

PACIFIC NORTHWEST

Over the past two years, resource managers at Craters of the Moon National Monument in Idaho developed several partner-

ships for the purpose of rehabilitating an abandoned mine site within park boundaries. Before rehabilitation, Martin Mine, a gold and silver mine dating from the 1920s, was about an acre in size and consisted of four tailings piles totaling 1,850 cubic yards (1,415 cubic meters) of material. The site was of concern, because it is located in the drainage of a creek that is the sole source of monument drinking water; a preliminary baseline water quality study had indicated that mine tailings were impacting the stream, predominantly by surface erosion and sediment transport processes.

The first step we took in the reclamation effort was to evaluate the mine under the Comprehensive Environmental Response and Liabilities Act (CERCLA, also known as Superfund) process. A preliminary site assessment conducted by the NPS Water Resources Division concluded that our site was not eligible for clean up under the act.

Next, resource management staff solicited technical assistance from the NPS Mining and Minerals Branch, who agreed to develop a reclamation design and oversee the implementation of the project. The selected design included: 1. placing the tailings below grade in dry, stable areas, 2. covering the tailings with a minimum of 36 inches of topsoils salvaged from adjacent roadfill, 3. reconstructing the surfaces to restore original contours and surface hydrology, and 4. mulching and seeding the area with native pioneering species. Mining and Minerals staff plan to publish a technical case study of this reclamation effort in a future edition of *Park Science*.

Finally, the Natural Resource Division of the Pacific Northwest Regional Office agreed to fund the reclamation effort. In order to stretch funding, resource manage-

ment staff at the park approached our neighboring Bureau of Land Management district to ask for their assistance. Through a contract, they provided a bulldozer and an operator for the work.

The park completed the project in late September following a full week of hard work. Staff from the Mining and Minerals Branch were on hand to oversee heavy equipment operations. An archaeologist from Hagerman Fossil Beds National Monument, Idaho, was also on-site to provide expertise on the protection of any cultural resources that might have been discovered (none were unearthed). Finally, a local Boy Scout troop along with resource managers handled the reseeded and mulching of the site.

The many cooperators involved in the project are to be commended for their efforts. Without them, rehabilitating this mine site at Craters of the Moon never would have occurred.

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Fossil finds, some of worldwide significance, continue to spring up all over Hagerman Fossil Beds National Monument. In December 1993, NPS staff excavated a fossil log that was not mineralized. That is, the original wood was still present despite the age of the specimen. The log is the second oldest of its kind in the world (the oldest is found in Greenland), and more of it is still present in the cliff face. The remainder will be excavated when funds become available.

In the spring 1994, a geology graduate student from Idaho State University discovered the skull of a fossil camel. What is really exciting about this find is that it was discovered in a geologic formation that had not been known to contain fossils, whatsoever. The camel skull is on display in the park visitor center.

During the dog days this past summer, we excavated several mastodon bones from a quarry in a remote section of the monument. While these bones were not in good condition, as we were prospecting around the area, we found an articulated fossil beaver skeleton! We have cast this skeleton in a plaster jacket for safekeeping and hope that the National Guard will provide us the service of a helicopter for its removal.

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The regional director recently recommended a policy of no recreational harvest of edible mushrooms in Pacific Northwest parks. While the *Code of Federal Regulations* permits a superintendent to designate fruits, berries, nuts, and unoccupied seashells to be gathered for personal use, the provision also stipulates a restriction. The regulation states that gathering is only allowed upon a written determination that the activity will not adversely affect wildlife, reproductive potential of a plant species, or otherwise adversely affect park resources. The memo included a summary of ecological considerations related to the harvest of mushrooms and recommended that superintendents not authorize the harvesting activity until they can demonstrate that mushroom collecting is not detrimental to park resources.

Presently, too little is known about the ecological effects of mushroom harvesting to suggest that no ecological effects occur from the activity. To the contrary, scientific evidence indicates that repetitive mushroom harvesting and certain collecting practices can damage the soil.

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The National Marine Fisheries Service has received three petitions to list several populations of salmon comprising four biological species of Pacific salmon from Puget Sound and the Olympic Peninsula, and to designate critical habitat under the Endangered Species Act of 1973. The agency found that the petitions present substantial scientific information indicating that the listings may be warranted.

Therefore, they began conducting a status review on these stocks this fall to determine if listing is, indeed, warranted. At the same time, they started comprehensive status reviews for populations of Pacific salmon and anadromous trout not presently undergoing status reviews in Washington, Oregon, Idaho, and California. These species are pink salmon, sockeye salmon, chum salmon, chinook salmon, and sea-run cutthroat trout.

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The report of the National Performance Review (the Vice President Gore reinventing government report, 1993) contains recommendations for a series of environmental actions concerning “environmentally and economically beneficial practices on federal landscaped grounds,” as entered recently into the *Federal Register*. One action is to increase environmentally and economically beneficial landscaping practices at federal facilities and federally funded projects. The recommendations, to be incorporated into our landscaping programs and practices by February 1996, specify that agencies should use regionally native plants while employing landscaping practices that conserve water, reduce energy consumption and the use of pesticides, and prevent pollution.

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Biological control agents that have passed the pesticide review process outlined in NPS-77 (Natural Resources Management Guideline) may be used in parks as part of an Integrated Pest Management Program. The review process usually involves quarantine, lab

or field tests, and receipt of a permit from the U.S. Department of Agriculture Animal and Plant Health Inspection Service (APHIS) indicating release of the agent.

However, park managers should be aware that APHIS currently has no process to regulate the quality of producers and distributors of biocontrol agents. A private distributor can, for example, import agents directly from the International Biocontrol Institute in Switzerland and sell them to parks without APHIS approval. Until a revised approval process is adopted that also examines more carefully the production and distribution of the agents, NPS managers should proceed cautiously. When biocontrol agents are to be integrated into a park pest management regime, it is prudent to first ensure that the distributors and producers are reputable. You can do this by contacting your state plant protection and quarantine officer, APHIS, the U.S. Department of Agriculture (USDA), or by purchasing biocontrol agents only through APHIS.

NPS IPM program leaders, along with the USDA and the International Biocontrol Institute, are also working toward resolving the following additional concerns regarding biocontrol agents: effects of the biocontrol agent on nontarget species and biodiversity, adherence to the National Environmental Policy Act process, and long-term monitoring issues.