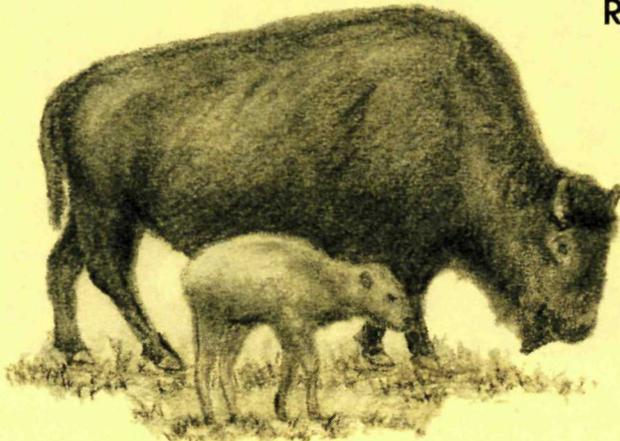


The Buffalo Chip

Resource Management Newsletter
Yellowstone National Park
June/July 2005



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TRASH AND AMERICA'S FIRST NATIONAL TREASURE

by Leigh Anne Dunworth

Discarded items in the Mammoth boneyard (otherwise known as "junk") provided inspiration for the recent exhibit, "Trash and America's First National Treasure," on display at the Waste Not Montana conference at Chico Hot Springs on April 11–13, 2005. The exhibit was created by Planning, Compliance, and Landscape Architecture (PCLA) staff Lori Gruber, Leigh Anne Dunworth, Sam Reid, and Charissa Reid. Jim Evanoff, the park's environmental manager, hosted the event, which focused on the latest information on waste stream reduction and new recycling alternatives. A number of agencies, organizations, and businesses provided displays and demonstrations throughout the conference, which was sponsored by Yellowstone National Park, Headwaters Cooperative Recycling, Inc., and the State of Montana. Presentation topics ranged from biomimicry to landfill gas (methane) energy projects. Yellowstone's Chief of Maintenance, Steve Iobst, presented a history of solid

waste (garbage) management in the Greater Yellowstone Area.

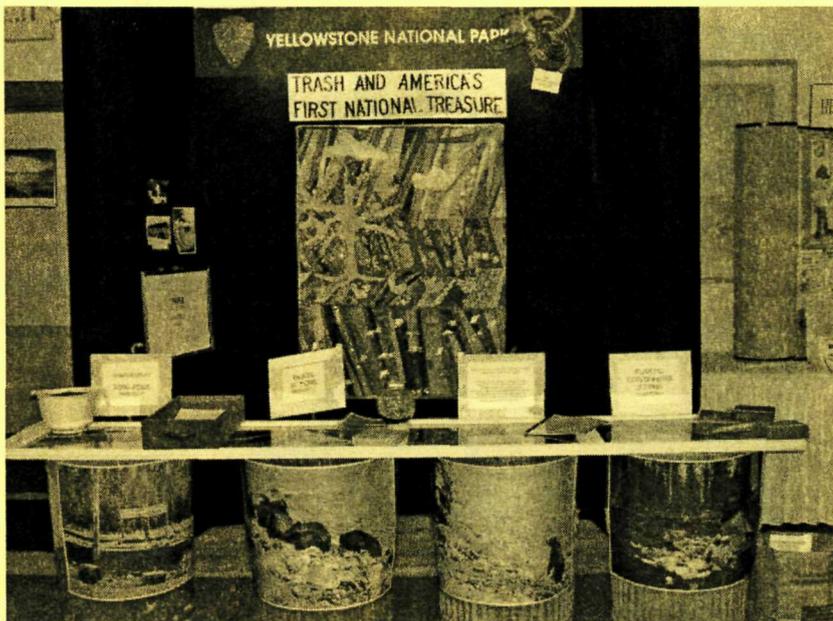
The PCLA display demonstrated a brief history of Yellowstone's garbage management, from the early open-pit dumps to the park's sustainable initiatives of today. A window panel created from an old garage door allowed conference participants to peer into 30-gallon garbage cans to see what Yellowstone recycles. Old copper pipes acted as posts for signs made from reused foam core and park maps that described the number of tons of glass (97 tons), paper (207 tons), plastic containers (6 tons), cardboard (150 tons), and aluminum/steel (197 tons) the park recycled in 2004. A panel from a discarded gas pump displayed the amount of biodiesel fuel used in the park last year—204,000 gallons. A quilted wall hanging made by Kathy O'Hern, manager of the West Yellowstone composting facility, provided the backdrop for the display. The quilt, made from recycled materials,

included embossed metal fish that Kathy had cut from aluminum cans. (Kathy said Rainier beer cans worked best!) Jim Evanoff commented, "The display was able to capture the entire theme of the conference, which was to promote recycling and reusing." And the best part? It didn't cost anything!

The display was re-created for the Corporation for the Northern Rockies' 6th Annual Sustainability Fair, held in Livingston, Montana, on July 9. Last year's event drew more than 4,000 visitors. Park participation in the sustainability fair has been an interdivisional outreach effort, including the Interpretation, Maintenance, and PCLA divisions, and the Superintendent's Office.

