

Cascade Lookout

A Publication of the U.S. Forest Service — 2002
Okanogan and Wenatchee National Forests



Your Okanogan and Wenatchee National Forests...

More than scenery, wilderness hikes, fishing, skiing, scenic drives, campground getaways, mountain biking and river rafting... There's the work that helps protect the land and serve people—wildfire, vegetation and pest management, trail maintenance and campground construction, wildlife and fish management... look inside to find out more.



A Note from the Forest Supervisor

Sonny J. O'Neal



It is my pleasure to offer you this fifth edition of the Cascade Lookout—an annual newspaper produced by employees of the Okanogan and Wenatchee National Forests that seeks to provide interesting and informative articles for the whole family. You will find stories about recreation opportunities, special places, Forest Service programs, unique management projects, and more.

You'll notice that a number of articles deal with fire management issues. These stories reflect our commitment to the prevention of destructive wildfires through forest thinning and prescribed fire projects, and through educational and cooperative efforts with adjacent landowners. Much of our prevention work remains focused on high priority forest areas near rural communities.

I would also like you to know that the restoration of lands burned during the summer of 2001 is ongoing, as is our effort to improve overall forest health through implementation of the Dry Forest Management Strategy. And, with the development of our local Fire Safety Action Plan, we are further strengthening our ability to make the job of fire fighting safer.

Although many areas of the forest were shut down last summer due to fire emergencies, the more normal snow pack this year should result in a more normal summer recreation season for visitors to enjoy the many activities these public lands offer. I do hope you are able to come visit some of the forest places described in this issue of the Cascade Lookout. But, even if you cannot, I hope you enjoy what we have provided in print—a little bit about a great big wonderful place that belongs to you and all Americans—the Okanogan and Wenatchee National Forests.

A handwritten signature in black ink that reads "Sonny J. O'Neal".



Public Comment Needed for Holden Mine Project



The Holden mine site is located between the Glacier Peak Wilderness and Lake Chelan, about 45 miles northwest of Chelan. It closed in 1957 after 20 years of operation.

In early 2001, the U.S.D.A. Forest Service, U.S. Environmental Protection Agency and the Washington Department of Ecology reached agreement with Intalco, the corporate successor to the Howe Sound Mining which operated the Holden Mine, on seven alternatives to clean up and restore the Holden Mine Site.



An inspector checks on conditions at junction of two tunnels deep within Holden Mine.

The alternatives will be evaluated in detail in the Feasibility Study Report that is due to be released in Draft by mid-June 2002. The alternatives range from no additional work to alternatives with multiple solutions and extensive alteration of the tailings and waste rock piles.

The Agencies welcome public comments on what should be done to clean up the mine site and restore damaged natural resources. The Proposed Cleanup Plan for the site will be presented for public review and comment in early 2003, and the public will have a 90-day period to review and comment on the Plan. After evaluating these comments, the Agencies will choose the appropriate plan to clean up and restore the Holden Mine Site and issue a Record of Decision. Implementation of the cleanup and restoration plan is expected to begin in 2004.

Documents related to this project can be viewed at the Wenatchee National Forest headquarters office in Wenatchee, Washington and the Washington Department of Ecology office in Yakima, Washington. You may call Norman Day, the Project Manager for the Holden cleanup, for project details. He can be reached at 509-662-4304.

For more information and photos of the project, visit the Wenatchee National Forest Holden Mine website:

www.fs.fed.us/r6/wenatchee/district/chelan/holden.htm

Over 1500 miles of recreation trail on the Okanogan and Wenatchee National Forests were maintained for use during the summer of 2001 because the folks who use them purchased a Northwest Forest Pass. Ten miles of the Pacific Crest National Scenic Trail were reconstructed through revenues from the Pass, as well. Pass purchasers can also take credit for funding the reconstruction of the Chewuch Trailhead on the Tonasket Ranger District and five miles of Tommy Creek Trail reconstruction on the Entiat Ranger District. Of every \$5 for a day pass or \$30 spent on an annual Pass, at least 80% of the cost is returned to the Forest where the pass was purchased. Thus, each program participant makes a significant contribution to the upkeep and enhancement of recreation trail resources.

Campground and other recreation user fees also resulted in a variety of benefits. Garbage and restroom service was provided in dispersed camping areas on the Cle Elum District, a new toilet was installed in the Chiwawa River drainage of the Leavenworth/Lake Wenatchee District, and a toilet destroyed by vandals was rebuilt in Fox Creek Campground on the Entiat District. A number of new picnic tables were added to campgrounds, and campground water system improvements were funded on both the Methow Valley and Tonasket Districts. Boat docks at Moore Point on Lake Chelan were maintained and 250 miles of Nordic ski trails were groomed at Echo Ridge on the Chelan Ranger District. The Naches Ranger District was able to renovate 10 units in Fish Hawk Campground and re-roof the cabin at American Ski Bowl.

In addition to the work already outlined, user fees also supported the work of seasonal employees doing routine campground and trail maintenance. Here's a quick look at the benefits user fees brought to specific areas of the Okanogan and Wenatchee National Forests:

NORTHWEST FOREST PASS Trail-Related Projects for 2001

Naches Ranger District
Match for IAC grants, 250 miles maintained
10 miles Pacific Crest Trail reconstructed
1.5 miles swamp Cr. Trail reconstructed

Cle Elum Ranger District
350 miles trail maintenance

Lake Wenatchee/ Leavenworth Ranger District
400 miles trail logged out

Entiat Ranger District
Match for IAC Grants, 290 miles maintained
5 miles Tommy Creek Trail reconstructed

Chelan Ranger District
8 miles trail maintained

Methow Valley Ranger District
182 miles trail maintained with IAC match

Tonasket Ranger District
70 miles trails maintained
Chewuch Trailhead reconstructed

CAMPGROUNDS and Other Fee Projects

Naches Ranger District
10 units at Fish Hawk Campground renovated
Cabin re-roofed at American Ski Bowl

Cle Elum Ranger District
68 portable outhouses and garbage service at dispersed camping areas; Cle Elum Lake Rental Cabin program and cabin maintenance

Lake Wenatchee/ Leavenworth Ranger District
New toilet installed in Chiwawa River drainage
Wilderness Permit system

Entiat Ranger District
Toilet rebuilt at Fox Creek Campground

Chelan Ranger District
Boat docks maintained at Moore Point
250 miles Nordic ski trails groomed

Methow Valley Ranger District
15 new picnic tables
50 fire grates
Water system upgrade at Lone Fir Campground

Tonasket Ranger District
30 new picnic tables
Lost Lake Campground water system rebuilt

Forest areas will be humming with recreational refurbishing and maintenance activity in 2002 as well. In addition to routine campground and trail maintenance, Ranger Districts on the Okanogan and Wenatchee Forests have the following plan of work for this field season:

NORTHWEST FOREST PASS Trail-Related Projects for 2002

Naches Ranger District
300 miles of trail maintenance in Wilderness
17 miles Pacific Crest Trail reconstruction

Cle Elum Ranger District
Trail maintenance crew
Leverage IAC grants for motorized trail maintenance
Volunteer support
Trailhead maintenance and repair

Lake Wenatchee/Leavenworth Ranger District
Trail maintenance contract for 200 miles of log out

Entiat Ranger District
Install interpretive signs on Silver Falls Trail
200 miles of trail maintenance

Chelan Ranger District
Trail maintenance

Methow Valley Ranger District
Trail maintenance crew
Leverage IAC grants for trail maintenance

Tonasket Ranger District
Maintenance of trails in Salmon Creek area

CAMPGROUNDS and Other Fee Projects for 2002

Naches Ranger District
Reconstruction of Clear Lake Campground

Cle Elum Ranger District
Rental cabin maintenance
Toilet and garbage service in dispersed areas

Lake Wenatchee/Leavenworth Ranger District
Managing Enchantment Wilderness permit system
Maintenance of Chiwawa River dispersed camps

Entiat Ranger District
Install 25 new fire rings
Replace barriers in campgrounds

Chelan Ranger District
Nordic ski trail grooming—Echo Ridge
Lake Chelan boat dock maintenance

Methow Valley Ranger District
Volunteer Hosts at Harts Pass and campgrounds
Campground maintenance

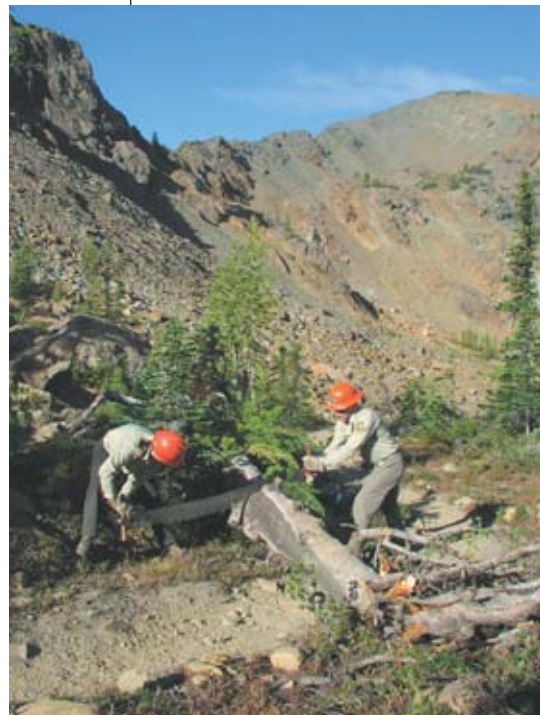
Tonasket Ranger District
Replace barrier logs at Lost Lake Campground
Install bear-proof dumpsters at Bonaparte and Lost Lake Campgrounds

For more information on any of these proposed projects, please contact the appropriate ranger district office. And, if you love the trails and park at trailheads on the Okanogan and Wenatchee National Forests—or any National Forest in Oregon or Washington—be sure to purchase your Northwest Forest Pass! The Pass is available from any Forest Service office as well as from a number of local retail outlets. See you on the trail! ■

Recreation Fees Hard at Work

by Marta Ames
Public Affairs Specialist

In 2001, Northwest Forest Pass revenues provided \$210,000, and receipts in campgrounds totaled \$252,000.



Dedication



Tom Craven



Karen Fitzpatrick



Devin Weaver



Jessica Johnson

The fifth annual issue of the Cascade Lookout is dedicated to four fine young people who lost their lives fighting the Thirtymile Fire on the Methow Valley Ranger District last summer. One story on this page describes steps being taken to make wildland fire fighting safer. Another story tells about a memorial site and permanent markers to be dedicated this July 11 where these brave firefighters died. Every summer, tens of thousands of firefighters face the risks of fighting wildland fire to protect rural communities and important natural resources. We will never stop trying to make firefighting safer. We will never forget Jessica, Karen, Kevin, and Tom. They will always be heroes to us.

Sonny J. O'Neal
Forest Supervisor

Memorial To Be Dedicated

A lasting memorial to the four fallen firefighters will be located beside the Chewuch River nearly 30 miles north of the town of Winthrop at the location where 16 people took to fire shelters as a last chance effort to escape the fury of an exploding wildfire.

"This will be a tasteful, yet powerful memorial to four fine young people," said Kristy Solbrack, leader of the memorial design team. The site will include a low rock wall, plaques dedicated to each firefighter, four memorial markers, and a stone bench to allow visitors a spot to sit in quiet reflection. A small parking area will allow parking for 3 vehicles. Solbrack noted that the memorial design has been reviewed by the families of the four firefighters.

Work on the memorial site is to be completed by early July this summer. A formal dedication will follow. Special legislation sponsored by members of the Washington Congressional delegation allowed the Forest Service to spend agency dollars on the memorial site. Delegation members will be invited to attend the dedication.

After the dedication a brochure and map will be made available through the Methow Valley Ranger Station at Winthrop for those who wish to visit the site in the future.

Safety Improvements Sought

Wildland firefighters in federal and state agencies across the nation train together and travel the country to support each other in times of wildfire crisis. Any time a tragedy occurs like the fatalities at Thirtymile, detailed investigations are conducted. These are followed by further analysis and hard work to try and determine mistakes made and to identify steps that can be taken to lessen the likelihood of a similar tragedy in the future.

Extended drought and changing forest conditions have set the stage for numerous destructive wildfires on the two forests in recent decades. Although the Thirtymile fire is the worst tragedy to have occurred on the Okanogan and Wenatchee National Forests, at least 23 additional fatalities have occurred on these two forests during the nearly 100 year history of fire fighting. Nine lives have been lost in aircraft accidents, seven in fire entrapments, three resulting from falling trees, two from heart attacks, and two from other causes.

In past months, the Forest Service has been working nationally, regionally, and locally to learn from Thirtymile. Nationally, The Forest Service has identified 31 action items in an Accident Prevention Plan designed to improve firefighter safety. They include steps to increase firefighter awareness of fire behavior, to better manage fatigue, and to strengthen leadership and accountability on a fire. The agency will also take actions to respond to all findings of the Occupational & Safety Hazard Administration, which conducted a parallel investigation of the incident.

Regionally, a Forest Service task force has focused on procedures for dealing with small fires as they escape initial attack and begin the transition to become large wildfires. They are giving extra consideration to critical safety elements like leadership, human factors, and the dispatch system. Employees of the Okanogan and Wenatchee Forests will implement all the changes in firefighting procedures that result from the national and regional efforts.

Meanwhile, an Okanogan and Wenatchee National Forest task force team worked for several months to develop improved approaches for dealing with fire suppression on the local level. The team met with employees across the forest to gather ideas for safety improvements. As a result of the effort, forest employees will focus on several key emphasis areas, make numerous immediate changes in the way business is done, and pursue long term strategies that will require work locally, regionally, or nationally.

The key emphasis areas include expanded training and guidelines for local crews; better tools to help firefighters recognize dangerous fire situations and understand when it is time to fall back; customized local briefings on fire behavior, weather, and hazards; and training of a cadre of safety officers that will have sole responsibility of fires that are not large enough to warrant a fire team, but have potential for rapid growth. ■



Conceptual sketch of the Thirtymile Memorial shows the path leading up to a semi-circular rock wall with a bronze plaque and photo etchings of the firefighters. There is also a bronze plaque on a large boulder just above the rock wall.

