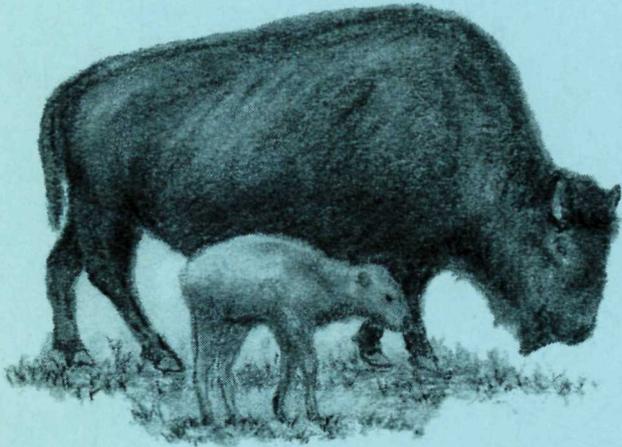


The Buffalo Chip

Resource Management Newsletter
Yellowstone National Park
October/November 2004



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CLEARIN' TRAIL

by Anita Varley

You know the old philosophical question, "If a tree falls in the forest, and there's no one there to hear it, did it make a sound?" We can't answer that one, but we can say with assurance that if a tree falls in the forest *over a trail*, it has to be moved. And that makes a lot of noise.

Some would ask, "Why do you have to move it? It's wild, just leave it alone." But that two-horned NPS mission of protecting resources while providing for the public enjoyment raises its head in the backcountry too, especially when it comes to trails. Clear-sailing trails, about a thousand miles of them, are crucial when it comes to keeping people and pack strings on them. When a tree falls across the trail, it doesn't take too many hoof- and footfalls to damage the surrounding vegetation, resulting in a widened or braided trail (a Leave No Trace guru's nightmare!). A lot of time, energy, and skills go into the care and maintenance of those seemingly primitive pathways.

As long as we've contemplated a thorny philosoph-

ical question, how about throwing in a bit of poetry to smooth it over:

*Give me a land of boughs in leaf,
A land of trees that stand;
Where trees are fallen there is grief;
I love no leafless land.
— A.E. Housman*

A backcountry ranger looking at hundreds of miles of trail to clear can attach another meaning to the third line of A.E. Housman's verse, "Where trees are fallen there is grief." It's the grief of not enough money, people-power, and time, exacerbated by sore muscles and joints.

This year, backcountry rangers and their crews of SCAs and volunteers cleared tens of thousands of trees from trails. For those of you who pooh-pooh poetry and philosophy, here's an Excel chart with numbers to bear out this report.

Yellowstone Park Initial Trail Clearing Stats 2004

Area	Trees Cut	Trail Miles	Total Personnel	NPS	SCA	VIP	Total Hours
Mammoth	3,000	122	6	3	1	2	1,056
Tower	333	80	17	16		1	120
Lamar	4,400	90	10	6		6	600
Canyon	3,100	60	8	2	2	4	320
Lake	3,800	140	10	4		6	750
Grant	360	14	3	1	1	1	113
Snake River	3,000	150	8	5		3	500
Old Faithful	1,700	72	7	3	2	2	75
Gallatin	1,600	110	3	3			850
Bechler	856	80	7	3		4	420
Totals	22,149	918	79	40	6	29	4,804

These totals, approximate and difficult to glean—"What, not only do we have to cut them, now we have to count them?!"—were unusually high. Was this because of too much wind, combined with the ongoing aftermath of the '88 fires, or just happenstance? I questioned a few of Yellowstone's many experts, and no one had a clear or concise answer. It's probably a combination of all of the above. So without apparent elucidation on that quandary, let's go back to verse.

It is not so much for its beauty that the forest makes a claim upon men's hearts, as for that subtle something, that quality of air that emanates from old trees, that so wonderfully changes and renews a weary spirit.

—Robert Louis Stevenson

The crews who saw, hoist, drag, and move thousands of fallen trees clear of the trails can apply an additional meaning, one with painful physical attributes to Stevenson's "weary spirit." Over 70 workers exhausted in excess of 4,800 hours just to accomplish initial clearing of over 22,000 trees. Total numbers for the season are even greater because, of course, the trees don't fall in concert—clearing is a continuous effort, especially after a big wind event. We warn our backcountry users to expect downfall and beware of falling trees throughout the summer.

