Global Engineering & Contracting Inc.

Engineering, Environmental and Construction Services

Why Choose Global Engineering & Contracting?

We are a Florida Company Providing One Stop Services: Engineering Services, Construction Management Services & Operations Services

Our Approach to Operations is – Proactive Operation with Open Communication while Engaging Regulators

OPERATIONS SERVICES

- CLIENT INVOLVEMENT
- PERMIT COMPLIANCE
- O&M PLANNING
- LONG TERM PLANNING
- LAB DATA QA/QC
- REGULATORY SUPPORT

Operation of water & wastewater treatment plants is a new business venture for Global Engineering & Contracting, Inc. based on repeated requests/complaints from our existing clients as well as our own observations of the current level of service being provided. But Operations of water & wastewater treatment plants is not new to our "Elite" Team Operators which is carefully assembled. Our operators are mostly Class "A" and "B" operators with a wealth of experience in Advanced and secondary advanced Wastewater Treatment Processes, among other processes. They have experience operating a variety of water treatment processes including Reverse Osmosis and Electro-Dialysis Reversal facilities.

ENGINEERING SERVICES

- CLIENT INVOLVEMENT
- DESIGN SERVICES
- MASTER PLANNING
- CONSTRUCTION MANAGEMENT
- ENVIRONMENTAL PERMITTING
- REGULATORY SUPPORT

Our objective is not to be the biggest, but the best. Our desire is to work with specific clients who are familiar with our work in engineering & construction services such as ELS, Sun Communities, Morgan Management, and Hometown America, among others. We want to provide the care and attention that the client expects and deserves. To that end, we have assembled a team of highly qualified and experienced personnel to work for us as we build the business.

Our operators won't pencil whip data or do a drive by check from the seat of their vehicle. We will operate/maintain the plant, QC the lab data received and submit accurate reports in a timely manner. Our operators will follow a specific Standard Operating Protocolcustomized to the facility. It will serve asa guide for them to check off as they go through their visit. A copy of the generalized protocol follows. In addition, an abnormal event report will be filled out if there is an issue at the site. The report is used to inform the regulators, client or both (depending on the situation) of what has happened at the site that is out of the ordinary. Clients will be provided with a monthly status report noting the routine duties performed during the previous month. The report is in an easy to read bulleted format so the client can quickly digest the information.

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Operations Staff Experience

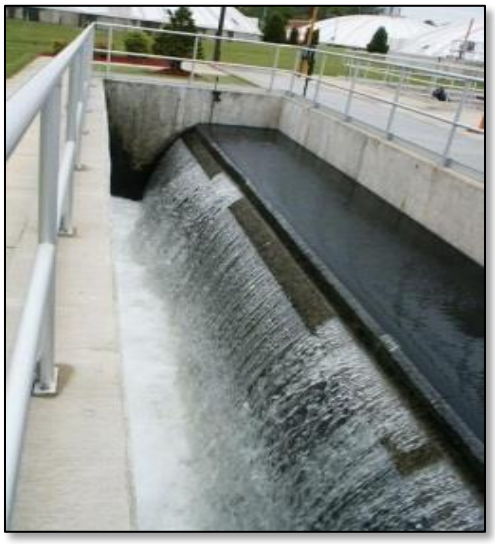
Below is a partial list of facilities and treatment processes that our elite team of operators have experience with.