In 2001, Washington State experienced its second driest winter in 106 years. As the snow melted and spring rains failed to fill reservoirs or nourish the forests, the potential for extreme fire behavior grew.

Fires have shaped the landscape for thousands of years. Most fires cause minimal damage to the land and pose few threats to people. However, some fires grow large enough to cause extensive resource damage requiring special rehabilitation measures. Of the 180 fires that burned on Okanogan and Wenatchee National Forests in the summer of 2001, six grew large enough to require special rehabilitation measures, called Burned Area Emergency Rehabilitation.

Burned Area Emergency Rehabilitation (BAER) is designed to address key goals of protecting human life and property, water quality, trails, and deteriorated ecosystems. In most instances, BAER work begins well before the fires are out, with resource specialists working side by side with fire suppression crews. Rehabilitation work is divided into two phases – suppression rehabilitation, and post-fire recovery actions. Suppression rehabilitation work involves repairing fire lines, fire camps, roads, fences, or other facilities damaged by suppression activities. Post-recovery actions are taken after the fire is out.

In most cases, only a portion of the burned area is actually treated. BAER treatments occur in severely burned areas, very steep slopes, places where run-off will be excessive, fragile slopes above homes, and municipal water supplies.

A common BAER activity for large fires includes seeding the burned area with a mixture of short-lived grasses such as winter wheat, and longer-lived native grasses. This is done primarily to aid soil stability for erosion control, and to help prevent the spread of noxious weeds. Log terracing is also a method used to aid soil stability and slow runoff.

The control of noxious weeds is another major consideration in BAER projects. Without native vegetation to out-compete noxious weed infestations,

the risk of an increased rate of spread is high. Noxious weed control methods include hand-pulling and grubbing, biocontrol (placing insects into areas to control the spread of weeds), seeding with native grass seed mix, mowing roadsides, and in some areas, the use of herbicide.

Preserving existing roadways and trails within a burned area can involve replacing culverts, stabilizing road slopes and road beds, grading road surfaces, and re-establishing drainage on trails.

Some unusual BAER projects will occur due to the 55,000 acre Rex Creek fire that burned on the Chelan Ranger District. About 5,600 acres of the Rex Creek fire burned with a high severity, in steep tributary valleys. Prior experience tells us that these tributaries are now more susceptible to massive floods and mud slides that have the potential for delivering tons of mud and woody debris into Lake Chelan. Log booms will be placed at the mouths of three intensely burned tributary streams in order to contain the debris should a flood event occur. Terracing with straw 'wattle' bundles was done on approximately 123 acres in the Safety Harbor Creek area last fall; an additional 230 acres of terracing will occur as soon as the snow melts off the slopes.

Burned Area Emergency Rehabilitation takes many different forms, but all forms of BAER work have the same key goals: Protect human life and property, protect water quality, and restore deteriorated ecosystems. ■

2001: A BAER of a Fire Season

by Robin DeMario and Diane Bedell



Terracing with straw 'wattle' bundles to minimize mudslides and erosion in the Safety Harbor Creek area



Straw 'wattle' bundles stacked up and ready for transport to the burned area.

The Highlands Fire Defense team is offering an opportunity to local landowners within the Highlands area (located near Tonasket) that is practically too good to pass up. Utilizing a Forest Service Grant from the National Fire Plan, local Washington State Department of Natural Resources and USDA Forest Service employees are working together with area fire districts and local contractors to help residents create and better understand defensible space around their homes.

Homeowners are asked to join in a contract agreeing to continue maintenance of the defensible space created. A team representative tours the property with homeowners focusing on the priority areas for work. A crew then spends a day working to remove hazards. While the crew does not remove human placed hazards, like firewood or burn piles directly adjacent to the structure, such risks are pointed out to the homeowners and suggestions are offered for better defense.



In Okanogan County there are over 300,000 acres of land with no home fire protection district coverage. Members of the team agree that creating defensible space around homes is a critical step forward in fire prevention, and ensuring the safety of firefighters and the public, particularly for those areas that don't have home fire protection coverage by a local fire district.

So far, about 80 homeowners have worked with a fire defense team consultant. Lyman and Pam Skow, homeowners in the Aeneas valley area, recently participated in the program. "One of the nicest things," noted Pam, "was that we felt in control. This wasn't a situation where the government came in and told us what we had to do." She was hesitant to mark trees for removal, "But everything in life is a trade-off," she said. "In this case I have traded some of my trees for better fire safety and an improved view." Pam and Lyman are spreading the word about the program to their friends and neighbors. "It's to our benefit to have our neighbors participate," observed Lyman as he swept his hands wide to encompass the timbered land surrounding his property. ■

Defense Help Offered to Landowners

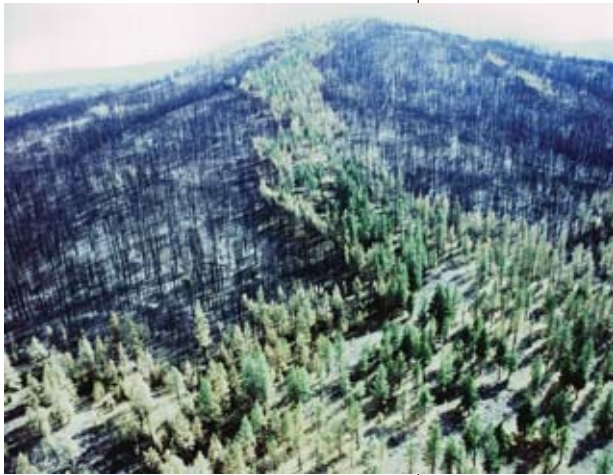


A graphic example of how "defensible space" actions taken prior to the fire that swept through this area saved this home, while several nearby homes were destroyed.

For more information, check out the website:
www.fs.fed.us/r6/oka/highlands_defense/highlands_defense_team.htm

Creating Healthy, Fire Resistant Forests for the Future

by Paul Hart
Forest Public Affairs Officer



This photograph dramatically illustrates the effects of wildfire on different types of forest. The middle ridgeline and foreground had been thinned prior to the Tyee fire which swept through this area. The surrounding forest was drastically changed, but in the thinned area most of the trees survived.



Forest before fuels reduction



Forest after fuels reduction

Forest fires have been getting bigger and harder to control in recent years. In 1994 and 2001 wildfires burned across more than 250,000 acres on the Okanogan and Wenatchee National Forests. It cost more than \$150 million to fight them, and millions more in revenue lost by tourism-dependent local communities.

The fires also put thousands of fire fighters and rural residents at risk. The Thirtymile fire, which killed four firefighters north of Winthrop last summer, occurred in an area that is like many others on the two forests where heavy fuels and high tree densities have developed. This condition produces severe fire behavior under dry burning conditions.

The Thirtymile fire underscores the very real danger presented by uncontrollable fires.

Why are forest fires getting harder to fight? Drought, lightning, and human carelessness certainly are factors. But local research has shown that fire conditions have changed quite significantly over the last 100 years or more, especially throughout the dry ponderosa pine and Douglas-fir forests of the west, says researcher Paul Hessburg of the Pacific Northwest Research Station laboratory in Wenatchee.

"Growth rings in old stumps and snags contain a history of dry forests exposed to repeated, low intensity surface fires going back 300 to 400 years and more," Dr. Hessburg notes. "Fire history research and old photo points help us to visualize native forests comprised primarily of large, widely spaced pine, Douglas-fir and larch."

Researchers believe that frequent lightning-caused fires burned through forests every 7 to 20 years. This kept them free of brush and fallen branches and encouraged the growth of grasses while discouraging the growth of many new seedling trees.

Nearly a century of well-intentioned fire suppression has transformed most of the dry forests into dense stands of smaller pine and firs. Today, nearly 600,000 acres on the two forests are considered "dense and dry."

To reverse this trend, forest managers have adopted a "Dry Forest Strategy" designed to thin large areas of the dry forest, leaving larger, well-spaced pines and Douglas-firs. Besides improving forest health, the goal is to provide fire-safe areas around local communities and remaining old forest groves. Thinning out dense groves of trees and utilizing prescribed fire after thinning to remove much of the woody debris and brush from the area are tools that are being used in the Strategy.

Each of the eight ranger districts on the two forests has thinning and burning projects designed to contribute to this Dry Forest Strategy. Here are some examples:

Tonasket Ranger District

The Coco and Bailout timber sales in the West Fork San Poil drainage and Aeneas Valley involve thinning on about 1,000 forested acres, followed by prescribed fire on nearly 2,000 acres. Also in the planning stage are large-scale projects west and north of Conconully, in the Mt. Hull Block adjacent to the Rocky Hull Fire area, and in the Upper Aeneas drainage.

Methow Valley Ranger District

Over 800 acres of the Fawn Timber Sale, about 7 miles north of Winthrop adjacent to the Edelweiss residential development will be thinned followed by prescribed fire. Part of the Solar timber sale, about 15 miles north of Winthrop adjacent to the East Chewuch Road, involves thinning on units totaling 200 acres. The Hungry Hunter planning area covers thousands of acres in the McFarland Creek area southwest of Twisp. A citizens' committee has assumed stewardship of the area and is helping plan thinning and burning projects.

Entiat and Chelan Ranger Districts

The Tiny Crum timber sale begins this spring, involving thinning of dense pine and fir stands on 225 acres in Crum Canyon, northwest of Entiat. The Deer Pellet sale just west of Twentyfive Mile Creek on the Chelan District is now completed. About half of the project was thinned as planned, and much of the rest was salvaged after a fire burned through it in 1998. The Swakane timber sale at the head of Swakane Canyon is a proposed helicopter thinning project that includes meadow restoration and road relocation objectives.

Leavenworth Ranger District

The Pendleton timber sale in the Mission Creek Drainage south of Cashmere is ¾ completed. The project has utilized helicopters, long span cable systems, and feller buncher equipment over snow to minimize soil impacts. In combination with the adjacent Crow timber sale, about 2,600 acres will be thinned. A similar project is the Sandman timber sale in the Sand Creek and Little Camas Creek drainages south of Cashmere. About half done is the 600-acre Williams timber sale in the Derby Canyon area near Peshastin. (More information on the Pendleton project can be found on page 20)

Lake Wenatchee Ranger District

The Fish Pole Project, located north of Lake Wenatchee, has resulted in eight large thinning sales, four of which are nearly done. The Compound Fracture sale on 18 acres around the ranger station is done. The 388-acre Fish Tank sale on Loop Hill is 80% done. The 219-acre Flat Fish sale between the Cove and the emergency airstrip is 70% done, and the 178-acre Frozen Fish sale is 90% done.

Cle Elum Ranger District

The Fawn timber sale will thin about 200 acres south of the Liberty community, and the Lion Thin is intended to improve the forest condition immediately adjacent to town. The Johnson Canyon sale is planned for about 800 acres in the Reecer Creek drainage north of Ellensburg. The Iron Thin forest health analysis is considering potential thinning and prescribed fire projects in a 10,000 acre area of the Blue and Pipe Creek areas in the Swauk Drainage.

Naches Ranger District

Six large projects are underway, including the West Nile and Nile timber sales near Eagle Rock about 30 miles west of Yakima. The two Nile projects involve thinning, pruning, and underburning on about 4,000 acres. The project is to be done in 2003 and will provide a large fuel break near private land and numerous rural residences. The 1,000 acre Swamp Devil timber sale just south of Cliffdell is about 25% completed. The 2,000 acre Pinus II sale just north of Cliffdell in the Gold, Spring, and Pine Creek drainages is 80% done. The 2,500 acre Kaboom sale around Goose Egg Mountain near Rimrock Lake has just begun and also involves 4,400 acres of underburning to reduce fuels. The 4,700 acre Elderberry sale in the Oak Creek drainage should begin this year, with some underburning in the fall. ■

The Forest Service is dedicated to providing educational experiences about our natural resources. Employees of the Okanogan and Wenatchee National Forests are involved in many activities that take place in local communities. They may be found teaching classes at outdoor education camps, leading plant walks or participating in festivals, fairs and parades. Find out more about these events by calling the Ranger Stations listed below.

TONASKET:

National Fishing Week, Tonasket Ranger District Fish Day - This event is for kids 14 years and younger. Prizes for fishing derby, education stations about fishing, fish biology, fish habitat, and water safety. Goodie bags for everyone, drawings. Located at Bonaparte Lake Campground fishing pier. Hosted by the Tonasket Ranger District and local partners. —June.

METHOW VALLEY:

Watchable Wildflower Walks - Explore the botanical wonders of wildflowers. Learn more about alpine plant species and their environments from Forest Service botanists and naturalists. Harts Pass area. —July.

LAKE CHELAN:

Earth Day Celebration - Live music and entertainment all day. Flea market, crafts fair, informational booths, reptile roundup show, plant seed exchange. Chelan Ranger District participates with an information booth. Riverwalk Park downtown Chelan. —April

Lake Chelan Mountain Bike Festival - A regional championship with incredible downhill, dual, and cross-country racing at Echo Ridge. Lake Chelan Ranger District provides information and support. —May

Lake Chelan Sportsman's Kids Day Fishing Party - Family fun! Located at the Lake Chelan Golf Course Pond. Lake Chelan Ranger District provides information, prizes and support. Open to all kids ages 1 to 15. —May

LAKE WENATCHEE:

Lake Wenatchee State Park Programs - Saturday evening programs offered throughout the summer beginning at 8:30 p.m. in the amphitheater. Enjoyable for all ages. Bring a blanket to keep off the chill. Also offered: Smokey Bear programs every Saturday morning. Everyone welcome! Hosted by Lake Wenatchee State Park and Lake Wenatchee Ranger District. —July and August



Last winter there were two rescues involving snowmobilers in the Cle Elum Ranger District. One individual was high marking on the south face of the south peak of Ingalls Peak and lost control in the steep icy cliffs. "High marking" occurs when a snowmobile operator drives as high as possible up the side of a hill. Without the assistance of the Army Mast helicopter, evacuation of that injured snowmobiler (who had multiple broken bones and possible internal injuries) would have been very difficult.

