 2nd WEDNESDAY of each month at 6:00 p.m. at the Fry Road MUD Building at 20111 Saums Rd, Katy, TX 77449. Agendas and Minutes of the meetings are posted on the authority website each month at www.whcrwa.com/meetings.



# That Sinking Eeeling Subsidence a lesser extent, by oil and gas

If you're looking for a culprit to blame for **subsidence**, some natural settling or shifting of sediments laid down millions of years ago may indeed cause this geological phenomenon, but not to the extent of that caused by the withdrawal of oil and gas. subsurface coal mining, and the pumpage of groundwater.

As people have been saying for ages, "Nature abhors a vacuum." When copious amounts of groundwater are drawn out of the aguifers below, the clay layers collapse under the weight of everything above them, effectively decreasing the storage capacity of the aguifer...never to return to previous levels.

Most of the groundwater wells that supply drinking water to the Houston-Galveston area have been constructed in the upper 1,000 to 2,000 feet of the Chicot and Evangeline aguifers. As subsidence increased inland – north and west of Houston – water levels have declined more than 100 feet in the Evangeline aquifer between 1977 and 1997. The area's steadily increasing population and decades of aggressive water usage resulted in a corresponding decline of the aquifers and in subsidence.

According to the United States Geological Service (USGS), the greater Houston area has been more adversely impacted by subsidence than any other metropolitan area in the U.S. Extensive subsidence - caused primarily by groundwater pumping and to

a lesser extent, by oil and gas extraction -has caused damage to the area's industrial and transportation infrastructure. One conservative estimate placed the average annual direct and indirect cost of subsidence to property owners at more than \$90 billion in 1998 dollars.

Look at it this way. If the elevation of your house is only 10 feet above sea level and vou lose 10 feet of elevation because of subsidence...your house would be under water. This happened to Brownwood, a subdivision in the City of Baytown that subsequently had to be abandoned - an extreme example of the effects of subsidence. While regional land subsidence can be subtle and difficult. to detect, there are locations in and near Houston where the effects are quite evident.

As much as 10 feet of subsidence has shifted the coastline and changed the distribution of important wetlands. One of the most obvious impacts of subsidence has occurred at the San Jacinto Battleground State Historical Park, where Texas won its independence, which is now partly submerged with 100 acres of the park under water.

There are plenty of reasons to care about subsidence...not the least of which are preserving our land for future generations and, "cha-ching", saving money. We all know it's important to conserve our natural resources, but are we really doing anything to make it happen? And how does that apply to subsidence? The truth is, it can be difficult to change our habits when we aren't sure how our actions make a difference. To truly get motivated, we must first understand the fundamental issues and why change is necessary.

Utility districts have supplied our neighborhoods with drinking water by traditionally drawing groundwater from aquifers beneath the earth's surface. But our area's steadily increasing population and decades of aggressive water usage have resulted in a decline of the aquifers and cause subsidence (the actual "dropping" or "sinking" of land). In fact, some areas within the Authority's boundaries have dropped more than 2cm per year from 2016-2020. If we did nothing, the subsidence rate could exceed 1-foot every 15 years.

The Harris-Galveston Subsidence District (HGSD) has been measuring subsidence since the mid-1970s, and they are the first U.S. regulatory agency of their kind with the assignment to "end subsidence". Their current measurement methods combine the latest technology (which collects data from orbiting satellites), with knowledge gained from more traditional methods, resulting in highly accurate measurements of change in land elevation due to subsidence. Armed with the authority to restrict groundwater withdrawals by the Texas Legislature, the HGSD has positively impacted critical situations in the coastal and Galveston Bay areas...and are now focusing much of their efforts in our area.

The HGSD has been using Global Positioning Satellite (GPS) technology since 1987, providing reference frames to measure subsidence at specific locations throughout the area. In the mid-1990s, the District and the National Geodetic Survey also utilize portable units, or PAMS (GPS Port-A-Measure) to provide subsidence measurements and operates four permanent CORS (Continuously Operating Reference Stations) which continuously output data, providing a basis from which change comparisons may be made and analyzed.