This year, when short funding resulted in shorter seasons and later hiring, coupled with an inordinate number of downed trees, the undertaking was compounded. The downfall was heavier in most districts than in most years since 1989. Also, it seemed to be the year of the really big tree, the granddaddies of the spruce/firs. Post-'88 downfall has decreased significantly in lodgepole stands that seemed to reach their peak at about 8–12 years after the fires. However, spruce/fir stands in burn areas at higher elevations are just starting to fall, leaving in their wake significantly larger trees and trails completely impassable to stock. Some of the higher elevation forests in the Lamar, like Bootjack Gap, Hoodoo Basin, Canoe Lake, Frost Lake, and Mist Pass experienced 100–120 downed trees per mile! In some areas, the downfall was so dense that some crews just quit counting individual trees. To quote one ranger dog-tired from the task, "with the cutting so heavy and the trees soooo big, we just started counting tanks



NPS PHOTOS

Ranger Tom Schwartz clears the Mist Pass trail in 2002 with VIP Ray Rathmell swamping (moving cut pieces of wood off the trail).

*I've become a shelter for bird and beast,
And when at last I fall to the Earth
The life I leave will inspire new birth;
A seedling springs forth from the ground
Nature's cycle goes round and round.*
—S. Edward Palmer, *Spirit Tree*

of gas instead of total trees. There is no way that we could have kept track!"

In recent years and in keeping with wilderness policy, many rangers have made a concerted effort to shift from mechanized saws to hand tools. Some rangers have designated lengths of trail to hand tools only, and others made a concerted effort to use hand tools only after the initial clearing was complete. But in a year like this one, with short terms for our seasonal personnel, and unusually heavy and huge-diameter downfall, we had to use the most accessible and efficient tools to get the job done even by mid-August.

In addition to clearing trail, the backcountry poses some formidable challenges to rangers assigned to "manage" it. The short list of duties for a backcountry ranger includes: erecting food-storage poles, checking campsites and maintaining fire rings, assisting hikers, enforcing regulations, evaluating commercial users, patrolling the boundaries, monitoring wildlife and thermal features, and maintaining cabins that trim hours off an otherwise too-long, arduous commute for rangers on patrol. To quote one of our more seasoned backcountry rangers, "One big difference between frontcountry and backcountry tasks is that the frontcountry problems are usually gone by the next shift, but backcountry problems are still there and often compounded." In other words, they almost never cease.

So the next time you mosey down a trail, you can augment your mental picture of the mighty forest's majesty with the crews who, through their labor, have cleared the

trail. What's the point of this whole article, you ask? Raising the awareness of this issue/problem. If it gets incorporated into your Reticular Activating System (where one ponders it subconsciously), perhaps some new ideas for possible solutions will emerge. We're not only thinking out of the box, we're thinking out of the cerebral cortex. And we're looking for some subliminally emerged illumination in 2005.

*As the poet said,
"only God can make a tree,"
probably because it's so hard to figure out
how to get the bark on.*
—Woody Allen 🐿



Volunteer Jeff Grandison rides through a previously cleared section of the Hoodoo Basin trail on his way to clear the Bootjack Gap trail. Lamar rangers experienced well over 100 downed trees per mile on the Hoodoo Basin, Bootjack Gap, and Canoe Lake trails.

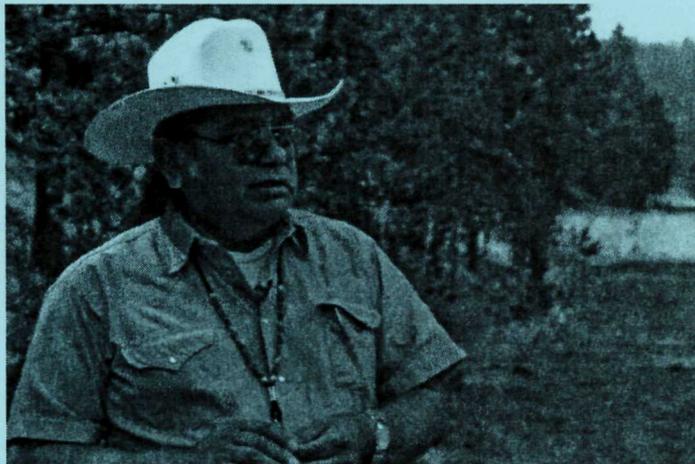
TWO WEEKS IN 1877: THE NEZ PERCE WRITERS' RETREAT—A TIME FOR REFLECTION

by Tasha Felton, with Linda Young

The Nez Perce people's passage through Yellowstone National Park in 1877 is an important event to today's descendants—and an historic event that has not been fully interpreted in the park. During consultations with tribal representatives a few years ago, YNP staff and members of associated tribes mutually agreed to do something about improving this situation, and the Nez Perce Interpretive Project was launched. The goal of this project is to provide a more honest, inclusive history for visitors.

