

# **Water Resource Engineer Tompkins County**

**Department:** Tompkins County Soil and Water Conservation Dist.

**Classification:** Competitive

**Approved:** 08/11/2017 (TCS&WCD Resolution No. 2017-40)

**Revised:** 12/19

**By:** LG, Deputy Commissioner of Human Resources

## **MINIMUM QUALIFICATIONS:**

The applicant must possess a license to practice as a Registered Professional Engineer – preferably in New York State. The applicant would also need to maintain that license throughout the life of employment with the Soil and Water Conservation District.

Tompkins County is Committed to Equity and Inclusion. We encourage those with similar values to apply.

**NOTE:** If not currently licensed in New York State, candidate would be required to obtain a New York State Professional Engineer license within six months of appointment.

## **SPECIAL REQUIREMENT:**

The candidate must possess a valid New York state driver's license at the time of application and maintain such license for the duration of employment.

## **DISTINGUISHING FEATURES OF THE CLASS:**

This is a professional position requiring knowledge of engineering theory and principals and the ability to apply this knowledge in evaluating and preparing plans, proposals, reports, designs, specifications and estimates for complex water related engineering projects. The incumbent in this position will be responsible for design, engineering approval and construction oversight of water related conservation projects including stream restoration/stabilization design around municipal and private infrastructure, municipal storm-water management and agricultural best management practice implementation. Other duties may include writing and editing technical sections of watershed wide management plans, public outreach and education, preparation of progress reports, and coordination and cooperation with involved agencies during project design. This position is afforded a high level of autonomy and considerable latitude to exercise independent judgment and decision making in carrying out assignments. This position works under the general supervision of the Conservation District Manager and works directly with consultants, contractors, and other staff to complete assigned tasks. Supervision and oversight of consultants, contractors and staff may be required. The incumbent will perform all related duties as required.

## **TYPICAL WORK ACTIVITIES:**

- Supervises geomorphic data collection, organization, and management; assist with data analysis and the compilation of results, conclusions and recommendations.
- Performs flood routing, storm water runoff, and hydraulic and hydrologic analyses on a watershed.
- Prepares design calculations, quantity estimates, and probable cost estimates for proposed projects.
- Researches permit requirements and work with staff, contractors, landowners and cooperators to obtain permits before project implementation
- Reviews shop drawings from contractors
- Approves designs for soil and water quality restoration projects on public and other private lands.
- Supervises construction of stream restoration projects and attend all project meetings.
- Cooperates with involved local, regional, state and federal government agencies on projects and permits.
- Edits technical sections of watershed wide management plans evaluating data collection techniques, quality assurance and quality control methodologies.
- Inspects the work of consultants and contractors.
- Prepares or directs the preparation of complex project designs, proposals, specifications, estimates and contract proposals for water quality related projects.
- Maintains engineering files including the proper organizing, authorizing and archiving of those files.

- Oversees contractor construction activities to ensure conformity to contract requirements including the quality of construction in adherence to predetermined schedules.
- Attends, participates in and/or conducts public meetings.
- Attend site visits with other staff prior to design implementation.

**KNOWLEDGE, SKILLS, ABILITY AND PERSONAL CHARACTERISTICS:**

- Through knowledge of the principles, practices, theories, and procedures of environmental, water resource and/or civil engineering, applicable to a Municipal or Soil and Water Conservation District setting.
- Thorough knowledge of geomorphic principles and practices.
- Ability to use hydrologic and hydraulic modeling software such as TR-55, TR-20, Streamstats, HY8, HEC-RAS and others that may apply to project design.
- Ability to utilize design and mapping software such as AutoCAD Civil 3d, Revit, and ArcGIS.
- Knowledge of local geography and ability to recognize different hydrologic regions and properties.
- Knowledge of grant application procedures and potential funding sources.
- Thorough knowledge of construction materials, methods, standards (NYSDOT, NRCS), and tests.
- Thorough knowledge of applicable codes, laws, rules, regulations, and policies governing and impacting on design and construction, applicable to a water resource setting.
- Skill in preparing, in final form, complex plans, designs, specifications, reports, contracts and narrative technical material.
- Skill in planning, scheduling, coordinating, and evaluating design, construction and maintenance programs.
- Ability to manage others well and delegate authority to skilled staff for larger projects.
- Ability to train other staff in methods of stream survey and data collection to produce desired results for designs.
- Ability to establish cooperative relationships with subordinates, public officials, staff, and representatives of contractors, consultants, and the public.
- Ability to communicate (verbal or written) detailed instructions to contractors, staff, project managers, landowners and the public.
- Ability to evaluate complicated proposals and designs and select the most practical plan of work accomplishment.
- Ability to establish project and work priorities.
- Ability to perform independently and carry out difficult assignments.
- Ability to use computers and technical instruments, requiring considerable precision, for administrative and design applications.
- Ability to perform activities requiring physical effort (walking, climbing, lifting up to 40 lbs. or reaching).
- Ability to perform work requiring prolonged visual concentration and considerable visual effort.
- Ability to be self-motivated
- Ability to be tactful and mentally alert to issues and problems as they arise.

**PHYSICAL, MENTAL AND ENVIRONMENTAL DEMANDS:**

The employee's physical condition shall be commensurate with the demands of the position, either with or without reasonable accommodations. The employee must have the physical ability to lift up to 40 lbs, walk long distances in rough terrain and be comfortable in and around flowing water to complete the work.

The incumbent must be able to accurately manage and manipulate information, using computer software and hardware systems, with or without reasonable accommodations.

Originally created August 9, 2017

W36.DOC