

190004HC – Environmental Analyst IV - Worcester

The Massachusetts Department of Environmental Protection (MassDEP) is the state agency responsible for ensuring clean air and water, the safe management of toxics, the recycling of solid and hazardous wastes, the timely cleanup of hazardous waste sites and spills, and the restoration and preservation of wetlands, surface waters and coastal resources.

MassDEP seeks applicants for the position of Environmental Analyst IV (EA IV), TMDL Coordinator, within the Bureau of Water Resources (BWR). Under supervision of the DEP Watershed Planning Program (WPP) TMDL Section Chief or designee, the TMDL Coordinator will assist in supporting water quality modeling and interpretation of results for draft and final TMDL projects. TMDLs or alternative plans will be developed to guide both water quality protection measures as well as restoration efforts to ensure management interventions will comply with Water Quality Standards. The TMDL Coordinator will work to oversee consultants, participate in advisory committees, assist in the review of models and the development and review of TMDL reports and alternative plans, and interact with the public. Data analysis and other functions will be carried out in accordance with the Massachusetts Consolidated Assessment and Listing Methodology (CALM), Surface Water Quality Standards (314 CMR 4.00) and Sections 305(b), 314, and 303(d) of the Federal Clean Water Act (CWA).

This position will be based in Worcester at DEP's Watershed Planning and Program's Office at 8 New Bond Street.

Specific job duties include, but may not be limited to:

1. Preparation and/or review of biological, physical and chemical water quality data to determine environmental impacts to freshwater bodies or estuaries;
2. Review and interpretation of water quality modeling results produced from a variety of water quality modeling tools;
3. Conduct computer modeling, or review the results of others, to assess water quality, including flow, groundwater contribution, pollutant loadings and hydrology;
4. Conduct reviews to ensure that data quality requirements are met in conformance with QA protocols for modeling activities;
5. Develop standard methods, guidelines and protocols for watershed analysis including water quality models for TMDL evaluations in lakes, rivers and marine waters;
6. Develop work plans and review environmental consulting service proposals and contracts and recommend changes to technical specifications;
7. Review preliminary and final technical reports in order to summarize and make recommendations for revision or acceptance;

8. Determine need for surveys or investigations and assist in developing water quality monitoring plans to support TMDL development, model calibration and validation;
9. Prepare and/or review plans, specifications and cost estimates for complex TMDL development and planning projects;
10. Determine water quality monitoring needs and assist in the development of sampling plans to evaluate the effectiveness of restoration and protection measures, including post TMDL implementation activities;
11. Conduct planning activities to prioritize watersheds for protection and restoration in the Commonwealth, including TMDL development or alternative plans;
12. Ensure all agency Quality Assurance protocols and guidelines are followed;
13. Review, compile and reduce water quality data and perform necessary calculations;
14. Write technical reports and support necessary water quality modeling activities; and
15. Water quality model development and the interpretation of results produced from a variety of water quality tools (HSPF, QUAL-2E, WASP, MODFLOW, HEC-1, HEC-RAS, and SWAT).

Preferred Qualifications and Experience:

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- Knowledge of the Clean Water Act (CWA) and 40 CFR Sections 122, 131, 230, and 232
- Knowledge of the Water Quality Standards and the requirements involved with making water use attainment decisions (including CWA Sections 303(d) and 305(b) of the Clean Water Act)
- Strong experience in watershed science and analytical tools such as water quality models and other mathematical computations that are utilized in TMDL development at various scales and waterbody types
- Experience in the water quality modeling process (e.g., model development, calibration, validation and scenario analysis)
- Expertise in TMDL report writing, editing and review
- Experience interpreting complex biological, chemical, and physical data sets and statistical methods of analysis
- Knowledge of fate and transport of environmental contaminants in aquatic environments
- Knowledge of the principles of hydrology, including hydrologic cycle, groundwater flow, flood and flood control and runoff storage
- Experience in the development of project plans for water quality sampling, modeling, and TMDL planning efforts such as watershed characterization and data compilation
- In-depth knowledge of the principles and practices of environmental protection and restoration practices
- Experience identifying water quality monitoring needs and developing sampling plans to support TMDL development and restoration efforts

- Strong and effective writing, editing, and oral communication skills, including ability to successfully convey complex issues to peers and management, through writing, editing, and oral presentation;
- Ability to convey information to inform EPA, MassDEP, local government, and the general public about water quality concerns
- Ability to conduct TMDL outreach activities and stakeholder coordination, including responding to public requests and questions
- Background in quality assurance/ quality control principles
- Proficiency in the preparation of charts, graphs and tables
- Demonstrated organization and planning skills and ability to adapt to varying work situations
- Knowledge of and proficiency in MS Word, Excel, Access, and Desktop Geographic Information systems