The second snowmobiling incident involved a woman who was hill climbing and high marking near the microwave towers near Stampede Pass. This person sustained major injuries and was evacuated by Kittitas County Deputies and an Army Mast helicopter.

These are just two of several snowmobiling accidents that occurred last winter on the Okanogan and Wenatchee National Forests. Unfortunately, there were also 3 fatalities. The U.S. Consumer Product Safety Commission estimates that each year about 110 people die while riding snowmobiles and that about 13,400 hospital emergency room-treated injuries occur each year. Contributing factors include unfamiliarity of terrain, inexperience, alcohol, and speeding. Approximately 40 percent of the reported deaths resulted from colliding with trees, wires, bridges, and other vehicles. Some deaths occurred when the snowmobile rolled to the side in a ditch or stream and pinned the operator under the vehicle. Deaths also have occurred when the snowmobile entered water, mostly after falling through ice.

LEAVENWORTH:

Wenatchee River Salmon Festival - Celebrate the return of the salmon at the Leavenworth National Fish Hatchery. Bring the whole family and enjoy lots of activities, entertainment, tasty food, exhibits and arts and crafts. Hosted by the U.S. Fish and Wildlife Service and U.S. Forest Service. —September 21 & 22, 2002.

Winter Life Snowshoe Tours - Join a trained naturalist to unravel the mysteries of winter. Discover how mice stay warm and active under the snow; search for beaver sign along the Icicle River; and learn to read the stories told by tracks of local wildlife. Snowshoes provided, no experience necessary. Ages 8 and up. Hosted by the U.S. Forest Service and U.S. Fish and Wildlife Service. —Saturdays and Sundays, December through February.

National Fishing Week - Fishing Clinic/Derby. Fishing Poles, food, prizes. Walla Walla Point Park, Wenatchee. Sponsors include USFS, WA state F and W, Trout Unlimited and others. —June

Celebrating Wildflowers - Easy walks near Leavenworth. See Ponderosa pine, Douglas-fir dry forest, glacier lilies, windflowers, trilliums, camas lilies. Co-sponsored by the Washington Native Plant Society and U.S. Forest Service. —May

ENTIAT:

Annual Kids' Free Fishing Day at the Entiat National Fish Hatchery. Call hatchery manager Bill Edwards (784-1131) for details. Hosted by the U.S. Fish and Wildlife Service and U.S. Forest Service. —June

NACHES:

Nile Valley Days annual celebration. Axe throwing, cross-cut sawing, wood chopping contests. Food booths, exhibits, crafts and entertainment. Naches Ranger District sponsors an activity and provides information at exhibit trailer. —July

Naches Sportsman Days annual celebration. Carnival rides, entertainment, exhibits, crafts, bucket brigade, egg toss and other contests. Naches Ranger District sponsors an activity and provides information at exhibit trailer. —September

Naches Sportsman Days parade. See Smokey and his helpers riding in a Forest Service fire engine. —September

Sunfair Parade. Smokey and his helpers remind everyone to prevent wildfires. —September

Selah Kids Fishing Derby - Lots of prizes, fishing poles, tackle boxes, bait, hats. Children up to 15 years of age. Sarge Hubbard Park in Yakima. Sponsors: U.S. Forest Service, Washington Dept. of Fish & Wildlife, and others. Organized by Selah Parks and Recreation. —June.

FOREST HEADQUARTERS:

Celebrating Wildflowers - Easy walks near Wenatchee. See Ponderosa pine, Douglas-fir dry forest, and plants of the sagebrush steppe. Co-sponsored by the Washington Native Plant Society, U.S. Forest Service, and Bureau of Land Management. —May

Calendar of Events for the Okanogan and Wenatchee National Forests



The U.S. Consumer Product Safety Commission recommends the following snowmobiling tips:

- Never drive your snowmobile alone or on unfamiliar ground.
- Drive only on established and marked trails or in specified use areas.
- Avoid waterways! Frozen lakes and rivers can be fatal.
- Avoid driving in bad weather.
- Watch the path ahead to avoid barbed wire, ditches, and other obstacles.
- Slow down at the top of a hill. A cliff, snowbank, or other unforeseen hazard could be on the other side.
- Don't hurdle snowbanks. You have control only when your skis are on the ground.
- Learn snowmobile traffic laws and regulations for the area.
- Be sensible about stopping at roads or railroad tracks. Signal your turns to other drivers. Avoid tailgating and control speed according to conditions.
- Use extra caution driving at night—un-seen obstacles could be fatal!
- Never drink while driving any vehicle, including snowmobiles.
- Be sure the snowmobile is properly maintained and in good operating condition.

Snowmobiling is a fun, family-oriented winter recreation activity. Have a SAFE and ENJOYABLE snowmobiling experience in the Okanogan and Wenatchee National Forests. ■

Snowmobile Accidents on the Increase



METHOW VALLEY RANGER DISTRICT

Ten Old Forest Sentries Still Standing

by Debbie Kelly
Public Information Specialist



Goat Peak lookout



Helen Giles on First Butte lookout in 1953

Imagine waking up at 7,400 feet elevation in a drafty 12 by 12 foot, one room cabin towering 30 feet above the ground, perched on the cusp of a 200 foot vertical cliff. The view is spectacular. While opening up yet another can of beans from your limited food supply, you watch the rising sun cast a pink and golden-hued light on the panoramic view of snow-capped Cascade peaks. After breakfast you grab your canteens and water jugs and make the regular trek to a spring located a few miles away. You need to return to your high mountain lookout before the heat of the day to keep an eye out for forest fires.

There is something rustic, romantic, and oddly attractive about the idea of living for months in a tiny building with only an Osborne fire finding device, a Forest Service radio, and a glass-footed insulated stool for company. If this lifestyle sounds enticing, you may have missed your calling as a fire lookout.

During the 50-year heyday of northwest firewatchers, several thousand hardy individuals did heed the call. Between 1913 and 1953, the Okanogan National Forest built, staffed and maintained nearly 60 fire lookout stations.

Today only ten of these old Forest Service sentries remain standing: North Twentymile, Leecher Mountain, Monument 83, Slate Peak, Funk Mountain, Cornell Butte, First Butte, Goat Peak, Mt. Bonaparte, and Lookout Mountain.

Seven of these structures have been placed on the national historic lookout register. Only three continue to be actively staffed during the summer, having been replaced by the more technologically advanced aerial observer flights and satellite lightning strike detection. Today the remaining staffed lookouts serve double duty as human-relay points for radio communications and a safety link with backcountry rangers when the rugged wilderness terrain and deep valleys block radio transmissions.

Technological advances have nearly eliminated the need for lookouts. Although a few are still active, most of those remaining are nostalgic reminders of a by-gone era. Support from community members and organizations such as the Forest Fire Lookout Association (FFLA) may be instrumental in securing the future of lookout stations. The FFLA is a volunteer organization composed of hikers, conservationists, forest fire personnel, foresters, storywriters, and members of the environmental community – but all are lookout enthusiasts.

Recently the Forest Service signed an agreement with the Forest Fire Lookout Association to create an operating plan for a celebration of Forest Service lookouts and the development of a strategic plan for ongoing care of lookouts.

Planning for the lookout celebration coincides with Forest Service activities leading up to the agency's 100-year anniversary in 2005.

This summer the Forest Fire Lookout Association, Inc. will hold its 2002 Western Region Conference in Winthrop, Washington, September 6-8. Activities include presentations, workshops, and tours. For more information contact conference coordinator Ray Kresek, at 509-466-9171, or rkresk@webtv.net, or check out the FFLA website at www.firelookout.org ■



First Butte lookout

Watching Hawks from Earth and Sky —Technology and Raptor Migration

by Kent Woodruff
Wildlife Biologist



The bird left his hand, opened its wings and rose on the wind. In seconds, it was gone. The adult female Northern Harrier had been captured moments before as part of a cooperative effort called the Chelan Ridge Raptor Migration project, and was now on its way south to spend the winter at an unknown destination.

On that day in October 2001, the researchers had no idea where the bird would go. No one had previously followed the migratory path of Northern Harriers and the team wasn't sure if the hawk would winter 100 miles or 1,000 miles south of where it was captured. As it turned out, the bird traveled over 2,700 miles in just five weeks and settled in a remote desert wildlife area north of Las Vegas.

Over the past year, some of the top raptor scientists in the country have been working with the Methow Valley Ranger District to learn more about raptor migration. Operating from a windy, rocky outpost located atop the Sawtooth Ridge between the Methow Valley and Lake Chelan, the team is gathering information never before recorded. The team is currently testing a new piece of technological equipment that will give them valuable data for their study. Small transmitters fitted to a hawk's back send signals to a satellite orbiting 200 miles above the earth. The data can be downloaded at any time to a computer where information, such as the bird's location, activities, and even body temperature can be checked. The female Northern Harrier was the first of her kind to wear such a backpack.

During the fall migration season of 2001 project biologists outfitted a total of six birds of prey with satellite transmitters of various sizes and designs. In addition to the Harrier, a Golden Eagle, a Northern Goshawk, and three Red-tailed hawks all left the

research station at Chelan Ridge wearing the tiny transmitters.

The team continues to learn what works best for monitoring the movements of birds of prey. As with any scientific study, there are successes and failures. Some transmitters worked better than others, some were lost and some quit working. But, the team continues to make small strides to gain broader insights into the conservation of these magnificent birds. In 2002, project partners hope to send at least 10 more transmitters skyward on the backs of hawks.

Junior High Students Participate in Raptor Study

During the fall of 2001, classes from Liberty Bell Junior High School, under the direction of science teacher Mike Putnam, applied for and received a grant that funded two of the satellite transmitters. Students learned what it takes to be wildlife biologists. They traveled to the study site (at 5,600 foot elevation) to see how the hawks were captured and measured. In class they created model satellite backpacks, mapped the movement of the Harrier, and developed a website to share what they learned. As the project continues, additional classes will be involved to help the project achieve its goal of learning more about raptors and their migration.

Other cooperators in the project include:

HawkWatch International, Washington Department of Fish and Wildlife, Microwave Telemetry Inc., The Murdock Trust, and The Greater Wenatchee Community Foundation. ■

For more information visit the following websites:
www.hawkwatch.org
www.microwavetelemetry.com

In response to the wildfire season of 2000, the President directed the Secretaries of Agriculture and the Interior to develop a response to severe wildland fires, to reduce fire impacts on rural communities, and to ensure sufficient firefighting capacity in the future. Following this direction, Congress mandated the implementation of the National Fire Plan. The Okanogan and Wenatchee National Forests are now conducting their fire programs under the direction of the Fire Plan.

The five key points of the plan are firefighting, rehabilitation/restoration, hazardous fuels reduction, community assistance and accountability. The National Fire Plan addresses conditions that have evolved over many decades and cannot be reversed in a single year. It is a long-term commitment based on cooperation and communication among federal agencies, states, local governments, tribes, and interested publics.

This partnership success was evident last year when the Fire and Fuels Management Team on the Methow Valley Ranger District conducted a prescribed burning program that included removing debris from 328 acres of logged and thinned forests, and using fire on 5,477 acres to reduce amounts of natural fuels on the ground.

The Pine Forest and Aspen natural fuels burns were two of the prescribed burning projects undertaken last year with community support. Public meetings were conducted and comments and feedback were received from the community. News releases, radio announcements, and personal contacts kept valley residents informed about the projects.

The Pine Forest underburn, which occurred towards the end of April, was characteristic of the coordination needed to do prescribed burning in areas adjacent to forest lands. Because the Pine Forest subdivision was built next to national forest lands, fire managers of the Methow Valley Ranger District spent many hours with Pine Forest Homeowners' Association discussing the objectives (hazardous fuels reduction, wildland urban interface protection), long and short term effects, smoke impacts and other issues. Once the burn began, the Association assisted with patrol efforts and provided information about the burn to other neighbors. A Forest Service video production specialist was able to film the prescribed burn. On-camera interviews with district fire/fuels personnel and local homeowners provided a personal account of the activities. The footage is intended to be part of a video on the National Fire Plan.

The Aspen burn was a cooperative endeavor between the Forest Service and the Pacific Watershed Institute (PWI). The two entities planned and implemented a prescribed burn on the Methow Valley Wildlife Refuge, administered by the Washington Department of Fish and Wildlife. The objective of this burn was to stimulate aspen regeneration. PWI received a grant to fund a portion of this project. It helped pay for building a cattle exclusion fence around the project area, applying for and obtaining a burn permit, building control line around the project area, helping to collect data needed for the burn implementation plan, and providing public information and education to the surrounding land owners. Fire management personnel from the Methow Valley Ranger District, North Cascades Smokejumpers and Baker River Hotshots burned the project area in mid October. After the burn, PWI took the responsibility for patrolling the fire and mopping up the last of the active flames.

The Methow Valley Ranger District would like to thank those who provided assistance during the 2001 burning season. These are: North Cascades Smokejumpers, Baker River Interagency Hotshot Crew, Washington State Department of Natural Resources, Upper Skagit Valley Bureau of Indian Affairs, North Cascades National Park, U.S. Fish and Wildlife Service, Columbia River National Wildlife Refuge, Boise Helitack, and Wenatchee Valley Rappellers. ■

Public Partnerships in Prescribed Burning

by Kathy Busse
Fuels Planner



Underburns on National Forest land near Pine Forest subdivision



In the mid 1990s, the Twisp and Winthrop Ranger Districts were combined into the Methow Valley Ranger District. Because neither district office was large enough to hold all the employees in one location, the new district continued to work out of separate offices. That will change in mid-May. Recent reconstruction of the old Winthrop Ranger Station located just outside of Winthrop on the Chewuch River Road, will now allow Methow Valley Ranger District employees to work under one roof.

