

SCIENTIFIC RESEARCH AND COLLECTING PERMIT

Grants permission in accordance with the attached general and special conditions

United States Department of the Interior
National Park Service

Rocky Mountain



Study#: ROMO-00241

Permit#: ROMO-2022-SCI-0001

Start Date: Feb 01, 2022

Expiration Date: Dec 31, 2022

Coop Agreement#:

Optional Park Code:

Name of principal investigator:

Name: Ms Michelle Toshack

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Name of institution represented:

Adventure Scientists

Additional investigators or key field assistants:

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Name: Cedar Mathers-Winn

Phone:

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Study Title:

Wild and Scenic Rivers - Cache le Poudre, RMNP

Purpose of study:

We will conduct a nationwide water quality monitoring study on Wild and Scenic River (WSR) segments across 40 states on federal lands. This project will update the water quality status of the majority of rivers across the National Wild and Scenic River system (NWSRS). Adventure Scientists is prepared to provide advisory data to support federal and state agencies in their efforts to implement the Clean Water Act (CWA), which include TMDLs (total maximum daily loads) as well as 303(b) and 303(d) listings. Adventure Scientists has designed the project to meet the priorities and standards of a variety of stakeholders and to ensure data can improve agencies' decision-making capacity. In addition, state water quality agencies have expressed that regular monitoring of all surface waters improve their management ability, which includes updating assessments of impaired waters and collecting data on waters identified as having a good status but with no data to verify those conditions. The multi-level and inter-agency relationships that develop during the life of the project should allow us to better coordinate across groups in response to water quality issues in the NWSRS.

Several states require repeat monitoring and minimum data points to determine the status of surface waters, including rivers, in order to comply with the CWA. Therefore, Adventure Scientists is planning for four years of data collection (until fall/winter 2022) to enable the collection of sufficient data for river segments with significant data gaps/needs (e.g., unassessed and unknown waters). At full scale, volunteers may be deployed in 40 states.

Subject/Discipline:

Ecology (Aquatic, Marine, Terrestrial)

Monitor Natural Resources

Water Quality

Locations authorized:

Research activities will take place in Rocky Mountain NP, and data collection will occur in designated Wild and Scenic reaches of the Cache la Poudre River. Two proposed locations have been identified and include the Cache la Poudre River along the Cache la Poudre trail and the South Fork Cache la Poudre River between the Upper Mummy Pass trail and the South Stormy Peaks Trail.

Transportation method to research site(s):

Sampling locations will be accessed on foot.

Collection of the following specimens or materials, quantities, and any limitations on collecting:

No installations and no collections permitted.

Only observational and in situ data collection permitted, including: dissolved oxygen (DO), pH, temperature, total dissolved solids (TDS), salinity, conductivity, GPS coordinates of location, time of data collection, qualitative habitat assessment, and pictures.

Field personnel will adhere to the Rocky Mountain National Park aquatic disinfection guidelines provided by RLC staff.

Name of repository for specimens or sample materials if applicable:

NPS General Conditions for Scientific Research and Collecting Permit (available at the RPRS HELP page) apply to this permit. The following specific conditions or restrictions, and any attached conditions, also apply to this permit:

Please read these conditions carefully as they are legally binding. If you want to request a change in your permit conditions, please contact your designated park permit lead or the park Research Coordinator (Lisa_Baron@nps.gov; 970-586-1262).

Health & safety - permit holders are responsible for their own and their team's health and safety when in a national park unit. All natural areas pose risks, therefore be prepared in advance to eliminate or mitigate those risks. Let someone know your itinerary, communicate to that person if it changes, and establish an action threshold if your party fails to communicate as expected. Consider what is needed if a medical emergency occurs and take the appropriate actions to insure that those needs will be met. Permit holders need to exhibit a degree of self reliance and responsibility for their own safety commensurate with the difficulty of their chosen activities and maintain a safety plan on file.

Camping may be requested for research permit holders. All requests for camping must be made through the Continental Divide Research Learning Center staff. If camping is approved researchers must adhere to all guidelines provided for camping.

As a condition of this permit you must provide study site, plot, and collection locations in UTM's and in the NAD 83 Zone 13T North coordinate system along with a list of installed equipment, which shall include the purpose of the equipment and the expected duration of deployment in the park. At the end of the study, researchers must remove all equipment/installations not expressly approved to remain and notify the park of the date removed.

