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Shasta-Trinity brings Christmas to local, disadvantaged youth

By Andrea Capps-Crain



Children learn how to set up a clean campsite, have a safe campfire, and things they can do all year to be Smokey's helper during the Shasta-Trinity National Forest's Operation Holiday Cheer, Dec. 5. With help from the Shasta County Youth and Families Foster Care, OneSAFE Place (a women's refuge), Ready for Life Foster Families, and the Martin Luther King Jr. Memorial Center, the event brings the holiday season to local disadvantaged youth. (USFS photo by Andrea Capps-Crain)

REDDING, California — Every December, people gather together to celebrate the holidays with family and friends. Although it is considered the season of joy, many children in northern California aren't able to enjoy the decorations, gifts, or even families to spend the time with. Until the U.S. Forest Service and community partners stepped in.

On Dec. 5, the Shasta-Trinity National Forest (NF) hosted Operation Holiday Cheer in an effort to bring the holiday season to some local disadvantaged youth. Working in partnership with Shasta County Youth and Families Foster Care, OneSAFE Place (a women's refuge), Ready for Life Foster Families, and the Martin Luther King Jr. Memorial Center, the forest invited approximately 90 local children to kick off their holiday season.

“We understand that most of the children who attend this event have seen far more than their fair share of hardship,” said Dave Myers, Shasta-Trinity NF Supervisor. “It is an honor for the Shasta-Trinity National Forest to get to play host.”

The children crafted ornaments and chose their own Christmas trees to take with them. After a guided tour of the smokejumper base, the children watched the smokejumpers descend from a training tower. And as with most Christmas holiday events, Santa Claus came to town-complete with presents from Toys for Tots.

Approximately 50 Forest Service employees and volunteers from multiple partners (Bureau of Land Management, Redding Rotary, Semper Fi Two [a Redding-based, all-Marine Honor Guard], and Shasta College) worked for weeks to make this event a big success. Volunteers cooked lunch in Dutch ovens, helped with arts and crafts, and guided small groups of children through the day's activities.

“These partnerships with community members enhance the bond needed to help make our community a better place in which to live,” said Greg Balkovek , Chairman of the International Fellowship of Scouting Committee, Rotary Club of Redding.

Shasta-Trinity National Forest has hosted Operation Holiday Cheer since 2004.

Published: December 30, 2015

PSW workshop fosters student interest in Forest Service careers



Pacific Southwest Research Station recently teamed up with the National Hispanic Environmental Council and other Forest Service stations to host a week-long learning workshop for 22 Latino college students in Placerville, California. The Western Environmental Science and Research Institute gave the students—who hailed from across the nation and Puerto Rico—opportunities to hear from Forest Service scientists, tour lab facilities, visit research study sites and learn about research projects at the Institute of Forest Genetics and the Eldorado National Forest.

At the end of the week, students had an opportunity to apply and interview for Forest Service jobs.

Published: December 29, 2015

Forest Service seeks hidden grove as original recovers from fire

By Daniel Torok



James Healy, a member of San Bernardino National Forest’s fire patrol, pauses to survey the terrain during his search for a second and new southernmost aspen grove for Southern California. The SBNF’s original Aspen grove provided millions of visitors with a striking display of fall color in previous years. But in 2015’s Lake Fire, the forest’s quaking aspens all burned to the ground. (USFS Photo by Daniel Torok)

SAN BERNARDINO, Calif. — In 1849, forty-niners moved west with hopes of finding precious metal and striking it rich, only to end up broke a few years later when the surface gold was all collected. Today, a modern day gold rush has brought millions of tourists to Southern California with hopes of catching a glimpse of another rare, yellow treasure.

The southernmost Aspen grove (in California) provided millions of visitors with a striking display of fall color in previous years. Brilliant gold and fuchsia leaves rattled in the wind like a snake’s tail, dazzling adult and child alike. But in 2015’s Lake Fire, San Bernardino’s quaking aspens all burned to the ground.

“This summer’s Lake fire was catastrophic to the forest...a unique treasure now gone,” said Mary Beth Najera, a forest resources officer for the San Bernardino National Forest (SBNF).

For those still wishing to see the grove’s fall color, hope remains, though it will be a few more years. The Forest Service staff is encouraged by the grove’s conditions following the fire and is hopeful of a full recovery.

“When the fire came, it burned through the over story, and with no pre-existing competition, the aspens are vigorously rebounding,” said Najera.

In the meantime, the forest has been intrigued by the possibility of another nearby aspen grove. James Healy, a member of SBNF’s fire patrol, has begun the search for a second and new southernmost aspen grove for Southern California.

San Bernardino’s original quaking aspen was thought to be the only one in the forest. But local legend suggests there is a sister grove not too far away. Healy’s search brought him first to the shadow of Gold Mountain. In the fall, the leaves of oak and willow trees covering the mountain color it bronze and crimson. The hue of the landscape is aesthetically pleasing to most, but to Healy it is a warning.

“The color change happens in the leaves because the trees start to store their nutrients for the winter,” said Dave Austin, SBNF’s forest biologist.



When trees go dormant, they stop producing green reflecting chlorophyll. Only their yellow and orange pigments remain until the leaf withers and falls off. The cascades of colors produced by this process are a reminder of Healy’s short window of time—nature’s winding clock to the onset of winter. If he doesn’t find the suspected second grove soon, the trees will be hidden for another year.

But time is only half the challenge Healy faced in locating the special grove. Aspens can grow just about anywhere that has abundant sunlight and moist soil. So, Healy’s search area included most of the forest’s nearly 1,300 square miles. Luckily, one of the forest’s botanists was able to narrow the parameters.

“Keep an eye out for tributary creeks, where aspen groves can grow away from view and off the beaten path,” said Scott Eliason, SBNF’s botanist. “You will find them in the San Bernardino area along an unobstructed creek bed.”

Healy hiked up a dry creek bed on the mountain until it was dry no more. And it was there, alongside the unobstructed creek bed the botanist described a golden canopy of trees only a few hundred yards out! He arrived to the grove out of breath from excitedly running, but on closer inspection, the excitement was lost.

The trees before him were not what he expected. “I’m fairly certain it’s just black cottonwood,” said Healy.

The changing season had served up fool’s gold! Healy’s hopes for finding the second grove in time for fall’s color change were crushed. But he is not content to wait for the burned grove to return to its former glory. For Healy, the search goes on.

Published: December 28, 2015

2015 Regional Forester's Honor Awards

By Paul Robbins Jr.



Laser-etched, glass trophies await presentation during the 6th Annual Regional Forester's Honor Awards at the Doubletree by Hilton, Dec. 9. The ceremony was to recognize outstanding Forest Service employees and partners throughout California and the Pacific. (USFS photo by Paul Robbins Jr.)

SACRAMENTO, California—The U.S. Forest Service’s Pacific Southwest Region held their 6th Annual Regional Forester’s Honor Awards at the Doubletree by Hilton, Dec. 9, to recognize outstanding employees and partners throughout California and the Pacific. “Tonight is about reflection and saying thank you for your contributions throughout the year,” said Regional Forester Randy Moore to open the festivities. “We are here to recognize the work that sets us up for the future.”

Eleven awards were presented by the Regional Leadership Team, each involving ecological restoration, healthy workforce and workplace, or special accomplishments like “Partnership of the Year.”

Awardees received a laser-etched, glass plaque to commemorate their contributions to the health and resilience of both public and private forest lands.

Published: December 18, 2015

US Forest Service's Barney inspires others for careers as land stewards

By John C. Heil III



Outreaching to students who are not traditionally connected with the forest, Joy Barney trains Generation Green summer work program crew members in learning and conducting common forest health and fuels reduction techniques like this burn pile monitoring in 2014. (USFS Photo by Megan Dee)

Joy Barney has dedicated her life to connecting youth to the land. In the process she has touched many lives, so it comes as no surprise that winning a national award for her, is all about inspiring others.

The Lake Tahoe Basin Management Unit's (LTBMU) Conservation Education Program Specialist since 2007, Barney received regional and national recognition in October with the *Gifford Pinchot Pacific Southwest Region and the National Interpreter and Conservation Educator of the Year Award*. Named in honor of the first Chief of the U.S. Forest Service, the annual award is a national honor given to employees for achievement in environmental interpretation and conservation education.

“I hope that winning this award will help inspire others that I am mentoring to continue on with this kind of work,” said Barney. “It is important to see that the Forest Service feels like this is important work.”

“The reason this is such a big accomplishment for Joy, is that she doesn't even have

interpretive services in her job description – she is a conservation education specialist,” said Timothy Williams, regional coordinator for the Interpretive Services Program (conservation education specialist). “When she delivers with the conservation education program, she excels at telling the story and interpreting why it is so important to connect youth with nature.”

“She is very deserving of this award and I am thrilled to get to work with her on a regular basis,” said Beth Quandt, science outreach coordinator for the Lake Tahoe Unified School District. “She has been instrumental in bringing so many wonderful programs to the students of the Lake Tahoe Unified School District.”

Barney, 52, always had a keen interest in wildlife or being in nature from camping trips in the summer growing up. The San Jose native said that was where she felt the most whole. After receiving a bachelor’s of science degree in Wildlife and Fisheries Biology from UC Davis in 1985, Barney started her career with the Forest Service shortly thereafter as a forestry technician in silviculture. Even though she wasn’t technically in a Conservation Education position, she started programs such as the Little Children’s Forest in Groveland and Earth Day events on the Stanislaus National Forest. She picked up her love of interpretation on the Pinecrest Ranger District with wildflower walks, guided hikes and leading campfire programs.

At the LTBMU, Barney created a partnership group called South Tahoe Environmental Education Coalition (STEEC, <http://www.steec.org>). Under her leadership, these groups work together to provide high-quality, standards-based education programs for 2,500 children annually. Other programs she manages include Ski with a Ranger, Winter Trek and Kokanee Salmon Education, serving over 2,000 other forest visitors. In addition, Barney started a successful high school program - Generation Green of Lake Tahoe, providing volunteer and employment opportunities for diverse youth in the Lake Tahoe area. Due to the success of these programs, she expanded to the Eldorado National Forest.

“Joy’s tireless energy, enthusiasm and creativity contribute greatly to the success of the conservation education program,” said LTBMU Forest Supervisor Jeff Marsolais. “She excels in creating partnerships that foster meaningful connections for students and has done a tremendous job developing engaging science programs that build opportunities for future employment.

In the process of all her work on the LTBMU, Barney has inspired others to do similar work.

“Joy has led me to my current passion and pursuit of my profession in conservation education,” said Megan Dee, conservation education assistant for the LTBMU. “I would never have continued in the Forest Service without her extraordinary leadership and mentorship, which is also the case for many of the students she has worked with.



“She is an inspiration to all who work with her –partners, educators, students, parents, employees, and more. Joy and I both have consistently reminded successful Generation Green students that we aren’t losing the students, but the world is gaining them. This is based on our high school model Generation Green post-graduation and post-youth summer internship. It is not just a summer job to the students; it can be life-transformational, and it is Joy who leads them to learning how to achieve,

thus creating future land stewards and advantageous citizens of society.”

One of Barney’s mentors – Jim Oftedal, the regional outreach and recruitment and workforce diversity program manager recalls Joy providing one of her students a bicycle to get to and from work. “She took a big sister approach,” said Oftedal, who helped Barney start Generation Green on the LTBMU. “That student she helped is now a permanent employee with the Forest Service.

“Joy is a giver. The Generation Green program is more than a typical 40-hour work week. She really is a special woman. I can’t say enough about her. She is a very humble person. She has a wonderful smile and I am happy for her. She deserves this award.”

“If I was independently wealthy, I would still do this job,” said Barney.

Barney has been married to her husband, Paul since 1991. They have an 18-year old daughter Jera who Barney says “has had to share me with my generation green students.” When she does get some spare time, she and her husband like to go sailing in Monterey and up as far as Canada.

Published: December 15, 2015

Shasta-Trinity NF hosts 2nd Annual Spooky Forest event

Photos and Story By Cathy Keeler



Participants and volunteers look through the web as the "Ghost Ranger" speaks about the roles of district rangers and smokejumpers during the 2nd Annual Spooky Forest event on Oct., 31, at the Shasta-Trinity National Forest. Spooky Forest is an event that takes kids on a guided walk through a fun, Halloween-themed forest path to learn about the history of the Forest Service and to engage in conservation education activities. (USFS Photo by Cathy Keeler)

Skeletons, princesses and super heroes of varying sizes were led down a frightful forest path, toward a trio of characters conspiring to mold their very minds.

The Shasta-Trinity National Forest held its second annual Spooky Forest event on Oct., 31. Approximately 50 costumed children joined volunteers from the Semper Fi 2 Honor Detail, Shasta College Natural Resources Club, and the Forest Service to play a variety of games, such as bowling and bean bag toss, and take a guided tour of the forest.

Spooky Forest is an event that takes kids on a guided walk through a fun, Halloween-themed forest path to learn about the history of the Forest Service and to engage in conservation education activities. Guided by Forest Rangers, the children wove their way through the forest to meet Halloween characters: Alien Invader- Scotch Broom Monster, Ghost Ranger, and Spooky Tree Skeleton. Each character introduced and reinforced lessons for good forest health.

“The forest has been looking for ways to engage the younger generations, and raise awareness so people can understand and appreciate its natural resources, values and benefits,” said Andrea Crain, public affairs specialist for the Shasta-Trinity National Forest. “The Halloween guided-tour experience was an ideal way to do just that.”

First, Alien Invader - Scotch Broom Monster taught the kids about invasive species. He described how these aggressive species form dense, overcrowded stands which take resources away from native species and destroy wildlife habitat. He also explained how to get rid of them, telling the kids to have an adult burn them responsibly.

The second stop was a visit with Ghost Ranger, who quizzed the children about what a district ranger does for the Forest Service. The Ghost Ranger explained how a district ranger helps make decisions to manage and protect the forest. He also taught some fun facts about the forest like the number of acres in the Shasta Trinity National Forest, what a smoke jumper does, and the different firefighting tools used to manage wild fires. The children shared their favorite things to do in the Forest and identified ways they keep the Forest clean and healthy. The Ghost Ranger concluded with the following safety messages, “put out your camp fires, have an adult call in a fire if you see one, and do not feed wildlife.”

The final stop on the tour was a visit with Spooky Tree Skeleton, who talked to the kids about the positives and negatives of dead trees. The kids learned how dead trees provide homes to animals. Spooky Tree Skeleton also explained how trees die, some from deadly pest attacks and others due to wildfires. The kids also learned about the extra sap produced by some pine trees as a means of combating pine beetles, and how this sap is extra flammable and can contribute to big wildfires.

After completing the trail, the volunteer guides led the children out of the Spooky Forest area, where they gathered to ask follow-up questions about what they learned. As the event concluded, parents and children alike expressed their satisfaction and eagerness to return.

“I plan to take him back to this event for many years to come,” said Gabriela Peterson, who brought her son to the event. “We appreciate all the effort that goes into events like this, as they provide a fun, learning environment for my son that he would not otherwise be exposed to. I even learned a few things myself.”

Published: December 3, 2015

Hotshots prepare areas for prescribed burns on San Bernardino NF

Photos and Story By Daniel Torok



A hotshot crewman uses a chainsaw to limit the possible advancement of wildfire by trimming the bottom growth and dead branches.

ANGELUS OAKS, California—Screaming chainsaws tore through dry trunks while gloved hands ripped excess brush from the ground as a hotshot crew paved the way for a rejuvenating fire that would soon sweep the area.

Mill Creek hotshots prepared an area on the San Bernardino National Forest, Nov. 2, to start the winter’s prescribed burn projects and promote a healthier forest.

Prescribed burns are used as a management tool to maintain and restore native plant species, reduce fuels that can lead to large forest fires and improve certain wildlife habitats. This burn is also helping to protect homes in the area.

“The purpose of the burn is to create defensible space around Angelus Oaks to help reduce structure threats during wildfires,” said John Ellison, Mill Creek hotshot superintendent.

Chainsaws, hand tools and even controlled fires are used to remove potentially hazardous fuels, which can include trash and litter, gathered leaves and branches, new forest growth, and dead vegetation.

Because fire is used in the process, hot shots must wait for the correct atmospheric conditions before beginning the prescribed burn effort.



Hotshot Alejandro Pena listens to a safety brief.

“Weather has a direct impact on fire behavior. We use prescribed fire when weather and fuel moistures are in alignment to give us the desired results,” Ellison said.

The hotshot crew is hoping to get an opportunity to use prescribed fire in December. Ecosystems can become unbalanced over time if not exposed to naturally occurring fires, leading to a buildup in fuels that can threaten communities in the wildland-urban interface, according to Randy Unkovich, an assistant fire management

officer for the San Bernardino National Forest.

According to the Fire and Aviation Management website, more prescribed fires mean fewer extreme wildfires. Extreme wildfires can occur when trees are stressed by overcrowding; fire-dependent species disappear; and flammable fuels build up and become hazardous.

The preventative work done by the hotshot crews can be the difference between a few acres of scorched forest and a community on fire.

“Prescribed burns are necessary to reduce fuel loading and reduce the risk to life and property,” said Unkovich.

Mill Creek hotshots will return to the site and numerous other areas of the forest to prepare them for prescribed burning in December. Preventative work is a continuous process, requiring year-round attention from the forest’s hot shot crews.

Published: November 23, 2015

R5 Growth Respect and Opportunity Workshop

By Brenda Kendrix



Amanda McAdams, forest supervisor for the Modoc National Forest, addresses the crowd during the close-out session of the Region 5 Growth, Respect and Opportunity Workshop (G.R.O.W.), Oct. 29. The 3-day workshop featured inspirational speakers, cultural change and diversity trainers, stories from Region 5 employees, training sessions, and discussions designed to elicit involvement and two-way communication. (USFS Photo)

SACRAMENTO, California—Approximately 300 employees from throughout the region attended the Region 5 Growth, Respect and Opportunity Workshop (G.R.O.W.), October 27-29. The event was driven by a continuous exchange of ideas and suggestions, all aimed at moving conversations on diversity and inclusion toward action.

The workshop featured inspirational speakers, cultural change and diversity trainers, stories from Region 5 employees, training sessions, and discussions designed to elicit involvement and two-way communication. Presenters included Deputy Chief Mary Wagner, Region 10 Regional Forester Beth Pendleton and guest speakers, Joselyn Dipetta, Steve Van Valin and Patricia Russell McCloud. The objective of the workshop was to share information that will help develop a work environment where everyone feels included and differences in perspective and background are appreciated.

The event also hosted an awards ceremony Oct. 27, which honored regional employees for

their efforts in creating and maintaining a healthy workforce and workplace.

- Dan Kleinman and regional fire personnel were recognized for their outstanding support to the Regional Office following the 2014 Napa Earthquake.
- Shawna Legarza was recognized for her outstanding leadership and commitment to fostering a diverse workforce, and an inclusive work environment in the Pacific Southwest Region.
- The Angeles National Forest was recognized for their outstanding contributions in connecting people to the land during the 2015 World Special Olympics World games in LA.

The workshop concluded with breakout sessions for all participants to share their ideas and suggestions on a plan of action to continue the exchange of ideas after the workshop. The future of GROW is in the planning stages and more is expected in the future.

Published: November 20, 2015

Forest Service, Pit River Tribe celebrate historic stewardship agreement

By Paul Robbins Jr.



Marko Bey, executive director of the Lomakatsi Restoration Project, gives a presentation on the workforce training program to Pit River Tribal Elders and U.S. Forest Service employees during a celebration of their historic stewardship agreement at the National Wildland Fire Training Center, Nov. 13. (USFS Photo by Paul Robbins Jr.)

SACRAMENTO, California—The Pit River Tribe, U.S. Forest Service and Lomakatsi Restoration Project celebrated a historic stewardship agreement with a ceremony at the National Wildland Fire Training Center, Nov. 13.

The parties signed a 10-year Master Stewardship Agreement Sept. 10, beginning one of the largest collaborations in U.S. history between the federal agency and a Native American Tribe. Pit River ancestral lands encompass 100 square miles within the Lassen, Modoc and Shasta-Trinity National Forests. The agreement unifies the parties' efforts in preserving and protecting these lands.

“With so many people, their thoughts, their ways, and their skills, we can make the land better,” said Bill George, Tribal Elder for the Atsugewi, one of 11 bands that form the Pit River Tribal Government. “This is a day we can be thankful for, that the tribe is willing to join with the Forest Service, and vice versa.”

The ceremony began with each party's leadership expressing their excitement toward the agreement and gratitude to those involved. The Lomakatsi Restoration Project also gave a short presentation to explain how its workforce training program will help build the capacity of the Pit River Tribe to implement ecological restoration projects.



Restoration projects from the agreement will create 17 full-time and 200 seasonal jobs, providing additional employment opportunities within the tribal communities. New positions open to the tribes will include land management specialists, foresters, timber sales specialists, loggers, heavy equipment operators and more.

“We’re not just talking about boots on the ground with chainsaws, but the Pit River Tribe administering these projects,” said Marko Bey, executive director of the Lomakatsi Restoration Project.

After the presentations, the Maidu Tribe treated everyone in attendance to a traditional meal featuring Sumi (deer) stew, salmon chowder, acorn bread, salad and water from local mountain springs. While they ate, the group shared ideas for initial projects and locations. It didn’t take long for the group to realize their

“to-do” list was long, but their objectives for the land were aligned.

“There is a lot of work to be done,” said Timothy Davis, a district ranger on the Modoc National Forest. “We share a vision and common goals for what needs to be done on the forests.”

The Roaring Creek Dancers capped off the celebration with a presentation of traditional dances and dress from numerous Native American Tribes. The thunderous thump of the drum beat, twirling rainbow of colors from the dancers, and spirited singing of meaningful songs was a fitting end for the celebration of what all agree is a bright future.

The Pit River Tribe is anxious to begin restorative work through the stewardship agreement, hoping to set an example that may inspire similar agreements with the Bureau of Land Management, National Park Service and the State of California, according to Daniel Cardenas,

Pit River Tribe council member and representative of the Hammawi band.

“We can be a leader with this stewardship agreement, and hopefully other tribes will be able to follow,” said Cardenas.

Over the next decade, the stewardship agreement will use ecologically-based thinning projects to restore forest health, reduce excessive fuel loads, decrease the risk of uncharacteristically severe wildfires and strengthen the forests’ ability to withstand the challenges of climate change.

Published: November 20, 2015

Lassen fuelwood helps keep local communities warmer, wildfires smaller

By Paul Robbins Jr.



David Escobar, a Lassen County resident, stands in front of his shed, freshly stocked with Lodge pole pine fuelwood from the Lassen National Forest. Escobar uses fuelwood to heat his home through the fall, winter and spring.

Cutting fuelwood is part of the local culture for communities around the Lassen National Forest, as many of the rural homes in the area rely on the forest to heat their homes in the colder months.