The district had considered several options to provide convenient working space for everyone, including building a new office on the site of the existing Twisp office, building a new office half-way between Twisp and Winthrop, trading a portion of the Winthrop work compound for the Winthrop office, and buying the Winthrop office outright. After much analysis and environmental review, the Okanogan and Wenatchee National Forests decided to purchase the Winthrop office and new office space was constructed in the daylight basement.



Customer service is a high priority for the Methow Valley Ranger District. Although the Twisp office will only remain open as a work station, information and services will continue to be provided elsewhere in Twisp. Northwest Forest Passes, firewood permits, and Christmas tree permits will be available at the Train Station and Hank's Market. Other visitor services such as trail reports and map sales will be provided, but the location has not yet been determined.

Visitor information will be available year-round at the newly reconstructed Winthrop office and also at the Methow Valley Visitor Information Center located near Winthrop. The Visitor Information Center is open from mid-April through October. ■

Methow Valley Ranger District Employees Soon To Be Under One Roof

by Jennifer Zbyszewski
Recreation Staff

TONASKET RANGER DISTRICT

Fish, Forests, Facts and Fun



Where can you find children participating in activities that involve spraying water from a fire engine, studying plants growing in their natural habitat, identifying tracks in the mud, or planting a tree?

Learning is fun at Tonasket Ranger District. In our programs, children can be found in a myriad of settings. One day you may find students in front of a computer screen, the next on a remote hillside with a shovel in hand. Shouting facts in unison, jumping over mock waterfalls, studying maps, thumbing through field guides, looking through binoculars, listening to stories, and wielding fishing poles are all part of the learning experience.

District employees lead programs that include both field and classroom activities. One example is the Loon Education curriculum where children learn about the declining loon populations in the west. The course begins on the internet with a program called "Journey North", and is followed by hands-on activities in the classroom. Before students travel to highland lakes where loons live and raise their young, they already know about loon behavior and their habitat. At the lakes, students are shown a prepared slide show from the North American Loon Fund, then view the loons on the water. They play a migration game, read an Indian legend, and create illustrations of loon habitat and loon behavior. By the end of the program, students understand more about the relationship between humans and their environment. They discover that the decisions they make now, and as adults, will have an affect on the future of many species, including the future of the loon.

The Jimmy's Meadows project is another example of how Tonasket Ranger District partners with educators. Tonasket High School's biology classes are active participants in a pilot wetland restoration project in the Cobey Creek drainage. The class has written monitoring plans and has returned to the site to look at the results of a similar project completed in 1981, before any of them were born! At Jimmy's Meadows they will work to get water flowing over a once moist meadow, grow and transplant riparian vegetation, and learn about the National Environmental Policy Act.

You don't have to be a student in a classroom to participate in all of the Tonasket Ranger District activities. In the spring during National Fishing Week, families are invited to Tonasket Fish Day where they can learn to fish, find out about all the different types of creatures in the lake environment, and get a quick biology lesson thrown in for good measure. Other activities incorporate games and story telling as a way to help teach about habitat, migration, or other related topics.

The success of many of our conservation education activities is due to the support and sponsorship of a variety of partners. If you have questions about Tonasket Ranger District's Conservation Education activities or would like to find out how to participate, please call us. ■

The Story of the Highlands Ski Area



It was during the winter of 1984-1985 that Tonasket Ranger District employees noticed ski tracks occurring regularly on the north side of Phoebe Mountain. The tracks were those of Walter Henze, a long-time Tonasket resident and back country skiing enthusiast. The district approached Mr. Henze about the need for developing a Sno-Park facility to access the ungroomed backcountry of the highland hills. Soon plans were being discussed for a ski area.

The project crossed both federal and private land and approval was first obtained from landowner Mariann Oberg and the Forest Service. That winter, plans were made to develop a Sno-Park modeled after the South Summit area on Loop Loop pass near Omak. Throughout that season, local Nordic skiers discussed possibilities. Enthusiasm grew, and in the spring of 1985, the Highlands Nordic Ski club was formed.

Throughout the spring and early summer of 1985, the Ski Club applied for grants, coordinated with other winter sports organizations, and completed the analysis necessary under the National Environmental Policy Act. Volunteers spent the summer and fall laying out 12 kilometers of trail.

Tonasket business owners, Herb and Bertha Wandler, donated equipment to build the parking area in exchange for naming a trail "Straight Edge," the radio handle Bertha's father Rollie Shaver was given during his years of employment with the Forest Service. Rollie built the house in the meadow where the trail runs today.

Over the next four years, a local ski enthusiast used his own antique snowmobile (with a track setter made from a tree stump and 2 x 4s) to groom trails. It was in 1990 that the ski area received their first piece of grooming equipment from Washington State Parks Commission. But the Highland ski group managed to keep the old 1976 snowmobile running and continued to use it as a 'groomer' for three more seasons. The next piece of machinery added to this fleet of equipment was a worn out mogul planer that still had a lot of sickle bar teeth left to chew up snow during icy conditions. Then, in 1993 the State Parks, impressed by the thrift of the Highlands Ski Club, gave them a brand new snowmobile and state of the art groomer that are still in use today.

Today, just 16 miles east of Tonasket, the Highlands Ski Area has become a favorite spot for Nordic skiers with over 25 kilometers of ski trails available. The Telemark trail was added with the help of Forest Service employees and Job Corps volunteers. Work on the trail took several seasons and a small amount of dynamite before it was ready for skiers. Recently, the Red Mill project analysis allowed for completion of the trail system. The most significant addition was the Antoine Loop Trail.

Use of the ski area has increased over the years since the Tonasket Ranger District met with Walter Henze. What began with a few tracks in the snow has developed into a popular local ski area with about 1,000 skiers visiting the area each winter. ■

It's amazing what you can find in the forest if you look carefully. On the Tonasket District, cabins, sheep camps, mines, trash dumps, and an occasional prehistoric campsite may be discovered slowly disappearing under layers of brush, trees and fallen leaves, needles and branches.

To the untrained eye, many of these cultural resources may not be noticeable. In the U.S. Forest Service, archeologists and cultural resource technicians use special techniques and methods to locate cultural objects.

Like all federal agencies, the Forest Service is required by law to explore most areas on public lands where projects may result in ground disturbing activities. The National Historic Preservation Act requires federal agencies to consider the effects of their projects on historic properties. Project areas are surveyed for significant cultural resources long before a project even begins. Any cultural object that is at least 50 years old is considered a resource worthy of consideration.

When planning a project that involves ground disturbance, the Forest Service goes through several steps. First, tribal governments are notified and their concerns are taken into consideration. Next, a variety of resources are reviewed for information that may help in identifying possible sites. Historic documents, books, and the District's cultural resource atlas are tools used to check for documented sites inside the project area. If there are no cultural resources recorded in the project area but they are likely to occur, a site visit is in order.

Before determining how much to survey and where to go, a map of the project area is created showing areas where cultural resources are likely to occur. Factors such as available water and steepness of

slope are key to narrowing down the area to be surveyed. Depending on size and extent of the location, the entire area or a portion of the area is surveyed. Cultural resource specialists line up 90 feet apart and walk back and forth across the project area recording any cultural resources found.

A final report is prepared describing the project and the survey. If cultural resources are present an archeologist determines whether they are significant, and if so, how best to protect them. In most cases, simple avoidance is prescribed. The report is submitted to the State Historic Preservation Office (SHPO) in Olympia for agreement on the determination of project effect upon the cultural resources present. If SHPO agrees, the Forest Service has met its responsibility under the National Historic Preservation Act.

When out enjoying your National Forest, it is possible that you, too, may discover something of historic significance. You can help preserve a cultural resource object or site by leaving it where you found it. Note the location of the object or site and contact a Forest Service archeologist. They may be able to tell you more about your find. In addition, they will officially record your site and determine how to preserve it for the future. ■

Buried in Time



Old Granite Mountain lookout

Aren't cows supposed to be in pastures? Most visitors would not expect to encounter cows, calves and bulls while vacationing on National Forest lands. While it seems strange to see large domestic animals wandering through forested areas, it is not unusual – especially on the Tonasket Ranger District.

This northernmost district of the Okanogan and Wenatchee National Forests is home to the largest public land grazing program in the state of Washington.

Thousands of acres of grassland mixed with forest are ideal for cattle grazing.

An environmental analysis conducted by the Forest Service allows ranchers to graze livestock on National Forest lands. The analysis determines how many cattle can graze in specific areas and how many grazing permits can be issued. Ranchers with permits pay a yearly fee for each animal they graze on National Forest lands. Grazing is allowed from mid May through mid October.

Chances are good that you will encounter cattle on your visit to the Tonasket Ranger District. You may also come across fences, water troughs, gates, corrals, and cattle guards that are all part of the grazing program.



Here are some tips that will help make your visit more enjoyable.

Cow Country Etiquette

- 🐄 Approach cows slowly. Most will move away from you as you approach on foot, bicycle, or in a vehicle. Be aware that cows often decide to cross the road about the time you begin to drive past them.
- 🐄 If ranchers are with the cows, it is best to pull over and turn your vehicle off until they have passed by. Do not help ranchers move cows unless they request your help.
- 🐄 Give bulls a lot of room if you need to walk near them.
- 🐄 Never approach an injured animal. If you find an injured or dead cow, write down the cow's location, the color of its ear tag, and any identification on the ear tag that you can see from a safe distance. Notify the nearest Forest Service office as soon as possible.
- 🐄 If you come across an unlocked gate and it is closed, close it after you pass through it. Never leave a closed gate open - even for a few minutes.
- 🐄 If a gate is open, leave it open.
- 🐄 Never cut a fence to walk or drive through it. Cows will go through the cut fences and end up in places they should not be.
- 🐄 If you camp near corrals, set up camp as far away as possible. Never block the road to the corral with your vehicle. Be prepared to move your camp if a rancher requests it. These are working corrals and the ranchers are required to have access to them.

If you have questions about grazing on national forest land, please stop in to see us at the district, or call Teresa Messerlie, Range Program Manager, at 509-486-5148. ■

Cows In the Woods?



All articles by
Shannon O'Brien
Public Affairs Specialist

The Many Faces of Rex Creek Fire

by Diane Bedell
Public Affairs Specialist



Rex Creek Fire viewed from near Leavenworth (approx. 45 air miles away) on August 17, 2001. AP photo © Cheryl Hatch

A Growing Concern

On Saturday August 12th, a series of lightning storms moved across Central Washington, sparking at least 50 fires on the Okanogan and Wenatchee National Forests. These fires were scattered from Yakima to the Canadian border.

The Rex Creek Fire, relatively remote and thirty miles away from the town of Chelan, was one among many fires started by that storm system. Passengers and crew on the Lake Chelan Boat Company's Lady of the Lake II reported seeing lightning striking halfway down the surrounding hillsides, followed immediately by flames. In the tinder dry conditions, it didn't take much to start a fire.

By Friday August 17, five lightning-caused fires on the north shore of Lake Chelan had burned together creating the Rex Creek Complex. Approximately 18,800 acres were blackened, primarily in the Lake Chelan/Sawtooth Wilderness Area. With much of the fire fighting resources already committed to fires elsewhere, local Forest Service and fire district personnel worked to protect scattered parcels of private property, cabins, and homes along the shoreline. At that time 152 people had been assigned to the fire complex.

On the afternoon of August 17, the Rex Creek fires erupted. A strong wind that had developed from the north pushed the fire south and east - nearly doubling the acres already burned. Smoke from the fire billowed into the sky like a volcanic eruption. The plume could be seen from as far away as Idaho.

Tough Terrain, Limited Resources & Weeds Challenge Firefighting Efforts

Several issues made fighting the Rex Creek Complex challenging from the very beginning. Initially, air support and ground personnel were not available to assist local firefighters. Fire fighting resources were going to other, more dangerous fires that were threatening homes and communities elsewhere in the Pacific Northwest.

The Rex Creek Complex, burning in the remote Lake Chelan-Sawtooth Wilderness, was very difficult to access. Fire engines and heavy equipment were of no use because there are no roads on the rugged north shore. Crews of firefighters comprised of local citizens were ferried by the U.S. Coast Guard

Auxiliary more than 20 miles up-lake by boat to a base camp and then ferried across the lake to fight the fire. Sporadic winds caused erratic fire behavior that further complicated the firefighting efforts. Crews retreated to the safety of their boats using high-pressure water cannons to tackle the flames.

As if fighting a fire under adverse conditions was not enough, firefighters also had to be careful of a noxious weed. The fire burned through an area that is heavily infested with common crupina, a "Class A" noxious weed in Washington State. This extremely aggressive

weed is found on the north shore of Lake Chelan and is the only known infestation in Washington State. Extra precautions had to be taken to reduce the risk of spreading the weed by transporting seeds on clothing and equipment. Even hoses used to fight the blaze in infested areas were bagged, inspected and washed to remove weed seeds. Such care had rarely been taken during firefighting efforts to ensure that weeds were not spread due to suppression activities.



Crew boat leaves Lucerne for the Rex Creek fire across Lake Chelan

Firefighters continued to fight the fire throughout the rest of the summer and into early fall when cool weather and rain finally doused the flames. But there was still much work to be done.

The Next Steps

As September ended, and snow began to dust the high country, it was clear nature would dictate when the Rex Creek Complex fires would burn out. In about 60 days the fire had burned over 55,000 acres.

Even before the fire was out, crews were preparing for the Burned Area Emergency Rehabilitation (B.A.E.R. - See article on page 6) The Rex Creek Complex had burned nearly 15% of the Lake Chelan Basin Watershed. Five thousand acres, or nearly 10%, burned at a high intensity, mostly in the Fish Creek drainage. There was a high risk of a massive landslide or debris torrent and special measures would be necessary to reduce impacts to the ecosystem.



