

MONO LAKE

N E W S L E T T E R

Summer 2015

This is the first time in 37 years that we have featured the Milky Way on the cover of the *Mono Lake Newsletter*. *Tufa and Milky Way* by photographer and Mono Lake Committee member Thomas Piekunka, is not only a stunning view of the night sky over Mono Lake, it was shot without artificial light. Knowing that the photograph was taken with sensitivity for the subject—without disrupting wildlife (people included) with bright lights at night—makes it that much more beautiful.

That idea, that knowing more about something can make it more beautiful, is actually a pretty good theme for this issue of the *Mono Lake Newsletter*. Let's face it, drought doesn't look good on Mono Lake. Dusty exposed lakebed and weak trickles of water in cobbled creek channels are hard to see. With the final snowpack numbers in we've had to face up to some stark realities about what the coming summer is going to mean for the Mono Basin—a potential two-foot vertical drop in lake level not being the least of it.

Today the lake is at 6,379 feet above sea level. Without the Mono Lake Committee, the lake would be at 6350'. That's not only 29 vertical feet of water, it's the difference between a landscape with a recovering ecosystem, and one without. So, when I look out at Mono Lake knowing it could be that much worse, I can still see a landscape that has undoubtedly stalled out, but is, in the bigger scheme of things, on the road to recovery. Mono Lake has protections in place and a dedicated group of people who really, really care about it, work for it every single day, and are determined to figure out the best things for it no matter what the circumstances. I'm pretty sure there is extra beauty in that.

Maybe you should come see for yourself—walk the shoreline, check out the night sky, or scout out some water and follow the lead of the dipper below.

—Arya Degenhardt, Communications Director



American Dippers are North America's only truly aquatic songbird, and catch their food underwater by swimming and walking on the bottom of streams. A family of dippers takes up residence along Lee Vining Creek each summer—if you listen closely you can hear them singing and see them diving for food and feeding chicks.

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

Summer 2015
Volume XXXVII, Number 1

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Mono Lake mired in drought

by Bartshé Miller

By now, nearly everyone has heard that California is suffering from record-setting drought. After four consecutive years of below-normal precipitation and above-normal temperatures, the state is reeling. Every watershed in California is stressed, a mandatory 25% water reduction is in effect for residents (see page 10), urban areas have begun rationing supplies, over half a million acres of agricultural land are fallowed, fish species are nearing extinction, millions of trees in the Sierra are dying from drought-related stress, and fire danger is extreme. Water levels in lakes and reservoirs around the state are well-below normal. The Mono Basin is also suffering from extraordinary drought.

Four dry years have depressed Mono Lake five feet in elevation and the lake is expected to lose around two feet this year. The cumulative impacts of drought and increasing temperatures are significant. Lake salinity is on the increase, the growing landbridge between Negit Island and the mainland threatens nesting California Gulls, and new alkali flats pose an increasing threat to air quality and human health. Increasing winter and spring temperatures may be changing the productivity and timing of the brine shrimp (*Artemia monica*) population. A shift in *Artemia* timing is, in turn, creating difficult consequences for the one million plus Eared Grebes that rely on shrimp for food during fall migration. In addition, reduced flows in Rush Creek mean warmer water temperatures, increased turbidity, and potential peril for the creek's trout population (see page 5).

Advancing landbridge

The most visible change due to the drought at Mono Lake is the landbridge threatening to connect Negit Island with the north shore. The retreating lake has exposed shallow lakebottom and tufa shoals, making it possible to approach Negit and its satellite islets by foot. These islands harbor a

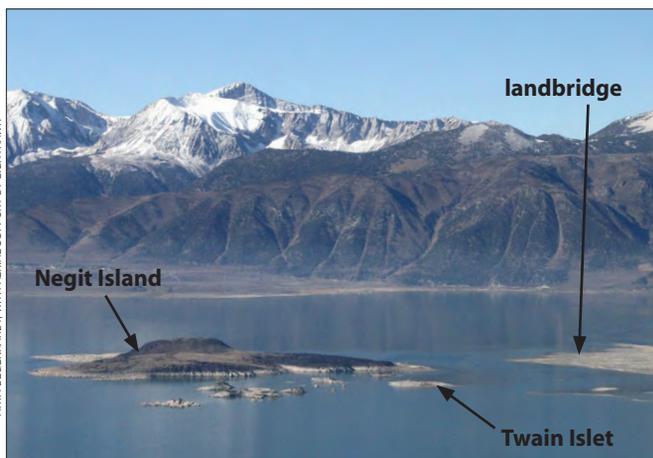
significant California Gull colony, along with a handful of nesting Black-crowned Night Herons and Caspian Terns. At the current lake elevation, coyotes can explore the landbridge and easily see these birds. If enough coyotes learn to wade or swim to nearby islets, they would be rewarded with helpless eggs or chicks, disrupting nesting birds on Negit or any other islet. Today the lake is just four feet above a complete connection with Negit. Twain Islet, adjacent to Negit Island, is home to 46% of the nesting California Gull population at Mono Lake. If the drought continues beyond this year, other nesting sites like Twain will be threatened by predation resulting from the exposed landbridge.

Declining air quality

Among the reasons for maintaining a higher lake level are human health and federal air quality regulations. Air quality declines with the lake level. Newly-exposed lakebottom is a source for salt and other minerals that take flight during windy days. The particulate matter (PM₁₀) produced by these alkali flats is very small, ten microns or less in diameter (human hair is 90 microns wide) and is easily inhaled deep into the lungs, causing respiratory problems.

The California State Water Resources Control Board recognized that air quality was an important consideration for increasing the level of Mono Lake, and that excessive water diversions created the problem to begin with. The State Water Board determined that the management level of 6392 feet above sea level would be the elevation at which most of the dust-producing areas would be submerged. Today, as expected, we are seeing significant dust storms now that Mono Lake is lower. The Great Basin Unified Air Pollution Control District continues to monitor air quality in the Mono Basin and quantifies the impact of individual and cumulative

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Negit Island and islets, October 2012 at lake level 6382.4'. Today the lake is 6379', four feet above the connection with Negit Island.



As Mono Lake drops due to the drought more alkali lakebed is exposed to high winds, resulting in air quality violations.

dust events. You can see real-time data online at bit.ly/airqualitydata.

Not the good ol' days

Large dust storms and the landbridge are reminiscent of Mono Lake in the years of excessive water diversions, before the 1994 State Water Board decision. No one likes to see the lake drop this low again, especially after its general course of upward momentum over the last 17 years.

Fortunately, when the State Water Board issued their 1994 decision for Mono Lake, they created a framework for balancing water diversions with lake levels tied to ecological health, air quality, and recreational values. Now, for the first time since this decision, the lake has declined below an important threshold, triggering a significant reduction in export to Los Angeles.

6380': Health insurance for Mono Lake

On April 1, 2015, Mono Lake Committee staff cooperatively measured the lake level with Los Angeles Department of Water & Power (DWP) staff from Bishop. On that day the lake level gauge showed 6379.01 feet in elevation, and it was no surprise. Because Mono Lake fell below 6380' exports are now significantly reduced until the lake rises to, or above, 6380' on a future April 1. The reduction in diversions will mitigate difficult drought conditions at the lake and put it in a better position to recover when wet winters return to California.

