baywork
bay area water/wastewater workforce reliability

ENGINEER PROFILE

Name: Christopher Hakes
Organization: Santa Clara Valley Water District

Engineering Discipline (Check one below):

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

1. Please describe the work you do:

   As a member of the Construction Services Unit, my main focus is construction management and contract administration. After the District's Board of Directors awards a Project to a Contractor, it's my responsibility to monitor the Contractor to ensure compliance with all the requirements in the project's drawings and specifications. During the course of construction, I manage any changes to the contract that may be necessary, as well as monitor and control the project schedule and expenditures through daily interaction with the Contractor and Water District's Construction Inspection staff. Although most of my efforts are focused on the active construction portion of a project, I also participate in the preparation and review of contract documents and project management, during the planning and design phases of the project.

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

   In order to qualify for my position, I was required to possess a B.S. in Civil Engineering or related field, have four years of professional civil engineering experience, and be registered as a professional civil engineer in the state of California.

3. What do you like best about your job?

   It's tough to pick just one thing, so I'm going to cheat a little and pick two. One of the most rewarding aspects of my job, thus, one of the things I like best, is that the work I do directly serves the interests of the inhabitants of Santa Clara County. as a public agency, the goal of the projects that I work on for the District is to provide direct benefit to the residents of the county (through clean, safe drinking water, flood protection, or wildlife habitat restoration). The other aspect of my job that I like best is the diversity of work that the District offers me. Because the District performs both flood protection and water distribution/supply projects all across Santa Clara County, I'm fortunate enough to be able to work in a

variety of locations and on a wide range of projects. On any given day, I could be working as far north as Palo Alto and as far south as the San Louis Obispo Reservoir on levee construction and restoration, treatment plant renovations, pipeline construction, or habitat restoration.

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

   My most rewarding project was the Pond A8 Applied Study Project. The project served a traditionally under represented community (the Alviso area of San Jose) by ensuring flood conveyance capacity while also restoring wildlife habitat. As a pilot project, the Pond A8 Applied Study Project will also contribute valuable information that will shape the long term restoration plans for the South Bay Salt Pond Complex, as well as future flood protection Projects for the community of Alviso.

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

   The most successful engineers that I've worked with all share three main characteristics; they are detail oriented, independent thinkers, and excellent communicators. It also goes without saying that they also must possess a strong interest and understanding of water/wastewater treatment distribution. However, these three characteristics are what I feel differentiates a truly successful engineer from an average one.

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

   The water/wastewater industry may appear to have a very narrow focus, but in reality it has many facets. I would suggest that someone interested in this field gain exposure to as many of the fundamental principles as possible across the entire breadth of the industry. Without at least looking into all the possibilities, you may not find which facet of the industry truly interests you. Once you've determined the specialty that most piques your interest (water treatment, wastewater treatment, water distribution, flood protection, etc.) focus your efforts on obtaining some real world exposure to the field, to make sure that the end career lines up with your personal expectations of it. After you've gotten to experience the feel (or smell in the case of wastewater) of the industry up close, and decide that it's right for you, focus on learning as much as you can about the field and do your best to get your foot in the door (in any capacity) where you want to work.