Last year, the forest issued permits amounting to the removal of 1,493,760 cubic feet of fuelwood for personal and commercial use in the communities. That wood heated homes in Susanville, Westwood, Chester, Mineral, Butte Meadows, Chico, Red Bluff, Burney, Fall River Mills, McArthur, Pittville, Old Station and Viola.

“More than one third of all homes in the communities served by Lassen National Forest are heated with fuelwood,” said Ron Perry, a timber contract specialist for the forest.

Lodge pole pine, Douglas fir, and incense cedar are effective firewood commonly found in the Lassen. With thin bark and one of the higher BTU ratings of a soft wood, Lodge pole pine is the popular choice for many. And this popular wood will be even easier to claim this year

thanks to the effect of high winds from a recent storm.

“This year we (the Lassen NF) had a large wind event and trees were scattered all over the landscape,” said David Bricker, a resource information analyst for the Lassen. “If this was left on the landscape, the wildfire danger would be increased.”

The downed and scattered trees will be easier for community members to collect, but more importantly, their collection reduces the amount of fuel available for wildfires. Firewood collection serves as a thinning operation, accomplishing needed fuel load reduction in the drought-weakened forest.

“While providing a resource to the public, (fuelwood collection) also accomplishes good work for the forest,” said Perry.

The mutual benefit of fuelwood helps solidify the connection between the local communities and their national forest lands. The reciprocal relationship between man and forest fosters an appreciation of the federally protected landscape.

“It allows me time out in the woods to not only gather the fuelwood I need, but to enjoy the beauty and quietness of this lovely area,” said David Escobar, a Lassen County resident.

Permits for fuelwood are available at LNF Ranger Stations at a cost of \$10 per cord. A cord measures four feet high by four feet wide by eight feet long. Minimum purchase is two cords, with a maximum allowance of ten. Permits are valid for one calendar year. For more information, call David Bricker at 530-252-6683.

Published: November 4, 2015

Forest Service, community of Vallejo host Visions of the Wild H2O Festival

By Paul Robbins Jr.



Steve Dunsky (left), the audiovisual manager for the Pacific Southwest Region of the U.S. Forest Service, and Brenda Kendrix (right), the community relations manager for the Pacific Southwest Region of the U.S. Forest Service, operate an informational booth at the Farmers’ Market portion of the Visions of the Wild H2O Festival, Oct. 17.

VALLEJO, California—What began last year as a one-time festival to celebrate the 50th anniversary of the signing of the Wilderness Act, is now becoming an annual event to promote environmental awareness in the community.

The U.S. Forest Service, Vallejo Watershed Alliance, Vallejo Community Arts Foundation and the City of Vallejo hosted the Visions of the Wild H2O Festival from Oct. 15 – 18. The festival promoted the community’s embrace of all aspects of water around the city, from human needs and irrigation to maritime culture and creek restoration.

The four-day festival included documentary film screenings at the Empress Theatre, a water-themed art exhibition at Temple Art Lofts, guest speakers ranging from scientists to philosophers, field trips and outdoor recreation, a watershed restoration project, a farmer’s market filled with informative booths, and numerous water conservation demonstrations.

“Part of what I love about this festival is that there are so many different activities that appeal to different people,” said Leigh Beck, a board member of the Vallejo Community Arts Foundation.

The celebration was opened with an original reading by the first Poet Laureate of the City of Vallejo, Genea S. Brice. Attendees also heard from more than a dozen speakers at several venues, including:

- Stuart J. Swiedler, a physician-scientist from Oakland
- Lindsey Rustad, Ph.D., a forest ecologist for the U.S. Forest Service at the Hubbard Brook Experimental Forest in New Hampshire
- Laurette Rogers, a 21-year veteran of Students and Teachers Restoring a Watershed
- Mike Moran, a naturalist with the East Bay Regional Park District
- Myrna Hayes, San Francisco Bay River Guide
- Forrest Pound, a San Francisco based documentary producer
- Gordon Becker, a fisheries scientist and board member of the Friends of the River and the Tuolumne River Trust
- Pam Bond of Swanson Vineyards and Winery
- Carter Brooks, an artist and philosopher of climate art



The large number of speakers at the event not only reflected the diverse nature of Vallejo’s community, which was found to be the most diverse city in the nation according to a 2010 study, but also provided the unique perspectives needed to represent each subject covered.

“A single speaker could not represent the importance and values associated with each individual topic or program,” said Doug Darling, Chairman of Vallejo Watershed Alliance. “These are educators who have a passion about what they do; people who help our youth to understand, respect and enjoy our environment.”

The numerous events of the four-day festival were taken in by approximately 1,000 people. Groups of citizen conservationists took part in

Laundry to Landscape: Greywater Hands-On Workshop, where they learned how to use water from their laundry for gardening and landscaping. Others collected acorns to augment restoration efforts along the creek in the Blue Rock Springs Creek Corridor. Some simply took in the scenic beauty of the water landscape with kayaking or the Napa River Cruise.

Every event in the festival helped link the Vallejo community to one of its most important local resources and share in its stewardship. It has also helped link the community to the federal agency residing nearby on Mare Island.

“The Forest Service employs many people who live in Vallejo, and the festival has helped strengthen the connection between the agency and community,” said Beck. “The (Forest Service) has been a lead partner for the past two years, bringing tremendous value in planning, implementation and funding.”

This year’s theme combined conservation with the vibrant art movement in Vallejo to create an appealing formula for future Visions of the Wild festivals. Positive responses from attendees and obvious benefits to the community lead many of the event’s organizers to expect the festival will continue.

“Doing the (Visions of the Wild) is a great experience and overall awareness for Vallejo,” said Darling. “If this event continues on its annual journey, it will bring with it a better outcome every year.”

Published: November 2, 2015

Timber Sales Support Restoration, Local Industry

By Ken Sandusky and Paul Robbins Jr.



President Obama recently proclaimed Oct. 18-24, 2015, as National Forest Products Week, to recognize the natural resources and materials provided by forests that are essential to the American way of life. The Modoc National Forest provides a shining example of the forest stewardship and sustainable resources the proclamation is intended to recognize.

The Craig Timber Sale on the Devils Garden Ranger District will provide 5.2 million board feet of biomass (byproducts of trees and plants) and 3.7 million board feet of lumber-quality timber while meeting National Environmental Policy Act (NEPA) requirements for ecosystem restoration. Forest health objectives for the sale focus on undergrowth removal to reduce hazardous fuels and create a more resilient forest. Larger, older and more fire-resistant trees are marked to be left behind.

The guidelines for trees to be cut on this sale ranges from a 10-inch diameter at breast height in some areas to 29 inches in others, depending on the needs of the specific stand. Careful evaluation precedes all timber activities on the forest.

“The NEPA evaluation process determines the need for the treatment,” said Andrei Rykoff, the section chief for natural resource management of the Pacific Southwest Region, USFS. “Once the need is identified, the district silviculturist comes up with the prescription to meet the

environmental requirement.”

Logs too small to be sawed into useable lumber are transported for use as biomass by Burney Forest Power. Logs of sufficient size and quality to be used for lumber production are going to the Shasta Green Mill. Franklin logging is also conducting harvest and chipping operations. All three companies operate in California.

“Forest management projects on the Modoc National Forest are designed with ecological restoration as the primary objective, but we cannot accomplish this without the infrastructure and people in place to get the work done,” said Eastside District Ranger Tim Davis. “We always keep this in mind, and continually seek to design projects that will support local businesses and workers while also creating more resilient forests.”

This project is part of the larger Hackamore Ecosystem Watershed Restoration Project, which was designed for resource protection and enhancement. Archaeological sites, along with botanical and wildlife resources, have been identified for protection within the project area.

A mechanical harvest system is being used, meaning trees are felled with machines called feller-bunchers instead of traditional chainsaws. This is important to the restoration project because feller-bunchers can reduce residual stand damage in comparison to manual felling. The purchasers and harvesters in the sale will also provide a surface replacement deposit to fix any damage created to roads during harvest and slash disposal.

“Engineers evaluate the roads and trails to be used, and then, based upon the amount of material to be moved, estimate the cost to repair and replace the surfaces,” said Rykoff.

The sale of the lumber-quality timber pays for the removal of hazardous fuels and other ecosystem restoration activities. The forest is careful in scaling the timber sales to ensure the value covers the cost of the linked restoration project.

Without the ability to use timber to help offset the cost of forest-health projects, Modoc National Forest personnel would be unable to remove the smaller material – which acts as hazardous fuels during wildfire – or would need to pay a contractor to do the work to achieve a forest more resilient to wildfire and other disturbances.

The Biomass Crop Assistance Program (BCAP) helps offset the operational costs and makes these projects more feasible by providing access to federal funds. BCAP provides financial assistance to establish and maintain new crops of energy biomass, or harvest and deliver forest residues to qualifying energy facilities like Burney Forest Power. Eligible crops may include corn residue, diseased or insect infested wood materials or orchard waste.

Last year, more than 200,000 tons of dead or diseased trees from national forests and Bureau of Land Management lands were removed and used to produce renewable energy, while reducing the risk of catastrophic forest fires.

Published: October 23, 2015

San Bernardino National Forest Hosts Fuels Demo

By Gerrelaine Alcordo and Paul Robbins Jr.



SAN BERNARDINO NATIONAL FOREST, California—U.S. Forest Service personnel use a variety of tools to start fires, but always in an effort to prevent larger fires from occurring.

The Mountaintop District of the San Bernardino National Forest (SBNF) hosted a Fuels Treatment Demonstration for more than 40 visitors of varying agencies, Oct. 16, showcasing new technologies in mechanical treatment of hazardous fuels. Mechanical treatment reduces the amount of vegetation in an area which has built up to dangerous levels, or changes the arrangement of these fuels to lessen the likelihood of catastrophic fires.

“The benefit of hosting the demo is that it provided us the opportunity to discuss our hazardous fuels reduction treatments within the San Bernardino National Forest,” said Steven Alarid, a member of the Enterprise Program Team, SBNF. “We had a great platform to showcase our mechanical treatment prescriptions as they relate to historic fire behavior and vegetation structure.”

Vendors displayed mechanical treatment equipment like drip torches, terra torches, plastic sphere dispensers and hand tools. The hand tools are used for piling brush, pruning lower branches of trees, and creating fuel breaks to encourage the right kind of fire. Mechanical treatment can be used on its own or together with torches for prescribed burning to change

how wildfire behaves. As a result of this type of treatment, when a fire does burn through the area, it is less destructive, less costly and easier to control.

While visitors inspected the gear, fire personnel shared their experiences with wildfire effects in both treated and untreated areas. Their talks highlighted the safer working conditions, and conservation of infrastructure and resources that result from fuels treatment efforts.

“The Forest took the opportunity to promote our intention of increasing broadcast burning operations in the future,” said Dan O’Connor, fuels officer for the San Gabriel River Ranger District, Angeles National Forest. Broadcasting burning is controlled application of fire to fuels, under specified environmental conditions that allow fire to be confined to a predetermined area, producing the fire characteristics required to attain planned fire treatment and resource management objectives.

Vendors and equipment were provided by Caterpillar Inc., FECON, FAE-Prime Tech, Takeuchi, and Timco, with attendance from multiple national forests, CALFIRE units, Ventura County, Big Bear Fire Authority, and a wide range of professionals from private industry and the local community. The demonstration was the second of a three-stop California tour, sponsored by the USFS, University of California Center for Forestry, TSS Consultants, and other partners.

The final stop will be Nov. 20, at Santa Rosa Indian Reservation, Mountain Center, California.

Published: October 22, 2015

Improving the Mill Creek Campground

By Ken Sandusky



Alturas, Calif.—Engineers with the Modoc National Forest recently replaced and improved the aging Mill Creek Campground drinking water system within the Warner Mountain Ranger District. The now-operational system is pushing good water pressure and quantity of water to four Americans with Disabilities Act accessible spigots, providing a drinking fountain and service connections near the restrooms.

The system serves 12 campsites and can accommodate up to 60 visitors at a time. It also serves the trailhead of the South Warner Mountain Wilderness.

“The old drinking water system for the campground was outdated and the maintenance needs were piling up,” said Jonathan Daley, forest facilities engineer. “Replacing the system was important for providing accessible, safe ground-source drinking water to the public for decades to come.”

A large contingent of hot shot crews, hand crews and engine crews from throughout the forest assisted the campground improvement effort as well. Firefighters landscaped, levelled tent spots, improved fire rings and picnic table locations, naturalized disturbed areas and removed danger trees.

Their labor was especially helpful due to the restrictions placed on work within the South

Warner Mountain Wilderness. Motorized equipment is not allowed to be used in this protected area, and all tools and materials had to be hand carried.

“It was critical to have the fire crews there digging the trench by hand because we weren’t allowed to use mechanized equipment,” said Daley.

The project improved the safety of public drinking water at the site, repaired the camping areas and provided the forest’s engineering team experience with the National Environmental Policy Act process, surveying, water system design and specifications.

“It also provided our construction crew the equipment, training and experience to develop a new cutting-edge technical capability called High Density Polyethylene Flexible pipe fusion welding,” said Daley. “We expect to continue using this capability on future water system projects in 2016.”

High Density Polyethylene Flexible pipe fusion welding is the process of making a joint by melting together plastic rather than using mechanical connections.

The forest was also proud to help support the local economy through the purchase of materials and labor with the special project funding from the U.S. Forest Service to complete the renovation.

Published: October 21, 2015

PSW Scientist co-authors successful migratory study

By Sherri Eng



Prothonotary Warblers are beautiful and migratory birds closely tied to their preferred breeding habitat: swamps and other forested wetlands in the eastern United States. Scientists have noted that Prothonotary Warbler populations have experienced precipitous declines in recent years, prompting new research investigating the little-known migratory behavior of the bird.

As part of this effort, researchers from the U.S. Forest Service Pacific Southwest Research Station, Klamath Bird Observatory, Louisiana Bird Observatory, and Audubon Louisiana attached several geolocators—ultra-lightweight devices that record the time of sunrise and sunset each day—on several Prothonotary Warblers using a back-pack harness. The devices were used to identify migratory routes and core wintering areas. The information collected by each geocator was used to track the daily location of the bird.

“As part of this study, we deployed three geolocators on Prothonotary Warblers in Louisiana,” says [Jared Wolfe](#), lead author and postdoctoral researcher with the Pacific Southwest Research Station. “After the breeding season, at least one individual completed its fall migration, over-wintered and made its way back to Louisiana where the bird was recaptured and the geocator was retrieved.”

Data from the geolocator suggest that this bird traveled at least 5,000 miles through seven countries.

Researchers found that this Prothonotary Warbler's migration pattern included an initial flight over the Gulf of Mexico from Louisiana into Central America, then east to the Greater Antilles for approximately one month, followed by a flight south over the Caribbean Sea to northwest Colombia, where it remained for the duration of the winter.

These findings contribute to a growing body of evidence that many migratory birds often use two or more wintering locations, or exhibit prolonged stopover behavior.

“Our results are the first to document movements of Prothonotary Warblers during their migratory and over-wintering periods,” says Erik Johnson, co-author of the study and director of bird conservation at Audubon Louisiana. “Based on the success of this study, we formed a coalition that includes researchers from Virginia Commonwealth University and Audubon South Carolina where we deployed an additional 47 geolocators on Prothonotary Warblers in 2014.”

By increasing the breadth of the study, the team of scientists hopes to better understand the migratory and over-wintering behavior of the birds, which will help them to identify habitat that may require additional protection for the species. This study also demonstrates that geolocators can be safely used to document migratory connectivity of species of conservation concern.

The findings of this study were published in the September 2015 issue of the *Journal of Field Ornithology*. The paper can be read using the U.S. Forest Service online system for sharing free, full text publications at www.treearch.fs.fed.us/pubs/49289.

Headquartered in Albany, Calif., the Pacific Southwest Research Station develops and communicates science needed to sustain forest ecosystems and other benefits to society. It has research facilities in California, Hawaii and the U.S.-affiliated Pacific Islands. For more information, visit www.fs.fed.us/psw/.

Published: October 13, 2015

Volunteers complete Wilderness Ranger Academy at Modoc National Forest

By Ken Sandusky



The Modoc National Forest recently hosted nine volunteers of the AmeriCorps National Civilian Community Corps for a 48-day assignment. During this time, the group completed a week-long Wilderness Ranger Academy which taught some essential skills for working in the remote environment of the South Warner Wilderness.

Some of the skills they learned during the academy were the principles of Leave no Trace, backcountry first aid and land navigation. The group also performed needed work projects in the Modoc National Forest and with the U.S. Fish and Wildlife Service at the Modoc National Wildlife Refuge.

“I signed up for the service aspect, but I also like the travel, schedule of projects and the network of contacts that I am building,” said Hannah Damgaard, one of the volunteers.

Day one was busy, beginning with an orientation in the offices of the Modoc National Forest and Modoc National Wildlife Refuge, then familiarization of local amenities.

Orientation was followed by a trip to Lake City, which included a glimpse at organic farming and homesteading by local resident Sophie Shepard. They also visited Patterson Guard

Station, high within the Warner Mountain Ranger District. The guard station was later used as a base camp, after performing a cleanup.

The promise of adventure and outdoor experiences are two of the draws to join AmeriCorps NCCC, and the volunteers did not find their stay in the Modoc lacking in those areas. One day involved working at the Modoc National Wildlife Refuge on projects benefitting the refuge's wetlands and wildlife habitats. Another day found the crew working high in the backcountry of the South Warner Wilderness on a hiking trail, while interacting with forest visitors.

The group also attended the Fourth Annual Modoc Sportsman's and Outdoor Expo at the Veterans Memorial Park in Alturas, where they shared with the community about AmeriCorps NCCC and learned about other public lands in Modoc County. The group also found time for volunteer work at Eagle Peak Animal Rescue, with local specialists Bill and Tina Hodge.

The Modoc National Forest partnered with the Corporation for National and Community Service to produce the Wilderness Ranger Academy.

To learn more about the Corporation for National and Community Service and its AmeriCorps NCCC program visit: <http://www.nationalservice.gov/>.

Published: October 13, 2015

Meet the SGVCC restoration crew

By Andrew Mitchell



On September 10, representatives from the Angeles National Forest paid a visit the San Gabriel Valley Conservation Corps (SGVCC) to learn more about their service to the local community. This was an important visit to the forest because the US Forest Service and the SGVCC have worked together over the years to develop links between youth conservation work and the San Gabriel Mountains. Currently, the SGVCC provides a full-time crew to projects that restore areas within the San Gabriel Mountains National Monument, through a partnership with the Angeles National Forest.

Joe Llewellyn, partnership coordinator for the Angeles NF, and Fabian Garcia, Southern California Consortium Director, were provided a tour of the SGVCC headquarters, two charter high school sites and a four-acre community garden managed by the corps.

“The two Charter High Schools were impressive efforts of community engagement targeting youth whom may be coming off of a troubled path,” said Joe regarding the services the SGVCC was providing the community of San Gabriel Valley.

He went on to express how impressive the community garden was as well, tying together the education, conservation service, sustainable living, and environmental restoration programs that the corps has put together to give their youth a well-rounded start to their future careers in

conservation.

Published: October 9, 2015

Los Padres NF hosts skateboard race

By Andrew Madsen



The Los Padres National Forest hosted the Second Annual Santa Gnarbara Skateboard Race Sept. 27, on the Santa Barbara Ranger District. The downhill skateboarding competition featured more than 100 skaters from across the country, and is one of only two sanctioned downhill skateboarding events on National Forest System lands.

Racers competed in different categories such as grom (18 years old and under), ladies, luge, stand up (racers cannot use their gloved hands for support), amateur, and professional. Top speeds of 35 to 45 mph were reached on the steep and curvy downhill course, which was lined with hay bales along hairpin turns to prevent skaters from tumbling down the hillsides.

“This race was held last year on our district and turned out to be an outstanding event,” said Pancho Smith, Santa Barbara District Ranger. “In this, the second year, a new location on the district was used that was both challenging for the racers and had the least impact on the public in terms of closing the road during the event. The race sponsors, participants, and volunteers did a great job of setting up, monitoring and cleaning up after the event.”

Downhill skateboarding is not a new concept, but the number of unsanctioned races has been growing. Events like the one held on the Los Padres NF help to promote the hobby safely for participants and commuters.

“Over the last several years the number of accidents between skateboarders and vehicles in Central and Southern California is on the rise,” Smith said. “The opportunity to have a sanctioned, safe and fun event has proven to be a huge draw for riders.”

Smith said his primary objective for the race was to provide safety for the riders by selecting a location that had limited vehicle traffic, as well as the essential features of a challenging downhill course. It was obvious the course met the “gnarly” factor as racers flew past the spectators that lined Happy Canyon Road on the bright Saturday morning. There were more than a few wipeouts along the hairpin turns, but thanks to the well-positioned hay bales, there were no serious injuries.

“In permitting this event, the Forest had a unique opportunity to showcase the Santa Barbara front country and our connection with skateboarding,” Smith said. “The race went off without a hitch. It lived up to its name, with many gnarly amateurs and professional racers competing for donated trophies and bragging rights!”

Published: October 9, 2015

Resources Advisors Help Protect Cultural and Natural Resources

By Stephanie Gomes



A resource adviser in firefighting gear stands next to a large sequoia tree saved from the Rough Fire. To help counteract the amount of surface disturbance that takes place during firefighting operations, Forest Service resources include a group of highly-trained specialists like archeologists and biologists. These fully fire-qualified and experienced specialists serve as resource advisors to the firefighters.

The Rough Fire has been burning for almost two months in rugged, diverse terrain on the Sequoia and Sierra National Forests, the Giant Sequoia National Monument, and the Kings Canyon National Park. The fire started on July 31 from a lightning strike, and grew to over 141,000 acres – at its peak, more than 3,800 wildland firefighters fought the fire.

Inherent in wildland firefighting efforts is the construction of fire lines with bulldozers and hand tools to stop a fire's progress. On the Rough fire, over 100 miles of fire line was constructed to corral the fire, in addition to many more miles of line that burned over as the fire made its dangerous runs.

To help counteract the amount of surface disturbance that takes place during these firefighting operations, our resources include a group of highly-trained specialists like archeologists and biologists. These fully fire-qualified and experienced specialists serve as resource advisors to the firefighters.

The Rough Fire had 15 resource advisors helping firefighters determine where natural and

cultural resources were and how best to protect them during fire suppression.

Linn Gassaway, the lead resource advisor supervisor for the Rough fire and a zone archeologist for the Sequoia National Forest, explained how some of their work takes place.



“Cabins and other cultural resources that can be destroyed by fire are wrapped with fire proof materials to protect them from the flames. Other cultural features that fire will not disturb, but that fire suppression efforts such as line construction could or will destroy, are marked in advance so line construction personnel and equipment can avoid them.”

The same approach was taken for the magnificent sequoia groves on both national forest and national park lands. Resource advisors monitored all the sequoia groves in the fire area during the suppression efforts. While fire is a natural part of the giant sequoia ecosystem, the severe drought conditions made it necessary to ensure the fire burned with less intensity in the Sequoia groves.