How much water are we looking at? This year, DWP's Mono Basin exports were reduced from 16,000 acre-feet of water to 4,500 acre-feet. An acre-foot (af) of water is approximately 326,000 gallons, and enough to supply the water needs of ten people in Los Angeles for a year (based on the most recent five years of water use data). The export difference, 11,500 af, is significant in a drought, but it's not

critical. This amount of water equates to a 1.8% reduction in Los Angeles' overall supply. The city is already making up for the loss of supply through aggressive water conservation goals while continuing to implement water recycling and other strategies that better cope with future reductions in water supplies due to drought and climate change.

Just add water (and pay close attention)

How far can Mono Lake keep dropping? We know that the lake will drop around two feet this year. In a year with record-low snowpack, there is little water remaining to make its way to Mono Lake. The next important lake level is 6377 feet. If at any point Mono Lake drops below, or is projected to drop below 6377', no diversions are allowed. The 6377' rule has never been triggered before, and the Committee is actively monitoring Mono Basin hydrology and projecting future lake levels to determine if, and how, it will come into effect.

Right now, in the Mono Basin, as in all of California, we are in uncharted territory. We have never experienced the impacts of extremely dry years combined with record warm temperatures. While watersheds all over the state are suffering, fortunately for the Mono Basin, we have a history of advocacy, science, successful legal action, and careful planning that continue to protect and balance Mono Lake's

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El Niño: Drought savior or much ado about nada?

If climate model trends prove true, a significant El Niño event may be present by next fall. Could it mean an end to the California drought? Will it reverse Mono Lake's falling lake level?

If El Niño strengthens and persists into the late fall, there will be an increased chance of above-normal precipitation for Southern California. The Eastern Sierra could also benefit, and the prognosis would be encouraging compared to the last four years. However, there are no guarantees, especially in an age of increasing oceanic and atmospheric temperatures and shifting climate patterns. We have observed few strong El Niño events in California history, and if one develops this fall it will be the most closely monitored and talked about to date.

In 2014 there were encouraging signs of a strong El Niño, but forecasts missed the mark. The Pacific is showing even more robust conditions this year, and the models are more bullish than ever. Even if an El Niño brings abundant precipitation in 2016, one wet winter cannot make up the deficit from California's most extreme drought in 1,200 years.



DWP and Mono Lake Committee staff read the Mono Lake level gauge together on April 1, 2015. Lake level: 6379.01 feet.

How low can they go?

Mono Basin streams in the drought

by Lisa Cutting

The expansive views from almost any vantage point in the Mono Basin tell a stark and undeniable story of four consecutive years of drought, above-average temperatures, and the combined effects on Mono Lake. For residents and regular visitors, the expanded exposed lakebed, growing landbridge, and dramatically changing topography of key visitation sites are hard to miss. While less immediately visible, the effects of the drought on the streams of the Mono Basin are no less severe.

Another grim year for Rush Creek

The Rush Creek watershed encompasses a complex water management system that is exacerbating the effects of the already-challenging drought. Water originating from the Sierra snowpack travels through a series of high-elevation reservoirs that collect and control the flows through Southern California Edison's (SCE) Rush Creek power plant. Water released from the plant makes its way into Grant Lake Reservoir, the Los Angeles Department of Water & Power's (DWP) storage basin for Rush and Lee Vining creek water, before it is diverted to Los Angeles.

DWP has already taken the maximum



This fourth dry year in a row will stress all Mono Basin streams, especially Rush Creek.

export for the year that is allowed when Mono Lake's elevation is between 6377 and 6380 feet above sea level. This, combined with drought conditions, has made Grant Lake Reservoir very low. In fact, it is so low that by the end of summer the reservoir is projected to reach the minimum allowable operating level—meaning that flows to Rush Creek will drop to match the inflow into Grant Lake Reservoir (see page 12).

The effects on Rush Creek below Grant Lake Reservoir are two-fold. First, when Grant is low in the summer it acts like a pot on a stove set at a very

low simmer. Cold, clear inflow from the high county enters and warms as it mingles with the stored water. By the time that water is released into lower Rush Creek the temperature will have increased 5–7 degrees Fahrenheit. The combination of warmer-than-natural water released from Grant, warm summer air temperatures, low water flow, and a lack of vegetation cover from a still-recovering forest system will keep that water at temperatures higher than in healthy, natural stream systems.

On top of that, a low Grant Lake Reservoir affects diurnal fluctuations in Rush Creek. In healthy streams diurnal fluctuations are natural daily changes in water temperature—heating during the day, cooling at night. In a normal system diurnal fluctuations are beneficial to trout, providing periods of feeding and growth. With Grant abnormally warm, scientists have documented wide swings in diurnal temperatures. With wider temperature swings, diurnal fluctuations cause additional stress to the trout instead of being beneficial.



Grant Lake Reservoir's low level will cause relatively warm and sometimes-turbid water to be released to Rush Creek this summer, negatively impacting the still-recovering trout fishery.

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ROBERT DI PAOLO

Like Grant, Lundy Lake Reservoir is very low, which means SCE's Lundy power plant will be operating at minimum levels all summer long.

Temperature and trout

The trout below DWP's Mono Basin dams are not native but date back to the late 1800s and have had self-sustaining populations since flows were restored in the 1980s. The protection of trout under Fish & Game Code section 5937 factored significantly in the battle to save Mono Lake, and trout remain important indicators of the health of Mono's recovering streams. Every year State Water Board-appointed Stream Scientists conduct trout population surveys and evaluate the condition of individual fish within the population.

It is clear from the Stream Scientists' annual reports that increases in summer water temperatures during the ongoing drought have negatively affected the health of Rush Creek's trout.

The optimum water temperature for brown trout growth peaks at 57°F. At 67°F, growth stops completely. Warmer temperatures cause the trout to expend extra energy, which affects the condition factor of the fish. Condition factor—the ratio of length to weight—is used to evaluate the health of an individual trout.

Water temperature relates to levels of dissolved oxygen—the colder the water, the higher the dissolved oxygen level, and the easier it is for trout to breathe. Higher-temperature water, as is expected for Rush Creek this summer, has less dissolved oxygen, which will stress the trout.

Turbidity and trout

When Grant Lake Reservoir is low, it creates turbidity problems for Rush Creek. When the wind whips up, wave action picks up fine shoreline silt and mixes it into the water column. The typically-crystal-clear water becomes murky with suspended sediment before it is released down Rush Creek. The lower Grant is, the more opportunity there is for sediment to pass from the unvegetated and unconsolidated shoreline downstream to Rush Creek.

Elevated in-stream turbidity is detrimental in many ways—raising water temperature, lowering dissolved oxygen levels, preventing light from reaching aquatic plants, and harming fish gills, eggs, and aquatic invertebrates.

We've seen turbidity issues associated with Grant Lake Reservoir before, not surprisingly when Grant was very low in late 2008 and early 2009. In this situation, the only way to address the problem is to have a higher minimum reservoir level so that the silty banks aren't exposed.

Riparian vegetation

Streamside vegetation is important for healthy stream systems. Trees and bushes shade the water, keeping it cooler in summer months. Insects—essential trout food—fall into the creeks from overhanging branches. Roots stabilize stream banks and prevent erosion.