So, what is "sustainability?" One definition is, "meeting the needs of the present without compromising the ability of future generations to meet their own needs." In 1997, the park began an aggressive effort to address a wide variety of pollution prevention, waste reduction, alternative fuels, and recycling projects. Partnerships have been formed among concessioners, non-profit organizations, other land management agencies, and public and private interests—all of the entities that are involved with environmental stewardship within the greater Yellowstone region.

In response to an executive order requiring all federal facilities to develop a comprehensive environmental management system (EMS), the EYE team was formed: Ensuring Yellowstone's Environment. Headed by Jim Evanoff, the first goal of the EYE team was to address solid waste management,



Yellowstone recyclables were displayed in garbage cans viewed through an old window panel (above, below). A quilt made from recycled materials, including aluminum cans, served as a backdrop (above).



specifically waste stream reduction and new recycling alternatives to reduce or divert waste, and to recycle a higher percentage of solid waste generated within the park. Updated information on the EMS process and efforts of the EYE team will soon be posted for employees on the park's Intranet site.

Specific goals are to:

- Divert 80% of the park's waste stream to recycling and composting by 2008.
- Increase, by 50%, the amount of recyclable quantities collected within the next two years.
- Recover 90% of partially empty small propane cylinders

from the thousands discarded in the park each year.

- Create a reviewing process for reusing materials and integrating recycling centers into new construction, as well as existing facility renovation throughout the park.

- Use 25% recycled materials in all new and remodeling projects in Yellowstone within five years.

- Select a new recycling collection location in Mammoth that will serve NPS and concessioner offices, the YCC Camp, and Upper Mammoth residents.

- Reduce the number and content of hazardous chemicals in the park, and eliminate outdated products. Reduce the purchase of harmful, toxic, or environmentally unfriendly chemicals.

What is the park doing to meet these goals?

- Employees and residents are separating compostables and non-compostables.

- More than 50 recycling bins have been provided throughout the park.

- A propane bottle recycling unit has been fabricated to deal with the thousands of propane canisters left behind by campers each year.

- Vendors have been asked to provide environmentally preferable products and services.

- Contractors have been asked to adhere to specific environmental criteria.

- A purchase authority for procuring chemicals was established.

- A chemical review committee was created.

Yellowstone's goals for the first phase of the environmental management system could not have been achieved without the park's partnerships, interdivisional outreach and education programs, and an environmental commitment from all park employees. 🌲

Yellowstone National Park is a special place—everyone is responsible for protecting and preserving the natural and cultural resources.

As the nation's and the world's first national park, Yellowstone National Park will continue to work together to promote and advance environmental stewardship with employees, partners, concessioners, and visitors.

Communicating, directing, and providing support for the environmental policy is a priority for the park superintendent, the leadership team, and managers. All employees must understand their role and lead by example.

—*Yellowstone National Park's
Environmental Mission
Statement*

NPS ENVIRONMENTAL ACHIEVEMENT AWARDS

from an article by Fred Sturniolo

A sustainable building project reported on in the March/April 2005 issue of *The Buffalo Chip* has won one of this year's National Park Service Environmental Achievement Awards. In 2004, Yellowstone National Park partnered with Xanterra Parks & Resorts to design and construct state-of-the-art, green buildings that provide employee housing in Gardiner, Montana. The two-house project, which was nominated in the sustainable design/green building category, conforms to standards set by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system. LEED guidelines establish requirements for sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. The council certified the new construction at Yellowstone last December.

The other winner was facility manager Chris Case of Pictured Rocks National Lakeshore, nominated for environmental stewardship. Chris was recognized

for his ongoing effort to showcase Pictured Rocks's environmental leadership program in numerous educational forums. The program advocates actions that conserve energy and preserve resources, such as recycling, green purchasing, reducing toxins, and harnessing solar power. Case launched a comprehensive bio-fluids and lubricants substitution plan at Pictured Rocks that calls for vegetable oil-based products as a replacement for the normal fuels, fluids, and lubricants used in fleet operation and maintenance.

The Environmental Management Program, part of the Park Facility Management Division, administers this awards program to acknowledge outstanding achievements by NPS employees, facilities, and partners in a broad range of environmental categories: environmental management systems, environmental stewardship, green purchasing, minimization of petroleum use in transportation, recycling, sustainable design/green building, and waste/pollution prevention. 🌲

TWO YEARLING GRIZZLY BEARS RESCUED FROM STEVENSON ISLAND

by Kerry Gunther and Travis Wyman

On June 27, Bear Management Office (BMO) staff successfully trapped and translocated two yearling grizzly bears that had been stranded on Stevenson Island. On June 4, the BMO received a report that on the previous day, the captain and crew of the *Lake Queen II* tour boat had observed an adult female grizzly bear with two yearlings on Stevenson Island. On June 5, BMO staff investigated the shore around the island and found tracks of an adult grizzly bear and at least two yearlings. Numerous bear scats were also found, indicating that the bears were feeding on the island's vegetation and were not in immediate danger of starving to death. The age and quantity of the tracks and scats indicated that the bears had likely been present on the island prior to the ice breaking up on Yellowstone Lake on May 23.

On June 6, BMO staff placed a bait station and made a track pit (raked the ground of a likely travel corridor smooth and clear of debris, to make subsequent tracks clearly visible) to determine if the bears were still present on the island. When the bait station was revisited on June 7, tracks of two yearlings but no adults were found, suggesting that the adult female may have swum for shore and abandoned the two yearlings. Because of their small size, the yearlings may have been afraid to swim the 1.4 miles to the nearest shore at the Gull Point/Sand Point area.