This permit must be carried at all times by field staff while sampling within the park. The permit also acts as an entrance pass. Individual investigators should be prepared to show the permit and personal identification at the park gate and as requested by any park staff member. If you need to add any co-investigators who will work apart from the PI, inform the park Research Coordinator of additional names so a permit amendment can be issued.

All Park regulations must be followed. Researchers are responsible for knowing and complying with all Rocky Mountain National Park (ROMO) and National Park Service regulations unless specifically exempted from a regulation in this permit. A copy of the most recent ROMO Compendium is available upon request from the Park Dispatch Office (970-586-1204).

Entrance to closed areas is not permitted without specific permission. If you wish to enter a closed area to conduct research, please contact your designated park permit lead or Research Coordinator to discuss. Permission must be issued in writing by the Chief Ranger's Office.

Data and Information Sharing. The permittee is required to submit an Investigator's Annual Report for each year of the research permit. As soon as possible after the expiration of the research permit the researcher must provide the park an executive summary of the research. Additionally, after research concludes (not to exceed 5 years), ROMO requires that the permittee provide copies of completed research products, including electronic copies of all scientific publications and gray literature (including theses, dissertations, final reports), any photographs taken, all published and unpublished data sets (including spatial data), and field notes to the park permit lead or Research Coordinator. A presentation to park managers may be requested upon completion of the project to explain the management implications of the research. The permittee signature on this permit indicates the researcher's concurrence with these requirements.

Protect rare species and cultural/archaeological resources. No rocks may be moved and no soil disturbed during this project unless specifically authorized by this permit. If any cultural/archaeological resources are discovered during research, stop work, leave item(s) in place, record location information, and contact the park permit lead or Research Coordinator immediately.

Protect wilderness values. All collections and installations must occur out of sight and sound of visitors to the maximum extent possible. Use of mechanized equipment in areas of the park managed as wilderness is not allowed unless specifically approved in your permit.

Equipment installation and plot markers are not generally allowed. The permittee is not allowed to install equipment or plot markers of any kind unless specifically authorized in this permit.

Safety is the responsibility of the principal investigator and team. If advice is needed on routes or on conditions which might be encountered, researchers should contact the Wilderness Office (970-586-1242) or park research staff. We highly recommend developing a safety plan for your team while working in the park.

Any specimens collected under this permit, any components of any specimens (including but not limited to natural organisms, enzymes or other bioactive molecules, genetic materials, or seeds), and research results derived from collected specimens are to be used for scientific or educational purposes only, and may not be used for commercial or other revenue-generating purposes unless the permittee has entered into a Cooperative Research And Development Agreement (CRADA) or other approved benefit-sharing agreement with the NPS. The sale of collected research specimens or other unauthorized transfers to third parties is prohibited.

Please be diligent in preventing cross-contamination of sites in the park. ROMO requires adherence to specific aquatic disinfection

guidelines when working in wetlands and other aquatic areas to prevent spread of disease and aquatic invasive species. If you are working in streams and wetlands please obtain these guideline from the research coordinator. If working in areas with exotic plants infestations, be diligent to clean your equipment, clothing, and footwear of any seed prior to moving sites. Any equipment set into the ground (e.g. soil corers, loggers, etc.) should be cleaned and sterilized before use within the park.

Locations of rare species and cultural resources must be kept confidential between yourself and park staff. Rare species include federal and state listed threatened and endangered species (T&E), federal and state species of concern, and taxa determined by ROMO biologists to be rare Park-wide and/or at risk of decline due to human activity. Please inform Park staff of inadvertent collection or disturbance of rare species. Do not publish, share in presentations, or post on websites rare species or cultural resource location information.

Confidentiality Agreement: By signing this permit, I agree to keep confidential any protected information that I may develop or otherwise acquire as part of my work with the National Park Service. I understand that with regard to protected information, I am an agent of the National Park Service and must not release that information. I also understand that by law I may not share protected information with anyone through any means except as specifically authorized by the National Park Service. I understand that protected information concerns the nature and specific location of endangered, threatened, rare, commercially valuable, mineral, paleontological, or cultural patrimony resources such as threatened or endangered species, rare features, archaeological sites, museum collections, caves, fossil sites, gemstones, and sacred ceremonial sites. Lastly, I understand that protected information must not be inadvertently disclosed through any means including websites, maps, scientific articles, presentation and speeches.