Terracing, Wattles and Booms

The shores of Lake Chelan are extremely rugged. The Lake Chelan basin is the deepest gorge in North America. The highest peaks of this gorge tower at 8,000 feet, dropping away to the bottom of the lake at nearly 400 feet below sea level. One of the major concerns resulting from the Rex Creek burn is the potential for major debris slides and massive erosion. Without some kind of stabilization, much of this area is at risk. In the Safety Harbor Creek drainage, logs were pinned into place across the hillsides. This terracing helps to slow any surface water that could erode the topsoil. Large sausage-shaped tubes filled with straw were also used to stabilize slopes. These "wattles" are easier for crews to maneuver into place and offer an effective alternative to logs.

With increased risk of debris slides on the steep slopes other measures are being taken to prevent large logs and floating debris from moving into the lake where they would be a hazard to boaters. This year log booms will be installed at the mouth of Safety Harbor Creek and installed at the mouths of Canoe Creek and Fish Creek.

Upland Seeding

Last fall, thousands of pounds of annual grass and sterile wheat seed was barged 35 miles up lake from the town of Chelan to the burned area. Following mapping identified by Global Positioning, a helicopter spread the seed in the more intensely burned areas to help stabilize the soil until native plants could take root.

Weed Warriors

In areas where the noxious weed crupina was a threat, a mixture of native grasses was used to prevent its spread. If left untreated, crupina may move to the Stehekin area or down-lake to rangeland and agricultural areas, causing long-term reductions in soil productivity, native plant populations and biodiversity, and wildlife forage. This spring, crews will hand pull crupina along the South Shore Trail corridor. Expect to see our weed warriors working in the area from March to May.



The Bad and Good of Rex Creek

Loss of private property during a wildland fire is tragic. Sometimes families lose precious items that can never be replaced. As more homes are built near public and private forested lands, more homes are at risk to loss due to wildland fires.

Unlike the impacts on homeowners, the effects of fire on the landscape is temporary. Fire impacts the landscape in many ways. Sometimes fire burns hot leaving a barren landscape and sterilizing the soil. But over time, sometimes several generations later, a mature forest will grow back. Some fires burn low to the ground, burning in a mosaic pattern, leaving patches of unburned areas. These areas recover quickly and often benefit from fire.

As is typical of much of the eastern Cascade dry forests, the shores of Lake Chelan are a fire dependent ecosystem. Under natural conditions, fires have historically returned to parts of the forest every 5 to 25 years. This is called the 'fire return interval.' Many areas of the Rex Creek Complex experienced low intensity fire. These fires are beneficial in that they will actually return nutrients to the soil, prevent fuel from build up, remove diseased trees, and stimulate growth of young plants, providing browse for wildlife.



Wildlife and Fire

Mountain goats are native residents of the mountains near Lake Chelan, as are mule deer, bobcats, a variety of rodents, and the oft-maligned rattlesnake. Most wildlife in the path of the fire escaped the smoke and flames by moving out of the fire area. Because the fire burned lightly over the majority of the area, new browse will come back in the spring providing soft, juicy and nutritious food for many animals. Since the fire, bands of mountain goats have been seen returning to their pre-fire habitat. Woodpeckers and other tree cavity nesting birds will benefit from burned trees that will die and become new homes.

Traveler's Guide to the Fire Burned Area

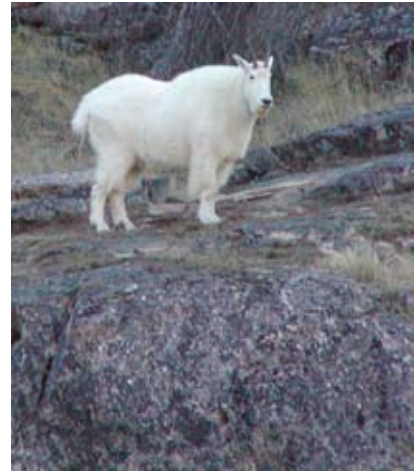
Visitors traveling up Lake Chelan will see many changes this year. Besides the very visible fire charred area, they will notice the results of rehabilitation projects. Some projects will be in progress. Log booms will be installed at the mouth of Safety Harbor Creek and installed or staged for use at the mouths of Canoe Creek and Fish Creek. As a precaution the dock and campground at Safety Harbor Creek will be closed to public use. While debris flows remain a potential threat, a small hike-in campsite at the mouth of Cascade Creek will be closed.

The Lake Chelan/Sawtooth Wilderness Area is popular with many hikers. The Lakeshore Trail is one of the first wilderness trails in the state to be snow free each spring. Hikers need to be aware that the Rex Creek Complex fire has increased some of the inherent dangers of wilderness travel. Many trees that were weakened or killed in the fire could fall at any time. Hikers should be cautious at stream crossings during spring run off and heavy rain showers as there is likely to be increased risk of a debris flow down many Lake Chelan tributaries.

Many trails in the Lake Chelan/Sawtooth Wilderness Area were heavily impacted by the fire. Some trails were undercut, and several trail bridges were burned. The Prince Creek trail will likely open later in the season than usual, and may not be safe for stock use until extensive trail restoration is completed. The Fish Creek trail will remain closed to public use indefinitely. The Summit Trail was not impacted by the fire. All hikers are encouraged contact the Chelan Ranger District for current trail information.

What the Future Holds

The impacts of the Rex Creek Fire will be visible on the landscape for a long time. Nature will slowly heal the scars of the burn. Grasses, then shrubs, and finally trees, will again grow on the landscape. Most of the fire burned at a low or moderate intensity and actually improved the health of the plant community. Much excess fuel was consumed, lessening the potential for future large scale and intense fires. We can be certain, as we continue to learn more about the important role of fire in the ecosystem, that Rex Creek will not be the last fire to leave its mark upon the shores of Lake Chelan. ■



CLE ELUM RANGER DISTRICT

A Remote Get Away Awaits You



If you are looking for unique overnight accommodations, the Cle Elum Ranger District has a deal for you.

Located at 6150 feet, the remote Table Mountain Cabin provides a fun alternative for your camping experience and is available for reservation year around. Visitors will appreciate the simplicity of this cozy cabin. The cabin, built in 1967 to house Boeing company employees doing high elevation frost research, has no electricity or running water, but you will find a small kitchen area, four twin beds downstairs, a wood stove, and a large unfurnished loft.

Just step out the door and get acquainted with what the Table Mountain plateau has to offer. Excellent hiking, wildlife viewing, and mountain biking await those who rent the cabin during the summer months. Winter enthusiasts will find plenty of snow for snowshoeing, cross country skiing, and snowmobiling.

The cabin is accessible by automobile during the summer months. Winter visitors will need to access the cabin by snowmobile, on snowshoes, or on cross-country skis.

Whatever time of year you choose to visit the Table Mountain cabin, you are sure to enjoy your stay.

The fee is \$40.00 per night with a group limit of 10 persons. All fees collected from the cabin are used to maintain and improve the facility.

A free informational packet is available at the Cle Elum Ranger Station to help plan your stay at the Table Mountain Cabin. The packet contains important information on *what is provided* and *what you will need to bring*. Call the Cle Elum Ranger Station at (509) 674-4411 ext 300 or 318. ■



Learning to Live With Cougars

How do human activities affect the behavior of cougars? This question is being asked by a number of entities currently participating in a unique local study called 'Project CAT.'

The project began last year when Cle Elum and Roslyn school district Superintendent Evelyn Nelson approached the Washington Department of Fish and Wildlife with a proposal to study cougars. An increasing number of reports of human and cougar contacts prompted the school district to propose a student-conducted study to learn more about cougar behavior and the way they interact with humans. The State Fish and Wildlife Department agreed to support the schools by providing funding and direction.

Project CAT will be accomplished over the next eight years and the results of the study are expected to have local and national significance in helping managers make decisions about cougar management. The focus of the project will be to determine how cougars react to human activities, such as development, outdoor recreation, and forest management. Study results may also help us understand what segment of the cougar population tends to interact most with society, such as how juvenile cougars interact with people compared to cougars who have lived in the area for many years.

The Cle Elum and Roslyn students will be assisted by an experienced cadre of teachers and biologists in this ambitious project. The Cle Elum Ranger District is proud to support 'Project CAT' by providing research data and assistance. Student teachers from Central Washington University will help students apply technology to analyze their data. The teachers were selected for the yearlong assignment based on their strong background in biology or technology.

High school students are currently working with Washington State wildlife biologist Gary Koehler, and professional tracker Don Clark to tranquilize and tag cougars with state of the art global positioning system (GPS) collars. The collars provide accurate locations of cougars and their movements.

Middle school students will study the fat content taken from the bone marrow of cougars' prey, a factor in cougar health. Finally, elementary students will learn about cougar behavior and food habits. They will also be educating the local community about cougar safety.

Other partners include Seattle's Woodland Park Zoo, University of Washington, The Hornocker Wildlife Institute, and Pacific Northwest Center for Spatial Information. ■



Photo by Richy Harrod, USFS
Illustration of Cougar tracks shown actual size

Ever wondered what the early days were like for the Forest Service and the residents of Cle Elum? Soon, the Salmon La Sac Guard Station will be available to take you back to a time when the Forest Service was young, and mining and trapping were lucrative industries in the area. Thanks to the support of many, the Cle Elum Ranger District hopes someday to open the historic building as a



Salmon la Sac guard station today

visitor center. Although there is still work to be done, visitors are welcome to stop by and see what's new.

The historic Salmon La Sac Guard Station was originally built in 1912 as a train depot for local mining operations. The tracks were never laid and in 1913, the Forest Service acquired the Salmon La Sac station from the Kittitas Railway and Power Company.

In 1915, the cabin became the very first ranger station in the area and served that purpose until 1926. Although by 1926 it was no longer the headquarters of the District Ranger, the building remained in service as a Forest Service guard station. Those working at the guard station were responsible for staffing seven lookouts, supervising trail crews, and monitoring sheep men, mining activities and heavy recreation use in the drainage.

The Salmon La Sac Guard Station once had an uncertain future. In 1968, the U.S. Forest Service had plans to remove the building. It wasn't until the Upper Kittitas County Heritage Council approached the Forest Service to reconsider its decision that the future of the building was assured. The council asked for the support of the Forest Service in nominating the Guard Station to be placed on state and federal registers of significant historic places. The agency

agreed and in 1974, the guard station was officially placed on both registers. Soon afterwards planning began for its restoration.

Over the past seven years, when funding has been available, the Forest Service has worked to restore the historic Salmon La Sac Guard station. In 1995, restoration on the exterior began. This included replacing the deck, posts, stairs, windows, doors, and rotten foundation logs. During the fall of 2001, the Forest Service received funding to remove rodent droppings, and to test for lead paint and asbestos to insure that the guard station met public health and safety standards.

Salmon La Sac Guard Station Bringing History To Life



Salmon la Sac guard station in the early days.

The Forest Service and the Friends of Salmon La Sac Guard Station are currently working together to locate historical items to display in the building. Other work scheduled this year, when funding becomes available, includes restoration of the grounds and painting of the building interior. Anyone interested in helping with the preservation of this historic building is welcome to contact the Cle Elum Ranger District. ■

Cle Elum Ranger District has been able to accomplish a variety of projects over the years through the generous help of local contributors. Below are two of the most recent accomplishments.



Cascade Conservation Partnership financed and oversaw the installation of a new well and hand pump for drinking water at Manastash Campground. Campers and stock users may now get their water from the new well rather than the river.

Trendwest Resorts Inc. donated a new toilet facility for the French Cabin Creek area of the Cle Elum Valley. People visiting this heavily used area will appreciate the convenience of the upgraded facility. ■



Community Contributions To America's Great Outdoors

All articles by
Adam Brown
Public Affairs Specialist

ENTIAT RANGER DISTRICT

Partnerships Built in Fire

by Kimiko Nalle
Fire Prevention Specialist



Entiat Hotshots

Wildfires move across state, private, and federal land boundaries without regard to ownership. This means that a variety of firefighting organizations must work together to achieve the common goal of suppressing wildfires. A successful multi-agency suppression team is built on communication, coordination and hard work.

Each summer, the Forest Service hires employees to fight wildfires on National Forest lands and to assist cooperating fire agencies. The Entiat Ranger District hires an average of 20 hearty men and women to fight fires. This group is known as the Entiat Initial Attack fire crew, a team of well-trained, rugged, and dedicated workers.

To safely and efficiently suppress wildfires on multi agency lands, cooperation between the agencies must start long before fires ignite. This is true for the Entiat Initial Attack Crew and the local volunteer fire department. The Forest Service and Chelan County Fire District #8 are responsible for protecting the land in and around the towns of Entiat, Ardenvoir, and Brief.

On several occasions, the Entiat Initial Attack Crew and Chelan County #8 worked side by side, digging fire line and deploying hose lays to suppress

wildfires. A lightning storm during the summer of 2001 caused several fires on the Entiat Ranger District. One of them was called the Upper Roaring Fire. Engine 501 from the Entiat Ranger District and Engine 841 from the Entiat volunteer fire department were assigned to the fire. Together they placed 1,000 feet of fire hose around most of the fire. Both engines took turns supplying water to feed the enormous system of hose and water nozzles used to control the fire. In May of 2001, the Entiat Ranger District sent a fire engine, a hand crew, and the 20-person Entiat Hotshot crew to support the Entiat volunteer fire department on the Shannon Ridge Fire. Together they built a fire line and were able to contain the fire to five acres in size.

Working side by side has had very positive results. There is a stronger level of trust and communication among the Forest Service, the local volunteer fire department and the community, thus creating an increased efficiency in suppressing wildfires. The successful working relationship between the two departments has also resulted in many young volunteers from Chelan County Fire District #8 being hired by the Forest Service as part of the Entiat District seasonal firefighting crew. In addition, two Entiat Initial Attack supervisors are members of the Entiat volunteer fire department.