Although there was plenty of succulent vegetation for the bears to graze, the types and quantity of late summer and fall bear foods were rather scarce. Thus, it was likely that if the bears were to remain on the island they might starved to death, as has happened in the past. In 1984, an adult female grizzly bear with three cubs-of-the-year were found starving to death

on Frank Island. One of the cubs died of malnutrition; the adult female and remaining two cubs were captured by BMO staff and translocated to the mainland. In 2001, a yearling grizzly bear was found stranded on Dot Island. Evidence indicated that the yearling's mother had been present on the island but had swum back to the mainland, leaving the yearling stranded.

The yearling was captured and translocated to the mainland by BMO staff. Because grizzly bears are a threatened species, the decision was made to capture the bears on the islands and translocate them back to the mainland.

In this case, because only the yearlings were frequenting the bait station, no one was certain that the mother bear was not still on the island. On June 8, BMO and Lake Maintenance staff, using the NPS



Staff immobilize two grizzly bear yearlings found stranded on Stevenson Island.

NPS PHOTOS BY TRAVIS WYMAN

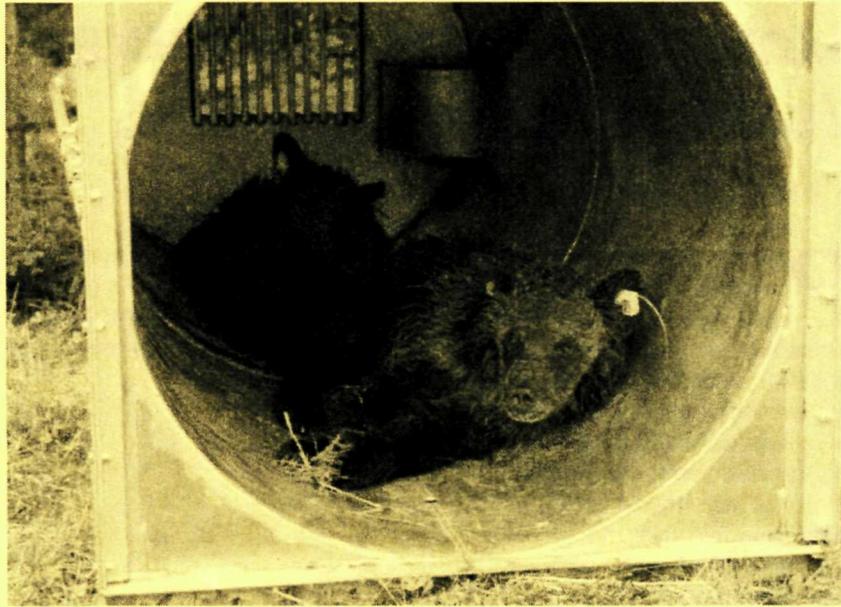
landing craft, placed three aluminum culvert traps on the island. Bait was placed inside, but the doors were locked open so that the bears could get used to going in and out of the traps. The hope was that the sow (if still present) and both yearlings would become comfortable entering and feeding in the traps, and that all three bears could be caught at once, because catching the yearlings without the mother bear would create a significant risk for BMO personnel checking the traps. In addition, bait stations with digital remote sensor cameras were placed in several locations to determine more precisely how many bears were on the island. These eventually showed that only two yearling-size grizzlies were on the island, and that the adult female bear was either no longer present or no longer alive. BMO biological technician Travis Wyman and Jeremiah Smith of the Interagency Grizzly Bear Study Team (IGBST) set the traps on June 25. The two yearlings

were captured in the trap that evening. BMO biologist Kerry Gunther and Travis Wyman investigated the site on the morning of June 26. The trap, with the bears still in it, was moved to a secure location on the island and left for one additional night, surrounded by cameras in a final attempt to determine if the mother bear was present. With the cubs periodically bawling from inside the trap, the mother bear was certain to come to their aid if she was present on the island. When the mother bear did not show up at the trap site, BMO, Lake Ranger, and IGBST staff immobilized the yearlings and fitted them with ear tag transmitters to monitor their survival. The bears, both females, were measured, tagged, and weighed (71 lbs. and 76 lbs.). They were underweight for their age, but healthy. Their chances for survival were estimated at 50%, and as high as 80% if they rejoined their mother on the mainland.

The cubs were allowed to fully recover, and were then transported by boat to the South Arm of Yellowstone Lake for release. They were last seen grazing together just above the beach, and last located by air on Sunday, July 17, still together and still relatively close to the release site. They will be monitored by telemetry flights for the next year.

On June 28, Kerry Gunther, Tyler Coleman, and Becky Wyman walked the island to make sure that the mother bear or any other siblings were not on the island. Other than a lot of scat and a couple of daybeds, not much else was found. The island was re-opened to the public, and all traps and materials were removed.

Some might wonder why the National Park Service chose not to "let nature take its course" in this situation; the answer lies in the grizzly's federal status as a threatened species. In these cases, when managers must weigh standard policy against public sentiment and the opportunity to better the bears' chances for survival, their threatened status makes the decision easier. 🐻



The two female cubs were fitted with ear tag transmitters for future monitoring, allowed to fully recover (above), and transported to shore by boat (below).



