

## CCWD Engineering Department:

The Engineering Department provides services and technical support for a wide variety of District projects and activities. Typical projects include design of capital improvement projects (pipelines, pump stations, energy recovery projects, canal improvements, etc.), evaluations of existing facilities and technical support for dam performance monitoring.



### Assignment/Description:

#### **Pump Station Energy Management Study:**

Assist in the evaluation of operation of pump stations to identify opportunities to reduce overall energy use and cost. Conduct field investigations to test efficiency of pumps, perform economic analyses to determine cost-effective improvements and prioritize and recommend improvements.

**Large Diameter Pipeline Preliminary Design:** Assist in the preliminary design of relocation of a key 90-inch diameter water supply pipeline to accommodate new freeway onramp.

**Canal Replacement Project:** Provide design assistance during construction of approximately 1 mile of 10-foot diameter pipeline for the Canal Replacement Project.

#### **Provide planning and design support on the District Center Building**

**Improvements Project:** Provide assistance with evaluation of structural, mechanical, and electrical systems, and development of preliminary design of improvements to the District's main administrative building.

**Investigate and design safety related improvements at District facilities:** Provide assistance with identifying, prioritizing, and design of safety improvements at various District facilities, including water treatment plants, pump stations, storage reservoirs, and administrative facilities.

**Perform hydraulic modeling assignments:** Review the hydraulic model of one of the District's critical water supply pipelines, assess the historic performance compared to expected performance and identify potential causes and remedies for deficiencies. Using H2ONet, run hydraulic models to confirm fire flows and sufficient service pressures for new and existing customers. Completion of coursework in hydraulics and proficiency in using spreadsheets programs is required.

**Project Management – Review Budget and Schedule Milestones:** Provide project management assistance by tracking project budgets and progress for in-house projects and consultant efforts. Develop projections to determine whether projects are tracking on schedule and on budget.

**Assist with monitoring dam performance:** Assist with the assessment of dam performance based on field measurements and electronic tracking of foundation pressures and other dam instrumentation readings. Draft summary dam performance reports.

**Project management: review budget and schedule milestones:** Provide Project Management assistance by tracking project budgets and progress for in-house projects and consultant efforts. Develop projections to determine whether projects are tracking on schedule and on budget.

**Investigate and develop recommendations in response to Engineering Support Requests from other departments:** Assist with Engineering Support Requests received from the District's Operations and Maintenance Department for facility-specific and task-related field support and design modifications. Requires coordination with other departments to understand the problem, develop an approach, brainstorm ideas, and provide recommendations.

**Assist with design of Treated Water Pipeline Replacement:** Provide assistance with development of design drawings and specifications for the construction of new pipelines to replace older pipelines with a history of leaks. Work also includes field investigations, coordination with other agencies, and planning for utility shutdowns.

**Questions?** Call Cheryl Martinez in CCWD Human Resources at (925) 688-8035 or send her an e-mail at [cmartinez@ccwater.com](mailto:cmartinez@ccwater.com).