The width of streamside forest

corridors in bottomland areas is dependent on the trees' ability to access groundwater during dry years. Without enough water in the late summer, vegetation growth slows or even stops. If water becomes even more limited, trees cut off water to individual branches or die completely.

Already during this drought, some trees and understory vegetation have begun dying back, especially those far from the main channel along side channels that have dried up. It takes decades for large trees to grow, and this drought is a setback in the 25-year effort to restore the valley-wide riparian forest.

Slower restoration of streamside forests slows the restoration of the stream channels, and thus lengthens the time for the fishery to recover from the lingering impacts of decades of excessive water diversions. Trout recover last in restoring stream ecosystems because they depend on the health of all the other components combined.

Lee Vining Creek fares slightly better

Compared to Rush, Lee Vining Creek typically flows fast and cold due to its steeper gradient, fewer and smaller lakes and reservoirs upstream, and closer proximity to high-elevation snowpack.

In average runoff years, Lee Vining Creek's lowest late-summer flow is about 25 cubic feet per second (cfs), but this year, Lee Vining Creek could get as low as 6 cfs by the end of the summer. This low flow will be tough on trout.

Lee Vining Creek is better prepared to weather the drought because the streamside vegetation cover has recovered more and is more dense, which will help keep the water cooler as it moves downstream toward Mono Lake. It's only in the lower reaches of Lee Vining Creek that temperatures may warm significantly.

Parker and Walker

Parker and Walker creeks are

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Grant Lake Reservoir outlet design

by Geoffrey McQuilkin

The Los Angeles Aqueduct diversion dam on Lee Vining Creek was upgraded 15 years ago in order to better deliver mandated flows to the long-suffering creek. Now progress is moving quickly to apply a substantially larger fix to achieve required restoration flows on Rush Creek, Mono Lake's largest tributary.

Thanks to the Mono Basin Stream Restoration Agreement negotiated by the Mono Lake Committee with the Los Angeles Department of Water & Power (DWP), along with our friends at the California Department of Fish & Wildlife and CalTrout (see Fall 2013 Mono Lake *Newsletter*), a new facility will be constructed at Grant Lake Reservoir to overcome the limitations of DWP's existing WWII-era infrastructure.

Based on details reviewed at an early spring engineering design meeting in Los Angeles, the new facility will utilize the same Langemann gate technology as the Lee Vining Creek improvements—but with more and bigger gates.

At the meeting, which was part of the Agreement's communication procedures, DWP staff showed that the facility is well on the way from concept to reality. The overall plan is to deepen the existing reservoir spillway to allow the controlled release of water via a pair of 12-foot-tall variable-

position gates. Core samples have been drilled, geotechnical data analyzed, and engineering drawings are now at what the engineers call 30% completion. Design finalization is scheduled for 2016, with construction to follow in 2017 and 2018.

In addition to the outlet construction work, measures will be taken to shore up the existing ditch that supplies water to Rush Creek. While that ditch is far too small to carry the needed wet-year peak flows, it will be used simultaneously with the new gates to achieve flows in Rush Creek of at least 750 cubic feet per second in the wettest of years. Excavated material from the spillway will be used to reinforce and raise the outer ditch wall. The remainder of the material will be placed into an old excavation pit that dates back to the original Grant Dam construction.

The Committee is pleased that the Grant Outlet provisions of the Stream Restoration Agreement are moving forward toward full implementation. While engineering and construction challenges still lie ahead, modernization of DWP's Mono Basin infrastructure will bring the aqueduct into the 21st Century, providing the capacity to meet stream and fishery restoration goals simultaneously with providing for the needs of Los Angeles residents. ❖



A pair of 12-foot-tall Langemann gates will be installed in the Grant Lake Reservoir spillway to allow peak restoration flows in Rush Creek.

Progress on new DWP water license

Revision of DWP's official water licenses, in order to incorporate the provisions of the 2013 Mono Basin Stream Restoration Agreement, continues to move forward, with formal action likely by the California State Water Resources Control Board in late summer.

Progress has been slow, but unavoidably so because to take action the State Water Board also needs DWP's design and

environmental documentation for the Grant Outlet in hand. That design work is substantial and has proceeded relatively quickly, meaning that the schedule laid out in the Agreement is being followed and that Rush Creek is moving closer to the day when its fish, birds, meandering channels, and streamside forests will experience the promised restorative flows of water.

Caltrans rockfall project now in progress

by Lisa Cutting

After three years of meetings and discussions, in-depth analysis and testing, expert recommendations and collaboration, the Lee Vining Rockfall Safety Project is underway.

The California Department of Transportation (Caltrans) project will improve motorist safety by reducing rockfall incidents along a one-mile section of Highway 395 near Old Marina. The project will stabilize and revegetate six eroded slopes using a combination of anchored mesh, soil rehabilitation, and revegetation tailored specifically to the Mono Basin's unique soil composition.

More than 650 Mono Lake Committee supporters commented on the proposed project, advocating for an effective and ecologically sensitive project with minimal visual and no water quality impacts.

What drivers should expect

The project area has steep slopes to the west and the Mono Lake Tufa State Natural Reserve to the east so space is tight and requires closing one lane of the highway to stage and maneuver equipment. Temporary traffic control signals will operate 24 hours a day for the duration of the project and motorists should expect delays of up to 20 minutes. At night the signals will be activated by motion sensors to reduce wait time.

In addition, the project will include two eight-day periods of complete road closure for up to one hour per day, Monday through Thursday mornings between 6:00AM and 7:00AM. In order to minimize the number of people affected by the delays, the hour-long closures will not take place on Fridays, Saturdays, or Sundays. Specific complete-closure dates will be communicated well in advance on Caltrans' electronic highway information signs, temporary signage, and online.

The Mono Lake Committee Information Center & Bookstore as well as monolake.org will serve as a source for closure information and updates as the project progresses this summer.

Construction timeline

The formal project schedule outlines construction during the 2015 and 2016 summer seasons. Since the contractor has been able to get an earlier start than originally planned, the project may be completed earlier—perhaps even before the snow falls this coming autumn. Of course, there are many unknown factors that could influence the project timeline, most notably weather and unforeseen complications that may arise during construction.

How the project area will look this year

Now that traffic control systems and erosion control safeguards are in place, Caltrans has started work on the two northernmost, most complex slopes, where they have begun rock removal, or “scaling,” to prepare the slopes for anchored mesh. Over 3,000 anchors must be drilled into three of the six slopes in order to secure the mesh. The mesh will both stabilize loose material and help hold soil amendments and seed mixtures in place to give plants a chance to establish.

Although some amount of rock removal has to occur on all six slopes, the three southern slopes do not need anchored mesh, and will be stabilized through soil rehabilitation and revegetation alone. Over the past two years Caltrans has methodically tested a range of revegetation options, and has tailored the project to use the best method for each slope.

This summer we expect the slopes to look their worst, and they will be somewhat of a shock to people who know the area and the view along the lakeshore well. Some slopes will be cleared of all existing vegetation and the anchored mesh will be clearly visible. But, as we know from other restoration projects in the Mono Basin, doing things right takes time, and in the long-term the slopes will blend in with the adjacent existing vegetation. The area will ultimately be much safer and will look better than it has in the 80 years since the slopes were originally cut to make room for the highway.