It is through this continued monitoring of subsidence and a commitment to water conservation that we will enable nature to replenish our aquifers.

For additional information on this important topic, please visit whcrwa.com/subsidence.



# HOW TO KEEP COOL WHEN IT GETS HOT

If you could do just one thing to beat the heat this summer...what would it be? The old saying that, "only mad dogs and Englishmen go out in the noonday sun" offers an excellent strategy for surviving Texas summers!

#### Stay out of the sun while it's at

**its hottest.** This isn't always easy to do, especially when a day at the beach or lake beckons. When you do have to be outside between 11 am and 2 pm, seek shady areas to limit your exposure to heat, and most of all, drink plenty of water.



#### Sunscreen and sunglasses don't

actually have a cooling effect, but their protection is vital during hot spells. In addition to being painful and skin-damaging, sunburn reduces the ability to release heat from the body and causes loss of body fluids. If you're swimming, for example, even though water may be cool, the sun will still take its toll on you. The reflection of the sun off the water increases the likelihood that unprotected skin will burn. Determine when you'll need to get out of the water before getting burned, and then head for some shade before that happens.

If you're going to spend a lot of time outdoors, take time to **watch weather forecasts, or check your favorite weather app** for heat alerts, advisory notices, and "real feel" temperatures that will give you an idea of how hot it will really feel. Never ignore a heat advisory...always be sure to keep water handy when outside for extended periods of time.

**Dress simply.** Lightweight, loose-fitting clothing will help to keep you cooler, and light colored clothing helps reflect the heat and sunlight better. Don't forget your head. Hats are indeed cool – anything from a stylish wide-brimmed hat, to a light colored ball cap can help keep you cooler by providing shade. You might even try using a bandanna or scarf -- this can actually "wick" sweat away from your head, spread it over a larger area where it evaporates, and can actually reduce your scalp temperature.

#### A lot of anything can be too much during a Texas summer! Pack up the

bling! Wear fewer accessories and jewelry during hotter weather. Metal jewelry will attract and hold the heat. If you have long hair, wear it up and off your face and shoulders. Wear footwear that breathes. Sneakers may be good for sports and athletic activities, but they can get really hot and uncomfortable. If you're going to the beach or pool, be sure to protect your feet from scalding hot beach sand and from sharp items in the water. Be careful if you decide to go barefoot. Many artificial pavements become unbearably hot during summer months and can seriously burn bare feet.

#### Stay hydrated. Water is essential for keeping your cool during

**hot weather.** Water helps regulate your body temperature, and should be drunk even if you don't feel thirsty. Here's a cool idea: freeze a container of water to carry around with you. It'll be solid when you leave home but it will melt and provide continuously chilled, slowly thawing water all day. Minimize drinks with caffeine, because these tend to increase dehydration.



Experts point out that temperatures inside a closed vehicle can reach over 140 degrees F within minutes and the sudden shock of getting into this super-heated air can raise your body temperature in a hurry. Exposure to these extreme temperatures can kill in minutes. Remember that youngsters' bodies heat up faster than those of adults. NEVER leave a child -- or a pet -- in a parked car... even for a minute. Also, be aware that some objects in the car — seatbelt buckles and steering wheels — can become unbearably hot and burn young skin.