The Nez Perce Interpretive Project is a collaborative effort involving three tribes (the Confederated Tribes of the Umatilla Reservation, the Confederated Tribes of the Colville Indian Reservation, and the Nez Perce Tribe of Idaho); two YNP divisions (the Division of Interpretation and the Yellowstone Center for Resources); and several other partners. There are several components of this project: wayside exhibits, an interpretive brochure, an interpretive compact disc, and the sharing of reference materials created from these projects that can serve to better inform the development of interpretive talks and programs. The park is fortunate to have three interpretive specialists working on this project, representing each of the tribes. Albert Andrews Redstar of the Confederated Tribes of the Colville Indian Reservation was an interpretive specialist for the Nez Perce National Historic Trail for the past two years. Allen Pinkham of the Nez Perce Tribe is currently on the Circle of Tribal Advisors of the National Council of the Lewis and Clark Bicentennial. Bobbie Conner, Director of the Tamastlikt Cultural Center in Pendleton, Oregon, is the representative of the Confederated Tribes of the Umatilla Reservation.

In mid-October, these writers participated in a writers' retreat to begin creating text that can ultimately be used to develop wayside exhibits and a brochure. During this time, we had the opportunity to work with the tribal representatives and get a sense of the project's importance from their perspective. The commitment of the writers was apparent. With open books, laptops, and oral history reports surrounding them, they looked like lawyers mulling over



Allen Pinkham, member of the Nez Perce Tribe and interpretive specialist for the Nez Perce Interpretive Project.

NPS PHOTOS

documents on our First Amendment rights. As specialists in their field, their command of the literature and their expertise was apparent; but they also provided something that literature cannot: living memory, the shared consciousness of the Nez Perce people.

When asked about the highlight of their week here and what they saw as most integral to this process, each said that the most meaningful aspect of their trip was being able to get out on the land. Mr. Andrews Redstar explained that "being here brings all that sadness to the surface and, hopefully, we capture some of that to add to the knowledge you might have about how we felt [and] how we feel today." Mr. Pinkham, standing near where the Nez Perce entered the park at the west, reflected on the geographical nature of the area. It caused him to wonder, "Why did our people come in this side at the west end of the park? Why didn't they go up through Three Forks and go straight north?" Why did they make the choices they made? He also mentioned, and Redstar agreed, that "it's just like Nez Perce country" out on the west side of the park where the Nez Perce entered.

What do the Nez Perce writers want from this experience? What do they think they can contribute? Simply, *change*. They wish to change misconceptions about their people and what happened here in 1877.



Looking west into the park along the Madison River.

As Mr. Pinkham put it, "We've got to kill some myths now." Particularly, they would like to see two common misapprehensions addressed: that the Nez Perce were lost in the park, and that Yellowstone was an untouched wilderness.

Were the Nez Perce lost in Yellowstone? That is not a point of debate for this report. However, it has been for many historians and experts on the 1877 war. For Redstar and Pinkham, there is no debate. Many tribes, including those of the Columbia Plateau and the mountain valleys, used the vast trail system to "go to buffalo" and to rendezvous and trade with tribes east of the mountains in central and southern Montana, both before and after the horse was introduced in North America. The Nez Perce people, they say, were no exception; they too had knowledge of this vast "highway" system of trails connecting their home in the Wallowa Valley of Oregon with the rest of their world. They claim that Yellowstone, with its various "Indian trails," such as the Bannock Trail, was included in that knowledge. Of particular interest to this issue is Nez Perce warrior, Yellow Wolf's statement:

"My grandfather, Homas, son of Seeloo Wahyakt, died on a buffalo hunt in Yellowstone Park. I am not mistaken! It was at Sokolinim [Antelope] where he was buried. This is north of some hot springs. Not over or beyond any big mountain, but it is above where two rivers meet."

—Yellow Wolf in *Yellow Wolf: His Own Story*, by Lucullus McWhorter

Moreover, the writers view the idea, held by many in the general public, that Yellowstone National Park was an untouched wilderness as a misconception. They hope that by including their perspectives in interpretive media, they will reveal that the natural wonders of Yellowstone and its human history and tribal cultures are woven into the same fabric. "What we came up with is that this [Yellowstone] is the remnant of creation—the geysers, the mud boiling, and

those kinds of things—so that's part of our spirituality as well, and we need to try to explain that," Pinkham said. The Nez Perce passage through Yellowstone is a clear example of how landscape shapes history. The landscape played a large role in shaping the choices of Chief Looking Glass and Chief Joseph. Their descendants wish to illustrate how the people and the land have shaped each other. Pinkham added that this kind of project helps "people start to understand that the environment is part of them as well."