Fires will continue to occur, and Entiat Initial Attack personnel and the volunteer fire department of Chelan County Fire District #8 will continue to work as a team in their efforts to suppress wildfires. ■

Appearances Can Be Deceiving

by Brigitte Ranne
Botanist



The cheerful, yellow snapdragon-like flowers in the upper photograph look quite attractive. The array of flowers in the lower photo is equally attractive. But there is a big difference between the plants in each photo. The deceptively attractive yellow-flowered plant is called Dalmatian toadflax, and is actually a noxious weed. Plants in the second photograph are a mixture of wildflowers. The difference between the two is that the Dalmatian toadflax came from Eurasia and the wildflowers are native.

In its native habitat, the population of Dalmatian toadflax is kept in balance. Other plants, insects, animals, and pathogens that have co-evolved with toadflax act as controls. In North America, we don't have the natural predators that keep Dalmatian toadflax under control. Our insects and animals don't recognize toadflax as a food source, and our plants have not developed defenses against its ability to invade their territory.

Toadflax was first brought to North America by pioneers who valued its ornamental qualities and its ability to thrive in all kinds of climates. Unfortunately, it turned out to be a little too hardy and is now rapidly invading forests and rangelands throughout the western states. Researchers have recorded over 1000% increases in patch size in a single year!

Here on the eastern slopes of the Cascade Mountains, the plant thrives in our dry forest and sagebrush steppe ecosystems and is seriously threatening native plant communities and wildlife habitat. Dalmatian toadflax is very efficient at reproducing itself. Each plant can produce half a million seeds. The seeds are small and light, much like poppy seeds, and are easily carried in mud stuck in a tire or boot tread, or on animals. In addition to reproducing by seed, Dalmatian toadflax can sprout new plants from its extensive underground root system, making it particularly difficult to get rid of.

Now that Dalmatian toadflax is here, what can we do to control it? Unfortunately, there is no single solution. The most successful approach involves using a combination of strategies that include prevention (avoiding new ground disturbance), education, early detection, hand grubbing or digging (best for isolated plants and small patches), spot spraying with herbicides (spot spraying kills the weed but leaves the surrounding native plants), and biocontrols. The biocontrol method uses insects that have been imported from the weed's original ecosystem. After much testing, they are approved for release in the United States. The Entiat Ranger District is currently sponsoring a research project to evaluate the effects of fire and other control methods on Dalmatian toadflax.

What can you do to protect our native plants and wildlife? Try to keep vehicles on designated roads and trails – Dalmatian toadflax loves newly disturbed soil. Learn to identify Dalmatian toadflax. Try not to hike off-trail through weed patches. Notify the Forest Service or county weed board if you notice Dalmatian toadflax in a new place, and prevent it from taking hold on your own property. Volunteer to help control weeds on your favorite hiking or biking trail!

Remember, although these flowers may be pretty in appearance, don't be fooled! Appearances can be deceiving. ■



Landowners in the Entiat Valley are confident that they have a say in how the Entiat watershed will be managed for the future. They now have a vision that allows for the coexistence of people, fish, wildlife, and plants.

It hasn't always been that way. The early 1990's brought forecasts of increased regulation of water rights and fisheries protection by government agencies. It appeared if the local community didn't take a pro-active approach in the decision making process to manage the Entiat watershed, that others might make those decisions with a less satisfactory outcome.

Seizing the opportunity to make a difference in planning for the future of the Entiat watershed, members of the Chelan County Conservation District met with the Entiat Chamber of Commerce in 1993 to gain support. The Chamber initiated a search for local citizens interested in participating, and soon a landowner steering committee was formed.

The steering committee met in December 1993 with members representing local landowners, the Conservation District, Natural Resource Conservation Service (NRCS), and the Entiat Ranger District. The committee outlined a planning process, identified stakeholders, and crafted a preliminary mission statement with goals. Soon a Coordinated Resource Management Planning (CRMP) effort was initiated. Those involved included the landowner steering committee, a technical advisory committee, and a watershed planning coordinator. Largely supported by donated time and a shoestring budget the organization made significant progress between 1994 and 1998 in compiling and collecting information about the watershed.

Although much was accomplished during these years, more in-depth studies were beyond the financial means of the group. Through the Washington State Watershed Planning and Salmon Recovery Acts in 1998, the Conservation District and Forest Service succeeded in securing funding for additional watershed work. With funding now available, the Entiat CRMP group reorganized to become the Entiat Planning Unit and an already broad cross section of stakeholders expanded to include those in the orchard, logging, and grazing industries, as well as representatives from environmental groups, and retired citizens. The Technical Committees include County, State, and Federal employees, representatives of the Yakama Indian Nation and Colville Tribes, as well as other interest groups.

The Entiat Planning Unit is now focusing on specific analysis tasks for water quality, water quantity, in-stream flow, and habitat. Additional funding from other sources, such as the Colville Tribes and the State Salmon Recovery Funding Board, are supplementing the effort.

In the decade since the first Entiat watershed steering committee met, much work has been accomplished by many dedicated people. Accomplishments have included sponsorship of a 3-day workshop on in-stream flow analysis and installation of stream restoration demonstration projects. Completion of the Entiat Watershed Plan is scheduled for September 2003. Today, Planning Unit members are confident that a science-based planning process is fulfilling their mission and that with landowner cooperation, regulating agencies may not find it necessary to apply "one size fits all" regulations in this model watershed. ■

One Size Does Not Fit All

by Rick Edwards, *Hydrologist*
and Phil Archibald, *Fisheries Biologist*



*Fish habitat improvement involving placement of large wood in the Entiat River.
Photo by Joe Kelly, USDI BLM*

The Entiat River Valley is a natural attraction. Deeply forested areas, the rushing Entiat River, and Silver Falls all make this a beautiful place to visit. Campgrounds, trails and picnic areas scattered throughout the valley invite people to linger for a few hours or stay for a vacation. All of these natural and man-made features are part of the popular Silver Falls Recreation Area that can be found 31 miles up the Entiat Valley Road.

The Recreation Area is named after the locally famous Silver Falls, which cascades out of the upper Silver Creek valley, a hanging valley that was carved by glaciers. Located here in this perfect setting are the Silver Falls Campground, Silver Falls Riverside Interpretive Trail, and the Silver Falls National Recreation Trail.



1930's registration booth

Silver Falls Campground, one of the first developed on the Wenatchee National Forest, is situated on both sides of Silver Creek adjacent to the Entiat River and the Silver Falls Guard Station. Civilian Conservation Corps (C.C.C.) workers built the campground in the late 1930s. According to a 1931 report, 5000 campers a year used the campground then and it remains just as popular today with 31 developed camping sites, a picnic area, and large group reservation site.

In the late 1950s, the campground was extensively modified. However, several C.C.C. era structures were left, including a log kitchen shelter, a log registration booth, two free-standing camp stoves and two reflector-type fireplaces. These structures are illustrative of the rustic style of improvements used by the Forest Service between 1935 and 1942. Together they represent the most complete and best surviving example of a C.C.C. campground on the Okanogan and Wenatchee National Forests.

Silver Falls National Recreation Trail, located across the road from the Silver Falls Guard Station, offers hikers views of Silver Falls, mature forests, large ponderosa pine trees, the Entiat valley, and surrounding peaks. Interpretive signing will be installed in the summer of 2002 that explains local geologic and hydrologic processes, riparian habitats and general forest ecology. Originally, user-established routes provided access to only the lower portion of the falls. In the mid 1960s, construction began on a 1.5 mile trail with masonry walls, steps and two bridges. Since then, additional masonry benches and steps, and two new view points have been created, and the trail now extends up the steep valley wall to cross Silver Creek at the top of Silver Falls.

Silver Falls Riverside Interpretive Trail is located near Silver Falls campground adjacent to the down-valley campground loop. The trailhead facility provides parking for six to eight vehicles and a fully accessible toilet. The 1.4 - mile interpretive trail offers three different barrier-free difficulty levels from easiest to most difficult. The trail route follows the Entiat River. Twenty-two interpretive signs, resting benches, and two observation platforms at the rivers edge further enhance the recreation experience. These features combined with riparian habitats, and views of young fire-generated forests across the river, provide the user with a unique interpretive opportunity. ■

Silver Falls Recreation Area—Crown Jewel of the Entiat

by Tom Graham
Recreation Manager



LAKE WENATCHEE RANGER DISTRICT

Out with the Old, In With the New

An interview by Barbara Fish
Public Affairs Specialist



White River bridge

“What’s new,” I asked Denny McMillin, recreation assistant for the Lake Wenatchee and Leavenworth Ranger Districts. “Well that depends on what you’re referring to,” was the response.

McMillin has a lot to think about these days. He manages a big recreation program on two districts. That includes all campgrounds, picnic areas, interpretive trails, signs, and outhouses, as well as two wildernesses, and a number of special uses like minerals and summer homes.

“OK, what’s new with projects,” I said, trying to be more helpful. “I’m interested in whether recreation built any new campgrounds or trails – that sort of thing.”

“You bet, it was a very busy season last year and we accomplished a lot. Anyone visiting our districts will be sure to notice some changes. Here are some of the things we did:

- ◆ Reconstructed a section of the Pacific Crest Trail from Lake Janus on the north to Hope Lake on the south. Improved tread and drainage on about 15 miles of trail.

- ◆ Relocated Smithbrook Trailhead to a new location and built a parking lot. Visitors won’t have to park in a wide spot in the road on a steep hill anymore. And we built a new piece of trail to connect this parking area to the trail. The new trail goes through trees instead of the avalanche path. It’s a little longer and has a little more elevation gain, but it’s more scenic.

- ◆ Moved Hidden Lake parking lot out of Glacier View campground and built a new trail from the parking lot to the lake – and it isn’t any longer or steeper either! There’s also more room for parking at the new site without getting tangled up in the campground activities.

- ◆ There’s also a new bridge at White River Trailhead for the Indian Creek Trail. If you’ve hiked the trail in the last couple of years, you know that the old bridge had fallen down.

- ◆ Remember that old campground at Riverside on the Little Wenatchee that kept getting flooded out? Well, it has been moved across the river and is now called Rainy Creek. Now that it’s out of the flood plain, it is not affecting the quality of fish habitat. And, the new campground is bigger, so more people can enjoy it. The old site is being closed and the road is being rehabilitated.



Upper Icicle River crossing

Other projects in the Leavenworth area:

- ◆ There are two new log stringer bridges on the Icicle Trail in the Alpine Lakes Wilderness. In recent years, the old bridge at Upper Icicle Crossing had fallen down, and the bridge across French Creek was really tilting to starboard.

- ◆ There’s a new bridge across Icicle Creek on the Icicle Gorge Trail near Chatter Creek. Old age was taking its toll and the bridge was becoming unsafe to use. Be sure to stop and enjoy the view of the gorge from the bridge.

Those are the big projects. Stop by again and I’ll tell you about all the other things we did – like trail maintenance, installing new outhouses, replacing hand pumps in the campgrounds.....”

Thanks Denny, maybe later! ■

Gather 'Round the Campfire

by Terri Halstead
Information Assistant

*The flicker of a campfire, the wind in the pines
The moon in the heavens, the stars that shine
A place where people gather to make friends of all kinds
A place where all our troubles are always left behind
So give me the light of a campfire, warm and bright
And give me some friends to sing with; I'll be here all night
- author unknown*



Remember going to campfire programs as a kid? Remember how much fun it was to sit under the stars, watching the campfire smoke rise and swirl while learning about local natural, and cultural history? Well, the campfire program tradition continues at Lake Wenatchee State Park.

The U.S. Forest Service, Washington State Parks, and the Northwest Interpretive Association have joined in a unique partnership to provide a series of evening summer programs designed for all ages. These programs are presented in a spacious outdoor amphitheater at Lake Wenatchee State Park, located on the edge of beautiful Lake Wenatchee.

On Saturday evenings in July and August visitors can watch movies from an old-time projector, listen to storytellers weave their tales of lore and history, travel in time over the Great Northern Railway, explore the natural environment, or enjoy music and dances from around the world. With a wide range of educational entertainment, there is something for

everyone. Last summer’s campfire programs showcased folk music, dance, and storytelling from many different cultures. Visitors joined in a Native American circle dance, learned the German “chicken dance,” clogged along to Appalachian fiddle tunes, and participated in Irish reels and jigs.

The line-up changes each year so contact the

Lake Wenatchee Ranger District (509) 763-3103 to see what surprises are in store for 2002. Also, be sure to join us for the Saturday morning programs when Smokey Bear and his firefighter friends teach about fire prevention and safety. Kids can spray water from a real fire hose, take pictures with Smokey, get an up-close look at fire engines, and take home a Smokey Bear “goody bag.” Celebrate Smokey’s birthday on August 10th this year, complete with cake and visits from Smokey’s friends. It’s an event for all ages. The Smokey Bear programs begin at 11:00 a.m., and the evening programs start at 8:30 p.m. every Saturday in July and August. The programs usually last about one hour. The free programs are funded by audience donations.

Come and enjoy the entire day at the Lake Wenatchee State Park. Bring along a blanket and a jacket for those chilly nights and mosquito repellent – just in case! ■



The Wenatchee National Forest has some of the finest groomed snowmobile trails in the state, with more than 1,000 miles of groomed routes.

The Lake Wenatchee, Leavenworth, and Entiat Ranger Districts offer one of the more popular areas of this extensive system. About 200 miles of trail receive an estimated 30,000 visitor-days of snowmobile rider use per year. In addition, the trails are also popular with dog sledders, cross-country skiers, and snowshoers.

It takes a lot of equipment, funding and people to maintain such an extensive network of trails. After the first snowfall, volunteers from the Lake Wenatchee Recreation Club help install more than 600 signs to insure that the system is well marked for safety and accessibility.

Once the signs are installed and more snow has fallen, a 4-month grooming program begins, starting in early December and continuing through March. The 200 miles of trails on National Forest lands are kept in excellent condition with a fleet of snowcats.