Rest is an important way of coping with too much heat. Don't pass up the opportunity to rest when you feel tired during hot weather. If you start to feel ill in the heat, listen to your body. If you feel short of breath, feel fatigued or light-headed, have a headache, nausea, or feel confused, these are danger signs that the heat is getting to you. Immediately stop what you're doing, rest somewhere as cool as possible, and drink plenty of water. If you continue to feel bad after a short rest, get medical assistance at once! ◆

### The Surface Water Supply Project

To meet the Harris-Galveston Subsidence District (HGSD) and Fort Bend Subsidence District's (FBSD) groundwater reduction requirements for 2025 and beyond, the West Harris County Regional Water Authority (WHCRWA) has partnered with the North Fort Bend Water Authority (NFBWA) to construct the Surface Water Supply Project (SWSP). The Surface Water Supply Project is needed to conserve groundwater and reduce land subsidence. Land subsidence is the sinking of the land surface. Pumping large amounts of groundwater causes the ground to settle, lowering the elevation of the land. This project will help to reduce land subsidence and will meet the water needs of a rapidly growing population.

Once complete, surface water from Lake Houston will be supplied to retail water providers such as Municipal Utility Districts (MUDs), Public Utility Districts (PUDs), and Water Control and Improvement District (WCIDs). These transmission pipelines will vary in diameter from 42 inches to 96 inches, depending on the pipeline segment. Project construction began in 2020 and is expected to be completed by 2026.

#### HARRIS-GALVESTON



SUBSIDENCE DISTRICT www.hgsubsidence.org



www.fbsubsidence.org

All construction will be completed in segments, and the waterline will be built one segment at a time. You can find updated timelines for construction at www. surfacewatersupplyproject.com.

The construction for each segment will aim to minimize impacts to any given area for extensive amounts of time. As construction moves along the project alignment, residents, business owners, and anyone traveling in the vicinity of the pipeline alignment may experience detours, access issues, and other construction activities associated with large-scale linear projects. To minimize these impacts, much of the pipeline will be installed within existing pipeline corridors. Public safety, ease of access, and well-marked detour information will be a priority throughout the delivery of the project.

Delivery of surface water to WHCRWA and NFBWA residents through this line is scheduled to begin in 2026.

Project team members are committed to communicating proactively with your community. For more information about construction in your area, please visit www. surfacewatersupplyproject.com/construction.



#### **Construction Updates**

#### <u>Segment A</u>

Segments A1 and A2 have been awarded. Construction is anticipated to begin by late summer of 2023.





A1-A2 Installing construction entrances

A1-A2 Performing Borings 2.0

A1-A2 Performing Borings

### <u>Segment B</u>

Segment B is divided into three segments, Segment B1, B2, and B3. All three Segments have been awarded and are currently under construction.

Up-to-date construction information is available online at surfacewatersupplyproject.com.





B1-B2 Fisher Rd.

B1-B2 Gessner Rd

B1-B2 Hempstead Rd



B3 removing deep anode well



B3 ribs and channels under Hardy-UPRR



B3 Shaft 5

#### <u>Segment 3</u>

Segment 3 is divided in six segments (A1 – A5 & B1). Segments 3-A1, 3-A2, and 3-A3 have been awarded and are are near completion, with ongoing restoration through the segments. Segment 3-A4 is complete, and Segments 3-A5 and B1 are obtaining environmental clearance before finalizing design.



#### Segment C

Segment C is divided into two segments, C1 and C2, for construction. Construction of these segments began in early 2021, and both are near completion, with ongoing restoration through the segment.





C1 Butterfly valve vault



C1 Regrading Easement near Daisy Meadow



C2 Installed new resident fences and gates



C2 open cut waterline



C2 Restoring parking lots



C2 waterline installation

### <u> Kinder Morgan (KM)</u>

The Kinder Morgan is a 66-inch welded steel water line running along a Kinder Morgan pipeline corridor. The project was divided into six segments (KM1 – KM6) for construction. Currently, the Kinder Morgan segment is in design.



### **Central Pump Station**

The Central Pump Station is one of two pump stations in the SWSP. The Central Pump Station has been awarded and is currently under construction.