For the Mono Lake Committee this carefully-planned, long-range approach to fixing both the rockfall problem and the visual scars of the past is a good example of a win-win collaborative solution to this critical issue. ❖



The Lee Vining Rockfall Safety Project will reduce rocks falling onto the highway while improving the visual quality of old roadcuts at the same time.

ANVA DEGENHARDT



The OEC Access Fund in action

There are no two ways about it—it takes a lot of resources for a school or community group to visit Mono Lake. From vans to gas to groceries to chaperones to permission paperwork to substitute teachers (not to mention the six-hour drive), it takes an incredible amount of time, energy, and money to pull it off. Once a group gets to the Mono Basin the struggles seem to fall away as life-changing experiences and lifelong memories are made. But that first year of making the trip can be really difficult, and even with the lowest program costs in California and a sliding scale, sometimes the communities we work with simply don't have the resources to get their kids to the Outdoor Education Center (OEC).

The OEC Access Fund was set up in 2010 by Randy Arnold (see page 24) to help groups that demonstrate a strong interest in participating in the OEC program, but need an extra financial boost to physically get here.

In 2014, generous Mono Lake Committee member Bob Finch was inspired by the OEC program and wanted to help. Thanks to his donation to the Access Fund, this year we will have four new groups that would otherwise not have been able to participate in the program: Sun Valley Magnet School, Friends of the Los Angeles River, APEX Academy, and the American River Charter School. Thank you, Bob! ❖



During the winter months OEC staff spend time with students in Los Angeles. They give presentations on Mono Lake and coordinate with teachers and group leaders—getting everyone ready for their five-day adventure at Mono Lake.

The Longest Straw

A team of ambitious young filmmakers is working to raise awareness about the connection between Los Angeles and the source of its water in the Eastern Sierra. *The Longest Straw* crew will backpack 338 miles along the Los Angeles Aqueduct from LA to Mono Lake. Last year the team visited the OEC with the East Yard Communities for Environmental Justice community group; see the teaser at thelongeststraw.com. This summer OEC students will hike the final miles with this inspiring crew.



Our mission is to build understanding and appreciation for the Mono Basin/Los Angeles watershed through education programs and muscle-powered recreational activity; to demonstrate that balanced solutions are possible for meeting the water needs of people and the environment; and to kindle stewardship through service projects that restore and improve the quality of the Mono Basin watershed.



monolake.org/education
facebook.com/mono.oec

PHOTOS BY SANTIAGO ESCRUCERIA

Policy notes

by Lisa Cutting

Governor's mandatory water restrictions

On April 1st Governor Jerry Brown made an announcement that took no one in California by surprise. Brown ordered cities and towns across the state to cut water use by 25% (based on 2013 water use levels) as part of new mandatory drought restrictions. The restrictions are in response to another drought year—the fourth in a row—that is setting records in almost every measurable category.

Local water agencies are tasked with implementing their own specific programs to achieve the average 25% reduction (which ranges from 8% to 36%) within their customer base and must provide monthly reports to the California State Water Resources Control Board. Some cities with very high water use levels have to conserve even more, while others, like Los Angeles, have been issued lower conservation requirements based on the success of their efforts to date (see page 14).

Lee Vining's water supply comes from a spring in Lee Vining Canyon, the flow of which has been diminishing during the current drought. The local Public Utilities District has sent a list of conservation strategies and a copy of the water code to every customer, and visitors should expect to see brown lawns in town this year.

To see the Governor's complete executive order online, go to bit.ly/waterorder.

Sierra Nevada bighorn sheep relocated to Yosemite and Sequoia

In late March, nine bighorn ewes and three rams were relocated from the Inyo National Forest and Sequoia National Park to the Cathedral Range of Yosemite and seven ewes were moved to the Laurel Creek area of Sequoia.

Expanding the animal's distribution into historic ranges through multi-agency programs like this is part of the formal recovery plan established by the California Department of Fish & Wildlife to increase population numbers and genetic diversity.

Bighorn sheep occupied these areas in the past, so they are expected to do well. They will be close to other Sierra Nevada bighorn sheep, which is important for connectivity between herds. They will be far from any domestic sheep, which will provide a physical buffer from potential disease transmission.

The Sierra Nevada bighorn sheep was listed as federally endangered in 2000 when the population got as low as 100 remaining individuals. As a result of recovery efforts the population has increased to over 600.

Bi-State population of Greater Sage Grouse not listed

The US Fish & Wildlife Service has determined that the Bi-State population of Greater Sage Grouse—referred to as the Mono Basin population due to its eastern California and west-central Nevada habitat—does not warrant protection under the

Endangered Species Act.

A key factor in the decision not to list it was the development of the Bi-State Action Plan, a comprehensive management plan developed over the past 15 years by the Bi-State Local Area Working Group. The working group consists of wildlife experts from federal, state, and local agencies and private landowners from California and Nevada. The plan includes 80 science-based conservation projects designed to reduce threats and protect the sagebrush-steppe habitat, which is key for the sage grouse. Additionally, the working group has secured \$45 million in funding to ensure the plan's success.

Organizations such as the Center for Biological Diversity and California Audubon aren't convinced that this approach will be the best way to protect the Bi-State population. In separate press releases the groups expressed concern that the Bi-State Action Plan isn't a substitute for federal protection under the Endangered Species Act and that serious threats remain unaddressed. They argue that listing the sage grouse would create habitat protections and land management practices that this population needs to survive.

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A Sierra Nevada bighorn sheep lamb gets released into Yosemite National Park.

PHOTO COURTESY OF STEVEN BUMGARDNER, YOSEMITESTRIP.COM

Bobcat trapping

California Department of Fish & Wildlife commissioners have been grappling with how to proceed with the implementation of AB 1213—the Bobcat Protection Act of 2013. Thirty eight California counties want to ban bobcat trapping outright within their jurisdiction, at least until the State completes population surveys. Mono County recently added its name to that list.

If an overall statewide ban is not possible, Mono County would, at a minimum, like to see zones established where no trapping would be allowed. Proposed zones include State Parks, National Parks, and the Mono Basin National Forest Scenic Area. The Scenic Area is an obvious choice given the higher level of protection within its boundaries.

Prior to the County's formal comment on the issue, the Mono Lake Committee had submitted comments calling for the same approach. The Fish & Wildlife Commissioners are scheduled to take up the matter again at their next meeting, which will be held in Mammoth Lakes in June.



PHOTO COURTESY OF LUNDY SCHNEIDER

A bobcat spotted in Mono County.

Inyo Forest planning process delay

The Inyo National Forest's plan to release a draft environmental impact statement (DEIS) this spring has



ARVA DEGENHARDT

Entrance and campground fees for Yosemite National Park have increased as of March 2015.

changed and the public can now expect the document to be released this fall. Wilderness inventories and evaluations have been completed and before this fall the Inyo plans to conduct public outreach meetings.

Together with the Sequoia and Sierra National Forests, the Inyo started its management plan revision process in August 2014. Guided by the 2012 planning rule, all national forests will be updating their management plans; the Inyo is helping to pave the way as one of the first three forests to undertake the process.

