

Department of Natural Resources
Position Description

Division of Environmental Management

Working Title: Lake and Reservoir Ecologist/Limnologist

Classification Title: Water Resources Management Specialist - Senior

POSITION SUMMARY

The Lake and Reservoir Ecologist is a high-level science and management position responsible for the statewide management of lakes, reservoirs and their watersheds. This position will develop and utilize scientific processes and community-based approaches for managing WI's lakes and reservoirs to maximize ecosystem health and resource protection. The Lake and Reservoir Ecologist is responsible for designing guidance, serving as technical consult, and providing training for district staff, environmental consultants and other management organizations involved in lake and reservoir assessment, planning, protection and restoration activities. This position will cooperatively design, conduct, and produce reports to problem solve specific and statewide lake and reservoir issues (e.g., eutrophication, habitat quality, invasive species, shoreland impacts, water use, etc.).

Maintains a high degree of professional excellence through publications, presentations, and participation in scientific, educational and policy-making forums and contributes to state and national lake and reservoir ecosystem policy determination. Works to evolve partnerships for lake and reservoir protection. This position is expected to work independently under general supervision and reports directly to the Lakes and Rivers Section Manager in the Bureau of Water Quality.

Geographic Scope & Travel Requirements: This position may be headquartered in any DNR office in WI, depending on business needs and the location of the selected candidate. This position has statewide responsibility. Some travel is required, including occasional overnight stays.

Scope of Authority: This position works under general supervision and reports to the Lakes and Rivers Section Manager in the Bureau of Water Quality.

Goals and Worker Activities

35% A. Define waterbody and watershed management goals, evaluate management outcomes and determine best management practices

- A1. Develop or revise scientific methods, procedures and management strategies to direct technical, human and monetary resources toward implementing statewide lake and reservoir management goals.
- A2. Design and develop scientific tools, manuals and guidance for assessment, protection and restoration of habitat and native flora and fauna in WI's lakes and reservoirs for professional staff, consultants and community and citizen scientists. Collaborate with fisheries, water evaluation and monitoring staff to develop standards and criteria for water quality, nutrient loading, recreational use, aquatic invasive species, habitat and

biotic integrity and use those standards and criteria to set management targets and evaluate program success.

- A3. Consult with the statewide lake and reservoir interests to identify limnological and ecological research needs for lake and reservoir management. Identify and communicate the program's research priorities to the bureau and division. Administer the department's aquatic invasive species research and demonstration grants.

35% B. Provide consultation, training, and technology transfer

- B1. Develop guidance and procedural instructions on lake and reservoir assessment, problem diagnosis, management feasibility, and protection and restoration practices. Develop and coordinate training for professional staff, consultants, community leaders and volunteers engaged in lake, reservoir and watershed protection and rehabilitation.
- B2. Respond to requests for assistance and information from water quality, fisheries and watershed managers, federal program managers, the public and community-based organizations and municipalities by drawing on existing databases and a broad knowledge of limnological principles. Lead technical review teams evaluating and advising on program-funded lake, river and watershed projects. Participate in intra- or inter- agency ad-hoc or standing teams on limnological issues as assigned by program supervisor.
- B3. Independently design and conduct statistical analyses and modeling of limnological datasets and provide limnological consulting and technical assistance. Provide management bureaus with technical information for effective statewide decision making. Coordinate or direct short-term problem-solving efforts, such as comprehensive literature reviews, solicitation of outside advisory opinions, ecological modeling and/or collection of data, to meet management and policy objectives.
- B4. Track and transmit lake and reservoir management and research program project results to management bureaus and administrators as well as to regional and national groups and citizen forums. Promote lake and reservoir protection in cooperation with other local, state and national programs. Contribute to public education and awareness programs by developing information and being a public spokesperson for the program including speaking at public meetings, providing information to the media, or participating in educational workshops. Assist in developing communication messages to the public.

25% C. Lead policy development and provide consultation on regulations, policies and emerging issues

- C1. Provide technical and scientific input and provide recommendations on the development and promulgation of the program's administrative and manual codes pertaining to the surface water grants, aquatic invasive species and aquatic plant management programs.

- C2. Interpret technical and scientific program policy for staff and customers. Document and provide findings and determinations in technical memos and reports.
- C3. Lead the review and evaluation of technically complex and challenging surface water grant and other department sponsored projects and ensure compliance with program policies and regulations.
- C4. Stay current with the science of limnology and emerging lake and reservoir management techniques and tools. Continually evaluate the adequacy of existing policy and regulations to cover changing conditions and recommend improvements as needed.

5% D. Professional Development

- D1. Maintain a high level of technical expertise by routinely reviewing the aquatic ecology and limnological literature.
- D2. Establish professional working relationships with DNR management bureaus and districts, federal agencies, state agencies, the University of Wisconsin campuses at Madison and Stevens Point and other agency ecologists and researchers.
- D3. Attend training courses, conferences, workshops and symposia. Attend formal courses as recommended on an approved training plan to develop technical and interpersonal skills.

KNOWLEDGES, SKILLS AND ABILITIES

- 1. Advanced knowledge of the ecology of Wisconsin lakes and reservoirs and aquatic systems.
- 2. Advanced knowledge of limnological field and laboratory techniques.
- 3. Knowledge of lake and reservoir models for hydrology, water quality, and ecosystem processes.
- 4. Knowledge of the principles of biological limnology, landscape ecology, and ecosystem ecology.
- 5. Knowledge of the quantitative limnological and ecological theory and techniques including common limnological data analysis methods, statistical design and analysis, and ecosystem modeling.
- 6. Knowledge of DNR administrative policies and procedures.
- 7. Skilled in writing scientific and administrative reports, computer system documentation, and educational materials.
- 8. Skilled in oral communication including scientific, training, and lay audience presentations.
- 9. Ability to work with people to educate, understand, communicate and motivate.
- 10. Ability to work in teams and partnerships.
- 11. Ability to operate IBM-PC type -processing, graphics, and database software.
- 12. Skill in operating boats.

Physical Requirements and Environmental Factors:

Strength Requirements: Sedentary work, exerting up to 20 pounds of force occasionally for no more than 10% of the time; sitting will occur over 75% of the time.

Physical Requirements: N/A

Environmental Factors: The position will spend approximately 90% of the time indoors. 10% of work time may be outdoors.

Equipment Used: Computers, audio-visual equipment, boats and motors, vehicles, trailers, limnological monitoring equipment.

Special Requirements:

Must be able to meet and maintain DOA fleet standards for eligibility of operating a state-owned vehicle.

This position will also require employees to possess a Boating Safety Education Certificate (often referred to as “Wisconsin Boating License” or “Wisconsin Boater Education Card”) as proof that you have successfully completed all state-mandated boater education requirements within the first 3 months of the job.

Remote Work: This position is suitable for remote work and will follow current department policy.