Breach of any of the terms of this permit or for violation of park regulations will be grounds for revocation of this permit and denial of future permits.

Summary of permitted field methods and activities:

This project empowers Adventure Scientists' volunteer network with the tools, technology, and guidance to collect water quality data across over 13,000 miles of WSRs managed by USFS, BLM, and NPS. Adventure Scientists will leverage its volunteer communities of whitewater rafters and kayakers as well as backpackers, mountain bikers, day-hikers, and trailrunners to collect the necessary data. We will launch the project's first phase as a small-scale nationwide effort, with priority given to the nearly 4000 river miles of unassessed and unknown water quality managed by your agencies. These rivers span 16 of 40 states with WSRs. In the second project phase, Adventure Scientists intends to expand the project scope by prioritizing river segments with significant data gaps as well as those with identified impairments under the CWA. We will also incorporate previously collected data throughout the rivers managed by these three federal agencies.

We will focus on parameters that can be collected via field instruments or observations. Volunteers will deploy Hach probes that monitor dissolved oxygen (DO), pH, temperature, total dissolved solids (TDS), salinity and conductivity. Field equipment will be attended at all times by the volunteer and the volunteer will not be installing or leaving any equipment in the field. While in the field, volunteers will collect both chemical and physical condition data, requiring volunteers to: (1) access pre-selected field sites; (2) mark GPS coordinates and exact time of data collection; (3) deploy a data logger/sensor for the collection of basic parameters (temp, DO, pH, conductivity, TDS, salinity) in situ; and (4) conduct a qualitative habitat assessment and take photos.

Recommended by park staff(name and title):

Approved by park official:

Title:

Acting Continental Divide Research Learning Center Director

Reviewed by Collections Manager:

Yes X No _____

Date Approved:

I Agree To All Conditions And Restrictions Of this Permit As Specified
(Not valid unless signed and dated by the principal investigator)

Michelle Toshack

(Principal investigator's signature)

25 January 2022

(Date)

THIS PERMIT AND ATTACHED CONDITIONS AND RESTRICTIONS MUST BE CARRIED AT ALL TIMES WHILE CONDUCTING RESEARCH ACTIVITIES IN THE DESIGNATED PARK(S)



GENERAL CONDITIONS For SCIENTIFIC RESEARCH AND COLLECTING PERMIT

United States Department of the Interior
National Park Service

- 1. Authority** - The permittee is granted privileges covered under this permit subject to the supervision of the superintendent or a designee, and shall comply with all applicable laws and regulations of the National Park System area and other federal and state laws. A National Park Service (NPS) representative may accompany the permittee in the field to ensure compliance with regulations.
- 2. Responsibility** - The permittee is responsible for ensuring that all persons working on the project adhere to permit conditions and applicable NPS regulations.
- 3. False information** - The permittee is prohibited from giving false information that is used to issue this permit. To do so will be considered a breach of conditions and be grounds for revocation of this permit and other applicable penalties.
- 4. Assignment** - This permit may not be transferred or assigned. Additional investigators and field assistants are to be coordinated by the person(s) named in the permit and should carry a copy of the permit while they are working in the park. The principal investigator shall notify the park's Research and Collecting Permit Office when there are desired changes in the approved study protocols or methods, changes in the affiliation or status of the principal investigator, or modification of the name of any project member.
- 5. Revocation** - This permit may be terminated for breach of any condition. The permittee may consult with the appropriate NPS Regional Science Advisor to clarify issues resulting in a revoked permit and the potential for reinstatement by the park superintendent or a designee.
- 6. Collection of specimens (including materials)** - No specimens (including materials) may be collected unless authorized on the Scientific Research and Collecting permit.

