



## School of Natural Resources

### M.S. Specialization in

# Aquatic Ecology

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## PROGRAM DESCRIPTION

The Aquatic Ecology specialization is designed to provide a rigorous, focused graduate program that draws on faculty expertise in both aquatic sciences and ecology at UNL and the diversity of aquatic habitats in the Great Plains region.

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## RESOURCES/FACILITIES

The School of Natural Resources is in the newly renovated Hardin Hall on UNL's East Campus. The new building has excellent laboratory, office, and classroom facilities to support research, teaching and outreach regarding natural resources. In addition, Nebraska has a wealth of water resources, including nearly 2,000 natural Sand Hills lakes and playas, many of which are unique worldwide, the largest aquifer (groundwater reservoir) in the world, more than 5,000 wetlands, including rare saline sites near Lincoln, and more than 1,000 reservoirs and sandpit lakes across the state. With 13,013 miles of streams, Nebraska ranks 10<sup>th</sup> in the nation, including several major river systems.

Laboratory resources include the Water Sciences Core Facility Laboratories with cutting-edge analytical capabilities for trace organics such as pesticides and their metabolites, heavy metals, and stable isotopes. In addition, the Aquatic Ecology Laboratory includes an indoor microcosm facility with 32 artificial streams and 25 1,000-L tanks for experimental studies. Field facilities include Cedar Point Biological Station in western Nebraska and a system of many research sites across the state.

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## ADVISING FACULTY

Edwin Harvey	Water Chemistry / Hydrology
Kyle Hoagland	Limnology / Aquatic Ecology
John Holz	Water Quality
Aris Holz	Aquatic Ecology
John Lenters	Lake Modeling
Mark Pegg	Fisheries
Kevin Pope	Fisheries
Steve Thomas	River Ecology

In addition to School of Natural Resources faculty, there are more than 90 water science faculty and more than 30 ecology faculty at UNL, offering exceptional depth and breadth in these allied areas. Faculty in the School of Biological Sciences and the Department of Geosciences participate in this new interdisciplinary specialization.



## COURSE EXAMPLES

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Advanced Limnology  
Aquatic Botany  
Chemistry of Natural Waters  
Ecosystem Ecology  
Environmental Isotope Hydrology  
Fisheries Biology  
Fisheries Science  
Freshwater Algae

Genetic Ecology  
Ichthyology  
Lake and Reservoir Ecology and Management  
Limnology  
Population Biology  
Quaternary Ecology and Climate  
Wetlands

## ADMISSION REQUIREMENTS

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All potential SNR M.S. graduate students must meet the following minimum requirements or provide the requested information:

- A bachelor's degree with a background that includes at least one course in each of the following disciplines with a minimum of eight courses total:
  - Mathematics (must include one semester of Calculus)
  - Physics
  - Chemistry
  - Life Sciences (Agronomy, Biology, Ecology, Forestry, Wetlands, etc.)
  - Earth Sciences (Geology, Meteorology, Oceanography, Soils, etc.)
- GRE scores of 500 verbal, 620 quantitative, and 4.0 analytical writing
- TOEFL score of 600 paper-, 300 computer- or 79 web-based (applies only to international applicants for whom English is not the first language)
- GPA of 3.0 (in a 4-point system)
- Three letters of recommendation
- Statement of purpose

There are no specific requirements for this specialization beyond those necessary for admission into the School of Natural Resources graduate program; however a strong background in aquatic sciences and/or ecology is helpful.

## CAREER OPPORTUNITIES

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Our M.S. students have pursued a wide range of career paths over the past several years, including positions with state and federal agencies, natural resources districts, environmental consulting firms, and nongovernmental (nonprofit) organizations. Course work and thesis topics are coordinated closely with a student's long-term goals.

## CONTACT INFORMATION

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The University of Nebraska-Lincoln is an equal opportunity educator and employer with a comprehensive plan for diversity.

*"I appreciate the collaborative research possible in the School of Natural Resources due to faculty and graduate student efforts which encompass a broad spectrum of specializations."*

– Aris Severn