EXOTIC VEGETATION MANAGEMENT IN YELLOWSTONE NATIONAL PARK

by Resource Management staff

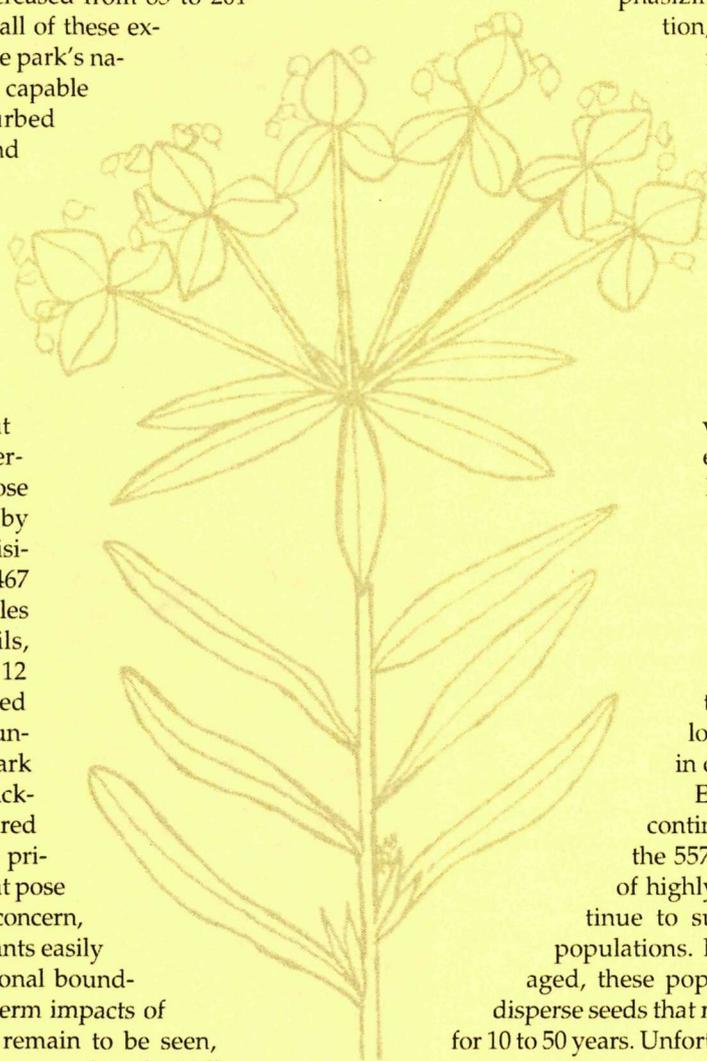
Protecting Yellowstone from the increasing threat of exotic plant invasions has become a major challenge for park management. During the past 20 years, the number of non-native plants documented in Yellowstone has increased from 85 to 201 species. Although not all of these exotic plants endanger the park's native species, many are capable of invading undisturbed plant communities and can irreversibly impact these communities and the wildlife they support.

The full extent of exotic plants in Yellowstone's 2.2 million acres has not been determined, but the areas most vulnerable to invasion are those most frequently used by its 3 million annual visitors—along the park's 467 miles of roads, 900 miles of backcountry trails, 2,650 miles of rivers, 12 frontcountry developed areas, and 302 backcountry campsites. The park also has 291 miles of backcountry boundary shared with other public and private land managers that pose a special management concern, because non-native plants easily move across jurisdictional boundaries. While the long-term impacts of these invasive plants remain to be seen, changes have already occurred in the Yellowstone landscape as populations expand and new species arrive. Several exotic species, such as timothy and downy brome, have become so widespread that budget and workload constraints make it impractical to attempt to control them.

In 2004, more than 100 park staff and 150 volunteers worked in a coordinated effort to manage this threat. The park has adopted an Integrated Pest Management (IPM) approach with regard to exotic vegetation emphasizing prevention, education, early detection, treatment, and monitoring.

While 60% of the park's annual efforts go toward an integrated treatment approach (combining herbicide and manual control of 25 highly invasive species), 40% of the efforts have gone into prevention, education, and early detection surveys. In 2004, staff surveyed 3,000 acres, treated 36 species on 462 acres, and discovered 35 new populations of highly invasive exotic plant species. Most of these populations were located along roads and in developed areas.

Even with dedicated, continuous annual pressure, the 557 recorded populations of highly invasive species continue to survive in low-density populations. If not effectively managed, these populations can annually disperse seeds that remain viable in the soil for 10 to 50 years. Unfortunately, some targeted species continue to move into the backcountry, where survey, control, and containment costs increase dramatically. In support of these efforts, staff and volunteers put over 7,381 hours into managing invasive plants. This included 4,207 hours of volunteer time.

