

Stormwater

Mexico Beach has a variety of stormwater pipes within its system, everything from 36" ADS pipe on Florida Ave. to what the majority of the City is made up of which is 12" ADS, we do have concrete, and tin pipe in spots around town as well.

Maryland Park drainage is made up of a large 8' concrete box that runs from the east end of Maryland Park and drains into the 8th street canal at Robin Lane (about 1 mile long), and is responsible for a lot of the drainage on the east side of town from Georgia Avenue up to 15th St. Florida Avenue is made up of 36" ADS pipe that also drains into the 8th St canal and is longer than the Maryland box and is responsible for the drainage from Hwy 98 to Georgia Ave and from 8th St to Azalea Dr. This pipe is failing up and down and is in need of replacement very soon.

The stormwater system in Mexico Beach is largely outdated and is in need of a major overhaul. While we do have a stormwater master plan we currently do not have the sufficient funds to carry out a City wide project. The majority of problems are a result of improper installation and the age of the pipes.

The lifespan of an ADS pipe is 20-25 years, while this type of pipe is fine for normal uses we need to look at the area in need to determine the type of pipe to be installed. An example would be areas like New Mexico and 5th St where concrete pipe would be the better material, the reason being that these areas and other areas like these where the terrain is very flat. Concrete pipe allows us too establish the depth at a shallower rate as opposed to a deeper depth needed for an ADS pipe in order for it to stay in the ground. If the depth is too shallow then the pipe will float up and out of the ground. Concrete pipe is more expensive but if installed properly the lifespan increases to 50 + years, which saves money long term.

Areas of top priority are 5th St (the curve to Maryland Park), New Mexico, Colorado, 7th St, the drainage ditch between 1st St and Azalea Dr., Florida Ave., Oleander Ave., Fortner Ave., and the south side of Hwy 98 from 25th St all the way to 42nd St. This pretty well encompasses the entire City but all the areas mention above need the stormwater areas improved. A project this size would take years for the City to accomplish if we did it "in house" and if we contracted the project out it would cost a lot of money.

Potable Water

The water we use in Mexico Beach for everyday use such as drinking, cooking, bathing, irrigation, pools, and washing your vehicle comes from Deer Point Lake in Panama City. Deer Point Lake is located north of Panama City, off of US 331 and SR-77. Primarily used as a public water source, Deer Point Lake is also used for irrigation and recreational purposes. With approximately 4,572 surface acres of water.

Construction of a dam across the northern portion of North Bay in 1961 impounded water flow from Econfinia Creek, Bear Creek, Cedar Creek, and Bayou George, thus creating Deer Point Lake. Econfinia Creek is the most significant tributary to Deer Point Lake, contributing about 57 to 79 percent of the lake's inflow. The Deer Point Dam, managed by the Northwest Florida Water Management District, controls the outflow of water into North Bay. The reservoir provides more than 760 million gallons of fresh water each day to Panama City and the surrounding areas in Bay County. Deer Point Lake also provides a valuable watershed for fish and wildlife, including osprey nesting grounds. (Information obtained from fwc.com and lakeblubbers.com)

Now that we've covered a little history about the lake we get our water from, let's talk about what it takes to keep that water fresh and ready for use after the 30+ mile trip from the lake to our facility here in Mexico Beach and ultimately to your home. Tyndall Air Force base has a 5 million gallon storage tank supplied by Bay County, this is the tank that Mexico Beach draws their water from which is then stored in our 1 million gallon storage tank located at the City yard. Water demand is drawn from the 1mg tank by the 60hp VFD motors to maintain a constant pressure of 60 psi, in the morning hours the motors will shut down and the 100,000 gallon elevated storage tank will supply the system with water until the demand requires the VFD motors to come back online.

We use VFD motors and the elevated tank (water tower) at our Water Plant unlike some other systems that only use VFD motors or elevated tank for maintaining their system. The elevated tank (water tower) is an asset to the City, if there is a failure such as instrumental or mechanical in the plant then the elevated tank will take over and maintain the system until the issue(s) can be fixed. If there is a failure in the water plant we have what is called an auto dialer that will notify us of an issue and allow us to respond and begin to fix the issue at hand while maintaining the water supply until that issue is fixed or if need be we can run the system manually.

Before the water makes it to your faucet it needs to be re-chlorinated by us, this happens before the water goes into the distribution system, the chlorine is for disinfection. We also add Aqua Mag for iron sequestration and corrosion control. The majority of our distribution system consists of 10" and 6" water mains. Since we've upgraded the water system and the water plant we have seen an improvement in water quality, water volume and fire protection.

The Bay County Water Treatment Plant is one of the state's largest surface water treatment plants. They have received the DEP Excellence Award for the last 6 years in a row.

