

Kaibab National Forest

2010 Accomplishment Report





Each little brown myotis bat can eat up to 1,200 mosquitoes per night

Research Finds Bats Commute Great Lengths to the Kaibab Plateau

Allen's lappet-browed bats, some weighing the equivalent of just three Hershey's kisses, fly distances longer than a marathon each night from lower elevation canyons to drink water and eat insects at ponds atop the Kaibab Plateau.

That was one of the findings from a weeklong bat survey conducted on the North Kaibab Ranger District in early July by a group of government agencies and volunteers. Members of the Forest Service, the Arizona Game and Fish Department, Northern Arizona University and volunteers from Bat Conservation

International, who came from as far away as Oregon and Washington, DC, spent the week of July 5 studying the elusive nocturnal creatures.

Using a technique called mist-netting, the group caught and released hundreds of bats at more than 25 water sources around the plateau.

These bats are roosting in the crevices of cliff faces in canyons and traveling great distances each night to these ponderosa lakes," said

North Kaibab Biologist Angela Gatto, adding that one bat had travelled 14.5 miles and another 17.5 miles from roost to water.

Previous studies have produced similar findings, such as

greater western mastiff bats and spotted bats that travel from the Grand Canyon each night to forage at meadows atop the Kaibab Plateau for nightly nourishment at distances of more than 25 miles each way.

The Kaibab Plateau is home to at least 13 species of bats, a diversity likely made possible by the significant elevation changes and accompanying variety of habitats in the area. "Various mountains and plateaus provide these sky islands near canyon habitats across Arizona that make ideal conditions for bats," Gatto said. Arizona is home to 28 species of bats, second only to Texas in diversity.

This year's bat survey on the Kaibab focused on the Allen's lappet-browed bat, named for the large, lobelike lappets curling around its head. The bat is designated a sensitive species by the Forest Service. The group wanted to learn where lactating females are living with their newly-born pups.

Researchers glued a small radio transmitter, about the size of a pinto bean, to the hair on each bat's shoulders, making it easy for the animals to shed the device within a few months of the tracking. The radio data indicated that the mother

bats leave their pups each night in crevices high up the cliffs of Kanab Creek Canyon to seek out water sources miles away in the ponderosa pine forests atop the plateau.

"Amazingly, a bat we radio tagged this year and tracked to a roost in Kanab Creek used the same roost as [a bat] we captured and radio tagged in 2005," said Carol Chambers, professor of wildlife ecology at Northern Arizona University.

"By reusing the same roost over several years, this seems to indicate high quality roosts."

Statewide bat coordinator Angie McIntire of the Arizona Game and Fish Department said one reason bats merit the attention of researchers is because they are the number one predator of nighttime insects, such as moths, beetles and mosquitoes. "They really help keep insect populations in check," McIntire said. "They're a very important component of the ecosystem."

Each little brown myotis bat can eat up to 1,200 mosquitoes per night, Chambers said. McIntire added that widespread misperceptions exist that bats often carry rabies. In fact, they are no more likely to carry rabies than any other wildlife species, she said.

What Forest Service employees do is truly important work and it affects not only the here and now, but how our forests will be in the years to come. It affects the future health of the forest, the diversity of wildlife habitat, and outdoor recreational opportunities for millions of people across the Nation.

— Earl Bassett, Lead Park Ranger
Williams and Forest Service Visitor Center,
Forest Service employee for 34 years



WILDLIFE

The Kaibab National Forest strives to have habitat available at the appropriate spatial, temporal, compositional, and structural levels for a variety of vertebrate and invertebrate species. Specifically, wildlife biologists work in an integrative fashion with other resource specialists to provide adequate opportunities for breeding, feeding, nesting, and other critical life-cycle needs of various wildlife species. An emphasis is placed on the protection of key habitats that contain threatened, endangered, and/

or sensitive species of plants and animals.

Large wildlife projects in 2010 included the North Kaibab Ranger District bat survey, a weeklong study focusing on the Allen's lappet-browed bat, and the North Canyon Creek habitat restoration project, which restored 29 failing dams that create pools in the shallow creek where trout can live during the winter or during periods of low water flows.

Other projects undertaken in 2010 with a focus on wildlife included:

- **Ida Grassland Maintenance Project** – About 1,800 acres were treated in 2010 in order to improve habitat for pronghorn antelope, elk,

Natural Lakes Fencing Project

A project started several years ago to protect wildlife waters on the Kaibab Plateau was completed in 2010 thanks largely to the efforts of volunteers.

As part of the 2001 decision associated with the Kane Ranch Environmental Assessment, 17 natural lakes were identified in the Central Summer Allotment to be fenced to exclude cattle. The last one, East Lake, was completed in 2010.

All of the 17 lakes have been fenced completely or repaired thanks in large part to volunteers from Grand Canyon Trust and the Arizona Deer Association. The purpose of the project is to maintain the water sources for wildlife by preventing cattle from affecting the water and aquatic vegetation.

"Water sources that are open to cattle tend to become turbid and anaerobic," said Angela Gatto, North Kaibab Ranger District wildlife biologist. "These natural lakes support deer, of course, but are also important for migratory birds, waterfowl, marsh birds, amphibians, and more."



J D Dam Lake, Williams Ranger District

Crews Rebuild Historic Trout Habitat on the North Kaibab

In 1934, during the Great Depression, workers from Fredonia, Arizona, and Kanab, Utah, built 68 log dams along the North Kaibab Ranger District's North Canyon Creek—the district's only perennially flowing stream—in an effort to make suitable habitat for introduced trout. The project was funded through the National Industrial Recovery Act (NIRA), a New Deal era program to create jobs during a time of high unemployment.

Now, 76 years later, a group of volunteers led by the Arizona Game and Fish Department have restored 29 failing dams, using the same construction methods and many of the same hand tools used by the original workers.

"To be part of a group doing the same work, using the same tools in the same place, really gives you a sense of history," said Scott Rogers, Arizona Game and Fish Department Region II fisheries program manager and the project leader.

During September, about a dozen volunteers from American Conservation Experience joined Arizona Game and Fish Department staff to reconstruct log check-dams,

which create pools in the shallow creek where trout can live during the winter or during periods of low waterflows. Because the creek is now within a designated wilderness, no motorized tools can be used. Crews packed in tools and supplies on horseback, felled fir trees using 2-person hand saws, chipped away bark with axes, and rearranged logs and boulders using crow bars and muscle.

To create the dams, logs were buried beneath rock ballast at right angles to the streamflow to produce a steady trickle of water into pools below. A non-woven geotextile fabric was applied to the upstream side of the log dams to seal and help hold fine sediment material from downstream movement. In some places, downed trees were moved across the pools to increase shade for the fish.

The remote North Canyon Creek is used as a refugium for a genetically pure population of Apache trout, classified as a threatened species by the U.S. Fish and Wildlife Service. In 1963, the Arizona Game and Fish Department planted the fish in North Canyon to provide genetic protection and population stability for the threatened trout that have suffered

hybridization with nonnative species and habitat loss in other parts of Arizona. The fish are derived from the Ord Creek stock of Apache trout, which are native to the headwaters of the White Mountains, including the Little Colorado, Salt and San Francisco Rivers.

According to government records, the 1934 North Canyon work crews were led by foreman Walter McAllister of Kanab. NIRA work crews were typically supervised by the U.S. Forest Service, U.S. Park Service or U.S. Grazing Service (now the Bureau of Land Management). Work camps were administered by the War Department, with a local Army Reserve officer and physician typically assigned to each camp. Enrollees received \$30 a month for their work, and were required to allot \$25 of this to their dependents at home (parents and siblings). Those without families were required to allot \$25 to a savings account available to them upon discharge. Room, board, health care, education, and uniforms were provided. The remaining \$5 a month salary was available to the enrollees for their personal needs. The enlistment period was 6 months, not to exceed 2 years total.

Pronghorn Migration

Some fences can negatively impact pronghorn herds because they may be cut off from valuable resources and needed migration or escape routes. This fragmentation of habitat can have serious consequences.

The Kaibab National Forest is working to reduce impacts to pronghorn herds by removing unnecessary obstacles to migration. To that end, Williams Ranger District biologists removed 2 miles of fence in a pronghorn migration corridor during fiscal year 2010. The work, which was completed in consultation with the Arizona Game and Fish Department, should facilitate use of these important corridors.

and other wildlife species by thinning junipers and pines to maintain an open grassland/savanna habitat structure in historic grasslands on the north part of the Williams Ranger District. The project area serves as important habitat for pronghorn and elk, and provides habitat connectivity to state and private lands to the north where other grassland maintenance treatments have been occurring. In addition to pronghorn and elk, this project provides long-term benefits to many species of wildlife associated with grassland and savanna habitats, including Gunnison's prairie dog, badger, spotted ground

squirrel, vesper sparrow, horned lark, northern harrier, western meadowlark, barn swallow, barn owl, and burrowing owl.

- **Bird Monitoring** – The Kaibab National Forest continued its multi-year project with Rocky Mountain Bird Observatory to gather long-term trend data for populations of most diurnal, regularly breeding bird species in the forest. In the short term, this program provides information needed to effectively manage and conserve bird populations in Kaibab National Forest. It also supports the forest's

efforts to comply with requirements set forth in the National Forest Management Act and other statutes and regulations. Finally, it contributes to Rocky Mountain Bird Observatory's broader landscape-scale breeding bird monitoring program, which includes many different states in the U.S.

- **Goshawk Noise Study** – North Kaibab Ranger District employees worked in collaboration with the Rocky Mountain Research Station and the U.S. Army Engineer Research and Development Center/Construction Engineering Research Laboratory to

gather information on noise impacts to northern goshawks from logging trucks and recreational OHVs. The goal is to test sufficiently to establish critical thresholds for timing, distance, and noise levels.

- **Small Mammal Survey** – Forest biologists provided support for a survey of small mammal use in areas of the forest dominated by pinyon pines and juniper trees. The study will provide valuable data on how management activities might affect small mammals in this habitat type.

Volunteer Archaeology Event Offers Opportunities for History and Food Buffs Alike

When you think about archaeology, do blue corn and green chile pancakes come to mind? Or, how about sweet potato quesadillas? Well they would if you had participated in the volunteer archaeology projects—known as Passport in Time—hosted by the Kaibab National Forest over the last 20 years. Next to helping preserve the Nation’s past, food has been the top priority on these weeklong volunteer adventures.