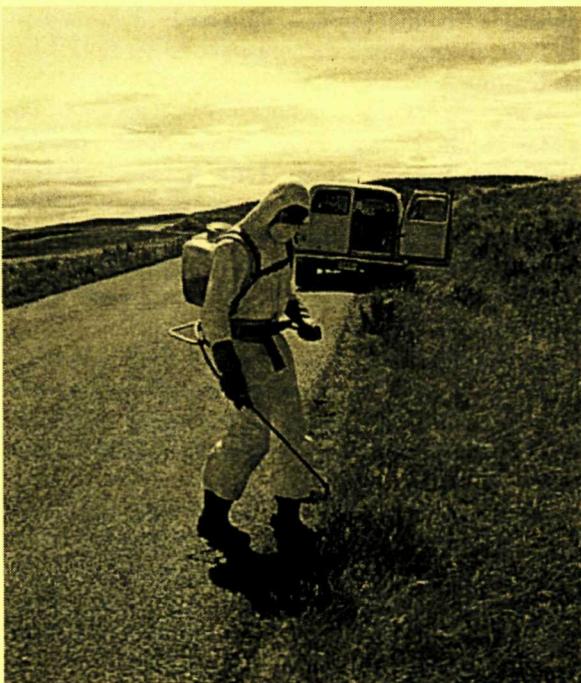


Of the 462 acres treated in 2004, 59% were herbicide treatments, and 41% were manual. Judicious use of selected, environmentally safe herbicides are a critical component of any effective management program. Over the last 25 years, the park's herbicide use has dramatically decreased as treatment of dense

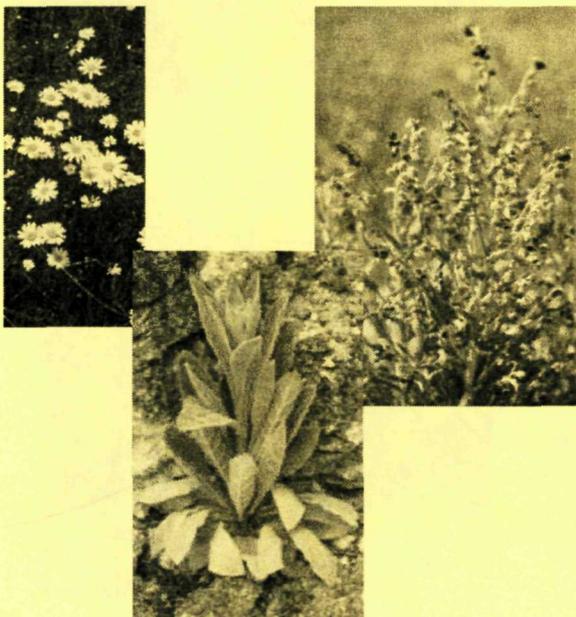
weed populations using broadcast spray equipment has transitioned to backpack spot spraying of sparsely distributed individual plants. This conservative approach to herbicide use protects native plants in the treatment areas and promotes their recolonization of weed infested areas without the need for expensive vegetation restoration efforts. In 2004, staff applied 1,638 gallons of diluted herbicide mix (1–2% active ingredient, 98–99% water) parkwide.

To implement a pro-active, comprehensive program, the park has identified the need for supplemental annual funding to support the expansion of current IPM efforts. This would include early detection surveys in high risk areas not currently being routinely monitored, such as backcountry trails, campsites, boundaries, and utility corridors; high-risk stream corridors; fishing trails; high-risk game trails; geothermal areas, and wildlife use areas. It is estimated that the park needs to monitor an additional 7,000 acres for an annual survey total of 10,000 acres. Furthermore, critical infrastructure support is needed, including a building for equipment/chemical storage and herbicide mixing, water quality monitoring, support in securing biological controls for widespread invasive species, ecological risk assessment for new invading species, programmatic environmental assessment, restoration/revegetation efforts, and development of a long-term monitoring program. 🐜

NPS PHOTOS



Above: Park staff spraying roadside exotic vegetation. Below (left to right): Ox-eye daisy, woolly mullein, and houndstongue.



MOST OF THE PARK'S ERADICATION AND CONTAINMENT EFFORTS ARE DIRECTED AT 15 SPECIES:

- 159 acres of spotted knapweed (*Centaurea maculosa*)
- 53 acres of ox-eye daisy (*Chrysanthemum leucanthemum*)
- 18 acres of dalmatian toadflax (*Linaria dalmatica*)*
- 14 acres of yellow hawkweed (*Hieracium pratense*)
- 12 acres of musk thistle (*Carduus nutans*)
- 12 acres of woolly mullein (*Verbascum thapsus*)*
- 9 acres of orange hawkweed (*Hieracium aurantiacum*)
- 9 acres of St. John's wort (*Hypericum perforatum*)
- 4 acres of hoary cress (*Cardaria draba*)
- 2 acres of Russian knapweed (*Centaurea repens*)
- <1 acre of leafy spurge (*Euphorbia esula*)
- <1 acre of sulphur cinquefoil (*Potentilla recta*)
- <1 acre of plumeless thistle (*Carduus acanthoides*)
- <1 acre of common tansy (*Tanacetum vulgare*)
- <1 acre of tall buttercup (*Ranunculus acris*)

*Species only treated where initial invasion is occurring, while other areas of the park with large established populations are not being treated.