The general conditions for specimen collections are:

- Collection of archeological materials without a valid Federal Archeology Permit is prohibited.
- Collection of federally listed threatened or endangered species without a valid U.S. Fish and Wildlife Service endangered species permit is prohibited.
- Collection methods shall not attract undue attention or cause unapproved damage, depletion, or disturbance to the environment and other park resources, such as historic sites.
- New specimens must be reported to the NPS annually or more frequently if required by the park issuing the permit. Minimum information for annual reporting includes specimen classification, number of specimens collected, location collected, specimen status (e.g., herbarium sheet, preserved in alcohol / formalin, tanned and mounted, dried and boxed, etc.), and current location.
- Collected specimens that are not consumed in analysis or discarded after scientific analysis remain federal property. The NPS reserves the right to designate the repositories of all specimens removed from the park and to approve or restrict reassignment of specimens from one repository to another. Because specimens are Federal property, they shall not be destroyed or discarded without prior NPS authorization.
- Each specimen (or groups of specimens labeled as a group) that is retained permanently must bear NPS labels and must be accessioned and cataloged in the NPS National Catalog. Unless exempted by additional park - specific stipulations, the permittee will complete the labels and catalog records and will provide accession information. It is the permittee's responsibility to contact the park for cataloging instructions and specimen labels as well as instructions on repository designation for the specimens.
- Collected specimens may be used for scientific or educational purposes only, and shall be dedicated to public benefit and be accessible to the public in accordance with NPS policies and procedures.
- Any specimens collected under this permit, any components of any specimens (including but not limited to natural organisms, enzymes or other bioactive molecules, genetic materials, or seeds), and research results derived from collected specimens are to be used for

scientific or educational purposes only, and may not be used for commercial or other revenue - generating purposes unless the permittee has entered into a Cooperative Research And Development Agreement(CRADA) or other approved benefit - sharing agreement with the NPS.The sale of collected research specimens or other unauthorized transfers to third parties is prohibited.Furthermore, if the permittee sells or otherwise transfers collected specimens, any components thereof, or any products or research results developed from such specimens or their components without a CRADA or other approved benefit-sharing agreement with NPS, permittee will pay the NPS a royalty rate of twenty percent(20 %) of gross revenue from such sales or other revenues. In addition to such royalty, the NPS may seek other damages to which the NPS may be entitled including but not limited to injunctive relief against the permittee.

7. **Reports** - - The permittee is required to submit an Investigator's Annual Report and copies of final reports, publications, and other materials resulting from the study. Instructions for how and when to submit an annual report will be provided by NPS staff.Park research coordinators will analyze study proposals to determine whether copies of field notes, databases, maps, photos, and / or other materials may also be requested.The permittee is responsible for the content of reports and data provided to the National Park Service

8. **Confidentiality** - - The permittee agrees to keep the specific location of sensitive park resources confidential. Sensitive resources include threatened species, endangered species, and rare species, archeological sites, caves, fossil sites, minerals, commercially valuable resources, and sacred ceremonial sites.

9. **Methods of travel** - Travel within the park is restricted to only those methods that are available to the general public unless otherwise specified in additional stipulations associated with this permit.

10. **Other permits** - The permittee must obtain all other required permit(s) to conduct the specified project.

11. **Insurance** - If liability insurance is required by the NPS for this project, then documentation must be provided that it has been obtained and is current in all respects before this permit is considered valid.

12. **Mechanized equipment** - No use of mechanized equipment in designated, proposed, or potential wilderness areas is allowed unless authorized by the superintendent or a designee in additional specific conditions associated with this permit.

13. **NPS participation** - The permittee should not anticipate assistance from the NPS unless specific arrangements are made and documented in either an additional stipulation attached to this permit or in other separate written agreements.

14. **Permanent markers and field equipment** - The permittee is required to remove all markers or equipment from the field after the completion of the study or prior to the expiration date of this permit. The superintendent or a designee may modify this requirement through additional park specific conditions that may be attached to this permit. Additional conditions regarding the positioning and identification of markers and field equipment may be issued by staff at individual parks.

15. **Access to park and restricted areas** - Approval for any activity is contingent on the park being open and staffed for required operations. No entry into restricted areas is allowed unless authorized in additional park specific stipulations attached to this permit.

16. **Notification** - The permittee is required to contact the park's Research and Collecting Permit Office (or other offices if indicated in the stipulations associated with this permit) prior to initiating any fieldwork authorized by this permit.Ideally this contact should occur at least one week prior to the initial visit to the park.

17. **Expiration date** - Permits expire on the date listed. Nothing in this permit shall be construed as granting any exclusive research privileges or automatic right to continue, extend, or renew this or any other line of research under new permit(s).

18. **Other stipulations** - This permit includes by reference all stipulations listed in the application materials or in additional attachments to this permit provided by the superintendent or a designee. Breach of any of the terms of this permit will be grounds for revocation of this permit and denial of future permits.