Name of principal investigator:  
Name: Roger Bales  Phone: 209-724-4348  Email: rbales@ucmerced.edu

Name of institution represented:  
University of California, Merced

Co-Investigators:  
Name: Martha Conklin  Phone: 209-228-4349  Email: mconklin@ucmerced.edu  
Name: Robert Rice  Phone: 209-228-4397  Email: rrice@ucmerced.edu

Project title:  
Continuous stream measurements at Wawona

Purpose of study:  
Continuously measure stream stage, temperature and electrical conductivity in South Fork of Merced River. Use this information to develop an understanding of how stream flow responds to temporal and spatial inputs of snow, rain and energy in the watershed draining to that point.

Subject/Discipline:  
Water / Hydrology

Locations authorized:  
South fork of Merced River below Wawona bridge.

Installation of low-profile, temporary (up to 10 years) streamflow gage, consists of a weighted water level sensor placed on the bed of the river and connected via wiring and conduit to a radio transmitter on shore. The gage is placed at the location of an existing staff plate used by park utilities staff to estimate flows for wastewater treatment compliance purposes. Data from the sensor is relayed from the transmitter to a receiver located at the Sierra Nevada Research Institute building in Wawona and thence to a UC Merced server. The transmitter installation consists of a battery and transmitter box, antenna, and solar panel mounted to a T-post approximately 4 feet in height driven into the top of the north bank of the river. The antenna is approx. 3 inches in height and mounted to the top of the T-post. The corresponding receiving antenna is mounted to an existing antenna boom on the Sierra Nevada Inst. building.

Transportation method to research site(s):  
vehicle and foot

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

Name of repository for specimens or sample materials if applicable:  
n/a

Specific conditions or restrictions (also see attached conditions):  
Park contact for this permit is Jim Roche and he may be reached at (209) 379-1446.
This permit is valid in 2009 only. Park entrance fees are waived while conducting the research. Each member of the investigator's team (i.e. field crews) must carry a copy of this permit and NPS conditions at all times while conducting the research and show to park staff when requested.

This permit is valid as a wilderness use permit, if research needs to be conducted in the Yosemite Wilderness. Researcher agrees to comply with all park regulations. Researcher agrees to NPS General Conditions for Scientific Research and Collecting Permit, Superintendent's Order: Flagging and Temporary Demarcation Guidance, and Warning: Disease Threat (Equipment Decontamination Protocol for Researchers Working In Yosemite National Park) (attached). Researcher agrees to NPS, Yosemite National Park, Wilderness Use Permit guidelines. A Minimum Requirement Analysis document (if required) for research in Yosemite's Wilderness is on file in the individual researcher's hard file of the Research Permit Coordinator's office in Resources Management and Science.

Researcher must submit an Investigators Annual Report at the end of each permit year through the NPS Research Permit and Reporting System (RPRS) website. In this case, the researcher needs to submit a report for 2009.

This permit is valid only until December 31, 2009. The researcher will need to apply for a renewal permit early in 2010 (January or February), if wanting to continue the study, as it is NOT automatic. This is submitted in the RPRS website by following the links under the heading. Submit applications for research permits. After typing in your last name, the website finds all of your permits in all NPS units. You can find your Yosemite permit and click on the link. Apply for permission to continue this study at this park (a renewal request).

Yosemite requires that you have both your IAR and renewal application in the website before your application for the New Year can be reviewed. Please also note: Before your permit will be issued, any Repository Agreement for Collected Specimens (included as appendix pages in the final application sent to you after your application submittal by the RPRS website) must be signed by the responsible official at the repository institution and faxed to Mitzi Thornley (209) 379-1060.

Researcher will NOT collect special status plants or animals.

DRIVING ON RESTRICTED-USE ROADS IS NOT ALLOWED.

Cultural Resources in Yosemite are protected by the Historic Preservation Act of 1966, as amended (16 U.S.C. 470). Archaeological resources in the park are also protected and the Archaeological Resource Protection Act of 1979, as amended (16 U.S.C. 470aa), which carries criminal and civil penalties for removing or damaging archaeological resources. The Permittee shall provide adequate supervision of its employees, clients, and team members to ensure that the park's historical and archaeological resources are not disturbed. The Permittee is responsible for informing its employees, clients, and team members of park regulations.

Any ground disturbance must be cleared with the Chief, Resources Mgmt. and Science.

Researcher will send three (3) copies of the final report and one copy of all documentation including data, maps, photos, reports and publications to the Yosemite Museum. Miriam Luchans, Museum Registrar, is the contact at 209-372-0281.

Researcher is required to send to Yosemite National Park Resources Management and Science Division all relevant spatial data that was collected within the park. The preferred format for the data is ESRI Arc (vector or grid), either shapefiles, coverages, geodatabases, or grids. It is also preferable to have the data projected in UTM zone 11 North, North American Datum 1983. Digital data must also include a full metadata file that describes the data, including spatial reference system, contact information, abstract of data collection and purpose, information on the data itself, and all other relevant information. Metadata should adhere to the Federal Geographic Data Committee standard.
Recommended by park staff (name and title):  
Research Permit Committee

Approved by park official:  
Mitzi Thornley
Title: Research Permit Coordinator  
Chief, Resources Mgmt. & Science

Reviewed by Collections Manager:
Yes ☑ No

Date Approved:  
6/1/09

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

Roger Bales  
(email=rales@ucmerced.edu, c=US)  
Date: 2009.06.15.14:35:09-0700

(Principal investigator's signature)  
(Date)

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