

POSITION DESCRIPTION

This position description serves as the official classification document of record for this position. Please complete the information as accurately as you can as the position description is used to determine the proper classification of the position.	
2. Employee's Name (Last, First, M.I.)	8. Department/Agency ENVIRON, GREAT LAKES & ENERGY
3. Employee Identification Number	9. Bureau (Institution, Board, or Commission)
4. Civil Service Position Code Description Geologist-A	10. Division Drinking Water and Environmental Health Division (DWEHD)
5. Working Title (What the agency calls the position) Geologist 12 (Hydrogeologist)	11. Section
6. Name and Position Code Description of Direct Supervisor PEARSON, SARA K; ENVIRONMENTAL MANAGER-3	12. Unit Source Water Unit
7. Name and Position Code Description of Second Level Supervisor DEBRUYN, DANA L; STATE ADMINISTRATIVE MANAGER-1	13. Work Location (City and Address)/Hours of Work Constitution Hall; 525 W. Allegan, Lansing, MI 48909 / Mon - Fri, 80 hours per pay period
14. General Summary of Function/Purpose of Position	
<p>Serve as the recognized resource hydrogeologist for the evaluation of source water resources. This position will serve as the lead hydrogeologist responsible for analyzing, critiquing, and developing hydrogeological assessments for water withdrawal applications, source water protection plans, and water well construction specifications for the most controversial and complex projects. The assessments and plans often contain complex groundwater modeling applications that require review for use of appropriate parameters and verification of model outputs. Suitability of the model for the application is another critical part of the review. The employee is responsible for coordinating activities with the water use and water withdrawal programs in the development of public water supply sources, including water withdrawal impact assessments and large quantity water registration.</p> <p>Engineering firms, water supply contractors, local health departments and other agencies routinely rely on advice on various aspects of rules and regulations, water withdrawals, construction of wells and groundwater contaminant investigations in relation to development of the groundwater resource. The employee serves as a point of contact for the more complex requests and collaborations relative to quantitative and qualitative assessments of surface water and groundwater resource impacts. The employee also responds to requests and initiates discussions with public water supplies on requirements in construction of wells and applying the rules to complex site-specific problems.</p>	

15. Please describe the assigned duties, percent of time spent performing each duty, and what is done to complete each duty.

List the duties from most important to least important. The total percentage of all duties performed must equal 100 percent.

Duty 1

General Summary: **Percentage: 50**

Serves as the recognized resource hydrogeologist for the evaluation of source water resources.

Individual tasks related to the duty:

- Lead the review of hydrogeologic assessments submitted by the regulated community for complex and controversial sites to ensure conformity with public water supply program requirements and DWEHD policy and procedure.
- Assess hydrogeologic data for accuracy, use of appropriate test methods, modeling inputs and outputs, representativeness of the location's geology, data validation processes, and well construction designs for determining sustainable source water withdrawal rates, particularly for large quantity withdrawals.
- Serve as a technical resource for experienced level hydrogeologist(s) in the unit.
- Serve as hydrogeological lead on Department-wide formal and ad hoc workgroups on topics such as well construction, groundwater resource management, groundwater modeling, and geographic information system (GIS) technology.
- Develop and update work plans and procedures for hydrogeologic studies outlining aquifer test parameters, data collection and analysis criteria, and reporting requirements for use internally and by the regulated community in reviewing groundwater and surface water protection plans and source water assessments.
- Review, update, and/or draft technical resource materials and policies and procedures for use in the development, management, and protection of source water resources.
- Represents the DWEHD on ground water, wellhead protection, source water protection and water withdrawal issues.

Duty 2

General Summary: **Percentage: 20**

Serve as the resource and coordinator for the division's source water data collection and inventory management program.

Individual tasks related to the duty:

- Provide technical expertise including input on database content, data gap identification, functionality needs, integration with other EGLE applications, data management processes and procedures, and work with the DWEHD Data Applications Unit to plan and coordinate enhancements and replacements as part of the department's IT modernization strategies.
- Incorporate ArcGIS geographic information system (GIS) applications for use in analyzing data, story mapping, and development of applications to improve efficiencies in workflow and access to ready-reference information related to the source water protection programs.
- Establish a source water inventory management program identifying the sources, protection areas, yields, vulnerabilities, permitted discharges, and more.
- Update and refine the work unit's process for delineating provisional wellhead and surface water intake protection areas.
- Assist the database development team(s) in identification of enhancement deliverables in IT projects, including annual and quarterly schedules for completion.
- If needed, administer the contracts for any needed software applications.