For the 2010 Passport in Time (PIT) project, which was held on the forest’s Tusayan Ranger District, Forest Service archaeologists and volunteers camped out and dined on green curry shrimp stew, Southwestern egg scramble, and golden graham cracker encrusted French vanilla toast, amongst other delicacies.

At the end of each long day of archaeological survey and monitoring, Passport in Time volunteers and professional Forest Service archaeologists came together in camp for cooking and camaraderie. Of course it isn’t just the food that makes the Kaibab PIT projects memorable. It is also the important work accomplished toward protecting and preserving the forest’s unique cultural sites. During a week in late September, Forest Service archaeologists and PIT volunteers recorded 51 new sites,

which included 6 sweat lodges, nearly 50 brush shelters, and 6 pueblos. Most of the brush shelter camps also had earlier prehistoric components, many with projectile points.

“We logged 500 volunteer hours in accomplishing the 2010 Passport in Time project,” said Neil Weintraub, a Kaibab National Forest archaeologist who has been involved with PIT since it became an official Forest Service program in 1991. “What is truly amazing is that over the past 20 years, more than 14,000 hours have been contributed by PIT volunteers. That equals nearly 7 person years of work.” And, a lot of really delicious meals served up around a campfire.



Archaeological Databases

Archaeologists on the North Kaibab Ranger District developed two computer databases that will help facilitate research on the Arizona Strip. One database is a catalogue of the district’s artifact collection, and the other provides information on the district’s collection of stone projectile points. The databases are searchable by a number of criteria and can visually display the information using GIS technology.

Archaeological technician Colleen Nicholas catalogued the district’s entire collection of artifacts, including pottery fragments, stone tools and flakes, and several hundred stone projectile points used by prehistoric hunters around the plateau. She sorted the artifacts by type, style, time period, and location. Photos of unique items were also included in the databases.

While Forest Service archaeologists don’t typically collect artifacts anymore, explained North Kaibab Assistant Archaeologist Britt Betenson, existing collections are maintained as a tool to help researchers understand the past.

LETTER FROM AN ARCHAEOLOGY INTERN

Written by: Marianne Olney-Hamel, Grinnell College student. As submitted to the Grinnell College Web site, www.grinnell.edu. Grinnell College is located in Grinnell, Iowa.

Noah Eribley and I are archaeology interns and spend most of our days with Neil Weintraub (Grinnell College, 1986) and Erin Woodard, archaeologists on the south zone of the Kaibab National Forest. One of the big projects is an archaeological survey of tanks throughout the Williams Ranger District. The forest allows cattle and sheep ranchers to lease land to graze their livestock, and tanks are low points, natural or manmade, where water collects and the livestock drink. Archaeologists have to make sure there aren’t any sites that would be damaged, so we’ve visited tanks all over the forest looking for pottery sherds, flakes, structures, bone, or any sign of prehistoric settlement. We’ve also been working on site mapping in the Tusayan Ranger District, just south of the Grand Canyon.



Neil and Erin are fantastic supervisors, and they really care about us doing something new and exciting every day. We’ve also had the opportunity to work with some of the tribes living in the area at summer camps. Today, for example, we went to a summer camp on the Hualapai Reservation and threw atlatls (ancient hunting tools) with the Hualapai kids there. I have learned so much in my past 6 weeks on the Kaibab: how to identify the local materials ancient people used to make points (arrowheads), about the high desert ecosystem, how to use a compass and portable GPS unit, how to throw an atlatl and a rabbit stick (ancient hunting tools), how to weave twine from yucca fiber, how to measure the height of a tree using a clinometer, and how to hoot like a spotted owl. The list goes on! It’s been a great internship and a wonderful opportunity for Grinnell students over the years, as Neil has been hosting interns for 15 years!



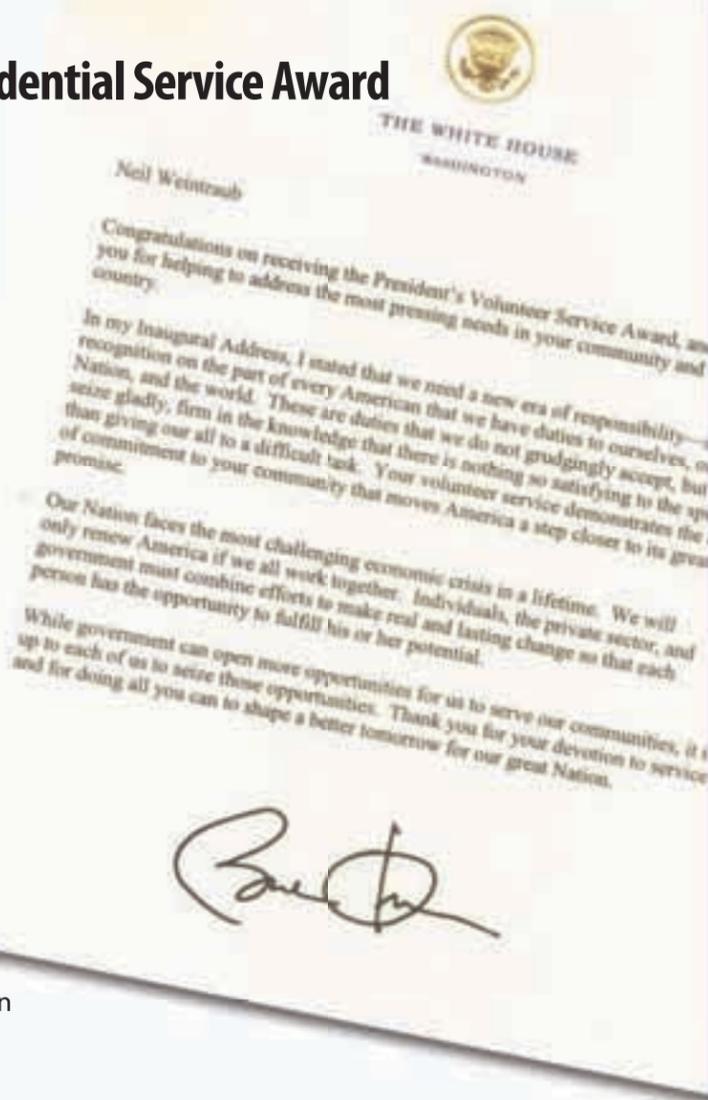
Kaibab Employee Receives Presidential Service Award

A Kaibab National Forest employee was awarded the President's Volunteer Service Award for his ongoing commitment to community service.

Archaeologist Neil Weintraub, who has worked on the Kaibab National Forest since 1990, has been a longtime volunteer in northern Arizona communities including serving with Big Brothers Big Sisters of Flagstaff both on their activity board and as a mentor in their Flagstaff and Williams school-based programs.

The award, which was officially announced in August as part of the USDA Secretary's Annual Honor Awards ceremony, serves as a way to thank and honor Americans who, by their demonstrated commitment and example, inspire others to engage in volunteer service.

As part of his recognition, Weintraub received a congratulatory letter from President Barack Obama. The letter reads, in part, "While government can open more opportunities for us to serve our communities, it is up to each of us to seize those opportunities. Thank you for your devotion to service and for doing all you can to shape a better tomorrow for our great Nation."



Local Nonprofit Receives National Preservation Award

The Kaibab Vermilion Cliffs Heritage Alliance (KVCHA) received a letter signed by First Lady Michelle Obama announcing that it received a Preserve America Steward designation. "It's not every day you get something in the mail from the White House. But ... a large envelope arrived with that return address," said Rose Houk, KVCHA coordinator.

Houk said the letter announced the group's designation as a Preserve America Steward, "for all that you do to care for our Nation's important historical resources." Preserve America Stewards, part of a national initiative of the Advisory Council on Historic Preservation, the U.S. Department of the Interior, and other Federal agencies, is a designation program that began in 2008 to recognize programs that have demonstrated "a successful use of volunteer time and commitment in order to help care for our historic heritage," according to the program's Web site. The Web site lists only 13 programs besides KVCHA as having received the stewardship designation.

KVCHA is a nonprofit with the mission of helping preserve cultural resources of the eastern Arizona Strip region. In recent years, KVCHA has partnered with the North Kaibab Ranger District to perform work on the Warm Fire Recovery Project, the Passport in Time project, at a field school for university students studying archaeology, and in the Saddle Mountain Wilderness.

Kaibab National Forest Celebrated Earth Day with Local Students

The Kaibab National Forest celebrated Earth Day 2010 by hosting the third annual Williams Science Camp on April 22. About 35 sixth graders from the Williams Elementary-Middle School participated in the event, which received rave reviews despite cold temperatures and occasional snow showers.

Students rotated through six hands-on learning stations set up in and around the Williams Ranger District office – The Fire Triangle; A Paleontological Adventure; Split Twig Figurine Making; Orienteering with Maps and Compass; The Early Cultural History of Northern Arizona; and Measuring Tree Height, Diameter, and Age.



Fiscal year 2010 was another busy year for the heritage program on Kaibab National Forest. Forest archaeologists continued to work in support of high-priority projects such as travel management, forest plan revision, and the "Proposed Mineral Withdrawal Environmental Impact Statement."

Using funding from the Recovery Act, the forest completed restoration projects on a number of historic cabins and facilities. Kaibab archaeologists also conducted 49 heritage presentations and tours for more than 1,000 participants from school groups, Forest Service organizations, local tribes, archaeological societies, professional archaeological organizations, and universities. Forest archaeologists received several awards for this interpretive work.

In all, archaeologists authored 67 heritage resource clearances for forest projects. More than 51,000 acres of inventory were conducted, and archaeologists identified 426 new archaeological sites. Archaeologists also monitored and documented the condition of 197 sites on the forest. These included 23 priority heritage assets monitored and managed to standard. Finally, 250 acres of non-project related survey were conducted identifying 49 new heritage properties.