The writers have big expectations for this process and other efforts like it. Albert Andrews Redstar expressed his view on the project:

"We are dealing today with alcoholism, domestic abuse, dealing with child abuse. I'm dealing with all the ills of our society almost on a daily basis. So how does this all make sense to all that? What I see here is an opportunity to bring forth our worldview—if we can use the language—if we can use perception to help people come to terms with how we see the world, perhaps there's a chance that we can reach out and help each other with our ills."

For the NPS and the public, the educational benefits of these types of partnerships abound. Righting the wrongs, representing the other side of the story, enables the public to better assess history and better understand the complexity of the events surrounding 1877. The history of the West is not black and white; it is not a good guy/bad guy tale. There are multiple accounts of every story, and the perspectives from which those accounts arise need to be presented in our country's national parks.

We are moving toward a more holistic view of land in our country—one that includes its cultural and natural aspects, a view that will give the American public an opportunity to experience all facets of the landscape. For the Nez Perce, as Allen Pinkham put it, "We're not just archeology. We were here prior to Lewis and Clark, even the horse and even before Columbus and we need to explain all that. We are not just something in writing. We are not history. We're still here." 🐾

NEZ PERCE SCULPT, BLESS, AND HONOR

by Katharine L. White

Amidst a still backdrop of towering lodgepole pines, three Nez Perce riders will forever more stand in recognition and commemoration of the historic 1877 flight of the Nez Perce people, which transpired, in part, within the Gallatin National Forest (as well as Yellowstone National Park). The sculpted sheet steel tribute powerfully depicts the riders in silhouette, revealing a quiet, yet continual presence throughout this area.

Culminating in over a year's work between Gallatin National Forest and the interpretive company, Heritage Designs, the sculpture and accompanying interpretive panel now resides along the Nez Perce National Historic Trail Autotour Route on the north side of the Beartooth Scenic Byway, just three miles east of Cooke City, Montana.

The celebratory unveiling of the sculpture occurred on October 9, and consisted of a traditional Nez Perce Blessing Ceremony conducted by the Nez Perce Spirit

ual Leader Horace Axtell. In the presence of a large crowd, blessings and prayers of protection were interwoven with the heart-felt drumming and singing of Michael Penney and his drum group, "Nez Perce Nation." The ceremony featured the accomplished Nez Perce sculptor Abraham Yearout, whose hard work and creativity made this piece a reality. Marna Daily of the Gallatin National Forest remarked that the "ceremony was very successful. We were very glad that everyone who participated could attend. We are especially appreciative of the Nez Perce tribal members who attended, as they made the event truly special."

Evident on all the faces and in the embraces of those present was the realization that this interpretive sculpture and panel is much more than a static symbol of the hardships and tragedy faced by the Nez Perce people in the past; it is also a part of a living memory that is still healing and still relevant in the lives of many Nez Perce today. 🐾



Three miles east of Cooke City, Montana, in the Gallatin National Forest, a new roadside exhibit commemorates the historic 1877 flight of the Nez Perce.

AN OVERVIEW OF THE 2004 "ANNUAL DISTURBANCE" ACTIVITY AT NORRIS GEYSER BASIN

by Denise Herman

The dynamic nature of the Norris Geyser Basin excites interest from visitors and researchers alike. But sometimes things grow even more exciting in the basin. The Norris disturbance is a time of more rapid, widespread changes than are usually experienced in the basin. Sometimes this disturbance is very subtle; other times, it can be dramatic. Seismic activity can cause many changes in geothermal systems. The Norris disturbance, however, is attributed to water tables. The most widely accepted theory holds that super-heated, highly pressurized waters, high in chloride and silica, begin to fill their plumbing channels. The pressure from these waters ruptures the self-sealed zone above them. Like ice cracking on a lake, the weaker areas rupture first, and the subterranean cracks may spread across the basin. On the surface, these cracks are manifested as changes in water appearance, water chemistry, new vents, and changes in geyser activity.

This year's disturbance event kept the Norris interpretive ranger staff busy documenting changes and monitoring trail safety. On the morning of September 18, Denise Herman noticed features demonstrating activity similar or identical to their activity during last year's disturbance. Jamie Silberberger joined her in the basin and confirmed her observations. John Tebby arrived during the afternoon and documented aspects of the event on video.

Some of this year's more interesting or dramatic changes

include: Steamboat Geyser has been having minor eruptions through the summer. During the disturbance, the amount of water discharged by the south vent dropped significantly. On October 2, with the onset of minor eruptions, the geyser began to resume its typical water volume and force, but lacked any consistency.

