JOB VACANCY NOTICE

Flood Modeling Intern
(Engineering Aide)

2 1/2-month Internship

Texas Water Development Board, Stephen F. Austin Building
1700 North Congress Ave., Room 670, Austin, Texas 78701
Please contact Human Resources for accommodation requests.
Phone: (512) 475-2142
Apply at: Work in Texas www.workintexas.com OR
HR@twdb.texas.gov

Texas Water Development Board’s Mission
Leading the state’s efforts in ensuring a secure water future for Texas and its citizens.

The Texas Water Development Board (TWDB) endorses telecommuting and hybrid workplace plans, in addition to other flexible work alternatives. We offer competitive compensation and benefits package including medical, dental, vision, 401(k), flexible spending, and flexible work hours so you can have a work/life balance! For more information about these benefits and more visit: http://www.twdb.texas.gov/jobs/benefits.asp.

Veteran’s Preference
Veterans, Reservists or Guardsmen with an MOS or additional duties that fall in the fields of 12H – Construction Engineering Supervisor, 12T – Technical Engineer, EA – Engineer Aide, ENGI3 – Civil Engineering, 3ESX1 – Engineering, 72D – Environmental Science Engineering Officer, 32EX – Civil Engineer or other related fields pertaining to the minimum experience requirements may meet the minimum qualifications for this position and are highly encouraged to apply.

Additional Military Crosswalk information can be accessed at http://www.hr.sao.texas.gov/Compensation/MilitaryCrosswalk/MOSC_EngineeringandDesign.pdf.

Job Description Summary
Performs entry-level engineering assistance work within the Texas Water Development Board’s (TWDB) Flood Modeling Department. Work involves assisting with flood data collection, data formatting, processing, and analyses. Assists in development of flood models and mapping under senior oversight and guidance. Works under close supervision, with minimal latitude for the use of initiative and independent judgment. Reports to the Manager of the Flood Modeling Department.

Essential Job Functions
• Provides technical support to the statewide floodplain modeling program designed to inform stakeholders of flood risk and to support regional and state flood planning, including the development of relevant technical standards and procedures.

Female and minority applicants are encouraged to apply.

The TWDB is in compliance with the Americans with Disabilities Act and makes reasonable accommodations for applicants and employees with disabilities. If a reasonable accommodation is needed to participate in the job application or interview process, to perform essential job functions, and/or to receive other benefits of employment, please contact the Human Resources Division for assistance at (512) 475-2142. Deaf and hard of hearing applicants may contact our office via Relay Texas at 1-800-735-2989 (TTY/TDD).

HR-002 (Non-Supervisory)
Revised 5/10/22
Manages certain project activities within the department, to include coordinating external activities and training, leading, and assigning the work of the team.

Develops and applies floodplain models according to agency-approved technical standards and procedures.


Coordinates with federal, state, and local entities to collect NFIP and RiskMAP engineering data in support of floodplain mapping needs.

Assists in preparing documents such as memos, reports, work process and policy documents.

Provides presentations to internal FSCA division staff on relevant topics.

Ensures the provision of quality customer service from the department to both internal and external stakeholders.

Maintains confidential and sensitive information.

Ensures individual and team files (electronic and hard versions) are appropriately maintained and timely disposed of in accordance with the agency’s records retention procedures and schedule.

May be required to operate a state or personal vehicle for business purposes.

Performs other duties as assigned.

**Minimum Qualifications**

- Undergraduate or Graduate student with major coursework in Engineering, Physical/ Natural/Environmental sciences with emphasis in Hydrologic/Hydraulic/Hydrodynamic Modeling, Surface Water Resources, or a related field.
- Experience developing, applying, or running hydrologic/hydraulic models using HEC-HMS, HEC-RAS, or similar models.
- Experience using Geographic Information Systems (GIS) datasets and software such as ArcGIS.

**Preferred Qualifications**

- Relevant coursework or experience conducting studies related of surface water resources, floodplain management or modeling, or a related field.
- Experience with a wide range of hydrologic methods and models for a variety of watershed sizes.
- Experience developing steady, unsteady, two-dimensional, or other complex hydraulic models. Experience in developing automation techniques for hydraulic models.
- Experience with developing flood mitigation planning, modeling, and design solutions.

**Knowledge, Skills, and Abilities (KSAs)**

- Knowledge of relevant hydrologic/hydraulic/hydrodynamic techniques and models, including standard models and methods used to develop FEMA Base Level Engineering.
- Knowledge of the National Flood Insurance Program (NFIP), FEMA flood hazard mapping, Flood Insurance Rate Maps (FIRMs), Flood Hazard Boundary Maps, CLOMR/LOMR submittals, and floodplain management.
- Skills in using internet email and Microsoft Office programs such as Word, Excel, PowerPoint and Access.
- Skills in developing, applying, or running hydrologic/hydraulic models (e.g., HEC-HMS, HEC-RAS, SWMM, InfoWorks, AdH, GSSHA, etc.) or other computational/numerical models.
- Skill with GIS applications; skill using ESRI ArcGIS 10 (or later) software product suite with knowledge of Spatial and 3D Analyst extensions and exposure to geodatabase use and design.
- Skills in reading and interpreting engineering documents, surveys, topographic information, and aerial photography.
- Skills in manipulation of data sets for hydrologic and hydraulic modeling, including topographic (e.g. LiDAR, DEM), soils, landcover, and other data sets. Skill in working with very large data sets.
- Skills in using numerical/visualization tools, e.g., Matlab, Surfer, Octave, Scipy/Numpy, Matplotlib, Tecplot, Gnuplot, HEC-DSS, etc.
- Skills in using programming language such as Fortran, C, etc. and/or scripting languages such as Perl, Python, bash, etc.
- Skills in writing technical memos, reports, work process, and policy documents.
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- Ability to adhere to work schedules, follow procedures with respect to leave and submit accurate timesheets by prescribed deadlines.
- Ability to perform routine and non-routine work assignments accurately and on-time with little or no supervision.
- Ability to perform assigned duties and improve work habits and/or output.
- Ability to complete assigned work, on time, neatly and with infrequent errors.
- Ability to interpret policies, procedures, and regulations.
- Ability to stand/sit/move with no physical limitations or aids to perform activities such as retrieve/replace files in a large file system for boxes up to 30 lbs.
- Ability and willingness to travel 10% of the time, primarily within the State of Texas.
- Ability to operate a vehicle (state or personal) for state business and maintain a driver’s license and driving record that complies with state and agency requirements.
- Ability to workdays that may exceed 8 hours, including early mornings, nights, and weekends.

Remarks
- Copy of required academic transcripts and/or licensures and driving record must be submitted at the time of hire. Failure to provide required documentation will result in no further consideration for employment.
- Important Notice: Otherwise, qualified candidates who are ultimately considered for potential employment with the Texas Water Development Board may be the subject of a request for any criminal history record information maintained by the Texas Department of Public Safety (DPS). Evidence of a criminal conviction or other relevant information obtained from the DPS shall not automatically disqualify an individual from employment with the Texas Water Development Board.