

# Crater Lake Currents

May 1, 2015

In this issue...

Caldera News

Safety & Wellness

Drought Outlook

In the Community

People of the Lake

Just for Fun



The first visitor ever to use the new refilling station in Steel VC looked pretty excited to save a bottle's worth of plastic.

## CALDERA NEWS

### North Entrance Opening

The West Rim will open from Rim Village through the North Entrance on **Friday, May 15**, this year, weather permitting. The road will remain closed from North Junction to Cleetwood until about mid-June. And East Rim from Cleetwood to Munson Valley Road will open sometime in late June. Take advantage of the traffic-free roads and splendid weather by biking, hiking, or running the Rim Road now. We are in store for a busy, construction-filled summer.

### New Water Bottle Refilling Station in Steel VC

The Steel Visitor Center is the site of a new water bottle refilling station, installed by water guru **Dave Sulewski** on April 2. The refilling station is part of a park effort, with the cooperation of Xanterra, to phase out the sale of disposable water bottles at Crater Lake National Park. Another refilling station is set to be installed on the exterior of the camper store sometime this summer. More than 500 bottle's worth of water flowed from this station from April 2-30. So go ahead, drink up!

### Summer Kick-Off Cook-Out on the Rim

Just before Rim Drive opens for the summer, the Employee Association would like to invite you to a cook-out on the Rim overlooking beautiful Crater Lake. The cook-out will be held from **noon to 1:30 p.m.** on **May 14** at a pullout on West Rim Drive. The exact location will be decided closer to the date. Facilities, led by **Brian Coulter**, has generously agreed to man our giant charcoal grill and prepare burgers and hot dogs for everyone. Food and drinks will be provided by the Employee Association, and we'll even try to bring some games to play.

### Summer Hours for Steel Visitor Center

The Steel Visitor Center is back to summer hours, **9 a.m. to 5 p.m.** The post office is open more hours as well, from **9 a.m. to 12 p.m.** and then again from **1 to 4 p.m.**

### Lodge Talks Resuming

Interp will begin presenting Lodge talks every day in the Great Hall on **May 15**. Talks begin at **4 p.m.** and last about 20 minutes.

## Teaching Snow Science at Crater Lake

By Emily Prud'homme, Education Ranger



For seven weeks each April and May, school buses wind their way up to Rim Village for students to learn about the winter environment while on snowshoes, in their outdoor classroom for the day. Many students have been to Crater Lake on other field trips in the fall, or on visits with their families, but very few of them have had the experience of learning while on snowshoes. They come from the Klamath, Rogue, and Umpqua valleys, where the flowers are blooming and temperatures are warm enough for shorts and t-shirts. So imagine their surprise when they arrive at the Rim to snowbanks over their heads, unfamiliar contraptions for their feet, and are given a shovel and asked to dig a pit two feet down into the snow! Thus a day with the spring Classroom at Crater Lake program begins.

The snow science investigation is an important component of the curriculum. Students measure the temperature and density of the snow, comparing their data from the top of their pits to the bottom. This activity is a hands-on, student-centered inquiry which meets many state science standards for upper elementary students, and gets the kids physically and scientifically engaged with the snow at Crater Lake.

But the real 'a-ha' moment comes when we show them our ranger experiment. Taking 1000ml of snow, we melt it over a camp stove to find the water content of that surface sample. Fresh, fluffy snow may have around 100ml of water, while icy snow in the process of melting may have around 500ml of water. The visual effect is clear, from a seemingly solid cylinder of snow comes around half that volume of water. This snow-water equivalency test is similar to one performed by the Natural Resource Conservation Service near House 20 each winter, as it's a way to determine how much runoff to expect from any given snowpack. This record extends back to 1943, and the most recent measurement was on March 31 of this year, with 56 inches of snow on the ground and 23.3 inches of water equivalent.