This past summer, Echinus Geyser frustrated many visitors with its irregularity. Intervals between eruptions ranged from several hours to several days. During last year's disturbance, intervals between eruptions changed from irregular to regular. On September 22, Denise Herman checked the gauging station data for Tantalus Creek, and noted that the small spikes of geyser eruptions it registered changed from irregular to 3½-hour intervals on September 18. She and John Tebby made a few test predictions and confirmed that Echinus had switched to regular intervals. Beginning on October 2, Echinus's intervals began to change again, similar to last year's disturbance behavior. Intervals are now generally ranging from 3 to 5 hours, but false eruptions appear to be contributing to the challenge of making predictions.

Green Dragon Hot Spring was boiling violently on the morning the disturbance began, with some surges of almost one meter in height. Water levels were high enough that there was significant overflow into Gray Lakes, which were themselves surging heavily. These two features appeared to be pouring mud into Tantalus Creek.

On September 20, a small, new mudpot emerged next to the new boardwalk. It produced some mudflows and inaugurated the new boardwalk with its first mud splatters. By September 30, no mud was visible in the vent, but could be heard gurgling in the crater.

Porkchop Geyser became more turbulent, with increased boiling and surges around ½ meter. The water has remained opalescent.

The vents of "Sagebrush Springs," the hot spring that emerged beside Porkchop Geyser July 10, 2003, were larger and more active on the morning of September 18 than they had been previously. They increased in diameter and were perpetually spouting up to one meter high. Another vent, a long crack, emerged and was in a frenzied bubbling. By September 20, the entire Sagebrush Springs system became a system of fumaroles.

Similar to the activity during last year's disturbance, many of the features in the flats around Porkchop Geyser went into steam phase. "DB" steam vent was roaring from its steam pressure and could be heard as far away as the Norris Museum. Pearl Geyser, Son of Green Dragon, Grandson of Green Dragon, last year's new mud pot (as yet unnamed), Yellow Funnel Spring, and "Orby" Geyser all went into steam phase.

Vixen Geyser, one of the true gems at Norris, had not been visible most of the summer. The first reported eruption of Vixen Geyser was on July 31. On the morning of September 18, the trail was largely



Green Dragon Hot Spring was observed in steam phase at the time of the disturbance.

covered by a puddle, and water had eroded under the kick log beside Vixen, suggesting that it had had a major eruption. Minor eruptions subsequently occurred with intervals of less than five minutes.

On September 25, a geology class from the University of Colorado inquired about a geyser near Minute Geyser. After viewing their video and reviewing office information, we realized that this was a change of activity for the existing vent. Interpretive rangers Denise Herman, John Tebby, and Jamie Silberberger noted eruptions reaching 15 to 30 feet about every 10 minutes. It was active for two days before going into steam phase. This existing feature attracted a great deal of interest, and viewers filled the trail wayside in front of it for both days.

On September 15, John Tebby noticed Guardian Geyser having steam phase eruptions. These almost continuous eruptions had only short pauses between them.

Constant Geyser was active all summer, and most eruptions consisted of three to four bursts

spaced several minutes apart. Since September 18, Jamie Silberberger noted more single burst eruptions. When eruptions do have multiple bursts, the time between them has lengthened.

Whirligig Geyser was dormant for much of the summer. The first recorded eruption of the year occurred on August 21, though John Tebby noted signs of eruptive activity prior to that. Once it began erupting and killed off the *Cyanidium* (red algae that live in thermal, acidic environments), those eruptions were not consistent in either frequency or force. During some eruptions, the side vent was barely audible. After September 18, it seemed to be erupting more regularly with very audible chugging from the side vent.

Jamie Silberberger noted eruptions of Fireball Geyser reaching up to about five meters and lasting for about 10 minutes.

Congress Pool started the summer muddy, but gradually developed a slight bluish tint. Starting September 18, it once again became muddy. By September 25, the

Annual Thermal Disturbance

Analysis of temperature loggers confirmed observations by Norris interpretive rangers that the thermal disturbance began September 18, 2004. The clearest indicator of the thermal disturbance was the temperature log for Echinus Geyser, showing a change from irregular eruption intervals *before* the disturbance to regular eruption intervals on September 18. Echinus's regular eruption interval was clearly visible as a regular temperature spike in the stream data from the Tantalus Creek gauging station. Steam temperatures were also measured in selected thermal features within the Norris Geyser Basin. The highest steam temperature was 2°C above boiling in Guardian Geyser. On September 27, Pearl Geyser changed from a blue pool to a steam vent. Yellow Funnel and Son of Green Dragon still contained minor amounts of water on September 29.

