Subject: GRD Fall Report #1
Author: DaVon Moore at NP-DEN3
Date: 1/6/99 1:48 PM

GEOLOGIC RESOURCES DIVISION
NATURAL RESOURCES PROGRAM CENTER
Fall 1998 Report - Part 1

MINERALS MANAGEMENT - GENERAL

1999 APPROPRIATIONS ACT REDIRECTS MINERALS MANAGEMENT FUNDS - Specific language in the Omnibus Budget Act redirect about 25% of the Geologic Resources Division base funding to the Mojave National Preserve. In FY-98, the Division received $580,000 for a desert minerals program to address the mining workload created by the California Desert Protection Act, affecting Death Valley and Joshua Tree National Parks and Mojave National Preserve. NPS requested the increase to add minerals specialists to support staff in all three desert parks with: mining claim validity examinations (including new staff located in Barstow), assistance in applying mining regulations and processing mining plans, and undertaking abandoned mine site safety and restoration projects. However, the 1999 Act directs that the funds be used "exclusively for new hires of mineral examiners on site at the Mojave National Preserve" and requires that none "be used for staff or administrative expenses for the geological resources division in Denver, Colorado or any other location."

The loss of base funding adversely impacts the division's ability to assist all parks with minerals and geology programs. With the reduction, there is insufficient funding to cover projected FY-99 program costs, thus requiring division staffing and park support funding adjustments. Specific actions to reduce FY-99 costs include transferring two Barstow-based mineral examiners to Mojave's staff, and eliminating division funding for two temporary geologists and a half-time paleontologist in our geologic programs. Other division staff previously working on desert mining has been reassigned to funded program areas, such as abandoned mines and geology. Planned hiring of geology specialists in paleontology, shorelines, and geomorphology will be postponed. Division funding for staff travel will be restricted and funding for park abandoned mine restoration projects may be reduced. The Division is making a concerted effort in its work planning to address park's high-priority technical assistance needs. Park support for travel may be required and lower priority projects are being deferred. (Shaver)

NATURAL RESOURCES PROGRAM CENTER STAFF ATTEND FEDERAL AGENCY HARDROCK MINING DIALOGUE - Water and Geologic Resources Division staff attended a week-long meeting with Forest Service, Bureau of Land Management, and Environmental Protection Agency attorneys and technical staff analyzing cleanup authorities for hardrock mining sites. Most of the discussion focused on CERCLA ° 106, the

authority under which natural resource trustees, such as the Department of Interior, may order responsible parties to clean up sites that may endanger human health and the environment. The Department of Interior, unlike the Department of Agriculture, has not aggressively used its ° 106 authority to date, in part due to lack of staffing and expertise. In follow-up discussions, the NPS specialist responsible for this program showed a willingness to work with the Division and parks to bring a ° 106 action to compel cleanup at mine sites. (Brunner)

GEOLOGIC RESOURCES - GENERAL

NPS PRESENCE SPURS INTEREST AT GEOLOGICAL SOCIETY OF AMERICA CONVENTION - For the third year, the Division hosted an NPS booth at the Geological Society of America's annual convention last October. Response and interest in NPS geologic concerns was overwhelming. While visitation is difficult to gauge, about 500 Geologist-in-Parks (GIP) information sheets disappeared, along with all available handouts on the Division, the Abandoned Mineral Lands program, caves, volunteering in parks, and a variety of NPS publications. The booth saw steady traffic from the time the doors opened until the lights went out, with contacts ranging from students seeking employment to detailed discussions on increasing the geologic presence in parks. A sampling of visitors/topics includes: faculty members from universities interested in the GIP program for students and themselves; the Association of Women Geoscientists potentially sponsoring a GIP internship; faculty seeking input on texts for park geology courses; several new NPS geology textbooks; representatives of associated organizations, including the National Science Foundation, GSA, National Science Teachers Association, National Association of Geoscience Teachers, and National Earth Science Teachers; possible funding through Exxon Production Research Company; and enough requests for employment information to convince us to create an information sheet for next year's convention in Denver. (Wood)