RAIN, SLEET, SNOW... AND GEYSERS

by Carolyn Loren and Old Faithful, Norris, and Grant Interpretive staff

Recent visitors experienced all four of the above—on the same day, in the same hour. Despite the weather, it's been a good time for geyser watching. Steamboat Geyser erupted May 23 (see inset below), its first eruption since October 2003. It erupted at about 2:40 PM during preparations for the summer season, so many "old-timers" and new seasonal employees got to see it for the first time. For those of us arriving in the evening or even the next day, Steamboat's roaring steam was very impressive! Also, as usual, Cistern Spring slowly drained, allowing us to see details usually hidden by water. It took nearly two weeks for Cistern to recover its overflowing water level.

In other Norris Geyser Basin news, after erupting at approximate 3½-hour intervals for a time, Echinus Geyser is once again unpredictable. Congress Pool continues to be low and cloudy. Pearl Geyser has a pinkish salmon tint, new since fall. If you have not yet visited the new section of boardwalk that gives you views of Porkchop Geyser (among other things), you should consider a trip to Norris.

West Thumb Geyser Basin has also experienced changes, with many features showing lower water levels. Roadside Spring has not overflowed into Abyss Pool since sometime during the spring closure. Its

water is so low it cannot be seen from the boardwalk. Hillside and Lone Pine geysers are seen occasionally erupting, as in other seasons. Elk gave birth elsewhere this year, so the basin did not have to be closed for that reason.

At the Upper Geyser Basin, Giantess Geyser erupted May 28, and Plume Geyser soon stopped erupting, re-activating June 16. Big and Little Anemone geysers are both active again; Baby Daisy is not. Fan and Mortar geysers are experiencing reasonably short intervals, Beehive Geyser thrills visitors nearly daily, and Giant Geyser "hot period" watchers are seeing some long, sometimes exciting action.

At Midway Geyser Basin, Opal Pool has been nearly empty since sometime during the spring road closure. While it has an erratic history of eruptions, this long drain is a first, according to long-time geyser gazers.

In the Lower Geyser Basin, Great Fountain Geyser is again being predicted, at 12 hours. Fountain Geyser seems to be erupting at 4½- or 6½-hour intervals, according to reports from observers. You may notice some changes in the activity of Fountain's surrounding small geysers, and in the Kaleidoscope Group out in Fountain Flat.

Summer is here. Come see the geysers! 🌋

Steamboat, World's Tallest Active Geyser, Erupts *from a PAO news release*

On Monday, May 23, 2005, at approximately 2:40 PM, a National Park Service employee reported that Steamboat Geyser was erupting. Steamboat Geyser rarely erupts in its major phase. More commonly, Steamboat ejects water in frequent bursts of 10–40 feet. During a major eruption, Steamboat can reach heights of over 300 feet, showering viewers with mineral-rich waters; the May 23 eruption expelled approximately 11,500 gallons of water. For hours following its rare, 3–40 minute major eruptions (water phase), Steamboat thunders with powerful jets of steam; this steam phase can continue as long as 12 hours after the water cessation.

Steamboat's intervals are unpredictable and can vary from 3 days to 50 years (Steamboat was dormant from 1911–1961). In recent years, Steamboat has erupted in 1989 (3 times), 1990 (1 time), 1991 (1 time), 2000 (1 time), 2002 (2 times), and 2003 (3 times). 🌋



PHOTO COURTESY MARGARET GREELY KURTIN

USGS SCIENTIST IRVING FRIEDMAN REMEMBERED

from a USGS News Release

Dr. Irving Friedman, a longtime U.S. Geological Survey (USGS) scientist and a pioneer in geochemistry, died on June 28, 2005, at the age of 85. Friedman was a member of the famed group of post-doctoral researchers in Nobel laureate Harold Urey's laboratory at the Institute for Nuclear Studies at the University of Chicago. There, he built the first mass spectrometer for routine measurement of the hydrogen isotope composition of water. After serving in the Navy during World War II, Friedman joined the USGS in 1952; he worked for the USGS for more than 43 years. Dr. Friedman retired from the agency in 1995, but remained active as an emeritus scientist.

Dr. Friedman was known as the "father of isotope hydrology;" his scientific career was a pursuit of the understanding of every aspect of the water cycle. He made major contributions to a number of fields through application of stable isotope geochemistry, and to the development of instruments used to

predict earthquakes, and to detect helium in exploring uranium, thorium, petroleum, and natural gas. In the 1940s, he made major contributions to the science of hydrothermal growth of quartz, which made possible the development of the synthetic quartz industry. He was long associated with study of geothermal features and water issues of Yellowstone National Park.

Dr. Friedman published copiously, received the Department of Interior Meritorious Service Award and the Congressional Antarctic Medal, and was made an Honorary Fellow of the Geochemical Society in 2002. He was recently honored by the Society for California Archaeology for his role in the development of obsidian hydration dating, a technique that revolutionized the dating of obsidian artifacts in western North America. He married Rita Vicary in 1946, and she survives him. His interests included skiing, flying his own plane, and traveling with Rita. 🐻

8th Biennial Scientific Conference on the Greater Yellowstone Ecosystem

GREATER YELLOWSTONE PUBLIC LANDS

A Century of Discovery, Hard Lessons, and Bright Prospects



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University of Montana

Mr. Dale Bosworth
Chief, U.S. Forest Service

Ms. Karen Wade
former Intermountain

Mr. Harvey Locke
Canadian Parks and
Wilderness Society

Dr. Richard Knight
Colorado State
University

Region Director,
National Park Service

Dr. Sarah E. Boehme
Whitney Gallery of
Western Art

Dr. Monica Turner
University of
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October 17-19, 2005
Mammoth Hot Springs Hotel
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Registration and lodging:
Xanterra Special Reservations,
(307) 344-5566, sr@xanterra.com

Conference details:
Virginia Warner, (307) 344-2230,
yell_conference@nps.gov

www.nps.gov/yell/technical/conference2005

...NEWS BRIEFS...