Yosemite fees increase

As of March 1, 2015 entrance fees and campground fees in Yosemite National Park have increased. The last fee increase was in 1997. The new fee schedule makes Yosemite fees comparable to those at other national parks such as Yellowstone and Grand Canyon and will help the park keep up with inflation. Eighty percent of the fees collected in Yosemite stay in the park to fund restoration projects, infrastructure improvements, and youth education programs.

In response to public comment on the proposed fee increase, Yosemite is implementing the increases in phases and will offer a reduced entrance fee in the non-summer months. The vehicle entrance fee has increased from \$20 to \$30 April through October and a lower, reduced seasonal rate of \$25

for the other months of the year. The park's annual pass has increased from \$40 to \$60.

The full list of entrance fee and campground fee changes is online at bit.ly/yosemitefees.

Kiddoo appointed to lead air quality agency

Phillip Kiddoo is the new Air Pollution Control Officer of the Great Basin Unified Air Pollution Control District following the retirement of Ted Schade at the end of last year (see page 25).

Kiddoo is no stranger to the Eastern Sierra or the agency. He was born in Bishop and after securing two science degrees from UC Santa Barbara he returned to the Eastern Sierra. He has previously worked for the California Department of Fish & Wildlife and the University of California White Mountain Research Station. He has worked for the District for over ten years and is familiar with sophisticated air monitoring and data analysis systems.

The District is a joint agency of Alpine, Mono, and Inyo counties responsible for all federal and state air quality standards to protect the health and welfare of residents and the environment. Air quality monitoring—especially at dry Owens Lake and Mono Lake—is a focal point of the agency. ❖

Lowest runoff forecast ever—half of previous low

by Greg Reis

October 2014 to March 2015 precipitation was about 33% of average—the driest recorded at the Lee Vining and Ellery Lake survey locations, and third-driest recorded at Cain Ranch. April 1 snow surveys found only 14% of average snow water content in the Mono Basin after a warm March melted much of the already near-record-low snowpack.

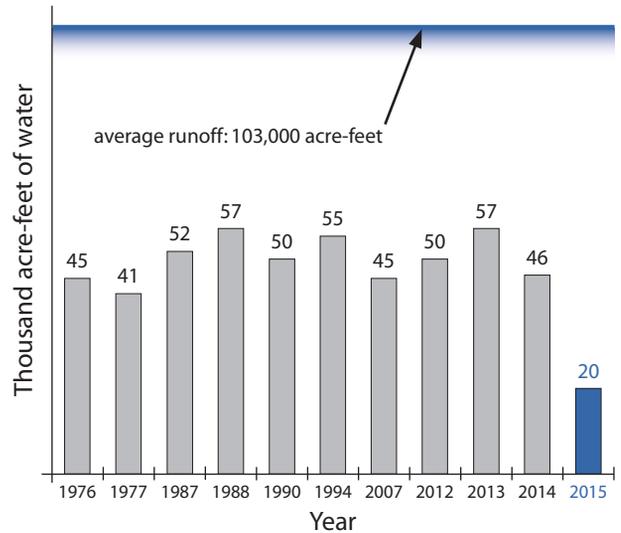
Based on precipitation, snowpack, and recent runoff, the Los Angeles Department of Water & Power (DWP) issued its runoff forecast: 19% of average runoff April–September, and 25% over the next year (assuming median precipitation.) The forecasted April–September runoff is not only less than the driest year on record (1977)—it is less than half of that. This unprecedented forecast creates more questions than it answers as there is no data that even comes close to this year’s figures.

This summer Southern California Edison’s operating plans in the upstream portions of the Rush Creek watershed will be more important than ever. Careful

water management can make a big difference for Rush Creek’s fish and streamside forests in this unprecedented drought.

In a second consecutive dry year, State Water Board Decision 1631 requires that a pulse flow of water be released down Rush Creek for five days. However, this year the Committee advocated for deferring that pulse flow in order to preserve as much water as possible for as long as possible in Grant Lake Reservoir. This will postpone Grant reaching its minimum operating level of 11,500 acre-feet, at which point D1631 allows the release of water to lower Rush Creek to drop to match the inflow.

The ten driest Mono Basin runoff seasons



2015 runoff (Apr–Sept) is forecast to be the lowest in the 80-year record, and twice as dry as the previous record-holder (1977).

Typically, in late summer during a dry year like this one, inflow could be less than 10 cubic feet per second (cfs), which is much less than the 31 cfs flow Rush Creek will get as long as Grant stays above 11,500 acre-feet. ❖

6417
Lakewatch

Mono Lake drops below 6380', heading for 6377'

by Greg Reis

On April 1, Mono Lake was 6379.01 feet above sea level. An April 1 level below 6380 feet triggers a cutback in the annual limit on water exports to 4,500 acre-feet, for the first time since 1996. By 3PM on April 1, DWP had begun exporting water, and had exported all 4,500 acre-feet by May 1.

The Mono Lake Committee’s analysis shows that the lake will drop roughly 2 feet this summer

and autumn—slightly more or less depending on precipitation—and could get close to the level at which DWP’s exports drop to zero (6377') when precipitation from winter storms typically causes the lake to begin its seasonal rise. Previous projections didn’t show this in the range of possibility, but with the unprecedented conditions we are now witnessing, this new situation makes sense.

If Mono Lake doesn’t fall below 6377', it will likely get close. However, the lake shouldn’t reach levels that allow for coyote predation on the main nesting islets during this California Gull nesting season (more on page 3).

All of this underscores the importance of ongoing careful forecasting of Mono Lake’s level, since exports are only permitted when projections indicate Mono Lake will remain above 6377'.

Next year the amount of water DWP can take for runoff year 2016–2017 will be determined both by the actual level on April 1, 2016 and whether the level projected for the subsequent months falls below the 6377' elevation. ❖

Greg Reis is the Committee’s Information & Restoration Specialist. He is looking forward to leading a field trip at the Chautauqua this year.

6417
6392'
6379'
6372'
Prediversion lake level, 1941
Management lake level
Current lake level
Historic low, 1982

Mono Basin Journal

A roundup of quiet happenings at Mono Lake

by Geoffrey McQuilkin



GEORGE MCQUILKIN

Springtime in the Sierra is always exciting as the seasons negotiate for control, the cold days of winter loath to let the springtime sun sneak in and warm up the place.

By February spring had made a strong early showing with warm days that brought thoughts of kayaking on the lake. Winter just didn't make much of an effort. A little snow, a little cold, especially little when you look at the numbers—the driest winter in the 80-year record at Mono Lake, and the warmest too.

On an early May Monday my daughter and I walked the sunny lake shoreline to get a good view of the rockfall project starting on the highway. T-shirts and sunscreen were a must, gulls wheeled overhead like summer, and already-dry grasses crunched underfoot.

And then Thursday that same week the weather whimsy of the Sierra delivered the biggest storm of the winter—Mono

Lake's biggest storm of the last several years, it turns out. Jackets and gloves were a must, snowplows thundered past like winter, and ankle-deep icy slush captured errant footsteps.

