

Subject: June NRSS Monthly Report

Natural Resource Stewardship and Science Report - June 1997

NEW DEVELOPMENTS

NEW AIR RESOURCES DIVISION CHIEF Christine Lipaj Shaver has been selected as the new Chief, Air Resources Division. She was most recently a Senior Attorney with the Environmental Defense Fund in Boulder, Colorado, where she directed EDF's involvement in air quality-related judicial, legislative, and regulatory proceedings, with an emphasis on the western U.S. and U.S./Mexico border region and served on the Grand Canyon Visibility Transport Commission's Public Advisory Committee. She also sat on EPA's federal advisory committee on implementation of air quality standards and regional haze program requirements. Prior to joining EDF, Chris was the Chief of the National Park Service Air Quality Division's Policy, Planning and Permit Review Branch. She began her career with the Environmental Protection Agency's air quality office in Washington, D.C.. In 1979, she moved to EPA's Rocky Mountain Regional Office, where she was an Assistant Regional Counsel and provided legal advice, defended agency actions, and enforced compliance with the Clean Air Act. She received the Department of the Interior's Honor Award and the National Parks and Conservation Association's Stephen Mather Award. Ms. Shaver received her law degree from Georgetown University Law Center in Washington, D.C., (J.D. 1977) and her undergraduate degree from Wittenburg University (Springfield, Ohio) (B.A. in psychology and sociology, magna cum laude, 1974). She is a member of the Colorado bar.

INTERAGENCY AGREEMENT WITH USDA ON ULTRAVIOLET MONITORING - NPS-ARD has signed an Interagency Agreement with the USDA UV Monitoring Program at Colorado State University to measure UV irradiance at three NPS sites (Big Bend, Everglades, and Grand Canyon NPs) using a "shadowband" instrument. Big Bend and Everglades also measure UV-B using a Brewer spectrophotometer as part of the NPS-EPA DISPro network. This agreement will allow us to compare data from the two instruments at these two parks. Contact Kathy Tonnessen (303-969- 2738) or John Ray (303-969-2820) for more information.

SPRING RIVER RUNOFFS: GLEN CANYON DAM The Colorado River Basin is experiencing larger-than-average runoff this spring. Reservoir releases have been adjusted to accommodate this large runoff, with implications to park resources. Releases at Glen Canyon Dam are approaching 28,000 cfs. Lake Powell is expected to fill in July and there is still a possibility that the reservoir will "spill" in July, resulting in very large flows downstream. There is concern that many of the sandbar deposits created during the 1996 experimental "flood" are eroding under current (spill-avoidance) operations and that the supply of stored sediment on the riverbed is being depleted. Depending upon the extent of sediment depletion, a spill in July may not be effective in rebuilding eroded sandbars, and may possibly be erosive in some reaches. Monitoring is being conducted to document the effects on resources of this spring's runoff. It is expected that alternative ways of operating the dam in high runoff years to better benefit downstream resources will stem from the lessons learned this year. DINOSAUR High runoff in the Colorado River Basin also is affecting operations of Flaming Gorge Dam on the Green River upstream

from Dinosaur NM. Releases almost double powerplant capacity have occurred. This represents the first time since 1983 that Flaming Gorge Dam has "spilled." The high releases are being coordinated with flows on the Yampa River downstream in order to minimize flood impacts to property owners downstream of the park, and to benefit native fishes. The high releases are providing an unexpected opportunity for NPS-funded researchers involved in studies of sediment and vegetation dynamics in Ladore Canyon in DINO. Water Resources Division staff have supported these research efforts by conducting sediment sampling at the Gates of Ladore (in DINO) during the period of high flows. Problems with the spillway tubes at Flaming Gorge Dam resulted in releases being temporarily reduced, but spilling is expected to resume by the end of June. Sediment supplies in Ladore Canyon remain high, and it is expected that some benefits to sediment and riparian resources will stem from this year's high flows.

MARK-UP House subcommittee mark-up eliminated proposed FY 1998 increases for CESUs and the social science program. Increases related to desert mining, air quality, abandoned mine lands, and inventory and monitoring remained. The full House appropriations committee, the full House, and the Senate still need to act.

HEADS UP

AIR QUALITY-RELATED RESEARCH OPPORTUNITIES During the third week in July we expect the EPA to release the Request for Assistance (RFA) or Announcement of Opportunity (AO) for research under the Demonstration Intensive Site Project (DISPro). This AO will be distributed out of the Corvallis EPA Lab (via e-mail, and can be found on the EMAP web page). The AO will ask researchers for a 3-5 page preproposal to investigate four research topic areas at study sites in the 12 DISPro parks. Research topics include the effects of nitrogen deposition, ozone, and ultra violet (UV) radiation on natural resources, and investigations of how to extrapolate point environmental measurements to larger areas and landscapes. Preproposals are due in 30 days. We will then choose preproposals that meet the objectives of DISPro and ask those researchers to develop full proposals. For information contact Kathy Tonnessen at 303-969-2738 (kathy_tonnessen@nps.gov).