Duty 3

General Summary: **Percentage: 10**

Review permit applications and preliminary requests for large quantity water withdrawals regulated under Part 327 of the Natural Resources and Environmental Protection Act, PA 451 of 1994, as amended and coordinate screening activities with EGLE's Water Resources Division.

Individual tasks related to the duty:

- Coordinate the review and approval process with the Water Resources Division (WRD) for water withdrawals proposed by community public water supply systems to ensure conformity with withdrawal program requirements.
- Screen proposed water withdrawals by community public water supplies using Michigan's Water Withdrawal Assessment Tool (WWAT) and coordinate the outcome of the screening process with the WRD.
- Complete the water withdrawal site specific review process where proposed water withdrawals have been rejected by the initial screening using the WWAT.
- Oversee the WWP permit process on proposed withdrawals by Public Water Supply Systems meeting the permit thresholds of the water withdrawal legislation.
- Provide hydrogeology guidance relative to the WWP to DWEHD staff, local units of government, public water supply systems and consultants in development of large quantity water withdrawals.

Duty 4**General Summary:****Percentage: 10**

The employee leads coordination activities in source water protection, wellhead protection grants, and source water assessment programs as assigned.

Individual tasks related to the duty:

- Provide hydrogeology expertise in the programs mentioned above on matters pertaining to the evaluation, use, and characterization of source water resources.
- Provide oversight and review of hydrogeologic reports and in the approval of methods for delineating wellhead protection areas to ensure conformity with program guidelines and requirements.
- Review, compile and maintain files related to hydrogeologic investigations and groundwater modeling in the source water protection, wellhead protection grants and source water assessment programs.
- Assist in the general administration of the programs.

Duty 5**General Summary:****Percentage: 10**

Assist in general program responsibilities.

Individual tasks related to the duty:

- Answer inquiries related to the groundwater resource development, wellhead protection, source water protection, groundwater assessments, groundwater models, aquifer testing, contaminant migration in groundwater, and well construction issues as they relate to the public water supply program.
- Letter and report writing and data management related to the above-mentioned areas.

16. Describe the types of decisions made independently in this position and tell who or what is affected by those decisions.

The employee independently schedules and performs hydrogeological assessments on geologically complex sites brought to the unit and coordinates water withdrawals with the Water Resources Division staff. This position uses technical expertise to identify data needs and implements processes using applications like GIS for improving workflow. The employee uses professional judgment and makes decisions on compliance for the most complex and/or controversial projects related to well and aquifer hydraulics, hydrogeologic reviews, and verification of groundwater modeling inputs and outputs.

Examples of specific decisions made independently include:

- Hydrogeologic assessment contains all necessary and relevant data elements for decision making, the data is accurate, and the projected outcome is supported by the data provided.
- References the hydrogeological conditions and assesses whether the withdrawal rates will support the needs of the public water supply.
- Determines the susceptibility of the groundwater resource to contamination based upon review of existing records for contaminated sites and hydrogeologic information.
- Sets priorities for work, makes decisions and recommendations that influence the direction of DWEHD programs involved in development and use of the groundwater resource.

Potentially impacted parties include water well drilling contractors, water supply contractors, consultants, public water supply systems, land developers and the public.

17. Describe the types of decisions that require the supervisor's review.

The employee's supervisor provides direction and oversees issues that impact or pertain to Department policy and any deviations from EGLE or DWEHD administrative policies and procedures. Any enforcement referrals and approval of any contract funding are needed by the supervisor.

18. What kind of physical effort is used to perform this job? What environmental conditions in this position physically exposed to on the job? Indicate the amount of time and intensity of each activity and condition. Refer to instructions.

Typical office setting with majority of work conducted with a computer monitor, keyboard and mouse. Occasional field trips to observe well drilling activities, problem drinking water wells or aquifer testing. Field activities may involve periodic exposure to cold or inclement weather, heat, noise, dust, insects, vegetation, or heavy equipment traffic and operation hazards. Personal protective equipment such as a hard hat, safety shoes, safety glasses and ear protection may be required.

19. List the names and position code descriptions of each classified employee whom this position immediately supervises or oversees on a full-time, on-going basis.

