

# Michaela R. Lowe

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## EDUCATION

### University of Washington

M.S. in Aquatic and Fishery Sciences

Seattle, WA

September 2017 – Present

### College of Charleston

B.S. in Marine Biology with Spanish Minor

Charleston, SC

May 2014

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## PROFESSIONAL & RESEARCH EXPERIENCE

### University of Washington

Graduate Research Assistant

Seattle, WA

September 2017 – present

- Major advisor: Dr. Daniel Schindler
- Assessing the variation in geochemical tracers of river waters and fish fin rays to infer movement patterns of threatened bull trout among different habitats using a non-lethal approach.

### South Puget Sound Salmon Enhancement Group

Fish Biologist

Lacey, WA

July 2019 – present

- Leading a project assessing the variation in geochemical tracers of river waters and resident fish species in the Puyallup River basin.
- Duties include leading field data collection efforts, preparing all river water and calcified structure samples in the laboratory prior to solution based inductively coupled mass spectrometry analyses, performing statistical analyses, and writing technical reports.

### University of Washington's Alaska Salmon Program

Research Technician

Bristol Bay, AK

August 2018

- Monitored salmon populations in the Wood River system using salmon spawner surveys, stream resident fish diet sampling, otolith extractions, limnology data collection, and juvenile fish population surveys.

### U.S. Fish and Wildlife Service

Biological Science Technician, GS-0404-05

Lacey, WA

July 2017 – August 2018

- Monitored the migration of bull trout in the White River through radio telemetry and passive integrated transponder (PIT) tagging studies and fin ray microchemistry.
- Supported federal, state, and tribal partners in assessing river and estuary species composition in response to the removal of the Elwha and Glines Canyon Dams in the Elwha River.

### U.S. Fish and Wildlife Service

Independent Contractor

Lacey, WA

September 2016 – June 2017

- Monitored bull trout using radio telemetry to assess the potential impacts of the Mud Mountain Dam and Buckley Diversion Dam on migration and survival in the White River.
- Organized daily radio telemetry tracking events in remote wilderness and urban areas via river floats, hikes, bikes, and vehicles using Lotek SRX receivers.
- Collected, managed, and summarized data from fixed telemetry sites and daily tracking data.

### U.S. Fish and Wildlife Service

AmeriCorps Service Member as Conservation Scientist/Educator

Lacey, WA

September 2015 – July 2016

- Developed and implemented education programs focusing on salmon and watershed ecology curriculum for over 700 K-12 students in classrooms, festivals, and workshops throughout western Washington.
- Supported numerous aquatic and terrestrial research projects including fish population studies, spawner, snorkel, and electrofishing surveys, food web and sediment sampling, native plant restoration, and hatchery biological sampling.
- Recruited, trained, and managed volunteers for a habitat restoration project that restored 3 acres of forest and pasture areas into a city park through invasive species removals and native plantings.

### Florida Fish and Wildlife Conservation Commission

Spatial Analysis Intern

St. Petersburg, FL

October 2014 – February 2015

- Assisted the development and management of the Geospatial Assessment of Marine Ecosystems (GAME) ArcGIS mapping project and database used to identify, inventory, and catalog research related to biological, chemical, geomorphological, physical, and human use activities research the Gulf of Mexico.

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- Supported new website development for the GAME database aimed to increase accessibility to scientific research in the Gulf of Mexico.

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## TEACHING EXPERIENCE

### University of Washington

Teaching Assistant

- Fisheries Ecology Spring 2019
- Limnology Fall 2019
- Topics in Sustainable Fisheries Winter 2020

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## GRANTS AWARDED

### The American Fisheries Society

- Amount awarded: \$1,000
- C. Jeff Cederholm Scholarship

### The U.S. Fish and Wildlife Service

- Amount awarded: \$102,000
- Independent graduate research funding for collaborative project with the University of Washington and the Western Washington Fish and Wildlife Conservation Office.

### The National Park Service

- Amount awarded: \$10,000
- North Coast and Cascades Research Learning Center (Project Support)

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## TECHNICAL REPORTS & PRESENTATIONS

- **Lowe, M.R.** 2020. Reconstructing the migratory patterns of bull trout using geochemical tracers. Invited oral presentation at the American Fisheries Society Western Division Annual General Meeting. (Cancelled due to Covid-19).
- **Lowe, M.R.** 2018. Evaluating geochemical tracers in fish fin rays: a non-lethal approach for threatened species. Oral presentation at the University of Washington's School of Aquatic and Fishery Sciences Graduate Student Symposium. Seattle, WA. (Awarded People's Choice Award)
- **Lowe, M.R.** 2018. Evaluating geochemical tracers in fish fin rays: a non-lethal approach for threatened species. Oral presentation at the Washington Cooperative Fish and Wildlife Research Unit's Annual Student Symposium. Seattle, WA.
- **Lowe, M.R., R. A. Lofgren, R. J. Peters & B. Wright.** 2018. Inferring movements of bull trout using geochemical signatures in Mount Rainier National Park. Resource brief for The National Park Service's North Coast & Cascades Research Learning Center. Sedro-Wooley, WA.
- **Lowe, M.R.** 2015. Mercury concentrations in bivalve tissue samples throughout the Gulf of Mexico from 1986 – 2012. Oral presentation at Florida Fish and Wildlife Conservation Commission's Fish & Wildlife Research Institute. St. Petersburg, FL.

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## PROFESSIONAL SKILLS

- Proficient in ArcGIS, R Programming, Microsoft Office Suite
- Adept at general aquatic field collection techniques
- Experience with inductively coupled plasma mass spectrometry (single and multi-collectors) and preparation of calcified structures
- Whitewater Rescue Technician and Wilderness First Aid certifications
- Language: Spanish (intermediate)

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## VOLUNTEER ACTIVITIES

- Little Bit Therapeutic Riding Center
- Special Olympics
- Northland Therapeutic Riding Center