Because Crater Lake National Park straddles the top of three major southern Oregon river basins, the snowpack here has a direct relationship to the river flows and water supplies of all of our surrounding communities. A graph showing the annual accumulated snowfall at Park Headquarters, with data from 1931 to the present shows a clear downward trend in snowfall amounts. While the students dutifully answer that climate change is the reason for this, and offer ways that they can conserve water by using less at home, it might be difficult to comprehend a lack of snowpack when they are standing on several feet of it! Our programs take place in the upper Klamath Basin, and given the state of water emergency in Klamath County, I encourage the students to throw as many snowballs downhill to send a little more water their way!



## Hike of the Month

Hike of the Month will be a regular feature throughout the summer for as long as trails are hikeable. Thanks to **Jen Gifford** for the idea and for highlighting the many trails she and her crew work on each summer.

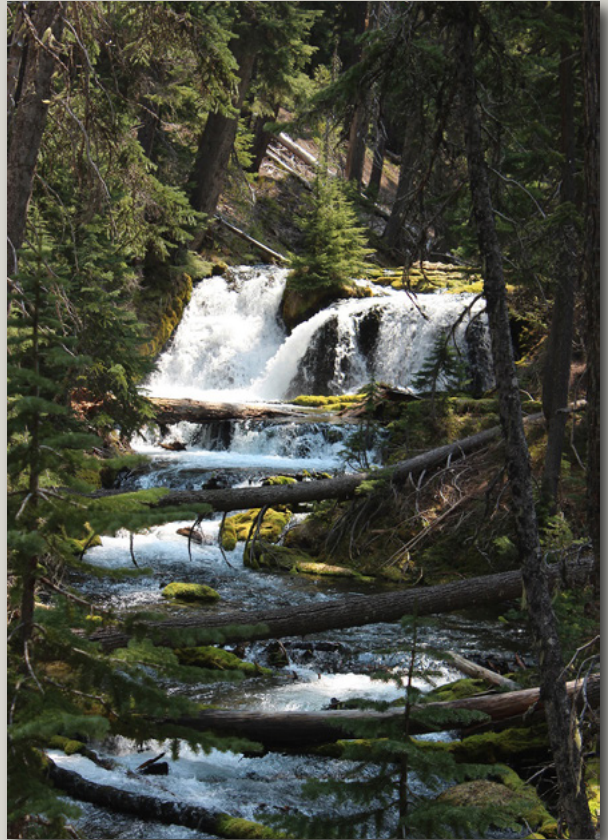
## Boundary Springs Trail

By Jen Gifford, Trails Supervisor

The Boundary Springs Trail is located in the northwest corner of the park near Diamond Lake and takes you to the spectacular headwaters of the Rogue River. Normally this area is still under snow, but it is one of the first areas to melt out in the park. Beginning at the Forest Service trailhead on Hwy. 138 at the Mt. Mazama Viewpoint, this 2.5 mile long hike travels through a quiet lodgepole pine forest dipping in and out of drainages before meeting up with the Rogue River and following the river to its headwaters.

Along the way, the trail takes you past lush meadows and a beautiful waterfall before reaching the many springs that make up Boundary Springs. In late summer, huckleberry bushes line the trail and make a great trailside snack while you hike. If this easy 5-mile round trip hike is not quite enough for you, continue on the Boundary Springs Trail past the springs toward the Bald Crater Loop Trail, an easy 2 miles of diverse forests with views of Mt. Bailey. For a shorter hike, bring a high clearance vehicle and take FS road 760 to trim one mile off your hike, the secondary trailhead is just past the river crossing.

This trail is not well marked on the Forest Service side, so bring a good map and be aware of your surroundings. This trail is also a part of a larger trail network that includes the Upper Rogue River Trail, which follows the Rogue River downstream to Lost Creek Reservoir, approximately 50 miles away, and the Pacific Crest National Scenic Trail...the hiking opportunities are endless!



