

Job Title: Hydrologic and Hydraulic Modeling Engineer
Department: Water Resource Engineering
Reports to: Manager of Energy and Water Management

FLSA Status: Exempt
Classification: Professional
Supervises: N/A

Position summary: The Hydrologic and Hydraulic Modeling Engineer position develops a broad knowledge of the TRWD Water Resource Engineering Division standards, practices, and system operations, as well as skills in a specific practice area. This position will collaborate with other district staff to evaluate small projects or portions of larger project. (Engineering level will be determined by years of experience and level of education.)

Qualifications required:

- Bachelor's degree in Engineering from ABET accredited curriculum or a Bachelor's degree in Hydrology
- Valid Texas Driver License

Qualifications desired:

- Prior experience working with hydrologic and hydraulic models such as HEC-HMS, HEC-RAS, Riverware, and Texas Commission on Environmental Quality (TCEQ) Water Availability Models (WAM).
- Engineer in Training (EIT), Professional Engineering license (PE), Professional Hydrologist certification, etc.
- A Texas Professional Engineering license or a Professional Engineering license from another state with the ability to obtain a Texas license within 6 months.

Essential functions and responsibilities:

- Take initiative to plan, schedule, conduct, and/or coordinate detailed phases of engineering work in a part of a major field
- Produce one or more of the following: process study, hydrologic and hydraulic modeling tools, research investigations, reports, presentations and other activities of limited scope requiring knowledge of principles and techniques commonly employed in the specific narrow area of assignments.
- Utilize Microsoft Word and Excel to perform calculations, tables of information, and written communication for engineering and hydrologic studies to share with other team members.
- Organize, adjust, correlate, and utilize data to inform hydrologic and hydraulic modeling activities and recommend informed operational and planning decisions.
- Understand, maintain and utilize hydrologic and hydraulic models used for TRWD flood operations and water supply planning/decision support.
- Compile and improve technical specifications for hydrologic and hydraulic modeling procurement projects.
- Work as a team to perform assigned tasks given on a project in order to meet deadlines.
- Collaboratively use judgment to determine adaptations in methods for non-routine aspects of assignments.
- Estimate project costs for budgeting.

- Assist with client, customer, or official contacts and communication pertaining to specific assignments or meetings.
- Apply professional and ethical responsibilities

Nonessential functions, skills and experience:

- Assist in coordinating work of interns and/or administrative staff
- Train other engineers, technicians, and hydrologists in software applications such as MS Office, GIS, hydrologic and hydraulic models, and technical procedures
- Aid other departments in technical problems
- Monitor flood levels and recommends actions to shift PE with authority for gate changes during flood operations
- Participate in professional societies and makes presentations as necessary
- Perform other job related duties

Success factors/job competencies:

- Work well in a team setting
- Oral and written communication, and collaboration skills at a professional level
- Problem solving, investigation, and analysis skills
- Computer proficiency in engineering software products

Physical demands and work environment:

The physical demands and work environment characteristics described here are representative of those that must be met by an employee to successfully perform the essential functions of the job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

- Physical demands: While performing duties of job, employee is occasionally required to stand; walk; sit; use hand to finger, handle, or feel objects, tools, or controls; reach with hands and arms; balance; stoop; talk or hear. Employee must occasionally lift and/or move up to 25 pounds. Specific vision abilities required by the job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus.
- Work environment: While performing the duties of this job, the employee typically resides within an office or cubicle and will have field work that may expose the employee to weather conditions prevalent at the time. The employee must be able to work long hours under stress in flood situations.