MSU RECEIVES AUBREY HAINES'S FILES

Most of former Yellowstone National Park Historian Aubrey L. Haines's collection of historical documents and memorabilia have been donated to Montana State University and will soon be available to researchers and students. Mr. Haines, the park's first historian from 1959–1969, spent decades researching, collecting, and writing the park's definitive two-volume history, *The Yellowstone Story*, as well as several other books on Yellowstone and other national parks. According to Yellowstone National Park writer Paul Schullery, Haines "always had time to help other writers and historians. And in that same spirit, the Haines family has given national park scholars everywhere a wonderfully generous gift." The Haines collection will become part of MSU's Special Collections library; it will soon be available to students and researchers.

RURAL FIRE ASSISTANCE PROGRAM PROVIDES FUNDING

Yellowstone National Park has obtained \$27,000 in funding from the Department of Interior's Rural Fire Assistance Program. The funds will be awarded to four local rural fire departments to be used for wildland fire training, wildland fire-related equipment or supplies, and wildland fire prevention/education activities. The four local fire departments receiving funding include Park County, Montana, Rural Fire District #1 (awarded \$9,000); Gateway Hose Company Fire Department, Gardiner, Montana (awarded \$4,000); West Yellowstone, Montana, Fire Department (awarded \$7,000); and Paradise Valley Fire Service Area (awarded \$7,000).

Local firefighting agencies are often the first line of defense in protecting wildland-urban interface areas threatened by fire. The Rural Fire Assistance Program, a component of the National Fire Plan, provides funding for training, equipment, materials, supplies, and technical support for wildland fire protection to communities with populations of 10,000 or fewer. The National Fire Plan was instituted after the 2000 fire season, when almost 123,000 wildland fires burned more than 8.4 million acres and destroyed numerous structures across the U.S. The Rural Fire Assistance Program component is designed to improve firefighter safety and enhance the wildland fire protection capabilities of rural and volunteer fire departments responding to wildland fires.

FINAL STUDY ON HOW GROOMED ROADS INFLUENCE BISON MOVEMENTS AVAILABLE TO THE PUBLIC

An independent assessment, "The Ecology of Bison Movements and Distribution In and Beyond Yellowstone National Park," has been completed and is now available to the public. Produced by Dr. Cormack Gates, an internationally recognized expert in bison ecology and management, the study included collaborative input from more than 30 scientists, biologists and current and retired park staff, as well as 15 interested non-government organizations. The report addresses how groomed roads influence bison movements during the winter, and provides management recommendations to the National Park Service to address remaining information needs. In summarizing the report, Dr. Gates concluded that "Road grooming is not the major factor influencing bison distribution and range expansion, and available evidence strongly suggests that groomed roads that align with natural movement corridors have not changed population growth rates relative to what may have happened in the absence of road grooming." The study does note that one short road segment through Gibbon Canyon does not align with natural movement corridors and might facilitate bison movement from the central range to the northern range. Copies of the report are available online at www.nps.gov/yell/technical/planning/gates/index.htm.



YELLOWSTONE NATIONAL PARK CONCESSION CONTRACT AWARDED

The concession contract to provide lodging, food and beverage, retail, camping, marina, and other services at Yellowstone National Park has been awarded to Xanterra Parks & Resorts (Xanterra). Xanterra cur-

rently operates the concession contract to provide these services, which expires on October 31, 2005. Xanterra has worked with the National Park Service (NPS) in Yellowstone since 1995, when the company purchased TW Recreational Services, which had held the concession contract since 1979.

Xanterra's proposal promised to offer a higher level of guest services, provide interpretive opportunities, and continue to promote strong environmental practices and ethics, including a commitment to historic structure preservation. Under the direction of the NPS, Xanterra will oversee the maintenance, preservation, and protection of over 800 facilities within the park, including such historically significant buildings as the Old Faithful Inn, the Lake Hotel, and Roosevelt Lodge. Xanterra will also restore and return to service eight historic yellow buses (White Motor Company touring vehicles) that were used to transport park visitors through the park starting in 1936. Xanterra's commitment to quality customer service for Yellowstone's visitors and protection of natural and cultural resources was emphasized throughout the proposal.

Xanterra currently operates in several national park areas, including Bryce Canyon, Crater Lake, Death Valley, Everglades, Grand Canyon, Petrified Forest, and Zion national parks and Mount Rushmore National Memorial.

NEW NPS INTERNET WEB SITE HELPS PUBLIC TRACK PARK PROJECTS

A new, web-based program is helping national park enthusiasts to track and comment on projects at Yellowstone National Park and other National Park Service units. Planning, Environment and Public Comment (PEPC) is an online collaborative tool that gives the public unprecedented, easy access to documents used in developing and tracking projects within the NPS. Members of the public can access the site at <<http://parkplanning.nps.gov>> to find out more about park projects as routine as trail rehabilitation and utility location or as complex as relocating the Liberty Bell and restoring the White House grounds. The public can not only access project information, but also submit comments on project documents including Environmental Assessments (EAs) and Environmental Impact Statements (EISs). For Yellowstone National Park, the public can access completed EAs for projects such as the Old Faithful Visitor Education Center and also comment on currently proposed changes to park fishing regulations and future projects. The park will continue to take written public comments on all its proposed projects and planning efforts.