PROGRESS

CARBON I US/MEXICAN AIR QUALITY - At the US-Mexico National Coordinators meeting held in Matamoros, Mexico, on May 28-30, 1997, Mexico agreed to conducting 2 intensive regional studies to further identify the source types and source regions responsible for poor visibility at Big Bend NP. Mexico further agreed with a US proposal to include tracer releases as part of these intensives that will likely be conducted Summer 1998 and Winter 1999. Results of the 5-week preliminary study conducted at 19 locations in northern Mexico and southwest Texas last fall have been analyzed by NPS researchers. NPS is now awaiting a meeting with Mexico to discuss the results before releasing the results. The purpose of the preliminary study was to obtain initial information on (1) spatial gradients of visibility reducing fine particles over northern Mexico-southwest Texas, (2) logistical aspects of conducting fine particle sampling in remote areas of Mexico, and (3) network design for the intensive studies. For further information contact Miguel Flores, Air Resources Division at (303) 969-2076 or mif@aqd.nps.gov or Miguel_Flores@nps.gov.

I&M STEERING COMMITTEE The NPS Inventory and Monitoring Steering Committee met June 11-13, 1997 in San Antonio, Texas. Gary Williams indicated that the new priority list for Level I inventories, based

on information provided by parks, will be issued by the end of July.

GEOLOGIC INVENTORIES There was a consensus that we do not yet have a good understanding of what geologic information is needed by all park units for day-to-day management of park resources, although the I&M Program has assembled considerable information about USGS geologic mapping efforts in parks. At the recommendation of the committee, the Geologic Resources Division will convene a workshop (tentatively set for November) of 15-20 resource managers, geologists, and other scientists later this year to focus on: 1) what Level I inventories should include for all parks, 2) how to evaluate the quality of existing geologic information, and 3) how to add interpretative value to existing geologic maps. **NPFLORA/FAUNA** Survey data indicate a significant percentage of parks find the current NPFlora/NPFauna databases at least somewhat useful, but most parks prefer not to have their information available over the Internet because of concerns about the accuracy and sensitivity of the data. The Committee agreed to sponsor a workshop composed of 2-3 I&M Committee members plus several individuals from parks to evaluate the current structure of the databases and make recommendations for improvements to better meet park needs. The Committee also agreed with plans to develop a Lotus Notes application for these databases on a server in Fort Collins, with the Natural Resource Information Division would be responsible for maintaining the Servicewide databases. **MONITORING** Estimates were submitted by Channel Islands, Shenandoah, Great Smoky Mountains, and Denali National Parks of additional funding needed to complete these programs and make them "fully operational." They were submitted in response to a Prototype Monitoring Program Review held in Phoenix last February. Based on the scope and level of additional needs, the Committee recommended against additional funding for current prototypes at this time, due to concerns about jeopardizing other efforts. Operational plans, also being developed by the prototypes, will be evaluated to see if they justify some additional funding to help parks meet their operational needs. The Committee also recommended that no additional prototypes be initiated at this time due to budget constraints. The Committee further urged that NPS continue to encourage the BRD to assemble a team of monitoring specialists who can provide technical and statistical support for NPS monitoring programs. To begin assisting non-prototype parks, the Committee recommended a survey to determine what is currently being monitored throughout the Service and what monitoring-related needs exist. The survey would be followed by a workshop (one for each region) with resource managers to fine-tune needs and priorities. The Committee also recommended convening a separate group to develop a process for development of park conceptual ecosystem models.

ABANDONED MINE AND SAFETY TRAINING AND BAT WORKSHOP PRESENTED - Geologic Resources Division staff presented two training sessions in June. One addressed abandoned mine and radiation safety training for the summer field inventory crew and managers for the BLM Utah State Office and Utah's Division of Oil, Gas, and Mining (UDOGM); this is the fourth year the division has provided this training to Utah's seasonal abandoned mine inventory crews-- both to repay UDOGM for their contracting assistance in numerous abandoned mine closures on NPS lands in the state and to foster interagency cooperation. The seasonal crew will be conducting AML inventories in several of Utah's abandoned uranium mining districts this summer. The training emphasized hazard awareness and avoidance in conducting external mine surveys (the crew will not go underground) and radiation health, safety, and monitoring procedures. Another session at training offered by the BLM National Training Center and Bat Conservation International for regional federal, university, and industry employees, emphasizing the need to assess and accommodate critical bat habitat in abandoned mine reclamation programs. Division staff presented a paper

on bat-compatible mine closures installed to-date in the National Park System (71 closures in 11 park units), participated in panels and presentations on abandoned mine safety, closure policies, and project administration, and helped coordinate a field exercise. The class drew 45 participants, primarily from BLM and USDA Forest Service.