The sequoia groves burned in the Rough Fire survived and will benefit from the effects of the fire. Some of the groves will see something they have not experienced in a very long time – new seedlings sprouting in large numbers next spring. As the Rough Fire slowly burned through the sequoia groves, it removed years of accumulated needles and debris on the forest floor. New seedlings will now be able to reach the soil and start germinating when rains come.

“This is one of my proudest achievements as a resource advisor,” said Gassaway. “Fire is bittersweet, but because of what we were able to do with the sequoias, this one was really exciting.”

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Forest Service hosts NPLD events across California



The Pacific Crest Trail Association's regional volunteer group, NorCal Trail Crew, joined staff of the Shasta-Trinity National Forest and other volunteers to perform tread, drainage, and general maintenance work in the Deadfalls area along the Pacific Crest Trail, Sept. 26.

The U.S. Forest Service Pacific Southwest Region, community partners and hundreds of local volunteers came together to celebrate National Public Lands Day, Sept. 26, with planned events happening from San Bernardino to Redding, California.

Dozens of events hosted by national forests contributed to 2015's NPLD being the nation's largest single-day volunteer effort for public lands since it was created by the National Environmental Education Foundation (NEEF) in 1994. Local efforts were part of a record-setting 200,000 volunteers across 2,500 events nationwide, according to NEEF.

The now popular day started as just three events and 700 volunteers, but has grown exponentially through the enthusiasm of National Forest staff and surrounding communities. It serves as an opportunity to educate the community about the importance of public lands and how the federal land management agencies maintain those lands.

“Forest Service employees in California enjoy every opportunity to show people how their forests and public lands are maintained with service, respect and integrity,” said Randy Moore, Regional Forester for the Pacific Southwest Region. “National Public Lands Day provides that opportunity, with the added bonus of a few volunteers to help with the maintenance.”

The events varied in scope and activity, based on the unique needs of the lands and community support available. Here are some of the ways USFS employees and local volunteers helped make NPLD successful:

- The Angeles National Forest hosted a free, family event at the El Pueblo de Los Angeles Historical Monument to educate the public about the environment and natural resources. Visitors were able to meet Smokey Bear, learn about local watersheds and wildlife, and receive a free sapling. The event was co-sponsored by San Gabriel River Discovery Center Authority, LA City Council and 26 other community partners.
- The Los Padres National Forest hosted a two-day NPLD outing sponsored by the Ventana Wilderness Alliance. More than 20 volunteers and staff worked on public trails by removing 27 trees, clearing debris and brushing miles of trails. The group was based out of Boy Scout Camp Pico Blanco, and received a pot-luck dinner and NPLD one-day pass for Forest Service and National Park lands in appreciation of their efforts.
- Staff members of the Mendocino National Forest were joined by approximately 60 students from Chico State University to assist with improvement projects at the Red Bluff Recreation Area. Based out of Camp Discovery, the students repaired and replaced signs, fencing, picnic table tops and amphitheater seating. The university sponsored the event, which also served as a lesson in ecological restoration for the students.
- The San Bernardino National Forest and Bureau of Land Management hosted volunteers on the Santa Rosa and San Jacinto Mountains National Monument, where they assisted with trail improvements, trimming plants, planting native vegetation, removing weeds, and repairing fences. Six truckloads of trash and three truckloads of bagged green waste were removed. Two miles of trail was restored and a badly eroded jeep trail was re-vegetated with native plant material. The Redshank Riders Back Country Horsemen and Friends of the Desert Mountains provided the majority of labor and support for the event.
- Staff and friends of the Shasta-Trinity National Forest joined members of Girl Scout Troop #70262 in removing trash and planting 19 native bushes and plants in the Fisherman's Point Day Use Area on the Shasta Dam. This was the 10th year the Shasta Dam and Shasta-Trinity NF has done a combination of events for NPLD. All 31 participants received a certificate of appreciation for their efforts. The Shasta Lake Ranger Station also set up an informational booth at the dam, where campfire permits were issued and the public could ask questions. "I'm happy we have National Public Lands Day," said Rebecca Bales, an office automation clerk for Shasta-Trinity NF. "It's

a day for the public to get out and help care for the land.”

- The Pacific Crest Trail Association's regional volunteer group, NorCal Trail Crew, joined staff of the Shasta-Trinity National Forest and other volunteers to perform tread, drainage, and general maintenance work in the Deadfalls area along the Pacific Crest Trail. “It was an honor for members of the Pacific Crest Trail Association’s NorCal Trail Crew to join with so many other volunteer groups for NPLD, the Nation’s largest one-day, hands-on volunteer effort to improve the public lands that we all enjoy,” said Janette Storer, head of the NorCal Trail Crew at the event.

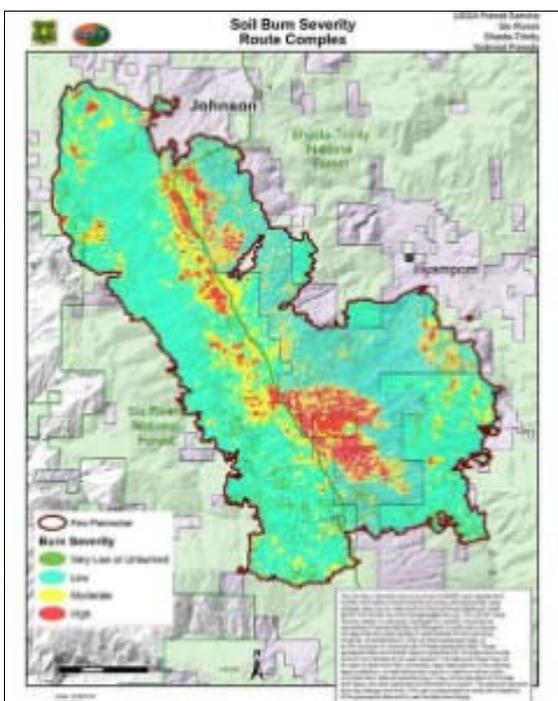
Published: October 9, 2015

Northern California Burned Areas Recovery

By Stephanie Gomes

Many forests depend on periodic fires to maintain healthy ecosystems. In these fire adapted areas, fire promotes plant diversity and burns away accumulations of live and dead plant material such as pine needles, leaves, branches, and smaller understory trees.

The 240 Northern California wildfires that resulted from the July 30-31 lightning event are a reminder that Mother Nature continues to play a major role in forest ecosystems. Over 200,000 acres of federal lands in northern California burned from that lightning event. Firefighters fought aggressively to minimize threats to people, property, cultural and natural resources.



While natural processes play a major role in forest recovery after a wildfire, there are certain actions the Forest Service takes immediately following a fire to protect watersheds, speed the recovery of the burned areas, and reduce sediment and soil erosion that flow downstream during fall and winter rains.

Suppression repair is the first phase of recovery efforts. Fire crews construct rolling dips and dirt water bars along hand and dozer lines to divert water off the containment lines, and minimize surface and gully erosion. Crews also remove berms on dozer lines, scatter cut brush on hand and dozer lines, and repair roads used during the suppression of the fire to return those areas to a stable functioning condition. Controlling

erosion and run-off from fire suppression containment lines are high priorities for the Forest Service to ensure healthy watersheds.

Burned Area Emergency Response (BAER) teams of the Six Rivers and Shasta-Trinity National Forests completed the second phase of recovery for these wildfires. BAER teams completed a survey and analysis for the burned areas, analyzed the data they collected and produced a “Soil Burn Severity” map. This is critical to the assessment of potential watershed impacts from wildfires to any downstream values that may be at-risk from potential increased

flooding, sediment flows, and rock slides. BAER teams also produced reports for each burned area that included an assessment, produced findings for the burned areas' post-fire conditions, and recommended emergency stabilization measures and actions. BAER emergency stabilization efforts focus on the protection of human life and property, and critical natural and cultural resource values such as the water quality of rivers, lakes, and streams.

BAER teams consist of scientists and specialists such as hydrologists, geologists, soil scientists, road engineers, botanists, wildlife and fisheries biologists, archeologists, geographic information specialists, and silviculturists from federal and state agencies.

The Shasta-Trinity National Forest received \$303,435 for emergency land stabilization measures on federal lands burned by the Fork Complex lightning wildfires; \$201,222 for the South Complex lightning wildfires; \$55,988 for the Mad River Complex lightning wildfires; and \$214,873 for the Route Complex lightning wildfires. The Six Rivers National Forest received \$331,983 for the Mad River Complex lightning wildfires, and \$228,286 for the Route Complex lightning wildfires.

The third and longest stage of recovery of the burned areas is called "long-term recovery and restoration". This phase began on both forests by identifying environmental analysis leaders and teams, and gathering initial information provided to the forests by the fire suppression repair and BAER assessment teams during their burned area recovery efforts.

The Forest Service expects the watershed recovery of these burned areas to take three to five years; there will likely be increased water and sediment flows from these burned areas during this time.

Published: October 9, 2015

Helping Highlight the San Gabriel Mountains National Monument



Field Ranger Adrian Duran gives visitors information about trail conditions and expected weather conditions for the day at Icehouse Canyon trailhead at the San Gabriel Mountains National Monument, September 20.

U.S. Forest Service employees on the Angeles National Forest and San Gabriel Mountains National Monument work hard every day to help visitors learn about and explore their monument and forest lands. Direct interaction provides visitors with up to date information regarding closures and weather patterns, highlights the many places available to recreate, and helps the Forest Service learn about our visitors and their individual needs.

Published: September 24, 2015

Forest Service attends 23rd Annual Hawaii Conservation Alliance Conference

Story by Marta Call, Photos by Franz Schmutzer



Native dancers perform the hula during a cultural welcome called "kipaepae." The welcome included a chant called the "oli" and gifts of lei to the more than 1,300 participants of the Hawai'i Conservation Alliance's 23rd Annual Hawai'i Conservation Conference, held at the University of Hawaii Hilo campus, Aug. 3-6. The U.S. Forest Service is an active member of the Hawai'i Conservation Alliance.

Conservationists with the Pacific Southwest Region of the U.S. Forest Service were part of the more than 1,300 participants in the Hawai'i Conservation Alliance's 23rd Annual Hawai'i Conservation Conference, held at the University of Hawaii Hilo campus, Aug. 3-6.

The Hawai'i Conservation Alliance (HCA) is a collaboration of conservation leaders representing 25 cultural, educational, government and non-profit organizations from across the state. Collectively, HCA works to safeguard the biodiversity of Hawaii's ocean, land and streams. The Forest Service is proud to be an active member of the Hawaii Conservation Alliance.

“The Hawaii Conservation Alliance Conference is an annual event that gathers everyone in the conservation community and allows us time to connect,” explained Jodi Chew, Pacific Island Liaison for the Pacific Southwest Region of the U.S. Forest Service. “At this conference, conservationists share knowledge and leverage resources to further conservation efforts in

Hawaii.

This year's conference was entitled, "Hanohano Hawai'i Kuauli: Celebrating Collaboration Ecosystems." It was opened with a cultural welcoming protocol called the *kipaepae* ("the stepping stones into a house") which included the *oli* (chant), hula and a gift of lei to each participant, according to the University of Hawaii Hilo website. It also featured an HCA first, with participants learning in the field.

"I was jazzed that we introduced learning in the field in addition to the classroom sessions. We stretched from mountain to sea—*mauka* to *makai*— with sites at a fishpond to restoration work on top of the highest mountain, Mauna Kea," said Chow.

The *huaka'i*, site-based learning, allowed those interested in seeing and participating in conservation first-hand the opportunity to do so. These *huaka'i* sessions blended science and culture.

Chew explained that since this year's conference took place in Hilo on the island of Hawaii, instead of its usual venue on Oahu, it helped diversify the portfolio of participants and involved more people in the conference. The new venue tapped into another stream of conservation folks to amplify the conversations and energy around conservation efforts. It attracted quite a few first-time attendees and a younger demographic.

The HCA wanted to expand the reach of the conference and this year was a test of that vision," she said. "I hope this new group of attendees sees a value in participating and will return to future conferences. I may be biased, being a part of the conference planning group, but I think it went well. "

Even the name of the site for this year's conference was apropos to its theme. In the island language "Hilo" means "to weave." Every HCA conference strives to weave together conservation knowledge, experience and ideas; scientists, land managers, cultural practitioners and community; challenges, actions, and solutions.

"Traditional knowledge in Hawaii is rooted to the idea that man is not separate from the *aina* (the land) but a part of it," said Chew. "This pushes Hawaii to integrate traditional knowledge with Western science into investigations of bio-cultural science."

The people and communities of Hawaii depend on healthy land and water for social, cultural and agricultural well-being. The HCA plays an important part in helping the state balance resource protection with use, which is a big challenge on an island.

"With limited land mass, Hawaii is constantly addressing this topic. Working together to

perpetuate native ecosystems and ensure the unique biodiversity of our islands endures, the HCA provides unified leadership and advocacy for Hawaii's most critical conservation issues,” Chew concluded.

For additional photos from the event, please visit the University of Hawaii Hilo Campus website at <http://hilo.hawaii.edu/news/stories/2015/08/06/uh-hilo-hosts-statewide-conservation-conference/>.

Published: September 10, 2015

Stanislaus NF community partner wins national award

By Rebecca Garcia



CSERC Executive Director John Buckley provides assistance to a stream restoration project on the Mi-Wok District of the Stanislaus National Forest.

The Central Sierra Environmental Resource Center (CSERC) was recognized by the U.S. Forest Service 2014 Recreation, Heritage & Volunteer Resources, Volunteers & Service Annual Awards Program for their outstanding restoration work performed in partnership with the Stanislaus National Forest (STF).

The Mi-Wok Ranger District of the STF nominated CSERC for their commitment to engage local volunteers in partnership for a wide range of restoration projects. In addition, CSERC was instrumental in helping the Forest obtain support for restoration projects following the 2013 Rim Fire that consumed over 257,000 acres of public lands in the STF and Yosemite National Park. CSERC was selected from 65 nominations across the country as the winner of the national 2014 Volunteers & Service Restoration Award.

“CSERC has demonstrated their commitment to engaging with the Stanislaus National Forest through partnership and community education; expanding our capacity to meet restoration targets,” said Jeanne Higgins, forest supervisor. “We look forward to having a long-term relationship with CSERC to grow this partnership and increase our capacity to restore the landscape.”

Since 2000, the Stanislaus has received over \$4 million in off-highway vehicle (OHV) funds. A key component to receiving these funds is the ability to match the dollar value with in-kind and volunteer labor.

“We have come to rely on CSERCS’s volunteer expertise in support of restoration projects,” said Fred Wong, district ranger, Mi-Wok Ranger District. “They embody the spirit of citizen stewardship and significantly contribute to the Stanislaus [National Forest] achieving restoration goals.”

For 25 years, the non-profit (CSERC) in Twain Harte, Calif., has worked to protect water, wildlife and wild places. Restoration workdays are the core of what CSERC does. They are instrumental in recruiting and organizing volunteer workdays for a wide range of restoration projects on the forest.

“In a typical year, CSERC staff and volunteers will plant willows in denuded meadows, repair crumbling stream banks, build fences to protect damaged riparian areas, clean up litter along streams or rivers, and build new trails for public use.” said Julia Stephens, volunteer coordinator for CSERC.

Depending on the project, participating in a volunteer restoration event can be like a mini-course in soils, hydrology, wetland delineation, forestry, botany, recreation management, ecology or wildlife. As a demonstrated value to public lands restoration and to volunteers in local communities, it is easy to see why CSERC is an award-winning organization.

“CSERC expands our capacity to meet restoration goals,” said Randy Moore, regional forester for the Pacific Southwest Region of the U.S. Forest Service. “Their dedication to the restoration of these lands fosters strong partnerships between the community and the Forest Service, helping develop good stewards of these valuable resources.”

Published: September 9, 2015

Restoring burned California lands with climate adapted trees

By Keith Riggs



The Forest Service’s Foresthill Divide Seed Orchard maintains valuable and diverse gene pools of major forest tree species. USFS photo/Keith Riggs

After the wildfire has passed and the landscape is scorched, restoration begins.

But what trees and plants should be reintroduced? Will the local populations of a native species be able to survive in a climate that grows hotter and drier each year?

In California, replanting with sugar pine as a component of the species mix will replenish trees that were abundant and much valued by the early settlers to the region. But because of its light weight, dimensional stability and workability, its numbers tumbled because of over cutting.

Sugar pine is the tallest and largest of all pines, frequently reaching a height of 200 feet and a diameter of 60 inches at breast height. The large pendulous cones hanging from long, asymmetrical branches make it easy to identify. Native Americans used the pitch from sugar pine to repair canoes and to fasten arrowheads and feathers to shafts.

Sugar pine harbors a high level of genetic variability, which is important for adaptation and resistance to pests during periods of rapid climate change.

“Climate change is moving too fast for trees to adapt via natural selection. This is why we

advocate assisted migration, also known as managed relocation or assisted gene flow,” said Tom Blush, regional geneticist with the U.S. Forest Service’s Pacific Southwest Region.

Adapted Seed Production

One technique forest geneticists use is to graft a variety of selected older tree’s branches (scions) to sugar pine seedlings (rootstock), establishing a seed orchard which is intensively managed for seed production. The mature scion material grafted on to the juvenile rootstock reaches reproductive maturity rapidly, drastically reducing the number of years necessary to produce adapted tree seeds.

The Forest Service’s Foresthill Divide Seed Orchard is the site for this work. It was established to facilitate conservation and improvement of Sierra Nevada forests. The seed orchard covers 400 acres in the hills above Auburn, Calif. It maintains valuable and diverse gene pools of major forest tree species.

“Our diverse stores of native genetic resources are irreplaceable and critical to the maintenance of ecosystems that are productive, sustainable and resilient to new stresses such as insects, pathogens and climate change,” Blush explained.

Sugar pine is highly susceptible to the exotic white pine blister rust caused by the fungus *Cronartium ribicola* which was introduced to the United States in the early twentieth century. Blush emphasizes that his genetic selection work with sugar pine will make future trees resistant to the blister rust as well as being able to withstand the increased temperatures and reduced precipitation that will come to the Sierra with climate change.

“If climate change proceeds as predicted, a major concern is that planting stock originating from fixed contemporary seed zones (an area within which plant materials can be transferred with little risk of being poorly adapted to their new location) will be growing in suboptimal conditions by the end of the century or sooner,” he warned.



As changes in climate continue, some tree populations will become maladapted to the “new” climate in their existing locations. In some cases, entire species may become maladapted throughout their entire current range. Blush emphasizes that it is imperative to protect genetic diversity for current and future generations, especially for vulnerable species and populations that exist at very few other locations or in groups that are related but widely separated from each other geographically.

He concluded by stressing that maintaining healthy ecosystems in the face of climate change will require new tools, practices and refocused investments in all areas of Forest Service land management, including genetic resource management. Much of that work will be conducted in collaboration with federal, university, industry, state, tribal and non-governmental partners.

Published: September 4, 2015



PIT projects provide data for USFS, experience for students

By Ken Sandusky



Passport in Time volunteers work with U.S. Forest Service archaeologists and historians on the Modoc National Forest during an archeological survey and inventory. USFS photo/Ken Sandusky

Through a sea of brightly colored “pin flags” and old gnarled juniper within the vast sagebrush, some forest visitors may see a small group of Passport in Time (PIT) volunteers of all ages and backgrounds.

PIT volunteers work with U.S. Forest Service archaeologists and historians on national forests throughout the country on diverse activities like archaeological survey and excavation, rock art restoration, archival research, historic structure restoration, oral history gathering, and analysis and curation of artifacts.

Hear more about the value of the program from its volunteers and the staff of the U.S. Forest Service:

Value of the Volunteer to the Program

“This is one project that takes everybody to accomplish,” said volunteer David Loera of Sacramento, Calif.

“We couldn’t do this archeological inventory without the help of PIT volunteers,” said Gerry Gates, Modoc National Forest Archaeologist. “They help make the work more cost effective, and help provide insight and knowledge about heritage resources, and the history of the tribes in the area.”

Value of the Opportunity to the Volunteer

“If you like the outdoors and want to see the beauty of America, Passport in Time gives volunteers an opportunity to help preserve cultural heritage,” said Ray Hanson, from Myrtle Creek, Ore.

“I do a lot of rafting and you’re always moving,” shared Loera. “PIT allows me to move slower and take the time to see many things I might miss during my other outdoor pursuits.”

“All of the Archeology and Heritage employees I have worked with here and all over the country are really competent public servants,” Hanson added. “I’ve not met a fumbler or a bumbler in the bunch!”

Value to Education and Experience

“My education and future career path requires field school, which can be expensive. PIT is a good opportunity to get field experience without paying thousands of dollars,” said UC Santa Cruz Biology and Anthropology major, Rebecca Rottenborn. “This is a great opportunity to gain experience in my own state, where we are studying history that hits much closer to home.”

Madison Henley recently graduated from Western Washington University in Anthropology with an archeological concentration and has also been to field school. “I have found it hard to find opportunities to gain experience on the West Coast,” she said. “These projects are a really good way to get experience and make valuable contacts at the same time.”

Rottenborn and Henley agree on the value of getting to know people in the archeological community on the West Coast. Many have participated in other PIT projects around the country, and every project is organized by knowledgeable individuals.

“Archaeology is a close-knit community,” said Henley. “It’s good to get to know as many people as possible.”

Brooke Harder from CSU-Chico and Scott Jones from Bakersfield Community College assisted the Modoc Archeological Crew with instructing PIT volunteers in archeological field

methods during their six-week volunteer placement provided by the Modoc National Forest Heritage Program.

The information gathered from this PIT project will be available for graduate students to use as subjects for master's thesis topics. Over the years, the Modoc Heritage Program has supported more than a dozen theses and one PHD dissertation.

The studies help the staff better understand the nature of the area's non-renewable archeological resources, and helps improve management methods.

“We have been hosting PIT projects on the Modoc since 1991, and hope to continue in the future. It is a program that helps the Forest to achieve a ‘Heritage Program managed to standard’,” Gates added.” And it’s just plain fun!”

Learn more about Passport in Time (PIT) and how to get involved at:

<http://www.passportintime.com/>. Or hear directly from more volunteers on Facebook [@PassportinTime Volunteers](#).

Published: September 4, 2015

San Bernadino National Forest begins xeriscape project to conserve water

By Paul Robbins Jr.



The severity of the California drought has U.S. Forest Service employees searching for new ways to conserve water on public lands, and employees on the San Bernardino National Forest (SBNF) have found success through a form of landscaping.

Through xeriscaping, a form of landscaping that reduces or eliminates the need for supplemental water from irrigation, the headquarters of the SBNF will use approximately 1.9% of the annual amount of water that was previously required to sustain their lawn. This will equate to 621,500 gallons of water conserved annually.

“We were looking for ways to reduce water consumption because we are required to be more sustainable as good stewards of the land,” said Damon Romero, facilities engineer for the SBNF.

