JOB VACANCY NOTICE
Manager of Flood Modeling
(Manager V)

(INTERNAL POSTING)

Job Description Summary

Performs highly advanced (senior-level) managerial and/or engineering work administering the daily operations and activities of the Texas Water Development Board's (TWDB) newly created Flood Modeling Department. Work involves establishing and maintaining a successful floodplain modeling program and coordinating flood mapping tasks with existing agency efforts to support regional and state flood planning. As Senior Engineer, serves as an advisor on engineering-related matters and oversees applicable work conducted by staff. Ensures floodplain model compliance with agency-approved technical standards and procedures and accuracy of models and associated data. Work involves establishing goals and objectives; developing guidelines, procedures, policies, rules, and regulations; developing schedules, priorities, and standards for achieving established goals; coordinating and evaluating department activities; developing and evaluating budget requests; and, monitoring budget expenditures. Serves as a liaison and gives presentations concerning floodplain modeling, mapping, and management in the state. Plans, assigns, and supervises the work of others. Works under minimal supervision, with extensive latitude for the use of initiative and independent judgment. Reports to the Director of the Flood Science and Community Assistance Division.

Essential Job Functions

- Guides the creation of the Flood Modeling Department and provides effective leadership for and management of the program.
- Establishes and oversees a 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.
- Manages all project activities within the department, to include coordinating external activities and training, leading, and assigning or prioritizing the work of the team.
- Develops and applies floodplain models according to agency-approved technical standards and procedures.
- Supports efforts of the Federal Emergency Management Agency (FEMA) Cooperating Technical Partners (CTP) Program.
- Coordinates with federal, state, and local entities to collect NFIP and RiskMAP engineering data in support of floodplain mapping needs.
- Develops, reviews, and implements policies and procedures and the results of special investigations, audits, and research studies to improve program operations.
- Writes, reviews, and evaluates scopes of work, memos, reports, work process, and policy documents.
- Serves as a liaison for the TWDB at meetings with federal, state, and local entities or the public throughout Texas to support floodplain modeling and mapping.

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- Provides presentations to technical and non-technical audiences.
- Manages contracts related to floodplain modeling and mapping and assists in training and overseeing staff contract managers.
- Ensures program activities are coordinated for efficiency and are communicated effectively to agency management including updates to TWDB Board Members, as needed.
- Ensures staff is equipped with the necessary knowledge and tools to effectively perform their duties.
- Ensures the provision of quality customer service from the department to both internal and external stakeholders.
- Supports department administrative requirements related to organization, budget, and personnel.
- Develops and manages program budgets, expenditures, contracts, and performance measures.
- Monitors and reports department work activities.
- Assigns job duties, conducts performance evaluations, clarifies roles and responsibilities, and monitors and measures performance against goals.
- Evaluates department performance and recommends and leads improvements.
- Manages the performance of direct reports, to include, timely completion of plans and appraisals, and follow-through on disciplinary actions as needed.
- Authorizes department hiring, separations, disciplinary actions, and employee performance rewards.
- Maintains confidential and sensitive information.
- Presents expert testimony, as required.
- Conducts legislative bill analysis, as required.
- 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.
- Maintains required certifications and licenses and meets the continuing education needs and requirements of the position to include, attending mandatory training courses.
- May be required to operate a state or personal vehicle for business purposes.
- Performs other duties as assigned.

Minimum Qualifications

- Graduation from an accredited four-year college or university with major coursework in Engineering, Physical/ Natural/Environmental sciences with emphasis in Hydrologic/Hydraulic/Hydrodynamic Modeling, Surface Water Resources, or a related field.
- Seven to nine years of relevant work experience conducting or leading studies of surface water resources, floodplain management or modeling, or a related field.
- Experience developing, applying, or running hydrologic/hydraulic models using HEC-HMS, HEC-RAS, or similar models.
- Three years progressively responsible professional work experience managing projects and/or staff (including multi-disciplinary teams.)
- Relevant education and experience can be substituted on a year-for-year basis.
- Licensed as a Professional Engineer by the State of Texas.

Preferred Qualifications

- Graduate degree from an accredited college or university 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 floodplain models.
- Experience with the Federal Emergency Management Agency (FEMA) flood hazard mapping and Base Level Engineering techniques.

- Certification as a Certified Floodplain Manager.

Knowledge, Skills, and Abilities (KSAs)

- Knowledge of local, state, and federal laws and regulations relevant to floodplain management and of the principles and practices of public administration.
- Possesses necessary skills and comprehensive knowledge to perform the job.
- 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 reading and interpreting engineering documents, surveys, topographic information, and aerial photography.
- Skills in manipulation of data sets for hydrologic modeling, including topographic (e.g. LiDAR, DEM), soils, landcover, and other data sets.
- Skills in scientific data management, analysis, and interpretation, particularly of hydrologic data.
- Skills in using numerical/visualization tools, e.g., Matlab, Surfer, Octave, Scipy/Numpy, Matplotlib, Tecplot, Gnuplot, HEC-DSS, etc.
- Skills in developing, applying, or running hydrologic/hydraulic models (e.g., HEC-HMS, HEC-RAS, ADH, GSSHA, etc.) or other computational/numerical models.
- Skills in using programming language such as Fortran, C, etc. and/or scripting languages such as Perl, Python, bash, etc.
- Skills in working with Lidar and with spatial data analysis software (e.g., ArcGIS, etc.).
- Skills in writing technical memos, reports, work process, and policy documents.
- Skills in project management and grant/contract administration, including developing scopes-of-work.
- Skills in communicating with elected, local, state, and federal officials, stakeholders, and the media.
- Skills in using Microsoft Office programs such as Word, Excel, and Access.
- Skills in use of internet, email, word processing, spreadsheet, presentation, database software, and in the use of standard tools of the profession.
- Ability to lead projects and perform duties as assigned without direct supervision.
- Ability to meet public/government officials to initiate studies and to request data pertinent to studies.
- Ability to communicate clearly and concisely, both verbally and in writing.
- Ability to adhere to work schedules, follow procedures with respect to leave and submit accurate timesheets by prescribed deadlines.
- Ability to make mature, objective decisions and identify areas of potential problems.
- Ability to perform effectively and willingly when changes occur in scope and nature of the work and work environment.
- 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 in order with infrequent errors or persist until tasks are completed.
- Ability to interpret policies, procedures, and regulations.
- Ability to provide prompt, courteous and accurate assistance and clear and concise communication to agency staff, as well as to employees of other political entities and the public, both verbally and in writing.
- Ability to work with others in a team environment and cooperate with supervisors, co-workers, and others.
- Ability to manage multiple tasks and schedule work in order to maintain regular progress on assignments and meet deadlines.

- 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 up to 15% of the time, primarily within the State of Texas.
- Ability to perform work outdoors possibly during inclement weather or under hot /cold temperatures.
- 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 work days that may exceed 8 hours, including early mornings, nights, and weekends.
- Ability to train others.
- Ability to assign and/or supervise the work of others.

<u>Remarks</u>

- 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.