Tree branches, thick with leaves, bent low to the ground under the weight of over a foot of wet snow. Apple blossoms disappeared into fresh snow cocoons. Black Point turned white. It was even enough to raise the lake over an inch in a single day. Drought ending? No way. A preview of next winter? Unknown. But a welcome confirmation that Sierra storms heavy with snow can still dominate the landscape? Absolutely. ❖

Geoff McQuilkin is the Committee's Executive Director. He enjoyed being at the California State Science Fair in Los Angeles with his daughter Caelen and her project on how warm temperatures affect the activity rate of pikas.

Benchmarks



ARVA DEGENHARDT

June 2014: We thought launching canoe tours at Navy Beach at lake level 6380.4' was a challenge....



ARVA DEGENHARDT

May 2015: This is what a drop of 1.4 vertical feet of water looks like. Good thing our canoe tour crew has a new launch strategy!

SoCal water notes

by Geoffrey McQuilkin

The word of the day, week, month, and year in Southern California water (as with all of California) is “drought.” How bad will it be? How warm will it be? How can Governor Jerry Brown’s 25% water use reduction be implemented? What about next year?

Los Angeles and Mono Lake are two ends of a watershed, connected by the Los Angeles Aqueduct. The effects of the drought on Los Angeles—and the response plans—are critical to Mono Lake, especially in this dry year as lower water exports kick in to slow the falling level of Mono Lake (see page 3). The good news is that LA is already working on achieving an aggressive set of new water conservation goals laid out by Mayor Eric Garcetti last fall.

Garcetti’s directive requires Los Angeles to reduce per-capita water use 20% by 2017, and then move further to reduce imported water use by 50% by 2024. The plan encompasses water conservation, water recycling, stormwater capture, and local supply cleanup. Voluntary and institutional measures are the focus for achieving these goals, and range from major water recycling and groundwater cleanup facilities to measures as diverse as rain barrels, turf removal, and recirculation of water at car washes. However, Garcetti set forth incremental targets that must be met along the path to achieving the 20% reduction goal and indicated that mandatory restrictions would be implemented if the targets are not met.

By being proactive, Los Angeles is well-positioned to meet the urgent mandates of the fourth year of statewide drought. On April 1, Governor Brown ordered mandatory urban water conservation of 25% for the year in response to the dismal winter snowpack. Some urban areas with very high water

use levels have to conserve even more; the 36% requirement set for Beverly Hills is an oft-cited example. Los Angeles received credit for the success of its efforts to date and was issued a reduced requirement of 16% that will require aggressive action but is well within the Mayor’s goals.

Turf removal is one area where the Los Angeles Department of Water & Power’s (DWP) conservation efforts have skyrocketed. Thanks to incentives of \$3.75 per square foot of lawn removed, demand is strong. DWP General Manager Marcie Edwards, speaking at the Committee’s Andrea Lawrence Award Dinner in April, reported that “a square foot of turf uses 44 gallons of water a year ... in the first six months of the year we’ve removed four million square feet of grass, and we believe we’re going to be at 18 million square feet removed by the end of the summer.”

These conservation programs are also integral to the successes achieved so far in protecting Mono Lake—indeed, they have been critical to answering the question of how Mono Lake can be protected without transferring the city’s water demands to other natural resources. This year Los Angeles reduced its water exports from the Mono Basin by 11,500 acre-feet to comply with the state mandates protecting Mono Lake, the first time in history that such reductions have taken place without a court involved. Following the rules is the right thing to do—and the success of water conservation in Los Angeles makes it possible.

In this drought year of unprecedented, never-before-seen low runoff from the Sierra, we will experience many never-before-seen things. Los Angeles and the Mono Lake Committee are both working to make sure that unprecedented water conservation success is one of them. ❖

