MONTGOMERY COUNTY GOVERNMENT **Code No. 002232**
ROCKVILLE, MARYLAND **Grade 19**
CLASS SPECIFICATION

WATER QUALITY SPECIALIST I

DEFINITION OF CLASS:

This is intermediate professional level work in water resources and biological sciences involving monitoring surface water quality, stream habitat conditions, plant and animal species present, wetlands identification and illicit storm water discharges into streams. Contacts include employees within the department and of other County agencies for the purpose of coordinating work and the exchange of technical information. An incumbent in this class offers limited public service or assistance involving answering technical questions concerning stream water quality.

An employee in this class performs technical and developmental tasks in support of limited portions of various stream monitoring activities; successfully completes more complex field sampling and habitat assessments that are primarily of a routine or repetitive nature; progressively masters more complex data management tasks; assists in the preparation of reports concerning monitoring activities and stream conditions by preparing simple graphs, tables and charts; and prepares draft text that includes a discussion of methods, materials and results. The employee plans and carries out various phases of work assignments, handling problems and deviations in accordance with established instructions, policies, or accepted practices. Completed work is reviewed by the supervisor for technical soundness, appropriateness and conformity to requirements. Guidelines in the form of regulations, technical manuals and County policies and procedures are available, but may not cover new or unusual situations and may require some modification for certain assignments. The employee uses initiative and resourcefulness to modify, adapt or deviate from existing guidelines, recommending changes as appropriate. The complexity of the work is characterized by applying knowledge of physical, chemical and biological interactions to the analysis of field survey data to provide descriptive statistics summarizing the data. The scope of the work supports the development of baseline information on stream water quality and the maintenance of analytical data used for planning purposes in assessing the impact of development on stream water quality and habitat conditions. The work is performed primarily out-of-doors along stream banks and in streams and ponds and may involve deep or swiftly moving water or contact with human or animal wastes from sanitary sewer leaks. There is occasionally some risk in the work involving slipping in deep or swiftly moving water, encounters with snakes and other harmful animals, exposure to the chemicals used in fixing collected samples and electric shock from a fish shocking device. Appropriate safety precautions must be taken including the use of protective attire and proper grounding from 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)

- Works with stream monitoring crews under general supervision in the performance of routine tasks and under direct supervision when required for new or increasingly complex tasks.

- Conducts field sampling and monitoring of stream conditions in support of County baseline monitoring plan. Monitoring activities include the calibration, maintenance and deployment of a multi-parameter probe to record chemical and physical parameters (e.g. temperature, dissolved oxygen, pH, etc.); the survey of specific stream morphology parameters with guidance from senior crew members; the establishment and recording of measurements of stream flow and stage; the collection of nutrient grab samples; full participation in fish monitoring activities, excluding the use of backpack electroshock device; the identification of observed stream fish to species level with the aid of available taxonomic guides; the collection and processing of benthic macroinvertebrate samples; the sub-sampling of benthic macroinvertebrate samples; the identification of benthic macroinvertebrates to the family level using optical aids and available taxonomic guides; the identification of most amphibians and reptiles observed in the field with the aid of taxonomic guides. Provides data entry support. Fieldwork is generally supervised.
- Assists in maintaining quality control procedures by reviewing and editing data and analytical results; prepares routine queries and reports from the monitoring databases; develops portions of required technical information and analysis in accordance with data collection and quality control protocols among the interagency and volunteer participants in monitoring activities; completes increasingly complex tasks related to the maintenance of the stream water quality database.
- Prepares routine reports and limited portions of more complex reports which address water quality and habitat conditions in County streams. Prepares the data for these reports, including limited statistical analysis of data collected.
- Performs other related duties as required.

KNOWLEDGE, SKILLS AND ABILITIES:

- General and specific knowledge of stream ecology, macro-invertebrates, fish and stream habitat conditions. The ability to identify local fish, amphibians, reptiles and macroinvertebrates to the family level is required.
- General knowledge of local, State and Federal water quality standards and criteria, sampling protocol and methods of analysis for sampling data.
- Knowledge and skill in water quality and biological sample collection techniques.
- Ability to provide basic interpretation and statistical analysis of data collected concerning stream habitat, fish and macroinvertebrate species and water sample parameters.
- Ability to effectively communicate more technical and complex ecological concepts and principals in both written and oral formats, to a lay audience.
- Ability to use automated programs to access and to manipulate data (e.g. Excel, Word, and Access).

MINIMUM QUALIFICATIONS:

Experience: One (1) year of professional experience in stream water sampling and data analysis, bio-assessment protocols for streams and rivers (particularly fish and macro-invertebrates) and the assessment of stream habitat conditions.

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: May, 2000
Revised: October, 2007
August, 2013