Wastewater

Our wastewater system consists of 26 lift stations, 500 manholes, and miles of gravity and force main lines. When wastewater leaves your home it enters into a gravity distribution system of 8" pipe and all of these pipes connect to manholes and lift stations. Once the wastewater reaches a lift station it is pumped through force mains until it reaches the master lift station at Canal Parkway. This master lift station consists of 3, 75hp motors/pumps that alternate to send the wastewater through a 14" force main that runs down Hwy 98 through Tyndall Air Force Base and to the Advanced Wastewater Treatment Plant. Here the wastewater is treated before being reintroduced back into the environment.

- The Advanced Wastewater Treatment Plant provides domestic wastewater treatment for Callaway, Cedar Grove, Parker, Springfield, Tyndall, Mexico Beach, and unincorporated Bay County.
- On average, 3.7 million gallons per day (MGD) are processed.
- 0.5 MGD of treated effluent is supplied to Tyndall Air Force Base for reuse as irrigation water.
- Pollutant removal efficiencies average 98.9% for biochemical oxygen demand (BOD) and 99.6% for total suspended solids (TSS).
- (Information obtained from www.co.bay.fl.us/wastewater.php)

Whether it is potable water or wastewater it all begins at Deer Point Lake and ends at St. Andrews Bay where its reintroduced back into the environment cleaner than when it all began.

Public Works/Utility Departments

Daily Work Schedule

The City Public Works Departments and the City Utility Departments work every day to make Mexico Beach a clean, safe, and enjoyable place to live and visit. While each day brings a new set of challenges to overcome the goals remain the same and that is to provide a service to its citizens and visitors that is courteous and professional while getting the job complete in a safe and timely manner.

Here we will go over what each department's daily work schedule consist of, what they do, how they do it, and why it has to be done. Keep in mind that although we have a daily work schedule set in place and put into action we do get pulled away on a regular basis to other areas within the City. Let's begin....



While the daily operations for all departments vary from one to the next there are some aspects that are the same. Each person is expected to be at work and clocked in on time, each department is required to take care of and maintain its equipment, vehicles, and tools and all are required to follow the personnel policy set forth by the City Council.

Each department has a set time that they have to be here at work and clocked in:

- Sanitation Department – 6 am
- Public Works – 7 am
- Water/Sewer – 7:30 am

Each department has a set time to get off from work, although circumstances can change that time:

- Sanitation Department – 2 pm
- Public Works – 3:30 pm
- Water/Sewer – 4:30 pm

Every Wednesday each department must log the miles or hours of each vehicle and piece of equipment with the Vehicle Maintenance Department for tracking.

Water Department

The Water Department is responsible for the health of our City through the water we drink and the way we treat our water. Another aspect of the job that is often over looked is the flow of water, when you turn on your faucet at home and water flows out that's expected but do you know how much work goes into keeping that water flowing and those pipes in working order? Let's go over the daily work schedule for the Water Department.

Each morning the water plant and the equipment within the plant must be checked thoroughly and logged:

- Check breaker panels
- Check pumps
- Check pressure gauges
- Check valves
- Check emergency shut offs
- Check emergency power
- Check for leaks
- Check for corrosion
- Check for intrusion
- Check Chlorine Room and Equipment
- Check for Chlorine leaks
- Check for faulty equipment
- Repair/replace as needed
- Check chlorine residual
- Check flow reading
- Log chlorine residual – for plant operators report for DEP
- Log flow reading - for plant operators report for DEP

Once the plant is checked and everything is satisfactory the rest of the day is spent working on the water system and helping customers:

- Reconnects
- Turn offs
- Customer Service
- Water Line Repairs
- New Installations
- Map water lines
- Locating valves
- Locating meters
- Work valves
- Paint valve covers (at plant & in the field)
- Flush water lines

Water Department

- Read Meters (monthly)
- Regulatory sampling (monthly)
- Grease pumps
- Clean chlorine equipment
- Clean valve vaults
- Clean Water Plant at the end of each work day

These are the day to day items we work to get accomplished each day of the week but there are many other items that are not planned that come up and we have to deal with on a whim. Water also assists other departments when needed.

Sewer Department

The Sewer Departments job is to move solid waste from the City to the AWT wastewater treatment facility. This department plays a large role in the health and safety of the City just as the Water Department does but in a very different way. By keeping the pumps operating and the waste flowing to the treatment facility we can enjoy the benefits of this beautiful community in a safe, healthy, and above all smell free environment.

The Sewer Departments daily work schedule consists of a constant check of the system, since the system is basically pumps and pipes we need to be careful of what we allow inside those pipes and wet wells because abrasive materials can cause the pumps to fail and being in a beach community sand can be a problem. Let's break down the day to day operations for the sewer department...