Erin Woodard, Archaeologist, Williams and Tusayan Ranger Districts

Archaeologist Gathering Focused on the Arizona Strip

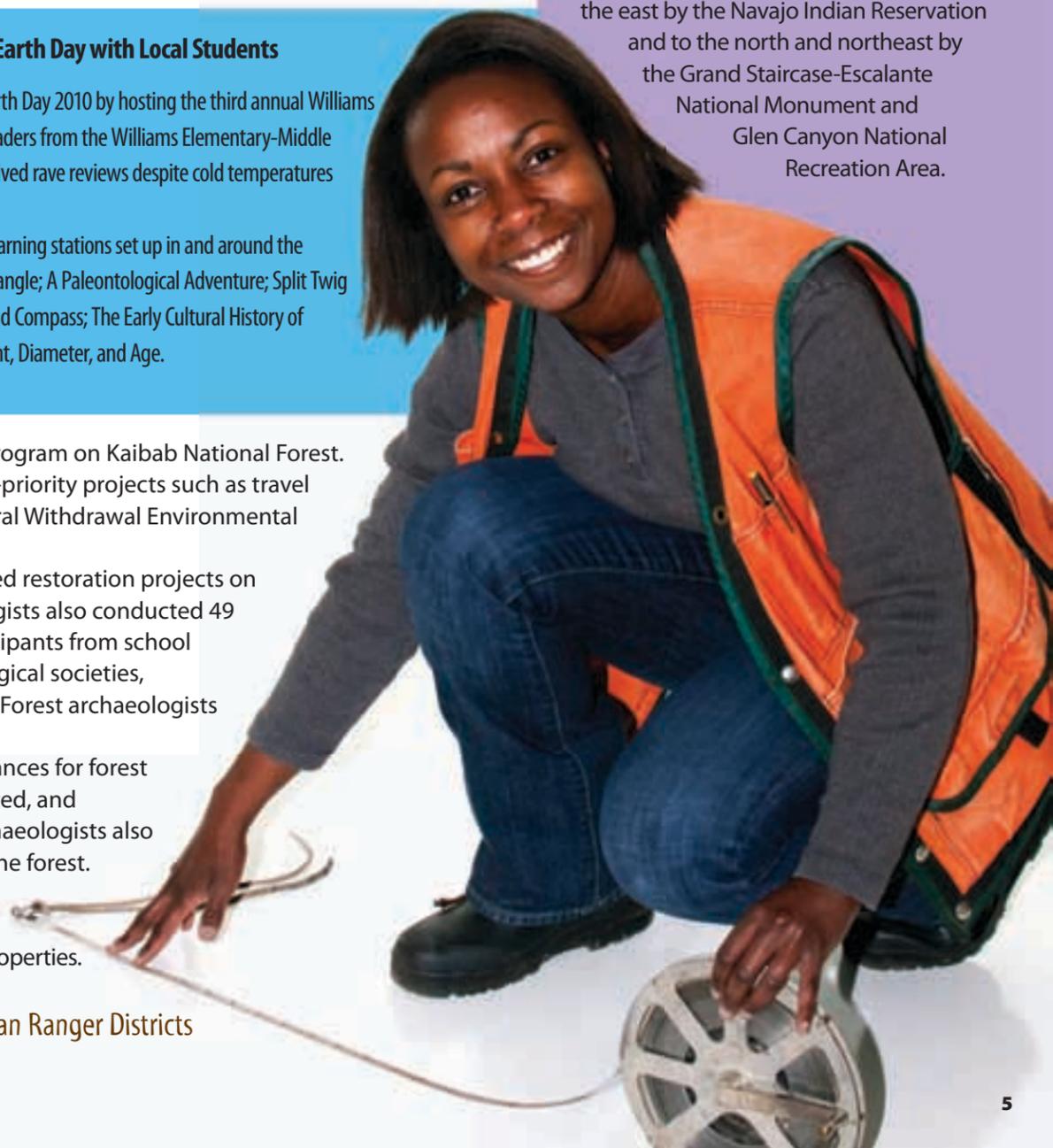
More than 120 people attended a first-of-its-kind symposium in Page, Arizona, in late 2010 that focused on the vast cultural resources of northern Arizona.

Titled "Discovering the Arizona Strip: Learning from the past, planning for the future," the event brought together archaeologists and enthusiasts from universities, government agencies, Native American tribes, and other organizations to share the results of various research projects and to generate ideas for future study.

"Basically, it was a look at all the work that's taken place on the Arizona Strip, what's been learned and what things we still don't understand," said Connie Zweifel, archaeologist on the North Kaibab Ranger District.

Presenters came from universities in Oregon, Utah, Arizona, and Nevada, and the Museum of Northern Arizona, in addition to a variety of government agencies. Archaeologists who worked on the original Glen Canyon Dam Project in the 1960s were also present to share their perspectives. Ideas resulting from the event will be gathered by a Ph.D. candidate and summarized into a general plan to guide future research work on the Arizona Strip.

Nearly 8,000 square miles, the Arizona Strip describes all lands in Arizona north of the Colorado River and generally west of Page to Colorado City, Arizona. The area includes the Grand Canyon National Park, Kaibab National Forest, Pipe Spring National Monument, Kaibab Paiute Indian Reservation, Arizona Strip District of the Bureau of Land Management, Lake Mead National Recreation Area, Vermilion Cliffs National Monument and Grand Canyon-Parashant National Monument, in addition to the towns of Fredonia, Colorado City, and Beaver Dam. The area is bordered to the east by the Navajo Indian Reservation and to the north and northeast by the Grand Staircase-Escalante National Monument and Glen Canyon National Recreation Area.



TRIBAL RELATIONS

During fiscal year 2010, the Kaibab National Forest continued to work closely with tribes on a variety of issues. Forest managers attended 12 government-to-government consultation meetings and field visits. Tribal relations staff conducted an additional 13 meetings and field visits. Significant accomplishments stemming from this consultation work included the following:

- In response to requests from the Cameron Chapter of the Western Navajo Agency, the Kaibab implemented a firewood

permit program at the Kaibab Navajo liaison's office in Cameron, Arizona. The Kaibab Navajo liaison issued more than 100 permits for free-use, personal, and ceremonial use firewood.

- The Kaibab worked with five tribes to produce a traditional cultural property (TCP) determination for Red Butte, a site of cultural and religious significance to these tribes. Since 2007, the Kaibab has been working with the Havasupai Tribe, Hopi Tribe, Hualapai Tribe, Navajo Nation and Pueblo of Zuni to assess the cultural significance of Red Butte on the Tusayan

Ranger District. A TCP is defined as a cultural resource "that is eligible for inclusion to the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community."

- The Kaibab worked to facilitate traditional use of the forest by tribal members, including facilitating collection of medicinal plants and other forest products.

Northern Arizona Land Management Agencies Host 2010 Intertribal Meeting

The fourth annual intertribal meeting brought together representatives from Federal land management agencies and tribes to share information and discuss topics of interest to all including traditional perspectives on Federal land use, forest restoration efforts, recent wildfires and rehabilitation work, and traditional ecological knowledge.

The meeting, which was held in mid-September, was hosted by the Kaibab National Forest, Coconino National Forest, and Grand Canyon National Park and included field visits to locations and projects on each hosting unit.

"A lot of times you go to these kinds of things and you stay in a meeting room," said Lee Lomayestewa, a staff member of the Hopi Cultural Preservation Office and an attendee at the intertribal meeting. "I really liked going out to visit sites and actually seeing some of the projects being done on the ground."

Field visits included a tour of the Forest Service/Grand Canyon office in Cameron, Arizona, that focused on outreach to the Western Navajo Nation; a visit to the area burned by the Schultz Fire in Flagstaff, Arizona, to see the effects of the fire and the rehabilitation work occurring; a stop at Red Butte on the Tusayan Ranger District to discuss the "Northern Arizona Proposed Withdrawal Environmental Impact Statement" that relates to proposed exploration for uranium; and a tour of the Mather Point area on Grand Canyon National Park.

"Visiting the landmark feature in the newly designed Mather area was a wonderful opportunity for tribal representatives to see it completed and in place," said Janet Cohen, tribal program manager for Grand Canyon National Park. "Tribes were integral in its development and it highlights the important connection tribes maintain with the Grand Canyon."

A focal area for the meeting was a discussion about traditional uses of Federal lands and ways to accommodate them. These uses could range from conducting ceremonies in areas of special tribal significance to collecting traditional plants.

"We visited numerous places and, along the way, discussed a wide range of issues related to management of lands in northern Arizona," said Mike Lyndon, tribal liaison for the Kaibab National Forest and a key organizer of the intertribal meeting. "We felt it was a very valuable 2 days and we hope all the participants did too."

Other topics included the Tribal Forest Protection Act of 2004, which authorizes the Secretaries of Agriculture and Interior to give special consideration to tribally-proposed projects on agency lands bordering or adjacent to Indian trust land, and the Four Forest Restoration Initiative, which seeks to restore fire-adapted ecosystems across northern Arizona.

"Everybody benefits from all of the things that the Park Service and Forest Service are trying to preserve for the future – not just for us [tribes] but for everyone," Lomayestewa said. "It is good to be working together."

Forest Supervisor Receives Recognition for Work with Tribes

Mike Williams, Kaibab National Forest supervisor, received an award for his personal support of the forest tribal relations program and regional contributions to the program.

The award was presented at the Kaibab All Employees Appreciation Event held on the Williams Ranger District.

During the event, Dan Meza, Southwestern Region tribal relations, presented Williams with a Navajo wedding basket. The basket is used to recognize the union of a relationship. "Mike recognizes the unique relationship between the forest and tribes," Meza said. "He values their opinions, perspectives and participates in dialogue because he genuinely feels the relationship is valuable and important."

Williams travels widely to consult with tribal representatives at Havasupai, Navajo, Zuni, Hopi and Hualapai. He went to Havasupai and Hualapai to commemorate the signing of memorandums of understanding with these two tribes. He also toured with Hopi representatives to look at potential kiva reconstruction projects at their villages using forest timber products.

According to Meza, district rangers on the Kaibab National Forest have strong relationships with tribes because of Williams' encouragement and support, despite challenging issues. He supports tribal relations program managers by listening to issues and their recommendations for resolutions to difficult problems.