Washington State Parks contributes funding for all of the grooming, and also provides for plowing and sanitation services at the District's three Sno-Parks through the Washington State Parks & Recreation Commission's snowmobile registration receipts, state gasoline taxes, and Sno-Park permit sales. Local snowmobile clubs also help out by contributing funds for trail grooming.

U.S. Forest Service snow rangers play an important role in the winter recreation program. Funded through the Washington State Interagency Com-

mittee for Outdoor Recreation and assisted by local volunteers, the rangers provide a visible Forest Service presence. During the busy winter season snow rangers can be found teaching snowmobile safety classes, performing routine maintenance on trail signs, and recording information on visitor use. They educate the public on safe riding, trail etiquette, protecting wildlife and forest resources, and winter preparedness. Occasionally they assist the Chelan County Sheriff's Office and volunteers from the Lake Wenatchee Recreation Club with search and rescues, accidents, fatalities, and close calls involving inexperienced or reckless riders. Look for the snow rangers at popular snowmobile trailheads. You can't miss them in their mobile "Caribbean Coffee Cabana," complete with colorful tents, Hawaiian shirts, pink flamingoes, Tiki torches, and reggae music. Be sure to stop for a cup of coffee and lots of great information.

It takes a team effort to provide for a fun and safe snowmobiling experience. This team includes state and federal agencies, dedicated volunteers, and you!

Once grooming season begins, trail information may be obtained by contacting the daily updated Lake Wenatchee Ranger District hotline at (509)763-3103. ■

Behind the Scenes at a Snowmobile Paradise

by Roger Ross, *Recreation Planner*
and Terri Halstead, *Information Assistant*



Snow Ranger Larry Anderson

Fungi can be the most disgusting slime and form imaginable, and the most delicate and beautiful. They can damage and destroy wood, paper, and other natural materials to the tune of billions of dollars annually, but they also decay and recycle invaluable nutrients into our diverse ecosystems. Some fungi are the most sublime of culinary treats, while others are thoroughly repulsive as a food source. Some species of fungi help trees and plants grow and others can kill by living off their hosts. All things considered, fungi are irrefutable, influential members of our world — we love 'em and we hate 'em.

Just as we have the Plant Kingdom and the Animal Kingdom, we have the Kingdom of Fungi. While many people may think fungi are members of the plant community, their uniqueness merits a niche of their own.

Some fungi can be found in the familiar form of mushrooms. When people think of forest fungi, they often think about the ones collected for the table.



Morels, chanterelles, boletes, truffles, and others are much sought after delicacies that can make a day out in the woods even more pleasurable. Others may think of the red, yellow or ghostly white mushrooms that appear to jump out from the darkness of the woods. And still others are reminded of the common toadstools that hide everywhere amongst the leaves and litter of the forest floor. (By the way, there is no difference between a mushroom and a toadstool, just the name people choose to call them).

If you're inclined to eat mushrooms, it is important to know the difference between edible ones and those that are unpalatable or even poisonous. Some fungi are obviously not meant to be eaten simply because of their texture, such as woody conks on trees. Others have an unpleasant odor, flavor or texture. The best way to learn about mushrooms is to go out with a mushroom expert or mycological (mushroom) education group. Firsthand experience from someone who truly knows is most enlightening.

There are many good field books available to identify fungi, however comparing your specimen to a picture does not guarantee its edibility! It's always best to not eat any mushroom until its identity is certain. Unfamiliarity with the species or erroneous "picture-booking" can lead to sickness and possibly death. Be cautious even with the "notable" edibles. Some people may be allergic or sensitive to some species. Sometimes mushrooms have been handled poorly or are over-mature allowing bacteria to form, which can also cause illness.

The Okanogan and Wenatchee National Forests have free use permits available for people who wish to collect mushrooms for personal use (this is defined as up to three gallons/day total) or commercial permits for those who wish to collect more than three gallons/day or wish to sell those that they collect. Contact any Ranger District office or the Wenatchee Headquarters for more details.

Recommended guidebooks: *Mushrooms Demystified* and *All That The Rain Promises* by David Arora. *The New Savory Wild Mushroom* by McKenny, Stuntz, and Ammirati are available from Northwest Interpretive Association at District Offices. Other sources: Puget Sound Mycological Society (www.psms.org), Snohomish Mycological Society, Wenatchee Valley Mycological Society. ■

The Nature of Fungi Are They Beauty or Beast?

by Mick-the Mycologist-Mueller



LEAVENWORTH RANGER DISTRICT

Artists Leave a Watershed Legacy

By Barbara Kenady-Fish
Public Affairs Specialist



William F. Reese and Heather Murphy at the White River beaver pond in May of 2001.



David Barker painting "Confluence Trestle" at the confluence of the Wenatchee and Columbia Rivers in August of 2001.
Photographs Copyright © 2001 Mary Randlett.
All rights reserved.

Armed with cameras, sketchpads, canvas and paints, over a dozen prominent nature artists trekked into the hills and forests near Leavenworth, Washington. Their goal was to record special places found on National Forest lands in the Wenatchee River watershed, using film, paper and even stone. Icy water cascading out of mountain lakes, trees filtering sunlight onto the forest floor, and hawks gliding on rising air currents all provided inspiration for the artists.

This special event, called Watershed Art, took place during the spring and summer of 2001. It was the inspiration of three local artists and an internationally renowned sculptor named Tony Angell. Artists Gretchen Daiber, Cynthia Neely, Gretchen Rohde and Angell were convinced that people would connect with the beauty of the Wenatchee watershed and learn to appreciate and value its importance and complexity through original artwork.

That idea led to the creation of Watershed Art, a non-profit organization that partnered with others to bring well-known artists to the watershed to capture its essence. Artist William Reese said, "As artists we can show people the beauty of the watershed, its poetry and soul, and hope our work will highlight the reasons to protect it." (Quote obtained from Martha Hill).

The Lake Wenatchee and Leavenworth Ranger Districts were one of the key partners in the project. Employees from the districts provided the artists with information about the Wenatchee watershed including subjects as diverse as wildlife, plants, cultural resources, and natural features. In May, the Forest Service had a unique opportunity to share the complexities of the watershed with the artists and local community. Over 100 people attended the kick-off event which included a presentation of *A View into the Ecology and History of the Wenatchee Watershed: Assisting Art, Based on Science*. Specialists in botany, wildlife, fisheries, archaeology, wilderness and recreation used slides and narrative to illustrate the ecological and social aspects of the Wenatchee River

watershed. Included in the presentation was a discussion on local history by Byron Newell, logger and member of a pioneer family from the community of Plain. Tim McNulty, noted nature writer, will include the presentation materials in a publication about the watershed that feature the artists' works.

Throughout the year, several art shows and workshops were offered to the public who learned first hand about stone carving, conservation, painting, journaling, and safe backcountry travel. Residents of the Wenatchee watershed made the event a successful one by providing much needed energy and expertise. In return, they found reward in the year's activities and in working side by side with world-class nature artists. But the communities weren't the only ones that benefited from this unique relationship. Artist Bill Reese, long time resident of the area, saw places he had never seen before, painter Robert Bateman added the White Headed woodpecker to his life-long bird list, and photographer Kevin Schafer spent a week camping in the Enchantments. Sculptor Tony Angell, painter Tom Quinn and photographer Art Wolfe were fortunate to see a northern spotted owl family. All came away from the experience with a feeling of camaraderie with their fellow nature artists, the Wenatchee watershed, and the volunteers.

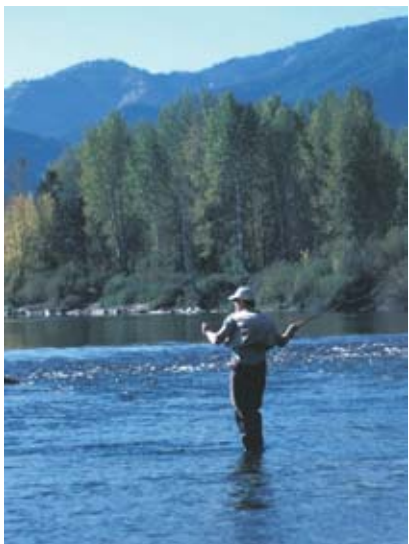
This coming September 2002, the *Watershed Art Conclusive Shows* will feature over 200 pieces of original artwork produced from last year's artists' visit to the Wenatchee watershed. The artwork will be available for purchase only during the shows, which will be held simultaneously in Leavenworth and Wenatchee.

The artists: Robert Bateman, Art Wolfe, David Barker, William Reese, Kevin Schafer, Tony Angell, Thomas Quinn, Jeri Nichols Quinn, Sara Mall Johani, Thomas Jay, John Marshall, Ted Rand, Mary Randlett, Martha Hill, Fenwick Landsdowne.

For more information on Watershed Art:
www.watershedart.org ■

Click, Phzzzzzzzzz, Kerplunk

by Cameron Thomas
Fisheries Biologist

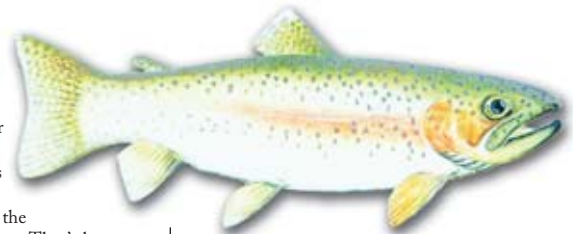


In past years, these three casting sounds would drift through the still morning air along the banks of the beautiful Wenatchee River. In recent years and continuing in the 2002 fishing season, these sounds and the anglers that make them are absent. That's because the Washington State Department of Fish and Wildlife has closed virtually all salmon and trout fishing seasons on the river. The question hundreds of curious visitors ask yearly at the Leavenworth Ranger District is, "Why?"

According to Art Viola, a biologist with the Washington State Department of Fish and Wildlife (WDFW), the simplest and most direct answer for the closed season is, "to protect endangered spring chinook and summer steelhead until those species are recovered and will sustain a sport fishing season."

Spring chinook and summer steelhead in the Wenatchee River basin are "endangered" under the Endangered Species Act. This means that naturally reproducing spring chinook and steelhead (fish that have reproduced in the river without the aid of hatcheries) are in danger of disappearing forever in the Wenatchee. By law, the National Marine Fisheries Service cannot allow a sport fishery to directly target an endangered fish.

Some anglers have asked why they can't fish for trout. The answer is that trout, specifically 6" to 8" rainbows, look just like steelhead juveniles, resulting in trout anglers actually targeting steelhead juveniles by mistake. If a trout season was allowed, people could accidentally hook chinook and steelhead juveniles causing injury to, or killing these young fish.



Many frustrated anglers still wonder, "How can a fish like steelhead be endangered when thousands came back to the Wenatchee in 2001?" These mostly hatchery adult steelhead are not currently viewed as proof that the species is recovered and no longer endangered. It would take several years of improved returns to indicate a species is moving towards recovery. Should the steelhead population continue to return in large numbers, there is a chance that Wenatchee steelhead could have their status lowered to 'threatened.' If the status of steelhead changes to the less severe 'threatened' listing, a 'catch and release' steelhead fishery may occur. WDFW and Viola haven't given up. Viola advises, "Hope for a good return this year. There's a chance we could have a steelhead season in 2002 yet."

Trout anglers can enjoy fishing at other locations near Leavenworth. These include high lakes in the Alpine Lakes Wilderness, Fish Lake, and along the Icicle above the Leavenworth National Fish Hatchery. For more information on fishing, pick up a copy of the Washington State Fishing Regulations. ■

It's difficult to understand that our eastern Cascade forests were quite different historically than they are today. Few of us have been around long enough to see the gradual changes that have occurred over the last century.

In fact, forests of today are very different from those of the 1800s. A century of fire suppression has left our forests with many more trees and much more fuel. Lately, we have heard a lot about the health of our forests and how forest fires are getting bigger and harder to control. Many of us witnessed the volatility of our forests in 1994 and again last year when thousands of acres burned and many homes were threatened or destroyed.

It is for this reason that managers of the Okanogan and Wenatchee National Forests have been implementing what is being termed 'The Dry Forest Strategy.' (See story on page 7) It is clear that some kind of action is necessary to help restore dry forests so they are resilient enough to withstand fire and insect attacks. To accomplish this task a number of tools are currently being utilized including thinning and pruning trees, handpiling woody debris, and using prescribed fire. These tools help reduce fuels and create forests with more widely spaced, larger trees that don't need to compete as hard for water and nutrients.



Example of a dense, dry forest

The Pendleton Project is a good example of an area where this strategy is being implemented. Located just west of Wenatchee in the Number 2 Canyon and Mission Creek area, the project already shows results of a long-term effort to restore the forest structure and many of its ecological functions. Ranger District managers chose the Pendleton area as a good candidate to introduce thinning, handpiling and prescribed fire.



Prescribed fire helps the forest return to a natural state

Historically, the site has been heavily altered by decades of fire suppression, and by logging in the early 30s. Today, most of the trees in the Pendleton area are 60 to 90 years old and are growing at 200 or more trees per acre – quite different from a century ago when the forest was composed mostly of 100 to 400 year old Ponderosa pine trees growing at 20 trees per acre.

Many people think that the forest they see today is the same forest that has been there for hundreds of years. "Most of the older trees that you see now in the Pendleton area were actually the younger trees that loggers left behind in the 1930s," said Bill Hartl, a silviculturist from the Lake Wenatchee and Leavenworth Ranger Districts.

The Pendleton Project covers an area of approximately 2,000 acres and is scheduled to be treated with most of the tools in the Dry Forest Strategy kit. The goal is to grow vigorous 100 to 400 year old trees – much like the forests at the turn of the century. The first steps of this long-term project have been achieved. Most of the project area has already been thinned and some areas have been treated with prescribed fire. About 1,500 acres of thinning debris has been handpiled for burning.

The prescription for growing a dry forest of old trees is to manage tree density and fuels so that forests can resist fire and tolerate insects and disease. "Thinning reduces the density of trees and increases their longevity. We are reducing competition for water and nutrients so that trees can remain healthy in order to grow to their full size," Hartl said.

