

MONO LAKE

N E W S L E T T E R

Winter & Spring 2016

It is often said that hope is not a strategy. At the Mono Lake Committee we take that to heart. Hope plays an important role, but it's not a strategy. Balancing hope for a "big winter" with a dedication to tracking the sometimes-sobering realities of what the weather patterns are actually delivering is a challenge—especially after four drought years and in the flurry of excitement about and promise of the current El Niño.

Don't get me wrong, Committee staff are the first to rejoice in any snowfall that comes our way. On any given day you might find Bartshé skiing up Tioga Pass at lunch; Jess finding new lines off of June Mountain; Robbie, Lily, Andrew, and Nora laying fresh tracks by moonlight; Lisa out checking on trout while walking Tucker; Elin telemarking with friends; or Geoff with his not-yet-two-year-old on her first set of skis.

And at the same time we're also tracking the Mono Basin's high country snowpack numbers, measuring the water content of each snowfall, checking weather stations, measuring the lake level, and analyzing the big picture situation with watershed model runs as new data comes in. This is not even a hyperactive fascination with the weather—knowing if Mono Lake will rise or fall in the year ahead is critical on many fronts. As we go to print, there's a storm on the horizon that could potentially bump the February snowpack numbers up, but by our best analysis, the results of the winter are still too close to call.

In the meantime, we're busy tracking the things affected by these numbers—the effectiveness of the moat around the gull colony, the fish and flows in the streams below low reservoirs, and of course, the lake level and what it means for the amount of water diversions this year. For some, these things might seem less exciting than playing in the snow. For us, it's all part of the same package. It's where hope meets strategy.

So, that is what you'll find in this issue of the *Mono Lake Newsletter*. We hope you enjoy reading it as much as we have enjoyed putting it together for you.

—Arya Degenhardt, Communications Director



COVER PHOTO COURTESY OF RICHARD ERB

ANDREW YOUSSEF

Project Specialist Robbie Di Paolo measures streamflow in the mile-long Mono Gate One Return Ditch, where water from Grant Lake Reservoir is released to Rush Creek.

Mono Lake Committee Mission

The Mono Lake Committee is a non-profit citizens' group dedicated to protecting and restoring the Mono Basin ecosystem, educating the public about Mono Lake and the impacts on the environment of excessive water use, and promoting cooperative solutions that protect Mono Lake and meet real water needs without transferring environmental problems to other areas.



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MONO LAKE
NEWSLETTER

Winter & Spring 2016
Volume XXXVII, Numbers 3 & 4

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Will Mono Lake rise in 2016?

Lake level modeling and the snowpack waiting game

by Geoffrey McQuilkin

The question for 2016: Will the winter be big enough to make Mono Lake rise? The short answer is: stay tuned to see what happens in the second half of winter. Snowpack conditions are the key to lake level forecasting, and they are currently far better than the last four drought years. But the snowpack is not yet above average for the Mono Basin.

Will water exports be allowed?

The lake level is currently 6378 feet above sea level. The rules controlling water exports to Los Angeles recognize the ecological jeopardy the lake is in when it approaches 6377 feet, *and* they add a twist. As usual, the lake level gets measured on April 1—if it is below 6377, no exports are allowed for the following 12 months. That part is straightforward and easy.

The twist comes in when the hydrologic modeling takes center stage. The rules mandate that water exports must stop if “Mono Lake is projected to fall below 6377 feet at any time during the runoff year of April 1 through March 31.”

Making a 12-month lake level projection is routine—DWP and the Committee do it every year. But there are several techniques that are used, and thus, results can differ—that’s where things get tricky. How do we resolve differing projections, most notably if DWP’s stays above 6377 and the

Committee’s does not? Is DWP willing to work collaboratively to deliver a consensus science-based projection?

To be sure the right thing happens for Mono Lake, the Committee began talking with DWP in December to review these rules and lay the groundwork for timely and productive collaboration.

February outlook is inconclusive

The Committee’s modeling analysis shows that this year’s runoff needs to be at least 80% of average to keep the lake above the critical 6377-foot level. That’s certainly achievable, especially with the snowpack measured at 90% of average as of February 1 and El Niño conditions remaining strong. But it is also possible that Mono Basin runoff could fall short of that mark, especially if some of the season’s remaining storms skirt to the north or south.

With the February 1 snowpack as a starting point, the Committee’s hydrologic analysis shows that the current odds are about 50% for staying above 6377 and 50% for falling below. But as of this writing it is too early to draw any conclusions, and the main lesson from lake level forecasting is to be prepared to handle all scenarios—while patiently awaiting the next storms to see what snowfall nature brings to the Mono Basin. ❖



Mono Lake Committee staff walked to the narrow moat of water that still separates Negit Island from the mainland last November.

Meh Niño

by Bartshé Miller

ANDREW YOUSSEF



After a nearly four-year absence, winter has made an appearance in the Mono Basin, but it has not met expectations of a very strong, “Godzilla” El Niño.

In Lee Vining we have enjoyed the full spectrum of winter weather: freezing fog, snow, rain, and cold temperatures. We have experienced something much closer to a normal winter, and after four years of well-below-normal winters, we are easily impressed by even a little bit of snow. While the psychological bar is very low, the true measure of winter for Mono Lake is in the water content of the Sierra snowpack and the eventual runoff—these numbers tell the real story (see page 14).

Much of the Mono Basin remains a bit below-average in terms of precipitation, and the snowpack in the Rush Creek drainage remains lackluster. Gem Pass, as of February 1, is at 80% of normal. This data point is particularly important since this is the bellwether snowpack measurement above Mono Lake’s largest tributary stream, Rush Creek.

The current, powerful El Niño is having oceanic and

atmospheric impacts around the world. However, for large parts of California, “Godzilla” has yet to impress. The character and trajectory of recent winter storms has favored neither the Mono Basin nor the Eastern Sierra. Past, significant El Niño events (1983 and 1998) were delivering well above average snow over the Sierra by early February, and in Los Angeles precipitation was climbing toward a 30+ inch year. To date the city has logged just over 5 inches of rain, and Mono Basin snowpack is 90% of normal. After four years of record drought, numbers like this inspire an utterance of “meh.”

While the winter will not rescue us from the effects of long-term drought, there is still time for El Niño to deliver a robust winter. If fortune is in the jetstream, the title of this article will be woefully inaccurate by the time you read it. ❖

Bartshé Miller is the Committee’s Education Director. He is now an honorary member of the Groundhog Day Frozen Paddlers—a loosely-affiliated, foolhardy group who have canoed on Mono Lake on February 2 during a snow squall.

Stream Restoration Agreement on its way to water license

by Geoffrey McQuilkin

The Mono Basin Stream Restoration Agreement is a milestone in the long-running effort to recover the health of Rush, Lee Vining, Parker, and Walker creeks after the damage of decades of excessive water diversions. The Agreement was finalized in late 2013, and since then the Mono Lake Committee has been moving it through the channels necessary to incorporate the terms into the official water license issued by the California State Water Resources Control Board to the Los Angeles Department of Water & Power.

This has been a high priority for the Committee, and we have invested a large amount of time and resources working with the Agreement parties to ensure that each element of

the Stream Restoration Agreement is fully and accurately included in the text of the license.

Over the winter the “to do” list got shorter and shorter, and we ultimately reduced it to a single technical item about the allowable rates of change in Rush Creek flow during 61 seasonal hydrograph segments spanning seven runoff year-types. The Committee, working with the involved parties, crafted the language needed to resolve the issue. This means that the State Water Board will soon be able to conduct its final review, leading to an updated water license—and all the stream restoration benefits it contains—being put into place by summer.

Rush Creek dodges another setback

Mono Lake Committee action prompts flow adjustment

by Lisa Cutting

Despite some snow on the peaks and forecasters still calling for an El Niño weather pattern, Grant Lake Reservoir remains at a precariously low level. With three Southern California Edison (SCE) reservoirs upstream, and four years of drought to catch up from, Grant will be the last reservoir to benefit from this year's runoff. Since lower Rush Creek is dependent on Grant Lake Reservoir for its water, and because special water management rules are triggered when Grant drops to a certain level, the Mono Lake Committee was busy in December ensuring that the best possible situation was secured for Rush Creek for the remainder of the winter.

Grant can only go so low

In 1994, the California State Water Resources Control Board, by way of Decision 1631, had the foresight to protect flows in Rush Creek from scenarios in which Grant Lake Reservoir gets abnormally low.

Ordinarily, the minimum winter release requirement from Grant to lower Rush Creek is 36 cubic feet per second (cfs). However, the rule states, "If Grant Lake storage falls below 11,500 acre-feet, the instream flow requirement shall be the lesser of the inflow to Grant Lake from Rush Creek or the specified dry year flow requirement." This change in operation acts as a safety mechanism to prevent Grant from reaching a level so low that releasing water into Rush Creek would be physically impossible.

Last fall Committee staff projected that Grant could reach 11,500 acre-feet by late November (see Fall 2015 *Mono Lake Newsletter*). By early December it was clear that the low-volume rule would be triggered—but the situation wasn't that simple.

Over the last two years, SCE has been releasing upstream flows in a "peaking" pattern where more water is released at times of peak electricity need. This means that the amount of water flowing into Grant can fluctuate

daily between 10 cfs and 100 cfs, making it difficult to match the outflow with the inflow.

Furthermore, as Grant fluctuates above and below 11,500 acre-feet, the required flows would also fluctuate anywhere from 10 cfs to 36 cfs. Fluctuations in Grant's level pose the greater problem—both in terms of acceptable winter flows for the health of Rush Creek and for DWP's operations.

Special permission necessary

Fortunately, the State Water Board offers a remedy for special circumstances like this: A "Temporary Urgency Change Petition" (TUCP) can be filed by the licensee. In this case, all the parties involved—DWP, the Committee, California Trout, California Fish & Wildlife, and the State Water Board-appointed Stream Scientists—supported a TUCP.