New Activity at Existing Thermal Feature

On Sunday, September 26, one day after what turned out to be new activity at an existing thermal feature was observed near Minute Geyser, YNP geologists Hank Heasler and Cheryl Jaworowski measured the geyser's temperature and acidity. The temperature of the thermal pool was 0.6°C below boiling, and the pH was 5.0. The activity was within an existing sinter funnel. Dark gray, muddy water rapidly rose in the funnel, culminating in an eruption of 15–25 feet and lasting approximately one minute. The water then drained back into the sinter funnel to repeat the cycle. As of September 26, there was no overflow of water out of the funnel. On Sunday evening, geyser activity ceased. On September 29, Hank and Cheryl witnessed steam issuing from its vent. The new activity occurred approximately one week after the beginning of the annual thermal disturbance in Norris Geyser Basin.

water level had dropped below this summer's typical levels. On September 29, it began to burp and bubble heavily.

The Carnegie Drill Site, even through the start of the disturbance, had a significant amount of water outside the cap, periodically erupting as a geyser and producing copious steam. On September 25, it was dry with no noticeable steam. The small pool directly behind the sign for the Drill Site had also been full until September 25, when it, too, became dry.

Which of these changes will remain for a considerable length of time? No one can say. Some of Norris's changes are very short lived, while others linger for

years. But disturbance changes certainly contribute to the widespread fascination generated by the Norris Geyser Basin. While these changes can make visiting Norris rather frustrating—from one day to the next a geyser can become unpredictable, or a feature may become dormant—they also make Norris arguably the most exciting basin in Yellowstone: you may be the first to see a new feature emerge, the first to see a geyser revive from dormancy, or the first to witness new activity in existing features. Every visit to the Norris Geyser Basin offers the thrill of exploration that the first visitors must surely have felt. 🌋

...NEWS BRIEFS...

MAN SUFFERS THERMAL BURN IN YELLOWSTONE

Park visitor hiking off-trail at Artesia Geyser breaks through crust

A 39-year-old park visitor from Georgia was burned after breaking through the crust in a thermal area in the Old Faithful area in early October. The man and a friend were touring the Firehole Lake area in the Lower Geyser Basin when they decided to get off the boardwalk at Artesia Geyser. The victim broke through the crust, submerging both his legs up to the knees in hot water and suffering second degree burns to approximately 25% of his body. His friend pulled him from the hot water and drove him to the Old Faithful Inn to seek medical attention. Park EMS staff immediately responded, stabilized the victim's injuries, and transported him by ambulance to the Old Faithful Clinic for additional care; he was subsequently taken by lifeflight helicopter to Eastern Regional Medical Center in Idaho Falls, Idaho. This is the first individual to receive a thermal burn during the 2004 summer season.

YELLOWSTONE JUSTICE CENTER ENVIRONMENTAL ASSESSMENT AVAILABLE FOR PUBLIC REVIEW

An environmental assessment (EA) for a new Justice Center (courthouse) in Yellowstone National Park has been released for public review. The National Park Service, in cooperation with the U.S. Courts and U.S. Marshals Service, is proposing to build a Justice Center in the Mammoth Hot Springs area of Yellowstone National Park. The new building would house three interrelated functions: a U.S. District Court, law enforcement activities for the U.S. Marshals Service and NPS, and detention facilities. The building would be

two stories high, for a total of approximately 17,000 square feet. The footprint for the building would be around 5,700 square feet, and impact about one acre of land. The Yellowstone Justice Center would consolidate functions currently housed in historic buildings in Mammoth that no longer meet space, safety, security, and building code requirements. Comments on the Yellowstone Justice Center EA will be accepted until November 24, 2004. They must be submitted in writing and should be addressed to: Yellowstone Justice Center EA, Planning Office, P.O. Box 168, Yellowstone National Park, Wyoming 82190. The EA is available for review online at <www.nps.gov/yell/technical/planning/index.htm>. Printed copies may be requested by calling Yellowstone National Park at (307) 344-2018.

CONSTRUCTION OF NEW CANYON RANGER STATION GIVEN GO AHEAD

Groundbreaking could take place as early as spring 2005 for the new ranger station at Canyon. The ranger station will be built between the current service station and campground entrance along the North Rim Drive across from the Canyon Village Historic District. The 2,000-square-foot facility will serve Resource Management and Visitor Protection staff based at Canyon. These employees had been working out of one small, inadequate office in the recently demolished visitor center. The new building will include a public contact area, secure offices and storage, a training room, and a locker room. Total cost of the project is estimated at less than \$500,000. Long-term plans call for an Emergency Services Building to be constructed adjacent to the ranger station. It would house an ambulance and structural fire engines currently based in

crowded maintenance facilities in the employee housing area. Moving these vehicles next to the ranger station would improve emergency response times in the Canyon area. Planning efforts in accordance with the National Environmental Policy Act were recently concluded with the signing of a Finding of No Significant Impact, which is available online at <www.nps.gov/yell/technical/planning/index.htm> or by writing the Planning, Compliance, and Landscape Architecture Office, P.O. 168, Yellowstone National Park, Wyoming 82190.