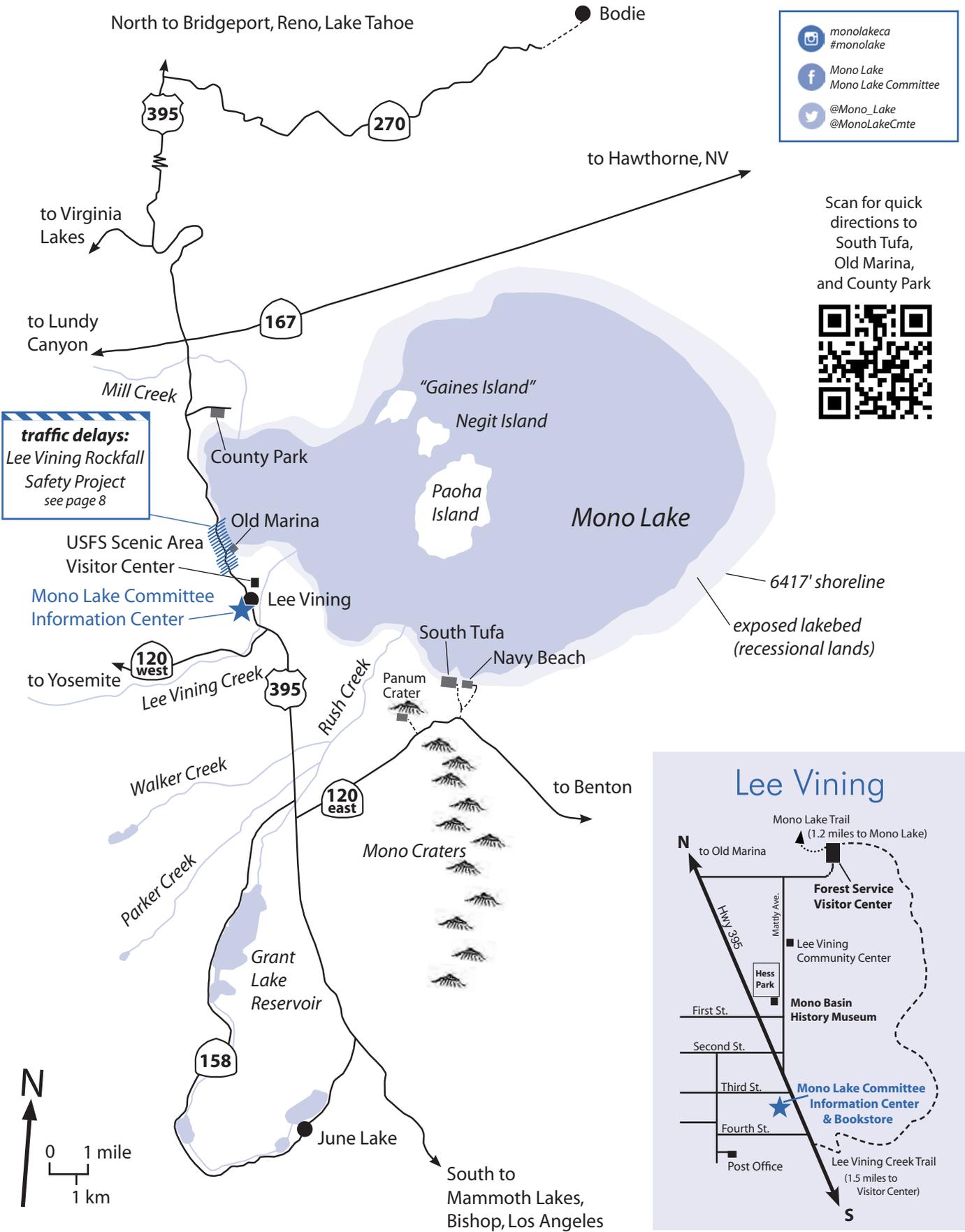


BARTSHE MILLER

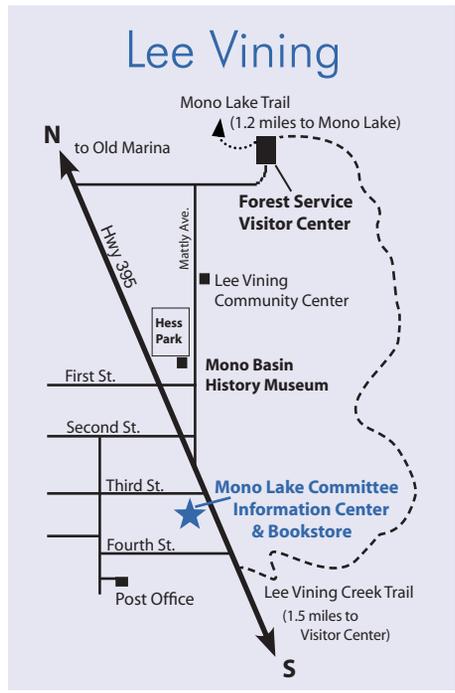
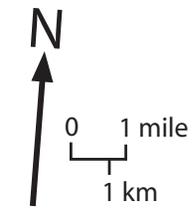
Summer at Mono Lake

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Scan for quick directions to South Tufa, Old Marina, and County Park



traffic delays:
Lee Vining Rockfall
Safety Project
see page 8



When you visit Mono Lake

Nestled at the edge of the arid Great Basin and the snowy Sierra Nevada mountains, Mono Lake is an ancient saline lake that covers over 70 square miles and supports a unique and highly productive ecosystem. The lake has no fish; instead it is home to trillions of brine shrimp and alkali flies. Freshwater streams feed Mono Lake, supporting miles of lush riparian forests of cottonwood and willow. Along the lakeshore, scenic limestone formations—tufa towers—rise from the water’s surface. Millions of migratory birds visit the lake each year.

In 1941, the Los Angeles Department of Water & Power (DWP) began excessive water diversions from Mono Basin streams. Mono Lake dropped 45 vertical feet, lost half its volume, and doubled in salinity.

The Mono Lake Committee was founded in 1978 in response to the threat of inevitable collapse of the Mono Basin ecosystem. The Committee bought an old dance hall in Lee Vining to use as headquarters and went to work spreading the word about Mono Lake. In 1979 the Committee took the City of Los Angeles to court, arguing that DWP had violated the public trust doctrine, which states: “The public trust . . . is an affirmation of the duty of the state to protect the people’s common heritage of streams, lakes, marshlands and tidelands. . . .” —Supreme Court of California, 1983

In 1994, after over a decade of litigation, the California State Water Resources Control Board ordered DWP to let Mono Lake rise to a healthy level of 6392 feet above sea level—twenty feet above its historic low. DWP has reduced its Mono Basin water exports by over 80 percent, and Mono Lake is on the rise. This is truly an environmental victory.

Mono Lake’s recovery depends on water conservation in Los Angeles, and the Committee has created solutions



IVNETTE VILLASOMER

Mono Lake Committee Information Center & Bookstore

- Open daily from 8:00AM–9:00PM during the summer
- monolake.org and (760) 647-6595

Stop by to see detailed displays about Mono Lake’s political history and the current work of the Mono Lake Committee, “The Mono Lake Story” film, an art gallery, a comprehensive selection of books on natural and local history, T-shirts, maps, and locally made artisan gifts. This is also the Lee Vining Chamber of Commerce and our friendly staff are happy to help with local information for your visit.

to the demand for water by implementing conservation and recycling programs in LA that have saved more than enough water to share with Mono Lake. Today LA is one of the most water-conscious cities in the United States, and the Committee works statewide to promote wise water use for people and the environment.



AMERICAN RIVER CONSERVANCY

Canoe on Mono Lake

- Saturdays and Sundays at 8:00, 9:30, and 11:00AM
- \$25 per person, tours last one hour
- Reservations are required: monolake.org/canoe or (760) 647-6595
- Sorry, no kids under the age of 4

Guided canoe tours provide a unique look at the ecology and geology of this high desert lake. No canoe experience is necessary and all equipment is provided. Discover bubbling springs, alkali flies, brine shrimp, underwater tufa towers, migrating birds, and crystalline water, all from the unique vantage point of a canoe.

you are part of the Mono Lake story



ARYA DEGENHARDT

Free naturalist tours at South Tufa

- Daily at 10:00AM, 1:00PM, and 6:00PM
- Tours are free, but there is \$3 per person entrance fee for the South Tufa Area
- Meet at the kiosk at the South Tufa parking lot

Find out why Mono Lake is salty, taste alkali fly pupae, make tufa, and catch a glimpse of thousands of phalaropes or Eared Grebes on this fascinating and free hour-long walk.

The Mono Lake story is not over

The Committee works in public policy, ecological restoration, public education, water conservation, scientific research, and hands-on stewardship. We continue to strive for thoughtful solutions—an approach that has been consistently successful for Mono Lake.

We protect Mono Lake. Challenges facing Mono Lake include demands for water, poorly-planned development, increasing recreational use, underfunded management agencies, and climate change, among others. The Committee works to balance competing needs in a way that protects Mono Lake.

We restore Mono Lake. Restoration work at Mono Lake seeks to achieve healthy, self-supporting lake and stream systems that will thrive into the future. Rejuvenating the Mono Basin ecosystem's dynamic natural processes is the

Keep up with Mono Lake

- | | |
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Mono Lake Committee |
|  (760) 647-6595 |  info@monolake.org |

best way to heal the damage caused by 50 years of excessive water diversions.

We educate people about Mono Lake. The Committee offers hands-on programs to share the sense of wonder that Mono Lake evokes. South Tufa tours, canoe tours, activities for school groups, field seminars, and the annual Mono Basin Bird Chautauqua all provide ways to learn more about Mono Lake. In addition, the Mono Basin Outdoor Education Center brings students from Los Angeles to learn about the source of their water, educating the next generation of California's policymakers.

We support sound science. Science is the base of our policy work, a guide for restoration, and an inspiration for understanding Mono Lake. The Committee supports and works closely with researchers, hosts a comprehensive research library, and runs the Mono Basin Field Station to enhance the scientific knowledge of Mono Lake, its tributary streams, and the surrounding lands.

Long Live Mono Lake!

Mono Lake is a great success story, and you can be a part of it! Add your voice to the 16,000 members who are committed to the protection and restoration of Mono Lake. Your support as a Committee member will be put to hard work for Mono Lake.

Join us on a walking tour, canoe tour, volunteer restoration day, or a field seminar. Check out Mono Lake online at monolake.org. Stay connected to Mono Lake and help ensure its protection for generations to come. ❖



EMILY LUNG

Free bird walks at County Park

- Fridays and Sundays at 8:00AM
- Meet at Mono Lake County Park, tours last 1½–2 hours

Magic is literally flying and flitting through the air in the Mono Basin. Join a resident expert to see everything from shorebirds to songbirds on a free walk for all levels of birders. Bring binoculars and a bird book if you have them (not required).

