

ENGINEER PROFILE

Name: Edward Oyama

Organization: West Valley Sanitation District

Engineering Discipline (Check one below):

- Civil
- Mechanical
- Electrical
- Environmental (including Process)
- Structural
- Information Technology
- SCADA
- Other

1. Please describe the work you do:

I am the Director of Engineering and Operations and have the responsibility for directing, managing, planning, and overseeing the Engineering and Operations Division of West Valley Sanitation District. The District operates and maintains 625 miles of wastewater collection system for approximately 108,000 people in the south west end of Silicon Valley. I am responsible for all District engineering and maintenance functions and other District functions, which includes the development and execution of the District's Capital Improvement Program, project planning and design, construction management, risk prioritization studies, hydraulic modeling studies, maintenance and repair programs, staff training, District Safety Program, equipment procurement, staff hiring, division budget preparation, and many other functions.

2. What combination of education, experience, and skill was required in order for you to obtain your job?

I earned a BS degree in civil engineering from Fresno State University. I have a wide range of experience working for the US Bureau of Reclamation, US Army Corps of Engineers, private engineering firms, Monterey Regional Water Pollution Control Agency, and West Valley Sanitation District. This experience encompasses many facets of civil engineering including water supply forecasting, coordination of reservoir and canals of the Central Valley Project, dam and canal construction, military facility construction, contract administration, contract and claim negotiations, land development design, wastewater treatment design and construction, and collection system design and construction. I have over ten years supervising and or managing an engineering department/division and over six years managing an operations department/division.

3. What do you like best about your job?

As a civil engineer, it is inherent that the work that we do serves to benefit society. The field of water and wastewater are especially critical to the wellbeing and survival of humanity, so just the magnitude of its importance makes my job very gratifying. I am proud to have been a government employee for over thirty years and am dismayed at the negative opinions expressed by some who feel government (government

workers) should be eliminated. The customer of any government agency is the public and I am motivated and excited to be able to provide excellent service to the citizens we serve. I enjoy working with other dedicated staff in providing this invaluable service and having the shared commitment to continuously seek ways to improve the effectiveness and efficiency of this service.

The specific thing I like best about my job is to help problem solve difficult issues, or resolve conflict. Sometimes this accomplished by providing guidance and direction to staff when developing or making improvements to District programs. Other times, it involves direct discussion and or negotiation with individuals, companies, or other government agencies.

4. Please tell us about the water or wastewater engineering project you enjoyed working on the most, and what made it rewarding.

The most interesting and rewarding project I have worked on was the construction of the \$30 million tertiary treatment facility at Monterey Regional Water Pollution Control Agency, located in Marina, CA. I served as the Owner's Representative and was responsible for the oversight of the engineering design consultant, construction management consultant, and the construction contractor. Along with the oversight responsibilities, I was responsible for the coordination between the contractor and Agency Staff to ensure that there was no conflict between the contractor's activities and the operation of the existing wastewater treatment plant.

It was interesting and rewarding for two primary reasons: the size of the project and the associated complexities of the design and construction elements involved in creating this new facility, and the significant benefit this project has on the agricultural lands of northern Salinas Valley by retarding the advance of seawater intrusion.

5. What qualities and capabilities are needed in order for an engineer to be successful in the water/wastewater industry?

Just as with any career choice, an individual must have passion for the work they do. As repeatedly quoted over time, Confucius was to have said "*Choose a job you love, and you will never have to work a day in your life*". One must honestly believe that their work in the water/wastewater industry is so vital, so essential, so fulfilling that this passion can be easily developed. Involvement in related professional organizations: e.g., Water Environment Federation (WEF), local and state California Water Environment Association (CWEA), Bay Area Clean Water Agencies (BACWA), California Association of Sanitation Agencies (CASA) is one way to become immersed in the industry and become affiliated with other industry professionals.

Individuals who have found an affinity towards water and wastewater during their degree program, have most likely taken a number of elective course work in this field of study, if not specializing in their post graduate studies. Continuing education of new and emerging technologies by attending technical conferences and webinars is important to maintain relevant and current. Sharing of knowledge with other industry professionals helps to elevate the entire profession. As an individual gains experience, their responsibilities will likely change into a supervisory and eventually managerial roles. These skills are rarely taught as part of an engineering curriculum and will require a strong skillset in communication, coaching, and consensus

building. An overlooked aspect by engineers in the water and wastewater industry is having knowledge and understanding of the important role that non-engineers have (operators, maintenance workers, chemists). An appreciation of the work non-engineers perform, will increase the ability of an engineer to be empathetic and take into consideration the needs of the people that have to operate and maintain the facilities they design.

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

Civil engineering is a very broad profession that can take you in many directions. Water and wastewater are, and will continue to be, the two most promising disciplines of the civil engineering field. Other disciplines such as transportation, structural, geotechnical, environmental will continue to be important to society. My advice to students contemplating a career in civil engineering is to get your “feet wet”. Get some experience under your belt (even if you have to volunteer) so that you gain experience in some aspect of civil engineering. Referring specifically to water or wastewater, some local colleges (Gavilan College) offer water and wastewater technology certifications that are meant for technical students wanting to go into this field of study. Although this coursework doesn’t count towards a civil engineering degree, it is an excellent way to gain a deep insight and appreciation of how things work.