**Open to:** Foot travel only  
**Difficulty:** Easy  
**Distance:** 5-miles round trip

## An Unexpected Donation

Marsha McCabe reports that Haggen Food & Pharmacy stores is donating 2% of their sales on Earth Day from their Oregon and Washington stores to the national parks in those states. Their donation for Crater Lake will be held by the Friends of Crater Lake. Haggen's Facebook followers were invited to vote for their favorite national park between April 22 - 28. The 1,192 votes determined what percentage of the funds would be donated to each park. The results were:

- Olympic National Park received 31 percent of the votes and \$12,433
- Rainier National Park received 27 percent of the votes and \$10,829
- North Cascades National Park received 26 percent of the votes and \$10,428
- Crater Lake National Park received 16 percent of the votes and \$6,417

You can read more about it on Facebook or here: <http://www.haggen.com/community/vote-for-favorite-nw-national-park/>.

## Artists Are in Residence

**Kit Frost**, from Durango, Colorado, arrived on April 28. Kit is a retired high school teacher and a lifelong educator. She is a photographer and is our established artist for Spring 2015. You can see some of her work on her website at [www.kitfrost.com](http://www.kitfrost.com). From her resume: "Kit's work is in pursuit of personal responses to visual observations concerning water issues, climate change, preservation, conservation, and air quality. Having grown up in urban New Jersey, and seeing the results of urban sprawl and disappearing open space, and night sky, Kit's focus is on capturing the grand, intimate, and unique before it vanishes." In addition to photography, she hopes to do videography and oil painting while she is here.

**Hila Ratzabi** will be arriving on May 9. Hila is a poet from Philadelphia, Pennsylvania, and is our emerging artist for Spring 2015. In her statement of intent for this residency she wrote: "I hope my work as a poet serves as a call to action by bringing to the forefront of the reader's consciousness the many dimensions of the climate crisis and the dire need for immediate change. We need poems to speak for the earth in a language that science and news articles cannot access."

→ Both artists will present their work at brown bag lunches in May. Look for more information coming soon.

## SAFETY AND WELLNESS

Get out there and enjoy your public lands, but do it safely. Here are some safe practices to keep you safe while hiking:

- Carry a headlamp on every hike, even short day hikes
- Carry and drink plenty of water (a minimum of 1 quart every 2 hours)
- Sturdy footwear with good traction might save an ankle
- Minor/moderate health or medical issues can be easily exacerbated by hiking up steep trails—know your limits and pay attention to how you're feeling
- Stay on established trails
- When hiking in a group, each member of the group should carry some water and food in case the party becomes separated, and the group should make a plan for where to meet up (at the vehicle, at the trailhead, etc.) if the members become separated.

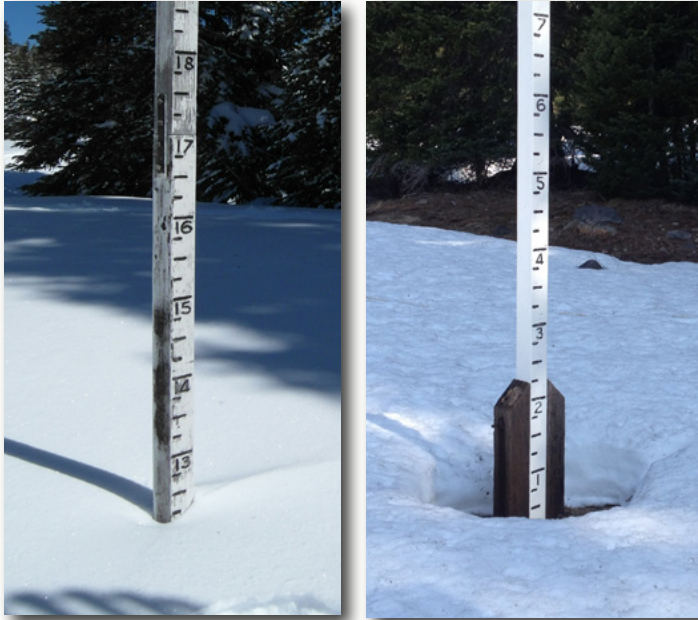




# DROUGHT OUTLOOK

By Scott Burch, Management Assistant

For the last three years, this area has been suffering one of the worst droughts in history. Some paleoclimatologists (scientists who figure out what the earth's climate was like before written records existed) are saying this is the worst drought in over 500 years. As of April 30, 2015, portions of 11 western U.S. states, including more than half of Oregon and the area around Crater Lake, have been declared disaster areas because of drought.



