

***POSITION DESCRIPTION***  
***Guadalupe-Blanco River Authority***

**POSITION TITLE: ENGINEER I**

**I. ORGANIZATION**

Division: Water Resources      Grade: 9      Revision Date: 12/19/2011

System: N/A      Salary Category: Exempt

**II. REPORTING RELATIONSHIPS**

Immediate Supervisor: Chief Engineer

Next Higher Supervisor: Executive Manager of Water Resources and Utility Operations

**III. JOB SUMMARY (Including number of personnel supervised, if applicable)**

This position is responsible for providing technical assistance to GBRA's operations, making hydrologic and hydraulic determinations, coordinating with local, state and federal agencies such as emergency management coordinators, the USGS, Corps of Engineers and the National Weather Service, and managing water resource projects as assigned by the Chief Engineer. The position requires a fundamental knowledge of all water resource engineering including surface and groundwater hydrology, hydraulics, water and wastewater treatment, and piping and pumping systems.

**IV. TYPICAL DUTIES (May include, but not limited to the following:)**

- A. Manage the Flood Information Program (FloodNet) that provides river flood data to appropriate local officials and provide support to Operations during floods.
- B. Supervise and conduct the annual upper and lower basin workshops with Emergency Management Coordinators and Flood Plain Administrators throughout the river basin.
- C. Work with the South Texas Water Master and assist in the preparation of water use reports to the Texas Commission on Environmental Quality (TCEQ).
- D. Work with the National Weather Service River Forecast Center regarding improved flood forecasting.
- E. Assist with the State's Environmental Flow Programs where required.

- F. Provide technical support for GBRA's operations including the preparation of design drawings, specifications and construction documents.
- G. Provide general technical support for the various operating divisions of the Authority.
- H. Perform hydraulic modeling and evaluate system improvements for GBRA's water and wastewater operations.
- I. Work with FEMA and other entities to improve flood modeling information within the Guadalupe River Basin.
- J. Oversee and/or conduct engineering and environmental studies and assessments.
- K. Stay technically competent in all related areas of water resources and environmental engineering.
- L. Prepare budget and contracts.
- M. Stay current on computer hardware and software related to computer-aided design and GIS.
- N. Provide technical support for special projects assigned by the Chief Engineer involving various activities such as water rights, water supply, erosion protection, and flooding.
- O. Help develop custom Conservation Plans.
- P. Perform flow measurement using an ADCP meter attached to a small boat.
- Q. Provide surveys of flood high water marks.
- R. Perform other duties as assigned.

## **V. REQUIREMENTS OF THE POSITION**

### Education:

Bachelor's of Science degree in engineering with a civil, water resources or environmental emphasis. Consideration will be given for other related degree plans with sufficient job-related experience.

### Registrations and Licenses:

Valid Texas Drivers License with acceptable MVR.

Prefer E.I.T. Certification or demonstrate ability to obtain such certification within 2 years.

Must obtain Professional Engineer's License within 5 years from date of employment.

Become a Certified Floodplain Manager within two years from date of employment.

### Experience:

Two or more years of progressively responsible engineering experience preferred.

### Special Requirements:

Must be willing to work nights and weekends during high rainfall, inclement weather, and flood events. Must show initiative and the willingness to learn and apply the technical engineering expertise necessary for a very diverse organization. Must work well in a team environment. Availability to meet work schedules is essential.

## VI. WORKING CONDITIONS, TRAVEL, EQUIPMENT USED

Approximately 80 percent of work is indoors. Twenty percent is outdoors and may be in inclement weather. Travel varies depending upon projects, but will occasionally involve overnight stay and long work hours.

## VII. ESSENTIAL JOB FUNCTIONS

- A. Operate a motor vehicle with either automatic or manual transmission.
- B. Communicate effectively with individuals and groups using oral, visual and written means.
- C. Make oral presentations to groups of three or more.
- D. Communicate effectively using the telephone.
- E. Read, analyze, and interpret complex scientific and financial studies and reports written in English.
- F. Read, legibly write and accurately interpret complex technical material written in English (such as Material Safety Data Sheets, legal contracts and the Federal Register); read such written material in small print.
- G. Employ sound judgment; think coherently and logically; and employ deductive and inductive reasoning.
- H. Perform basic and advanced mathematics, including algebra, trigonometry, geometry and elementary calculus.
- I. Employ and demonstrate an advanced knowledge of electronic spreadsheets such as EXCEL.
- J. Understand basic hydrology and hydraulics with some working knowledge of hydrologic computer programs such as HEC-RAS, HEC-HMS, and EPA NET or similar hydraulic modeling software.
- K. Enter and work in confined spaces, as defined by OSHA.
- L. Climb up and down vertical ladders up to 20 feet in length.
- M. Walk up to 2 miles across rough terrain.
- N. Lift forty pounds to waist height.
- O. Store and retrieve files at least five feet from floor.
- P. Respond to worksite emergencies at any time without delay.
- Q. Respond to visual and audible alarms.