In response to Governor Brown’s water reduction mandate, the SBNF requested and received a micro-grant from the Forest Service’s Region 5 Sustainable Operations Micro-grant program, which seeks to award money for smaller sustainability oriented projects throughout the forests. This enabled the forest to begin xeriscaping the approximately 12,000 square foot compound housing the forest headquarters, which was chosen because it had the greatest

potential for water reduction.

“The goal is to use this pilot project to encourage additional xeriscaping projects throughout the forest and the region,” said Romero.

The large project involves five phases



Time and budget constraints forced the forest to break the large project into five phases, each corresponding with a section of the compound. Each phase involves sod removal, installing a weed barrier, planting flowers, adding drip irrigation, and applying a covering of rocks and wood chips.

The forest completed the first phase of the project early this summer, thanks to the assistance of the Del Rosa and Mill Creek Hot Shot crews, Front Country engines, and dozer operators. Led by Del Rosa Fire Captain David Borero, the firefighting crews completed phase one ahead of schedule and kept the total cost to \$7,800 (\$5,000 paid by the micro grant).

“Their strong work ethic helped get the project done in a timely manner and helped keep the project’s cost within budget,” said Manuel Villegas, a maintenance mechanic for the SBNF. “Forest Service firefighters have a tradition of volunteering for difficult and critical jobs, and this xeriscape project is no different.”

The SBNF expects to begin and complete the second phase of the xeriscaping project in the spring of 2016. This is the first of many planned xeriscaping projects on the forest. Future projects may include assistance from the city of San Bernardino, whose officials have shown interest in collaboration.

Published: September 1, 2015

Summer interns choose Plumas National Forest for life-changing experience

By Jeremy Croft



Wayne Castellino (kneeling), an intern from Feather River College, measures dissolved oxygen in a Red Clover Valley pond under the supervision of Daryl Hodges, forest fisheries biologist for Plumas National Forest, July 28.

Up before the summer's dawn, tired bodies clamber into a truck and rumble down a highway, then over dirt roads. At their destination, they step into hip waders while the sun begins to peek over the horizon. By the time its whole orb is visible in the east, Justine Lee and Wayne Castellino have already surveyed three meadow ponds for dissolved oxygen levels, gathering crucial information for maintaining healthy fish populations on the Plumas National Forest (PNF).

This is the life of interns from Feather River College (FRC) working on the PNF from June through August in a variety of fields, from wildlife biology and forestry to geographical information systems and road maintenance. Lee and Castellino, both seniors at FRC, are two of the 20 interns working on the forest this summer.

"I enjoy working outside," said Lee. "And working with a government agency is a great learning experience."

For Castellino, the chance to gain hands-on experience motivated him to seek an internship with the U.S. Forest Service.

“I wanted the opportunity to work in a field I’m interested in, to interact with professionals in the field and see what the job is like,” said Castellino.

The partnership provides benefits to the forest as well, by creating more stewards interested in caring for federal lands. Matthew Johnson, intern coordinator for the Plumas National Forest, acknowledges the agency’s interest in developing long-term forest caretakers.



“We’re involving the local community in the stewardship of our forest,” said Johnson. “By getting these students the experience and training they need, and by working with the college, we can help them succeed in acquiring jobs locally or with the Forest Service.”

According to Rick Leonhardt, intern coordinator for Feather River College, an internship teaches valuable “soft skills” applicable to any work environment, skills like resilience, self-awareness and empathy.

“The interns have to get out into the field and do real work,” said Leonhardt. “When they finish this program, they’re much more marketable as employees.”

The partnership between PNF and Feather River College is a recent venture, beginning in 2014. In that short span, it has provided dozens of interns with valuable, hands-on experience in their fields, and satisfied the students’ need for paid work.

“As far as summer jobs go, you can’t get much better than this,” said Castellino. “You go to bed at night feeling like you’ve contributed something good.”

For more information about FRC internships available on the Plumas National Forest, please contact Rick Leonhardt at (530) 283-0202, extension 358, or Matthew Johnson at (530) 283-7827.

Published: September 1, 2015

Artists-in-Residence on San Gabriel National Monument

Story By Marta Call



A color drawing by Kelly McFall depicts an amphitheater on the San Gabriel Mountains National Monument. McFall was one of ten local artists chosen for a free one-week stay at Crystal Lake recreation area, in exchange for hosting an open house or workshop, and donating one piece of art generated from the stay.

National monuments encompass landscapes that are beautiful, diverse, historic and of scientific interest. The San Gabriel Mountains National Monument is no different, and all of these features were made available to local artists during the new Artist-in-Residence program sponsored by the Angeles National Forest.

Artists from Los Angeles and surrounding areas were invited to participate in a one-week stay at Crystal Lake recreation area sometime between June and October, 2015. Twenty-four applicants submitted a wide variety of non-traditional creative projects for consideration, and a selection committee, composed of eight members of the local art community, chose the top 10 submissions. The selected artists each hosted an open house or a workshop during their stays, and donated one piece of art to the forest.

The program's focus is twofold. First, the resident artists spend a week on the forest, hopefully gaining inspiration for their art and also sharing their talents through interaction with forest visitors. Second, the forest receives donated artwork with a local flare to share with other

forest visitors.

Singer/songwriter Michael Zigon, of Los Angeles, gave classes every day—including guitar lessons—and hosted several survival skills workshops. In the tradition of nature artists John James Audubon and nature writer Aldo Leopold, artist Kerry McFall, from Corvallis, Ore., created a field guide/sketchbook of her time on the monument. During her week on the monument, she noticed the connection between art and nature enhanced everyone’s experience.

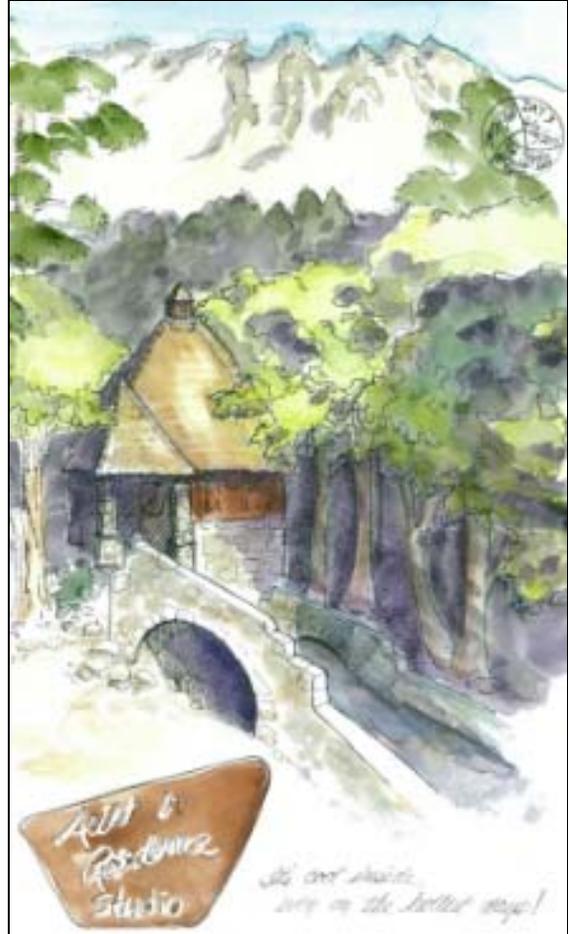
“I was really impressed by the effect the artist-in-residence program had on the public, said McFall. “By connecting visitors with art in the outdoors, their experience of the forest was that much greater.”

This was the inaugural year of the Angeles National Forest’s Artist-in-Residence program, with participants and organizers alike encouraged by the results. Chris Fabbro, the volunteer coordinator for the Angeles National Forest, worked closely with Ann Bond from the San Juan National Forest to mirror a similarly successful program in Colorado.

“She helped us avoid reinventing the wheel,” said Fabbro. “Collaborating with her and non-profit partners like the Angeles Volunteer Association provided the support we needed to make this first year successful.”

The Artist in Residence program resulted from the California Regional Forester’s invitation for Forest Service employees to devote a portion of their work week to creative projects. Chris saw an opportunity to repurpose underused buildings to host the artists, while creating a new, low-cost feature to enhance visitors’ experiences on public lands.

The Angeles National Forest will be inviting the public to a showing of the collected art in the spring of 2016. Any artists or volunteers interested in being involved with this program should contact Chris Fabbro at 626-574-5226 or email at cfabbro@fs.fed.us



Published: August 25, 2015

Videos Released by California ReLeaf, Save Our Water & U.S. Forest Service

These new videos educate viewers to the benefits of trees to California and the importance of caring for trees in times of drought. The videos take viewers step-by-step through the watering process, ensuring trees get the water they need without waste.

Watering Mature Trees

- You can view this video on [YouTube](#)

TIP: Deeply and slowly water mature trees 1-2 times per month with a simple soaker hose or drip system toward the edge of the tree canopy—NOT at the base of the tree. Use a Hose Faucet Timer (found at hardware stores) to prevent overwatering. And add 4 – 6 inches of mulch to save water!

Watering Young Trees

- You can view this video on [YouTube](#)

TIP: Young trees need 5 gallons of water 2-4 times per week. Create a small watering basin with a berm of dirt and use a 5 gallon bucket as a big measuring cup. And add 4 – 6 inches of mulch to save water!

Trees provide many benefits like shade, clean air & increased property values. *Learn how to care for your trees to keep them alive during the drought.*

Published: August 17, 2015

U.S. Forest Service supports 2015 World Special Olympics

Story By Paul Robbins Jr.



Jose Henriquez-Santos (left), a landscape architect, and Joanna Huckabee (behind), an archaeologist, both with the Angeles National Forest, discuss the types of prizes available on the wheel with visitors at the U.S. Forest Service booth at the World Special Olympics in Los Angeles, July 26. Employees of the Angeles National Forest/San Gabriel Mountains National Monument were joined by employees and volunteers from national forests all over California to staff an informational booth on the University of Southern California campus, July 23 – Aug. 2. The booth helped inform athletes and spectators about the accessibility of national forests and monuments, while helping to spread the message of wildfire prevention.

A small but enthusiastic group of volunteers joined a famous bear and well-known owl to support an international competition attended by more than 100,000 people from all over the world. The U.S. Forest Service was a proud partner of the 2015 World Special Olympics in Los Angeles recently.

Employees of the Angeles National Forest/San Gabriel Mountains National Monument were joined by employees and volunteers from national forests all over California to staff an informational booth on the University of Southern California campus, July 23 – Aug. 2. The booth helped inform athletes and spectators about the accessibility of national forests and monuments, while helping to spread the message of wildfire prevention.

Visitors to the booth received brochures, booklets and coloring books on topics ranging from environmental conservation to Smokey Bear's principles. But the most popular item at the

booth was the prize wheel, available for anyone to take a turn. Every spin earned a prize from the table, which included: pins, Frisbees, bracelets and other great gifts. The fun, interactive activity helped to bridge the language barrier for many of the international participants.

“The fan favorite was definitely the (prize) wheel, which was a great way to interact with those who didn’t speak English or Spanish,” said Joanna Huckabee, an archeologist for the Angeles NF.

Tens of thousands of athletes, families, and other spectators made their way through the USFS booth and left with hands full of free gifts and information. The booth remained busy throughout the 10-day event, but saw its highest activity during special appearances by furry and feathered friends of the forest. Frequent visits by Smokey Bear, Woodsy Owl, and K-9’s from USFS Law Enforcement drew large crowds.

“Whenever Smokey, Woodsy, or (the K-9’s) were present, people were lining up to have their pictures taken,” said Martin Dumpis, the regional forester’s representative for ecological restoration in Southern California. “There never was a dull moment at the booth.”

Being a part of the largest event in the city of Los Angeles since the 1984 Olympics was an honor for USFS employees and volunteers alike. Everyone involved was proud to know they had made a positive impact on so many people from so many places.

“All across the world, athletes and their coaches will remember where they got the Smokey Bear pin, Frisbee, bracelet and other gifts,” said Dumpis. “More importantly, they will remember who gave it to them.”

Published: August 14, 2015

Wildfire smoke monitors working to reduce health and safety impacts

Story By Keith Riggs



Environmental Beta Attenuation Monitors (E-BAMs) are portable particulate monitoring stations. They are one technological tool used to monitor smoke. They can transmit their data via satellite to a central location for analysis.

Smoke from wildfires can have an enormous impact on the public and on fire personnel, affecting health, interfering with transportation safety and upsetting tourism and local economies.

Trent Procter, like all U.S. Forest Service Air Resource Advisors, is a technical specialist with expertise in air quality science, including: air quality monitoring, smoke modeling, pollutant health thresholds and communicating about smoke risks and mitigation.

“Smoke from wildland fire is a significant source of air pollution. It can pose potential risks to health, visibility, safety and general nuisance problems. Forest managers, fire managers and air resource specialists must address these issues when and where appropriate to minimize smoke impacts to public health and welfare,” he explained.

Exposure to smoke, either for the public or firefighters, is a concern because a large proportion of wildland fire smoke emissions are fine particulate matter that can penetrate to the deepest parts of the lungs.

Air Resource Advisors can be dispatched to an incident to assist with understanding and predicting smoke impacts on the public and on fire personnel. Whenever smoke is a concern, their objective is to provide timely smoke impact and forecast information and messages based on best-available science.

Technology plays a big part in this forecasting process.

“Satellite images, monitoring data and smoke modeling projections all inform the typical smoke forecast,” Procter explained.

The Forest Service works with partner agencies to deploy “real time” monitoring <http://app.airsis.com/usfs/fleet.aspx> into communities and locations where instant feedback is helpful in keeping the public and health officials informed. The monitors transmit the smoke concentrations to satellites and then back to web-based tools that help provide the smoke concentrations seen in the forecasts.

Air Resource Advisors work with multiple agencies to address public health concerns, smoke risk to transportation safety and fire personnel exposure, as well as how to reduce and mitigate smoke exposure.

As the Pacific Southwest Region’s Air Quality Manager, Procter’s work takes him throughout the state, and during this year’s drought-fueled wildfire season, he’s been busy coordinating with other agencies for appropriate response to smoke.



“The success in bringing helpful information to the public in California is a credit to our partners at the air pollution control districts and the California Air Resources Board. The staffs in these agencies are professional and so very dedicated to an emergency response that helps the public reduce or manage their exposure,” he said.

Before igniting a prescribed fire - a fire being used for specific land management objectives - managers must identify smoke-sensitive areas such as communities, hospitals and highways

and use appropriate mitigation and evaluation techniques to minimize smoke impacts. Weather, climate and air quality monitoring data are used by fire managers to customize smoke management techniques as needed in these cases.

"In the case of wildfires, where managers have little or no control over what burns, many times it's a matter of understanding fire behavior, fuel combustion and suppression techniques," Procter explained.

"That enables us to understand how those features and management actions will play out with weather forecasts and subsequently allow a credible forecast of where smoke will go—or sometimes, more importantly, where it won't go. Our recent efforts to improve wildfire smoke forecasting are allowing us to learn much that can improve our smoke management techniques in prescribed fire projects."

Procter cites the blog, "California Smoke Information" <http://californiasmokeinfo.blogspot.com> as a central point for smoke related information. The site is a voluntary effort by city, county, state, tribal and/or federal agencies to coordinate and aggregate information for California communities affected by wildfire smoke. It includes current air quality reports and maps, satellite images, and fact sheets and information about the health effects of smoke, and protection methods.

Published: August 12, 2015

Lake Tahoe Basin employee recognized as environmentally exemplary

By Lisa Herron and Paul Robbins Jr.



When Joy Barney arrived to the Lake Tahoe Basin Management Unit (LTBMU) in 2007, she was shocked by the lack of involvement by local high school students in their own environment. Many hadn't hiked a trail or been boating on the lake, and most couldn't identify the trees growing in their own back yards. She was determined to correct this.

Barney founded the Generation Green of Lake Tahoe program, which educates high school students about the environment, and gives them work and volunteer experience through the Forest Service. She also helped found the South Tahoe Environmental Education Coalition (STEEC), which provides 1,500 hours of environmental education to local schools annually.

"Seeing that the opportunities that draw people to Lake Tahoe from all over the world were not being used by local youth inspired me to focus our conservation education on the local community," said Barney, the conservation education coordinator for the LTBMU.

Her exceptional work with both programs was acknowledged June 24, when she was recognized as an exemplary agency representative.

Barney was presented with The Lake Spirit Award by LTBMU partner, the Tahoe Regional Planning Agency (TRPA). The award recognizes individuals who possess a strong personal commitment to preserving Lake Tahoe and whose passion results in progress and

environmental improvements.

“This year’s winners have shown amazing commitment by going above and beyond to protect Lake Tahoe,” said TRPA Environmental Education Specialist Devin Middlebrook. “When it comes to creating environmental improvements on the ground, everyone has a role to play.”

Barney was honored by the recognition and looks forward to continuing her work in conservation education with the local community.

“I am passionate about the natural beauty that surrounds us here in Lake Tahoe, and I want to inspire others to love it and take care of it,” said Barney.

Read more about this year’s winners at <http://www.trpa.org/trpa-recognizes-lake-spirit-award-winners-2/>.

Published: August 12, 2015

Forest Service entertains, educates at California State Fair

Photos and Story By Paul Robbins Jr.



U.S. Forest Service staff greet visitors at the entrance to Camp Smokey at the California State Fair. The USFS funded and staffed multiple exhibits at the California State Fair, July 10-27, to provide a fun, interactive and educational experience for visitors.

SACRAMENTO, Calif.—When thousands of people pour through the gates of the California State Fair, their thoughts are typically on carnival rides, prize games and funnel cakes. But in addition to the typical frills of the fair, visitors this year were treated to an interactive experience with their national forests.

The U.S. Forest Service (USFS) funded and staffed multiple exhibits at the California State Fair, July 10-27, to provide a fun, interactive and educational experience for visitors. The attractions provided an engaging atmosphere to promote messages of fire prevention, conservation and the benefits of healthy forests.

“It gives us a chance to welcome the public to the national forest and let them know it is theirs to enjoy,” said Dale Miller, a forestry technician for the Amador Ranger District, Eldorado National Forest.

Camp Smokey

The largest and only permanent USFS exhibit in the fair is Camp Smokey. It is a multi-agency effort, staffed by USFS employees, Generation Green Team students, CALFIRE, the Bureau of Land Management and others.

Visitors began on a short trail, led by a forest service employee, where they learned about safety and “Tread Lightly” principles for the forest. Then they visited small, brightly colored houses where they were presented with information on: wildfire behavior, the history of Smokey Bear, in-home fire safety, and how to Stop, Drop and Roll. The visit culminated in a puppet show for the children, and a visit from Smokey Bear.

“I love watching the children when their eyes light up and they ask questions,” said Miller. “It’s even more fun when it’s coming from mom or dad.”

Camp Smokey also featured a booth from the California Firewood Task Force. Children who visited the booth were given temporary tattoos of the gold-spotted oak borer, a beetle that has killed thousands of oak trees in San Diego County. Their goal was to educate the public about firewood as a source for invasive tree-killing pests.

Green Dream Exhibit

The Green Dream Exhibit is a partnership with Western Chapter International Society of Arboriculture and the U.S. Forest Service with the goal of educating Californians about their urban forest and trees. It consists of the “Tree Circus” and an Ask the Arborist booth. The booth helped to educate the public on the role of urban forestry in their communities, while the circus added some fun to learning. Children of all ages were encouraged to ascend ropes using available harnesses, reaching heights of more than 25 feet if able.

“The Tree Circus educates and inspires young tree lovers to climb like a professional in the ‘indoor urban forest,’” said Miranda L. Hutten, Urban & Community Forestry program manager for the Forest Service’s Pacific Southwest Region.

The Forestry Center

Managed by the Forest Foundation, the California Forest Center taught visitors about California forests, wood products, and important forestry issues. The center offered a shaded nature trail with 40 native species of trees and a variety of rescued animals. There was also an informational center where visitors were able to inspect casts of animal prints and scat commonly found in California forests.

The Forest Service’s Generation Green team, consisting of students from the Central Valley to

Sacramento, helped staff the information center.

Continuation

With a focus on fire safety and goals of increasing support for conservation efforts throughout the state, the Forest Service and its many partners hope to continue their inclusion with the California State Fair and its visitors. The appreciation is evident in the reactions of visitors to the unique exhibits, and the staff enjoys the opportunity to display their passion for the forests.

“There are times when I am (at the Cal State Fair) that think I have done more to protect our environment than when I am (working on the Eldorado),” said Miller.

Published: August 7, 2015

Lassen National Forest, community partners educate kids on public lands

Story by Joyce El Kouarti, Lassen National Forest Public Affairs Officer; photo courtesy of Lassen Land and Trails Trust



The Lassen National Forest (LNF) and partners in the community are bringing area youth onto the forest to help improve environmental education for school children.

Reduced budgets for environmental education in Lassen County have led to reduced awareness regarding the importance of public lands and their resources, such as fish and wildlife habitat, native plants, soil productivity, and the ecosystem services provided.

In response, the LNF partnered with Lassen Land and Trails Trust (a local nonprofit land conservation organization), the Bureau of Land Management (BLM), and the Lassen County Office of Education to create the Lassen County Environmental Education Collaborative (LCEEC). The group brings together school administrators, classroom teachers,

“By sharing resources and expertise, we’re able to provide programs that expand kids’ outdoor experience,” said Jessie Diermier, the LCEEC coordinator.

“We’re also able to serve our public lands through on-the-ground projects designed to improve our natural and recreational resources.”

youth program leaders, natural resources professionals from the LNF, and others to help children understand the importance of public lands, and natural and cultural resources.

Environmental Education Programs

The *Nature Camp* program takes place in LNF’s Eagle Lake Ranger District every summer, helping children from third through sixth grade discover what makes the forest unique. Camp staff and natural resource professionals take the kids hiking, climbing and wading through creeks to learn about the hydrology, wildlife, botany, geology, archeology and heritage of the region.

“Nature Camp is very fun,” said Emmalee Rotlisberger, a participant in Session 2. “If you love rivers, hikes and learning then you will love this!”

The *Youth Camp in the Forest* program takes place on 67 acres of habitat on the eastern shore of Eagle Lake. This unique area offers access to mountains, high desert, alpine forests and meadows, marshes, streams, brush-filled flats, and the lake. Sixth-grade classes come to enjoy the biodiverse area while learning from natural resource professionals. Students enjoy hands-on learning centered on the watershed; flora; fauna, such as the Eagle Lake Trout and Western Grebes; and other outdoor science lessons.

Using the core education standards adopted by the State of California, the programs present a grade-appropriate curriculum focused on life and earth sciences. Learning about the ecosystems from within gives the students a unique perspective when presented with scientific knowledge in the classroom. Every student keeps a journal of their experience, which is evaluated in the end by looking for key words and concepts.

These programs are just a few of many that the LNF undertakes to strengthen their stewardship of public lands in California. With the capacity to create future stewards and responsible users for decades to come, the LCEEC programs are favorites on the forest.

