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GEOGRAPHIC INFORMATION SYSTEMS TECHNICIAN
GEOGRAPHIC INFORMATION SYSTEMS SPECIALIST

BASIC FUNCTION

Under general supervision, utilizes Geographic Information System (GIS) techniques to create and provide maps and data sets to internal and external District stakeholders and provide a better understanding of certain variables in a given geographic location. Employees collect, analyze and interpret geospatial information and use GIS software and technical analysis techniques to extract data and provide recommendations to support of a variety of district planning and asset management tasks.

REPRESENTATIVE DUTIES

The classification specification does not describe all duties performed by all incumbents within the class. This summary provides examples of typical tasks performed in this classification.

- Utilize, Geographic Information System (GIS), Computer Aided Design and Drafting (CAD), relational databases and related technologies to prepare, update and produce maps, drawings, plans, spreadsheets, data files, geospatial data sets and other graphic representations that display layers and attribute data from the district database; incorporate maps, charts, spreadsheet data and text into reports. *"E"*
- Research, collect, organize, validate, maintain and enter attribute data pertaining to specific features into relational database systems and code and digitize spatial features or other planning data into various GIS layers; maintain documents, files, data sources and map files and conduct site visits to verify and update data. *"E"*
- Retrieve and conduct quality assurance/quality control of GIS data and perform routine GIS data maintenance, manipulations, and basic analysis, to support the needs of internal staff and presentation purposes; perform spatial analysis and interpret plans, photographs, maps and legal descriptions. *"E"*
- Determine map content and layout, as well as production specifications, such as scale, size, projection, colors, and execute design drafts; respond to ad-hoc requests from internal and external stakeholders for GIS data and consult with supervisors and clients regarding scope of mapping requests. *"E"*
- Demonstrate a commitment to the Portland Public Schools Equity Initiative by developing a thorough knowledge and application of the district Racial Educational Equity Policy, Equity in Public Purchasing and Contracting and other board policies; participate in staff development, in-services and trainings related to diversity, equity and inclusion in the workplace and in K – 12 education; model appropriate behaviors; develop, recommend and implement improvements to business practices with awareness and understanding of their impact in a racially and culturally diverse community. *"E"*
- Assist in resolving and troubleshooting basic GIS software related problems; provide technical assistance, training, and information to co-workers, District staff and external stakeholders, as necessary; participate in or provide basic training on GIS software or map reading. *"E"*
- Collaborate with colleagues and other public agencies on cross-functional district teams and on projects requiring the use of GIS data such as land use, facility management, capital planning, space planning, enrollment balancing or transportation planning to participate in and coordinate the planning, implementation and maintenance of GIS, CAD or other related software and systems. *"E"*
- Maintain and develop professional skills through ongoing training and career development, including self-study, classroom training, and industry seminars and workshops; attend and participate in meetings, conferences, and seminars relevant to systems applications development. *"E"*
- Perform related duties as assigned.

Note: At the end of some of the duty statements there is an italicized "E", which identifies essential duties required of the classification. This is strictly for use in compliance with the Americans with Disabilities Act.

DISTINGUISHING CHARACTERISTICS OF THE CLASS

Both classifications in this series are responsible for the research, collection and display of data using software, drafting and analysis techniques to support the planning and operational needs of the district. Geographic Information Specialists may specialize in a specific area such as demographic, land use or hazard or other geographic mapping or may work within multiple areas of GIS analysis and map production. All levels of the classification provide technical expertise and information regarding assigned functions and perform data collection, validation, research and map production duties. The levels are differentiated by the scope of work performed, the level of independence, the complexity of research and analysis conducted and the variety of GIS maps and data sets produced.

The Geographic Information Systems Technician classification is the primary level classification in the series. Employees in this classification create and analyze routine, limited scope GIS maps and data sets and conduct basic research. Employees are required to have a basic technical background and understanding of GIS software and will develop overall expertise in related software and programs, conducting research and analysis and validation of GIS data. Upon successful completion of not less than two (2) years of active participation in GIS data maintenance and entry and the development of customized GIS mapping and other data reports, employees in this classification who have gained sufficient knowledge of the broader scope of more complex elements of the classifications responsibilities may advance, with the confirmation of duties and recommendation of department leadership, to the Geographic Information Systems Specialist II classification.

