

## ENGINEER PROFILE

**Name:** Aaron Baker, P.E.

**Organization:** Santa Clara Valley Water 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 lead of the Civil Engineering group that performs engineering and project management for the maintenance of the Water Utility's pipelines, pump stations, water treatment plants, and recharge facilities. A large component of my work is the inspection and rehabilitation of large-diameter pipelines.

Typical work for a pipeline rehabilitation project includes performance or oversight of the following:

- Pipeline Vault Inspection and Inventory
- Purchasing of all large-Diameter butterfly valves and air valves
- Draining and disinfection plans
- Rehabilitation Design
- Preparation of Plans and Specifications and Construction Contract Documents
- Isolation of the Pipeline - Lock Out/Tag Out Coordination and Execution
- Dewatering of Pipeline including environmental monitoring
- Inspection of Rehabilitation Work performed by Contractor
- Construction Management Activities
- Video and Visual Internal Inspection of Pipeline
- Filling of Pipeline and commissioning
- Disinfection (treated water only) of pipeline
- Project activity accounting and closeout

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

- Bachelor's Degree in Civil Engineering,
- Professional Engineer License in California,
- 4 years of Professional Engineering experience in the Water Utility field, and
- Driver's License in California.

3. What do you like best about your job?

I find it rewarding to be able to look at a facility and know that I designed it and managed the construction of it.

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

A recent project that I enjoyed working on was the West Pipeline Rehabilitation Project. The Project included the rehabilitation of an approximately six-mile section of large diameter treated water pipeline. Work was performed at over 50 individual sites (including work in major roadways such as Stevens Creek Blvd.) during a 10-week shutdown. Designing, planning, and coordinating such a massive effort to be performed in such a short time was very challenging. As this was a rehabilitation of an old pipeline, many issues came up in the field during construction. Working with the Construction Team to solve these problems and get the job done required quick thinking to keep the project on schedule. In the end, we put the pipeline back into service as promised in the original schedule.

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

- Able to visualize how things work together,
- Understanding how the system operates,
- Good with numbers, and
- Able to communicate well with mechanics and operators.

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

- Find an internship in the industry while in college.
- During College, get involved with the Professional Society/Group for the engineering discipline such as the American Society of Civil Engineers.