“Lassen National Forest is proud to be a partner in the Environmental Education Collaborative,” said Eagle Lake District Ranger Matt Boisseau. “These programs are perfect

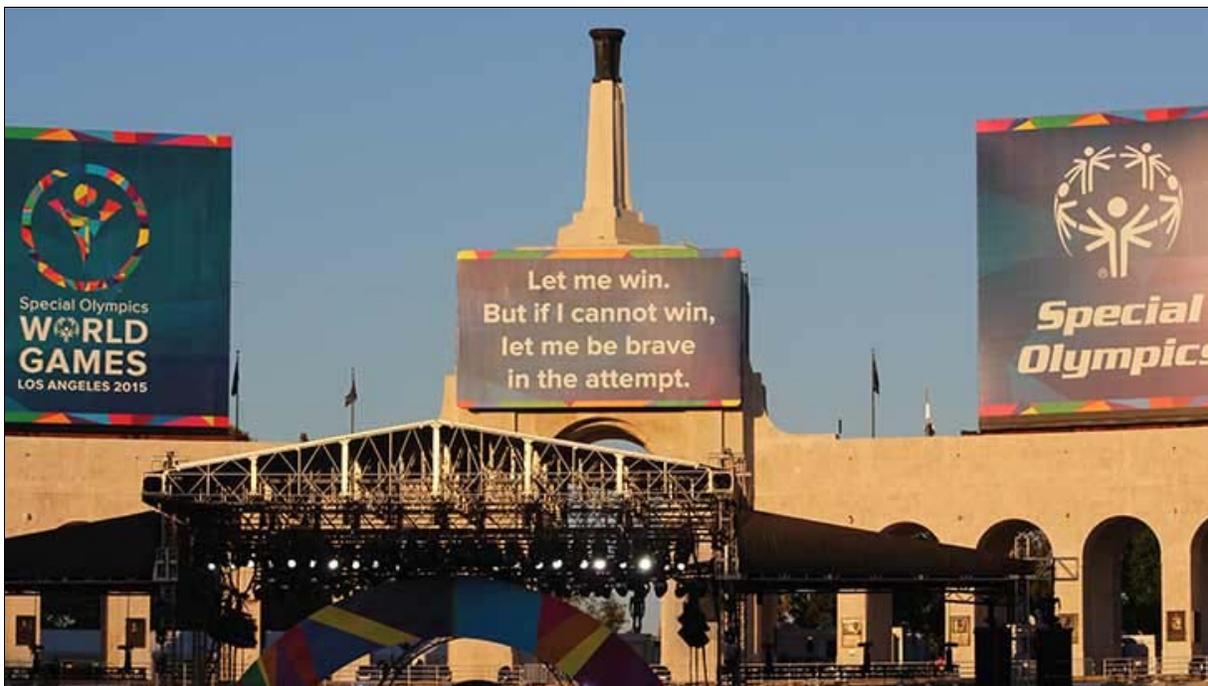
“The goal of these elementary education programs is to teach children how to integrate their experiences to reach a complete understanding of natural resources and their importance in the community,” said Diermier.

“We’re not only trying to strengthen science capacity, but also promote an understanding of self and the world.”

examples of the kind of community partnerships that we strive for.”

Published: August 3, 2015

Anges National Forest participates in Special Olympics World Games



Opening ceremonies for the 2015 Special Olympics were held at the Los Angeles Memorial Coliseum.

The U.S. Forest Service is a proud supporter of the 2015 World Special Olympics, currently being held at the USC Campus in Los Angeles. Staff members from various national forests are operating an informational booth for the duration of the competition, located in front of the Edward L. Doheny Memorial Library.

Participants and spectators are encouraged to stop by for information on the new San Gabriel Mountains National Monument, wildfire prevention tips, visits from Smokey Bear and Woodsy Owl, and a wide variety of free gifts.

Published: July 29, 2015

Student Trail Crew assists in Moonlight Fire Restoration

By Jeremy Croft



High above the floor of Indian Valley, near the town of Taylorsville in the Plumas National Forest, the rhythmic sound of picks and shovels displacing earth echoes across the tree-covered slopes of Keddie Ridge. Downhill from charred acreage impacted by the 2007 Moonlight Wildfire, high school students are hard at work, rebuilding a trail altered by landslides.

Plumas National Forest is continuing a productive partnership with the Sierra Buttes Trail Stewardship Student Trail Crew in the form of a conservation and mentoring program that benefits both forest infrastructure and the students' lives.

The partnership identifies trails in need of clearing or other improvements, and then completes the work while teaching high school students the profession of trail maintenance, according to Michele Jimenez-Holtz, an education liaison and fire restoration coordinator for the Mt. Hough Ranger District of the Plumas National Forest. Students also learn the mandates of "Leave No Trace" camping, wilderness survival skills, leadership skills, team-building and personal responsibility.

"We teach them responsibilities like cooking their own meals and cleaning up camp." said Lathecia Watson, a crew leader for the student trail crew. "They learn a lot of respect for



themselves.”

Watson was a participant with the Student Trail Crew for two years before she was hired as a crew leader. She traces her enthusiasm for the forest to her Maidu ancestry and her family’s love for outdoor activities. The Maidu are a Native American tribe from the area.

“I felt at home on the trail crew the first day I came out for orientation, my first year,” said Watson, a student at Feather River College, majoring in environmental studies and forestry. “I really think this program has changed me—it’s made me a better leader.”

For Michael Fowler, a student crew member from Quincy, the program provides an opportunity to enjoy the outdoors while making

a difference. During this year’s iteration, Fowler and his colleagues have repaired and reconstructed portions of both the Peters Creek Trail in Plumas National Forest and the Soda Springs Trail in Lassen National Forest.

“It would be amazing to be a trail crew leader next year,” said Fowler. “This is the best way I can think of to spend my summer.”

Published: July 17, 2015

Forest Service employs special advisors for fire restoration

By Gerrelaine Alcordo



When the Incident Management Team deployed to the recent Lake Fire, it wasn't just firefighters and aircraft pilots on scene for the 31,359 acre blaze. Containment, suppression and restoration efforts all require assistance from a specialized group of advisors.

The Resource Advisor Group consists of resource experts who can provide information on how the fire, and efforts to fight it, will affect the ecosystem and its restoration. These specialists include biologists, archeologists, botanists, and wilderness and recreation specialists.

“The resource advisor’s role is vital during and after because they provide insight on how the fire suppression efforts damages may affect the area if not properly repaired,” said Jaime Gamboa, forest fire chief on the San Bernardino National Forest.

One of the primary functions of the group is to document impacts from suppression activities and recommend repairs to minimize further effects. After the fire area is deemed safe by firefighting personnel, advisors work side-by-side with suppression crews to document and implement suppression repair plans. Repairs can range from pulling brush back over a fire line and securing the area to prevent further disturbance, to researching native plants in the area to ensure re-planting returns the area to its original state, according to David Austin, forest

biologist, San Bernardino National Forest.



The advisors also partner with the U.S. Fish and Wildlife Service, State Fish and Wildlife Agencies, and Tribal organizations to develop repair standards that consider shared resources and yield the best possible results.

“We work with the team to minimize impacts on all of the resources within the forest,” said Austin. “These resources include sensitive species, threatened endangered species, recreation facilities, historical sites and cultural

sites.”

The U.S. Forest Service’s resource advisors are a part of the organization’s commitment to using the best scientific knowledge in making decisions and promoting the health, productivity, diversity and beauty of forests.

Published: July 16, 2015

Plumas National Forest trains teens to be forest caretakers

By Jeremy Croft



Caring for the more than one million acres of scenic mountain lands in the Plumas National Forest takes an enormous amount of time and energy, which happen to be two things teenagers have in abundance.

A partnership between the forest and Plumas Conservation, Restoration and Education in Watersheds (P-CREW), aims to bring the enthusiasm and longevity of youth to bear on conservation efforts.

Every summer, the forest hosts collaborative efforts with community partners to teach high school students the fundamental skills of trail maintenance and construction, ecological restoration, fuels reduction, and wilderness survival. This is the first year of partnership between the forest and P-CREW, according to Michele Jimenez-Holtz, an education liaison and fire restoration coordinator for the Mt. Hough Ranger District of the Plumas National Forest.

“The students help us get a lot of work done on the ground,” said Jimenez-Holtz. “And we’re giving them an opportunity to learn about watersheds, ecology and fire-adapted ecosystems.”

P-CREW is the result of coordination between Plumas National Forest and the Sierra Institute, pairing high school students from Plumas County with youth from Oakland and other cities in



the San Francisco Bay area. During two five-week internships, a total of 24 high school students learn how to manage forest lands during the recovery period after wildfires. In addition to the knowledge they receive in forest management, the students claim the experience of building a team in a diverse, multicultural environment is invaluable.

“Everyone’s different, and it’s important to take other people’s needs into account, as well as your own,” said Owen Gleaton, a participant in P-CREW.

Eric Willadsen, an adult crew leader for P-CREW, believes the water resources in Plumas County have been the key to bringing the geographically and culturally diverse group together, because of the wider impact on northern California.

“The water in the Plumas National Forest is the drinking water for the Bay Area,” said Willadsen. “That’s been a huge connecting theme between the students from the Bay Area and the local students.”

In addition to studying water-related topics, the students of P-CREW have participated in numerous fuels reduction and noxious weed removal projects, achieved their CPR certifications, and surveyed owl and goshawk habitats with wildlife biologists.

Published: July 16, 2015

Walking the trails of history, tragedy at Mendocino National Forest

Story and Photos by Paul Robbins Jr.



Daren Dalrymple, a former Hotshot firefighter now serving as the fire and fuels planner of the Mendocino National Forest, looks upon the spot where most of the 15 firefighters that were killed in the 1953 Rattlesnake Fire fell.

It took almost an hour of driving to reach our destination. Daren Dalrymple, a former Hotshot firefighter now serving as the fire and fuels planner of the Mendocino National Forest, used the time to explain how this staff ride was normally used as a “lessons learned” activity for firefighters from all over the United States. Recounting the events of the 1953 Rattlesnake Fire helps firefighters prevent it from happening again, and ensures the brave men who lost their lives are never forgotten. For those of us that don’t fight fire for a living, the latter purpose remains relevant.

Our first stop was more than a mile from where the worst of the fire happened. Standing at the base of a fork in the road, Dalrymple explained the significance of the location as where Forest Service firefighter Archie Miller first spotted the smoke of the fire. Dalrymple also highlighted the weather as we examined the site, because the 90 degree temperature and moderate winds were similar to weather conditions on July 9, 1953.

The second stop was up Alder Springs Road to the right of the fork, where the road curves left around Oleta Ridge. There was a deep slope leading down into a valley on the right, and the



steep rising slope of the ridge on the left. The average grade in the canyon is 55%, with a high of 90% at some points. The slopes are also riddled with thick brush, primarily chamise, most of which matched my height of six feet. Standing at the base of the slope, just past the bend, Dalrymple explained how the qualities of the chamise, part of a chaparral ecosystem, make it a prime fuel source for fire. He also pointed out the spot where an arsonist purposely started the fire that would kill 15 firefighters.

The Fire Begins

The fire was started at approximately 2:20 p.m., smoke was spotted at 2:30 p.m., it was reported at 2:40 p.m., and an engine from Alder Springs arrived with a five-man crew at 3:15 p.m. Burning for nearly an hour at that point, the fire had moved up the ridge and out of the reach of their hoses, so the crew began hand line construction on the backside of the ridge. Hand line construction means cutting a path through the foliage in order to run a 2.5 inch diameter fire hose up the ridge.

At approximately 4 p.m., Charles Lafferty, fire control aid, arrived to take charge of the effort. He immediately pulled the crews (15 firefighters on scene by this point) back from Oleta Ridge, and moved up the curving road to Powderhouse Turn, ahead of the fire, where forest engineer J.M. Ewing took command. His plan was to use the existing fuel breaks (areas with no plant growth, therefore providing the fire no fuel to continue) of Alder Springs Road and a road atop Oleta Ridge, position firefighters to prevent the fire from jumping over the breaks at any point, and intentionally burn to Powderhouse Turn.

Visualization of the Weather Pattern

Standing at Powderhouse Turn, Dalrymple and I looked back to into the canyon as he explained the firefighting plan, which he admitted is one they would likely follow today in a similar situation. With a sound plan, the crews set upon their tasks with efficiency, controlling

the head of the fire by 5:30 p.m. and completing the lines for the fuel breaks by 6:40 p.m. It was nearly an hour later, after more crews had arrived and the controlled burning operation began, that weather conditions would foul the plan and lead to tragedy.



To explain how and why, Dalrymple turned me away from the site of the fire to peer back into a large valley on the other side of Powderhouse Turn. The valley ended in a mountain range, and on the other side of that mountain range was the ocean. Throughout the day, heat rising up and out of the canyon toward the ocean creates the upslope winds that helped fan the fire at Oleta Ridge. As the sun sets and temperature cools, however, the wind changes direction, coming back from the ocean and creating downslope

gusts. Accentuated by a deeper than usual coastal marine layer, the reversed flow can generate stronger wind speeds than normal. This was the case for the Rattlesnake Fire.

The Fire Whirl

It started with winds dying down at approximately 7:30 p.m., slowing the controlled burn to Powderhouse Turn. Twenty minutes later, a recess on Oleta Ridge caught a brief change in wind direction, creating the conditions for a fire whirl (a burning dust devil). The whirl threw embers over Alder Springs Road, creating multiple spot fires below and one across the canyon on Powderhouse Ridge that were noticed at 8:15 p.m. The spot fires below the road were immediately attacked and extinguished, but the one across the canyon was left alone while firefighters focused on the larger effort.

At 9 p.m., when the upslope winds subsided completely, four firefighters were dispatched for initial attack on the remaining spot fire. Fifteen minutes later, a crew of 15 from the New Tribes Mission was dispatched to the spot fire after completing their work atop Oleta Ridge. Thirty minutes later, Robert Powers, an assistant ranger for the Mendocino NF, plus four, were dispatched with food for the spot fire personnel. After Powers' crew arrived with the meals, all 24 gathered in a draw on the east side of the spot fire, where they were unable to see Powderhouse Turn.

Changing Winds Lead to Tragedy

At 9:45 p.m., roughly the same time the spot fire crew gathered for their meal, the flow of air



began from the west. The controlled burn crew stopped operations just shy of Powderhouse Turn, but not before the shifting winds caused new spot fires in the canyon below the turn, less than 100 yards west of the 24 firefighters. Lafferty left immediately to warn the firefighters, climbing Powderhouse Ridge along a newly created dozer line until he could see headlamps, then shouting for the men to head east and down in a hurry. The firefighters broke into two groups, nine heading straight up the

slope of the ridge to the fire break, and 15 heading east with the intent of descending below the fire. The nine made it to the fire break safely at 10:30 p.m.

The strength of the winds coming back from the ocean was enough to carry the fire quickly east through the canyon, rather than up the slope as fires typically burn. Despite following instructions and heeding their training, the 15 fire fighters were chased east by the wind-driven fire that caught them at 10:41 p.m. Dalrymple explained this as we stood in the cleared area where the 24 firefighters first stopped to eat. He then showed me the escape routes the two groups took from that position.

Walking Their Path

As I stepped into the path of the 15, now cleared of chamise for the ease of visitors, I found myself in awe of the task they faced to escape the blaze. On either side of the path rose a wall of vegetation that would not only resist progress with its thickness but grab and tear at garments as a person passed through. The challenge of pushing through the vegetation was made even more formidable by the uneven slope of Powderhouse Ridge, requiring the men to climb steep grades through the wall of brush.

The burning in my legs as we ascended the loose dirt of the incline furthered my reverence for the escape effort. I, a recently separated Marine, labored to move up this freshly cleared path. The firefighters had been doing backbreaking work for eight hours before they were forced to carve their own path through this terrain with flames closing in. As I stood atop the first crest, looking down upon the large, white cross dedicated in their honor, I felt the enormity of their challenge. Even with cut trails, the canyon offered no easy path.

Another 50 yards of treacherous downslope led us to the memorial site, where Dalrymple explained the hundreds of weathered t-shirts and hats left by firefighters who had been a part



of the staff ride or simply visited the memorial. The vantage point also provided a clear view of the 15 smaller crosses scattered across the ridge above, each where a firefighter fell. Two stand 20 meters further up the slope than any others, because they had broken away from the group to make for the fire break at the top. A single cross sits hundreds of yards to the east and further down the valley, marking the youngest and fastest of the crew. Two more are planted just east of the memorial cross, the first of the main group to fall. The other nine are huddled together in a clearing less than 20 yards further, where the fire caught up to them all.



Another short, but difficult walk over rough ground saw me standing before the group of nine

crosses. From there, peering back to their starting point was astonishing. What must have felt like miles to the 15 looked less than 200 yards from where we stood. But to traverse that difficult ground in the minutes it took for the fire to overtake them was a physical feat deserving of respect and admiration. The entire trip, from personally experiencing the terrain to the vivid accounts provided by Dalrymple, was humbling.

Walking in the footsteps of those brave men is a unique experience that provides perspective on the challenges our firefighters face when battling the unpredictability of nature's destructive forces. This experience, and the perspective it provides, is available daily on the Mendocino National Forest.

Groups interested in a guided tour of the Rattlesnake Fire Memorial can contact the Dispatch Center for the Mendocino National Forest at 530-934-7758.

Published: July 13, 2015

Maintaining the safety, utility of your recreation areas: Paige Makowski

Story and Photos by Paul Robbins, Jr.



Paige Makowski, a recreation technician for the Stonyford Area of the Mendocino National Forest, inspects a vial of potable water for a campground for contaminants on June 4, 2015.

The Stonyford Area of the Grindstone Ranger District offers some of the most enjoyable and challenging off-highway vehicle (OHV) routes in the nation. It also gives visitors access to seven campgrounds, four of which are dedicated to recreational vehicles. The area is riddled with hiking trails and picnic areas, features lake and stream fishing, and contains approximately 96,000 acres of alluring forestland to explore. And all of this is maintained for your leisure by Paige Makowski.

Makowski is a recreation technician with the U.S. Forest Service, assigned to care for the Stonyford Area of the Mendocino National Forest. Assisted by just two other technicians, she spends her days patrolling and evaluating the massive range of land under her care.

The responsibilities of a recreation technician are numerous and varied, with the two most time consuming being maintenance and hazard detection. Makowski maintains and repairs signage, tables, restrooms, and all other features of the Stonyford campgrounds. She also surveys more than 100 miles of the OHV trails to detect potential hazards like fallen trees and debris, removing unnecessary dangers to OHV enthusiasts.



“Our recreation staff in the field is critical to ensuring our visitors have a great experience in the forest,” said Grindstone implementation officer Lori Cayo. “Technicians like Paige do a lot of the hard tasks, and we truly appreciate everything our recreation staff accomplishes in the field, every day,”

Makowski also monitors the drinking water for all campsites, ensuring optimal temperature, chlorine levels and output. She trims foliage around camping areas for tick prevention, collects fees for the various activities, and enforces all rules and regulations. Despite all the work she does, however, Makowski finds the most effective way of maintaining the

recreational areas is to engage the public for help.

“It’s important because there are so few technicians, the only way to really take care of the forest is to make sure they do,” said Makowski, referring to forest visitors.

The “Tread Lightly” principles are the primary subject of conversation nearly every time Makowski is able to meet recreationists. The simple principles are summarized as:

Travel responsibly!

- Stay on designated roads, trails and areas.

Respect the rights of others!

- So they can enjoy their recreational activities undisturbed.

Educate Yourself!

- Obtain travel maps and regulations from public agencies.



Avoid sensitive areas!

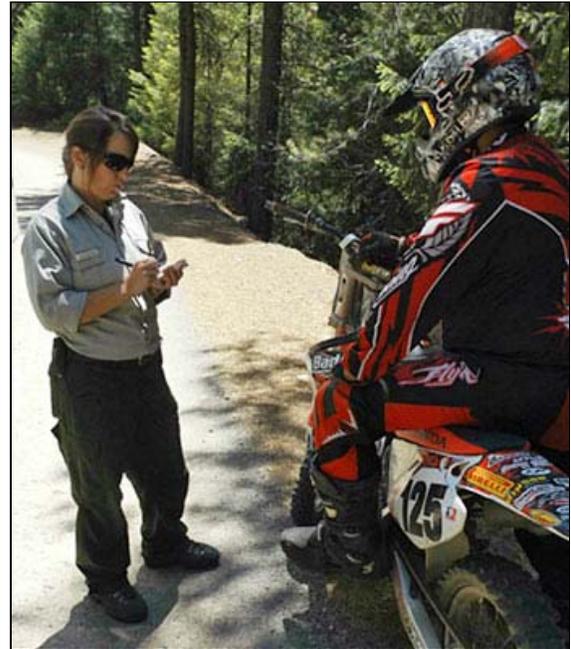
- Such as meadows, lakeshores, wetlands and streams.

Do your part!

- By leaving the area better than you found it.

With the help of recreationists and the dedicated service of recreation technicians like Makowski, the Mendocino continues to provide diverse and exciting opportunities to enjoy your national forests. For more information on how to preserve recreational areas during use, visit <http://treadlightly.org/>.

Published: June 25, 2015



Sierra National Forest hosts Youth Fishing Derby

Story by Paul Robbins Jr / Photos by Iveth Hernandez



Shaver Lake was a busy place June 13, as children gathered to cast a line during the Youth Fishing Derby, hosted by the Sierra National Forest. Eighty-two participants, ranging in age from three to 15, competed in seven categories for prizes.

The categories included largest fish, smallest fish, most fish, first fish, last fish, youngest angler, and a casting competition. Prizes for the competition ranged from toy water guns to a free, all-day boat rental, and a raffle was held for the grand prize of the event: a complete, 1-day family fishing trip.

The free competition lasted from 7:30 a.m. until noon, and 35 fish were caught in total. Every participant of the derby received a small prize for their efforts, whether they caught a fish or not. But the biggest prize went to an enthusiastic toddler.

“We’re going fishing again! On a big, big boat!” said 3-year-old William Wilkens, after winning the grand prize.

The prizes for the event, along with food and drinks for all, were donated by local businesses in support of the derby. Numerous games and activities were made available for the families of the participants, and Smokey Bear stopped by for a visit. The Sierra NF also brought Dinkey Creek Engine 43, four forest fire prevention patrols, and two law enforcement officers for an

interactive, prevention display.

“The Youth Derby was a wonderful community event, with children and their families fishing, playing games, and learning about the great outdoors,” said Alex Wilkens, Forest Fisheries/Aquatic Biologist for the Sierra NF, and a volunteer for the event. “I think it was a positive experience for everybody.”

The event was made possible by the generous donations of the Educational Employees Credit Union, Central Sierra Anglers, Shaver Lake Trophy Trout Project, Edison Company, and many more.

Published: June 17, 2015



Tahoe NF Leads Nature Hike for Students with Disabilities

Story by Kathy Van Zuuk



U.S. Forest Service botanist Denise Della Santina teaches Nevada County students about nature.