Additional Subordinates

20. This position's responsibilities for the above-listed employees includes the following (check as many as apply):

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|---|------------------------------------|---|-----------------------------------|
| N | Complete and sign service ratings. | N | Assign work. |
| N | Provide formal written counseling. | N | Approve work. |
| N | Approve leave requests. | N | Review work. |
| N | Approve time and attendance. | N | Provide guidance on work methods. |
| N | Orally reprimand. | N | Train employees in the work. |

22. Do you agree with the responses for items 1 through 20? If not, which items do you disagree with and why?

Yes

23. What are the essential functions of this position?

Serves as the recognized resource and lead hydrogeologist for the evaluation of source water resources. This hydrogeologist position is responsible for providing technical expertise on hydrogeologic reviews, aquifer testing, well construction, and groundwater resource development in complex geological settings or controversial resource development projects. In this capacity, the position makes direct recommendations on the actions to be taken for next steps in the evaluations or issues direct approvals on behalf of the division following policies and procedures. This position sets priorities for work, makes decisions and recommendations that influence the direction of DWEHD programs involved in development and use of the groundwater resource and represents the DWEHD on ground water, wellhead protection, source water protection and water withdrawal issues.

24. Indicate specifically how the position's duties and responsibilities have changed since the position was last reviewed.

Requesting to downgrade this position to Geologist-A for recruitment and training purposes.

25. What is the function of the work area and how does this position fit into that function?

The function of the DWEHD is to provide engineering, hydrogeologic, and technical assistance in the regulatory oversight of public water supply systems. Specific facets for individuals in DWEHD with a work emphasis on groundwater arise from the state's responsibility for development and implementation of a state wellhead protection program, source water assessment program and source water protection program as mandated by 1986 and 1996 amendments to the federal Safe Drinking Water Act. With expertise in the area of groundwater resource development this subset of the Environmental Health Section also has responsibilities relative to the regulation of water withdrawals relative to the 2003, 2006 and 2008 amendments to the Great Lakes Preservation Act, Part 327 of Act 451.

The function of this lead Hydrogeologist is to provide technical expertise to DWEHD in the development and implementation of the above-mentioned programs. In this capacity, the employee reviews and approves studies and assessments for geologically complicated conditions and provides technical expertise for controversial source water resource projects. The employee is also responsible for numerous recommendations related to groundwater modeling, aquifer analysis, and groundwater resource evaluations that influence the development of source water resources throughout the state. This individual serves as a resource to staff, prioritizes work, makes recommendations on groundwater related program direction and represents DWEHD on many issues related to the development and use of groundwater.

26. What are the minimum education and experience qualifications needed to perform the essential functions of this position.

EDUCATION:

Possession of a bachelor's degree in geology, or in geological, petroleum, mining engineering, or earth science

EXPERIENCE:

Geologist 12

Three years of professional experience in carrying out geological activities to protect, develop and maintain natural resources equivalent to a Geologist, including one year equivalent to Geologist P11.

KNOWLEDGE, SKILLS, AND ABILITIES:

The employee must possess a broad range of knowledge pertinent to water resource development, water supply system operation and well construction. Expertise in the areas of aquifer test analysis, hydrogeology, groundwater contamination studies, groundwater modeling, field investigation methods and groundwater research is preferred. Extensive experience working with GIS software is highly desired. The employee must possess an ability to work with people, express thoughts orally and in writing, speak at public meetings and exhibit sufficient initiative to work without direct supervision. The ability to maintain liaison between other state and federal agencies is a plus. Knowledge and familiarity with Part 8: Groundwater Sources, Michigan Safe Drinking Water Act, Act 399, PA 1976, the Great Lakes Preservation and Aquifer Protection Acts, Parts 327 and 328 of Act 451, and the Ground Water Quality Control Act, Act 368, PA 1978 is strongly desired. Familiarity with Part 201, Environmental Remediation, and Part 213, Leaking Underground Storage Tanks, of Act 451 is beneficial. Extensive experience working with ArcGIS software.

CERTIFICATES, LICENSES, REGISTRATIONS:

Valid Michigan Drivers License is preferred.

NOTE: Civil Service approval does not constitute agreement with or acceptance of the desired qualifications of this position.

I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Supervisor

Date

TO BE FILLED OUT BY APPOINTING AUTHORITY

Indicate any exceptions or additions to the statements of employee or supervisors.

None

I certify that the entries on these pages are accurate and complete.

HEATHER KREINER

2/1/2022

Appointing Authority

Date

I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.

Employee

Date