

**MONTGOMERY COUNTY GOVERNMENT
ROCKVILLE, MARYLAND
CLASS SPECIFICATION**

**Code No. 002233
Grade 23**

WATER QUALITY SPECIALIST III

DEFINITION OF CLASS:

This is advanced level technical work in water resources and biological sciences involving monitoring surface water quality, stream habitat conditions and plant and animal species present, wetlands identification and illicit stormwater discharges into streams. Contacts include employees of other County agencies to coordinate stream sampling and evaluation of stream habitat conditions and to exchange information, environmental groups and the business community to exchange information and coordinate volunteer sampling efforts, developers and citizens to answer technical questions regarding stream quality and assist in evaluating impact of development upon stream habitat and mitigation of impact, and co-workers to coordinate work and exchange technical information. An incumbent in this class offers limited direct public service or assistance primarily involving answering questions concerning stream quality.

An employee in this class provides advanced level technical support for stream monitoring activities which are mandated by the Federal Clean Water Act by conducting and training volunteers to conduct field sampling and habitat assessment; maintaining proper data management, analytical procedures and quality control procedures; preparing reports concerning monitoring activities and stream conditions; and answering technical inquiries from citizens, environmental groups, and other County agencies concerning stream water quality and habitat conditions. The work is performed under general direction; an employee plans and carries out assignments independently. Work is evaluated for technical soundness and conformity to policy and requirements. Guidelines in the form of regulations, technical manuals and County policies and procedures are available; however, they are not completely applicable to the work and an employee uses ingenuity and resourcefulness to modify or adapt guides as necessary to accomplish the work. The complexity of the work is characterized by the analysis of information collected in field surveys using knowledge of physical, chemical and biological interactions to assess the quality of the habitat and the impact of development and/or illicit discharges on stream quality, as well as responsibility for linking database information to geographic information systems (GIS) applications.

The scope of the work directly affects the development of baseline information on stream quality and the maintenance and analysis of data used for planning purposes to assess the impact of development on stream water quality and habitat conditions. The work is primarily performed out-of-doors, along stream banks and in streams and ponds, and may involve deep or swiftly moving water or human or animal wastes from sanitary sewer leaks. There is occasionally some risk in the work involving slipping in deep or swiftly moving water, snakes and other harmful animals, exposure to chemicals used in fixing collected samples, and electric shock from a fish shocking device. Proper precautions must be taken including proper attire, boots, hand protection and proper grounding for the fish-shocking device. The work requires light physical effort such as walking over rough, uneven, slippery or rocky surfaces; bending, crouching, stooping, stretching or reaching; or occasional lifting of objects up to 50 pounds.

EXAMPLES OF DUTIES: (Illustrative Only)

- Conducts field sampling and monitoring of stream conditions in support of County baseline monitoring and National Pollutant Discharge Elimination System permitting requirements. Field sampling and monitoring activities include collecting water samples in streams and ponds for analysis of chemical and physical parameters (such as temperature, dissolved oxygen, pH, etc.); evaluation of stream flow, bank condition, and in-stream habitat conditions; and collection and evaluation of biological data on fish and various macroinvertebrates (small animals with no backbone such as crayfish, snails and insects).
- Develops and administers watershed management GIS work applications and instructs other staff on its' use.
- Trains volunteers in field monitoring and sample collection (as mentioned above), quality control procedures, data management and analytical procedures to develop useful and technically credible data on stream and habitat conditions. Helps to coordinate volunteer efforts to develop a cooperative Countywide-monitoring network.
- Provides technical information and analysis to develop data collection and quality control protocols among the interagency and volunteer participants in monitoring activities, and in the maintenance of the stream water quality databases.
- Prepares reports which address water quality and habitat conditions in County streams. Prepares data for these reports including statistical analysis of data collected.
- Answers inquiries from the public concerning stream water quality conditions and discharges from the County's municipal and industrial stormwater drainage system.
- Assists in preparing, negotiating and administering consultant monitoring and laboratory analysis support contracts by providing technical information, analysis and administrative support when the supervisor is absent.
- Performs related duties as required.

KNOWLEDGE, SKILLS AND ABILITIES:

- Considerable knowledge of stream ecology, macroinvertebrates and fish inhabiting streams, stream habitat conditions, and wetlands identification and interpretation.
- Considerable knowledge of local, State and Federal water quality standards and criteria, sampling protocol and methods of analysis of sampling data.
- Skill in water quality and biological sample collection techniques.
- Ability to interpret data collected concerning stream habitat, fish and macroinvertebrate species present, and water sample parameter results to assess condition of streams, source of water quality problems and impact of development activities upon stream habitat.
- Ability to analyze data collected, including statistical analysis.
- Ability to communicate (especially technical information) effectively, both orally and in writing, to lay and technically knowledgeable individuals and groups.
- Ability to use automation tools to access and manipulate data (e.g., Lotus 1-2-3, FOXPRO, d-Base).
- Ability to convert technical data to GIS applications and administer and maintain these databases.
- Ability to plan and coordinate work independently.
- Ability to train laypersons in technical sampling protocol to ensure data credibility.

MINIMUM QUALIFICATIONS:

Experience: Three (3) years of experience in stream water sampling and data analysis, bioassessment protocols for streams and rivers (particularly fish and macroinvertebrates), and assessment of stream habitat conditions and a minimum of one years experience using ERSI GIS software, to include

ArcView and ArcGIS.

Education: Bachelor's Degree in biology, aquatic ecology, limnology, natural resource management, environmental science or a related field from an accredited college or university.

Equivalency: An equivalent combination of education and experience may be substituted.

LICENSE:

- Possession and maintenance at all times of a valid Class "C" (or equivalent) driver's license from the applicant's state of residence when required for job-related duties.

PROBATIONARY PERIOD:

Individuals appointed or promoted to this class will be required to serve a probationary period of six (6) months, during which time performance will be carefully evaluated. Continuation in this class will be contingent upon successful completion of the probationary period.

MEDICAL EXAM PROTOCOL: Core Exam.

Class Established: June, 2005

Revised: August, 2013