

Katelyn P. Driscoll

Research Ecologist

USFS Rocky Mountain Research Station

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333 Broadway Blvd SE, Albuquerque NM 87102

Education

University of New Mexico, Albuquerque, NM August 2018 – Present
PhD Candidate in Biology

University of Montana, Missoula, MT June 2013 to May 2015
Master of Science in Systems Ecology

Gonzaga University, Spokane, WA August 2006 to May 2010
Bachelor of Science in Biology, minor in Spanish

Professional Experience

USDA Forest Service, Rocky Mountain Research Station, Albuquerque, NM July 2018 – Present
Research Ecologist, GS-0408-12

- Develop and deliver scientific knowledge, technology, and tools that enable managers and members of the public to restore and sustain forests and grasslands
- Plan, organize, and conduct research, assessments, and literature reviews within focus areas of the Maintaining Resilient Dryland Ecosystems program including understanding disturbances and stressors, reducing risk, and increasing resilience and resistance, developing restoration tools and materials, restoring ecosystems, controlling invasive species and recovering native species, and emerging, cross-cutting science to provide information and tools for management and research
- Research drivers and stressors to riparian, aquatic, and groundwater-dependent ecosystems, the current condition of these systems in relation to natural range of variation, and their resistance and resilience to anthropogenic and natural disturbance
- Research impacts of upland and valley bottom restoration treatments to riparian and aquatic systems

USDA Forest Service, Rocky Mountain Research Station, Albuquerque, NM July 2016-July 2018
Ecologist, Presidential Management Fellow, GS-0408-11

- Develop and deliver scientific knowledge, technology, and tools that enable managers and members of the public to restore and sustain forests and grasslands
- Plan, organize, and conduct research, assessments, and literature reviews within focus areas of the Grassland, Shrubland, and Desert program including understanding effects of interacting disturbance, developing tools to restore ecosystems, and improving understanding of climate change and climate variability
- Research drivers and stressors to riparian, aquatic, and groundwater-dependent ecosystems, the current condition of these systems in relation to natural range of variation, and their resistance and resilience to anthropogenic and natural disturbance
- Completed requirements of Presidential Management Fellows program including co-chairing Recruitment and Orientation Committees, completing 160 training hours, and completing a 4 month developmental assignment
- Serves on Region 3 Interdisciplinary Science Team to provide Riparian, Aquatic, and Systems Ecology expertise and to co-manage the production of science with experts in the National Forest System
- Serves on R3 Riparian and Aquatic Ecosystem Strategy Team and member of Riparian and Aquatic Existing and Desired Conditions working group

- Serves on Advisory Board for National Aquatic Biodiversity Assessment
- Served on Technical Advisory Committee for the Middle Rio Grande Wetland Mapping and Classification project

**USDA Forest Service, Salmon-Challis National Forest, Salmon, ID
Ecologist (detail), GS-0408-11**

May 2017-Sept 2017

- Participated and contributed in the role of Ecologist for the Forest Plan Revision Team
- Coordinated and led riparian, aquatic, and groundwater-dependent ecosystem assessment for forest plan revision
- Provided advice and reviews for Terrestrial Ecosystem assessment for forest plan revision
- Shadowed Fisheries and Wildlife program leads and Forest Supervisor
- Participated in and contributed to annual Pacfish-Infish Biological Opinion review with FS managers and representatives from state and federal agencies.

**DOI U.S. Geological Survey, Wyoming-Montana Water Science Center, Helena, MT
Hydrologic Technician, GS-1316-05**

Nov 2015-July 2016

- Gathered water quality, discharge, and river stage data
- Maintained gage house equipment and rating curves at 18 USGS stream gages
- Completed statistical analyses and wrote reports to be used by the International Joint Committee in modeling natural flow at the U.S.-Canada border

**Institute on Ecosystems, University of Montana, Missoula, MT
Research Assistant**

June 2013-May 2015

- Studied how geomorphology and hydrology interact to create ecological complexity across a floodplain
- Designed observational study, aided in collection of high resolution digital imagery from a small plane, maintained large geospatial database
- Used Erdas Imagine and ArcGIS to identify, measure, and map aquatic and floodplain habitats throughout the course of a flood event
- Communicated research findings to government and non-profit partners, public audiences, and the scientific community via presentations and publications
- Oversaw a field crew in the execution of gathering, organizing, and processing field data.
- Planned and organized numerous weeklong field trips, including managing equipment, coordinating with land owners, and reserving lodging