Mae Franklin, Kaibab Navajo liaison; Mike Williams; Dan Meza

George Prehn, Facilities Maintenance, Williams and Tusayan Ranger Districts

The forest also continued to collaborate with tribes to incorporate tribal concepts and issues into the revised “Kaibab National Forest Land Management Plan.” Since 2007, the Kaibab has met 27 times with tribes to discuss the revised plan. Many issues of concern for tribes are currently addressed in the revised plan including management of important resources such as seeps, springs, and plants, management of traditional cultural places, and management of ski areas and other recreational sites.

Also in 2010, the Kaibab held a series of meetings and field visits with the Navajo Forestry Department to develop a collaborative approach to managing Forest Service lands adjacent to the Navajo Nation. The goal for this project is to develop a management approach that promotes landscape restoration while providing for traditional use of the area by Navajo tribal members. In addition, the Kaibab Navajo liaison worked with the Natural Resource Conservation Service to host a

conservation day at the Cameron Chapter House. At the event, the Forest Service and other government agencies presented information on various topics including livestock management, crop preparation, and resource management.

Finally, the Kaibab Navajo liaison is working with Navajo seniors to document oral histories regarding places and resources of the Kaibab.

Native American Environmental Youth Camp

To the north of Nanaz ah ha, which is the name used by Navajos for Coconino Rim, about a mile and half from the Grand Canyon is Grandview Lookout Tower. That was the site of this year’s first-ever youth camp for tribal members from Navajo, Hopi and Zuni the week of August 2.

Native youth participants between the ages of 10 and 14 started the weeklong camp, which was sponsored by Dine College, at Tuba City Boarding School. After 2 days there, the students headed out to the woods. On August 4, after a 3-mile morning hike on Bright Angel Trail at Grand Canyon National Park and lunch, the campers were greeted by Forest Service employees Michelle Begay and Mae Franklin. Kaibab National Forest archaeologists Neil Weintraub and Erin Woodard talked with the kids about the role of archaeologists in the Forest Service and challenged them to try the atlatl, an ancient hunting tool.

Rachael Biggs, a Kaibab forester, showed the students how to determine the age of a tree using an increment borer and how to identify dwarf mistletoe invading a pine tree. Kimberly Begay and Richard Piante, Forest Service fire prevention officers, demonstrated how to use various firefighting tools and taught the campers about the complex instruments on fire engines and trucks. Tusayan District Ranger Angela Parker shared her perspective on the unique characteristics of the Tusayan district and answered student questions.

After participating in these learning sessions, the campers climbed into Grandview Lookout Tower, from which they could see Dook’o’osli’id (San Francisco Peaks) to the south, Dzil Dilhili (Red Butte) to the east, Tse l che’ kooh (Grand Canyon) to the north, and beyond the lower basin to the east, Dine bikayah (Navajo land).



Kaibab National Forest and the Hopi Tribe Cultural Preservation Office worked with internationally-recognized Hopi filmmaker Victor Masayesva, Jr., to produce a 12-minute video that is available on the Kaibab National Forest Web site at: www.fs.usda.gov/goto/kaibab/snake_gulch_video.

The video was completely produced by Mr. Masayesva with support from the Kaibab National Forest and Hopi Tribe. The video documents some of the work being done by the forest and tribe to collaborate on land management issues. Many of these efforts are currently focused on incorporating tribal concepts into the forest’s land management plan revision process.



Forest and Navajo Nation Archaeologists Team to Record Petroglyphs

On April 28, Kaibab National Forest heritage program employees conducted a petroglyph documentation class for members of the Navajo Nation Archaeology Department. During the hands-on training, Kaibab and NNAD archaeologists documented about 75 percent of the petroglyphs located near a recently-discovered Cohonina village site on the Williams Ranger District.

The archaeologists recorded 20 separate panels of petroglyphs with hundreds of individual images representing a variety of distinct design styles. The group, which included Kaibab employees Neil Weintraub, Mike Lyndon, Erin Woodard, and Mae Franklin, also monitored another nearby petroglyph site, which has remained undisturbed for 20-plus years.

All told, the four NNAD archaeologists contributed 32 hours of volunteer labor to the project while also receiving valuable training in site documentation. According to a letter from the NNAD supervisory archaeologist, Neomie Tsosie, “For everyone, this exercise was a useful introduction to Cohonina rock art and field recording methods.” As part of the Kaibab National Forest’s ongoing work with tribes, a special emphasis has been placed on this kind of joint training and collaborative field work.

The Cohonina village site was originally discovered during the summer of 2008 when a forest archaeologist was collaborating with fire managers on the proposed location of a dozer line associated with a wildfire. The Cohonina was a group of early people who arrived in today’s Kaibab area around A.D. 700. The Cohonina lived in small groups, hunted game, gathered wild foods, and probably farmed in drainages.

When Kaibab archaeologists returned to record the Cohonina village site in 2009, they noticed hundreds of petroglyphs on a nearby cliff. Now, thanks to the recent combined effort of Kaibab and NNAD archaeologists, those petroglyphs have largely been documented.

Environmental Education Program Plants Stewardship Seed in Local Sixth Graders

Kaibab National Forest Geologist Jessica Lopez Pearce and Archaeologist Erin Woodard found themselves in a sticky mess demonstrating geology concepts to sixth grade students at Camp Colton this summer. Lopez Pearce and Woodard used food to simulate the three types of magma and demonstrate how each type of lava forms a different type of volcano. Peanut butter was used for highly viscous rhyolite magma, corn syrup for intermediate andesite magma, and vegetable oil represented non-viscous basalt magma. “I try to keep my programs as hands-on as possible,” said Lopez Pearce. “But maybe not as messy!”

Each spring and fall the Forest Service partners with Project LIFE (Life in the Flagstaff Environment) through Camp Colton. Project LIFE is an award-winning environmental education program operated by the Flagstaff Unified School District at Camp Colton. The program challenges Arizona children to learn and experience nature outside the classroom.

“I feel it is important to participate in Camp Colton because geoscience education is a wonderful way for children and adults alike to understand the local landscape,” said Lopez Pearce. “Camp Colton provides a wonderful opportunity to create experiential and inquiry-based educational programs. I am proud to have been a part of it.”

Forest Plan Revision

Forest employees continue to work on revising the “Kaibab National Forest Land Management Plan.” The land management plan guides the Kaibab National Forest in fulfilling its stewardship responsibilities to best meet the needs of the American people. The plan provides a framework to support social, economic, and ecological sustainability, and is intended to provide guidance and information for project and activity decisionmaking on the forest over the next 5 to 15 years.

Forest managers expect a draft environmental impact statement (DEIS) to be available to the public in summer 2011. Four alternatives have been developed for detailed analysis in the DEIS. The selected alternative will become the new “Kaibab National Forest Land Management Plan.”

Bill Williams Cap Fuels Reduction Project

The Bill Williams Cap Fuels Reduction Project authorizes hazardous fuel removal on top of Bill Williams Mountain to protect a critical communications site, fire lookout, and sensitive tribal shrines, and a ceremonial area from fire.

In the fall of 2010, Williams Ranger District fire managers accomplished several portions of the project including thinning, piling, and hazard tree removal. Arizona State Forestry crews assisted district fire personnel on these operations.

After prescribed burning is completed, potentially next fall, the project will set the way for the next phase of fuels treatments on the mountain. These future treatments will help protect Williams, the watershed, and natural and cultural resources from severe fire occurrence.



Silviculture

Silviculture work completed in fiscal year 2010 included vegetation management activities such as thinning, hand and machine piling, dwarf mistletoe removal, aspen fencing, and tree planting.

Thinning is the selective removal of trees within a stand in order to meet specific resource objectives.

Thinning creates down woody debris called slash, which then needs to be piled for later burning or other treatment. Some piling is done using hand crews, while other piles are created using heavy equipment.

Dwarf mistletoe is a parasitic plant that increases the vulnerability of host trees to insect infestation, drought and disease. Tree stands heavily infected with dwarf mistletoe contain deformed, stunted, dying, and dead trees. The control measure for major dwarf mistletoe infection is the removal of the infected trees, which occurred in 2010 on the Tusayan Ranger District in a stand affected by the parasitic plant.

On the southern two districts of the Kaibab, there has been a serious decline in aspen. Forest resource specialists have been working to protect and restore aspen sites using two methods. One is to remove competing tree species in and around aspen sites, which is known as aspen release. The other is to fence aspen sites to prevent elk and deer from browsing on new aspen sprouts. Overall, 2010 proved to be a good year for aspen regeneration due to the efforts of district employees and the increased precipitation. Also in 2010, the Williams Ranger District began a monitoring program with the goal of determining the effectiveness of past aspen release projects.



Before Treatment (2003)



After Treatment (2005)



Four Forest Restoration Initiative

Employees of the Kaibab National Forest continue to play a key role in planning and preparations related to the Four Forest Restoration Initiative (4FRI). 4FRI is the largest landscape-scale restoration effort in the history of the Southwest.

4FRI endeavors to implement ecological restoration treatments at strategic locations within 2.4 million acres of four Arizona national forests—the Kaibab, Coconino, Apache-Sitgreaves and Tonto. The goal is to treat approximately 50,000 acres per year over a 20-year span using mechanical thinning and fire as primary methods to restore health and resilience across the four forests.

4FRI is a cooperative effort between the Forest Service and a large group of public and private stakeholders such as local government, research, U.S. Fish and Wildlife Service, environmental organizations, private industry, and more.



Kaibab Vegetation Types

The Kaibab National Forest has a diversity of vegetation types due to the range of elevation and soil types. Pinyon-juniper woodlands cover 40 percent of the Kaibab. Other vegetation types include mixed conifer, grasslands, sagebrush shrublands, Gambel oak shrublands, and desert communities. Aspen, riparian,

Crews Replant 900 Acres of Warm Fire Restoration Project

Despite heavy snow accumulations and strong spring winds, crews working with the North Kaibab Ranger District of the Kaibab National Forest replanted about 900 acres that were moderately to severely burned during the 2006 Warm Fire.

This year's replanting effort combines with 1,600 acres replanted in 2008 for a total of 2,500 acres to date that have been replanted as part of the Warm Fire Restoration Project. The project calls for replanting 10,000 acres in all, and the district plans to plant another 300 acres in the spring of 2011.

The prevalence of standing dead trees across the landscape raised safety concerns, especially during periods of high wind, and a heavy snow season pushed back planting dates from April into late May. Despite challenging weather conditions, crews planted about 246,000 ponderosa pine and nearly 7,000 Douglas-fir seedlings in an effort to accelerate the process of reforestation.