The old Canyon Visitor Center, recently demolished to make way for a new facility.

TWO PEOPLE HURT IN SEPARATE ANIMAL ENCOUNTERS

Concession employee gored by bison; visitor knocked around by sow grizzly

A concession employee was gored by a bison on October 6 at Old Faithful. The 24-year-old man was walking back to his dorm at about 11:20 p.m., and did not see the animal. The bison gored him in the rear and lifted him into the air, landing him face down. He was treated for a 2½-inch puncture wound and received stitches in his face at the Old Faithful Clinic.

On September 26, a park visitor escaped serious injury after surprising a grizzly sow with two cubs. The 41-year old Livingston, Montana, resident was backpacking along the Snake River Trail south of Heart Lake when he heard a "whoof" and looked up to see the three bears about 30 yards above the trail. The sow bluff charged. As the man slowly and calmly began to leave, the bear hit him from behind, knocking him down, and then ran off. After starting to crawl away, the man heard the bear huffing, and curled up into the fetal position, with his back to the sow. The bear batted him twice on the head and once in the shoulder, and bit into the top of his pack several times before

running off. The man then hiked out to the trailhead. He received two small puncture wounds on his head and one on his right shoulder, but did not seek medical treatment. Wildlife managers believe the backpacker avoided serious injury by acting passive and non-threatening during the encounter, by going into the fetal position, and by keeping his pack on his back.

BIRD DEATHS AT HEART LAKE

During the last week of August, park ornithologist Terry McEneaney was notified by area personnel about several songbird deaths reported by visitors at Heart Lake. Richard Jones, backcountry ranger at Heart Lake, collected several songbirds and relayed information concerning the findings to McEneaney. On September 1, McEneaney traveled to Heart Lake to identify species and examine the scene where the deaths occurred. Although West Nile Virus has not reached YNP yet, it could occur at any time, and this incident was investigated thoroughly, to either rule it out or properly document it. With help from two wildlife pathologists, necropsies were performed on several of the specimens. All concluded that because the birds were insectivores, they most likely died from starvation as a result of a storm in the Heart Lake area on August 25–26. The birds' intestines were empty of food, which is a classic symptom of starvation. The birds collected were as follows: 1 yellow-rumped warbler, 1 olive-sided flycatcher, 2 tree swallows, and 5 Western wood-pewees (nine birds total).

WOLF WINTER STUDY BEGINS

The Wolf Project begins the annual Early Winter Study starting November 15 and ending December 14, 2004. This is an intensive, 30-day study where field crews monitor several wolf packs throughout the northern range every day from dawn until dusk. The purpose of winter study is to document long-term wolf predation patterns, territorial movements, behavior, interactions with other species, and characteristics of their prey. Volunteers began arriving on November 8. Wolf Project personnel conducted a three-day training session with the help of other park staff (from Maintenance, Safety Services, and Resource Management) in which safety, park regulations, and proper radio use, were emphasized in addition to the research related training topics. The crew will use telemetry to monitor wolf packs ranging from the North Entrance to the Northeast Entrance, and will also hike off-road to collect samples from wolf kills, conduct elk counts, and observe wolves. In addition, Wolf Project staff will monitor wolf packs from the air during aerial

telemetry flights throughout the 30-day study period.

PARK SERVICE ANNOUNCES TEMPORARY WINTER USE PLANS

Finding of No Significant Impact approved

The National Park Service has approved winter use plans for Yellowstone and Grand Teton National Parks and the John D. Rockefeller, Jr., Memorial Parkway to provide visitors with a range of winter recreational opportunities for a three-year period while protecting park resources. A Finding of No Significant Impact (FONSI) for the Temporary Winter Use Plans Environmental Assessment ensures that park resources are protected and allows for the use of snowmobiles and snowcoaches in the parks on roads that automobiles use in the summer.

The FONSI, which ensures access and protection of resources, was approved by National Park Service Intermountain Regional Director Steve Martin on November 4, 2004. The plan will be in effect for the next three winter seasons, allowing snowmobile and snowcoach use through the winter of 2006–2007. A final rule implementing the decision will soon be published in the *Federal Register*.

Under the decision and the implementing rule, 720 snowmobiles per day will be allowed to enter Yellowstone, all led by commercial guides. This is substantially below the historic peak day use levels in the park and is lower than the level of access allowed during the last half of the 2003–2004 winter seasons. Commercial guides will not be required for the 140 snowmobiles per day allowed in Grand Teton National Park.