CPS Stormwater Junction Box

CPS Subgrade Preparation

CPS Waterline installation



Rendering of the WHCRWA Central Pump Station

All schedule information included in this newsletter are subject to change, pending design, coordination, and contracting timeframes. Updated construction schedule information will be made available online at www.surfacewatersupplyproject.com/construction.

The SWSP Team provides multiple opportunities for you to receive information about the project. If you have questions about the SWSP call the hotline at 1-844-638-SWSP (7977) for updates or email the team at info@surfacewatersupplyproject.com.



### **5** FACTS ABOUT MOSQUITO BITES

Only **FEMALE** mosquitoes bite. They use pairs of "tubes" to access and then collect blood. She is not biting you out of spite – she needs the protein in the blood to produce her eggs. When a Mosquito pokes their "proboscis" through your skin, their saliva – which contains a cocktail of anticoagulants – helps the blood get sucked out faster.

It's all down hill from there! If you scratch the bite, that will irritate and inflame the area even more... summoning an army of white blood cells to fight the invasion on the front lines.

The saliva sample provokes an allergic chain reaction... which releases immunoglobulins at the bite site... which produce histamines that trigger the ITCH!

When she's finished drinking all she can, the little vampire flies away but leaves some saliva behind...the gift that keeps on giving. In response, your immune system goes into full attack mode and unleashes various antibodies.

10

# GET RID OF THOSE PESKY MOSQUITOS!

Just when you're relaxing with your family on the patio, you hear it -- the distinct divebomber buzz of a mosquito with a nice juicy spot on your bare arm in her sights.

HER sights? Yes, indeed. It is the female mosquito that is responsible for 'biting' you. She's not biting out of spite -- she needs the protein from blood to produce eggs. Not that it matters...the end result is the same -- a tiny spot that itches the more you scratch it.

Here's some more bad news...mosquitoes can find you from up to 36 yards away

using sensory organs to detect smell, carbon dioxide, warmth and moisture emitted from a chosen host. The nasty little insects tend to stay around the area in which they hatched, so it is a really good idea to kill them before they make themselves at home. And since they need standing water for threequarters of their lifecycle and not

just to lay their eggs, the primary targets in your yard should be relatively easy to find.

If you hate mosquitoes, give some thought to how much you water your lawn. It only really needs watering twice a week AT THE MOST, even during hot summer months.

> If you're overwatering -- and most people do -- it is likely there are some soggy spots that

make an attractive home for these annoying, blood-thirsty pests.

There are probably lots of attractive mosquito breeding spots in your yard and around the house; you've just never hunted them down before. Here are some favorite mosquito "incubators" to look for... Bird baths and pet bowls...hose them out and add fresh water regularly.

Your dog or cat will appreciate the fresh water. They're not very fond of mosquitos, either.



Wheelbarrows are often left where they were last used, and if not turned over, they will collect rainwater. Dump water out of wheelbarrows and other yard equipment and store them properly.

If there are any young people around the house, put away toys and playthings that might hold water. Mosquitoes don't need a lot of standing water to make a nice home. Make sure to keep grass clippings and leaves out of the storm drains. Not only is putting grass clippings or leaves in the storm drains prohibited, but the debris tends to hold water and that attracts mosquitoes. While we're on the subject of storm drains, there are some very important "dos and don'ts" when it comes to these important conduits.

Most people are unaware that they impact water quality at all. Here's some useful advice from the West Harris County Regional Water Authority about the source of stormwater pollutants. Some of the biggest contributors to this problem are routine residential activities such as lawn mowing and fertilizing; car washing and maintenance, and the application of pesticides and herbicides on lawns and landscaped areas. These all add contaminants to storm runoff and can end up in our drinking water supply.

On household lawns and gardens, homeowners can try natural alternatives to chemical fertilizers and pesticides. Composting, use of native plants and Xeriscaping in landscaped areas can reduce or even eliminate the need for chemicals. Natural predators like frogs, dragonflies, and bats can help take care of pesky insects. If chemicals are needed around the home, they should be stored properly to prevent leaks and access by children. Most cities have designated sites for the proper disposal of used chemicals.