Two primary and related factors emerged as justification for the TUCP. First, a release of 10 cfs (the most recent low inflow from SCE's hydropower plant) is much lower than the 25 cfs minimum winter flow set forth in the 2013 Mono Basin Stream Restoration Agreement. Even though the Agreement is still awaiting adoption by the State Water Board, the supporting science for that winter base flow has long been vetted and agreed upon. Additionally, 10 cfs would be well below the lowest flow studied by the Stream Scientists during the 2009 Instream Flow Study. During that study the lowest flow analyzed was 15 cfs, which was determined to be too low and detrimental to the health of Rush Creek with the current habitat conditions.

Second, adhering to the minimum release requirement for when the reservoir is below 11,500 acre-feet

Continued on page 17



SANTIAGO ESCRUCENA

A snow-covered Grant Lake Reservoir at the lowest it has been since 2009, showing the current low volume of water (approximately 11,000 acre-feet) and exposed banks.

Keeping an eye on the California Gulls

Scenario planning underway

by Geoffrey McQuilkin

As the winter of 2015–16 unfolds in the Mono Basin, those of us lucky enough to live here are enjoying tracking every storm and taking the measure of El Niño's effects. After years of drought, many Mono Lake issues are critically affected by the size of this winter's snowpack.

But we can't wait until the final snowflake has fallen to plan for 2016. This is especially true for the protection of the California Gulls that nest on Negit Island and surrounding islets, because the magnitude of the winter will directly determine how safe the nesting ground is this year.

California's four-year drought has lowered Mono Lake more than five feet, causing the re-emergence of a substantial portion of the landbridge that connected the north shore to the gull nesting grounds in the 1980s and 1990s. A modest protective moat of water kept the gulls safe through the 2015 nesting season (see photo on page 3).

Now we're looking closely at what 2016 might bring. In the fall, Mono Lake Committee analysis showed that a wet winter would result in lake levels that improve the natural protection the lake offers one the nation's largest

California Gull rookeries. But a dry winter would expose an easy pathway for coyotes to reach and prey on the ground-nesting gulls, reigniting a major public concern not seen since the 1990s.

Planning for the worst, hoping for the best

In November Committee staff met with the lead Mono Lake gull researcher and a team from California State Parks, the agency with the dubious honor of being in charge of the landbridge as it emerges from beneath Mono Lake. The group's task was straightforward: consider reasonable steps that—if needed—could be taken to protect the gull nesting grounds from coyote predation.

The focus was on temporary measures that would deter coyotes from exploring the landbridge and discovering the gull rookery, potentially for one or two years. With the aid of satellite photos and wildlife camera observations, the group discussed various options and settled on a tentative plan to deploy a temporary electric fence similar to the affordable, low impact varieties used on local ranches.

When to take action

The winter snowpack will determine if a temporary fence is needed. The catch is that by the time we know the final size of the snowpack it will be too late to start planning and permitting a fence. So determining if and when to jump into action is critical. No one wants to see the colony suffer, and no one wants to build a fence that would be unnecessary if Mono Lake is going to rise, either.

To tackle this conundrum, Committee staff modeled multiple scenarios to guide decisions on how to proceed months in advance of winter ending. We used hypothetical snowpack scenarios ranging from dry winters to very wet and put them into the Mono Lake model to see the projected lake level results across 2016. We then looked to see which scenarios produced lake levels that preserved or enhanced the natural watery protection the lake provides the gulls—and which did not.

In the end this analysis has given us specific numbers to use to evaluate the snowpack in February and March to determine if gull protection plans need to be put into on-the-ground action.

So far so good

The Mono Basin snowpack measured 90% of average (see page 14) on February 1. That's pretty good news. Our lake level modeling work indicates a low chance of needing to construct a temporary fence this year to protect the nesting gulls.

However, the 90% measurement just barely triggers the "low risk" conclusion, and if the winter takes a drier turn then action would still be needed. As a result, we will continue work on the planning items with long lead times while we await the March and April snowpack measurements to make any final decisions. ❖



MONO LAKE COMMITTEE WILDLIFE CAMERA

Nesting gulls were safe from coyotes in 2015 but Committee wildlife camera observations confirmed that coyotes are active in the landbridge area.

Eared Grebe survey results from 2015

by Robert Di Paolo

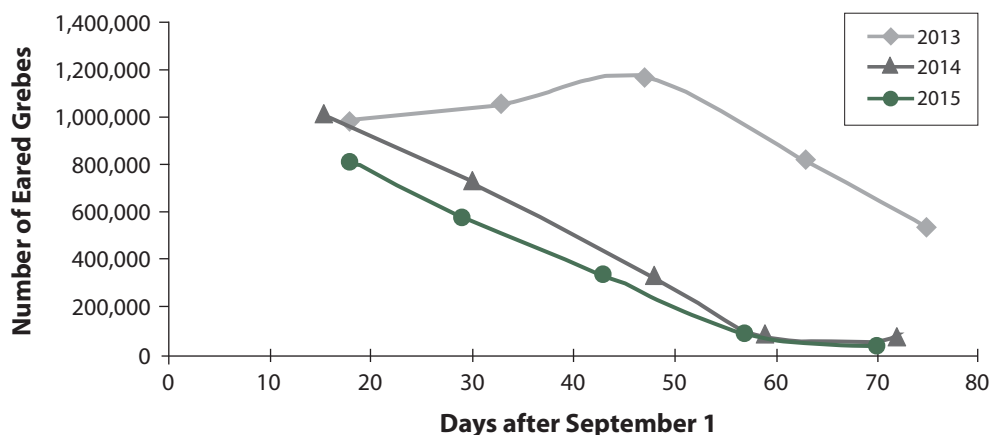
Mono Lake is a critical migratory staging ground for Eared Grebes (*Podiceps nigricollis*). Surveys have confirmed that 30–50% of the entire continent's population of Eared Grebes utilize Mono Lake, with over one million birds visiting on their fall migration route to feed on brine shrimp. Since 2008 the Mono Lake Committee has collaborated with Canadian research biologist Sean Boyd from the Pacific Wildlife Research Centre in British Columbia to carry out annual aerial Eared Grebe surveys.

It had previously been observed that Eared Grebes were most prolific at Mono Lake in mid-October (as recently as 2013), but aerial surveys from subsequent years suggest that a shift toward an earlier peak might be occurring. In order to capture this potential shift in the Eared Grebe migratory timing, we increased the number of survey flights in 2013, 2014, and 2015 to include five flights from mid-September to mid-November instead of only one flight in mid-October.

Results from 2014 and 2015 counts show that peak grebe abundance is happening earlier, meaning that additional surveys may need to be conducted in early September.

This critical research would not be possible without the help of volunteer pilot Geoff Pope, flight sponsor LightHawk, volunteer photographers, and volunteer grebe counters—thank you all. Together we are working to better understand Eared Grebes and conditions at Mono Lake. ❖

Eared Grebe peak visitation shifting earlier



Aerial Eared Grebe survey data suggests that a shift toward an earlier peak in grebe population numbers at Mono Lake may be occurring. See more information at monobasinclearinghouse.org.

2015 Mono Lake California Gull report

by Kristie Nelson, Point Blue Conservation Science

Monitoring of the Mono Lake California Gull colony by Point Blue Conservation Science researchers and volunteers to help understand how wildlife populations respond to ecological change over time continued in 2015.

It was a very successful year for the gulls: both population size and chick production were above-average. Chicks were numerous and heavy, which indicates that they were well-fed and healthy. The robust population was an especially welcome sight, as it may indicate a halt in the declining trend observed in recent years. We also saw several color-banded gulls that we had banded as chicks return as adults—that was a treat.

The troubling aspect of 2015 was the continuing decline of Mono Lake. I felt like a Venetian gondolier when

navigating the waters north of Negit Island—the lake was too shallow in that area to run the boat motor. Just two years ago I could motor around Gaines Island; over the 2015 summer it became connected with the mainland.



A banded California Gull (*Larus californicus*) with its chick at Mono Lake.

From our observations, it appeared that coyotes had not realized they could swim or wade to some of the nesting islands. They did in 1996 when the lake was two feet higher than it was last summer—demonstrating their ability to cross a relatively wide moat when they know a food resource awaits. Plans are underway to protect the gull colony from coyotes if the lake continues to decline (see page 6) and keeping an eye out for any signs of coyotes crossing to the islands will again be an important component of the field research this year. ❖

Explore Mono Lake with a guide

The Mono Lake Committee has been guiding visitors at Mono Lake for 38 years. We know where to see birds and wildlife, and how you can enjoy the quiet, magnificent reaches of the Eastern Sierra. Together, our diverse staff has over 150 years of experience birding, canoeing, and hiking, and we are experts in wildlife, wildflowers, fall colors, and much more. Whether you're looking for some quick advice, a guided trip, or a family outing, we can help you get the most out of your visit.

Choose a guided trip



PHOTO COURTESY OF CHRIS MCCREEDY

Visit
monolake.org/trips
to see all of the
trip options!

We're packing the summer and fall full of new exciting half-day and full-day guided trips. Visit monolake.org/trips to see the full calendar and sign up.

- Guided birding at local hotspots
- Full moon canoe on Mono Lake
- Enjoy the wildflowers in peak bloom
- See Eastern Sierra geology up close
- Visit important cultural history sites
- Fall color insider tour, and more

Create a custom trip

If you want a custom guided trip on your schedule, we'll work with you to put a trip together that matches your priorities. Need to find a few new bird species for your life list? Hoping to take your family on a private canoe tour? Want to find the more secluded fall color spots for photography? If you've got a trip you'd like to take, let us be your guides.