PUBLIC SCOPING BEGINS FOR WINTER USE PLAN AND EIS FOR GRAND TETON AND YELLOWSTONE NATIONAL PARKS AND THE JOHN D. ROCKEFELLER, JR., MEMORIAL PARKWAY

The National Park Service (NPS) announced that a Notice of Intent was published in the *Federal Register* on June 24, 2005, which begins public scoping for the long-term Winter Use Plan and Environmental Impact Statement (EIS) for Grand Teton and Yellowstone National Parks and the John D. Rockefeller, Jr., Memorial Parkway. This long-term plan is expected to guide the management of winter use in the three parks and ensure that park visitors have a range of appropriate winter recreational opportunities, and that those recreational activities occur in a suitable setting and do not impair or irreparably harm park resources or values.

Scoping is an opportunity early in a planning and EIS process for the public, organizations, and other agencies to suggest issues and alternatives that should be considered by the NPS in preparing the plan and EIS, which will consider a variety of different alternatives for managing winter use in the parks. These will include alternatives with various limits on the number of snowmobiles that may enter the parks, guiding requirements (including allowing some unguided or non-commercially guided snowmobile use), and allowing only mass-transit snowcoaches. In addition, the EIS will include alternatives that would leave varying road segments ungroomed for experimental purposes to address bison use of groomed roads. The EIS will evaluate the environmental effects of winter use on air quality and visibility, wildlife, natural soundscapes, employee and visitor health and safety, visitor experience, and socioeconomics. A draft EIS is expected to be released in the spring of 2006 for public review. The NPS intends to complete the EIS process and issue new regulations (if necessary) prior to the start of the 2007-2008 winter season.

Winter use in the parks currently operates under a temporary winter use plan. The temporary plan is intended to be in effect for three winter seasons (through the winter of 2006-2007), while the NPS prepares this long-term winter plan. The temporary winter use plan allows for a maximum of 720 snowmobiles in Yellowstone each day. All recreational snowmobiles in Yellowstone must be led by commercial guides. In Grand Teton National Park, 50 snowmobiles are allowed per day on both the Continental Divide Snowmobile Trail and the Grassy Lake Road, and 40 snowmobiles are allowed per day on Jackson Lake in order to provide access for ice fishing. With few exceptions, all snowmobiles are required to be "Best Available

Technology," which are the cleanest and quietest commercially available snowmobiles. Snowcoaches are also permitted in Yellowstone and the Rockefeller Parkway and are required to have functioning emissions control equipment. Snowplanes are not allowed on Jackson Lake or elsewhere in the three parks.

Public scoping comments are being accepted until midnight, September 1, 2005. To be most useful, comments should be substantive, pertinent, and provide new information not available in earlier winter use planning processes. Respondents are being encouraged to submit their comments through the Internet at <<http://parkplanning.nps.gov>>. Comments may also be mailed to: Winter Use Scoping, Yellowstone National Park, P.O. Box 168, Yellowstone National Park, Wyoming 82190. Finally, comments may be hand-delivered to Yellowstone National Park headquarters in Mammoth Hot Springs, Wyoming. Comments will not be accepted by fax, email, or in any other way than those specified above. A scoping brochure, and more information about winter use planning and visiting the parks in the winter, can be found at <www.nps.gov/yell/winteruse.htm>.

YELLOWSTONE ANNOUNCES A MAJOR UPGRADE TO ITS OLD FAITHFUL WEBCAM

"Virtual visitors" to the Old Faithful Geyser webcam page will find a greatly improved view of Old Faithful Geyser. New cameras at Old Faithful and Mammoth Hot Springs will provide larger, sharper webcam images than ever before. This upgrade was made possible by the generous donation of two Star-Dot NetCam megapixel cameras. The larger, sharper images allow a much better view of eruptions of Old Faithful Geyser, as well as of visitor and wildlife activities on and around the Mammoth Hot Springs Terraces. Links to all park webcams can be found at <www.nps.gov/yell/tours/livecams/index.htm>.

The original MammothCam will remain in place, because many visitors use it to wave to family and friends back home via the Internet; this is why visitors can often be seen on the webcam talking on their cell phones and waving toward the camera. As word has spread, this camera has become a highly popular "electronic postcard" that has been sent by visitors to friends and family worldwide. 🌲

The Buffalo Chip is the resource management newsletter of Yellowstone National Park. It is published periodically by the Yellowstone Center for Resources. We welcome submissions of articles or drawings relating to natural and cultural resource management and research in the park. They can be sent to:

The Buffalo Chip, Yellowstone Center for Resources,
P.O. Box 168, Yellowstone National Park, Wyoming 82190

Managing Editor: Tami Blackford

Editing and Design: Virginia Warner
virginia_warner@nps.gov

Editing: Alice Wondrak Biel

Cover illustration by Marsha Karle