For the same reason, clean the gutters regularly. Not only do leaves and pine-straw gather in these troughs and create havens for bugs, but if we do get a really good rain the debris will negate the reason for having the things in the first place...and water will simply stream over the edge. Unfortunately, cleaning out gutters has about as much appeal as pulling weeds, but the end result is worth it... in both cases.

Another nice mosquito breeding area that is not so apparent is container plants. Plant pot saucers can collect water, so check and empty them regularly. Or -- here's a clever idea that will help retain moisture -- fill them with sand or fine mulch to retain the water.

If you have a cover on your swimming pool or spa, prevent water from puddling on the cover. While you're checking around, eliminate any yard debris that might hold water. Eliminate any of these potential "homes."

If you have any kind of yard ornaments, check them carefully for places water can collect. Some common sense and vigilance will send the pesky little blood suckers somewhere else to live. Enjoy your summer and be bite free!



## **AWBD Summer Conference**



West Harris County Regional Water Authority (WHCRWA) had the pleasure of attending the 2023 Association of Water Board Directors Summer Conference, and we are excited to share some photos from the event. Our booth was thoughtfully prepared, showcasing informative collateral about the WHCRWA and the Surface Water Supply Project (SWSP). Alongside these materials, we proudly displayed branded items and contact cards to engage attendees.

To add a touch of creativity and fun, we incorporated an Irry Gator themed table, representing the WHCRWA's commitment to conservation and environmental stewardship. This unique addition drew attention and sparked conversations among conference participants. Our main table also provided visitors with comprehensive information about the WHCRWA ongoing projects and commitments to our community.











## Children Aren't Waterproof

Swimming is a great form of exercise, a fun activity, and also a way to combat the often stifling heat of a Houston summer day. We must be keenly aware, however, of the inherent dangers present when children are in and around swimming pools or other bodies of water. We've all heard the tragic news reports of the drowning or serious injury of a small child in a backyard swimming pool. It's easy to assume that this is something that happens to someone else's child, but without the proper precautions and supervision, this tragedy can strike any one of us. In fact, children under the age of five are 14 times more likely to be involved in a fatal accident in a swimming pool than in an automobile.



#### **Layers of Protection**

Many parents put their kids in swim lessons at an early age...and that's a good thing. But children should also be taught to have a healthy respect for the water... whether they are in it or just around it. Simply learning to swim does not guarantee that they will never be involved in an aquatic accident. The vast majority of people who drown never intended to get in the water in the first place.

One important (and mandatory) protective measure is fencing. Local laws and regulations call for all Houston pools – public and private – to be enclosed by a fence at least four feet high. The fences should have self-closing, self-latching devices and there should be no footholds or handholds that will allow a child to climb over. It is also recommended that fences with vertical slats be less than four inches apart, and if your fence is chain link, no part of the diamond-shaped opening should be larger than 1-3/4 inches. Fences are not just the law, they work: The American Red Cross statistics indicate that 50 percent of pool accidents involving young children can be prevented if adequate fencing and barriers are in place.

Check that barriers are secure at all times. Children are naturally drawn to the sparkling allure of water. A sliding glass door that successfully separates a child from a backyard pool one day can be opened by young fingers the next. Doors to pool areas should be secured with out-of-reach locks and protected with audible alarms, and, as an extra precaution, it's a good idea to remove toys from in and around the pool when it is not in use. They can attract young children to the unattended area.



Be prepared if an emergency situation arises. Preparation in case of emergency is imperative. Keep rescue equipment and a telephone near the pool whenever it is in use, and make sure those supervising children learn CPR and are able to administer it at a moments notice. These skills can prevent death or brain injury, which can occur in two to six minutes after oxygen is cut off from the brain.