- Half-day, full-day, or hourly trips
- Groups of up to 12 people
- Destinations up and down the Eastern Sierra from Topaz to Bishop
- Optional gourmet lunch in the field



BRV NICHOLS

Meet Lead Naturalist Guide Nora Livingston

Nora first worked for the Mono Lake Committee as an intern in 2008. Since that time she has worked as a field biologist studying birds in the Eastern Sierra, coastal California, and on Santa Cruz Island. While earning her degree in Environmental Studies, she led many birding outings for her college's Biology program.

Many may recognize Nora from leading popular field trips at the Mono Basin Bird Chautauqua. Nora's love for birds, flowers, geology, and hydrology is contagious. Her knowledge of the natural and cultural history of the Mono Basin paired with her guiding skills make any outing with her a blast!



PHOTO COURTESY OF MALCOLM DALGLISH

SoCal water notes

by Geoffrey McQuilkin

Mono Lake friends know that the ongoing campaign to protect Mono Lake is achieved through hundreds of small successes.

Persistence is necessary to achieve each success, and while the details can sometimes be less-than-exciting, the outcomes are inspirational.

This is not unique to Mono Lake, and in Los Angeles the same model holds true with water conservation policies that are critical to the long-term ability of the city to deliver water to residents and businesses while protecting Mono Lake. In the past year, important big goals have been set, and action is underway on the hundreds of steps needed to achieve them.

Aiming big for locally sourced water

The Mono Lake Committee has long advocated for water conservation measures as the way to provide Mono Lake with the water it needs to be healthy while meeting the real water needs of Los Angeles. These measures range from personal conservation habits, like turning off the tap when brushing your teeth, to household plans, like converting to drought-tolerant landscaping, to the institutional, like constructing large-scale water recycling facilities. In sum, these measures provide water from local renewable sources, thus reducing imported water from places like Mono Lake.

In 2015, Mayor Eric Garcetti set an ambitious goal for the city: source 50% of the city's water locally by 2035. Currently just 19% of the city's water is locally sourced, and the new goal firmly places the city on the path to a future in which environmental protections at Mono Lake and in the Eastern Sierra are easily achieved while providing the city with the water it needs to prosper. The Committee and many other environmental organizations are soundly in support. In fact, it would be fair to say that the effort to protect Mono Lake has been critical in showing the promise of this path.

The local water goal is part of a suite of sustainability efforts designed to make Los Angeles a national leader in solar power, electric vehicle infrastructure, water conservation, and green jobs. Goals are easy to announce, but in this case the measurements to evaluate progress are all viewable online, and an Office of Sustainability has been staffed to make sure implementation takes place. The full plan and metrics can be tracked at performance.lacity.org.

Making it happen, step by step

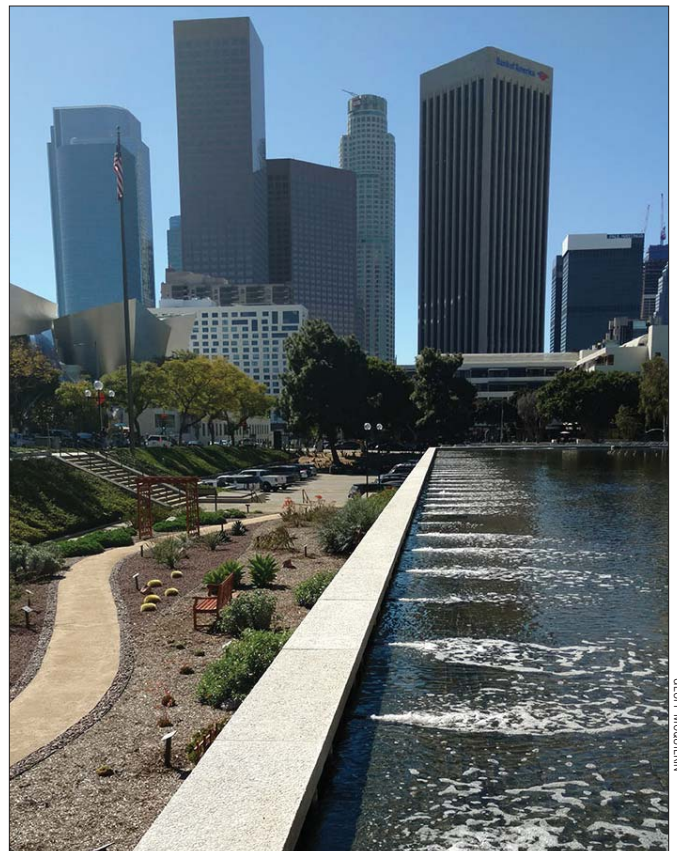
So how do you move the nation's second-largest city toward such an ambitious goal? One step at a time, by building very precise water-conserving measures into the regulatory infrastructure of the city. The Los Angeles water system is complex, and reweaving the fabric of regulations, incentives, best practices, and standard procedures takes in-the-trenches work in many forums. That's how big sweeping

goals turn into commonplace, everyday smart practices.

A recent example is LA City Council action 15-0458, a 17-page enhancement of the city building code championed by Councilmembers Felipe Fuentes, Jose Huizar, Paul Krekorian, and others. Among many things, it requires new water-saving systems and technologies in new and remodeled buildings.

The list of measures is impressively detailed: Mandatory smart irrigation controllers. Separate meters to measure use for outdoor landscaping and fountains. Mandatory pool covers to limit evaporative loss. Secondary piping systems to allow for greywater reuse in landscaping. Mandatory use of recycled water for toilets and building systems if the Los Angeles Department of Water & Power has a recycled water pipeline within 200 feet of the property line. The list goes on, with each detailed item adding another brick to a broad-based foundation of water conservation.

There are many more such measures to come in order to achieve the 50% locally sourced water goal. Mono Lake's protection is one of the compelling reasons to make such a significant change in Los Angeles, and the Committee will be involved as the lake's champion at every step. ❖



Drought-tolerant gardens are one aspect of how LA will meet the goal of 50% locally sourced water by 2035.

Policy notes

by Lisa Cutting

Inyo National Forest reviews stream eligibility

The Inyo National Forest draft environmental impact statement for a revised forest management plan has experienced more delays, but is now expected to be released this spring. Stakeholders and the public have been involved in the process since it began in 2013—evaluating and shaping the plan through public meetings and comment letters.

The Mono Lake Committee's focus is on the latest release of draft information for public review—specifically, recommending Mono Basin streams be included in the revised inventory for protection under the Wild and Scenic Rivers Act of 1968. For a stream to be considered it must have “outstandingly remarkable values” in one of three classifications: wild, scenic, or recreational. Only streams that are listed in the management plan as eligible can be considered for future protection and designation.

As Committee supporters know, the health of Mono Basin streams has improved significantly since the last inventory was completed by the Inyo in 1993. At that time, consistent flows

were just returning to dry and degraded creeks, and restoration activities had yet to begin in earnest. Given the continuous cutting-edge restoration and significant stream recovery achieved in the past 25 years, Mono Basin streams deserve consideration for eligibility.

Environmental Roundtable revived

Started in 2004 by the Committee, Environmental Roundtable meetings gather all Eastern Sierra environmental organizations together, with the primary goal of sharing organizational updates and keeping current on projects. The meetings also include policy-oriented presentations relevant to the entire group—often on an agency action or issue that multiple organizations may be working to resolve.

The Committee has reinvigorated the Environmental Roundtable after a two-year hiatus. Eastern Sierra environmental organizations are working hard and moving fast each day with their own projects and priorities. This meeting is an opportunity to come together face-to-face, share thoughts and ideas, and support each other in common areas. Participants leave the meetings

inspired by the tremendous amount of important work being done in the Eastern Sierra, as well as with new ideas and resources for their projects.

New Deputy District Ranger for the Mono Basin

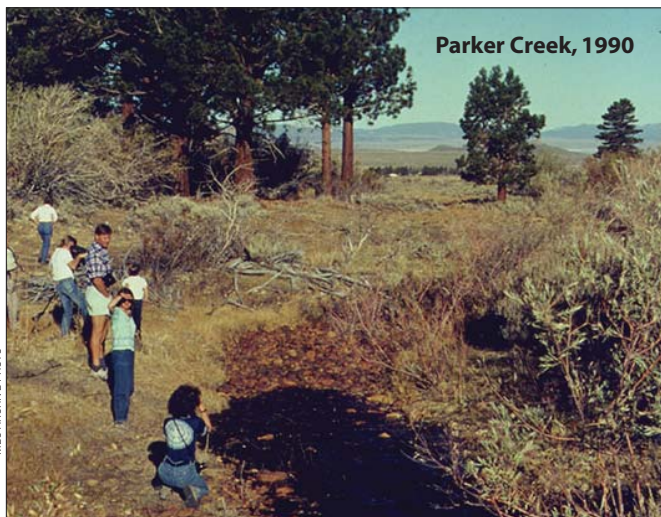
Margie DeRose is now the Inyo National Forest's Deputy District Ranger for the Mammoth and Mono Lake Ranger District. Margie is no stranger to the area, having worked on the Inyo as the Minerals and Geology Program Manager from 2010–2013. She has been coming to the Mono Basin and Eastern Sierra regularly since a high school earth science field trip.

Margie's goals for the position are “To continue to work toward our ecological restoration goals, accomplish more through collaboration, deliver benefits to the public, and provide a world-class recreation experience for visitors.”

Agencies trying to keep up with drones

This past holiday season an estimated one million additional recreational drones entered the air space as sales

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Parker Creek, 1990



Lee Vining Creek, 2011

Since the last Wild and Scenic Rivers inventory of Inyo National Forest streams in 1993, the health of Mono Basin streams has improved significantly, and thus they deserve consideration for eligibility under this round of evaluation.

soared to all-time highs. In an effort to keep up, the Federal Aviation Administration (FAA) implemented a mandatory registration system on December 21, requiring all drone owners to register their aircraft before using them so that individual drones can be identified and traced back to the owner if problems arise. It's likely that this is the first of many regulations and restrictions to keep airspace safe and respect privacy.