The snow stake near Sager Building shows how little snow remains in late spring. The image of the left is from April 30, 2011; the one on the right, April 30, 2015.

The environment, the economy, and our society are all negatively impacted by drought. For instance, higher temperatures and dryer conditions make for longer, more severe wildfire seasons, destroying hundreds of homes, millions of acres of wildlife habitat and costing billions of dollars. Droughts can produce a complex web of impacts that reach well beyond the area that is experiencing physical drought. The current drought-affected region grows more than half of the fruits, vegetables, and nuts in the United States. Because of the drought, food prices are going up nationwide, not only fruits and vegetables, but also beef and fish. In one example of efforts to deal with drought conditions last year, over 30 million young Chinook salmon in northern California were trucked hundreds of miles toward the Pacific Ocean in an attempt to save the fishing industry after drought left rivers too low for migration.

Crater Lake National Park received nearly 100% of its normal precipitation this winter, but only 30% of its normal snow fall. Nine of the 10 hottest years on record have occurred since 2000. The planet has warmed 1.4 degrees Fahrenheit since the 1800s, and as a result, snow is melting. In the last 47 years, a million square miles of spring snow cover has disappeared from the Northern Hemisphere. The Western U.S. gets as much as 75 percent of its water supply via snowmelt. Rivers and streams continue flowing into the summer so long as there is snow melting in the mountains above, but climate shift is fast diminishing the amount of mountain precipitation that falls as snow. We saw that in the more frequent and severe mid-winter rains in the last few winters. What's more, the snow that does accumulate is melting earlier in the year. This trend is observable throughout the West, and there is every reason to believe that, as global temperatures continue to rise, snowpacks will be smaller and less reliable as a store of water to carry us through the dry months. Comprehensive studies to investigate the cause of the ongoing drought have found that such conditions are much more likely to occur today than prior to the human emission of greenhouse gases that began during the Industrial Revolution in the 1800s.

Much of the information available is pointing to a drier and warmer climate for us here at Crater Lake. See a map of the seasonal drought outlook for the next three months at [http://www.cpc.ncep.noaa.gov/products/expert\\_assessment/season\\_drought.png](http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.png). Continued drought conditions have become a way of life, and likely will be the new norm for years to come. If we can come to terms with that, modify our behavior to be smarter about water use, and adapt our expectations to be in line with our dryer warmer climate, we can continue to protect and enjoy special places like Crater Lake.

## **Water conservation is already a way of life at Crater Lake.**

The Park responded to the drought situation in 2013 by developing contingency plans to avoid closing the Park in the event of a water shortage. Those plans are still in place, and the likelihood of the Park needing to close due to a water shortage is very, very low. Now in 2015, in the midst another one of the driest years on record, we are continuing to work with our partners to identify alternate sources of water and implement additional water conservation measures as we continue to welcome visitors from around the world to this national treasure. Our highest priorities are to protect natural and cultural resources, ensure safety, and to limit impacts to park visitors, employees, partners, and local businesses.

## **FAQs:**

### **Why is there a water shortage?**

The past three winters are some of the lowest snow years in history. That has reduced water flow in streams and rivers across the Upper Klamath Basin. As of May 1, 2015, Crater Lake National Park has received less than 30 percent of its average snowfall for this year. Snowfall is the single most significant contributor to water supply in the area.

### **How will the water shortage affect Crater Lake National Park?**

The park draws water from Annie Creek, a tributary of the Wood River, and part of the Upper Klamath Lake watershed, primarily to meet the needs of visitors—up to 3,500 per day. Lower water flows caused by the drought have significantly reduced the water available to all users in the basin and may require limiting access to the water that remains.

### **What does the park use water for?**

The park's water use is primarily for drinking, food preparation, showers, and toilets, as well as fire preparedness.

### **Why doesn't the park just use the water in Crater Lake?**

Consuming water from Crater Lake would conflict with the park's mission to preserve the lake.

