

## JACLYN MCGUIRE

SOUTH DAKOTA DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES  
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### EDUCATION

#### Bachelor of Science

*University of Wisconsin - Madison*

Sept 2007 – May 2011

- Major: Genetics, Zoology
- Certificate: Integrated Liberal Studies

#### Graduate Work Toward Master of Science

*Montana State University*

Jan 2014 – Dec 2016

- Fisheries and Wildlife Management

### EXPERIENCE

#### **Environmental Scientist**

July 2019 – Present

*Department of Agriculture and Natural Resources – Pierre, SD*

- Investigate, analyze, and determine if cleanups have met state requirements.
- Oversee and manage all data within the Environmental Events Database.
- Analyze and review reports to identify potential sources of contamination and determine their risk to the environment and human health.
- Coordinate spill site visits including soil and water sample collection.
- Prepare summaries and technical reports to determine compliance of state rules and regulations in relation to regulated substance releases.
- State representative for the Region VIII Regional Response Team.
- Represent the Department lobbying on behalf of the state's Industrial Hemp Program during legislative session.
- Primary contact for after-hours reports of regulated substance releases.

#### **Laboratory Assistant**

Jan 2017 – June 2018

*Texas State University – San Marcos, TX*

- Completed monthly field sampling trips collecting water quality samples analyzing conductivity, turbidity, and chlorophyll content.
- Designed and completed independent laboratory project about mussel movement in

response to dewatering events.

- Performed microscopic analysis of juvenile mussels and mussel gonad fluids.
- Edited and published results from the mussel movement project in *Freshwater Biology*.
- Collaborated with local state and federal agencies and other universities to collect mussels and eDNA water samples.
- Entered data for multiple projects for various students and organized data entry databases.
- Organized laboratory and inventoried items in the lab.

**Graduate Research Assistant**

Jan 2014 – Dec 2016

*Montana State University – Bozeman, MT*

- Performed laser ablation inductively coupled plasma mass spectrometry on fish otoliths, fin rays, and scales.
- Collected water samples for conductivity and analyzed isotope concentrations with a mass spectrometer.
- Presented thesis findings at the Western Division of American Fisheries Society
- Wrote project thesis, proposals, and annual reports and designed thesis research project.
- Drafted budget proposals and completed IACUC reports for my project.
- Coordinated and organized field and lab work with multiple agencies.
- Created maps using ArcGIS.
- Supervised volunteer undergraduate students in laboratory setting.

**Graduate Teaching Assistant**

Jan 2016 – Dec 2016

*Montana State University – Bozeman, MT*

- Prepped laboratory experiments including making agar, chemical solutions, and ran PCR samples.
- Taught three, two-hour long sections with 20 students weekly.
- Covered introductory biology topics ranging from photosynthesis to gel electrophoresis including lectures and hands-on experiments.
- Held office hours weekly and provided support for students.

**Aquatic Habitat Technician**

May 2013 – Oct 2013

*Wyoming Game and Fish Department – Laramie, WY*

- Taught water chemistry analysis to students with Trout Unlimited.
- Assisted in stream habitat restoration construction using survey equipment.
- Measured water levels and flow of irrigation ditches.

- Completed data entry in state agency databases.
- Created photo point catalogue of habitat restoration project.
- Created maps and analyzed data in All Topo V7 Pro.
- Performed backpack electroshocking and boat electroshocking to analyze fish populations in streams and lakes, respectively.

**Brucellosis Technician**

Sept 2013 – Dec 2013

*Wyoming Game and Fish Department – Cody, WY*

- Collected tissue samples from harvested elk and deer for brucellosis analysis.
- Communicated to the public about wildlife diseases.
- Assisted hunters in the field with questions about department policies.

**Fisheries Technician**

Jan 2013 – May 2013

*Wyoming Game and Fish Department – Cody, WY*

- Aged bony structures of walleye including otoliths and scales.
- Performed statistical analyses with fisheries population data.
- Created maps and analyzed data in All Topo V7 Pro.
- Organized applicant information for fisheries technicians and contacted references of applicants.

**Fisheries Technician**

June 2012 – Oct 2012

*National Park Service – Yellowstone National Park, WY*

- Deployed and retrieved gill nets to collect invasive Lake Trout in Yellowstone Lake.
- Led crews in daily gill netting operations including operating large boats greater than 30 feet, ensuring crew safety, deciding where to deploy nets, and managing the daily schedule.
- Repaired gill nets and catalogued inventory.
- Completed data entry in agency databases.
- Reviewed and edited Arc GIS maps showing gill net placements.

**Sea Lion Observer Intern**

Jan 2012 – May 2012

*Army Corps of Engineers – Cascade Locks, OR*

- Observed and recorded sea lion feeding behavior including species identification of prey via binoculars.
- Assisted with tagging, branding, and necropsies of sea lions.
- Created and catalogued identification markers for individual sea lions present at Bonneville Dam.
- Communicated to the public and represented the agency regarding observation efforts.

**Fisheries Intern**

Aug 2011 – Oct 2011

*National Park Service – Yellowstone National Park, WY*

- Deployed and retrieved gill nets to collect invasive Lake Trout in Yellowstone Lake.
- Performed barge and backpack electroshocking to remove nonnative invasive species in small, high elevation creeks.
- Repaired gill nets and catalogued inventory.
- Completed data entry in agency databases.

CERTIFICATIONS

South Dakota Petroleum Release Remediator	March 2023
• South Dakota Board of Technical Professions	
First Aid, Adult CPR/AED	February 2022
• Red Cross	
Leadership SD – State Government	December 2021
• Leadership South Dakota	
40 Hour HAZWOPER Certification	October 2019
• TIS Environmental Inc.	
Incident Command System Training – 100.C, 200.C, 700.B	August 2019
• Department of Homeland Security	
Electrofishing Safety	June 2016
• Montana Fish, Wildlife, and Parks Department	
Motorboat Operators Certification Course	June 2012
• Department of the Interior	

AWARDS

- 2020 South Dakota State Employee Recognition
- 2015 Jim Belsey Scholarship
- 2011 Towell Creativity Award and Scholarship