Here at Mono Lake agencies and organizations continue to observe and document increased drone use and the associated impacts to wildlife and the visitor experience. State and federal agencies are working to unravel the complex interplay of land and air traffic management while waiting for the next series of regulations and direction from the FAA.

The Mono Lake Committee is continuing to compile all relevant agency restrictions and applicable regulations and engage enforcement personnel when appropriate. If you encounter disruptive drone activity during your visit to the Mono Basin, please contact Lisa Cutting (lisa@monolake.org) at (760) 647-6595. Expect to hear more about this ongoing issue and the evolving management responses in future issues of the *Mono Lake Newsletter*.

Tuolumne River Plan proceeds

Yosemite National Park began implementing components of the Tuolumne River Plan (TRP) last summer and work is expected to continue once Tuolumne Meadows is clear of snow. Finalized in June 2014, the TRP is mandated by the Wild and Scenic Rivers Act. This comprehensive management plan includes specific actions to protect and restore the river as well as a quarter-mile-wide buffer on both sides.

As a result of the TRP, last fall the Tuolumne Meadows gas station closed permanently. Since the plan calls for "no net loss" of visitor parking, the

area will eventually be incorporated into a larger parking lot as other roadside parking areas are eliminated under the TRP.

Over the last two summers, restoration crews worked on the trail connecting Highway 120 with Soda Springs—replacing culverts, filling in

ditches, and restoring vegetation. Over time, the historic ditches and elevated trail had altered the natural flow of water in the meadow. Now, Tuolumne River water will spread through the meadow and vegetation patterns will mimic more natural conditions. ❖

Mono Basin locals raise awareness about climate change

Motivated by the climate talks in Paris, France this past December, a group of Mono Basin residents organized several local events in an effort to support climate awareness and generate and inspire positive change in local actions.

Guided by *350.org*, the group has initially focused on recognizing responsible actions and educating others about steps they can take to reduce personal carbon emissions. Central to the effort have been activities with local children—the next generation of activists and problem solvers.

The first event, a "Solar Walk," highlighted businesses and homes in Lee Vining that have "gone solar." Lee Vining's solar-powered buildings include the Mono Basin Scenic Area

Visitor Center, Channel Shell gas station (the first solar gas station in California), the Lee Vining Community Center, the Mono Lake Committee Information Center & Bookstore, and numerous private homes. Representatives from Sierra Solar, a local solar installation company, were on hand to answer questions and estimate power savings for homes and businesses.

In November, the group held another event—"Steps for Snow." A group of 30 community members walked from Lee Vining to Mono Lake. Participants were given beautiful snowflake ornaments made by local children, symbolizing the need for snow and the walk symbolized the "personal steps" we can all take to make changes in daily life that help reduce carbon emissions.



Mono Basin locals raise awareness about climate change with events like Steps for Snow.

Magic

The Mono Basin Outdoor Education Center programs

by Ron Ozuna

Editor's note: Each year we ask a writer to contribute to the Mono Lake Calendar—this essay is from the 2016 calendar.

Theodore Roosevelt High School had more than 5,000 students on a year-round schedule when we first started going to the Mono Lake Committee's Mono Basin Outdoor Education Center in 2001. I was part of the Humanitas Program, teaching Environmental Science, and my partner (and wife) Phoebe MacAdams Ozuna, taught Environmental Literature. Together, we developed classes that included an unusual component: a five-day field trip to the Sierra Nevada for students to live, work, and learn about nature, animals, geology, water, and life.

We began planning the first trip by talking to Herley Jim Bowling, the Mono Lake Committee's Los Angeles Education Coordinator. There were major obstacles—the trip would require the school to pay for three substitute teachers, permission from two school districts, and some serious fundraising. But Herley Jim guided us through paperwork, deadlines, and a payment plan. The principal found funds for subs, and I found teachers who were willing to drive students. The students worked hard and raised the money they needed by selling bags of chocolate-covered peanuts.

That first trip had ten Environmental Science students and three teachers. Driving the 335 miles to Cain Ranch, the Mono Basin Outdoor Education Center (OEC) headquarters, takes over six hours. It was a long drive, and I did not know what to expect once we got there. I just knew that being outdoors in the mountains would provide a new and important experience for these students. They had never experienced sleeping outdoors under the stars, walking trails, learning about terminal lakes, seeing or being in a volcano, walking through a forest alone at night, cooking, making meals, and having time to think about what it all means.

Santiago Escruceria, the Outdoor Experiences Manager, is a Colombian-born outdoor education teacher. He connected immediately with the students, talking to them in their home language, Spanish, as well as English. He and the OEC instructors made them responsible for themselves and their actions every day. They asked the students questions about nature, the environment, and by the last day, each student had begun to understand where they were and what

was happening around them on the planet. They started to understand about nature, wildlife, and how we are all connected by water, even in Los Angeles.

We had a closing ceremony the last night with the Native American tradition of the Talking Stick. As each person held the Talking Stick they had the opportunity to express their feelings about their experience. Some of the students talked about their home experiences and their experiences at Mono Lake and what it meant to them to be part of the OEC



A group of students from Roosevelt High School reflect on their Mono Basin visit in field journals at South Tufa.

program. For many, it changed how they viewed themselves and their surroundings. For the first time, they could see a future that was bigger than their small community and some even made new goals for themselves beyond high school. Many saw, for the first time, that graduation was just a beginning and education beyond graduation as a new goal. The things the students shared at the closing circle were so moving, it made me cry.

After the first trip to Mono Lake we debriefed and decided that the OEC program was magic. The location, itinerary, and the staff were all magic. The trip had transformed our students. We could see the change each day in our classrooms, wow!

By the second year, a special education student named Jessica learned about the trip from a friend. Though she was not our student, she really wanted to go and asked every day.

Continued on page 13

We talked to her teachers—she did not participate in class, she had very low reading skills (4th grade level), and there were significant family problems. We talked to her special-ed counselor who said it would be good for her to go on the trip—to get away from school and her family for a few days. We decided to take her on the trip, hoping it would help. The students again raised money by selling bags of chocolate-covered peanuts. It was a lot of work, but worth it. That year the best seller was, of course, Jessica. She raised her own money and helped her friend too.

When you arrive at the OEC you have an introduction circle meeting on the living room floor. This is when Santiago gives each student a fun nickname that he uses the entire trip, and sets the tone for the next five days. From there, the activities start—a night hike, canoeing on Mono Lake, swimming, mountain climbing, eating together, and working on stewardship projects together. The whole time Santiago talks to the students, asking questions, making them think and come up with answers. He talks to them about school, the importance of education, nature, animals, plants, water, maps, volcanoes, and the planet. All the students want to be around Santiago because he makes them feel important. Through these experiences, inevitably, the students begin to think about setting goals for school, education, and life.

This was a special time for Jessica and we could see her changing—she started to participate more, and to talk to the other students. Each day was an awakening for her, and by the end of the trip, we had witnessed a transformation. On the drive home she talked about school, education, goals, and of course, the trip to Mono Lake. Back at home, Jessica spent a lot of time in Mrs. MacAdams Ozuna's classroom seeking help and someone to talk to. We referred her to a reading specialist who worked with her to help her improve. She had changed.

Jessica went on three trips to Mono Lake in two years. Each time she returned she became a bigger person, a student



Roosevelt High School students hike in the Sierra at the top of the Mono Basin watershed as part of their stay at the OEC.

with goals for graduation and beyond. She wanted to become a flight attendant and a year and a half after she graduated, Jessica returned to let us know that she had gone to flight attendant school and had become what she had set out to be. The OEC program changed her life forever.

We brought groups of students to Mono Lake for ten years. Four of those years we came twice—14 trips in all. We have endless stories just like Jessica's from these trips. The OEC program changes lives, and as a teacher, there is no better sign that you're doing your job well than to see your students grow, learn, and to go on to succeed in this world. It's magic, it's Mono Lake. ❖

Ron Ozuna was a high school science teacher at Theodore Roosevelt High School for Los Angeles Unified School District for 19 years. He taught Environmental Science, AP Environmental Science, Marine Biology, Biology and 9th Grade Integrated Coordinated Science. Ron retired in June 2011 after 21 years of teaching.



Over 10 years Ron Ozuna brought 14 groups of students from Roosevelt High School to Mono Lake to participate in Outdoor Education Center programs.

Temporary reduction in minimum flow stabilizes Rush Creek

by Greg Reis

Due to the driest four years on record and record-low snowpack last year, fall and winter streamflows in the Mono Basin set new lows.

The inflow to Grant Lake Reservoir was unable to match the 36 cubic feet per second (cfs) minimum dry year release to Rush Creek, and on December 21 Grant Lake Reservoir storage dropped below 11,500 acre-feet. When this happens, current requirements call for a change in operations—reducing outflow to lower Rush Creek to match inflow from upper Rush Creek in order to prevent the reservoir from dropping lower.

The Los Angeles Department of Water & Power (DWP) lowered the outflow accordingly to 23 cfs; however,

there were concerns it could go lower and pass damaging fluctuations downstream. Recent inflows averaged 16 cfs and went as low as 10 cfs—far lower than the 25–29 cfs optimum flow outlined in the Mono Basin Stream Restoration Agreement that will be implemented by the new license.

The Committee saw the need for a creative, adaptive solution to avoid passing those low and fluctuating flows downstream (see Fall 2015 *Mono Lake Newsletter*). After consultation with fisheries Stream Scientist Ross Taylor and with support from Caltrout and the California Department of Fish & Wildlife, the Committee worked with DWP to get a Temporary Urgency Change Petition (TUCP) submitted to

the State Water Board for a constant release of a minimum of 20 cfs until March 31 (see page 5). The State Water Board approved the petition and the flow to Rush Creek since December 26 has been close to 23 cfs. DWP always tries to release slightly more than the minimum flow in order to minimize the chance of violations.