### **Will Crater Lake National Park have to close during a water shortage?**

We have many options in place to avoid a closure and to operate the park with limited water service. Closing the park due to water shortage is highly unlikely.

### **How much water does the Park use every day?**

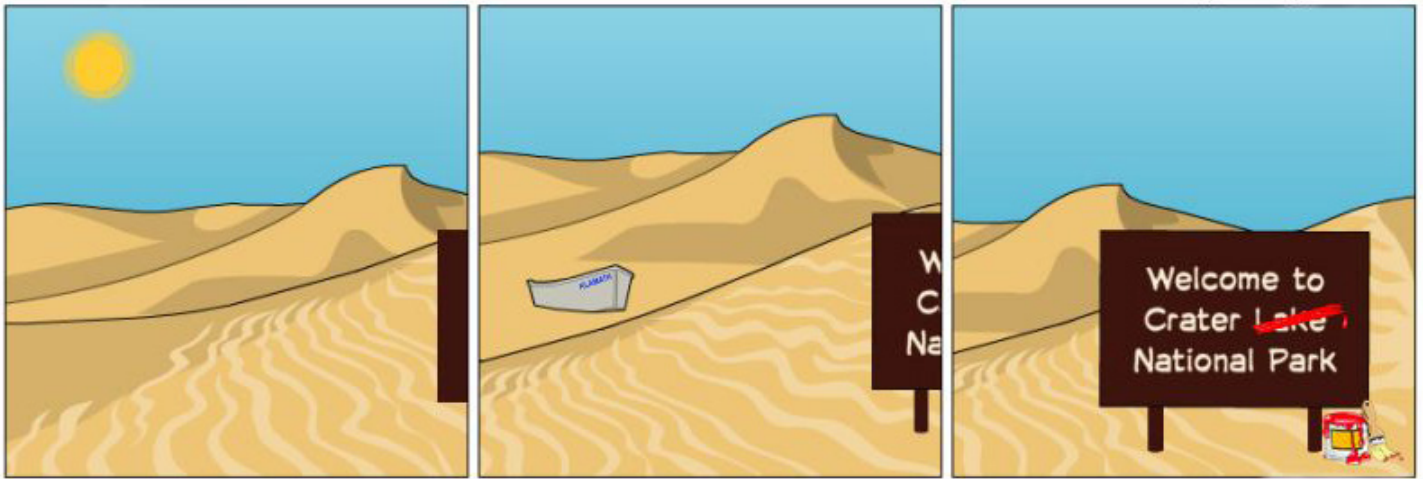
During peak season, the park, its 3,500 visitors, and park operations use less than 70,000 gallons of water a day. The conservation measures in place further reduce water use.

### **What is the impact to visitors to the Park?**

We continue to welcome visitors from around the world to this national treasure. We are letting them know about the water shortage and asking for their help in limiting their water use.

### **What water conservation measures are we taking?**

Over the last few years, the National Park Service and its primary commercial visitor service provider, Xanterra Parks & Resorts, has been installing low-flow fixtures including toilets, shower heads, faucets, and washing machines in park facilities and residences. The Park has also modified operations to reduce water consumption.



## 10 Water Saving Tips

- 1.** Stop leaks. If you see a leaky faucet/water line in the park, please let Maintenance know.
- 2.** Wash vegetables over dishpans and bowls. Reuse leftover water for cleaning or watering of plants, etc. This can save 150 to 250 gallons a month.
- 3.** Catch shower water in a clean container while waiting for preferred water temperature. Use this water for cooking, cleaning, watering, etc.
- 4.** Take shorter showers and avoid baths. Showers can save up to 700 gallons per month. A full bath can use between 30 to 50 gallons per bath.
- 5.** Wash full loads of laundry. Most top-loading washing machines use 40 gallons of water per load. Energy efficient front-loading machines use just over 20 gallons of water per load. A full load of laundry means you are getting the most out of every drop of water. As an alternative, consider using laundry services in other communities that are not under water restrictions.
- 6.** Turn off the water while brushing your teeth. Save 3 gallons of water per day.
- 7.** Don't flush trash. Every time you flush a cigarette butt, facial tissue, or other trash you waste water—between 1.5 gallons with a low-flow toilet to up to 7 gallons with an older model.
- 8.** Drive a dirty car. If you must wash your car, take it to a car wash that recycles water.
- 9.** Keep a bottle or pitcher of water in the refrigerator. Instead of running the tap to cool off the water, keep a supply of cold water in the refrigerator. This can save 200-300 gallons a month.
- 10.** Use a broom instead of a hose to clean driveways and sidewalks. This can save 150 gallons or more each time.