Check The System:

- Check every lift station and wet well every Monday (26 total, Mexico Beach and Beacon Hill), this means putting hands on and checking the flows of each pump, the amps of each pump and the hours of each pump. Every week
- Pump down each wet well every Monday during lift station inspection and inspect the wet well for dirt/sand buildup, grease buildup or any foreign material that may be present inside the wet well, clean out any material that should not be present inside wet well.
- Log lift station system information for reports
- Clean the wet well by spraying it down and using degreaser (if necessary)
- Repair/replace pumps
- Replace breakers, fuses, starters, capacitors, etc. as necessary
- Keep areas around lift stations in clean and proper order
- Look for broken laterals
- Check manholes for dirt/sand intrusion
- Check for chemical intrusion
- Check for cracks inside wet wells and manholes on walls
- Check for water intrusion
- Check for illegal discharges
- Locate sewer valves
- Paint sewer valves
- Locate manhole covers
- Paint manhole covers
- Work valves
- Locate sewer lines
- Map sewer lines
- Clean sewer lines

- Clean manholes
- Mark manholes with sewer markers where needed
- Locate laterals
- Assist homeowners with locating cleanout
- Check for tapered manhole covers
- Check for septic tanks
- Every day do a visual inspection of each lift station

This is the day to day operation for the Sewer Department and does not include the other items that come up during the week that pulls them away from these duties. The Sewer Department also assists other departments regularly.

Parks and Recreation Department

The Parks and Recreation Department keeps the parks and restrooms around our area clean and in working order for all to enjoy. During the summer months they work 7 days a week to keep the restrooms clean and stocked so people can go about their business. We will go over what they are expected to keep in tip top shape.

Grass Cutting and Landscaping:

- Toucans
- Sunset Park
- Maryland Drainage Easement
- Boat Ramp
- Municipal Park
- Mexico Beach Business Center (Parker Reality)
- Canal
- CDC
- Police and Fire
- Civic Center
- Florida Avenue
- Pier Park
- City entry signs
- Park signs
- Parker Park (New addition)

Restrooms (clean and stock every day):

- Toucans
- Under the Palms Park
- Sunset Park
- CDC
- Civic Center
- Municipal Park
- City Hall (New addition)
- Parker Park (New addition)
- Police
- Canal

Buildings to Clean:

- City Hall (New addition)
- Civic Center
- Library

- Police Lobby

The Parks and Recreation Department also must check and maintain the irrigation lines at the parks along with the timers and sprinkler heads.

Playground equipment must be checked regularly at Under the Palms Park and Municipal Park and repaired if needed.

General Maintenance

The General Maintenance Department is responsible for keeping all City buildings, structures, public areas, and facilities in safe and proper working order for the public. This is important so that everyone can enjoy the amenities the City has to offer in a safe environment.

Check List:

- Beach Walkovers
- Pier
- Restroom decks
- Restroom facilities
- Playground equipment
- CDC deck and stairs
- Stairs at canal
- Docks at boat ramp
- Street lights (bi-monthly)
- AC filters (monthly – City Hall, Civic Center, Police Station, CDC)
- Ice machine water filters (quarterly – Public Works, Fire Station)

Structure Maintenance:

- Pressure clean “T” on pier quarterly
- Replace boards on Pier as needed
- Rebuild benches for Pier as needed
- Fix water line as needed
- Replace lights on Pier as needed
- Replace benches on beach walkovers as needed
- Replace boards on beach walkovers as needed

Building Maintenance:

- Change lights
- Walls
- Floors
- Ceilings
- Doors
- Windows
- Gutters
- Pressure wash Police building (annually)
- Pressure wash City Hall (annually)
- Pressure wash CDC (annually)
- Pressure wash restrooms (quarterly)
- Pressure wash Civic Center (annually)
- Electrical work

Construction, the General Maintenance Department will also build a lot of what the City needs instead of the City buying items that are very costly, examples are:

- Benches
- Trash racks
- Bookshelves
- Cabinets
- Tables
- Shelves

During the summer months General Maintenance will help the Sanitation Department by picking up the beach trash cans every Monday and Friday.

Road and Streets Department

The Road and Streets Department plays a big part in keeping the City looking and working like seaside community we see and love every day. From right-of-way maintenance and storm water drainage to beach raking, sign replacement to road repairs and road painting they cover a large area of maintenance for the City.