The TUCP expires on March 31; on April 1 required flows in lower Rush Creek get reset according to final snowpack results and the runoff forecast. At that point, Grant Lake Reservoir is likely to still be very low, which means there could be another difficult summer ahead for the Rush Creek fishery if precipitation and runoff conditions are below average. ❖

Lakewatch

Too soon to tell whether Mono Lake will rise or fall in 2016

by Greg Reis

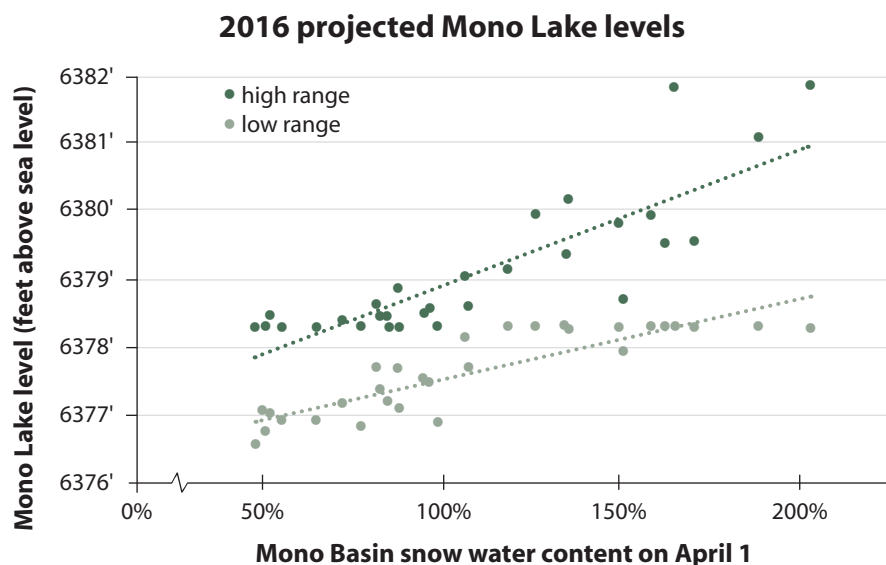
The Mono Basin had a dry-to-average start to the snowy season, but a dry February means that for Mono Lake to rise, March would need to have an El Niño-fueled series of storms that significantly increase snowpack and the resulting spring runoff. Although the snowpack water content is much greater than last year (the driest year on record), February 1, 2016 snowpack was just 90% of average, and the preliminary runoff forecast is for only 80% of average.

At this point in the winter season, we maintain our previous projection of a 50% chance that Mono Lake will drop below 6377 feet above

sea level in 2016 (see Fall 2015 *Mono Lake Newsletter*). Based on 1980–2010 hydrology data and the current lake level

of 6378 feet, we can currently say that if this year's runoff is less than 80% of

Continued on page 16



Based on 1980–2010 hydrology data and the possible April 1 snowpack, the graph shows that if April 1 snowpack is above average, Mono Lake is likely to stay above 6377 feet.

Mono Basin Journal

A roundup of quiet happenings at Mono Lake

by Geoffrey McQuilkin



GEORGE MCQUILKIN

There is much to be said about the return of a normal winter. Snow shovels have been literally dusted off, tire chains located in dark garage corners, and winter boots extracted from deep storage. Snow has often blanketed the lakeshore, and weeks of cold have brought icy conditions to Mono's tributary streams.

On Mill Creek, the traditional icy decorations have formed along the stream's edge: transparent ice stalactites dipping to the flowing water's surface, glossy shells of ice encasing boulders, and occasional sheets of ice hiding the stream entirely and leaving only the rumbling sound of water to hint at its presence.

All this turned even more interesting after an extreme overnight low temperature of -1°F. The flowing water

cooled to the point of freezing, yet had to keep moving downhill, and the stream thickened with loose ice crystals. The slushy ice and water mix clogged main channels and pushed the creek into new paths. Then it built elaborate rippled ice structures, grew anchor ice on the stream bottom, covered pools with an icy froth and rimmed them with an intricate band of ice. And yet two days later nighttime lows returned to the 20s, the days warmed, the stream returned to its purely liquid state, and little remained of the transient deep winter moment. ❖

Geoff McQuilkin is the Committee's Executive Director. After many years in the Mono Basin he is still amazed by how many interesting things take place every day, whether someone is there to see them or not.

Benchmarks



January 21, 2015: In the fourth consecutive year of drought, no snow was seen at the 8,000-foot elevation marker on Tioga Road. February 1 snowpack at the nearby Ellery Lake snow course was 19% of average.



PHOTOS BY BARTSHE MILLER

January 21, 2016: Snow and ski tracks on Tioga Road one year later during an El Niño winter. Current snowpack at Ellery Lake is 115% of average, the highest of all five Mono Basin snow courses where snow is measured (the lowest is 67% at Gem Lake).

South Tufa news

by Andrew Youssef

For many years, summer visitors to South Tufa have been able to join guided tours led by naturalists, but in winter, visiting South Tufa has been a mostly solitary experience. This year that has changed, and we are excited to announce two new ways we are making South Tufa a more interactive winter experience.

South Tufa tours continuing year-round

If you are planning to visit Mono Lake on a weekend, you will be pleased to learn that free, hour-long walking tours at South Tufa are now happening every Saturday and Sunday at 1:00PM through the winter and spring. Come join an expert naturalist to learn more about the fascinating natural history, human history, water story, and important future of Mono Lake during these quiet seasons. These tours are a joint initiative between the Mono Lake Tufa State Natural Reserve, the Eastern Sierra Interpretive Association, and the Mono Lake Committee.



PHOTO COURTESY OF ZACHARY TRIPPED

Visit monolakemobile.org on your smartphone to take the new virtual tour of South Tufa.

Introducing Mono Lake mobile

The Mono Lake Committee is now offering a self-guided tour of Mono Lake's spectacular South Tufa area that you can follow on your cell phone. Simply visit monolakemobile.org on your device at the lake (or from the comfort of your home) and see interactive maps, animated graphics, and historic photographs to deepen

your understanding of the Mono Basin ecosystem and the Committee's work. The self-guided tour has eight stops on various topics from tufa to brine shrimp. You can read about each topic or choose to listen to the narration so you can still enjoy the sights of Mono Lake. ❖

Andrew Youssef is a Committee Project Specialist. During his first Mono Basin winter he has spent as many days as possible on his new cross-country skis.

Lakewatch from page 14

average, Mono Lake is likely to reach 6377 feet at some point during the year. This would trigger the next tier of Mono Lake level protection by eliminating

DWP's export entirely. If 2016 runoff is 83% of average or wetter (a "Normal" year-type), chances are good that Mono Lake will stay above 6377 feet.

The graph on page 14 shows the full range of possibilities for Mono Lake's level in 2016. It is unlikely that this year will turn out to be wetter than 137% of average (a "Wet" year-type), but if that happens, Grant Lake Reservoir could actually spill next fall or winter, and Mono Lake might end the runoff year (April 1, 2016–March 31, 2017) above 6380 feet. A repeat of the "Extreme-wet" 1983 runoff year is not going to happen, but that would have sent Mono Lake as high as 6382 feet this year. ❖

Greg Reis is the Committee's Information & Restoration Specialist. He is saying about his daughter Ana's January birth that La Niña came during El Niño.



ANDREW YOUSSEF

Committee staff have read the lake level gauge on the west shore every month since 1979.

would cause the reservoir to fluctuate around that level, causing releases to Rush Creek to fluctuate between as low as 10 cfs (when the reservoir is below 11,500 acre-feet) and 36 cfs (when the reservoir is above 11,500 acre-feet). This large and frequent fluctuation occurring in winter is not good for trout health and survival, stressing the already drought-affected fishery.

The TUCP requested approval to release a consistent flow of 20 cfs—regardless of whether Grant Lake Reservoir is above or below 11,500 acre-feet—until March 31, 2016, when the temporary change expires. The 20 cfs flow was the best option for both maintaining the health of trout in winter and also preserving water storage in Grant Lake Reservoir. DWP submitted the TUCP in mid-December and a month later it was approved by the State Water Board.

The Stream Scientists have identified ideal winter base flows for Rush Creek to be 25–29 cfs. Flows higher than this adversely affect trout—making them expend extra energy to work against the stronger current during the winter when food is scarce. Once the Mono Basin Stream Restoration Agreement is

approved by the State Water Board (see page 4), the range of winter flows in Rush Creek will be clearly specified at the optimum level conducive to trout health and other aspects of stream restoration.

Restoration recovery = resilience

Some readers may be wondering why low winter flows are such a big deal. Many creeks in the Eastern Sierra have low water levels in winter—including Rush Creek above Grant Lake Reservoir—especially after four years of drought. The answer is that even though Rush Creek has experienced tremendous restoration recovery, the system still has a ways to go. Many of the steps are related to trout habitat complexity—like the creation of deep pools and overhanging vegetation that offer cover from predators in winter when water levels are low. Deep pools are less likely to completely freeze, and therefore provide refuge from cold, icy conditions of shallower water when every degree counts in terms of trout survival.

Comparing lower Rush Creek (below Grant) with upper Rush Creek (between Silver Lake and Grant Lake Reservoir) shows a stark contrast. Upper Rush

Creek was never fully diverted and the habitat is diverse and complex—deep pools, large fallen trees across the creek, and a variety of streamside vegetation help trout weather low flows and temperatures. Lower Rush Creek will get there eventually but it isn't there yet, so actions like the TUCP that help mimic natural stream patterns as closely as possible are critical.

The Mono Lake Committee will always be here to advocate for the streams to get the water they need, no matter how complicated negotiations become. However, the 2013 Mono Basin Stream Restoration Agreement sets up a simplified process shaped by the most current scientific analysis to ensure the best flows at all times. The sooner the Stream Restoration Agreement is in place, the more streamlined the process for dealing with these complicated scenarios will be. ❖

Lisa Cutting is the Committee's Eastern Sierra Policy Director. In 1972 (close your eyes, Mom....) she attended David Bowie's Ziggy Stardust concert at the Santa Monica Civic Auditorium with her best friend's older brothers.



