

MISSION-CRITICAL PROFILE

Name: Gerard Guinnane, Jr
Organization: City of San Jose – Environmental Services
Department: San Jose/Santa Clara Water Pollution Control Plant



Job Category (Check one below):

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

1. Please describe the work you do:

I check, maintain, and update instrumentation in the field that is essential to the water control process. I also check, maintain, and update the monitoring equipment used to enable the automated wastewater process technology for the water pollution control plant.

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 went to a trade school to gain my expertise in working with instrumentation. My experience as a machinist and welder for the Coast Guard also helped because it developed my skills in the field of instrumentation. My previous work with mechanisms in machinery helped me understand the systems involved in the wastewater process. I worked on the engines by overhauling them. In knowing the inner workings of these, I am able to understand what the sensors are telling me or should be telling me. It is an overall system view that makes trouble-shooting easier to accomplish. It keeps the job interesting as well.

3. What do you like best about your job?

An enjoyable aspect of my work is collaborating with my team on an assigned project. The projects are always enjoyable and the progress that you see is the thing you look forward to. The team that I am collaborating with has years of extensive knowledge and experience in the field. It makes the project easier to accomplish and to be tinkered with if there are stumbling blocks.

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

The projects and the activities that I enjoyed the most are those where there were challenges involved, and I had to be creative in finding a solution. One example was when the large gas holder was shut down for repairs; the small holder was put back into service after being out of service for 17 years. I set up a level

transmitter on the original indicator and wired it into the control system. The level was smaller and I was able to use a converter to “paste” it on the larger scale for the blending station. By tuning the system using the Zeigler-Nichols method, the blending station reacted fast enough to control in automatic. The large holder is 86,000 ft³ compared to 3000 Cubic ft³ on the small. Here we can see the level of creativity and innovation involved in the project.

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?

The field is quickly growing and changing in terms of technology. Ideally the individual who wants to succeed adapts to the changes in the field. An individual must have the patience to read the thick manuals and understand them. It is essential to fix and troubleshoot new instruments. It is also important for the individual to be proficient in math and science because the field focuses on the technical aspect of the water.

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

One piece of advice that I would give to the individuals who are considering a career in this trade is to learn and understand the field well before committing. No one wants to waste your invested time when going into this field just to find out it is not suitable for you.