For twenty years, the Tahoe National Forest’s Yuba River Ranger District has reached out to Nevada County Schools in order to help provide a special day for disabled students. For many of them, this is the only opportunity they get to experience their national forests.

On May 28, 2015, Twenty eight disabled students from three classes at 7 Hills and Union Hill schools teamed up with 28 students from the 7 Hills Leadership class, and a small group of aides and teachers for the trip. The leadership class is a group of seventh grade students who were recognized by their teachers as current or future leaders.

The special group of visitors was transported via buses provided by the Nevada County Superintendent of Schools (NCSS) to the Tahoe National Forest’s Rock Creek Nature Trail. Upon arrival, David Potter, Adapted Physical Education Specialist for the NCSS, divided the students into groups and assigned each one to a Forest Service employee, to serve as a guide.

Each group took part in a one-mile hike around Rock Creek Nature Trail, while the Forest Service employees presented interesting features of the Forest and stories of natural history. The leadership students acted as buddies for their disabled counterparts, helping them along the Trail.

The presentations by the Forest Service staff focused on touching and smelling forest features, to help keep the groups engaged and accommodate the blind students. Although the presentations were developed for the disabled students, the leadership students were also able to learn about the environment. One of the favored attractions of the tour, and consistently popular each year, was the Banana slug.

Highlight was Smokey Bear



The hike took approximately one hour to complete, with the students picking up speed toward the end because the smell of hamburgers was wafting through the trees. The Nevada City Rotary cooked and served hamburgers, veggie burgers, drinks, chips, and homemade cookies to an excited group. The highlight of the lunch was a visit from Smokey Bear, who stayed to take photos with all of the children.

The staff of the Tahoe National Forest looks forward to the event each year. And their friends from Nevada County Schools enjoy each opportunity to take part in their specially tailored, Rock Creek Nature Trail adventure.

Published: June 10, 2015

Inyo's Michael Morse named Most Honored Packer

Photo and Story by Debra Schweizer

“Seldom does anyone have the good fortune to meet a person as happy with his life as Michael Morse. Passionate about the mountains, mules and wilderness, he has been able to turn that passion into his life’s work with the United States Forest Service.” *Excerpt from the Bishop Mule Days Program.*

Morse was recognized at Bishop Mule Days 2015 on May 24, for his dedicated service as a packer for the Inyo National Forest, particularly for advocating that the Forest Service keep pack strings and mules working in the wilderness for practical and traditional reasons. This is the first time in 18 years that a federal employee has received this honor.

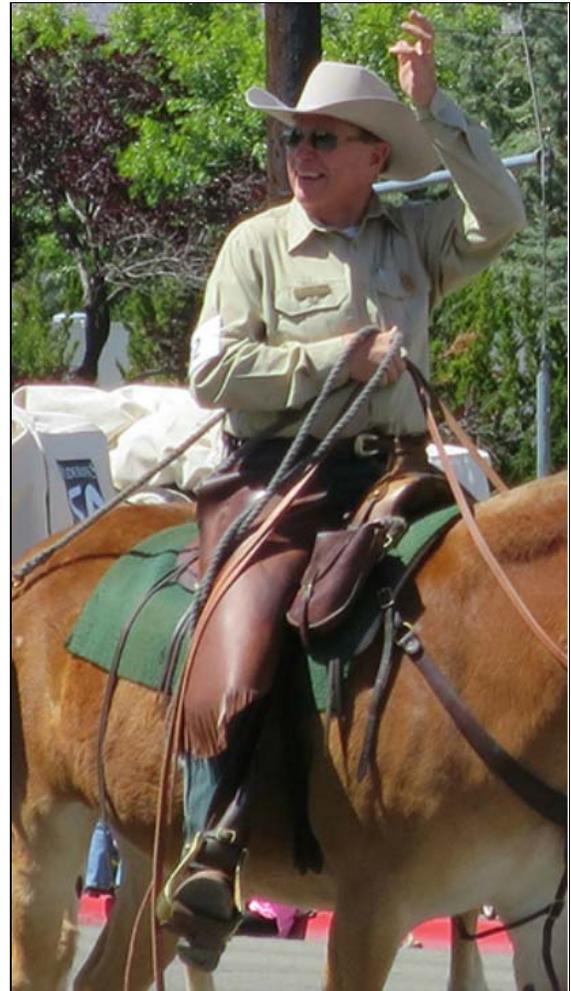
He was instrumental in creating the Forest Service Pack Center of Excellence for the Pacific Southwest Region, designed to maintain the stock programs in California forests.

“Any conversation with Michael invariably turns to the subject of mules and mountains, his career with the US Forest Service, and the importance he places on the love for mules, their value historically, and their future going forward.” *Excerpt from the Bishop Mule Days Program.*

A Long Tradition

The U.S. Forest Service has a long tradition of using horses and mules to bring supplies to remote locations in support of fire response, trail crews, and timber operations, as well as for patrolling in a manner consistent with wilderness and forest management.

Additionally, the Forest Ranger on horseback is one of the enduring traditions that connects



visitors to the forests and resources they come to enjoy. It is these traditions that Morse has worked to maintain in a challenging environment.

“Although the acres of designated wilderness have been steadily increasing, the number of pack stock and qualified packers has been steadily declining,” Morse said.

Maintaining the Tradition

As part of the Pacific Southwest Region’s Center of Excellence, Morse and fellow packers are focused on achieving their goal of maintaining the packing tradition by:

- **Engaging Youth:** To insure the skills and ethics of responsible stock use continues. Recruiting interns and hosting youth programs in the wilderness are some of the methods used to develop the next generation of stock users.
- **Education:** Informing the public on the value of pack strings by focusing on the proper use of pack stock as a minimum impact tool in the wilderness.

Additionally, Morse served as coordinator for the US Forest Service’s participation in the 2015 Tournament of Roses Parade. The parade highlighted east side community pride for the traditional role of the packers on the forest.

He is also an active board member for the Bishop Mule Days, which helps to ensure the US Forest Service is active in the parade and events. The community has expressed appreciation for the Inyo National Forest, others forests, and regional staff that participate annually.

Published: June 10, 2015

Off Shore Repeater Installed to Enhance Radio Communications

Story and Photos by Dave Johnson



Following several years of discussion and planning, a new offshore repeater was installed on Santa Cruz Island, June 2, 2015, 28 miles off the Santa Barbara coast. A repeater is a device that receives a digital signal on an electromagnetic or optical transmission medium and regenerates the signal along the next leg of the medium. These devices are used to enhance long-range communications.

The idea of putting a new repeater on Santa Cruz has long been under consideration, and was included in the Radio Replacement Program undertaken several years ago. The intent of the project was to provide better coverage of the Santa Barbara “Front Country,” which is the ocean side of the Santa Ynez Mountains between Gaviota and Ventura. The area was not covered well by the mainland repeater sites.

The new repeater is part of a test, and the equipment is as small and portable as possible. The initial idea was to utilize Mt. Pleasant, a previously developed site on the island. However, the facilities at Mt. Pleasant were largely destroyed by a windstorm several years ago and have yet to be repaired. As an alternate, Los Padres National Forest personnel were able to identify another site that had been developed for cellular phone services and then abandoned. The new site, known as Valley Peak, belongs to The Nature Conservancy, as does much of Santa Cruz Island. Valley Peak is “ready to use.”

Los Padres NF received permission to install the repeater on a “test” basis, in order to evaluate the coverage provided by the location. The forest personnel anticipate a request from Santa Barbara County to establish a partnership in further development of the Valley Peak site.

The repeater is contained within a durable, fiberglass case of the same type used by National Interagency Fire Center for incident communications equipment, and can be easily carried by two people. The antenna is larger, but adapted to mount to the corner castings of the shipping container that is used as a shelter at Valley Peak. This adaptation eliminates the need for construction of a tower. The repeater structure sits atop the island at 1300 feet above sea level.

Ric Wiles, the superintendent of The Nature Conservancy, coordinated transportation to the site, and helped with the installation. Channel Islands National Park assigned a patrol boat to the expedition, and with Ric’s help the setup was easily accomplished in a day. Initial testing indicates the site is operating according to expectations, and the assigned radio team of Dave Johnson and Patrick Marty are focused on improvements.

Published: June 9, 2015

Western Klamath Restoration Partnership meets, chooses demonstration sites

Story by Bridget Litten, Six Rivers National Forest; Photo by Michael Hentz, Mid Klamath Watershed Council



The Western Klamath Restoration Partnership (WGRP) met for a three day workshop, May 20-22, 2015—their 10th workshop—to move from agreement in principle to agreement in practice by reviewing treatment options for the Somes Bar demonstration site. The partnership involves more than 20 organizations, ranging from local high school students to members of the Environmental Protection Agency, invested in the restoration project.

“Working with everyone from such varied backgrounds and disciplines has been such an incredible shared learning experience,” said Will Harling, director for the Mid Klamath Watershed Council.

Out of the 1.2-million-acre planning area, the collaborative partnership has selected four demonstration sites—about 6,500 acres in all—to illustrate what various treatment options would look like on a smaller scale, and to engage the local communities in the planning process before moving on to the next phase.

The next phase would include 55,000 acres of treatment in the Somes Bar/Orleans area. Proposed treatments for this larger area include 15,000 acres of manual treatments, 14,000

acres of mechanical treatments, and 26,000 acres of prescribed burning as identified in the Somes Bar Integrated Fire Management Project footprint.

As part of the effort to engage local communities and get landowner support for proposed treatments (including prescribed fire) around their homes, 1,000 acres within the demonstration sites may be private land. Local fire-safe councils are contacting landowners within this area to gauge their interest in participating. Once approval from landowners is received, Forest Service staff will move forward with a categorical exclusion on the private lands.

“Getting work done on all lands (public and private) to address wild land fire management issues is a goal of the Cohesive Wildland Fire Management Strategy,” said Merv George, Jr., forest supervisor for the Six Rivers National Forest. “This project is all about mixing our green jerseys with jerseys of other colors. It’s an all-hands, all-lands approach to ecological restoration.”

Environmental analysis will also be done on the federal lands within the demonstration sites. To begin this process, the collaborative spent the final day of the meeting crafting purpose and need statements, and establishing a working group to refine the statements.

The WKRP Vision

The WKRP planning area includes the entire Salmon River watershed, a portion of the Middle Klamath River sub-basin between Weitchpec and Seiad Valley, and parts of the Siskiyou, Marble Mountain, and Trinity Alps wilderness areas. It spans two national forests—the Klamath and Six Rivers—and includes the communities of Weitchpec, Orleans, Somes Bar, Forks of Salmon, Cecilville, Sawyers Bar, Happy Camp, Seiad Valley, and a large portion of the ancestral territory of the Karuk Tribe.

The goal of the partnership is ecological restoration using traditional ecological knowledge and western science to reduce the uncharacteristic buildup of forest fuels, and to restore the role fire plays in a healthy ecosystem.

According to Bill Tripp, deputy director of Eco-cultural Revitalization and WKRP co-lead for the Karuk Tribe, “This is something that Karuk people have been wanting, to look at the entire ecosystem and move towards a landscape-level approach to forest management. WKRP is moving us in that direction.”

The WKRP is a community-based partnership with the goal of collaborative, landscape-scale fire management. Partners include the Six Rivers and Klamath national forests, the Karuk

Tribe, the U.S. Forest Service Pacific Southwest Research Station, the Nature Conservancy, Orleans/Somes Bar Fire Safe Council, Mid Klamath Watershed Council, Salmon River Fire Safe Council, Salmon River Restoration Council, UC Berkeley/Karuk Tribe Collaborative, Happy Camp Fire Safe Council, CAL Fire, Environmental Protection Information Center, U.S. Fish and Wildlife Service, Salmon River Restoration Council, Happy Camp Coordinating Committee, the Kaavíhvaans Project (tribal youth initiative, individual land owners), US Environmental Protection Agency, Happy Camp High School students, and the National Forest Foundation. Facilitation in this collaborative effort is provided by the U.S. Fire Learning Network. Their vision is to establish and maintain resilient ecosystems, communities, and economies guided by cultural and contemporary knowledge through a truly collaborative process that effectuates the revitalization of continual human relationships with our dynamic landscape.

Published: June 7, 2015

Tadpoles of Endangered Frog Species Released on San Jacinto Ranger District

Photos and story by David Austin, San Bernadino National Forest Biologist



On May 22, 2015, approximately 711 mountain, yellow-legged frog tadpoles were released into Fuller Mill Creek on the San Jacinto Ranger District by personnel from the US Geological Survey (USGS) and the San Diego Zoo. The mountain yellow-legged frog, or MYLF, is a federally endangered species, and occurs in only a few locations on the San Bernardino and Angeles national forests. The 35-45 days old tadpoles are about the size of a finger nail and were raised at the San Diego Zoo as part of the captive breeding program to help with the recovery of the species.

The San Diego facility can only hold approximately 400 tadpoles per year grow into juvenile frogs, and due to more than 1100 tadpoles successfully hatching this year, the additional tadpoles had to be released early into the wild. They were transported in buckets with portable aerators to keep oxygen in the water for the three hour trip from the zoo. Upon arrival, the bucket water was slowly acclimated by mixing stream water into the buckets prior to release.

A Successful Partnership Program

The MYLF captive breeding program is a partnership between various federal, state, and zoological societies that has been successfully breeding, rearing, and releasing egg masses,



tadpoles, and juvenile frogs at the James Reserve/Hall Canyon, located in the San Jacinto mountains. This program has been active for five years.

The USGS will be monitoring the release area over the next couple of months to see how many tadpoles are still in the release area. The tadpoles' survivability is less than 5%, due to various factors, so only 30-40 of the 711 released are expected to make it through the first year. This low survival rate is part of the reason the frogs are endangered. Other factors include loss of habitat, predators, and death from infection from "chytrid," which is a type of fungus which occurs naturally in the southern California area.

The San Bernardino National Forest has closure orders in place for the protection of all occupied MYLF habitats on the forest. These closures include: City Creek on the Front Country Ranger District, North Fork San Jacinto River/Dark Canyon, Hall Canyon, and Fuller Mill Creeks on the San Jacinto Ranger District.

Published: June 7, 2015

San Dimas Technology and Development Center Receives Green California Award



In this photo provided by USDA Forest Service, Presenter Aliyya Shelley Mattos, Executive Director of the Paper Seed Foundation, Dick Martin, SDTDC Maintenance Mechanic; Lara Buluc, R5 Sustainable Operations Coordinator, M. Renee Jewell, R5 Commercial Services Program Manager, and presenter Ray Scott, Executive Director of Keep California Beautiful.

The Washington Office Engineering [San Dimas Technology and Development Center](#) (SDTDC) received the Energy Efficiency Leadership Award at the Green California Summit on April 7, 2015, for its significant efforts, spanning several years, to increase its energy efficiency. The culmination of several projects was the 2012 completion of a photovoltaic system, which, when combined with energy conservation measures, made SDTDC the first net-zero energy facility in the USDA. Negotiations with local energy provider Southern California Edison (SCE) resulted in deviations to the SCE tariffs that were filed with the California Public Utilities Commission and will apply to all of the Federal Government.

Energy Conservation and Retrofits

SDTDC updated its energy system to be more efficient, lower cost and more environmentally friendly. San Dimas Maintenance Mechanic Dick Martin managed the replacement of 936 32-watt T8 interior fluorescent bulbs with 25-watt T8 bulbs, installed 88 automatic [occupancy sensors](#) that use dual technology to determine area occupancy in strategic work areas to

facilitate the timely shut down of unneeded lighting, installed 35 [plug load sensors](#) that continuously scan for human presence and automatically shut off certain products such as printers, fax machines and speakers.

Dick also managed the replacement of all exterior security lighting with new [compact fluorescent lights](#) and the replacement of a 150 horsepower (HP) motor that provides power for Spark Arrester Testing Equipment with a new 100 HP high-efficiency motor and variable frequency drive (VFD) significantly reducing the power demand.

“SDTDC’s approach to achieving net zero energy will serve as an example for the Pacific Southwest Region,” said Lara Buluc, R5 Sustainable Operations Coordinator. “By calculating their baseline energy consumption and developing a strategic cost-effective plan for reducing energy use via initial implementation of energy efficiency upgrades, SDTDC realized a quick payback period on their project.”

This accomplishment directly supports the goals of Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*, which requires federal agencies to upgrade 15% of existing buildings to net-zero energy, water, or waste by FY 2025.

The photovoltaic system

The American Recovery and Reinvestment Act-funded PV project contained two distinct components: the development and installation of the PV system and the development and initiation of an interconnection agreement with local utility provider Southern California Edison (SCE).

SDTDC partnered with Region 5 Contracting Officer/Program Manager Renee Jewell and USDA Office of General Counsel Deputy Regional Attorney John Eichhorst, to negotiate the Utility Interconnection Agreement. The National Park Service and the U.S. Department of Veterans Affairs joined forces with Jewell since they had pending solar projects of their own. This final agreement set a precedent for all federal agencies in California.

“After numerous long, very intense, negotiations with SCE, state regulatory agencies and the five federal agencies, which also included the Department of Energy and GSA, we were finally able to sign an agreement that allowed us to connect to the power grid,” said Jewell of the long agreement process. “This was definitely a situation where perseverance was critical to the success of the project.” Ultimately, Jewell’s patience and relentlessness paid off. Today, SDTDC’s new PV system produces nearly twice the energy as the facility uses, allowing the additional power to be supplied to the utility grid. According to Martin, the system has

generated over 1.4 million Kilowatt hours. (A 40-watt light bulb operating for 25 hours uses one kilowatt-hour.)

The award and other recognitions

In 2013, Acting R5 Sustainable Operations Coordinator Kelly Ebert, in collaboration with SDTDC Program Leader Kathleen Kreyns, nominated the San Dimas system for [Green Technology](#) magazine’s Green California Summit – Leadership Award. According to *Green Technology*’s Managing Editor, Racquel Palmese, the merits of the SDTDC project persisted in the minds of the advisory board that selects the Leadership Awards each year, making their 2015 award decision easy. *Green Technology* strives to cover the spectrum of entities conducting this important work. “Governmental efforts in sustainability rarely get recognized,” said Palmese. “We consider it an honor to help spread the word about great projects like this one.” This was the first Leadership Award to be presented to a federal government agency.

The PV system received a 2013 [GreenGov](#) Presidential Award for “Leadership in Environmental, Energy, and Economic Performance” and a 2013 U.S. Department of Energy – [Federal Energy and Water Management Award](#).



The solar array at the SDTDC

In this photo provided by SDTDC, Mr. Douglas Dahle, Principal Program Manager (Solar), DOE’s National Renewable Energy Laboratory; AQM’s Renee Jewell, Program Manager/Contracting Officer; Mr. Michael Picker, Senior Advisor to the Governor (Mr. Edmund Gerald “Jerry” Brown, Jr.) for Renewable Energy Facilities, State of California (at that time, he now heads the CPUC); Smokey Bear; and Ms. Kathleen Kreyns, Safety, Operations and Facilities Program Leader, San Dimas.

Published: May 18, 2015

Local Elementary Students Help Prevent Wildfires with Art

Photo and Story by Ken Sandusky



Recent rains helped to limit extreme fire danger this spring. However, with CALFIRE declaring the beginning of fire season in Northeastern California, *it is time for everyone to start thinking about fire safety*. Local elementary students lent a hand recently, by creating posters to help wildfire managers get the word out.

Modoc National forest supervisor Amanda McAdams, prevention technician Jennifer Leneave, and the County Health Department's Holly Stains visited Alturas Elementary April 29, 2015, to recognize winners of the school's Fire Prevention Poster Contest.

The effort was put on by the Modoc National Forest, in coordination with CALFIRE's Leah Sandberg and the Modoc County Public Health Department for elementary schools in both Alturas and Adin. Participating grades were Big Valley K-6 and Alturas K-5. All participants received a small, fire prevention related prize. The Alturas ceremony recognized both individual and classroom winners.

Individual Student Grade Winners:

- Ella Battram - Mrs. Kyлло's class - Kindergarten
- Griffin Jaeger - Mrs. Irvin's class - 1st

- Harley Barnhart - Mrs. Lewi's class - 2nd
- Jessica Houseman - Mrs. Toomey's class - 3rd
- Savannah Alvarez - Mrs. Server's class – 4th
- Audrey Goodman - Mr. House's class - 5th

Whole Classroom Winners:

- Kaitlin Nield - Mrs. Catania's class - Kindergarten
- Savanna Alvarez - Mrs. Erquiaga's class - Kindergarten
- Grady Battram - Mrs. Chandler's class

Winners had their picture taken with Smokey Bear and received backpacks full of fire prevention gifts. Forest Supervisor McAdams presented the awards in Alturas and congratulated the winners herself. Forest and County employees then visited one of the participating classrooms to hand out water bottles and thank the children for their efforts.

Published: May 18, 2015

Modoc National Forest Memorial Run Honor Fallen Firefighters



The Fifth Annual Shawn and Tom Firefighter Memorial Run was held Saturday, April 25, 2015 at the Lava Beds National Monument in Tulelake, CA. The 5K walk/run and 10K run was organized by employees of the Modoc National Forest and Lava Beds National Monument to honor Engine Captain Shawn Price and Apprentice Thomas Marovich, Jr. The event also serves to raise awareness and funds for the Wildland Firefighter Foundation whose mission is, “to help families of firefighters killed in the line of duty and to assist injured firefighters and their families.” All proceeds of the event are donated directly to the foundation.

Shawn Price passed away January 14, 2011, after a very brief but courageous battle with cancer at the young age of 43. During Shawn’s nearly 7 years as the captain of a wildland fire engine at Lava Beds, he accomplished many important tasks and became a well-respected member of the Lava Beds workforce, where his co-workers enjoyed his fun spirited habits and hard work ethic.

Thomas “TJ” Marovich passed away as a result of a tragic accident during a rappel proficiency training exercise at the Backbone Helibase in Willow Creek, CA on July 21, 2009. Tom was 20 years old at the time of the accident, and was in his second year as a wildland firefighter apprentice with the Modoc National Forest stationed on the Big Valley Ranger District.

This year's event hosted 86 runners, numerous volunteers, and Shawn's brother and mom. Many of the participants and volunteers are wildland firefighters themselves who knew or worked with both Shawn and Tom. A total of \$3,105 was raised this year, bringing the grand total donated to the Wildland Firefighter Foundation over the last five years to \$18,873.

Published: May 2, 2015

Using Technology to Prevent Catastrophic Wildfires



Senior Remote Sensing Analyst Dr. Shengli Huang and RSL staff look at the Lidar and imaging spectrometer instruments equipped on a King Air A90 plane. Photo by Carlos Ramirez

Imagine if one could prevent the next Rim Fire. The Remote Sensing Laboratory-Information Management Staff located in McClellan, California is using a variety of technologies and with their latest collaboration with NASA's Jet Propulsion Laboratory (NASA-JPL); they hope to do just that.