1. **Sarasota County Siesta Key Advanced Wastewater Treatment Facility**
    a. **2.7 MGD WWTF with surface water discharge directly into Grand Canal (Roberts Bay)**
    b. **Liquid bleach for disinfection, Sodium Bisulfite for disinfection, Phosphorus removal and De-nitrification Towers**
2. **Sarasota County Central County Advanced Wastewater Treatment Facility**
    a. **5.2 MGD Modified Ludzack-Ettinger (MLE) Process with effluent disposal to the North Master Reuse System**
    b. **Deep Injection Well for alternate effluent disposal**
    c. **Aquifer Storage and Recovery Well for reclaimed water storage**
    d. **Liquid bleach for reuse disinfection, chloramines for ASR effluent storage**
3. **Sarasota County Bee Ridge Advanced Wastewater Treatment Facility**
    a. **8.7 MGD MLE process with effluent disposal to the North Master Reuse System**
    b. **Deep Injection Well for alternate effluent disposal**
    c. **Permitted Residuals Management Facility (RMF)**
    d. **Septage Receiving Station**
4. **Sarasota County Venice Gardens WRF**
    a. **2.0 MGD Extended Air Process with effluent disposal to the South Master Reuse System**
    b. **Deep Injection Well for alternate effluent disposal**
    c. **Permitted Residuals Management Facility (RMF)**
5. **Sarasota County Carlton Electro-Dialysis Reversal Water Treatment Facility**
    a. **12.0 MGD treatment facility**
    b. **Second largest of its kind in the United States, Third largest of its kind in the world**
    c. **Deep injection Well for brine disposal**
6. **Sarasota County Venice Gardens Reverse Osmosis Water Treatment Facility**
    a. **2.75 MGD treatment facility**
    b. **Dual purpose Deep injection Well for brine disposal and back up disposal for Venice Gardens WRF reclaimed water**
7. **Charlotte County East Port WRF**
    a. **6.0 MGD MLE process with effluent disposal to reuse**
    b. **Twin Deep Injection Wells for alternate effluent disposal**
    c. **Permitted Residuals Management Facility (RMF) with dual centrifuges with ultimate disposal at Charlotte County Landfill**
    d. **Septage Receiving Station and Grease Treatment System**
8. **Charlotte County West Port WRF**
    a. **1.2 MGD Extended Air Process with effluent disposal to reuse**
    b. **Deep Injection Well for alternate effluent disposal**

9. Charlotte County Rotunda WRF
    a. 2.0 MGD Extended Air Process with effluent disposal to reuse
    b. Deep Injection Well for alternate effluent disposal
10. Charlotte County Burnt Store WRF
    a. 0.75 MGD Extended Air Process with effluent disposal to reuse
    b. Deep Injection Well for alternate effluent disposal
11. Charlotte County Burnt Store Reverse Osmosis Water Treatment Facility
    a. 3.61 MGD treatment facility
    b. Dual purpose Deep injection Well for brine disposal and back up disposal for Burnt Store WRF reclaimed water
12. Charlotte County Leachate Treatment Facility
    a. Sequencing Batch Reactor located at the Charlotte County Landfill to treat leachate from the landfill
    b. Powdered activated carbon used in treatment process
    c. Deep Injection Well for effluent disposal
13. Florida Keys Aqueduct Authority
    a. 0.06 MGD Bay Point Advanced Treatment process with Nitrogen and Phosphorus removal
    b. 0.075 MGD City of Layton Advanced Treatment process with Nitrogen and Phosphorus removal
14. Marion County
    a. 0.030 MGD Extended Air Process with on-site effluent disposal
    b. 0.020 MGD Extended Air Process with on-site effluent disposal
15. Hillsborough County
    a. 0.025 MGD Extended Air Process with on-site effluent disposal
    b. 0.08 MGD Extended Aeration Process with on-site effluent disposal
    c. 0.20 MGD Extended Aeration Process with on-site effluent disposal

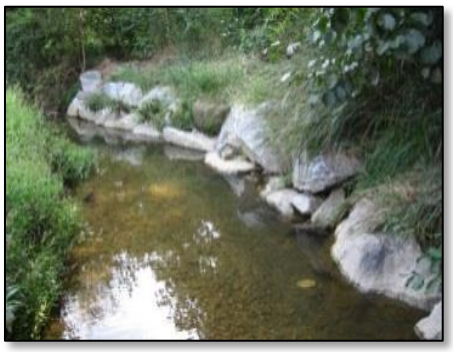
General Operating Protocol - Daily Operator Duties