SAND TRAP RESEARCH PROJECT - The Colorado School of Mines "senior engineering partnership" to design and build a sand trap to collect drifting sand dune particles has been completed on time and for less than $500 total outlay for materials. The two-semester effort resulted in computer generated engineering drawings, a technical report, and a complete prototype model of the sand flux device by the four graduating mechanical engineers. Steven Fryberger, the scientist who has been working several years at White Sands NM and Great Sand Dunes NM on dune migration research, picked up the prototype product in December for testing at White Sands NM, and then calibration in Sweden with a physicist colleague. The low budget research project may provide a new opportunity to advance the knowledge of sand dune migration and provide a monitoring tool for detection of outside influences on this dynamic geologic resource. Eventually, the new tool could find application to sand dune research in over 25 park units. Photographs of the device and an explanation of its function are on the Division's "Hot-topics" web-site at http://165.83.32.34/grd/ht_sand_trap.htm. (Cloues)

UNIVERSITY PROFESSOR TO CREATE GEOLOGY TRAINING GUIDES FOR PARKS - The NPS's appreciation for his recent assistance to Crater Lake NP prompted Dr. Robert Lillie, a geology professor with particular expertise in plate tectonics, to further assist the Park Service during his sabbatical from Oregon State University. Dr. Lillie will create park-specific geologic training guides for resource and interpretation staff, assist interpretation of park geology to visitors, and summarize recent research on plate tectonics for Blue Ridge Parkway, Gulf Islands, Sunset Crater, Mount Rainier, Olympic, and Haleakala. The ecological focus in the geology guides will show that geology is part of the ecosystem and link to guides for other resources. Half of Dr. Lillie's work will be funded by the Geologic Resources Division, with matching funds provided by the parks, park associations and the Southeast Regional Office. Dr. Lillie has expressed interest in assisting other parks in the future. Parks can also contact the Division for assistance through our Geologist-in-the-Parks Program.

(Geniac)

GEOLOGIC RESOURCES DIVISION HOSTS POLICY REVISION WORKSHOP - Park Service and USGS-BRD geologists attended a workshop convened by the Division to draft comments on the NPS Management Policies and commence revisions to the geology-related sections of NPS-77, soon to be renamed the "Natural Resources Reference Manual." The geology, cave, soil, and paleontology sections of the reference manual will be revised, and new sections about disturbed lands restoration, shoreline management, and geohazards will be added. The revised and new sections will be circulated for peer review before being submitted to the editors, the Natural Resources Directorate, and subsequent Servicewide review. (Brunner)

COASTAL PARK SUPERINTENDENTS AND RESOURCE MANAGERS MEET, RATE COASTAL PROCESSES HIGH - Division staff participated in meetings at Cape Cod National Seashore with superintendents and resource managers from the Atlantic and Gulf Coastal Parks to discuss a wide range of issues. While numerous topics were addressed at the Superintendents' conference, including T&E species, coral reefs, beach nudity, off-road use, and coastal erosion, the focus was clearly on park authority to regulate activities. A subsequent meeting of the resource managers about long-term monitoring emphasized ongoing coastal processes as a central theme. While only three parks have active erosion monitoring, all mentioned coastal processes as a concern. The Geologic Resources Division proposed a servicewide coastal processes conference in late 1999, which will be developed in coordination with USGS. (Heise)

NATIONAL SPELEOLOGICAL SOCIETY CONVENTION (NSS)- Twelve Park Service cave specialists attended the NSS Convention and participated in a variety of meetings and sessions. Bobby Camarra (HAVO) led a special session on current speleological work in HAVO. Joel Despain and Greg Stock (SEKI) were recipients of the NSS Cartographic Medal Award for their maps of Crystal Cave. Mike Wiles (JECA), Rod Horrocks (GRBA) and Stan Allison (CAVE) all presented speleological papers covering work from South Dakota to Mexico. In addition, Park Service cave specialists were speakers at the National Cave Management Symposium Steering Committee meeting and a special session on research and exploration in Lechuguilla Cave, and fielded questions and comments regarding use of NPS caves in a proposed large format film. (Kerbo)