For More Water-Saving Tips:

[www.epa.gov/owm/water-efficiency/](http://www.epa.gov/owm/water-efficiency/)

<http://environment.nationalgeographic.com/environment/freshwater/water-footprint-calculator/>

## IN THE COMMUNITY

### Teen Techathon: Stop Motion Animation

**What:** The downtown Klamath County Library is hosting a Teen Techathon that is open to anyone in grades 6 through 12. Space is limited. Registration is required. The three-day Stop Motion Workshop will include a general introduction to stop motion and the animation program Monkey Jam. Space is limited to 15 participants. Register at the Youth Services Desk.

**Where:** Downtown Klamath Fall Library,

**When:** Tuesday - Thursday, May 5 - 7, 4 - 6 p.m.

### Community Day at Oregon Caves

**What:** Oregon Caves National Monument and Preserve will offer free tours for the public as part of our 14th annual Community Open House. A "Grand Opening" for our brand new exhibit will be at 1 p.m. The Great Cats World Park will join the celebration, bringing up a Siberian Lynx and White Tiger as ambassadors for the event. Free tours of the cave will be offered from 10:00 a.m. to 4:00 p.m. They request only that you bring a can of food to donate to people in need.

**Where:** Oregon Caves National Monument and Preserve

**When:** Saturday, May 9

### Mothers Day Brunch at Lake of the Woods

**What:** Lake House Restaurant & Lounge is taking Reservation for Mothers Day Brunch \$21.95 for adults and \$8.95 children. Call 541-949-8300 x212 to make a reservation.

**Where:** Lake of the Woods

**When:** Sunday, May 10, 9 - 11:30 a.m.

### Women of the Land Exhibit

**What:** Pioneer women were the "heart, soul, and backbone" crucial to raising a family and ensuring a successful, smooth operating, farm. They clothed the family, made soap and candles, worked the land – their contributions are endless. Join us and learn more about these women, our un-sung heroes of the West! Attend Southern Oregon Historical Society's new exhibit, Women of the Land: Southern Oregon Women in Agriculture.

**Where:** Rogue Valley Mall, Medford

**When:** From Friday, May 15, to Sunday, June 21



### Jefferson State Choral Coalition

**What:** Jefferson State Choral Coalition (JSCC), the American jazz and popular music choral ensemble directed by Dr. Kirby Shaw, presents "Blame it on the Music." This concert is performed with extra spirit as JSCC celebrates becoming a non-profit organization. Tickets are available at **JeffersonStateChoralCoalition.com**, Paddington Station, SOU Performing Arts Center Box Office, and at the door: \$10 for adults: \$5 for children & students.

**Where:** SOU Recital Hall, S. Mountain Avenue, Ashland

**When:** Saturday, May 30, Performances at 3 and 7:30 p.m.



# PEOPLE OF THE LAKE

## COMING...

It's that time of year when Sleepy Hollow starts to get a lot less sleepy. Welcome back, returning seasonals! Also, we have a couple of new permanents starting in May, Jennifer Walgrave and John Harwood.

**Curtis Nyseth** and **Al Chamberlain** returned to work with Facilities in late April.

**Stephanie Carter** also came back to Crater Lake in late April to work as the third Classroom at Crater Lake Ranger.

Fees folks are getting back to work for the season. Fees Supervisor **Amelia Bruno** came back on in April and with the help of VUAs **Brandon Rodriguez** and **Christy Pendley**, who both started on April 28, they will get entrance stations open soon. **Stephen Barto**, **Jason Cross**, and **David Welk** are all returning to Fees in May.