Replanting is a high priority for a number of reasons, said North Kaibab Silviculturist Garry Domis. "There are really positive benefits to replanting, such as maintaining the watershed through soil stabilization, providing wildlife habitat, and providing forest products into the future," Domis said.

The planting work was funded by a \$140,000 grant from the National Forest Foundation, the official nonprofit partner of the Forest Service. Much of the grant money was donated to the National Forest Foundation by the Salt River Project Trees for Change Program. Through Trees for Change, the Phoenix-based utility provides matching contributions for customer monetary donations.



Forest products are available on a sustainable basis within the capacity of the land.

Wood products examples:

- wood pellets for home and industrial heating
- oriented strand board
- animal bedding
- wood molding
- pallets
- structural lumber
- firewood
- post and poles
- biomass to electricity

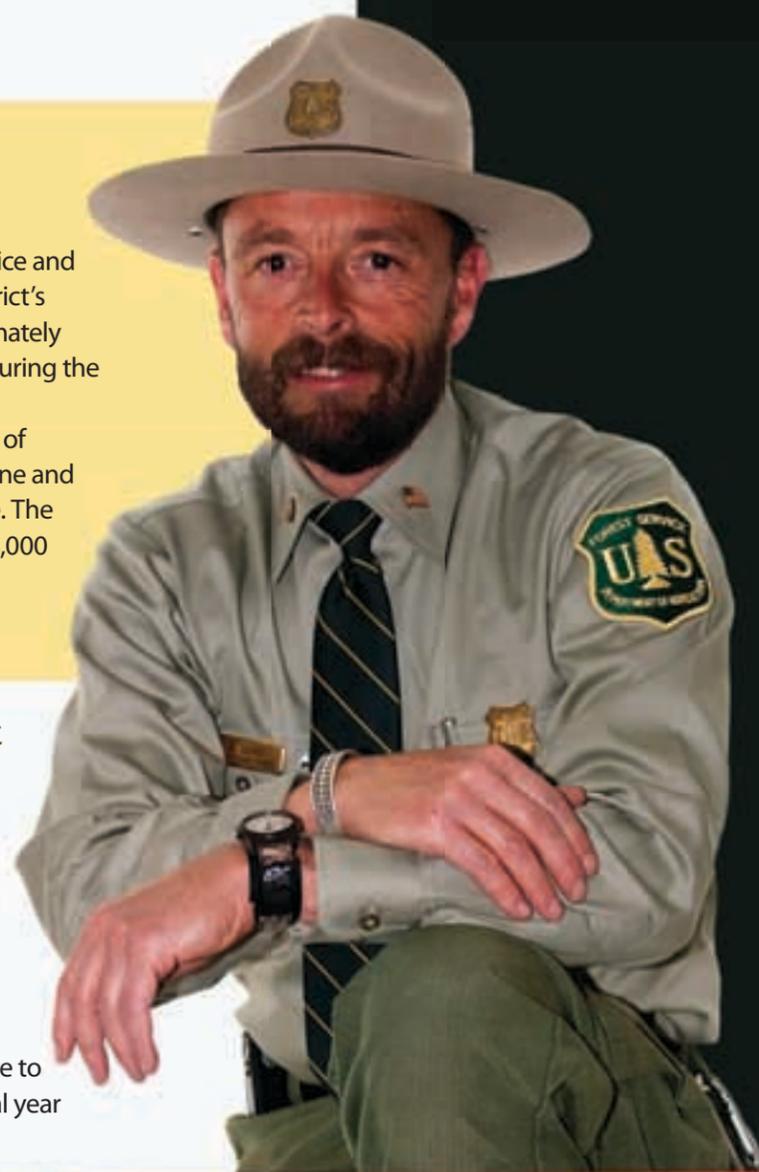
Other forest products examples:

- mushrooms
- wildflowers
- seeds
- nuts
- cones
- Christmas trees
- boughs

Warm Fire Recovery

In November 2009, the U.S. District Court in Phoenix ruled in favor of the U.S. Forest Service and the U.S. Fish and Wildlife Service in a lawsuit that challenged the North Kaibab Ranger District's Warm Fire Recovery Project. The project calls for the harvest of fire-killed trees on approximately 9,000 acres and replanting conifer trees on approximately 10,000 acres that were burned during the 2006 Warm Fire.

In 2010, the Kaibab National Forest moved forward with both replanting and the harvest of fire-killed trees. In May, crews working with the forest planted about 250,000 ponderosa pine and Douglas-fir seedlings on 900 acres that were moderately to severely burned during the fire. The North Kaibab Ranger District also prepared and sold timber salvage sales covering nearly 3,000 acres of fire-killed trees.



Bob Blasi, Prevention Officer, Tusayan Ranger District

Timber Production

National Forest System lands were reserved with the intent of providing goods and services to satisfy public needs over the long term. Among these goods is the production of a sustainable supply of forest products.

Timber production activities are tools that economically contribute to restoring and maintaining ecosystem diversity and supporting a viable wood products processing industry over the long term. The loss of the region's wood harvesting and utilization infrastructure has been a critical impediment to implementation of large-scale mechanical thinning treatments

necessary for restoration of fire-adapted forests.

Despite this major challenge, the Kaibab National Forest continues to use timber production when possible to reduce fuels, improve forest health, enhance wildlife habitat, and contribute to other important resource goals. In fiscal year 2010, Kaibab National Forest sold almost 26,000 CCF (hundred cubic feet) of wood products allowing for treatment of thousands of acres.



**FIRE PREVENTION
PATROLMAN
KAIBAB
NATIONAL FOREST**

forest and are found at lower elevations. As elevation increases, pinyon-juniper woodlands transition to ponderosa pine forest, which covers 35 percent of the and wetland vegetation is present in small, yet important areas.

In Fire, We All Work Together

One of the five National Fire Communication themes is, “In fire, we all work together.” Not just an idea, the theme is working on the ground at the Tusayan Ranger District. For the past several years, Tusayan Ranger District fire specialists have offered important hands-on training to the local Tusayan Fire Department on various wildfires and prescribed burns. These cooperative efforts provided Tusayan Fire Department important experience in wildland fire management.

With the training they received alongside Kaibab National Forest fire managers, Tusayan Fire Department firefighters were able to implement a hazardous fuels reduction project last fall with assistance from their Tusayan Ranger District neighbors. This was the second fuels reduction project initiated by the Tusayan Fire Department since it was established. The project met goals set forth in the Tusayan Community Wildfire Protection Plan.

Managing fire near communities is a critical and complicated endeavor. Working together and joining forces, we can build upon each other’s successes, reduce hazardous fuels, and achieve mutual fire management objectives.



Consortium Fires Up Information Exchange Between Land Managers and Scientists for Healthier, Safer Ecosystems

Scientists, land managers, and firefighters are working to spread knowledge about fire more effectively with one another and create on-the-ground results for a healthier ecosystem.

With more than \$350,000 in funding awarded this summer from the Joint Fire Science Program, those working in fire will be able to ask their burning questions and ignite useful research projects through the Southwest Fire Science Consortium.

The consortium is being developed as a mechanism to bring scientists and land managers together to share new research findings and management ideas, and to facilitate the funding of those ideas.

“In the past, the best science available did not always make its way into practical results on the ground,” said Dr. Andrea Thode, Northern Arizona University School of Forestry fire ecologist. “But with the loss of lives, forests, and wildlife habitat, along with the exorbitant cost of fire suppression

in recent years, the consortium will benefit all those involved in wildland fire and lead to healthier ecosystems.”

Consortium partners include the following: Northern Arizona University, Forest Service, University of Arizona, Ecological Restoration Institute, Rocky Mountain Research Station, the Forest Guild, National Park Service, Bureau of Indian Affairs, Bureau of Land Management, U.S. Fish and Wildlife Service, Arizona State Forestry, and the Wildland Fire Lessons Learned Center.



Back to the Basics

Students in the Northern Arizona University (NAU) S130/190 Basic Firefighting course took their new classroom knowledge to the field April 25. Fifty-two students had the opportunity for hands-on practice—with tools, hoses and pumps—under the guidance of their instructors from the Kaibab and Coconino National Forests.

The field day was the culmination of the basic firefighting class that involved two weekends of lectures, discussions, videos and presentations by subject matter experts in fire management. Each year, the Kaibab National Forest teams up with NAU to offer the class to students interested in firefighting.

Some of the participants are forestry students looking for summer work as firefighters. Another group is comprised of students in the National Park Service Ranger Program. Many of these students will be working in national parks this summer. Kathy Dodd, director of the Park Ranger Training Program said, “Not only do the students gain skills to be prepared to respond to wildland fire incidents while on duty in the national parks, they also learn about the important aspect of interagency incident management.”

The course is designed to provide students the basic knowledge, skills, and techniques needed for entry-level wildland firefighting. Some of

the lessons are weather, topography, fuels, fire behavior safety, incident management, radios and communications, hand tools, hazards and human factors on the fireline, and fire shelter training.

“It is important that we continue to partner with NAU to offer this course that lays the groundwork for firefighters to operate safely in the fire environment,” said Dave Bales, assistant fire management officer for the Williams and Tusayan districts of the Kaibab National Forest. “I look forward to seeing these students on a fire—employing the training, techniques and skills they learned in the class.”

FIRE MANAGEMENT

Over the course of the season, fire managers responded to 87 fires. Many fires were quickly extinguished due to their location, cause, time of the year, current and predicted weather, and fuels conditions. Several fires, however, were managed across the landscape within designated areas over the course of many weeks. This year, fire was returned to the ecosystem on 1,924 acres of the Kaibab National Forest. This may not seem like a significant amount of land; however, each acre is important in a fire-adapted ecosystem.

The Juniper, Wash, Tank, and Saffron Fires were managed on the three districts of the forest from June into September. The Juniper Fire was 16 miles northeast of Williams on the Williams Ranger District. The Wash and Tank Fires were 8 miles southeast of Tusayan on the Tusayan Ranger District. The Saffron Fire was on both the North Kaibab Ranger District and Grand Canyon National Park, and afforded the second opportunity in 2 years to manage fire across jurisdictional boundaries.