Flotation devices cannot be relied upon to keep a child safe in the water. Teach children to float on their back and instruct them on how to reach the side of the pool if they should ever fall in. Kids should know to YELL FOR HELP immediately – it could be your only indication that they are in danger.

Always remember to check the pool first if a child is missing. Seconds count in preventing death or disability. Go to the edge of the pool and scan it in its entirety.

#### The 2023 Rising Cost of Water Brochure is available for districts in the Authority.





To order visit whcrwa.com/order-form

71

### KNOWING ABOUT CLOUDS COULD KEEP YOU SAFE ON THE WATER

Have you ever heard the old saying, "Red sky at night, sailor's delight. Red sky at dawning, sailors take warning"? Versions of this message can be found in Shakespeare's writings and in the Bible! When you consider that people have been building and using some kind of watercraft since the Ice Age, studying the heavens when afloat has always been an integral part of a sailor's navigation training.

More than once, weather conditions have decided the outcome of historical events. Severe storms proved that the Spanish Armada was not so "Invincible" after all. When the King of Spain, Phillip II, launched his celebrated fleet against England in 1588, the sailors were plagued almost from the outset by storms and fierce winds that wreaked havoc on their battle plans -- and ultimately sank most of the ships that escaped the guns of Sir Frances Drake's Navy.

Today, boaters have many sources of information to help predict the weather -- Radio, TV, Websites, SMS and Weather Apps that can send alerts directly to your mobile device. Checking the weather before you leave for a day on the lake is always a good idea, but it will not keep weather problems from developing. Weather changes generally come from the west, so continue to keep your eye on the clouds, learn to recognize early warning signs, and know when to head for the safety of the harbor.

Especially during the summer months, thunderstorms and rain squalls can develop and become dangerous very quickly. Being aware of the appearance of the sky, the kind and movement of the clouds, and the direction of the wind will help you assess weather conditions while on the water.

Mare's Tails and Mackerel Scales...

The cloud classification system -- around since the early 1800's -- has been updated by modern weather specialists to include virtually any kind of cloud that might occur. Understanding the Latin names helps to identify them: Cumulus means piles or a heap; Stratus means layerlike or sheetlike; Alto means high; Nimbus means rain; and Cirrus means a lock of hair or curl. Sometimes the names are combined (nimbostratus) which even further defines their associated weather patterns. ♦ Here are some photos of clouds and brief descriptions of weather conditions they might bring if you see them while out on the water.

#### **STRATUS**



Form a continuous layer close to the ground, may produce a light drizzle.

#### CIRRUS



Mare's tails -- are high, thin and wispy; may indicate an approaching storm.

#### CUMULUS



Have flat bottoms and puffy tops. No rain if they stay separate.

#### **CIRROSTRATUS**



Form a thin veil over much of the sky. If a halo is seen around the sun, rain is likely on the way.



Darker than Stratus clouds and can produce steady rain.

#### **CUMULONIMBUS**



Heavy rainfall, lightning and thunder. Storms may not last long but can form tornadoes.

#### ALTOCUMULUS



Small, puffy clouds. May signal afternoon thunderstorms.

#### **GREENISH SKY**



Often seen at the leading edge of storms. May indicate hail; conditions right for tornado to form.



### West Harris County Regional Water Authority (WHCRWA) is proud to announce a new,

comprehensive advertising campaign in the Community Impact Newspaper, specifically utilizing the Katy & Cypress editions, and the Katy Times Newspaper. These local publications provide an excellent opportunity for WHCRWA to reach out to the community to raise awareness about our water conservation efforts and progress in water infrastructureconstruction.

As part of our commitment to transparency and education, we have created supporting content that will be available on our website, <u>https://wateru.whcrwa.</u> <u>com</u> and <u>https://www.whcrwa.</u>

<u>com</u>. Visitors to the website will find a wealth of valuable information, including tips on water conservation, updates on ongoing projects, and water quality issues. We believe that this effort to provide the community with knowledge is essential to foster responsible water usage and sustainability.