Right-of-Way Maintenance:

- Every Monday and Friday pick up trash along right-of-ways (Hwy 98 - from County Road 386 to Crooked Island Road, 15th St, 8th St, 7th St, Pier Road, Boat Ramp)
- Cut grass
- Pick up debris
- Pick up trash while cutting grass on interior of City
- Trim trees
- Trim bushes
- Fill in shoulders
- Bring in fill to repair right-of-way
- Maintain line of sight at intersections

Beach Maintenance:

- Every Monday and Friday pick up trash along beach (From County Road 386 to canal and from the west side of the canal down about 1 mile of beach)
- Beach Rake (as needed i.e., during grass season, for cleaning or for events)
- Remove debris (trees, fish, animals, trash, etc.)
- Replace sand fence

Stormwater Drainage:

- Clean or scope ditches
- Clean inlets and outfalls
- Clean stormwater pipe
- Install stormwater pipe
- Repair stormwater pipe
- Replace stormwater pipe
- Maintain drainage grates
- Monitor the 8th St canal for drainage, we physically check the 8th St canal by driving down and checking the level of the water every Monday and Friday during beach cleaning, we also physically check the canal before and after each major rain event.

City Signage:

- Maintain/Replace stop signs
- Maintain/Replace street signs
- Maintain/Replace speed limit signs

- Maintain/Replace informational signs
- Maintain/Replace directional signs
- Maintain/Replace load signs
- Maintain/Replace beach walkover signs
- Maintain/Replace beach signs
- Maintain/Replace bridge signs

Road and Street Maintenance:

- Repair cuts
- Repair pot holes
- Repaint stop bars
- Repaint center lines/divider lines
- Install reflectors
- Repair shoulder of roads
- Maintain intersections

Sidewalks:

- Maintain sidewalks
- Repair sidewalks

The Road and Street Department also works with all other departments running the City's heavy equipment and completing special projects.

Vehicle Maintenance

The Vehicle Maintenance Department has a full time job repairing all of the City's vehicles, equipment, and various tools throughout the departments. No matter the job we call on our mechanic to fix the problem.

Maintenance of Vehicles:

- Oil changes
- Tune ups
- Brakes
- Radiators
- Air conditioning
- Minor motor repairs
- Water pumps
- Transmission
- Power Steering
- Tire Rotation
- Lights
- Turn signals
- Emergency lights
- Wheel bearings
- Fuel system
- Belts/Pulleys
- Exhaust system
- Air filter

Maintenance of Equipment:

- Oil changes
- Fuel system
- Hydraulic system
- Air filter
- Belts/Pulleys
- Lights
- Warning flashers
- Grease pivot points
- Cylinders

The Vehicle Maintenance Department must log and track any and all work performed on vehicles and equipment, this will help us to determine when a vehicle or piece of equipment has become too costly to maintain and needs to be replaced.

The shop is cleaned at the end of each work day.

When there aren't any vehicles or equipment to be worked on the mechanic will clean up and mow the grass in and around the City yard.

City Dredge:

- Motor repairs
- Oil changes
- Fuel system
- Hydraulic system
- Cables and pulleys
- Refueling
- Gauges
- Snout
- Discharge hose
- Push Boat
- Push Boat Motor

Every Wednesday the Vehicle Maintenance mechanic will refuel all vehicles and equipment and log miles and/or hours of each for tracking purposes.

Canal Department

The Canal Department works to maintain a navigable channel through our canal and sandbars for boats to be able to exit and enter freely for their business or pleasure. The work performed in this area is completely dependent on the weather, good weather means we can dredge and bad weather means we cannot.

Maintain Dredge:

- Keep dredge decks clean (free of loose debris or objects)
- Minimize rust as best we can
- Make repairs as needed
- Keep engine room clean (oil leaks, hydraulic leaks, etc.)
- Keep wheel house clean

Maintain Canal:

- Dredge as needed
- Keep mouth open and at a depth of 8 feet +/- 2 feet
- Keep sandbars open and at a depth of 8 feet +/- 2 feet
- Dredge the west sand trap

Maintain the Beach:

- Place "STAY BACK" signs out before each dredging period
- Reposition discharge pipe as sand builds up
- Push sand outward at the end of dredging
- Drag area of beach where ruts have been made to flatten area out
- Pull discharge hose up from rack line to dune line
- Pick up "STAY BACK" signs

Assist other departments when there is no dredging.

Sanitation Department

The Sanitation Department has the duties of picking up the garbage/trash produced by residents, visitors, and commercial businesses throughout the City along with household debris and yard waste. During the summer months they will work 7 days a week picking up dumpsters, cleaning the beach, pier, canal, and boat ramp.

Pick up Garbage:

- Monday, Tuesday, Thursday, and Friday pick up residential and commercial garbage
- Wednesdays pick up yard debris, household debris, work orders
- Wednesdays wash trucks
- Wednesdays pick up beach trash cans

During off season assist other departments.