**Jennifer Walgrave** will EOD as the new permanent Protection Division Budget Technician on May 3. She has been working as the Academy Coordinator at the Seasonal Law Enforcement Ranger Academy at Colorado Northwestern Community College in Rangely, CO since 2013. Prior to that she worked seasonal positions for several years for the NPS in various disciplines (interpretation, law enforcement, administration) at various parks to include ORCA, DETO, GRBA. Jennifer has Oregon roots and is a graduate of Oregon State University.

On May 4, **Ian Willis** will return as the Trail Crew Leader for his second season. **Nikolaus Bines** will also return on this date as the Assistant Trail Crew Leader (a promotion for him!). This will be Nik's third season.

Returning Interpreters **Brian Ettling**, **Kris Smith**, and **Lisa Wall** will enter on duty on May 17, just in time for Lodge talks.

**Kara Reinhardt** will be returning as the Assistant Trail Crew Leader & Youth Conservation Corps Leader extraordinaire on May 18.

**Christine McCullough** will return to her Botany Tech - Invasive Vegetation Management Crew Leader position on May 25.

**John Harwood** will be arriving in late May. John will be Crater Lake's new permanent Supervisory Forestry Technician, Fire Engine Operator. John will be transferring from Great Smoky Mountains National Park where he works on the Wildland Fire Module. John has previously worked at Olympic National Park, Lava Beds National Monument, Guadalupe Mountains National Park, Lassen National Park, Grand Canyon National Park, and the Klamath Basin National Wildlife Refuge. John graduated from the University of Idaho with a Bachelor of Science in Resource Recreation and Tourism and a minor in Wilderness and Nature Preservation.

And, as soon as her background check clears, **Jaclyn Carpenter** will return for a summer season as dispatcher.

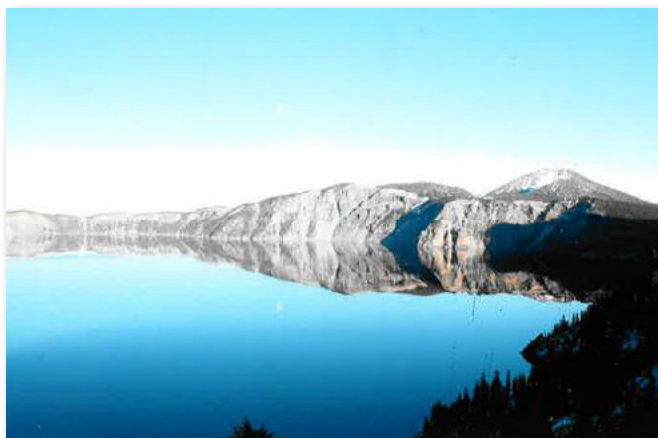
## GOING...

Interpretation Volunteers **Gretchen Conn** and **Sarah Dumont** will end their winter seasons on May 6. Both are heading off to exciting summer opportunities, Gretchen in Olympic National Park and Sarah at Gates of the Arctic National Park and Preserve.

Management Assistant **Scott Burch** leaves Crater Lake for much balmer National Park of American Samoa on May 28. As most have heard, Scott accepted a position as superintendent of that island park in the Pacific. Information on Scott's going-away gathering will be sent out in early May.

HR Specialist **Jean Heacock** has accepted a promotion at Mount Rainier National Park. Her last day will be on May 29. Jean's going-away party will be held in the Watchman Room up on the Rim on Tuesday, May 26, from noon to 1:30 p.m. Look for a flier with details soon.

## JUST FOR FUN



A looking glass day on the lake reveals a curious visual phenomenon when the image is flipped to a portrait orientation. What do you see? Thanks to **Mike Stone** for sharing this photo taken by a contractor.



**Emily Prud'homme** blows some young minds by re-creating the volcanic collapse that formed the caldera. Photo taken at a Children's Learning Fair in Klamath Falls by **Matt Daniel**.