



JOB DESCRIPTION

TITLE: MAPPING AND MODELING ANALYST
STATUS: Non-Union/FLSA Non-exempt
GRADE: 15

JOB SUMMARY:

Incumbent is responsible for producing and updating District maps, graphs, and charts to be used as public documents; assists in providing technical skills for various Departments in the use of GIS mapping technologies. The incumbent will strive to improve the effectiveness and efficiency of District efforts by improving staff and Board understanding of conditions impacting water/wastewater systems through modeling/mapping. Work involves transferring information from legal descriptions, aerial photos, ortho photos, and existing maps to a digital record using computer aided drafting techniques. Provides engineering design services to support and maintain utilities hydraulic models for the design and planning of developer and capital improvement projects, including on-going updates to existing models as new construction and improvements are established in the field.

REPORTING RELATIONSHIPS:

This position reports to the Utility Planner.

ESSENTIAL DUTIES include the following:

- Creates, maintains, and updates District GIS maps for purposes of utility location and identification, planning, and presentation to the public. This includes maps, parcel maps, aerial maps, topographic maps, land use and all other related maps;
- Designs and creates maps, charts, and graphic illustrations for technical reports, displays, graphs, signs, pamphlets, literature, and related material for use by employees and the general public;
- Reviews GIS data and works with GIS Coordinator to ensure map accuracy;
- Assists in the production of mapping services and products; coordinates symbolization, topography, and appropriate scales.
- Compiles, designs, and constructs final art using both automated and manual methods; monitors and coordinates the reproduction of map products;
- Simulates inflow, pressure, the operation of pump stations, valves, control valves, reservoirs of the District's water system; simulates sewer collection from pipe lines to lift station and treatment facilities;
- Evaluates the existing conditions and coordinates the calibration of water and sewer system models;
- Performs preliminary dry "runs" with models to verify pipe connectivity, adequacy of pump station and overall model operations;
- Runs various scenarios to determine the adequacy of District water and sanitary sewer system as population and development increase/decrease;
- Verifies and adjusts water and sewer system demands if necessary to be consistent with Planning requirements;

- Maintains a variety of logs, files, records, and maps; designs, implements and maintains required logs and record forms, maps, equipment, and materials;
- Responds orally or in writing to mapping or modeling inquiries from developers, employees, other government entities, and the public in regards to private development or capital improvement projects;
- Reviews development extension plans as required or needed; and
- Performs all other duties as required or assigned.

MINIMUM QUALIFICATIONS:

Knowledge of:

- Maps and legal descriptions;
- Current GIS methodologies and techniques;
- AutoCAD drafting and techniques;
- Printing and photographic systems;
- Drafting, photogrammetric, and land surveying techniques;
- Modeling strategies, software, hydraulics, and hydrology;
- District's GIS system or other similar systems, H2O Map, XP SWMM, or other hydraulic modeling software
- Microsoft Office suite;
- Data base creation and maintenance; and
- Customer service techniques.

Skill in:

- Performing complex mathematical calculations using a computer;
- Maintaining an accurate and complete filing system;
- Preparing accurate records, finished maps, exhibits, and documents for permanent reference and publication;
- Researching, verifying, and reviewing data;
- Using computers including window applications, Microsoft Office Suite, and other programs or software relevant to performing the essential functions of the position; and
- Communication, both written and oral, and interpersonal skills as applied to interaction with coworkers, supervisor, the general public, etc. sufficient to exchange or convey information and to receive work direction.

Experience/Education:

Any equivalent combination of education and experience that provides the applicant with the knowledge, skills and abilities required to perform the job. A typical way to obtain the knowledge and abilities would be an associate's degree or graduation from a technical school in geography, cartography, GIS, engineering, planning, construction management, or related field, and four years of experience in mapping, modeling, surveying, civil engineering, planning or other related field.

Licensing Requirements:

Possess and maintain a Valid Washington State Driver's License with acceptable driving record.

WORKING CONDITIONS:

Duties are primarily performed in an office environment while sitting at a desk, drafting table, or computer terminal but may also require travel to meetings and field inspections. When in the field, the employee may be exposed to adverse weather conditions, automobile traffic, and construction hazards. Duties require visual inspection of drawings, maps, exhibits, brochures, technical reports, graphic illustrations, displays, charts, graphs, signs, pamphlets, literature, and related materials.

PHYSICAL REQUIREMENTS:

Required to sit, talk, and hear, frequently required to use hands to: finger, feel or handle writing utensils, computers and office supplies which require repetitive arm, wrists and hand movement; occasionally required to stand and reach with arms and hands. Specific vision abilities include close, distant, and peripheral vision, depth perception and to adjust focus. Required to sit, stand, walk, hear, and talk; occasionally required to climb, balance, stoop, kneel, crouch, bend or crawl. Occasionally required to lift or move up to 25 pounds; occasionally walks on uneven, rocky, or rough ground. Position requires mental acuity to ensure thorough mental analysis of situations in a fast paced environment. May be required to sit or stand for extended periods of time.

This job description does not constitute an employment agreement and may be changed or amended at any time to meet the needs of the District.

Approved: August 20, 2018