**USDA Forest Service, PIBO Effectiveness Monitoring Program, Leadore, ID
Fisheries Biology Technician (seasonal), GS-0404-5**

May 2012-Oct 2012

- Collected information on a variety of stream attributes including habitat, channel geometry, streambank characteristics, substrate, gradient, water chemistry, macroinvertebrates, and large woody debris
- Conducted grazing impact surveys
- Organized and submitted data in timely fashion
- Led crews on 8 day backcountry hitches

**USDA Forest Service, Rocky Mountain Research Station, Missoula, MT
Fisheries Biology Technician (seasonal), GS-0404-5**

May 2011-Sept 2011

- Electroshocked and identified fish and amphibians in the field
- Collected DNA samples from fish and amphibians
- Organized and maintained datasheets in the field, uploaded and reported data after returning to the lab
- Led crew on 8 day backcountry hitches

Publications and Technical Papers

Turner, T.F., Bart, H.L., McCormick, F., Besser, A.C., Bowes, R.E., Capps, K.A., DeArmon, E.S., Dillman, C.B., **Driscoll, K.P.**, Dugger, A., Hamilton, G.L., Harris, P.M., Hendrickson, D.A., Hoffman, J., Knouft, J.H., Lepack, R.F., Lopez-Fernandez, H., Montana, C.G., Newsome, S.D., Pease, A.A., Smith, W.L., Taylor, C.A., Welicky, R.L. 2023. Long-term ecological research in freshwaters enabled by regional biodiversity collections, stable isotope analysis, and environmental informatics. *BioScience*. 73(7): 479-493.

Driscoll, K.P., Smith, D.M. 2021. Development of riparian and groundwater-dependent ecosystem assessments for National Forests in the Western U.S. *Sustainability*. 13(8): 4488. <https://doi.org/10.3390/su13084488>.

Smith, D.M., **Driscoll, K.P.**, Warren, S.D., Finch, D.M. 2020. Riparian and groundwater-dependent ecosystems of the Dixie and Fishlake National Forests: An assessment of resources and current conditions. Gen. Tech. Rep. RMRS-GTR-418. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 264 p.

Cooke, B., Friggens, M., **Driscoll, K.P.**, Elia, E., Bradley, A., Farr, C., Jaramillo-Scarborough, A. 2020. Resources for postfire response: Empowering land managers with new After Fire Toolkit. *Science You Can Use Bulletin*, Issue 43. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 7 p.

Driscoll, K.P., Smith, D.M. 2020. Vulnerable, valuable, variable: Science-based assessments of riparian and groundwater-dependent ecosystems. *Science You Can Use (in 5 minutes)*, April 2020. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 2 p.

Smith, D.M., **Driscoll, K.P.**, Warren, S.D., Finch, D.M. 2020. Riparian and groundwater-dependent ecosystem of the Bridger-Teton National Forest: An assessment of resources and current conditions. Gen. Tech. Rep. RMRS-GTR-407. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 204 p.

Cooke, B., Pelz, K., Witt, C., **Driscoll, K.P.**, Luce, C., Anderson, D., Barbour, J., Bush, R., Friberg, M., Perovich, C. 2020. Making sense of big data: Putting Forest Inventory and Analysis to work in forest planning. *Science You Can Use Bulletin*, Issue 39. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 11 p.

Driscoll, K.P., Hauer, R.H. 2019. Seasonal flooding affects habitat and landscape dynamics of a gravel bed river floodplain. *Freshwater Science*. 38(3): 510-526.

Driscoll, K.P., Friggens, M. 2019. Assessing risk in a post-fire landscape: are currently available tools good for the local landowner. *Natural Areas*. 39(4): 472-481.

Finch, D.M., Baldwin, C., Brown, D.P., **Driscoll, K.P.**, Fleishman, E.; Ford, P.L., Hanberry, B., Symstad A.J., Van Pelt, B, Zabel, R. (eds). 2019. Management opportunities and research priorities for Great Plains grasslands. Gen. Tech. Rep. RMRS-GTR-398. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 56 p.