Using state of the art aerial technology

Technology being used includes satellite and airborne remotely sensed data such as: [Landsat](#), [WorldView2](#) (DigitalGlobe), Light Detection and Ranging (LiDAR) and imaging spectroscopy (or hyperspectral). Remote sensing is the science of obtaining information about objects or areas from a distance, typically from aircraft or satellites. To support the use of these technologies, ground-based measurements of forest characteristics, locational information using GPS and spectroscopic measurements using a portable field spectrometer are also acquired. Much of the technology is free or already available to the federal government.

The U.S. Forest Service is in partnership with NASA-JPL for acquiring the LiDAR and imaging spectroscopy data for the King fire.

- [Lidar 101: Introduction to the JPL lidars](#)

- Visit the [Nasa LiDAR Homepage](#)
- Visit the [NOAA site on LiDAR](#)

Add ground technology and validate the aerial data

The on-the-ground data is collected and used in the interpretation of the remotely sensed data. This includes the calibration and validation of statistical models relating the ground measurement to the imagery. Uses of the data can span multiple resource areas and can have numerous different applications. For example, what conditions contribute to high-severity wildfires or prioritizing where mulching or reforestation would be most effective, thereby saving potentially millions of dollars are just a few potential uses of the data. Other uses include understanding fire behavior for potentially assisting firefighters with areas of specific danger or determining where habitat is suitable on the forest for species such as the California spotted owl and black backed woodpecker.

Using aerial resources provides access to data that would otherwise not be available using ground based data collection tools. Access to remote areas is one of the benefits of this system. However, the combination of the aerial and ground data is critical. “Data from these various tools used together will provide better information which will lead to better land management decision making,” said Carlos Ramirez, program lead for the Region 5 Remote Sensing Lab.

- For additional images see the [official news release](#).

More information on the research and tools being used

For examples of the data products being developed from these new-generation tools and updates on the collaborative study, please see: <http://wildfire.jpl.nasa.gov/>

For other studies see [The Ecosystem Disturbance and Recovery Tracker](#)

UC Davis Center for Spatial Technologies and Remote Sensing ([CSTARS](#))

GOES Early Fire Detection System – Rim Fire case slides (developed by the UC Davis Center for Spatial Technologies and Remote Sensing and the U.S. Forest Service Remote Sensing Application Center in Salt-Lake City, Utah): <https://ucdavis.box.com/s/iz9bxxmusnk7j3o5h6826snfbhfuyb1>

There will continue to be updates covering the collaboration and findings from the U.S. Forest Service’s work with NASA-JPL; University of California, Davis; University of Washington; the National Center for Atmospheric Research; and the Pacific Southwest and Pacific

Northwest Research Stations.

Published: April 14, 2015

Eldorado NF Completes Aerial Mulching on King Fire



Tub-grinder, preparing rice straw for mulching. Photo: Stanislaus NF

Burned Area Emergency Response

The King Fire was started by arson in the Eldorado National Forest on September 13, 2014 and burned 97,717 acres of national forest and private timber lands. The fire was 100% contained on October 9, 2014, and a Burned Area Emergency Response (BAER) Assessment was completed the following day. The BAER Assessment recommended emergency stabilization actions to protect human life and safety; property; natural resources; and cultural and heritage resources, at a projected cost of \$3.1 million dollars.

Aerial Mulching Projects

The primary treatment recommended to protect national forest resources was aerial mulching on slopes above Eleven Pines Road which is critical infrastructure and serves as the primary route from Highway 50 to the northern end of the [Eldorado National Forest](#) and could be heavily damaged by post-fire erosion. Straw mulch provides immediate ground cover and protects the soil from erosion and loss of nutrients. The BAER Assessment also recommended potential treatments on national forest land that could benefit other stakeholders. For more information about other potential treatments, visit the [King Fire website](#).



A total of 1,265 acres were treated with aerial mulching under two separate contracts. Bradco Environmental treated 320 acres above Eleven Pines Road in November, before heavy rains shut down the operation. Salmon River Helicopters treated an additional 695 acres above Eleven Pines Road, and another 250 acres above Brush Creek Reservoir.

Treatment of the Eleven Pines Road units was paid for by the U.S. Forest Service. Treatment of the units above Brush Creek Reservoir was paid for by [Sacramento Municipal Utility District](#) (SMUD) to protect SMUD's hydroelectric facilities which provide an important energy supply to the Sacramento metropolitan area. The King Fire helimulching project was completed on March 17, 2015. This joint helimulching project is expected to prevent several thousand tons of sediment from eroding. The photo above shows a sling-drop of rice straw above Brush Creek Reservoir.

Published: April 14, 2015

Forest Legacy Program Nearing 50,000 Acres of Protected Land in Hawaii



An Acacia koa tree on the Ka‘awaloa Forest. Photo: Hawaii Division of Forestry and Wildlife

The USDA Forest Service Pacific Southwest Region’s State and Private Forestry Division has announced an important accomplishment in the protection of forested lands on the west side of the Island of Hawaii. The Ka‘awaloa conservation easement will add 1000 acres of land to a large tract of previously protected lands. As a result of this recent closing in South Kona, the Hawaii Department of Land and Natural Resources (DLNR), U.S.D.A. Forest Service, and the Hokukano Ranch now have protected over 10,000 acres of native forest from development as part of this project. A total of 47,055 acres is now protected on Hawaii Island.

The Ka‘awaloa forest and Kealakekua Heritage Ranch are located approximately 20 miles south of Kailua-Kona and are owned by the Pace family. Under a previous landowner, the county of Hawaii had approved a development plan for the construction of 500 residential lots and an Arnold Palmer golf course. The Pace family decided that, instead of clearing the native forest for development, they would permanently protect the properties through conservation easements.

The Ka‘awaloa conservation easement officially closed in January and permanently protects 1,000 acres of forested lands valued at \$4.7 million. [Hawaii Forest Legacy Program](#) funding purchased the land for \$3.2 million with the remaining value donated by the landowner.



The Ka‘awaloa Forest in western Hawaii. Photo: Hawaii Division of Forestry and Wildlife

Located on the slopes of Mauna Loa, Ka‘awaloa is adjacent to the 9,000 acre Kealakekua Heritage Ranch Forest Legacy Project. The acquisition completes a connected landscape of charitable trust, protected private and public lands extending to [Hawai‘i Volcanoes National Park](#).

“The permanent protection of this native forest completes a multi-year effort to conserve the larger ranch,” said Sherry Hazelhurst, R5’s Director of State and Private Forestry.

“Congratulations go to the Pace family, our partners at DLNR and the entire team that contributed to closing this deal in record time.”

DLNR (as opposed to direct acquisitions by the Forest Service) under the Forest Service’s Forest Legacy Program.

The Ka‘awaloa Forest, combined with the adjacent Kealakekua Heritage Ranch, represents the first two conservation easements acquired by

The [Forest Legacy Program](#) identifies important forestlands that are threatened by conversion to non-forest uses, and provides funds to State agencies that are equipped to protect these lands in perpetuity. Working together with private landowners, the Forest Legacy Program strives to remove development pressure from important forest lands and improve sustainable forest management. The 1,000 acre Ka‘awaloa Forest protects a rare native forest, provides forest products to the local community, preserves habitat for native birds, and safeguards water quality in the primary watershed draining into Kealakekua Bay.

With the region’s history of nearly two-hundred years of timber extraction, much of the large trees - specifically *Acacia koa* (Koa) and sandalwood were harvested. Coupled with pressures from grazing animals, many of these forests have not fully recovered, ultimately resulting in significant loss of forest cover throughout the region. With a goal of sustainable management, the Pace family is re-investing in the forest and encouraging the regeneration of Hawaii’s native trees.

The property also provides a variety of non-timber economic activities, including plant collection, tourism, and hunting. The Ka‘awaloa conservation easement will protect native

forests such as 'Ohi'a lowland, montane wet, and 'Ohi'a /Koa montane mesic forests that support several endemic Hawaiian birds. Preserving the Ka'awaloa Forest, part of the fog-shrouded South Kona cloud forests, will directly contribute to safeguarding the water supply and water quality in a region subject to severe drought.

Published: April 14, 2015

The Excitement of being a Climbing Ranger

Meyers relishes working with people and dynamic nature of the job

By John C. Heil III, Press Officer, Pacific Southwest Region



Mt. Shasta Lead Climbing Ranger and Avalanche Forecaster Nick Meyers

Nick Meyers, 32, enjoys a variety of recreation; whether it is mountain climbing or biking, kayaking, dirt biking, surfing, kite surfing, fishing, tinkering around the house, landscaping, working on motors, wood working, dog training or backpacking - he is all in. He also knows the value of working hard. It is that combination that made him who he is today with one of the most challenging jobs in the U.S. Forest Service as a Lead Climbing Ranger on Mt. Shasta, California.

After getting his education at Feather River College and Western State College (Gunnison, Colorado) in outdoor recreation, Nick got his dream job at 19 as a seasonal employee on Mt. Shasta and has been there ever since.

The job is extremely multi-faceted with a great deal of public interaction, public speaking and educational presentations to all ages, search and rescue operations and wilderness, trails, recreation and special use management. In the winter, the Mt. Shasta Avalanche Center opens up. With almost 20 years of service, Nick and his crew are recognized by the U.S. Forest Service National Avalanche Center and operate December through March, issuing public

avalanche danger forecasts and providing valuable, free avalanche awareness and companion rescue workshops to the public throughout the winter. The climbing ranger duties do not go away in the winter time; however the avalanche center takes priority. The crew also helps out with the fire segment of the Forest Service at times of need.



Meyers using one of the tools of the job on a Mt. Shasta ridge. Photo: Jonathon Dove

Meyers particularly enjoys the snow based avalanche and glacier science, working with industry leading professionals in these fields. These snow and avalanche based cohorts provide him information constantly about the formation and occurrence of avalanches. He also works with U.S. Geological Survey with their work on Mt. Shasta as a volcano and its glaciers.

“The job duties are always changing and you have to be ready for anything at any time,” said Meyers. “I really had no idea I would ever be working for the Forest Service. I eventually decided to live here full time. I love it.

“There is a challenge almost every day. My favorite quote, maybe ever: ‘It takes a village...’ All of my challenges have not been overcome alone. Conversations with mentors, friends, family and co-workers have been a driving force for me in shaping my tactics to overcome challenges. Honestly, the biggest challenge with my job is working with other people. I really enjoy it. I love people, communicating with them and finding out what works and what doesn’t. Patience and understanding go a long, long way.

“I’ve learned the value of listening. I’ve also learned the value of never judging somebody until you’ve walked in their shoes. It’s easy to judge and make a decision quickly. From my hundreds of visitor contacts, I’ve learned to take the time to really talk to a person, listen, find some common ground, and then engineer for compliance... or just to be a friendly forest ranger.”

“He has optimism which cannot be taught,” said Nick’s mentor Rick Stock, a professor at Feather River College who was Mt. Shasta’s climbing ranger from 1992-1995. “Nick is successful at preventing much of the need for search and rescue with his interactions with people. They are comfortable talking to him.”

He has composure that allows him to be rationale under duress, added Stock. His experience in the backcountry on his own time where he makes climbing and skiing a part of his life

really add to his overall experience.

One of Nick's first lessons in life was about professionalism when he worked for his father, Brock who owned a golf club manufacturing business with a large dirt parking lot littered with pine trees.

"He made me rake the whole thing - not for punishment, but just because he liked it to look clean and professional," said Meyers. "I remember I absolutely abhorred that job. He taught me a lot though and through that task, I learned the idea of professionalism. Professionalism can occur at all levels and makes a difference."

"That was a good lesson for him working for his father," said Nick's mother Donna. "His dad always held him to very high standards. He taught him to be a good listener and treat everyone with respect. We are so proud of him and how he has excelled with such a good work ethic.



Meyers was recently featured on the front cover of *Popular Mechanics* magazine for his survival work.

"I didn't even know he was on the cover of *Popular Mechanics* until a friend mentioned it to me." The lessons of professionalism and hard work have certainly pored over into his current position.

"This job is certainly not easy, but extremely engaging and a lot of fun due to its variable nature," said Meyers. "If you're bored, you're boring..." a friend once said. Some of the hardest days as a ranger are long search and rescue missions. Climbing and descending all day and night exhausts you beyond belief, mentally and physically."

Inspiration has come from his parents who Meyers described as the "rock in his life" and the "salt of the earth."

"I have to give it up ultimately to my parents," said Meyers. "They structured my childhood perfectly, in hindsight. There were rules and boundaries, but they allowed me to explore my own creativities, needs, wants and desires. I am an only child, but they were excellent at providing fun for me. They gave me the platform to

succeed but were not pushy. I've never felt like they are trying to direct my life and they have supported me with every decision I've made.”

Nick still gets the feeling of exhilaration with the search and rescue element of his job.

“Search and rescue with helicopters is pretty exciting, I can't deny it,” said Meyers. “While helicopters are scary, nobody is going to deny they are awesome. Any little boy out there will tell you this and the feeling has not changed with age. I love search and rescue - everything about it... the challenge, excitement and the hopefully positive outcome.”

- Read the [survival essentials an avalanche / rescue expert always carries](#) story.
- Listen to the [Survival Podcast](#) with Nick.

Published: April 14, 2015

Tahoe NF Employee Celebrates 50 Years with the U.S. Forest Service



In the image above, Patti is seated in the center, while over 50 current and retired Tahoe employees clap as she receives a certificate recognizing her years of service.

Patti Mahaffey, Lead Information Assistant for the [Tahoe National Forest](#), celebrated her 50th year of working for the U.S. Forest Service’s Tahoe National Forest on March 4. She works at the front desk in the Forest Supervisor’s office in Nevada City, providing information to visitors, leading front desk operations, and always greeting visitors with a smile.

“Patti’s 50th anniversary with the Tahoe is an amazing accomplishment,” said Tom Quinn, forest supervisor. “She still shows up smiling and providing great customer service every day.”

Patti was first hired by the Tahoe National Forest in 1965 as a short-term (temporary) employee in a Clerk Typist position. She was 18 years old when she reported for her first day of work on March 4, 1965. Soon after, she was converted to a permanent employee.

Patti has spent her entire career at the Tahoe National Forest’s front desk. She has long been the public face of the Tahoe, at times writing newspaper columns and performing radio programs to provide forest information to the public. Her job has changed much over the years. In earlier days, Patti controlled the switchboard to connect calls. Today, her duties include updating the forest’s website. However, one thing has never changed. She always comes to work with a smile and a cheerful attitude.

“An organization is only as good as its people,” said Regional Forester Randy Moore. “People like Patti are what make the Forest Service great. I salute her dedication to the Tahoe National Forest and the agency. She is an inspiration to us all.”

Tahoe National Forest employees and many Forest Service retirees celebrated the occasion with Patti at the Tahoe National Forest Headquarters. Current Forest Service Chief Tom Tidwell sent Patti a letter of congratulations, as well as a certificate recognizing her 50 years of service to the agency.

Published: March 26, 2015



Forest Health Protection Coordinates with Mexican Delegation, Continues Efforts

Story by Tom W. Coleman, Forest Entomologist, Forest Health Protection, Southern California Shared Service Area



Members of Forest Health Protection, U.S. Forest Service, discuss monitoring and management options for infestations of the goldspotted oak borer in Orange County.

The introduction of exotic insects and diseases continues to increase annually in the U.S. While most exotic introductions are of little economic and ecological concern, on average, one new damaging agent emerges every year. In southern California, two exotic pests, the goldspotted oak borer and polyphagous shot hole borer/Fusarium Dieback Disease, are currently of great concern to the region.

These damaging insects have also become a concern in Mexico, which sent a delegation to Los Angeles and Orange Counties to learn more about injury symptoms, monitoring techniques, and management options associated with them. The delegation arrived March 4, 2015, and worked alongside Forest Health Protection (FHP) to increase their understanding of the threat. Several of the Mexican collaborators traveled from Northern Baja California, which is immediately threatened by both exotic species.

Early Detection is Crucial for Managing Forest Health

The goldspotted oak borer is an invasive beetle that was likely introduced into southern California *via* infested firewood from southeastern Arizona. It has killed large diameter coast live oak and California black oaks across all land ownerships, including the Cleveland National Forest. The beetle has been killing oaks in San Diego County since 2002, but was recently discovered in Orange County, representing an approximately 60 mile jump from previously identified infestations in Idyllwild, Riverside County, and San Diego County. The movement of infested firewood is likely responsible for the new infestations as well.



The bark of a California black oak was chipped away to show larval feeding (black lines on the wood) by the goldspotted oak borer at the Cleveland National Forest.

Polyphagous shot hole borer and Fusarium Dieback Disease is an insect-disease complex that may have been introduced into southern California from Southeast Asia. The polyphagous shot hole borer is an ambrosia beetle that injures or kills numerous hardwood trees in California. It does so by boring into the tree to cultivate symbiotic fungi and reproduce. Preliminary data suggests maples, willows, Fremont cottonwood, castor bean, and California sycamore are highly susceptible to injury from the ambrosia beetle. The beetle will also attack avocado trees, which may threaten the avocado industry of California. The insect-disease complex has been found in Los Angeles, Orange, Riverside, San Diego, and San Bernardino Counties, and the Angeles National Forest.

Early detection of these exotic species is crucial for managing their threat to forest health. FHP in Region 5 has taken great effort to lessen the populations of these exotic species in California, while educating and coordinating with other agencies and the public. FPH also bolstered their efforts recently by partnering with The Huntington Botanical Gardens and the University of California, Riverside, to spread awareness of these exotic pests to the participants of the International Plant Sentinel Network.

Published: March 24, 2015

Pacific Southwest Region Supports Biomass Power Plants – Seek New Project



This photo is from the Rio Bravo Rocklin truck dump. Ashlee Ransom was the acting Urban & Community Forestry Coordinator at the time of this visit.

Have you ever wondered where those trucks full of chips and logs are going? They are probably headed to one of the approximately 24 California power plants that use biomass to generate energy for the power grid. Employees from the Pacifica Southwest Regional Office, Stanislaus and Sierra NF's visited local biomass power plants last October during a National Bioenergy Day event. They were invited to visit the plants as part of a national effort to improve understanding about the industry and communication between potential biomass sellers and purchasers. "We are always seeking opportunities to better utilize non saw-quality woody debris from the national forests," said Larry Swan, Region 5 Wood Utilization & Biomass Specialist. "Taking part in the National Bioenergy Day afforded us the opportunity to see the end result of these projects and actually watch the woody biomass be converted into energy." Swan also noted that the participating plants are very open to visitors and enjoy showcasing their operations.

As California's forests face the challenges that arise from a changing climate, the risk of forest fires and the prevalence of forest pests and diseases are increasing. These risks are magnified when coupled with unmanaged forests and the buildup of forest biomass due to past fire exclusion. Increasing the use of forest biomass in the energy industry will not only help

address these issues by creating markets for treatment to reduce the fuel load in our forests, but promise to contribute to a clean energy economy and create green jobs in the process.

Swan visited the Rio Bravo Rocklin plant, a 24 MW plant in Lincoln, CA. Each megawatt powers about 1,000 homes for a year. Joining Swan were Sherry Hazelhurst, Director of State & Private Forestry, and Ashlee Ransom, acting Urban & Community Forestry Coordinator. Hazelhurst was impressed by how clean the facility was kept, as well as by the computerized control systems and monitors. “You can see how much energy is going into the grid every minute of operation and what is happening in all the machine-centers and raw material conveyance systems.” According to managers at the Rocklin plant, they currently use mostly urban fuel but would like to receive more forest biomass.

This was the first time that Hazelhurst and Ransom have visited this type of facility. Ransom said “it was enlightening to see the emissions control systems, which capture the majority of pollutants that would normally escape if the biomass was open-burned instead.”

Dave Horak, Timber Management Officer on the Stanislaus NF, visited the 20 MW Pacific Ultrapower Chinese Station in Jamestown, a plant that uses an approximately equal mix of urban, agriculture and forest biomass. Horak advises that there are current biomass contracts operating on the Stanislaus.

The competition between agriculture and forest biomass is primarily driven by cost. The urban sources are closer to the plants, making it difficult for the forest biomass sources to compete. According to Swan, the FS will occasionally subsidize the transportation of biomass to a plant, primarily due to the location of the project. If the slash is too close to houses and other values, the opportunity to burn the slash may be so minimal that it makes more sense just to transport the debris to one of the plants.

Mike Price, Timber Management Officer on the Sierra NF, visited the 25 MW Rio Bravo Fresno plant in Fresno, CA. This plant uses primarily urban and agricultural waste. “It was good to meet state legislative staffers and to talk about how biomass plants reduce open burning and contribute to local job creation,” Price said. “Even if a plant uses mostly urban and agricultural residues it still increases demand for woody biomass, which sometimes can include forest biomass.” Price also said that, from his perspective, about half the plant seemed to be made up of pollution control equipment which means emissions stay well within the guidelines permitted by local air resource boards.

On the Sierra NF, there is also an effort in North Fork to obtain permits and financing for a new small, 3 MW plant, which would concentrate on local forest and fuels management residue.

Price said he looks forward to taking more USFS employees on these types of tours. If Rio Bravo Fresno or other nearby biomass plant hosts another National Bioenergy Day event next year, he would welcome the opportunity to show other employees what this type of facility can do and how they can potentially help reduce open air burning and when everything comes together just right, help defray cost of management. “Not to mention, the BBQ lunch plant personnel put on for visitors with tri tip, sausage and four different kinds of hot dogs was an unexpected benefit.”

Published: March 2, 2015

Artist In Residence Program



One lucky artist will spend a week this year in the Black Mountain Lookout tower on the Plumas National Forest (PNF). The [Plumas County Arts Commission](#) and the PNF are partnering for the second year to provide inspiration for an artist to capture the beauty and spirit of the PNF landscapes. The intent of the Artist in Residence program is to celebrate the power of the arts while exploring and interpreting the forest environment and related issues. In return, the artist donates an original piece of artwork from the experience, as well as holds a free workshop or open house for the public. The winning artist will be selected in a combined juried competition and people's choice process.

Plumas Arts is coordinating the application process and hosting a juried art show of works entered at the March 2015 show in their Capitol Arts Gallery. The winning artist will be chosen in a combined juried competition and people's choice process. *Application deadline is February 27, 2015.*

The Artist-In-Residence program seeks to use art to explore the many ways in which people relate to the Plumas National Forest. The program goals include:

- Capture the beauty and spirit of the Plumas National Forest through the creation of a high-quality art
- Provide learning opportunities through the arts for visitors to the PNF
- Help citizens understand the connections between public lands, our use of natural

resources and our emotional ties to beauty, nature and self-expression, thus serving as a link between the utilitarian and aesthetic values of the forest

- Celebrate the power of the arts—and artists—to explore and interpret the forest environment and the forest related issues.

Selection of artists is based on a scoring system that includes: evaluating how the artwork will support the forest's interpretive themes, the artist's resume of professional art work, application and electronic file of work or on-line website.

Two pieces representing an artist's work will be displayed at the Plumas Arts Gallery for the March 6, 2015 opening reception. Art will be displayed in the Capitol Gallery from March 7 to 28.