The decision to work with these lightning-caused fires across the landscape required input from all forest disciplines. Once the incident objectives were defined,

a plan was developed identifying where the fire would be allowed to burn and what measures would be taken to protect and enhance resources. Importantly, each one of these fires was located near previously burned areas. This created effective fuel breaks to prevent rapid fire spread outside of the designated area.

The objectives accomplished on these fires involved reducing hazardous fuels, recycling important nutrients, improving wildlife habitat, and protecting range improvements and cultural resources. Actions taken to meet the objectives included burning along boundary lines ahead of the fire, initiating fire in strategic locations to maintain low to moderate fire intensity, and removing burnable vegetation around cultural sites and range improvements.

While the total acreage treated may seem small compared with the total number of acres of the Kaibab National Forest, each burned area is very important. Each time fire is returned to the ecosystem, it provides another protective layer of defense against severe fire occurrence. Many fires on the Kaibab National Forest will continue to be extinguished when they threaten lives, property,

LINE OFFICER TEAM LEADERSHIP AWARD

Presented to Martie Schramm, Tim Short, and Angela Parker for Excellence in Line Officer Commitment to Restoration of Fire-Adapted Ecosystems

MARTIE SCHRAMM, TIM SHORT, ANGELA PARKER

KAIBAB NATIONAL FOREST REGION 3

Wildland Firefighter Apprenticeship Program

In 2010, three Williams Ranger District employees completed the Wildland Firefighter Apprenticeship Program. After meeting the requirements of the program, Nick Behrends, Dave Kempton and Jesus Valdez became permanent Forest Service employees.

The Wildland Firefighter Apprenticeship Program was developed to provide workers with employment and training under actual job conditions. Using this approach, the apprentices learned the trade through participation in on-the-job training and related instruction.

During the program, apprentices worked in a wide range of fire management areas including safety, preparedness, suppression, fuels management, helitack, business practices, prevention, and dispatch. In addition, the apprentices were required to complete a significant amount of course work at the Basic Academy and Advanced Academy.

Behrends, Kempton and Valdez said they appreciated the variety of experience they received and the new people they met during their apprenticeship programs. They are settling into their new positions on engines and in fire prevention.

Joe Reinartz, Williams Ranger District fire management officer said, "The program provides a well-rounded and meaningful experience for firefighters. The Forest Service and the Williams district benefit greatly from the graduates of the apprenticeship program, and we look forward to rewarding careers in fire management for these individuals."



From left to right: Jesus Valdez, Nick Behrends, and Dave Kempton

and infrastructure. However, some fires like the four in 2010 will continue to be managed to reduce hazardous fuel accumulation, protect communities, and improve forest health.

FUELS MANAGEMENT

Fire managers on the Kaibab reduced hazardous fuel accumulations on 9,031 acres in fiscal year 2010. Treatments included prescribed fire, thinning, and piling.

Just over half the acres were accomplished using prescribed burns. Burning, under conditions that promote fires to spread across the surface, burning up accumulations of needles, leaves, twigs, and logs, greatly reduces the risk that a wildfire during hot, dry, or windy conditions will burn with high severity, causing high mortality in the forest canopy.

Moist conditions during the year decreased the number of acres that fire managers could treat with prescribed burns, but were favorable for burning a backlog of piles that had been created over the past several years. In all, 3,316 acres of piles were burned in 2010.

Thinning accounted for 67 acres of the forest's fuels reduction budget. Thinning dense stands of trees, so they more closely resemble historic forest structure, also promotes fires to burn as surface fires. Thinning decreases the "ladder fuels" that enable a wildfire to move from the ground up into the canopy of trees. It also creates openings between groups of trees making it less likely for a single or an isolated group of torching trees to become a moving crown fire.

Thinning from fuels projects and other forest projects creates down woody debris, called slash. This year, 782 acres of slash were piled. Some of this work was done with hand crews, while other piles were created using heavy equipment.

Kaibab fire managers continue to use lightning-caused wildfires to accomplish hazardous fuel reduction objectives when weather and forest fuel moisture conditions are right. In fiscal year 2010, four fires on the Kaibab were managed to achieve resource objectives, burning a total of 1,924 acres. This is a fraction of the 44,568 acres that were treated from 12 wildfires in 2009. This decrease was due to late snowpack in the spring, the early onset of the monsoons, and an overall decrease in the number of lightning-caused fires.

Historic Hull Cabin Available to Public through Cabin Rental Program

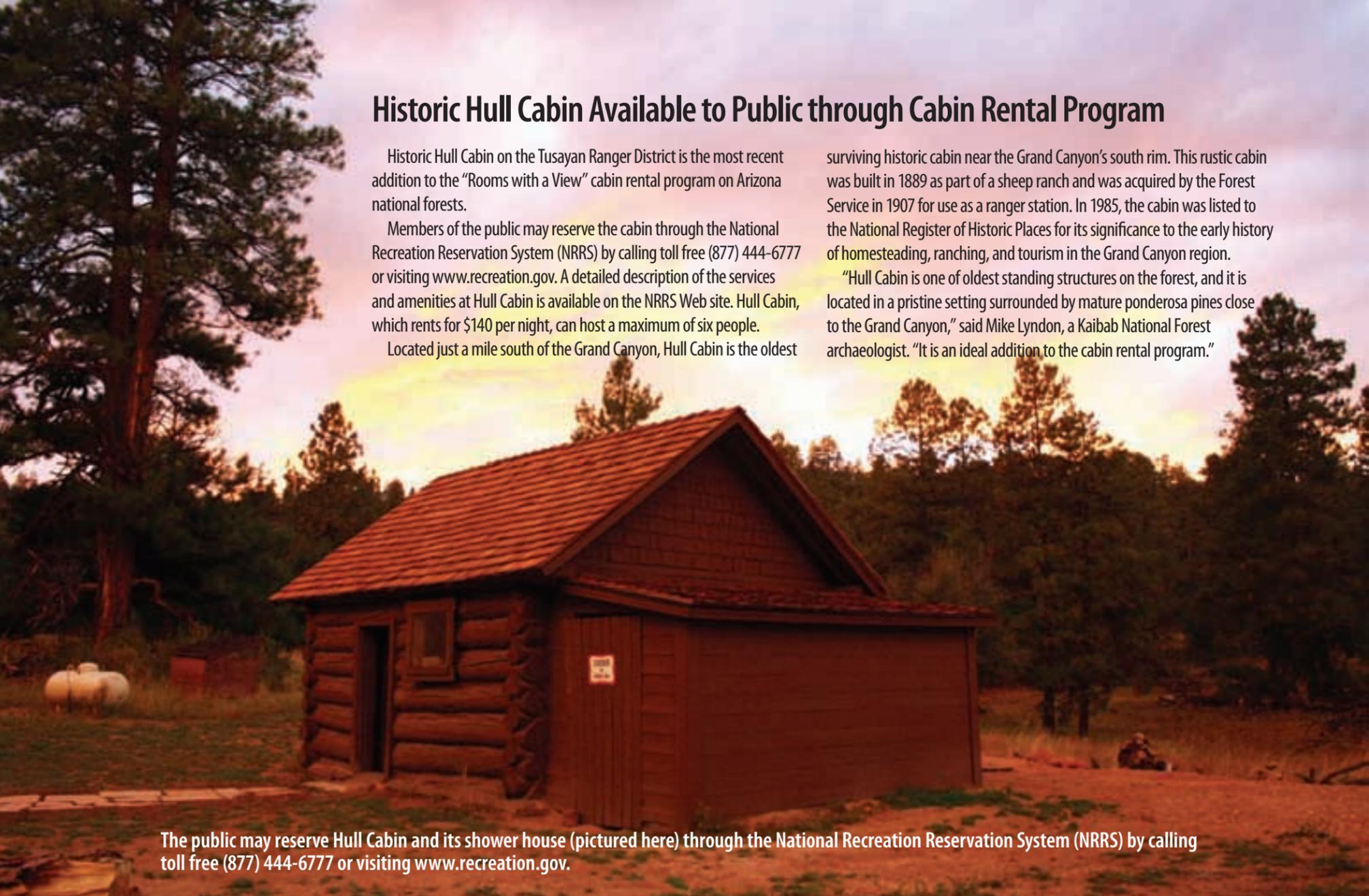
Historic Hull Cabin on the Tusayan Ranger District is the most recent addition to the "Rooms with a View" cabin rental program on Arizona national forests.

Members of the public may reserve the cabin through the National Recreation Reservation System (NRRS) by calling toll free (877) 444-6777 or visiting www.recreation.gov. A detailed description of the services and amenities at Hull Cabin is available on the NRRS Web site. Hull Cabin, which rents for \$140 per night, can host a maximum of six people.

Located just a mile south of the Grand Canyon, Hull Cabin is the oldest

surviving historic cabin near the Grand Canyon's south rim. This rustic cabin was built in 1889 as part of a sheep ranch and was acquired by the Forest Service in 1907 for use as a ranger station. In 1985, the cabin was listed to the National Register of Historic Places for its significance to the early history of homesteading, ranching, and tourism in the Grand Canyon region.

"Hull Cabin is one of oldest standing structures on the forest, and it is located in a pristine setting surrounded by mature ponderosa pines close to the Grand Canyon," said Mike Lyndon, a Kaibab National Forest archaeologist. "It is an ideal addition to the cabin rental program."



The public may reserve Hull Cabin and its shower house (pictured here) through the National Recreation Reservation System (NRRS) by calling toll free (877) 444-6777 or visiting www.recreation.gov.

Kaibab Lake Campground Receiving Upgrades

In 2010, major improvements began at Kaibab Lake Campground on the Williams Ranger District. The renovation work will continue through at least summer 2011.

Improvements to the campground include new pavement, new parking spurs, new campsite amenities such as fire rings and picnic tables, more day-use parking for improved fishing access, additional day-use picnic sites, improved ramadas, additional small group capacity, and a new camping loop with an additional 10 to 15 campsites. In addition to these planned improvements, the entrance road to Kaibab Lake Campground has also recently been improved.

"Kaibab Lake Campground is one of our most popular campgrounds," said Deirdre McLaughlin, a recreational forester on the Kaibab National Forest. "We are very excited about all the new amenities that will be available after the reconstruction."