Recognizing the influence of social media in today's digital age, the Authority will also extend its advertising campaign to various social media platforms. By reaching out to the community through Facebook, Twitter, and Instagram, we aim to engage a wider audience and encourage meaningful conversations about water issues.

Through these multi-faceted outreach efforts, WHCRWA seeks to strengthen its connection with the residents within the Authority's boundaries. By utilizing these trusted local publications and digital platforms, we hope to effectively communicate our mission and initiatives to promote responsible water management.

We encourage residents to visit the WHCRWA websites at https://www.whcrwa. com and https://wateru.whcrwa.com to explore the content and resources to help make a difference in preserving our water resources for future generations.



Extreme weather events and the very real prospect of drought have underscored the importance of having a safe and reliable source of water.



#### **BE WEATHER AWARE AND PREPARED**

Scan the QR Code, or visit 🖬 wateru.whcrwa.com 53 for links to various resources in the event of an emergency.

Text ALERTS to 1-833-385-0216 to sign up for WHCRWA Emergency Alerts

#### whcrwa.com in 🔟 🕴 🖸 💟





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While all facilities share standard practices, there are differences between water plants. In addition, there is nothing routine about operating water, wastewater and pumping stations. The Operator doesn't know how their day will unfold because an Operator's job is guided and controlled by a cell phone, the weather and other variables that cannot be predicted. While the job has a clearly choreographed routine, there are days where nothing is routine.

On an average day, a typical Operator could have up to 4-6 wells to operate. But water wells are just half of the story. Besides making sure that potable drinking water comes into your house or business, they also deal with wastewater. An Operator's main job when treating wastewater is to ensure that the water discharged from the plant is disinfected and non-hazardous to our environment.

There are at least six different levels of Operators that work for Inframark. What determines the difference between the Operator levels at Inframark is job experience. An Operator in training does not need to have experience, but an Water and wastewater careers offer long-term, stable options for those who believe that good health and a clean environment are important for their communities, and for those who want to make a positive impact on quality of life. These careers offer the opportunity to work outdoors, meeting challenges, good salaries, balance, and flexibility



Operator II must have at least two years and the appropriate license from the Texas Commission on Environmental Quality (TCEQ). An Operator III must have at least four years of experience and the necessary license while, an Operator IV must have at least five years and the necessary license. Our Lead Operators have their "B" license and five to seven years' experience.

#### AN OPERATOR'S DAY

An Operator begins their working day based on their scheduled route, which is not limited to just one plant or facility. They put in an 8-hour day with about 6.5 hours focusing on ongoing duties. In addition, time is allotted for enhanced services and work orders. In a normal day, an Operator may run one facility or up to a dozen depending on the size of the facility and daily facility requirements. Facility needs vary and depend on size, complexity of the facility or TCEQ requirements that mandate larger facilities to be maintained by an Operator with a higher license.



Different facilities also require different staffing hours. Most facilities run on a standard schedule. Once their duties are completed, the Operator will travel to another facility. Other facilities require an Operator ranging from 4 to 24 hours depending on the facility size, flow, and maintenance requirements. Larger facilities operated by The City of Houston and The City of Dallas, require 24-hour operations. Most all other facilities have some type of remote alarming device to notify of emergency situations of which an Operator is dispatched.

One of the first tasks an Operator does when they arrive at a wastewater treatment plant is to check the effluent chambers to see the quality of water produced or go to the headworks. From the headworks, they work their way through the plant. At a water plant, they check the control room for anything that may have tripped that did not trigger an alarm call or call out, and then start making their rounds.



At the end of their shift, the Operator will ensure that the logbook has been completed with all information entered, all data has been sent, all samples have been collected for the day and any samples going to the lab are collected or in the process of collection through an auto sampler. They verify that all necessary valves are closed, the remote alarm systems are working, and all doors are secured. They will also check equipment oil levels that have reservoirs, belts on motors or fans, and ensure electrical equipment is working properly. Below are a few items that the Operator is responsible for while at the facility.