Thinning will also reduce the density of fuel so that fire can eventually be introduced safely as part of a long-term maintenance program. Historically frequent, low intensity fire maintained the forest, keeping fuel to a minimum.

The Pendleton project has been one of several flagship Dry Forest Strategy projects on the Okanogan and Wenatchee National Forests since 1993. Forest management agencies from other countries have visited the site to learn from the strategy. "After nearly 10 years of working

towards a healthier forest condition at this site we are starting to see the connection between the first step of restoration and the goal," Hartl noted.

Several unique studies have been conducted on the Pendleton Project. Managers of the project are using what is called adaptive management to monitor results of the ongoing work. With this 'learn and adapt' method managers can better understand how plants and animals respond throughout the duration of the treatment.

A study of old stumps was included as part of the project plan to investigate what the forest structure looked like before human intervention. Old logs, trees, snags, and stumps were counted on numerous plots scattered throughout the project area and it was found that there were once about 20 relatively large trees per acre with an average diameter of 25 inches. "The stump study gave us a good picture of what the forest was like before logging and fire suppression," Hartl said. "It provides an example of an open park-like stand and gives us as a ball-park target to aim for."

Managers of the Okanogan and Wenatchee Forests will be doing dry forest management work for a long time. Hartl concluded by saying, "Our goal has been to influence the development of a forest so that fire can be introduced back onto the landscape, and it will be ongoing work. We expect to continue maintenance with a prescribed burn every 10 to 20 years so that the 60 to 90 year old trees you see today will be vigorous large diameter trees in the future." ■

Healthy Forests, Big Trees – Dry Forest Restoration

by Barbara Kenady-Fish
Public Affairs Specialist



Open Ponderosa pine forest



A healthy forest of large trees

All photos by Richy Harrod, USFS

NACHES RANGER DISTRICT

Responding To Loss

by Randall Shepard
District Ranger

The 2001 fire season brought tragedy to the Okanogan and Wenatchee National Forests. On July 10, 2001, the Thirtymile Fire (located north of Winthrop, Washington) transformed from a smoldering campfire to a ferocious inferno that trapped 14 firefighters and two campers in the narrow canyon along the Chewuch River. Sadly, four Naches Ranger District firefighters lost their lives as the firestorm overtook their position.



Thirtymile Fire, July 10, 2001
Photo by Sandor A. Feher

The loss was devastating, and literally thousands of Forest Service employees and other firefighters from across the nation joined us in mourning.

Most of us who work in the Okanogan and Wenatchee National Forests are directly or indirectly involved in fire-related duties. We also have family members, friends and co-workers who are on the front lines. To paraphrase an old saying, "We have met the firefighters and they are us." We recognize that wildland firefighting is dangerous work frequently performed in difficult terrain under adverse conditions. Fallible humans are pitted against the primal forces of nature. We take personally the cruel reminders these deaths provide of the unforgiving nature of wildland fire and the challenges of fighting it safely.

Our response has been to join our colleagues on the regional and national levels to improve our practices and better protect our firefighters. Beginning this fire season, these efforts will be evident. It is also important to remember that Thirtymile was a human-caused fire, and we must be vigilant in reminding people to be very careful in their use of fire within the forest. Renewed awareness and commitment to the safe use of fire and safe wildland firefighting are fitting ways to honor the proud memory of Tom Craven, Jessica Johnson, Devin Weaver, and Karen FitzPatrick who died protecting our national forests. ■

Your User Fees at Work

by Jacqueline Beidl
Archaeology and Recreation

The lodge at the old American River Ski Bowl is eligible to be placed on the National Register of Historic Places. Because of its historic status, all maintenance work and repairs must retain original materials and historic design. For the past nine years, the lodge has been managed as a public rental reservation site under a fee recovery system. With the availability of these funds, much-needed restoration work has been accomplished. To date, fee dollars have paid for



American River Lodge gets a new roof

materials to repair and restore porches, shutters, windows, toilet stalls, and stoves, with the majority of the labor being accomplished by volunteers.

Monies appropriated by Congress pay for only a portion of National Forest recreation programs, making the money generated by recreation fee recovery an increasingly vital component of recreation management. Eighty percent of the money visitors pay at recreation fee sites returns to those sites. Unlike most appropriated funding,

which goes away at the end of the year, fee recovery balances may be carried forward from one year to the next. This means money generated by a recreation site in excess of its annual maintenance and operations costs can be "banked" for several years to help fund more costly projects.

It took six years to save enough money to purchase cedar shakes for the American River lodge and the

outhouse. Rental collections from another two years helped pay for their installation on the lodge and outhouse last summer, with matching appropriated dollars paying for needed repairs to roof rafters. Although it took nearly a decade of savings, users of the ski bowl can now cash in on a leak-free stay!



Another beneficiary of the recreation fee program is Fish Hawk Campground, which has been included in the fee program since 1996. The campground was designed and built during the era when visitors camped with cars and tents. Today's larger recreation vehicles require more parking and turning areas to accommodate their size. Fee dollars were used to help pay for the lengthening of the access road and for hardening and realigning camping spurs to better accommodate modern recreation vehicles. Other improvements included traffic controls, a dumpster pad site, and steps and rails for an eroding hillside trail. The renovation project also got a boost from appropriated dollars earmarked for the replacement of old toilets, which also paid for the installation of an Americans With Disabilities Act-approved concrete vault toilet.

Thanks to your continuing support, fee recovery programs are making a difference! We hope you can visit the American River Ski Bowl or Fish Hawk Campground this summer to experience first hand the success your user fees at work. ■

The Naches Ranger District has cause for celebration. Last year the finishing touches were completed on a big project to reconstruct and rehabilitate five aging campgrounds on the district.

After pursuing project funding for more than 10 years, the district was awarded the funding in 1999. The money was received from Forest Service appropriated funds that are made available each year for such projects through a competitive application process.

This year campers and boaters are sure to appreciate the upgrades at Halfway Flat, Soda Springs, Bumping Lake, Pleasant Valley and Lodgepole campgrounds. The most notable improvements include a new recreation vehicle dumpsite and reconstructed boat launch area at Bumping Lake, and road surfacing improvements at all of the campgrounds.

The existing Bumping Lake boat launch was reconstructed to include a larger parking area,



floating dock, picnic sites and paved trails. The boat launch ramp was relocated to make it easier to launch boats. Both the recreational vehicle dumpsite and the boat launch are on the Recreation Fee system.

Dusty roads are no longer a problem at the five campgrounds. Paving was completed on the main Bumping Road from the dam to Bumping Lake boat launch, the Upper Bumping Lake Campground, and the new recreational vehicle sewage disposal site, as well as at Lodgepole Campground. Roads in the Halfway Flat, Soda Springs and Pleasant Valley campgrounds have been resurfaced with crushed rock.

Additional overall project improvements also include informational kiosks, rehabilitation of campground shelters, realignment of some campsite spurs, upgraded picnic tables, and fireplace grills. New redesigned toilet buildings have replaced antiquated buildings at each site. Water faucets have been installed at Soda Springs and Upper Bumping Lake campgrounds and a new hand pump faucet is available at Halfway Flat campground. Trees, shrubs and grass seed mix common to the area have been planted to provide ground cover and vegetative screening. In addition, a minimum of twenty percent of each campground was improved to meet current Americans with Disabilities accessibility standards.

Stay tuned! More campground facelifts will occur in coming years as funds become available. ■

Campgrounds Get a Facelift

by Larry Miller
Engineer



Strange as it may seem, the Forest Service has recently been putting dead salmon into local streams. Fish biologists are now finding that fish carcasses improve the health of streams and rivers by adding nutrients and minerals.

Before the 1890's, millions of salmon entered the Columbia River system, returning to upland streams to spawn and die. Each pair would coincidentally bring important nutrients and minerals that kept the stream productive for their hatching young. Since the early 1900's salmon runs have severely declined due to intensive harvest of returning fish in the lower Columbia River, dams, irrigation diversions (agriculture), and land management actions.

Today, the Naches Ranger District is doing its part to help restore the health of local streams and rivers. With the cooperation of several state and federal agencies, the district is putting salmon carcasses in the Bumping, American, and Little Naches Rivers. Frozen carcasses are collected from the hatchery at Priest Rapids Dam, where hatchery-bred salmon return each year.

Once the dead fish are tossed in the stream, the carcasses break down, decompose or are eaten by wildlife and aquatic organisms. These activities recycle nutrients that eventually provide benefit to wildlife, fish and plants. For example, decomposing carcasses cause an increase in aquatic insect populations, which feed young salmon.

Nitrogen is a key component of the nutrients provided by the salmon carcasses. But possibly more important are the minerals that salmon bring back from the ocean, including selenium and iron. Eagles, bears, and other animals that feed on salmon help distribute nutrients and minerals away from the stream edge (sometimes up to a mile!) where they are absorbed by trees and other upland vegetation.

By returning fish carcasses to streams, biologists also hope to improve survival and growth of young salmon. A recent study conducted partially on the Olympic Peninsula found young fish grew twice as fast and big in streams with natural spawning as those without. The study also found streams without spawning became more difficult to rehabilitate for salmon rearing over time.

Who would have thought we would be putting dead fish into our streams? Science is helping us to understand how better to care for and manage our natural systems for future generations. ■

Salmon Recycling— It's Good For Our Rivers

Naches Fish Biologists

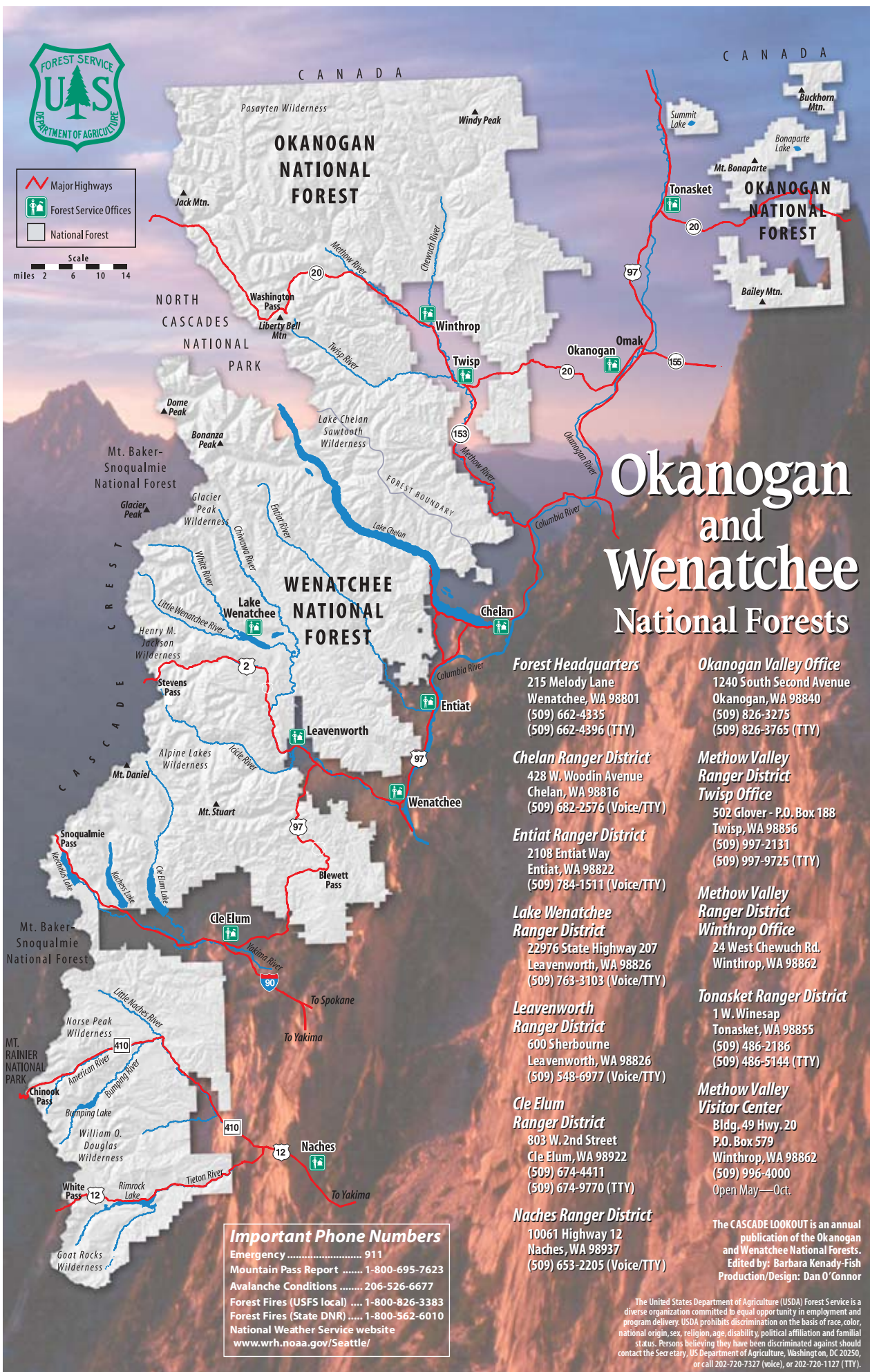


Frozen salmon are tossed into the Little Naches during winter after being tested for diseases.



Major Highways
 Forest Service Offices
 National Forest

Scale
miles 2 6 10 14



Okanogan and Wenatchee National Forests

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600 Sherbourne
Leavenworth, WA 98826
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Methow Valley Visitor Center

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P.O. Box 579
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Open May—Oct.

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The CASCADE LOOKOUT is an annual publication of the Okanogan and Wenatchee National Forests.
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 Avalanche Conditions 206-526-6677
 Forest Fires (USFS local) 1-800-826-3383
 Forest Fires (State DNR) 1-800-562-6010
 National Weather Service website
www.wrh.noaa.gov/Seattle/

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