Snowmobiles in Yellowstone will continue to operate on roads used by automobiles during the summer months. Snowmobiles will continue to be prohibited on specific side roads in Yellowstone including the Fountain Flat Road, Virginia Cascades Drive, North Canyon Rim Drive, Riverside Drive, and the road from Canyon Junction to Washburn Hot Springs Overlook. Snowmobiles will be allowed on the Lake Butte Road; and the Firehole Canyon Drive will be open to snowcoaches only from 7 a.m. to 12 p.m. and to snowmobiles and snowcoaches from 12 p.m. to 9 p.m. each day.

A total of 40 snowmobiles daily will be allowed on the frozen surface of Jackson Lake for purposes of ice fishing only; a valid Wyoming state fishing license and the proper fishing gear will be required. Snowplane use will continue to be prohibited on the lake.

All recreational snowmobiles entering Yellowstone National Park will be required to be four-stroke machines that meet the cleaner, quieter National Park

Service (NPS) "Best Available Technology" (BAT) standards. A list of NPS-approved BAT snowmobiles is available on the park's web site at <www.nps.gov/yell/planvisit/winteruse>.

BAT snowmobiles will be required in Grand Teton National Park, with the exception of a short segment of the Continental Divide Snowmobile Trail (between Moran Junction and the east park boundary) and those originating in the Targhee National Forest and traveling on the Grassy Lake Road as far as Flagg Ranch.

The temporary winter use management plan is a balanced approach that ensures that resources are protected, provides access and gives visitors, employees, and residents of the park's gateway communities the information they want and need to plan for the near term, and will help minimize economic impacts.

Monitoring data gathered during the interim plan will be invaluable in accurately assessing the impact of winter use in the long-term analysis and developing a permanent regulation for winter use in the parks.

The FONSI and EA are available online at <<http://www.nps.gov/yell/planvisit/winteruse/winteruse-ea.htm>>.

YELLOWSTONE VOLCANO OBSERVATORY (YVO) RESPONDS TO RECENT MEDIA COVERAGE ON THE YELLOWSTONE VOLCANIC SYSTEM

from a statement posted on the YVO website

Recent television shows and newspaper articles have highlighted Yellowstone's geologic past and active present. YVO (a partnership between the U.S. Geological Survey (USGS), the University of Utah, and Yellowstone National Park) is encouraged that the public shares our enthusiasm for Yellowstone and its history, and regularly assists the many television and newspaper professionals focussed on the Yellowstone volcanic system.

It is important that everyone understand that current geologic activity at Yellowstone has remained relatively constant since earth scientists first started monitoring some 30 years ago. Prospects of renewed volcanism are still far away. Though another caldera-forming eruption is theoretically possible, it is very unlikely to occur in the next 1,000 or even 10,000 years. Smaller eruptions are more likely, but even so, we see no signals of any impending volcanic unrest. YVO maintains an array of instruments that monitor activities at Yellowstone around the clock.

Interested readers are invited to explore the pages of our website <<http://volcanoes.usgs.gov/yvo/faqs.html>> to learn more about Yellowstone's

volcanic past, to view current data about earthquakes, ground movement and stream flow, and to read about Frequently Asked Questions (FAQ). Our new USGS Yellowstone Fact Sheet provides some context about scientists' growing recognition that Yellowstone remains an active volcanic and earthquake system.

YELLOWSTONE NATIONAL PARK AND XANTERRA PARKS & RESORTS RECEIVE VPP MERIT AWARD FROM OSHA

On Thursday, October 21, 2004, Yellowstone National Park and park concessioner Xanterra Parks & Resorts received special recognition from the Occupational Safety and Health Administration (OSHA) for their outstanding success in achieving an exemplary occupational safety and health program in the work place.

OSHA presented the park and Xanterra Parks & Resorts with the VPP Merit Award, one of the highest levels of recognition that OSHA offers under their Voluntary Protection Programs (VPP). The VPP brings together management, labor, and OSHA to

establish cooperative relationships in safety and health practices that go beyond traditional safety programs. Under the voluntary agreement, specific performance-based criteria are established that must be met before a site can achieve VPP status. Criteria include a high degree of management support and employee involvement, a high-quality worksite hazard analysis, prevention and control programs, and comprehensive safety and health training for all employees. In May, OSHA sent a five-person team to conduct a rigorous, on-site evaluation. Yellowstone National Park passed the verification process and was accepted as a VPP Merit site. This makes Yellowstone and Xanterra Parks & Resorts the first park and park concessioner to receive the VPP designation from OSHA.

Statistical evidence shows that sites that reach VPP status have fewer lost work days, lower worker compensation costs, and most importantly, fewer worker injuries and illnesses. VPP Merit sites must submit annual self-evaluations and undergo periodic on-site reevaluations to remain in the program. ♻️

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:

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