

Jennifer L. Chutz

Montana Natural Heritage Program
Ecologist/Project Manager

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PROFESSIONAL EXPERIENCE

Ecologist / Project Manager

November 2015 – Current

Montana Natural Heritage Program

Helena, MT

I develop and implement projects to document the distribution, dynamics and management of Montana's ecological diversity, especially wetland ecosystems, using field-based measurements, species and community surveys, and remotely-sensed data. Working with other MTNHP staff, I use ArcGIS desktop software, database software, and statistical packages to analyze geospatial relationships between land use, land cover variables and ecological integrity of wetland, upland and aquatic ecosystems. As a project manager on state and federal contracts, I write grant proposals, oversee budgets and deliverables, and prepare reports and documentation. I integrate data into spatial and tabular databases and map layers, produce reports and information summaries for presentations, publications, and the internet, and provide training, consultation and expertise on the assessment, status and management of ecological systems and communities. I also oversee field work planning, summer field crews, conduct ecological assessments and perform plant surveys, especially for rare wetland species. I produce and update ecological systems descriptions for Montana wetland and riparian ecosystems. I regularly collaborate with state, federal, and tribal colleagues to share information and ascertain our mutual professional needs and goals in order to develop and complete projects. I participate in statewide, regional and national multi-agency teams to ensure consistency in classification, mapping and assessment efforts that cross jurisdictional boundaries and am an active member of the Montana Wetland Council.

Wetland Ecologist, Owner

August 2012 – November 2015

DCI West Biological Consulting, LLC

Whitefish, MT

I founded DCI West to provide management-oriented biological consulting services to natural resource agencies and organizations. My work focused on wetland monitoring and restoration planning, environmental analyses, natural resource management recommendations, and project coordination. I provided technical assistance on all aspects of wetland ecology, including biology of waterbirds and aquatic invertebrates, vegetation identification and management, hydric soils, and hydrology, wrote scientific reports, and prepared materials for public outreach. As a business owner, I was responsible for all aspects of day to day business operations, marketing, tax reporting, budgeting, long-term planning, and completing contract requirements in a timely manner. Selected projects include:

- Performed a NEPA Biological Assessment for an Idaho Transportation Dept. (ITD) highway project where I assessed effects to ESA listed species and their habitat, and collaborated with state and federal biologists and ITD to modify project activities to reduce potential wildlife impacts.
- Analyzed 30 years of state-wide biannual waterbird survey data, summarized wetland vegetation information and its importance to waterbirds, and helped create a ranking system for prioritizing wetland restoration in the state of Hawaii for the Hawaii Wetland Joint Venture.
- Gathered GIS data from NHD, NWI, NED, SSURGO, USGS geology, etc., synthesized management documents, and gleaned online sources to create informative, technical wetland descriptions in a format that engages the general public for the online Hawaii Wetland Information Network through the Hawaii Wetland Joint Venture.
- Assisted the USFWS to improve the functionality of the state of Hawaii's waterbird survey Access database and spatial database. This has involved entering nine years of biannual field data, digitizing and editing GIS polygons, attribute tables, and maps, and helping both state and federal agencies

improve the overall process and products of these surveys and databases.

- Worked with Management and Engineering Technologies International, Inc. on several USFS contracts, including technical assistance with their Inventory, Monitoring & Assessment Program, Ecosystem Management Coordination Program, and a new Wilderness Technical Guide.

Wetland Ecologist, Botanist

June – August 2012, 2013, and 2014; July 2015

Montana Natural Heritage Program

Helena, MT

I conducted wetland assessments across western Montana in two-person teams to describe a wide variety of wetland ecological communities, including fens, intermontane potholes, emergent marshes, wet meadows and forested wetlands. In 2012, 2014 and 2015, I acted as the lead botanist on these assessments, identifying Rocky Mountain flora to species using dichotomous botanical keys in a standard sampling scheme. I also sampled field indicators of hydric soils, ascertained local and landscape hydrologic features, classified wetlands using Cowardin, HGM, and Ecological Systems, and collected a variety of other environmental data to determine anthropogenic disturbances to the wetland. Acting as a crew leader, I managed day-to-day field operations, maintained equipment, oversaw data integrity in the field, identified potential sites with topographic maps, aerial photographs and GPS units, and contacted landowners to ensure access. I also co-authored two reports and wrote the ecological description for the Intermontane Pothole system (in progress). Other work for MTNHP involved photointerpreting aerial imagery to verify whitebark pine stands, and conducting field work in prairie habitats to support ecological site descriptions.