Rush Creek above Grant Lake Reservoir has enough habitat diversity—deep pools and mature, overhanging trees—to handle low winter flows.



Lower Rush Creek, in contrast to the photo at left, has a more uniform creekbed depth and less streamside habitat diversity. Deep pools are created by high flow events, which have been absent on Rush Creek.

PHOTOS BY LISA CUTTING

2015 Free Drawing for Mono Lake

by Andrew Youssef

Thank you to everyone who participated in the 2015 Free Drawing fundraiser! Your support helps protect and restore Mono Lake so it can be enjoyed today and for generations to come. Congratulations to all of the winners, and a big thank you to all of the generous sponsors who donated prizes to the Free Drawing.

The Apple iPad mini went to John Helms of Moraga. GoPro camera: Jerry & Mary Ellen Hughes of Chico. Cali4nia ski pass: Katrina Hedlesky of Dayton, NV.



Ellen, Santiago, and Lily await the winner's name from a ticket Andrew pulls from the 2015 Free Drawing.

Tamarack cross country ski pass: Michael Dempsey of Walnut Creek. Patagonia gear: Ruth Baylis of Lincoln, Joel Paige of New Smyrna Beach, FL. REI backpack: Susan Brenner of San Jose. Yosemite gift package: Bruce Bernbaum of El Segundo.

Golden Gate vacation: Stephen Hough of San Marcos. San Francisco and the Bay: Andrew Frishman of Cambridge, MA. Death Valley vacation: Lidia Chang of La Mesa. Crowley Lake retreat: Jennifer Gibson of Sacramento. Mammoth Lakes vacation: Londa Goodell of Bishop. Hope Valley vacation: Lynn Vahey of San Leandro.

Mono Basin retreat: David Hyman of Sepulveda. Day on Silver Lake: Joan Weaver of Chatsworth. Mono Lake Committee gift packs: Dieter Wulfhorst of Auberry, David Crowfoot of Bend, OR. Mono Lake Committee field seminar: Paul Loudon of Langley, WA. Mono Lake canoe tour: Judith Jeffery of La Mesa.

La Brea Tar Pits excursion: Marya Carr of El Portal. Aquarium of the Pacific experience: Juliana Mijares of Brentwood. Bodie adventure: Betsy Livingstone of Forestville. Eastern Sierra experience: Greig Shepard of Glen Ellen. Friends of the Inyo membership: Gail Kirsch of Big Bear City. ❖

Walking Water takes its first steps in the Mono Basin

by Elin Ljung

Last fall, a group of 35 international and local community members walked from Mono Lake to Owens Lake, completing the first leg of a Mono-Los Angeles watershed-wide project called Walking Water.

The Walking Water project is “an educational journey intended to bring together the voices of the many peoples of the Eastern Sierra and Los Angeles watersheds through the act of walking together, following the waterways—natural and manmade—between Mono Lake and Los Angeles.”

After an opening ceremony at Lee Vining Creek with Mono Lake Committee staff and Mono County Supervisors in attendance, the group spent their first night at the Mono Basin Outdoor Education Center. The evening included a panel discussion with local author David Carle, Caltrout's Mark Drew, and Andy Lipkis of the LA-based non-profit TreePeople.

As the group traveled along the 150-mile, month-long trek, local and international community events complemented their steps. In addition to roundtable discussions in Bishop and Lone Pine, California, events in Turkey, Greece,

Scotland, South Africa, France, and Kenya also explored the relationship between humans and water. Mono Lake Volunteer Program Coordinator Janet Carle joined Walking Water for their week in the Mono Basin; read her account at monolake.org/walkingwater.

In fall 2016, the Walking Water group will continue on foot from Owens Lake to the Sylmar Cascades, where the Los Angeles Aqueduct drops into the LA basin. For more about the project, visit walking-water.org.



Walking Water at the Mono Basin Outdoor Education Center.

2016 Field Seminars



Visions of the Past: First Discoveries

June 4–5

Terri Geissinger

\$155 per person / \$140 for members

The Mono Basin is filled with monuments to a bustling past—take a journey back in time and discover its fascinating history. The past will spring to life as you hear stories of the discoverers, the prospectors, and the families who settled here and made the Mono Basin their home. Visit Dogtown, Monoville, Bodie (with a special visit to the Bodie Bluff!), Mono Mills, stagecoach routes, railroads, and gold mines. Terri Geissinger is a Bodie State Historic Park interpreter and guide with a contagious love of history.

South Shore Kayak

June 11

Stuart Wilkinson & Committee staff

\$105 per person / \$95 for members
limited to 12 participants

Early summer reveals snow-capped mountains towering over a glassy Mono Lake—a great time to kayak! Join Stuart

Wilkinson and a Mono Lake Committee staff member for a guided naturalist expedition that will cover a wide variety of topics relating to this unusual Great Basin lake, including geology, ecology, history, and politics. Expect to see underwater tufa towers, birds, brine shrimp, and lake-bottom springs. Some kayak experience is helpful, but not necessary; kayaks and safety equipment are provided.

The Natural History of Mono Basin Woodpeckers

June 14–16

Steve Shunk

\$165 per person / \$150 for members

Join North American woodpecker specialist Steve Shunk for this dynamic overview of Mono Basin woodpeckers. Woodpeckers are one of the most specialized bird families in the world, and at least nine species of woodpeckers occur regularly in the Mono Basin, making the forests around Mono Lake a perfect stage for observing these amazing forest carpenters. Steve has studied the ecology of western forests for the last 16 years and recently completed the *Peterson Reference Guide to Woodpeckers of North America*.

Mono Lake Committee Field Seminars fill quickly every year—
register online at monolake.org/seminars or call (760) 647-6595.

Miwok-Paiute Basketry

June 24–26

Julia Parker, Lucy Parker, Ursula Jones

\$265 per person / \$250 for members

\$80 materials fee

limited to 12 participants

primitive group campsite included (no pets)

During this seminar, participants will prepare materials and create a small Miwok-Paiute burden basket—used for gathering pinenuts, acorns, and berries. This seminar is designed for weavers of all levels and participants are encouraged (but not required) to camp with the group at a peaceful private campsite near Lundy Canyon. Lucy Parker is a descendent of the Yosemite Miwok, Mono Lake Kutzadika^a, and Kayasha Pomo peoples. She learned traditional handiwork from her mother Julia, a master basket weaver who has dedicated her life to learning and teaching basketry. Ursula, Lucy's daughter and Julia's granddaughter, is carrying the tradition forward.

Music & Ecology in the Mono Basin

June 24–26

Cole & Priscilla Hawkins

\$180 per person / \$165 for members

This nature and music adventure in the Mono Basin will connect the grandeur of the Sierra Nevada and Mono Lake with the music of Ludwig van Beethoven and Jean Sibelius. The seminar will include dinner catered by Linda Dore at the Hawkins' home on the north shore of Mono Lake. Priscilla Hawkins received a Bachelor of Music from the University of Michigan, holds a California teaching credential and has taught cello and chamber music for 40 years. Cole Hawkins earned a Master's in Biology at Fresno State and a PhD in Wildlife and Fisheries Sciences from Texas A&M.



Julia Parker weaves a basket from willow and tule at the seminar.



Mono Lake is a fascinating aquatic habitat with millions of creatures.

Mono Basin Natural History: Aquatic & Terrestrial Habitats

July 8–10

David Wimpfheimer

\$190 per person / \$175 for members

limited to 12 participants

The Mono Basin is one of the most diverse ecosystems on the continent; this field seminar will be an overview of the varied habitats that are found here. We will enjoy the rich diversity of mammals, butterflies, wildflowers, trees, and other plants as we explore the Mono Basin, and a major focus of this seminar will be the identification and ecology of birds that breed here. A guided canoeing exploration of Mono's south shore is included in this class. David Wimpfheimer has been an educator and interpreter for over 20 years, focusing on birds and California's natural history.

Loosen Up with Watercolor

July 8–10

Penny Otwell

\$175 per person / \$160 for members

limited to 12 participants

With larger brushes and brilliant transparent watercolor, learn to express your vision of the remarkable landscape of the Mono Basin through this field seminar. Painting exercises focusing on design and color will form the basis of this class for beginner to intermediate painters while working both indoors and outdoors. Instructor Penny Otwell paints professionally in the Sierra Nevada, and her distinctive style has evolved as a self-taught painter. Her work has been influenced by the work of Chiura Obata, Maynard Dixon, Edgar Payne, and Wayne Thiebaud.

Mono Basin Moonlight Photography

July 15–17

David Gubernick

\$275 per person / \$250 for members
limited to 10 participants

Nighttime photography opens up a new world of photographic possibilities, both compelling and challenging. Through guided practice sessions, field trips in the Mono Basin and upper reaches of the Eastern Sierra, coaching in the field, and review of images, you will learn to create nighttime images with visual impact. David Gubernick is an internationally and nationally published and award-winning nature photographer and workshop leader. His exhibition prints can be seen at Gallery Sur in Carmel and the Ventana Inn & Spa in Big Sur.



SANTIAGO ESCOBAR

A full moon over South Tufa provides beautiful photographic options.

Mono Basin & Bodie Photography

July 22–24

David Gubernick

\$300 per person / \$275 for members
limited to 12 participants

Join this warm and supportive field seminar to enhance your photo-taking abilities in the uniquely beautiful Mono Basin and at the world-renowned Bodie State Historic Park. Field trips and classroom sessions will combine to cover a multitude of photographic topics. Plus, the group will visit Bodie for private after-hours evening access. David Gubernick is an internationally and nationally published and award-winning nature photographer and workshop leader. His exhibition prints can be seen at Gallery Sur in Carmel and the Ventana Inn & Spa in Big Sur.