About the Black Mountain Lookout

Out of service for over thirty years, the Black Mountain Lookout was built in the late 1930s/early 1940s by the Civilian Conservation Corps. It served as a home and office for Rangers who worked on the historic Milford Ranger District, now known as the Beckwourth Ranger District.

The refurbished lookout sits at an elevation of 7,161' on the eastern edge of the Plumas National Forest. It has recently been retrofitted by a group of very dedicated volunteers with electricity, a heater, stove, refrigerator and updated lightning protection system. The 75 year old lookout has a commanding view to the east of Nevada's Great Basin. To the north stands the higher, still operational Thompson Peak Lookout. At the bottom of the Sierra Nevada's eastside escarpment sits the sometimes colorful, sometimes dry, Honey Lake.

The Black Mountain Lookout has been a recreation rental for the past four years and is available from Memorial weekend through October. Visit the [Black Mountain Lookout website](#).

Published: February 27, 2015

Region 5 Helps Map a New “Geography of Hope”



This photo was taken at the 2013 GOH Conference. Estella Leopold, far right, is the daughter of the late Aldo Leopold. Region 5 Videographers and Green Fire producers Ann and Steve Dunsky are seated either side of the panelist speaking. Photo: Alex Roa

Region 5 is co-sponsoring the 2015 Geography of Hope Conference (GOH) to be held March 13 – 15 at Point Reyes Station, Calif. *Mapping a New Geography of Hope: Women and the Land* marks the second time the region has sponsored this biennial event. In addition, a diverse group of Forest Service employees will attend.

Authors Robin Wall Kimmerer and Kathleen Dean Moore are serving as co-chairs of the three-day conference. A fierce compassion for the well-being of the Earth illuminates the writing of both women and helps deepen an understanding of the relationship between people and place. They will be joined by sixteen of the country’s most admired writers who also use language – whether poetry, fiction, or literary non-fiction – to express a sense of urgency about our environment.

“Facing down the forces that would irredeemably disrupt the life-sustaining systems of the world will take the greatest exercise of the human heart and mind the world has ever seen,” says co-chair Moore. “We will need to listen to all the voices – urban and rural, young and elderly, north and south, and especially to the voices of women, the keepers of the seeds. We will need to mobilize all our human capacities – to celebrate and to grieve, to dread and to take heart, to embrace and to resist, to radically reimagine who we are and how we live. In the

coming time of storms, it may be that this is the new geography of hope.” Region 5 co-sponsored the 2013 GOH Conference titled “Igniting the Green Fire: Finding Hope in Aldo Leopold’s Land Ethic.” The gathering kicked off with a screening of *Green Fire: Aldo Leopold and a Land Ethic for Time*, the Emmy Award-winning film about pioneer conservationist Aldo Leopold’s life and legacy. R5 filmmakers Ann and Steve Dunsky produced, directed and edited the documentary along with Forest Service colleague Dave Steinke. *Green Fire* was produced in partnership with the [Aldo Leopold Foundation](#) and the [Center for Humans and Nature](#), which is also a co-sponsor of this year’s GOH Conference. [Visit the Green Fire Movie website](#).

Working with the GOH organizers and presenters offers the Forest Service an opportunity to establish new connections and create partnerships around shared interests such as climate change.

Regional Forester, Randy Moore said, “Climate change is the biggest conservation challenge facing the Forest Service in the 21st century and contributing to global efforts that help forests mitigate and adapt to climate change is a priority for the Forest Service in California.” The Pacific Southwest Research Station provides critical research in addressing the Climate change issue. Visit the R5 dedicated [Climate Change](#) web page.

The Forest Service strategy for dealing with climate change includes helping forests adapt to changes in climate by restoring the resilience of forest, range and aquatic ecosystems; managing forests to increase the carbon dioxide they capture and store; using forest products to reduce and replace fossil fuel energy; maintaining a research program, and reducing the agency’s environmental footprint.

GOH event organizers also expressed appreciation to the Forest Service for its role in improving the diversity of the conference presenters and attendees by its sponsorships of young students. As a result, the organizers of this year’s event actively sought new directions and perspectives on environmental issues from women and people with varied ethnic backgrounds. According to Steve Costa, founder of the Geography of Hope Conferences and owner of Point Reyes Books in West Marin, “We have worked diligently since the last conference to increase diversity, both among the attendees and among the panelists. We are proud to announce that the 2015 presenters include six women of color (African-American, Latina, and Native American) whose insights into environmental justice will be invaluable.”

The conference takes its name from Wallace Stegner’s famous “[Wilderness Letter](#)” to Congress in support of the 1964 Wilderness Act. In it, he described wild landscapes as part of our “geography of hope.” Building on that, the 2015 gathering will include conversations

about how to map out a new geography of hope.

As a result of the three-day mix of panel discussions and field trips, event organizers plan to conclude the conference with a declaration, a unified statement that encourages all people to embrace this sense of urgency about our planet and act on their conviction.

The conference is held in Point Reyes Station, the gateway town to [Point Reyes National Seashore](#), a 53,000 park comprised of wild coastal beaches and headlands, estuaries, uplands and forested ridges.

The GOH conference takes place during Women's History Month on March 13, 14, and 15, 2015.

To find out more about the GOH, or to register for the conference, visit:
<http://ptreyesbooks.com/goh>

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Award for Angeles National Forest Supervisors Office Building



The ANF Supervisors Office Building has another distinguished award in its very short existence. It was selected as a recipient of the WoodWorks 2015 Wood Design Award for Regional Excellence for our submission to “Wood in Government Buildings” category. This is the first year the award was given for this category. The award was received in a ceremony at the Wood Solutions Fair in Oakland on January 27.

The organization offering the award, Woodworks Wood Products Council, accepted nominations for this award category in 2014. The nominated projects must demonstrate woods beauty, strength versatility, and cost effectiveness. [One nomination document](#) highlighted the LEED Gold certification.

Leadership in Energy & Environmental Design (LEED) is a green building certification program that recognizes best-in-class building strategies and practices. To receive LEED certification, building projects satisfy prerequisites and earn points to achieve different levels of certification. Prerequisites and credits differ for each rating system, and teams choose the best fit for their project. LEED certified buildings save money and resources and have a positive impact on the health of occupants, while promoting renewable, clean energy.

LEED stands for green building leadership. LEED is transforming the way we think about how buildings and communities are designed, constructed, maintained and operated across the globe.

- See the building in their gallery — <http://www.woodworks.org/project-gallery/>

Ricardo Lopez, Civil Engineer, on the ANF and Gene Kim, R5 Regional Architect, were two of numerous people that made this project and award possible. Congrats to all who were involved!

Published: February 5, 2015

Sierra NF Celebrates Four Years of Restoration Project Collaborative



The Dinkey Collaborative celebrated its four year anniversary on January 15 at Woodward Park Regional Library in Fresno with 42 participants attending, including 16 Forest Service staff and 23 members.

The Dinkey Landscape Restoration Project (DLRP) falls within scope of the national Collaborative Forest Landscape Restoration Program (CFLRP). Individual projects like Dinkey are often referred to as “CFLRs.”. The Dinkey Collaborative is the group of stakeholders that provides recommendations to the Forest on planning and implementing the DLRP.

The group has doubled in size since its inception, and now includes not only the forest products industry and environmental interests, but California Native American Tribes, various motorized and non-motorized recreational groups, Southern California Edison Forestry, and local land, business and homeowners, among others. The group has collaborated on several projects including:

- Development of a comprehensive, multiparty ecological monitoring plan
- A quantitative, science-driven landscape assessment process
- Detailed tree marking guidelines to promote heterogeneity and conserve Pacific fisher habitat, including a photographic field guide

- Cultural burning goals and prescribed fire prioritization criteria; a socioeconomic assessment; a collaborative adaptive management framework
- An approach to project planning that starts with anticipating and avoiding potential cumulative impacts to sensitive species and watersheds.

The group is nearing completion of its NEPA recommendations on the Exchequer project. This is the fourth project the groups has worked on (Soaproot, Eastfork, and Bald Mountain).

- More information on the Dinkey Landscape Restoration Project: <http://www.fs.usda.gov/detail/sierra/landmanagement/planning/?cid=stelprdb5440860>

The group has also hosted the following:

- Town hall events
- Field visit for surrounding forest communities to learn about its work
- Special tribal-led meadow restoration field visit
- Special water-forest session with local water and irrigation districts
- Tour of Terra Bella Mill for local elected officials
- Visit from the Washington Office.

Progressing in 2015, the group plans to develop a prescribed fire NEPA project that covers the entire Dinkey Landscape, to begin integrating the Pacific Fisher and California spotted owl conservation strategies being developed by the Regional Office; and to host a Science and Monitoring Symposium in November.

For more information contact High Sierra District Ranger Ray Porter rporter@fs.fed.us or the group's facilitator Dorian Fougères at dfougeres@ccp.csus.edu

Published: February 4, 2015

Cleveland NF Home to Rare Bat Species



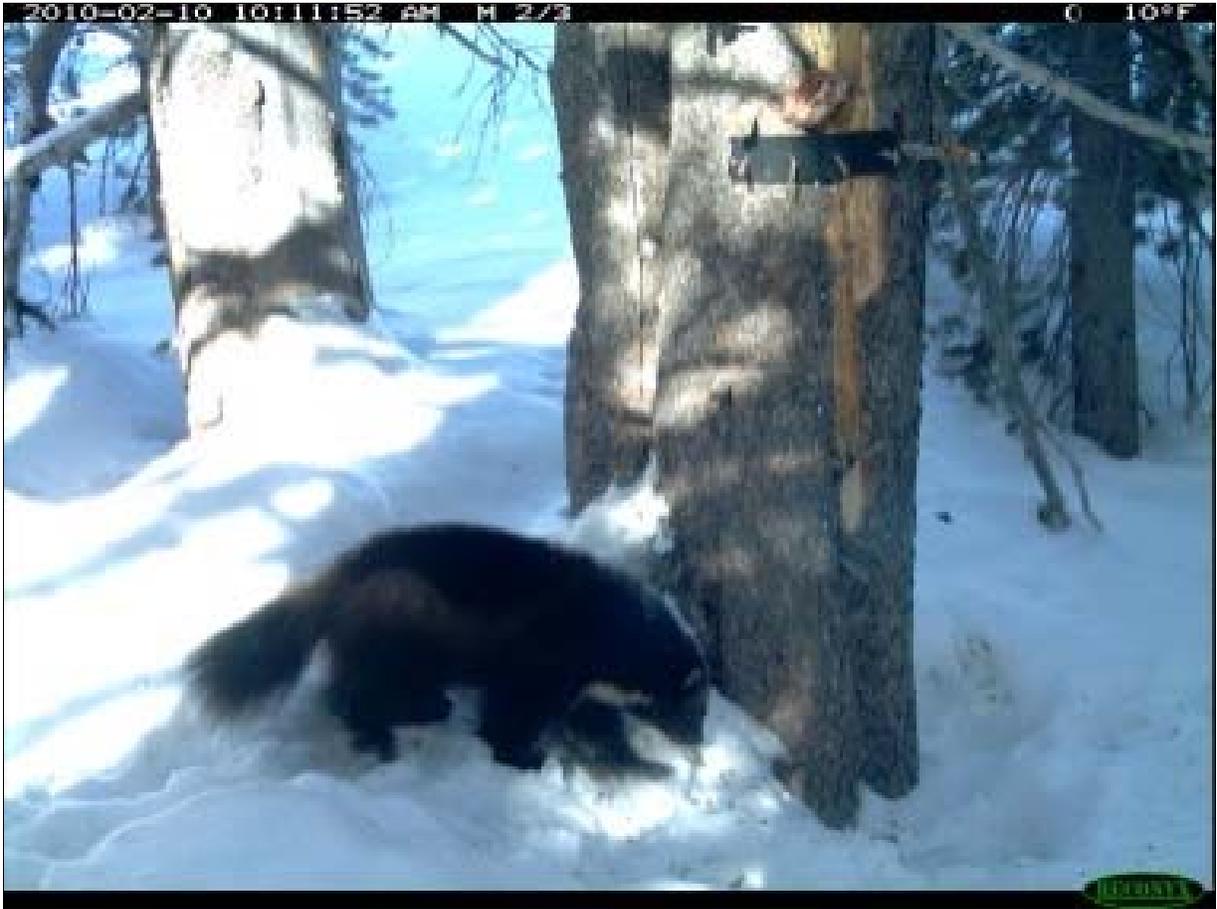
Cleveland National Forest is home to a rare bat species known as the Townsend's Big-eared Bat, which is currently being petitioned for state listing as threatened or endangered. This species is on the Regional Forester's Sensitive List, and is thought to be declining throughout the western United States.

In California, populations are widespread but sparsely distributed and surveys show possible declines in the number of colonies and availability of suitable roosting habitat primarily related to habitat destruction and disturbance. Typical roost sites are natural caves, abandoned mines, and buildings and there are several historically known roosts on Cleveland National Forest land.

The California Department of Fish and Wildlife is funding a two-year, state-wide study beginning in 2015 to evaluate the status of this species including surveys of both historical and potential roosts. The Cleveland National Forest is coordinating with the researchers on survey sites and access, and CNF biologists will be conducting surveys of selected locations as well. The first year of survey work at selected Forest sites did not detect any occupied roosts.

Published: February 3, 2015

Tahoe National Forest is Host to California's only Known Wolverine



On November 3, 2014 a wildlife camera placed by the California Department of Fish & Wildlife on the Tahoe National Forest captured several images of a lone wolverine (*Gulo gulo*).

In early January 2015, the US Forest Service Rocky Mountain Research Station's (RMRS) Wildlife Genetics Lab in Missoula, Montana confirmed that this is the same animal that has been in the area since its initial sighting on USFS lands in 2008.

Genetic testing shows that it originated from a Rocky Mountains population in the Sawtooth Range in Idaho. It is unknown exactly how this particular animal originally came to be here, some 800 miles away. California Department of Fish & Wildlife (CDFW) Biologist Chris Stermer said that this animal has a known range of approximately 297 square miles. "While this may seem like a large area, male wolverines are known to range as many as 1000 square miles," said Stermer.

Against the odds, Stermer said "we were hoping that the Nov. 3rd images were of a different animal. It would have been great if it turned out to be a pair of mating wolverines that could eventually develop into a population." In addition, Stermer also added "the wolverine is

looking healthy, with a nice winter coat and ample weight.” However, the average lifespan of wolverines in the wild is generally believed to be up to 13 years. This might mean that this particular animal is nearing the end of its solitary life.

This animal has also been known to frequent lands owned by Sierra Pacific Industries (SPI). According to Wildlife Biologist Amanda Shufelberger, SPI has an active wildlife monitoring program and has frequently seen this animal, affectionately named “Buddy.” SPI uses their wildlife monitoring data to make better informed land management decisions. “It has been a pleasure working with our state and federal partners on this wolverine project,” said Shufelberger.

Wolverines are the largest land-dwelling member of the weasel (Mustelidae) family. Historically, they are believed to have lived in California’s Sierra Nevada Range, but indiscriminate poisoning and fur trapping in the early 1900s eliminated the species from the state. The 2008 sighting was the first documented sighting since the early 1920’s, when a trapper killed one. Estimates of the elusive animal’s population in the contiguous United States range from fewer than 300 to as many as 500 animals. According to the US Fish & Wildlife Service it is listed as an Endangered Species.

- Visit the USFWS Wolverine site: <http://www.fws.gov/mountain-prairie/species/mammals/wolverine/>

“I think it's exciting,” Stermer said. “The survival of this wolverine for many years has brought up the topic of a reintroduction down the road.” However, the California Department of Fish & Wildlife currently has no plans to reintroduce the Wolverine to the state.

The wolverine is noted for its strength, cunning, fearlessness, and voracity. It may follow traplines to cabins and devour food stocks or carry off portable items. The wolverine is a solitary, nocturnal hunter, preying on all manner of game and not hesitating to attack sheep or deer. They have been known to defend their food supplies from bears and wolves. Wolverines are also adept scavengers, and thus a large portion of their diet comes from scavenging the carcasses of elk, caribou, and other animals. Researchers believe that climate change could threaten wolverines that remain in the U.S. as they are dependent upon snow.

In 1998, in preparation of increased Canada Lynx monitoring, scientists at the RMRS Wildlife Genetics Lab began developing a state of the art genetics facility that would eventually be used for testing and monitoring over 60 different species, including the wolverine. Director Michael Schwartz said “we regularly take low-quality, ‘forensic-like samples’ such as hair or scat, extract DNA, and learn about the ecology and demography of wildlife populations, like wolverine, sage grouse, and cutthroat trout.” As a result, the lab is able to produce helpful data

for land and wildlife managers to make better informed decisions.

Current wildlife projects in the Pacific SW Region that the Wildlife Genetics Lab is working include the Humboldt Marten, Fishers, Black-backed Woodpecker, and the Wolverine. The lab regularly partners with 19 state wildlife agencies as well as the USFWS, BLM and the National Park Service.

- Watch a video of wolverine: <https://www.youtube.com/watch?v=93ZRxBqvl8>

Published: February 3, 2015

Symposium on the Cultivation of Marijuana and Its Effects on Natural Resources



(Photo: USFS R5 Law Enforcement & Investigations)

R5 LE&I participated in a symposium on the cultivation of marijuana and its effects on the natural resources including wildlife. The all-day symposium, *Marijuana Cultivation and its Impacts on Wildlife, Habitats and the Wildlife Profession* took place at the Hyatt Vineyard Creek Hotel and in Santa Rosa on January 27. Attending were representatives of an interdisciplinary group of individuals including law enforcement, scientists, state and federal biologists, to include researchers from the Forest Service. Of primary discussion was the impact that trespass marijuana cultivation sites are having on the land, water, and wildlife

species, specifically the Pacific fisher.

Presentations and discussions focused on the current findings associated with marijuana cultivation on public and state lands. Assistant Special Agent in Charge, Kent Delbon spoke about what Forest Service LE&I is doing to deal with the threat in regards to investigations and reclamation of marijuana grow sites on Forest Service lands.

“Marijuana cultivation on public lands is not only a Federal crime, but has far ranging impacts on the environment, habitat, and wildlife within our National Forests that last for years after the plants have been harvested,” said Delbon.

According to R5 Deputy Director for Ecosystems Conservation, Diana Craig, wildlife managers are blaming rodenticides directly for the deaths of small carnivores including the Pacific Fisher. In addition, soil studies may be done soon to help determine potential effects of soils and groundwater.

Due to the widespread nature of this activity and its currently conflicting state and federal regulations, California’s water, wildlife, fish and diverse habitats as well as the safety of natural resource professionals are at risk. The symposium brought together these specialist to begin working towards understanding and addressing the impacts that marijuana cultivation has on California’s natural resources, and developing potential solutions to these problems.

Published: February 2, 2014

R5 and Partners Begin Study on Ecosystem Services



Valuing Ecosystem Services in the Santa Clara River Watershed Regional Workshops were held January 20-22, 2015. The three year project started in October 2014 and includes members from the USFS R5, UC Davis, and Michigan State University. The principal purpose is to provide the USFS with a tool to value important ecosystem services in southern California using the Santa Clara River Watershed as a pilot study. This will allow a valid and transparent framework for assessing changes to ecosystem

services caused by wildfire, the impact of management actions, and potentially, the likely effects of future climate change. Ecosystem services are the goods and services that flow from wildlands and forests that are valued and used by people, and that directly or indirectly support human well-being.

The project will map, quantify, and economically value a suite of services in the Santa Clara River watershed. Candidate ecosystem services include carbon storage, water quantity, flood protection, erosion/sedimentation regulation, biodiversity, and recreation. These will be measured using a combination of geographic data, remotely sensed data, and modified regional spatial models. Economic valuation will include willingness-to-pay and benefit-transfer techniques, and conducting a primary survey in the region. The initial focus of the project is to measure the change in these ecosystem services before and after wildfire, including the Piru (2003), Ranch (2007), and Copper (2002) fires, after which we will assess impacts from management scenarios and climate change. Undertaking this assessment will provide a framework that can be applied to other chaparral dominated watersheds and an opportunity to connect with other researchers and practitioners valuing ecosystem services in other Mediterranean-climate regions of the world.

FS Units Involved

- Santa Lucia RD, Los Padres NF, Santa Maria, CA
- Santa Clara/Mojave Rivers RD, Angeles NF, Acton, CA
- Pacific SW Research Station, Region 5, Riverside, CA

The Project Team Members

US Forest Service

- Hugh Safford (Regional Ecologist),
- Sarah Sawyer (Assistant Regional Ecologist),
- Mark Metcalfe (Regional Economist)

University of California

- Davis: Emma Underwood (Spatial Ecologist),
- Allan Hollander, (Biogeographer),
- James Quinn (Spatial Ecologist)

Michigan State University:

- Cloe Garnache (Resource Economist)
- Frank Lupi (Resource Economist)
- Ranjit Bawa (Resource Economist)

Workshop attendees visited three locations in the region; the Santa Lucia Ranger District office in Santa Maria (Jan 20; 9.30am-1pm), the Santa Clara/Mojave Rivers Ranger District office in Acton (Jan 21; 9am- 12.30pm), and PSW Research Station in Riverside (Jan 22; 9am-12.30pm), to meet with USFS personnel and other researchers.

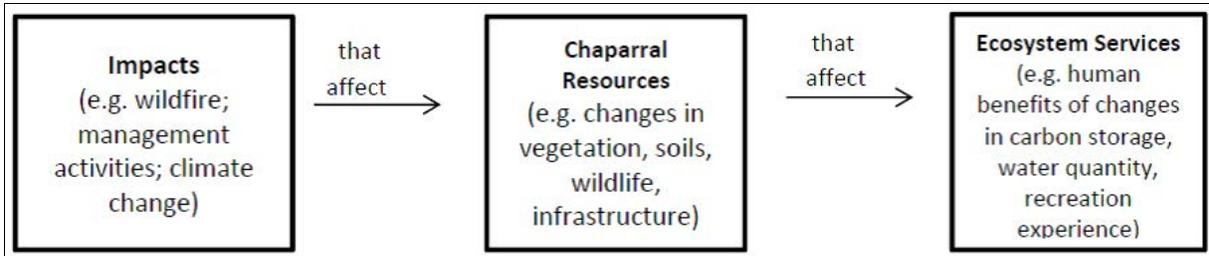
Workshop Goals

- Introduce the project and team
- Listen to participants describe what ecosystem services they see as most important and as most likely impacted by fire and understand the challenges
- Review and discuss work to date on a framework for assessing ecosystem services in chaparral lands
- Review and advance potential methodologies for measuring these services in the watershed and approaches for their economic value

Background information on organizing framework

The Project Team is currently developing a draft version of a means-ends framework specifically for chaparral-dominated landscapes. This aligns our analysis with the 2012 Planning Rule and current forest plan revision efforts in the region and helps prioritize efforts on the most important effects and ecosystem services. The framework lays out the cause and

effect relationships between:



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