

### MISSION-CRITICAL PROFILE

**Name:** Darrell Andrews

**Organization:** San Francisco Public Utilities Commission - Wastewater Enterprise



**Job Category (Check one below):**

- |  |   |
|--|---|
| <input type="checkbox"/> Water Treatment                 | <input type="checkbox"/> Electronic Maintenance Technician/ Instrument Technician |
| <input type="checkbox"/> Water Distribution              | <input type="checkbox"/> Electrician/Electrical Line Worker                       |
| <input checked="" type="checkbox"/> Wastewater Treatment | <input type="checkbox"/> Machinist/Mechanic                                       |
| <input type="checkbox"/> Wastewater Distribution         | <input checked="" type="checkbox"/> Other   |

1. Please describe the work you do:

I work at the Southeast Wastewater Treatment Plant, where the primary function is to collect and treat wastewater from the combined sewer system of San Francisco. Treatment is achieved by separating the solids from the influent wastewater and by disinfecting the effluent before it is discharged into the ocean and bay. I operate and maintain the various processes, and equipment involved in this treatment process.

Most recently I have been assigned to 525 Golden Gate, the LEED Platinum headquarters for the SFPUC. I am a building stationary engineer there and part of my responsibility is to operate and maintain the Living Machine; the black water treatment system designed to treat the building's waste in order to reclaim water for toilet flushing. This system reduces the building's usage of potable water by 70 percent. Additionally, I operate and maintain the building's HVAC Automated Logic Control system, Lutron lighting controls, Mecho Shades automated shades system, PV solar power generation, Windspire wind power generation and the plumbing and electrical infrastructure.

2. What combination of education, vocational training, apprenticeship, experience, and/or skill did you obtain in order to be qualified and selected for your job?

I began my career as a pre-apprentice stationary engineer at the Southeast Treatment Plant where I learned the process of treating wastewater. During this time I worked at the Oceanside Treatment Plant in addition to all of the pump stations in San Francisco. After almost two years as a pre apprentice, I was accepted in the Local 39 Stationary Engineer Apprenticeship where I learned the fundamentals of electricity, welding, refrigeration, controls, boilers, machinery, and wastewater math. Before completion of the apprenticeship I passed the State Water Resources Control Board's Wastewater Treatment Plant Operator exam for Grade IV certification. Additionally I received my Universal HVAC Technicians License and Certificate of Completion from Local 39.

3. What do you like best about your job?

This job is very unpredictable. Every day is not the same because the building is “alive” which means the various processes to keep it “living” require me to be prepared to respond to any issue at any time. One day there may be electrical issues, the next day there could be a plumbing issue, or possibly a heating problem coupled with automated shades malfunction. This building requires competent trained stationary engineers and being trained on all of the systems here allows me to troubleshoot and respond to any service call. The tenants that occupy the building are the end users and beneficiaries of all the systems here; and making sure they are operational is satisfying. It is rewarding when nothing “goes wrong” with the day to day operation of the building, because that is an indication that I have done my job well.

4. Please tell us about the projects and activities you have enjoyed most in your work in the water/wastewater field, and what made them rewarding.

While working at the treatment plant I have been involved with bar screen rebuilds, grit tank overhauls, digester cleanings, pump station upgrades, and system wide hydraulic maintenance. These experiences have been unique and extraordinary and at the same time, they have given me the flexibility to work beyond the treatment plant. After graduating from the apprenticeship I was asked to be a stationary engineer for a satellite campus of City College of San Francisco. It was here that I developed my foundation of building stationary engineering. After working there for about a year the AGM of Wastewater Enterprise of the SFPUC asked me to join the start-up crew for their new headquarters- 525 Golden Gate; the greenest urban government building in the United States. To be requested for this position is an honor and has been the most rewarding experience of my career so far.

5. What qualities and capabilities are needed in order for a person in your area of expertise to be successful in the water/wastewater industry?

To be successful in this industry requires a high aptitude for learning, proper education and training, and the ability to adapt to ever changing environments. The willingness to learn continuously is absolutely required because wastewater treatment and building systems are still evolving.

6. Do you have any advice for an individual who is considering pursuing a career in your field in the water/wastewater industry?

My advice to someone considering a career in this field would be to get the highest certification possible and take all of the training available. This industry is very mandatory but not many people are qualified to do the work.