Driscoll, K.P., Smith, D.M., Warren, S., Finch, D.M. 2019. Riparian ecosystems of the Salmon-Challis National Forest: An assessment of current conditions in relation to natural range of variability. Gen. Tech. Rep. RMRS-GTR-394. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 190 p.

Driscoll, K.P., Smith, D. M., Finch, D. M. 2019. Riparian ecosystems of the Manti-La Sal National Forest: An assessment of current conditions in relation to natural range of variability. Gen. Tech. Rep. RMRS-GTR-386. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 160 p.

Smith, D.M., **Driscoll, K.P.**, Finch, D.M. 2018. Riparian and wetland ecosystems of the Ashley National Forest: An assessment of current conditions in relation to natural range of variation. Gen. Tech. Rep. RMRS-GTR-378. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 101 p.

McShane, R.R., **Driscoll, K. P.**, Sando, T.R. 2017. A review of surface energy balance models for estimating actual evapotranspiration with remote sensing at high spatiotemporal resolution over large extents: U.S. Geological Survey Scientific Investigations Report 2017-5087. 19 p., <https://doi.org/10.3133/sir20175087>

U.S. Forest Service [USFS]. 2016. Indigenous Fish and Wildlife Management Strategy: Gila and Aldo Leopold Wildernesses, Gila National Forest. https://www.wilderness.net/toolboxes/documents/fishwildlifemgmt/Gila_Aldo_Leopold_Wildernesses_Fish_Wildlife_Management_Strategy_2016_Final_Signed.pdf

U.S. Forest Service [USFS]. 2016. Wilderness Stewardship Performance: Guidance for Developing an Indigenous Fish and Wildlife Management Strategy. https://www.wilderness.net/toolboxes/documents/fishwildlifemgmt/WSP_Guidance_Indigenous_Fish_Wildlife_Strategy_Wilderness.pdf

Presentations

Presentation to University of Montana Division of Biological Sciences

Driscoll, K.P. May 11, 2015. Use of airborne digital imagery to examine floodplain complexity at varying discharges. Oral presentation.

Presentation to Rocky Mountain Research Station and Southwestern Regional Office

Driscoll, K.P. August 12, 2016. Use of airborne digital imagery to examine floodplain complexity at varying discharges. Oral presentation.

Presentation to Rocky Mountain Research Station and Region 3 leadership teams

Driscoll, K.P., Smith, D.M., Dwire, K., Finch, D.M. February 6, 2017. Riparian, Wetland, and Groundwater Dependent Ecosystem Assessments for FS Intermountain Region (R4). Oral Presentation.

Presentation to National Burned Area Emergency Response Coordinator Meeting

Friggens, M.M., **Driscoll, K.P.** February 9th, 2017. Resource Manager Toolkit: Post-fire Floods

Presentation to Salmon-Challis Forest Leadership, Forest Plan Revision teams, and Region 4 regional employees

Driscoll, K.P., Smith, D.M., Dwire, K., Finch, D.M. May 15, 2017. Riparian, Wetland, and Groundwater Dependent Ecosystem Assessments for FS Intermountain Region (R4). Oral Presentation.

Presentation to Interagency Riparian Workshop

Driscoll, K.P., Smith, D.M., Warren, S., Finch, D.M. December 13, 2017. Assessment of Region 4 Riparian and Wetland Ecosystems. Oral Presentation.

Presentation to First Friday All Climate Change Talks (FFACTS) hosted by Forest Service Research & Development and USDA Climate Hubs

Driscoll, K.P., Friggens, M.M. March 2, 2018. After Fire: Toolkit for the Southwest. Webinar Presentation.

Presentation to Great Plains Grassland Summit

Driscoll, K.P., Friggens, M.M. April 10, 2018. After Fire: Toolkit for the Southwest. Poster Presentation.

Presentation to Bosque Ecosystem Monitoring Program Symposium

Driscoll, K.P. February 15, 2019. Groundwater Flow Regimes of the Rio Grande Bosque Ecosystem: Impacts of Channelization and Drought. Poster Presentation.

Presentation to UNM Research Days

Driscoll, K.P. March 2019. Groundwater Flow Regimes of the Rio Grande Bosque Ecosystem: Impacts of Channelization and Drought. Poster Presentation.