1. Sign in log book
2. Record lift station ETM readings
3. Check blowers and chemical feed pumps
4. Check splitter box and rake bar screen
5. Collect aeration sample and run 30 minute test
6. Collect effluent sample and run Cl_2 and pH
7. Measure clarifier blanket
8. Check RAS
9. Start WAS process or decant digester as required
10. Collect lab samples (Compliance) as required
11. Perform routine housekeeping &maintenance as needed
12. Secure Plant buildings



1. Sign in log book:

Sign in at start of each shift time, name and operator number. Make entries through the shift documenting any actions, plant changes, tests run and any activities at the plant that should be noted. Sign out at end of shift. Walk through the plant to designated check points (barscreen/splitter, aeration, digester, clarifier, cl_2 chamber effluent disposal site). If any of the checkpoints are out of compliance or need attention, make note to come back if it's a minor problem. Take immediate action if there is a major problem. During travel to the various checkpoints on the list be attentive to any other sights, sounds, smells or unusual circumstances.



2. Record lift station readings

Prior to arrival at the treatment plant, stop at the main lift station and record the ETM readings. Check wet well, electrical panel and general area. Report any unusual conditions.

3. Check blowers and chemical feed pumps

Check blowers for proper operation. Report any vibration, noise, or other condition that is out of the ordinary.

4. Check splitter box and rake bar screen

Ensure splitter box is operating properly. Make any adjustments that are necessary. Rake barscreen and place rags in a sealable container. Empty the sealable container as appropriate to prevent odors.

5. Collect aeration sample and run 30 minute test

Grab sample from the aeration basin and run 30 minute test. Make note of results and actions needed based on the results of the test (RAS adjustments, WAS rate, etc.).

6. Collect effluent sample and run Cl_2 and pH tests

Collect effluent sample and run required tests. Note results in the log book and daily operations sheet. Make adjustments to plant operations based on the results if necessary.

7. Measure Clarifier Blanket

The method of determining depth of blanket in the clarifiers is by using a manual sludge judge. There is a mark on the handrail to make sure all blanket readings are taken from the same spot. Make adjustments to plant operations if necessary.

8. Check RAS

Check the RAS rate and make adjustments as required. Ensure RAS is flowing properly and line is not blocked.

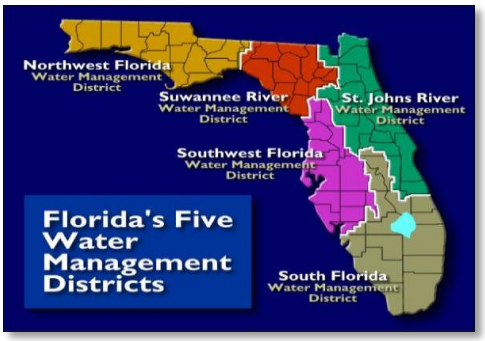
9. Start wasting to digester if required

Using the results of the checkpoint inspections and 30 minute test results set WAS rate as necessary. Shut down WAS and return the valves to the appropriate settings when WAS is complete. If digester has been set up to settle decant the digester. If sludge is to be hauled coordinate with on site manager to ensure the specific schedule is met.

10. Collect compliance samples

Based on the sampling frequency specified in the operating permit and lab sampling schedule, collect compliance samples as necessary and notify lab for pickup. Sample bottles are provided by the contract lab, all bottles are labeled and any preservatives that are needed are added at lab before delivery. The Chain of custody sheets are to be filled out to correspond to the sample bottles. Samples are stored on ice for pick-up.

11. Perform routine housekeeping & maintenance as needed



All treatment facilities require routine tasks that fall under housekeeping/maintenance. Such tasks include emptying rag buckets, hosing, brushing clarifier weirs, hosing, brushing skimmer boxes, cleaning skimmer boxes, and unclogging feed lines.

Mechanical equipment such as pumps and blowers must be checked for proper settings/operation. Air diffusers and air lifts should be checked for proper function. Electrical panels should be checked to ensure they are closed and sealed. Any deviation from normal standards should be reported to the onsite manager and the Global Operations Manager for follow up.

12. Secure site

At the end of the shift check the site for normal operating conditions, sign out in the log book, shut the entrance gate and secure the padlock.