PHOTO COURTESY OF KRISTIE NELSON

A tiny Marine Blue butterfly on the plant known as "ranger's buttons."

Insects & Plants for Kids

July 16

Richard Potashin & Nancy Hadlock

\$165 per person / \$150 for members
open to participants ages 9–14
children must be accompanied by an adult

Have you ever wondered why there are so many insects around flowers? How do they use each other for protection and food, and how do they support all life, including you? Early summer in the Eastern Sierra is a fascinating time to discover what's in bloom and who is buzzing around. Richard Potashin is a longtime Eastern Sierra resident who, in a previous life as a landscape gardener, developed a passion for native flora. Nancy Hadlock has been a naturalist, interpreter, and educator for the National Park Service and US Forest Service for over 30 years.

High Country Plants & Habitats: How are they coping with climate change?

July 29–31

Ann Howald

\$165 per person / \$150 for members

This class will explore the mosaic of habitats found in the Eastern Sierra high country—flower-filled meadows fed by meandering streams, sagebrush-covered slopes, lodgepole pine forests, subalpine lakes bordered by willows, and flowery rock gardens. A special focus this year will be the ways high elevation plants and animals of the Mono Basin are affected by climate change, now and in the future. Ann Howald is a retired consulting botanist who has taught popular Committee field seminars for over ten years.



SANTIAGO ESCOBAR

Wilson's and Red-necked Phalaropes flock to Mono Lake by the hundreds of thousands during the summer months.

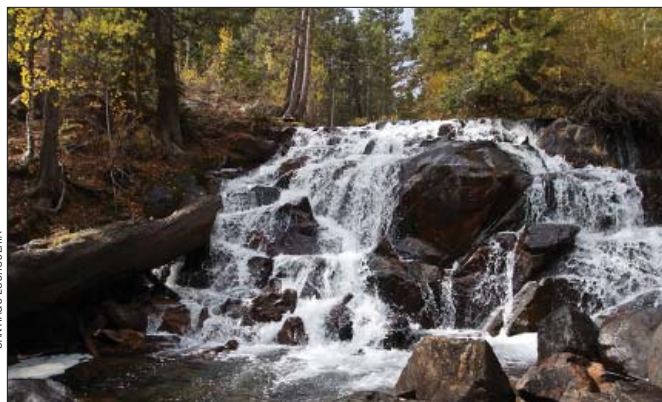
Los Angeles Aqueduct Tour

August 13

Bartshé Miller

\$105 per person / \$95 for members

The Mono Basin extension of the Los Angeles Aqueduct began transporting water 350 miles south to the City of LA in 1941. Visit all the major aqueduct facilities in the Mono Basin and learn about the aqueduct's effects on Mono Lake, its tributary streams, the Upper Owens River, and land management in the area. The group will discuss the history of water diversions, the effort to save Mono Lake, and the future of habitat restoration. Bartshé Miller is the Committee's Education Director with 24 years of experience working in the Mono Basin.



SANTIAGO ESCOBAR

Lee Vining Creek's water is diverted into the Los Angeles Aqueduct.

Birding the Migration: Mono Basin & Bridgeport Valley

August 18-19

Dave Shuford

\$155 per person / \$140 for members

The east slope of the Sierra Nevada is a major migration route for birds traveling from northern nesting areas to warm southern habitats. As a result, late summer is the time of year to see fall migrants and early arriving wintering birds

in the Mono Basin and Bridgeport Valley. Dave Shuford has been a staff biologist at Point Blue Conservation Science for over 30 years. He has conducted numerous surveys and research projects in the Mono Basin and beyond and is well acquainted with where to find birds in the Eastern Sierra.

Birding the Migration: Mono Basin & Long Valley

August 20-21

Dave Shuford

\$155 per person / \$140 for members

The east slope of the Sierra Nevada is a major migration route for birds traveling from northern nesting areas to warm southern habitats. As a result, late summer is the time of year to see fall migrants and early arriving wintering birds in the Mono Basin and Long Valley. Dave Shuford has been a staff biologist at Point Blue Conservation Science for over 30 years. He has conducted numerous surveys and research projects in the Mono Basin and beyond and is well acquainted with where to find birds in the Eastern Sierra.

Miwok-Paiute Basketry

August 26-28

Julia Parker, Lucy Parker, Ursula Jones

\$265 per person / \$250 for members

\$80 materials fee

limited to 12 participants

primitive group campsite included (no pets)

During this seminar, participants will prepare materials and create a small Miwok-Paiute burden basket—used for gathering pinenuts, acorns, and berries. This seminar is designed for weavers of all levels and participants are encouraged (but not required) to camp with the group at a peaceful private campsite near Lundy Canyon. Lucy Parker is a descendent of the Yosemite Miwok, Mono Lake Kutzadika^a, and Kayasha Pomo peoples. She learned traditional handiwork from her mother Julia, a master basket weaver who has dedicated her life to learning and

teaching basketry. Ursula, Lucy's daughter and Julia's granddaughter, is carrying the tradition forward.

Geology of the Mono Basin

September 9–11

Greg Stock

\$165 per person / \$150 for members

From volcanic craters to glacial moraines, earthquake faults to tufa towers, the Mono Basin displays some of the most unique, spectacular, and accessible geology anywhere in the world. This seminar, consisting mostly of field visits to the premier sites, will present the geologic stories of the Mono Basin in understandable fashion. Greg Stock is the first ever Yosemite National Park geologist. He has authored and co-authored over 50 papers and abstracts on Sierra Nevada geology and is co-author of the book *Geology Underfoot in Yosemite National Park*.

Living on the Edge: Sierra Nevada Bighorn Sheep in the Mono Basin

September 10–11

John Wehausen

\$165 per person / \$150 for members

This field seminar will involve discussions of the fascinating biology of the federally endangered Sierra Nevada bighorn sheep, their relationship with other mammals (including mountain lions and humans), and their conservation in the field. Past participants saw bighorn 15 out of the last 16 years—while there is a very good chance of seeing bighorn sheep during this seminar, there is no guarantee. John Wehausen has been studying the Sierra Nevada bighorn and working for their conservation since 1974. *Please be aware that this seminar involves very strenuous hiking at the 10,000-foot elevation and above.*



BARTSHE MILLER

Federally endangered Sierra Nevada bighorn sheep.

Visions of the Past: Bodie & Aurora

September 10–11

Terri Geissinger

\$155 per person / \$140 for members

In the Bodie Hills are ghost towns full of stories of pioneer families, prospectors, muleskinners, heroes, and gunslingers. This guided tour will visit the town and the cemetery of Bodie, once the second-largest city in California, with tours of the Standard Stamp Mill and the Bodie Jail. Next, a journey that hasn't changed much since the historic mining days will end up at Aurora, once a bustling town of 8,000 souls in the 1860s. Terri Geissinger is a Bodie State Historic Park interpreter and guide, with a talent for making history come alive.



SANDRA NOLL

Erratic granite boulders occur in the Mono Basin high country.

Geology of the Mono Basin

September 30–October 2

Greg Stock

\$165 per person / \$150 for members

From volcanic craters to glacial moraines, earthquake faults to tufa towers, the Mono Basin displays some of the most unique, spectacular, and accessible geology anywhere in the world. This seminar, consisting mostly of field visits to the premier sites, will present the geologic stories of the Mono Basin in understandable fashion. Greg Stock is the first ever Yosemite National Park geologist. He has authored and co-authored over 50 papers and abstracts on Sierra Nevada geology and is co-author of the book *Geology Underfoot in Yosemite National Park*.

Arborglyphs & Aspen Natural History

October 8–9

Richard Potashin & Nancy Hadlock

\$180 per person / \$165 for members

A century of sheep grazing brought Basque sheepherders into the Mono Basin's aspen-bordered meadows, and they left numerous carvings—arborglyphs—on the aspens. Join the instructors for an enchanting journey into the aspen groves to explore this historic art form and to learn about the wildlife, insects, and birds that are drawn to the groves. Richard Potashin has been discovering and documenting aspen carvings for many years. Nancy Hadlock has been a naturalist, interpreter, and educator for the National Park Service and US Forest Service for over 30 years.

Mono Basin Fall Photography

October 11–13

Robb Hirsch

\$275 per person / \$250 for members

limited to 12 participants

Autumn in the Mono Basin is one of the greatest photographic experiences in the country. Spectacular foliage

and skies combine with exceptional light, presenting ample subject matter for photographers in both color and black-and-white. Join accomplished photographer and workshop leader Robb Hirsch to explore shoreline locations at sunrise and sunset, fall color in nearby canyons, and grand overviews of the Mono Basin. Photographers of all levels are welcome; a fully adjustable camera of any size or format is suggested.



BARBIE MILLER

Mono Basin streamside forests are ablaze with fall color in autumn.

Field Seminar Registration Information

To register for a field seminar, please call the Mono Lake Committee at (760) 647-6595 and ask for the seminar desk, or register online at monolake.org/seminars.

More extensive seminar descriptions are available online at monolake.org/seminars.

We accept VISA, MasterCard, and Discover only. We cannot accept personal checks or registration by mail or email. Seminars are limited to 15 participants except where noted. If a seminar receives less than six participants (with some exceptions) the seminar will be cancelled two weeks in advance, and full refunds will be issued.

If you cancel three weeks prior to the seminar start date, we will refund your payment (less a \$15 processing fee). No refunds can be issued *for any reason* if cancellation is within three weeks of field seminar date, but tuition can be applied to another seminar that takes place within one calendar year of cancellation date. If you cancel within one week of the seminar start date, *no credit can be issued*.

Participants must sign a liability release form. All seminars and guided trips operate under permits from the Inyo National Forest and California State Parks.

