

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

**Code No. 002230
Grade 26**

SENIOR WATER QUALITY SPECIALIST

DEFINITION OF CLASS:

This is technical work in water resources and biological sciences supervising an organizational unit responsible for 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, to exchange information, and to assess the impact of development upon streams; environmental groups and the business community to exchange information, develop consensus policy recommendations concerning water quality protection, 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, exchange technical information and coordinate tracking and enforcement of discharge violations. An incumbent in this class offers limited direct public service or assistance primarily involving answering questions concerning stream quality.

An employee in this class manages all elements of the Watershed Monitoring Program. This includes responsibility for supervising the daily work activities of Water Quality Specialists and volunteers who conduct field sampling and habitat assessment; monitoring stormwater structures for effectiveness which requires monitoring of runoff flows and quality in and out of structures; for ensuring and maintaining proper data management, analytical procedures and quality control; for preparing technical reports concerning monitoring activities and stream conditions; and for responding to technical inquiries from citizens, environmental groups and/or other County agencies concerning stream water quality and habitat conditions. Under general direction, the employee independently plans and carries out programmatic responsibilities and has full technical responsibility for work outcomes. An employee in this classification develops the annual operating budget to support baseline and Special Protection Area monitoring activities and prepares draft amendments to laws and regulations as required. The work is evaluated for effectiveness in meeting specified requirements and expected results. 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 the employee must use ingenuity and resourcefulness to either modify or adapt the guides as necessary, or devise protocols to meet new situations to accomplish the work. The complexity of the work is characterized by the varied duties involved in establishing and maintaining a program involving analysis of physical, chemical, and biological information collected in field surveys to assess the quality of the habitat and the impact of development and/or illicit discharges on stream quality, and maintaining credible data with a supplemental workforce of volunteer monitors who are not technically-oriented. Assignments require resourcefulness to adapt to continually changing technologies and variables that must be considered in analyzing the data. The scope of the work directly affects the development of a program to collect baseline information on stream quality and the maintenance and analysis of data used for planning purposes to assess water quality conditions and trends, determine sources and impacts of illicit discharges, and track the impact of development

activities on stream water quality and habitat conditions. Much of the work is performed out-of-doors, along stream banks and in streams and ponds which 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 deep or swiftly moving water, snakes or other harmful animals, and electric shock from a fish shocking device. Proper precautions for outdoor work must be taken including proper attire, boots, hand protection, and proper grounding for the fish shocking device. Outdoor work requires light physical effort such as walking over rough, uneven, slippery and rocky surfaces; bending, crouching, stooping stretching or reaching; or occasional lifting of objects up to 50 pounds. The remaining work is performed in an office environment.

EXAMPLES OF DUTIES: (Illustrative Only)

- Plans, develops, and manages the County baseline water quality sampling and monitoring program which is used to ensure compliance with the National Pollutant Discharge Elimination System permitting requirements regulating illicit discharges from municipal and industrial stormwater drainage systems and to determine the impact of development upon stream conditions. Field sampling and monitoring activities of this program include collecting water samples in streams and ponds for analysis of water chemistry, the presence of toxic materials, 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).
- Assigns and reviews the work of both County employees and volunteers. Enforces work standards and participates in personnel matters including employee selection, performance management, training and development, discipline, and leave approval.
- 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.
- Organizes and manages the County water quality database.
- Oversees/implements all aspects of the County Special Protection Area monitoring program.
- Develops 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.
- Serves as technical advisor to citizen and environmental groups, schools and businesses to foster establishment of volunteer stream monitoring programs to develop and coordinate a cooperative County-wide monitoring network to assess and track water quality and aquatic habitat conditions in County streams.
- Prepares reports which address water quality and habitat conditions in County streams. Prepares data for these reports including statistical analysis of data collected.
- Serves as principal point of contact for inquiries from the public, the media and County officials concerning stream water quality conditions and discharges from the County's municipal and industrial stormwater drainage system.
- Prepares, negotiates and administers consultant monitoring and laboratory analysis support contracts.
- Organizes and provides principal staff support to County interagency water quality monitoring committee and related watershed monitoring groups.
- Performs related duties as required.

KNOWLEDGE, SKILLS AND ABILITIES:

- Thorough knowledge of stream ecology, macroinvertebrates and fish inhabiting streams, stream

habitat conditions, inhibiting physical, chemical or toxics impacts on stream ecology, and wetlands identification and interpretation.

- Thorough knowledge of local, State and Federal water quality standards and criteria, physical, biological, and chemical sampling protocols and methods of analysis of sampling data.
- Knowledge of small scale stream restoration measures and the ability to conduct such restorations.
- 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 illicit discharges and 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 lead, motivate and coordinate employees and volunteer staff; to work with diverse interest groups (e.g., the agricultural community, the business community, and environmental groups) to achieve consensus policy positions and agreement on technical criteria on complex water quality and watershed management issues.
- Ability to use automation tools to access and manipulate data (e.g., Lotus 1-2-3, FOXPRO, d-Base).
- Ability to plan and coordinate work independently.
- Ability to train laypersons in technical sampling protocol to ensure data credibility.

MINIMUM QUALIFICATIONS:

Experience: Five (5) years of experience in stream water sampling and data analysis including water chemistry, flow and toxics data for baseflow and storm flow conditions; and bioassessment protocols for streams and rivers (particularly fish and macroinvertebrates) and assessment of stream habitat conditions; one year of which was in a lead worker or supervisory capacity.

Education: Bachelor's Degree in biology, aquatic ecology, limnology, natural resources 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 to a position in this class will be required to serve a probationary period of twelve (12) months and, if promoted to a position in this class, will be required to serve a probationary period of six (6) months. Performance will be carefully evaluated during the probationary period.

Continuation in this class will be contingent upon successful completion of the probationary period.

MEDICAL EXAM PROTOCOL: Core Exam.

Class Established: September 1993
Classification Study: December 2005 (M)
August 2013