### ONGOING DUTIES AT THE WATER PLANT

- Daily recording of pumping equipment run time hours
- Daily monitoring and recording of chlorine/chloramine residuals within and outside of the facilities in the distribution system
- Adjusting chemical feed rates to maintain proper residuals required by the state
- Daily inspections of equipment fluid levels and adding if needed
- Monitoring and recording of daily chemical usage and adjusting settings if need
- Checking security fencing around perimeter of facility and correcting if damages or issues are seen to prevent trespassing
- Checking equipment for proper operations and getting repairs if needed Monitoring equipment for leaks and have repaired if needed
- Maintain proper water pressure within the distribution system
- Daily housekeeping





### ONGOING DUTIES AT THE WASTEWATER PLANT

- Daily recording of pumping equipment run time hours
- Daily monitoring and recording of chlorine residuals
- Monitoring of chemical feed systems and adjusting feed rates if needed to maintain proper residuals required by the state
- Daily inspections of equipment fluid levels and adding if needed
- Cleaning of certain components within the facility for proper operation Daily process control on the biological side
- Sludge management
- Daily inspection of security fencing around perimeter and correcting if damages or issues are seen to prevent trespassing onto facility
- Daily housekeeping

A day in the life of an operator is a full one because prevention and maintenance are the keys to the successful operation of both water and wastewater facilities.

### **ON THE ROAD AGAIN**



The Authority is pleased to announce the acquisition of two Mobile Teaching Labs. These *classrooms on wheels* are equipped with engaging displays, interactive exhibits about subsidence, water quality, groundwater and surface water. that highlight the significance of conserving our finite water resources.



These mobile units are available for community and MUD events as well as to schools within the WHCRWA boundaries. By providing these educational resources and interactive experiences, the WHCRWA aims to raise awareness about the importance of water conservation and to empower individuals to make a positive impact on their local environment.



The Mobile Teaching Labs offer a unique opportunity for hands-on learning. Through interactive exhibits, visitors can gain practical knowledge about water usage, explore innovative conservation techniques, and understand the environmental consequences of their actions. By interacting with the displays, students and residents can understand and adopt responsible water management strategies in their daily lives.



To reserve a Mobile Lab for a school in your district or for a MUD event, check on the website https://www.whcrwa.com/education/ mobile-teaching-labs/ or contact Barbara Payne. ♦



### IRRY GATOR'S ANNUAL SPRINKLER SYSTEM MAINTENANCE TIPS

### EXAMINE

Examine your irrigation system for clogged, broken, or missing sprinkler heads. Better yet, call in the pros... schedule a complete irrigation system evaluation performed by a licensed irrigator.

#### INSPECT

Inspect the connection points where the sprinkler heads join the pipes and hoses. Be especially alert for any mysterious, persistent puddles or pools of water in the yard or landscaped area that could indicate a leak in the system. If you FIND one, FIX it!

#### AIM

Aim irrigation water where it belongs. Nothing is going to grow on your driveway, sidewalk, or other paved areas so make sure the sprinklers water ONLY yard or landscaped areas.

### CONTROL

Control the controller. When the seasons change, review and update the system's settings. Don't just set it and forget it!

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IRRYGATOR.COM

#### NEW BROCHURES ARE AVAILABLE FOR RETAIL PROVIDERS IN THE AUTHORITY



Retail providers in The Authority can order printed copies of the brochure for free by visiting whcrwa.com/order-form



WATER U is a virtual classroom that features FREE "courses" on critical water issues that affect utility districts and residents in WHCRWA. WATER U allows participants to dive into the topics that interest them the most.

### wateru.whcrwa.com

### Don't forget the great billing inserts available FREE to retail providers in the WHCRWA



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