Presentation to Society for Freshwater Science

Driscoll, K.P., Smith, D.M., Warren, S.D., Finch, D.M. May 2019. Riparian and groundwater-dependent ecosystems of the U.S. Forest Service Intermountain Region: Assessment of management issues and current conditions. Oral Presentation

Presentation to Institute for Tribal Environmental Professionals Climate Change Workshop

Driscoll, K.P., Friggens, M.M. June 2019. After Fire: Toolkit for the Southwest. Oral Presentation

Presentation to Workshop: Understanding Freshwater Ecosystem Change through Analysis of Long-term Samples

Driscoll, K.P. September 2019. Riparian restoration and recovery of ecosystem function: using multiple stable isotope approaches to evaluate effectiveness. Oral Presentation

Presentation to Restoring the West Conference, Invited Speaker

Driscoll, K.P., Smith, D.M., Warren, S.D., Finch, D.M. October 2019. Riparian and groundwater-dependent ecosystems of Utah's National Forests: Assessment of management issues and current conditions. Oral Presentation.

Presentation to Rocky Mountain Research Station's Science You Can Use Webinar Series

Driscoll, K.P., Smith, D.M. 2020. Vulnerable, Valuable, Variable: Science-based assessments of riparian and groundwater-dependent ecosystems in the Intermountain Region. Oral Presentation.

Presentation to the Middle Rio Grande Collaborative Program, Invited Speaker

Driscoll, K.P. 2022. Statistical designs and potential indicators for evaluation of restoration success. Oral Presentation.

Presentation to U.S. Forest Service ScienceX Assessment Week, Invited Speaker

Driscoll, K.P., Smith, D.M. 2023. Streams, springs, and fens! Riparian and groundwater-dependent ecosystem assessments for forest plan revision. Oral Presentation.

Presentation to Turner Aquatic Conservation Lab 25th Anniversary Symposium

Driscoll, K.P., Martinez, L.M., Turner, T.F. 2023. Process-based stream restoration effectively alters riparian plant functional traits and functional diversity. Oral Presentation.

Presentation to UNM Research Days

Driscoll, K.P., Martinez, L.M., Turner, T.F. 2023. Process-based stream restoration effectively alters riparian plant functional traits and functional diversity. Oral Presentation

Tools and Outreach

Resource Manager Toolkit: Post-fire Floods (<https://postfiresw.info>)

- Toolkit and information site for managers, landowners, and communities to find guidance for assessing and preventing potential damage from post-fire flooding and related events. The site provides research, methods, and tools to measure and reduce risks associated with post-fire flooding, debris flows, and sedimentation.
- Wrote and developed all content for website. Worked with web developer to build site.

Riparian and Aquatic Ecosystem Strategy SharePoint Site

- Wrote and edited content for internal Forest Service SharePoint site for managers in the National Forest System to learn about riparian and aquatic ecosystems.
- Built and maintain SharePoint site. Update information, goals, action plans, and calendar as needed.

Conservation Education Outreach

- Regularly lead and participate in Conservation Education events including Valle De Oro Wildlife Refuge Birthday Party, Forest Service BioBlitz events, and events at schools and community centers.

Fellowships and Awards

2016-2018	Presidential Management Fellowship
2018	Rocky Mountain Research Station Technology Transfer Publication Award
2017	Rocky Mountain Research Station Outstanding Customer Service Award
2016	Rocky Mountain Research Station Conservation Education Award
2016	USDA Merit Award for Outstanding Collaboration
2013-2015	University of Montana Institute on Ecosystem Graduate Fellow

Professional Memberships

Society for Freshwater Science

Ecological Society of America

Society for Ecological Restoration

Additional Qualifications

Computer Skills:

- Statistical Software: The R Program, JMP
- Geospatial Software: Erdas Imagine, ArcGIS
- Microsoft Office Suite: Word, Excel, PowerPoint, Outlook, SharePoint

Volunteer Experiences:

- Americorps-Montana Conservation Corps, Crew Member
 - Trail Construction and Maintenance, Weatherization of low income housing
- Clark Fork Coalition, Volunteer Leader
 - Led crews and trained volunteers on basic stream sampling methods