DISTURBED LANDS RESTORATION INITIATIVE - A Department of the Interior FY-2000 initiative, known as "Partnerships for America's Resources" (PAR), includes a call for funding restoration work in the National Park System. The restoration portion of PAR is titled the "Habitat and Coastal Restoration Fund," which targets upland watershed areas, coastlines, wetlands, stream corridors, native plants, and the eradication of exotic plants. Division staff has been helping WASO use total disturbed area data and cost per acre estimates to develop the proposed budget. Budget estimates are derived mostly from data reported by parks for GPRA Goal Ia1A (disturbed area restoration) as found in the Performance Management Data System (PMDS), NR-MAP, and project cost data. The initial proposed budget includes $20 million per year ($520 million total over 26 years) for the National Park Service. (Steensen)

GEO-ECOSYSTEM SESSION TO BE FEATURED AT GEORGE WRIGHT SOCIETY MEETING - Two 2-hour sessions about "Geologic Components of Ecosystem Management," proposed by the Geologic Resources Division, will be held during the March 1999 George Wright Society annual meeting. Possible abstracts from NPS park and central office staff, GSA, and USGS include: "Ecosystem Restoration" (Spreiter-REWO), "History of Geology in Parks" (Unrau-DSC), "Paleo Research," (Fremd-JODA), "Role of Geology in Ecosystems" (Popenoe-REWO), "GeoEcology" (May-GSA), "Geology in Ecosystem Management - Fire" (Smith-GRD), "GIP Program" (Higgins-GRD), "Eolian Systems" (Valdez-GRSA), and "USGS Mineral Expertise" (Plumlee-USGS). For information, contact Bruce Heise at 303-969-2017.

DIVISION NEWS

NEW PETROLEUM GEOLOGIST - In January, Lisa Norby will join the Division as a Petroleum Geologist. For the last five years, Lisa has worked with the Denver Service Center as a natural resource specialist in planning and compliance, assisting with several controversial environmental impact statements such as Yellowstone's Bison EIS. Previously, Lisa worked 12 years for Mobil Oil as an exploration geophysicist, exploration geologist, and senior production geologist. She holds two advanced degrees: an MS in Geology and a Master of Environmental Policy and Management. Lisa's field experience in environmental compliance and mitigation and oil and gas exploration and development will be a great asset to the Division. (Woods)

NEW NATURENET WEBSITE STATISTICS SHOW GEOLOGY A POPULAR TOPIC - The New NatureNet server has a few new server-side goodies including a web visitor statistics package. The numbers for last week show that NatureNet visits from outside the NPS are approaching 10,000 visits per week. The Division's "Park Geology" site is receiving the largest block of visitors with 20% of the NatureNet total, the next highest is Air Resources with 13%. Our Tour of Park Geology is up to 600 visits per week and Geologist-in-the-Parks is at 400 visits per week. The weekly numbers will soon be available on the Natural Resources Intranet for your viewing pleasure. (Wood)

NEW STRATIGRAPHY WEBSITE ON-LINE - The next geologic theme, stratigraphy, has been posted on the NatureNet website. The science of stratigraphy is important to most geologic parks, because most paleontological and cave/karst parks derive their specific features from the stratigraphy. This site will include an on-line geologic "type section" database; emphasize cooperative studies of important geologic formations by the NPS, U.S. Geological Survey, and other agencies; and have strong ties to the Inventory and Monitoring program as many parks with geologic resources (i.e. Grand Canyon, Bryce Canyon, Zion, Arches, and Guadalupe Mountains) can be categorized as "stratigraphic" parks. (Connors)

FUTURE WEB MATERIALS-We have recently received electronic copies of several significant geologically related bulletins/articles that will be appearing on our website. Among these are The Yellowstone Paleontological Survey, the latest edition of the Paleo Newsletter, and the GRD sponsored Paleontological Research Volume #3. We hope to make these downloadable PDFs, as well as their own websites. An announcement will be sent out when these are ready for viewing. Also, we will be contacting Christine Turner of the USGS who has been doing an in-depth NPS-sponsored project on the Morrison Formation through out several western NPS units. Her volume (some 800 pages) will soon be available. We will be hoping for the condensed version for similar publication and distribution, as this is a significant project from a geologic standpoint. The Morrison Formation is probably the single-most dinosaur rich deposit on Earth, so this may be able to promote the importance of its occurrence in several NPS units! (Wood)