North Kaibab Historic Building Renovations

Contractors carried out a number of historic renovation projects on the North Kaibab Ranger District with funds provided through the American Recovery and Reinvestment Act of 2009 (ARRA). The district received about \$170,000 through ARRA to fund the renovations.

Jump Up Cabin, a former ranger station now used for recreation, received new flooring, new windows, a new stove, and exterior repairs. Situated at the trailhead for Ranger Trail 41 that enters Kanab Creek Wilderness, Jump Up Cabin is the oldest existing ranger station on the Kaibab Plateau.

Work also began to restore seven cabins and the original ranger district office located at Big Springs on Forest Road 22. The buildings received exterior, foundation and roof repairs, new windows, and new interior renovations, all keeping with historic materials and designs.



In 2011, contractors will also renovate the Dry Park Cabin, located next to the Dry Park Lookout Tower on Forest Road 22. Used to house summer fire lookouts, the cabin will have electricity and plumbing installed for the first time.

Visitor Use Monitoring

Kaibab National Forest employees, in cooperation with Arizona State University's School of Community Resources and Development, completed the third round of National Visitor Use Monitoring in 2010.

The monitoring involved surveying forest visitors on all three of the forest's districts to better understand what sites and facilities they use, how long they stay, and how satisfied they are with their experience.

The Kaibab National Forest surveys are part of the Forest Service National Visitor Use Monitoring Program, which provides information about recreation visitors to National Forest System managed lands at the national, regional, and forest level. Information about the quantity and quality of recreation

visits is required for several purposes including forest planning and improving public service. National Visitor Use Monitoring information assists Congress, Forest Service leaders, and program managers in making sound decisions that best serve the public and protect valuable natural resources.

"The information we collect can impact important things like our budget for various recreation opportunities and the kinds of activities, sites, and facilities that we focus on as a forest," said Charlotte Minor, landscape architect for the Kaibab National Forest.

Survey information is being compiled and will likely be available in mid-2011.



Fredonia and Kanab Teens Graduate from Forestry Program

On a Friday in late July, eight teenagers from Fredonia and Kanab graduated from the 7-week Youth Conservation Corps (YCC) program located on the North Kaibab Ranger District. During their time on the district, the participants learned a variety of forestry skills and helped forest program leaders complete some much needed work.

The YCC program is organized through Coconino Rural Environment Corps (CREC) in Flagstaff, which is a program of the Coconino County Community Services office. This was the second year in a row that YCC was offered on the North Kaibab.

During June and July, the YCC teenagers worked 280 hours under the supervision of two full-time CREC staff and various Kaibab National Forest employees. The students received training in emergency first aid, GPS technology, horsemanship, Leave No Trace wilderness ethics, northern goshawk management, and timber sale administration, among other things.

The work they performed included:

- Marking and numbering 14.6 miles of flagged cutting unit boundaries with tracer tree paint in the Warm Fire Recovery Area.
- Brushing around 20 miles of the Rainbow Rim Trail, the Arizona Trail, and the North Canyon Trail.
- Post-fire fence repair in the Warm Fire Recovery Area.
- Watershed channel rehabilitation.
- Preparing for construction of livestock-wildlife water catchments.
- Transporting 200 bales of hay for district horses.

YCC members are paid a stipend of \$590 every 2 weeks, and 17- and 18-year-old members are also eligible to receive an AmeriCorps Education Award of \$1,000 upon successful completion of an additional 20 volunteer hours. Four of the participants this summer will receive the AmeriCorps scholarship.



Jessica Lopez Pearce, Geologist, Williams and Tusayan Ranger Districts

Williams Ranger District Continues Successful Partnership with Coconino Rural Environment Corps

For the last several years, the Williams Ranger District has partnered with the Coconino Rural Environment Corps (CREC) for the hiring and management of its Youth Conservation Corps (YCC) program.

For fiscal year 2010, the partnership was able to hire eight crewmembers and two young adult crew leaders to work for 6 weeks on a variety of projects. Accomplishments included:

- 200 acres of manual noxious weed control.
- 5.5 miles of post-fire fence repairs for range improvements.
- 2.75 acres of fence removal for range improvement.
- 1 acre of manual fuels removal (raking and removing pine needles) on a fire sensitive archaeological site, for preparation of prescribed burning.
- 15 acres of hand piles constructed in preparation of prescribed burning.
- 5 acres of aspen fence construction and repair.

All of the crewmembers received 2 hours of environmental education each week and spent time with specialists from each functional area of the Williams Ranger District. This exposure to the different specialists allowed the crewmembers to inquire about different careers with the Forest Service. Several enrollees expressed interest in working for the Forest Service after high school.

National Trails Day Event on Williams District Draws Crowd

Little did the campers at Dogtown Lake know just how much fun they were going to have June 5 when the 17th annual National Trails Day was held at the campground. About 40 people, twice as many as last year, participated in the event hosted by the Williams Ranger District.

The day's activities included clearing brush and debris on a half mile of the popular Ponderosa Nature Trail, a rabbit stick and atlatl (ancient hunting tools) throwing contest, a coloring contest, an educational hike on the nature trail, and a Smokey Bear visit. In addition, Kaibab National Forest firefighters taught the kids who were in attendance all about fire engines. A barbecue lunch for the participants ended the day.

"It was great seeing everyone having fun and enjoying the great outdoors," said Christa Roughan, recreation staff officer for the Williams and Tusayan districts.

National Trails Day is held each year to increase awareness and appreciation of America's trails. Other event partners included City of Williams, Williams-Grand Canyon Chamber of Commerce, American Legion, and Williams Clean and Beautiful.



ENGINEERING

Several important facilities and roads projects on the Kaibab National Forest were started or completed by the engineering team in fiscal year 2010, including the following funded through the Recovery Act:

- Williams Ranger District – renovation of the Spring Valley recreational rental cabin; replacement of six toilet buildings at White Horse Lake and Kaibab Lake Campgrounds.
- North Kaibab Ranger District – renovation of nine living quarters at the Big Springs Work Center and Dry Park Lookout Tower.
- Tusayan Ranger District – installation of new water and wastewater systems at the Hull recreational rental cabin; replacement of three toilet buildings at Ten-X Campground.

Visitors to the Williams Ranger District will soon enjoy another phase of the ongoing rehabilitation of Kaibab Lake Campground that started in September to construct two additional road loops with new campsites.

A new roof was installed on the Tusayan Ranger District office building.

About 14 miles of Forest Road 307 on the Tusayan Ranger District were resurfaced with gravel after monsoon flooding created ruts, holes, exposed piping, and other potential hazards. Annual maintenance and grading were completed on 799 miles of forest roads on the Williams, Tusayan and North Kaibab Ranger Districts. Route marker signs at road junctions are being checked and new ones installed where necessary. So far, 100 percent of the route marker signs on the Williams and Tusayan districts and 25 percent on the North Kaibab district have been completed.

RECREATION

The beautiful, natural areas of Kaibab National Forest offer settings for a wide range of high quality recreation opportunities. The forest provides mountain, forested, and high desert places to escape from urban environments and pursuits, and enjoy cooler temperatures. Cultural features provide historic context to the natural scenery, adding to the richness of these places. Scenic areas provide opportunities to hike, bike, fish, hunt, see wildlife, and enjoy the peace, quiet, and spiritual values of nature.

Recreation managers on the Kaibab National Forest work to maintain and enhance the attractive scenery and unique combination of physical, biological, and cultural features of the forest for our use and for future generations. They also work to provide the public with diverse developed and dispersed recreation activities in balance with the ability of the land and management to support them.



Eagle Rock BAER

BAER stands for Burned Area Emergency Response and involves identifying threats following a wildfire and taking actions to manage unacceptable risks.

Following the Eagle Rock Fire in June on the Williams Ranger District, Kaibab National Forest employees have made significant efforts to protect human life and property, reduce erosion and sedimentation, limit invasion by noxious weeds, protect cultural and heritage sites, and more.

Specific actions have included the following:

- Straw mulching was completed on 660 acres. The straw mulch significantly reduced erosion.
- Seeding was completed on 500 acres. Seeding results in rapid growth of ground cover, which reduces soil erosion and invasion by noxious weeds.
- Straw wattles were placed around selected archaeological sites to keep the sites from eroding.
- Noxious weeds—bull thistle, cheatgrass and dalmation toadflax—were detected and treated within the burned area.
- Three livestock/wildlife stock tanks were used as sediment traps for removal of debris before it entered Forest Service and private structures and roads.
- During and immediately following significant storms, employees patrolled roads checking for culvert plugging and other road drainage problems.
- Flash flood and falling debris hazard signs were installed at targeted locations in order to provide for human safety.
- Two segments of crown ditching were constructed in order to divert waterflow around a historic cabin and on Forest Service land above a private homesite.



Bridger-Knoll Cheatgrass Abatement

The North Kaibab Ranger District began an experimental, 3-year project to combat cheatgrass invasions that resulted from the 1996 Bridger-Knoll Fire. Cheatgrass is a hardy, invasive species that typically moves into areas exposed to extreme temperatures during wildfires. The plant often outcompetes native species, and it does not make suitable grazing for cattle or wildlife.

For the first 2 years of the project, 963 acres of cheatgrass will be treated with pesticide in the Buckhorn area, on the northwest side of the Kaibab Plateau. Native grasses and shrubs will be reseeded in the fall of 2011.