The Mono Lake Committee works with instructors and field leaders who have received high ratings from past seminar participants. We emphasize a spirit of learning and camaraderie in this magnificent outdoor setting for a reasonable cost. Proceeds from Mono Lake Committee Field Seminars benefit research and education in the Mono Basin.

Mono Lake Committee Field Seminars are open to everyone, but Mono Lake Committee members get to register early and receive class discounts. If you are not a current member of the Mono Lake Committee, you can receive the discount by joining when you register.

Registration
opens every year
on February 1
for members.

Volunteer for Mono Lake

by Jessica Horn

Join the Mono Lake Volunteer Program this summer to learn more about Mono Lake, talk to visitors from all over the world, and spend time outside in the Eastern Sierra. Each summer, volunteers donate much-needed time to help staff the boardwalks at Old Marina and County Park, greet visitors at South Tufa, pull invasive plants to maintain trails and restoration sites, and help with a wide variety of projects in the Mono Basin.

Volunteers are required to attend the half-day sessions and are asked to donate roughly eight hours per month, June through August (on a flexible schedule). Participants must be at least 18 years old, be able to walk short distances, and stand for two hours.

In addition to training and volunteer graduation, Mono Lake Volunteers are welcomed into a friendly and engaged group of 60 fellow fans of Mono Lake—getting together for fun, educational, and Mono-Lake supportive activities throughout the year.

Volunteer training

Free training will take place in the Mono Basin on the following Wednesday and Thursday afternoons: May 25 and 26, June 1, 2, 8, and 9. Additionally, there are two optional trainings—interpretive technique training on June 6, and training for formal South Tufa tours on June 7, both with this season's Mono Lake Interns.

Meet the team

May 25, 1:00–4:00PM: Join us at the Mono Inn for introductions, a program overview, and sign-up paperwork. Hear from the Volunteer Program's cooperating partners—Mono Lake Committee, the Eastern Sierra Interpretive Association, Mono Lake Tufa State Natural Reserve, and the Bodie Foundation—and have a chance to meet new and returning volunteers.

Training in the basin

May 26, 1:00–4:00PM: Get an introduction to the south shore of Mono Lake with overviews at South Tufa and Navy Beach, including basic natural history and commonly asked questions.

June 1, 1:00–4:00PM: Get an introduction to the geology of Panum Crater and the history of Old Marina and the Mono Lake Tufa State Natural Reserve.

June 2, 9:00AM–12:00NOON: Optional group hike to Black Point.

June 2, 1:00–4:00PM: North shore overview, including Mono Lake County Park, DeChambeau Ranch, and Black Point.

June 8, 1:00–4:00PM:

Mono Basin Scenic Area Visitor Center orientation includes meeting the staff, seeing the *Of Ice and Fire* film, and taking a tour of the building and walking trails.

June 9, 1:00–4:00PM:

Mono Lake Committee

Information Center & Bookstore orientation includes a tour of the bookstore and back offices of the Committee and watching *The Mono Lake Story* film. We'll also walk to the Mono Basin History Museum and the Upside-Down House.

Volunteer graduation

After two weeks packed with information and fun, graduation takes place the evening of June 9 on the Mono Basin Scenic Area Visitor Center back patio. Friends and family are welcome to join in the graduation celebration and to enjoy the beautiful view of Mono Lake. Once you have made it through graduation you are ready to start your volunteer service!

The Mono Lake Volunteer Program is a joint initiative sponsored by California State Parks (the Mono Lake Tufa State Natural Reserve), the US Forest Service, and the Mono Lake Committee, with support from the Eastern Sierra Interpretive Association and the Bodie Foundation. Volunteers have the opportunity to work with all of the partners. If you are interested in volunteering, or for more information, please contact Jessica Horn (jessica@monolake.org) at (760) 647-6595. ❖



The 2015 Mono Lake Volunteers celebrate another great season.

PHOTO COURTESY OF JANET CARLE

Staff migrations

by Jessica Horn

With a winter of serial storms, the slopes above Mono Lake have been blanketed with snow, making it hard not to be overjoyed by the changes happening this spring.

On January 12, Information & Restoration Specialist **Greg Reis** and (former Office Director) **Erika Obedzinski** welcomed their second child, daughter **Ana Wren Reis Obedzinski**. Congratulations to the whole family, including Ana's big brother **Charlie**.

The Committee is expanding to accommodate the growing demand for specialized and private trips in the Mono Basin (see page 8) by adding a full-time

Lead Naturalist Guide to our staff. **Nora Livingston** started in the position in January and hit the ground running. This is not Nora's first time working for the Committee; many may recognize her from previous posts as Mono Lake Intern, Birding Intern, and her research work with Point Blue Conservation Science. Nora has been a Mono Basin Bird Chautauqua program leader since 2011, and her experience birding and leading field trips at Mono Lake make her the ideal naturalist for the position. ❖



Committee staff stopped by the Patagonia Reno warehouse to thank the company for supporting invasive plant removal restoration work.

Jessica Horn is the Committee's Office Director. She is taking full advantage of this winter's snowfall by skiing every weekend at June Mountain.

New carpet for Mono Lake Committee ice house

Like most businesses in Lee Vining, the Mono Lake Committee works in buildings with long and colorful histories. For example, the building that houses the Information Center & Bookstore used to be a dance hall frequented by Los Angeles Aqueduct construction workers in the 1940s before the Committee took up residence in 1978. Similarly, the "ice house" office next door, where five of us work, used to be exactly that—a small building full of ice that was dispensed through a chute where the parking spot out front is today.

To the best of our collective memories of the old carpet, it was installed by staff and interns about 20 years ago using free remnants donated from a nearby project. We have to give it credit for lasting this long, but thanks to the generosity and practical sense of Committee Board Chair Sally Gaines, the rodent-chewed, thread-bare carpet is now history. The ice house inhabitants are thrilled to have new, low-VOC, durable carpet squares, and moving everything out for the installation was a great excuse for a long-overdue purge of duplicate files and outdated materials.





From the mailbag

News from members and friends

by Ellen King

Mid-November through mid-January is the busiest time of the year at the membership desk. Year-end donations set us in motion mailing calendars, gifts, and thank-you letters in response. Your generous donations help us prepare the budget for the next year, and we appreciate every single one. After the year-end flurry, my husband Duncan and I took a vacation to Death Valley.

On the way home, we crested the pass to the Owens Valley, and a beautiful wall of white made it clear that the clouds that brought rain to the desert had delivered snow all the way to the valley floor. We are as grateful for the snow as we are to all of you whose gifts help us carry on the work that will keep Mono Lake a special place for many generations.

In honor

Ralph & Leslie Purdy of Novato made a donation in honor of **Mr. & Mrs. Ging Wang**. **John & Emily Thacker** of Los Altos sent a contribution in honor of **Rick Knepp**. **Kristine Zeigler** of Walnut Creek gave a gift in honor of her mother **Wanda Zeigler's** recovery from surgery.

In memory

Bob Battagin of Woodacre and **Leonard & Patti Blumin** of Mill Valley gave gifts in memory of **Rich Stallcup**. **Mr. & Mrs. Gary Conner** of San Clemente made a donation in memory of **Lupe Conner**. **Robert Coronado** of Huntington Beach sent a contribution in memory of **Stanley Kieniewicz**. **Kathleen Gaines** of San Rafael made a donation in memory of her father **Richard S. Gaines (David Gaines' uncle)**. **Gary & Carolyn Jonson** of Ferndale, WA gave a gift in memory of **Ken Lennon**. **Matthew Lawrence & Kimberly Seater** made a donation in memory of **Andrea Lawrence**. **Arthur Oswald** of Santa Rosa sent a contribution "in loving memory of **Mary Sheppard Oswald**." **Stacey Roberts** of Roseville gave a gift in memory of her father **Lawrence Schmitz**. **James B. Snyder** of Davis sent a contribution in memory of **Don Banta**. **Cathleen Tramutolo** of Bishop made a donation in memory of **Richard Tramutolo**.

We received donations in memory of **James Wilson** from **Mary Newton** and



Mono Lake Volunteers Janet, Rebecca, Karen, Jean, and Nancy came to help Ellen and Terry get year-end gifts mailed to Mono Lake Committee members. Thank you, volunteers!

Leilani Thornburg of Bishop, **Bonnie & Barry Howard** of Nevada City, and **Steve Weldon** of Sonora.

Farewell, Stephen Fisher

Documentary filmmaker **Stephen Jay Fisher** passed away in January. Stephen's interest in Mono Lake led him to create the groundbreaking and much-loved film "The Battle for Mono Lake" in the 1990s. His interviews with important players in the Mono Lake story are a true historical legacy, and he captured on video the historic vote of the State Water Board to protect Mono Lake in 1994. Stephen generously shared his footage with the

Mono Lake Committee over the years and we will miss his probing questions and Eastern Sierra enthusiasm.

Special recognition

James & Barbara Ward of Santa Barbara left an extremely generous bequest to the Mono Lake Committee. Their appreciation of Mono Lake and support for its lasting protection led them to include the Committee in their estate plans, providing funds to further our work to protect and restore Mono Lake for future generations. In 2016 a portion of their gift will be used to make long-needed improvements at the Mono Basin Outdoor Education Center. ❖



MONO LAKE COMMITTEE

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Mono Basin Bird Chautauqua

June 17–19, 2016

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Andrea Lawrence Award Dinner

May 13, 2016

Parallax Restaurant
Mammoth Mountain Ski Area

reserve your seat by April 15: (760) 647-6595



Explore Mono Lake with a guide

NEW!

- Guided birding at local hotspots
- Enjoy the wildflowers in peak bloom
- See Eastern Sierra geology up close
- Visit important cultural history sites
- Fall color insider tour
- Half-day, full-day, or hourly trips
- Groups of up to 12 people
- Destinations up and down the Eastern Sierra from Topaz to Bishop

See monolake.org/trips for more!

