

# Watershed and Earth Systems, BS

**Department:** Watershed Sciences Department

**College:** S.J. & Jessie E. Quinney College of Natural Resources

## Overview

### About This Degree

Utah State University is the only university in the state with a college devoted to the study of natural resources, and the watershed and earth systems degree is unique in that it allows students the opportunity to integrate physics, chemistry, and biology to understand watershed systems.

Watershed science is the study of the physical, chemical, and biological processes associated with the movement of water across the landscape. Clean and adequate water supplies are essential elements of human society, and understanding the interactions between water and the rest of the world is necessary to the management of all ecosystems.

Ranked third nationally in research productivity in aquatic sciences, the department deploys experiential learning opportunities through field trips to local rivers, streams, and lakes where students can gain hands-on experience within the environments they study. Watershed scientists work throughout the nation, as well as in other developed and developing countries, with the goal of understanding, managing, and restoring water supplies, water quality, and ecosystem health.

## Career Options

With a degree in watershed and earth systems, students may pursue the following careers:

- Hydrologist
- Wetlands specialist with federal and state agencies (USDA Forest Service, US Geological Survey, US Fish and Wildlife Service, Bureau of Reclamation, etc.)
- Conduct field research and analyses for private consulting firms
- Managing watersheds or wetlands for nonprofit organizations, conservation districts, state agencies or EPA
- Environmental scientist
- Fishery biologist

[Career Services](#) provides counseling and information on hundreds of job and internship opportunities and even helps students apply and interview.

## What it takes

### Admissions Requirements

In addition to Utah State University's [admissions requirements](#), the watershed and earth systems program has additional requirements:

- **Freshman:** New freshmen admitted to USU in good standing qualify for admission to this major.
- **Transfer Students:** Transfer students from other institutions or from other USU majors need a 2.5 total GPA for admission to the major.
- Special attention will be given to the amount of, and performance in, prerequisite math and science courses.

International students have [additional admissions requirements](#).

### Major Requirements

[Click here](#) to see course requirements for the **Bachelor of Science**.

## Contact

## Advising

All new USU students participate in a [New Student Orientation](#) program, where they receive detailed information about major requirements, registering for classes, and other important advising information.

### **Patrick Belmont**

Assistant Professor

**Office:** NR 350

**Phone:** (435) 797-3794

**Email:** [patrick.belmont@usu.edu](mailto:patrick.belmont@usu.edu)

### **Mykel Beorchia**

Academic Advisor

**Office:** NR 120

**Phone:** (435)797-2473

**Email:** [mykel.beorchia@usu.edu](mailto:mykel.beorchia@usu.edu)

## Get Involved

### Professional Organizations, Honor Societies, and Clubs

**American Fisheries Society:** The mission of the American Fisheries Society is to improve the conservation and sustainability of fishery resources and aquatic ecosystems by advancing fisheries and aquatic science and promoting the development of fisheries professionals.

**American Geophysical Union:** The American Geophysical Union is dedicated to furthering the geophysical sciences through the individual efforts of its members and in cooperation with other national and international scientific organizations.

**Aggie Recyclers:** Aggie Recyclers is a club designed to serve the community and the environment, accomplished through educating people how to live in a sustainable way. The club is very involved with recycling on campus as well as promoting other sustainable practices. In addition to raising awareness, members also participate in a variety of service activities.

**Fisheries Club:** This club improves the conservation and sustainability of fishery resources and aquatic ecosystems, provides networking experiences and financial support to students in fisheries-related fields, and promotes continued education to fisheries professionals and the community.

**Student Organization for Society and Natural Resources:** SOSNR was established in 2003 to promote opportunities for service in the community, provide forums for individuals to present research, and give students opportunities to participate in conferences to help further their academic careers.

**Student Sustainability Council:** The Student Sustainability Council is a student organization devoted to promoting sustainability on campus, educating the student body and the local community, and giving students the opportunity to serve in areas related to sustainability.

### Labs, Centers, Research

With the second oldest [undergraduate research](#) program in the nation, USU offers students a wide range of opportunities to gain hands-on research experience. The [Undergraduate Research and Creative Opportunities](#) program allows students to apply for grants and receive funding. USU's [Honors Program](#) prepares students for excellent graduate programs by helping them build relationships with professors, participate in research projects, take smaller, more intensive classes, and develop leadership skills.

**Ecology Center:** The Ecology Center is an administrative structure in the university that supports and coordinates ecological research and graduate education in the science of ecology and provides professional information and advice for decision makers considering actions that affect the environment. The Ecology Center at USU has had a string of directors known nationally and worldwide as premier scientists in the field of ecology, and students graduating with a degree in ecology are able to make important contacts with influential faculty that can help them go on to prestigious post-doctoral programs and faculty positions at universities around the world.

**S.J. and Jessie E. Quinney Natural Resources Research Library:** The Quinney Library maintains collections of materials pertaining to natural resources and the environment in a number of formats that support the programs of study and research in the College of Natural Resources and several partnering centers. The library has more than 60,000 items, both print and electronic, as well as videos, images, and more.

**Utah Botanical Center:** The UBC, located in Kaysville, Utah, is home to research and demonstration projects focused on sustainable living in the Intermountain West. Studies of water conservation, horticulture, water quality enhancement, wetland ecology, integrated pest management, urban forestry, agriculture, fish and wildlife, highway enhancement, and storm-water management combine to make the center a living laboratory.

**Utah Transportation Center:** The UTC uses its expertise in natural hazards to research congestion chokepoints, evacuation occurrences, infrastructure renewal, and operations as it relates to multi-modal transportation.

**Utah Water Research Laboratory:** The UWRL works on nearly 250 water-related projects a year and has projects in all of Utah's 29 counties and more than 40 countries. The lab is one of the go-to places that addresses the technical and societal aspects of water-related issues, including quality, quantity, and distribution of water.

**Water Initiative:** Utah State University supports a broad community of students and faculty engaged in water education, research, and outreach. The USU Water Initiative provides an overarching umbrella for the activities of this community aimed at fostering interdisciplinary collaboration and collegial sharing of ideas related to water across the departments and colleges of USU.