Wildlife Biologist

March 2009 – March 2012

U.S. Forest Service, Caribou-Targhee N.F., Ashton/Island Park R.D.

Island Park, ID

As the district biologist, I provided critique and technical advice on the development of over a dozen projects including habitat restoration, range allotment reviews, and timber harvest projects, evaluating their potential impact on dozens of wildlife species subject to state and federal protection. This required evaluating alternative actions, analyzing applicable inventory results and research to formulate proposed mitigation efforts, consulting with the USFWS, and preparing Biological Assessments in accordance with NEPA. I used ESRI GIS products for both project analysis and map creation. I regularly assisted with hands-on grizzly bear research and management activities, and conducted winter surveys for owls and furbearing mammals as part of the Forest monitoring program. I gave public education presentations on wetlands, waterfowl, invertebrates, living with wildlife, and citizen science, and interacted daily with the public about general wildlife information and specific management issues. I tracked my wildlife budget and created end of fiscal year program accomplishment reports. I regularly worked with state and federal resource management agencies and conservation NGO's for project-related tasks, field work, data exchange and meetings.

Graduate Student/Research Assistant

January 2004 – May 2011

South Dakota State University, Department of Natural Resource Management

Brookings, SD

I developed my research project, "Relationships among aquatic macroinvertebrates, endangered waterbirds, and macrophytes in taro lo'i at Hanalei National Wildlife Refuge, Kauai, Hawaii" from the ground up with my advisor, formulating the objectives, determining sampling strategies, and coordinating logistics. Ten months of daily field work alongside a full-time technician included surveys of Hawaiian and migratory waterbirds, wetland vegetation, abiotic conditions, and aquatic macroinvertebrate sampling in Hawaiian taro fields and managed wetlands. I enriched my background information with several years of wetland and other natural resource classes and spent over 2.5 years in the lab sorting and identifying nearly 95,000 invertebrates while supervising a crew of up to 6 technicians. In the midst of working as a full-time biologist for the Forest Service, I synthesized complex

biological field data via extensive statistical analysis (SigmaPlot, JMP) and conducted a thorough literature search to develop the management recommendations in my thesis.

Laboratory Teaching Assistant

September 2006 – May 2007

South Dakota State University, Department of Biology and Microbiology

Brookings, SD

As the teaching assistant for both ‘Introduction to Biology’ and ‘Introduction to Botany’, I taught laboratory classes to undergraduate students which involved preparing and giving classroom-style presentations and hands-on labs. I collaborated weekly with professors and other instructors over teaching material and style, gave and graded weekly exams, and enjoyed interacting with students.

Field Technician: Wetland and Waterfowl Research

April 2003 – October 2003

Univ. of Missouri & U.S. Forest Service, Caribou-Targhee N.F., Ashton/Island Park R.D. Ashton, ID

I worked in the Greater Yellowstone Ecosystem conducting statistically robust surveys of waterfowl and other waterbirds from spring migration through breeding, molting, staging and fall migration, recording their habitat use and behavior, and mapping their locations on aerial photographs. I surveyed submerged and floating leaved vegetation, sampled above and below ground biomass, monitored wetland abiotic factors (i.e., water quality, soils), mapped the duration and extent of wetland flooding using GPS units, and entered and performed QA/QC on collected data.

Field Technician: White-tailed Deer Research

May 2002 – August 2002

Michigan State University, Fisheries and Wildlife Department

East Lansing, MI

I worked in a two-person team to capture, radio-collar, and collect data on white-tailed deer fawns in southeast Michigan. I used radiotelemetry (Yagi and Omni antennae) to track fawns and adult deer.

Professional Meetings, Presentations, and Activities:

Conference Presenter

Montana Wetland Council/Northwest Science Association meeting – Missoula, MT

March 2014 – "Groundwater-dependent wetlands in western Montana forests"

The Wildlife Society National Chapter – Waikaloa, Hawaii

November 2011 – “Relationships among aquatic macroinvertebrates, endangered waterbirds, and macrophytes in taro lo’i at Hanalei National Wildlife Refuge, Kauai, Hawaii

Hawaiian Wetlands and Waterbird Workshop – Kaneohe, Oahu, HI

October 2011 – “Relationships among aquatic macroinvertebrates, endangered waterbirds, and macrophytes in taro lo’i at Hanalei National Wildlife Refuge, Kauai, Hawaii”

Midwest Fish and Wildlife Conference – Omaha, NE

December 2006 – “Macroinvertebrate communities in tropical wetlands and taro loi and their relation to endangered waterbirds”