Clare Hydock, Range Specialist, Williams and Tusayan Ranger Districts

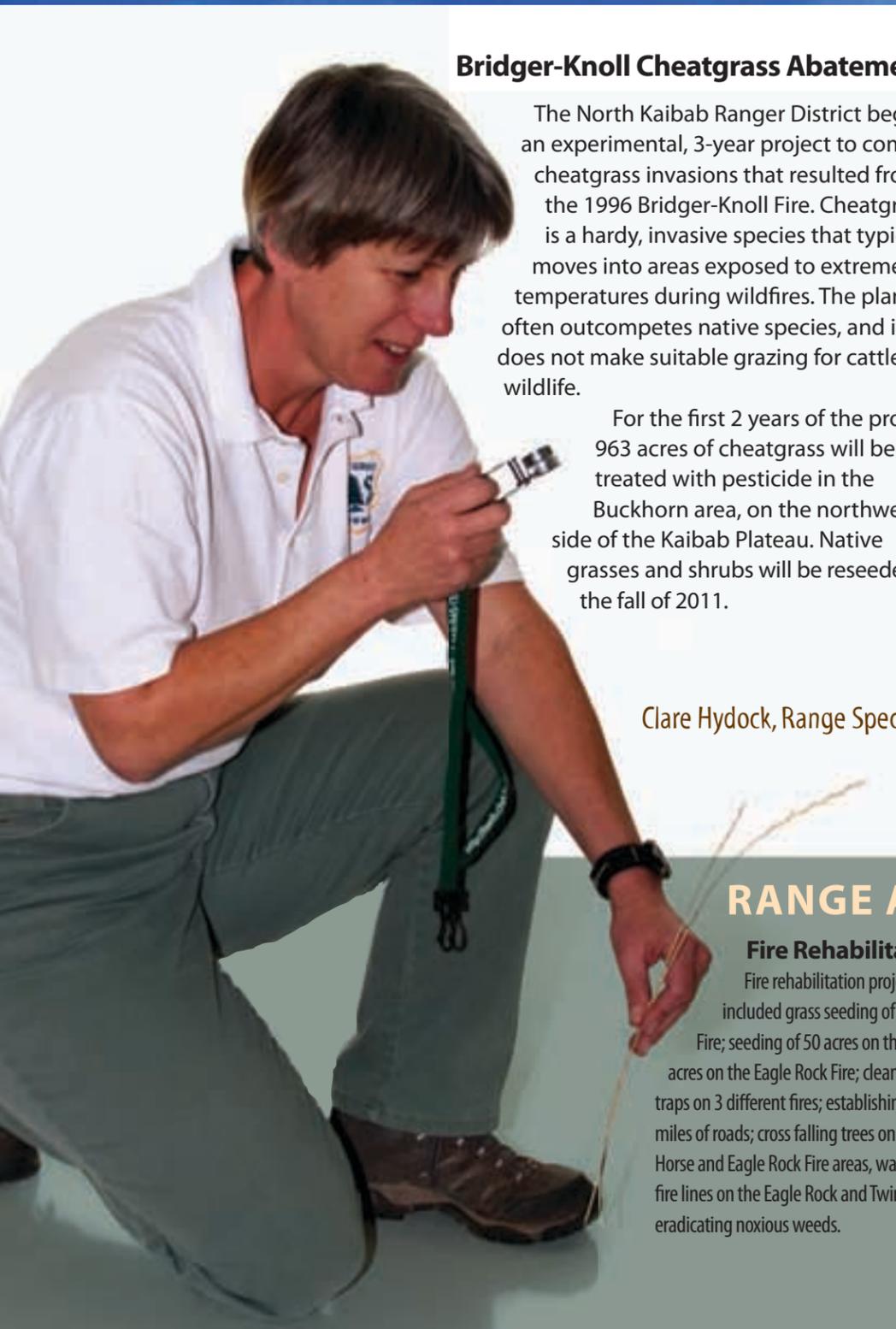
RANGE AND WATERSHED

Fire Rehabilitation

Fire rehabilitation projects completed in 2010 included grass seeding of 100 acres on the Wild Horse Fire; seeding of 50 acres on the Twin Fire; straw mulching 660 acres on the Eagle Rock Fire; cleaning 11 stock tanks/sediment traps on 3 different fires; establishing erosion control; repairing 10 miles of roads; cross falling trees on severe slopes within the Wild Horse and Eagle Rock Fire areas, water barring and rehabilitating fire lines on the Eagle Rock and Twin Fires; repairing fences; and eradicating noxious weeds.

Livestock Grazing Management

National Environmental Policy Act (NEPA) analysis was completed for the Hat Grazing Allotment on the Williams Ranger District. The analysis reviewed grazing practices on 103,256 acres and made adjustments when necessary to maintain and improve range conditions. Grazing practice adjustments outlined in 2009 NEPA analyses were implemented in the Corva and Double A allotments, which account for 57,017 acres on the Williams Ranger District. Improved grazing practices will result in improved soil and watershed conditions. The forest administrated 31 grazing allotments during the 2010 grazing year. Forage production was good with consistent moisture in most areas throughout the year.



Eagle Rock Fire, Williams Ranger District

The Eagle Rock Fire creeps down the eastern face of Sitgreaves Mountain on the evening of June 17, 2010.



Kaibab National Forest Hosts Ethiopian Delegation

The Kaibab National Forest hosted a 14-person delegation from the Government of Ethiopia on August 23 in order to provide information about the operational aspects of disaster management in northern Arizona.

The delegation members all held high-level positions in various land, resource, water, and emergency preparedness agencies in Ethiopia. They were being hosted on a 15-day study tour of Arizona, Idaho, and California by members of the U.S. Forest Service International Programs office out of Washington, DC.

"I must say, the Ethiopian delegation was very impressed by the level of effort everyone at the Kaibab National Forest exerted," said Brehan Doud, who accompanied the group as a representative of Forest Service International Programs. "The day was comprised of many important issues, all affecting Ethiopia in one way or another."

While in Arizona, the delegation members were interested in gaining insight into early warning systems, especially for drought and flooding; drought mitigation; water resources and conflict management; local, state and Federal agency response to disasters, especially fire, drought, and flooding; and emergency operations planning.

To meet those requests, Kaibab National Forest managers arranged for several presentations and took the delegation to visit sites on the Williams Ranger District.

"As it turns out, they deal with some very similar issues in Ethiopia to what we have here in northern Arizona. For example, they deal with drought and flooding frequently," said Dave Mertz, fire staff officer for the Kaibab National Forest. "We tried to tailor the time they spent with us to be most beneficial to their issues and concerns."



Grassland Maintenance

Grassland maintenance projects were completed on 1,801 acres to improve soil and watershed conditions. The work focused on former grasslands that have been encroached by pinyon pine and juniper trees. Monitoring has shown substantial improvement in ground cover conditions after treatment.

Mining Reclamation

Sandstone quarry reclamation was completed on 135 acres. Restoration work included filling in quarry holes with stone blocks, reshaping quarry areas to create gentle slopes, adding material to create a smooth surface, covering the area with the available topsoil from the site, and seeding where necessary. With these efforts, erosion will be reduced.

Noxious Weed Treatments

Noxious weeds were controlled on 4,509 acres through use of herbicide, hand pulling, and biological treatments. Species treated included dalmatian toadflax, bull thistle, leafy spurge, scotch thistle, musk thistle, diffuse knapweed, and cheatgrass. These treatments improved native plant community composition and density, with increased ground cover and watershed protection benefits.

Forest Vegetation

In order to prevent domestic livestock from accessing them, three wetlands on the Williams Ranger District were fenced with a steel cable as the top wire. Thirty acres were fenced at Perkins Tank, 40 acres at Mineral Lake, and 340 acres at Scholz Lake.

Watershed Condition

Watershed condition is integral to all aspects of resource management and use. Good watershed management maintains the productive capacity of soils, protects water quality and quantity, sustains native species, provides beneficial uses, and reduces the threat of flood damage.

The primary risk to Kaibab National Forest watersheds is uncharacteristic fire. Watersheds are at higher risk of erosion and sedimentation following uncharacteristic fire.

On the Kaibab, watershed conditions have improved as a result of managed fires and tree thinning projects, which have reduced the number of watersheds in unsatisfactory condition. Watersheds are generally on an improving trend due to these and other management actions.

Message from the Forest Supervisor – A Salute to Employees

As I reflect back over fiscal year 2010 on the Kaibab National Forest, there are many specific projects and events that stand out for me. The vast majority of those are included in this accomplishments report, which I sincerely hope you will enjoy reading and sharing with your family and friends.

As I look through this report, what stands out to me above and beyond all the specific work accomplished is the incredible dedication and flexibility of Kaibab National Forest employees. I want to take a moment here to recognize our employees' continuing efforts and successes on myriad fronts—from restoring fire-adapted ecosystems and improving watershed health to enhancing wildlife habitat and providing for diverse recreational opportunities, and from protecting our invaluable cultural resources and maintaining our forest roads and trails to providing timely and accurate information to our many involved stakeholders, and offering conservation and environmental education to local youth and our wider communities. For all that work and much more, I salute our Kaibab National Forest employees.

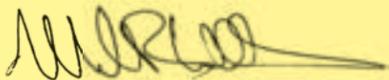
I also want to thank all of you—our partners, volunteers and other stakeholders. With limited resources but endless opportunities to improve natural and cultural resource conditions, your involvement, support and on-the-ground work are always appreciated and increasingly vital to our continued success.

As we move forward, there are a few key issues of which I want to be sure you are aware. First, the Four Forest Restoration Initiative (4FRI) is moving forward quickly on efforts to restore forest ecosystems on portions of four national forests along the Mogollon Rim in northern Arizona. The first planning effort associated with 4FRI is looking to conduct restoration activities on the Kaibab and Coconino forests within a 750,000-acre ponderosa pine ecosystem over about 10 years. A proposed action has already been released to the public, and a draft environmental impact statement is expected in fall 2011.

Second, in 2011 you will begin to see implementation of the Travel Management Rule (TMR) on our southern two districts—Williams and Tusayan. You can expect to see motor vehicle use maps (MVUMs), which will show the open road system for each district. These maps will be available to the public, free of charge, once they are produced. I am confident that as we implement TMR, you will find that there are ample opportunities to enjoy the Williams and Tusayan districts while also allowing for protection of our priceless natural and cultural resources.

Third, many of you know that we have been working hard to update the “Kaibab National Forest Land Management Plan,” which dates from the late 1980s. The forest plan is critical because it sets desired conditions, long-term goals, and other large-scale guidance used in developing every project that occurs on a forest. I am pleased to share with you that the draft environmental impact statement for our forest plan is expected to be released this August.

Finally, I wanted to mention that the United Nations has declared 2011 as International Year of Forests in an effort to strengthen the sustainable management, conservation and development of all types of forests for the benefit of current and future generations. We hope you will celebrate with us by visiting Kaibab National Forest and camping, hiking, fishing, biking, bird watching, or simply sitting in a beautiful spot while enjoying the sights and sounds of nature.



Mike Williams
Forest Supervisor



Sami Schinnell, Prevention Officer, Williams Ranger District and Smokey Bear

FY2010 Budget



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