The Geographic Information Systems Specialist is the professional level classification in the series. Employees in this classification perform the full scope of duties related to the collection, analysis, validation and dissemination of GIS data and map production, requiring a comprehensive knowledge of GIS software and in related software and programs. Employees develop and analyze complex GIS data sets and reports, provide input into cross-functional teams and serve as a technical resource and subject matter expert in the field. The Geographic Information Systems Specialist II participates in the mentoring, training and development of division staff.

EMPLOYMENT STANDARDS

Knowledge of:

Data analysis and data manipulation software tools (Excel, Access, and SQL).

Working knowledge of Geographic Information Systems and software such as ArcGIS or other Environmental Sciences Research Institute (ESRI) compliant tools.

Design techniques, tools, and principles involved in production of technical plans, blueprints, drawings, and models.

Basic automated mapping and geospatial processing techniques, methods and capabilities.

GIS database structures, scripting, programming, modeling, and design.

Different types of geographic sources such as plans, photographs, maps or geographical surveys.

Computer Aided Design and Drafting (CAD), Global Positioning Systems (GPS), photo imaging software, and database files and how they integrate with GIS software.

Cartography and map design, including coordinate systems, projections, and map scales.

Principles and methods for describing geographic features including physical characteristics and locations, their interrelationships and distribution.

Effective customer service skills using tact, patience and courtesy.

Effective team leadership and training techniques and methodology.

Oral and written communication skills; correct English usage, grammar, spelling, punctuation and vocabulary.

Ability to:

Gather and interpret basic GIS information from various sources such as, maps, graphs surveys or photos

Apply automated methods for geospatial data input, processing and analysis.

Draft drawings that incorporate design inputs, sketches, field notes

Design and maintain GIS databases and other database formats such as Microsoft Access, dBase, etc.

Create material lists and prepare material take-offs.

Collaborate with customers to identify GIS and mapping needs and solutions.

Convert and incorporate various types of data into GIS systems.

Document work performed on a project in project logs.

Document specific information about project data in the metadata file.

Ability to read and interpret maps, charts, aerial photographs, and statistics.

Keep knowledge and skills current; learn and develop technical expertise with current, future, state-of-the-art GIS and related software applications.

Set priorities, manage workflow and perform multiple complex and responsible activities, for multiple projects, concurrently with constantly changing priorities and deadlines.
Provide technical assistance to system users.
Advocate, model, learn and implement Portland Public School's Racial Equity Initiative.
Communicate effectively both orally and in writing.

Education and Training:
Both levels of the Geographic Information Systems classification require a Bachelor's degree in Urban Development and Planning, Geography, Environmental Science or related field with course work in GIS _or_ certification in GIS from an accredited college or university _or_ certification as a GIS professional (GISP) from the GIS Certification Institute.

Experience:

The Geographic Information Systems Technician classification requires one (1) year of direct experience inputting information into GIS Systems, conducting GIS research and producing GIS maps.

The Geographic Information Systems Specialist classification requires three (3) years of experience conducting quality assurance/quality control of GIS data and performing routine GIS data maintenance, and manipulations, _or_ two (2) years of experience as a Geographic Information Systems Specialist I with Portland Public Schools.

Any other combination of education and experience that would likely provide the required knowledge and abilities may be considered.

Special Requirements:

Some positions in this classification may require the use of a personal automobile and possession of a valid driver's license.

WORKING CONDITIONS
The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Persons with certain disabilities may be capable of performing the essential duties of this class with or without reasonable accommodation, depending on the nature of the disability.

Work Environment: Work is performed both indoors and outdoors.
Hazards: temperature extremes including inclement weather and adverse environmental conditions; potential conflict situations.
Physical Demands: Primary functions require sufficient physical ability and mobility to work in an office and outdoor setting; dexterity of hands and fingers to operate a computer keyboard and other office equipment; sitting or standing for extended periods of time; kneeling, bending at the waist, reaching overhead, above the shoulders and horizontally to retrieve and store files and supplies; lifting, pushing, pulling and carrying office and field equipment, supplies and materials weighing up to 25 pounds; repetitive hand movement and fine coordination to use a computer keyboard; hearing and speaking to exchange information in person or on the telephone; seeing to read, prepare and assure the accuracy of documents.