Workshop Co-Instructor and Presenter, Classroom and field settings

Montana Department of Environmental Quality and Montana Natural Heritage Program, Helena, MT

“Field Course in Wetland Plant Identification”: Kalispell MT, 6/14

Wetland Management and Educational Services, Inc. (WETMES), Dr. Leigh Fredrickson

“Aquatic Plant Ecology & Management”: NM, 10/08; SD, 9/08; HI, 11/07

“Aquatic and Semi-Aquatic Invertebrate Ecology, Monitoring, and Association with Vegetation”:
NM, 10/08; SD, 9/08; OK, 5/08; HI, 11/07

“Aquatic Invertebrate Associations with Waterfowl”: NM, 10/08; SD, 9/08; OK, 5/08

Publications and Reports

Vance, L., C. Tobalske, J. Chutz and K. Zaret. 2015. Headwater wetlands in the Missouri River Basin of southwestern Montana: Characterization and description of their extent, distribution and condition. Report to the U.S. Environmental Protection Agency. Montana Natural Heritage Program, Helena, MT.

Newlon, K., L. Vance, M. Hart, J. Chutz and J. Hahn. 2015. Estimating wetland condition locally: An intensification study in the Blackfoot and Swan River watersheds. Report to the U.S. Environmental Protection Agency. Montana Natural Heritage Program, Helena, MT. (In progress)

Gutscher-Chutz, J. 2011. Relationships among aquatic macroinvertebrates, endangered waterbirds, and macrophytes in taro lo'i at Hanalei National Wildlife Refuge, Kauai, Hawaii. M.S. thesis. South Dakota State University, Brookings, SD. 243 pp. <http://www.sdstate.edu/nrm/publications/theses.cfm>.

Reviewer

May 2014 – Reviewed several dozen abstract submissions for presentation at The Wildlife Society 2014 national conference, Pittsburgh, PA.

March 2008 – Reviewed Molnár et al. 2009. Influence of flooding and vegetation patterns on aquatic beetle diversity in a constructed wetland complex. *Wetlands* 29(4):1214-1223.

Professional Involvement

October 2015 - Current: Vice-President, Wetlands Working Group, The Wildlife Society. Relay monthly relevant wetland news, policy, or research stories to members via newsletters, website, Facebook and email. Participate in monthly board meetings and contribute to official comments made on major wetland policies such as the recent Waters of the U.S. Rule.

July 2013 - October 2015: Secretary/Treasurer, Wetlands Working Group, The Wildlife Society. Responsibilities include those listed above.

September 2014 - Current: Editorial Advisory Board, The Wildlife Professional (membership magazine of The Wildlife Society). Help guide magazine content by reviewing articles, participating in quarterly conference calls, making recommendations of story ideas, articles, authors, etc...

Member, Society of Wetland Scientists

GENERAL SKILLS & ABILITIES

Office:

Word Processing:	MS Word	GIS:	ArcGIS 10.3.1
Presentation:	MS Powerpoint	Data Analysis:	JMP 8, SigmaPlot
Spreadsheet:	MS Excel, Google Sheets	Graphing:	SigmaPlot 10.0
Database:	MS Access	Notes:	MS OneNote

Field:

GPS data collection with Garmin units	4WD driving in all manner of conditions
Multi-day backpacking surveys, on and off trail	Safe snowmobile use, on and off trail
Topographic map reading, orienteering, and backcountry navigation	CPR, First Aid

EDUCATION

M.S., Wildlife and Fisheries Sciences

South Dakota State University – Brookings, SD 57007
Graduated May 2011, Cumulative G.P.A.: 4.0000

B.S., Environmental Science and Management

Michigan State University, Lyman Briggs School – East Lansing, MI 48824
Graduated December 2002, Cumulative G.P.A.: 3.9067

Relevant Coursework (B.S. & M.S.):

Ecology	Aquatic Ecosystem Mgmt.	Biogeochemistry
Grassland Fire Ecology	Upland Ecosystem Mgmt.	Microbiology
Restoration Ecology	Waterfowl Ecology & Mgmt.	Genetics
Wetland Ecology	Aquatic Entomology	Entomology
Conservation Biology	Anatomy/Biology Vertebrates	Aquatic Plants
Environment & Policy	Organismal Biology	Geology
Environment & Society	Cell & Molecular Biology	Statistics I & II
Natural History & Conserv.	Inorganic & Organic Chemistry	GIS

PERSONAL INTERESTS

Fly-Fishing	Running	Traveling	Downhill Skiing	Camping
Hunting	Hiking	Quilting	Cross-country Skiing	Snowmobiling