One drop and a dozen options

A Mono Lake Committee member makes a difference, one drop at a time

by Robert Di Paolo

“How can we use a drop of water multiple times?” asks Regina Hirsch, longtime Mono Lake Committee member and founder of Sierra Watershed Progressive, a collaborative dedicated to identifying and implementing real water saving solutions.

In 2012 Regina and her team designed and installed the Mono Lake Committee’s low-cost, low-maintenance, and zero-energy greywater system to water our outdoor plants and save thousands of gallons of water every year. In year four of the drought, we’re more proud than ever to have and be able to showcase this low-tech-yet-innovative water conservation solution at the Committee headquarters.

The system is pretty simple—when people wash their hands in the bathroom, the water drains through dedicated pipes to underground mulch boxes. From there the water slowly seeps to the trees and plants when they need it most, which is, not

coincidentally, when there are the most visitors here in the summer.

Using water multiple times is no longer the question—it’s the new normal. Thanks to creative Committee members like Regina, the new question is “what are my options?”

For more innovative and inspiring

water projects developed by Sierra Watershed Progressive and Regina Hirsch, read the follow-up article online at bit.ly/dozenoptions. ❖

Robbie Di Paolo is the Committee’s Project Specialist. He is excited to have another summer of exploring and adventures in the Eastern Sierra.



In 2012 Regina Hirsch of Sierra Watershed Progressive installed the Committee’s greywater system, a simple and effective technology we’re glad to have, especially during drought.

Drought from page 4

public trust values, even in times of drought.

Climate change vs. Mono Lake

California has the most variable precipitation regime in the continental US, but it’s clear that anthropogenic climate change is making that variability more extreme. In 2014 we had the warmest year in history by an alarming margin, and the last two consecutive winters in California have been the warmest in history. These conditions have easily transformed a string of dry years into the most severe drought in the state’s history. Looking at 120 years of statewide temperature data, the warming trend is conclusive

and sobering.

Changes in future precipitation are less certain. Extreme drought year types are expected to increase in frequency, along with more extreme rain and flooding connected to atmospheric river events. Decreasing Sierra snowpack and earlier spring runoff are already measurable. This year’s Sierra Nevada snowpack was 5% of average, the smallest in history.

Since 1941, Los Angeles has diverted a total of 4.28 million acre-feet of water from the Mono Basin. If these diversions had never occurred, Mono Lake would be 37 feet higher than it is today, and would be in much better shape to weather this drought. More than just interesting speculation,

it puts Mono Lake’s condition in perspective. Protection and restoration plans are currently in place that address the problem of the last century—excessive water diversions. But are they capable of adapting to human-caused climate change—the greatest challenge of this century?

The consequences of climate change are large, complex, and affect us all. The Mono Lake Committee is asking questions and seeking answers in terms of what this change means for the Mono Basin. As a group of concerned citizens who care about the lake and streams, it is our mission to figure out what lies ahead for Mono Lake. ❖

2015 Field Seminars



PHOTO COURTESY OF ROBB HIRSCH

Visions of the Past: First Discoveries

June 6–7 • 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 13 • 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, such as 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.

Woodpeckers of the Mono Basin

June 16–18 • 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*.

Music & Ecology in the Mono Basin

June 26–28 • 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.

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

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.

Mono Basin Natural History: Aquatic & Terrestrial Habitats

July 10–12 • David Wimpfheimer
\$245 per person / \$230 for members

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 kayaking 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.

Insects & Plants: An Ecological Marriage for the Ages

July 17–19 • Richard Potashin & Nancy Hadlock
\$165 per person / \$150 for members

Explore the complex, intimate relationships and attractions between insects and plants, including the threats to this essential relationship and how cultures, artists, and poets have interpreted this "marriage for the ages." 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.

Los Angeles Aqueduct Tour

July 18 • Greg Reis
\$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. Greg Reis is the Committee's Information & Restoration Specialist with 20 years of experience in Mono Basin hydrology and restoration.

Mono Basin Streams: Flow, Fish, Forests, & Feathers

July 19 • Greg Reis
\$75 per person / \$65 for members

The new Mono Basin Stream Restoration Agreement reached with the Los Angeles Department of Water & Power will begin changing the Mono Basin's streams for better in the next few years. Join the Committee's Information & Restoration Specialist Greg Reis for a tour of Lee Vining and Rush creeks to see and discuss evolving restoration philosophies, the process of reaching the Stream Restoration Agreement, and what the expected results are for flows, fish, trees, birds, mammals, and Mono Lake.

Mono Basin Mammals for Kids

July 24–25 • John Harris
\$90 per person / \$80 for members

This class is designed for kids ages 6 to 12 and their adult companions (a parent or guardian must accompany kids taking this seminar) who are curious about the mammals found in the Mono Basin, from desert sand dunes to the



The Los Angeles Aqueduct Tour seminar includes a visit to the Walker Creek diversion dam.

monolake.org/seminars or (760) 647-6595 to register

forests and alpine meadows of the high Sierra. Through live-trapping and field observation of tracks, scat, burrowing, and the animals themselves, this seminar will introduce participants to the diversity of mammals found in the Mono Basin, with an emphasis on kid-friendly instruction. John Harris is a Professor of Biology at Mills College whose interest in Mono's mammals began in 1975 while studying chipmunks as an undergraduate.



GREG REIS

Kids love being able to see the Mono Basin's small mammals up close.

Mono Basin & Bodie Photography

July 31–August 2 • 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.

Introduction to High Country Plants & Habitats

July 31–August 2 • 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. Sight identification of common trees,

shrubs, and wildflowers will be emphasized, as well as the many ways that plants, birds, insects, and other wildlife interact in high country habitats. Ann Howald is a retired consulting botanist who has taught popular Committee field seminars for over ten years.

Geology of the Mono Basin

August 14–16 • 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 in understandable fashion the geologic stories of the Mono Basin. Greg Stock is the first ever Yosemite National Park geologist. He has authored or co-authored over 50 papers and abstracts on Sierra Nevada geology and is co-author of the book *Geology Underfoot in Yosemite National Park*.

Birding the Migration: Mono Basin & Bridgeport Valley

August 20–21 • Dave Shuford
\$190 per person / \$175 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. If the water level of Bridgeport Reservoir is high enough, this seminar will include a half-day of birding by boat. 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.

Loosen Up with Watercolor

August 21–23 • 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.

Birding the Migration: Mono Basin & Long Valley

August 22–23 • 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.



ELIN LUNING

Birding Horse Meadows, below Mt. Dana and the Sierra crest.

Miwok-Paiute Basketry

August 28–30 • Lucy Parker & Julia Parker

\$190 per person / \$175 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 the 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.

Creating the Illuminated Field Journal

September 4–6 • Hannah Hinchman

\$175 per person / \$160 for members

limited to 12 participants

A field journal is an ideal vehicle to record moments of discovery about the natural world, as well as a quiet way of simply being present outdoors. In this workshop, artist/writer Hannah Hinchman will guide you in exploring the variety of nearby habitats—opening windows to nature’s many secrets and learning to personalize these experiences through journal entries, both drawn and written. Hannah is the author of three books about field journals, and has been teaching field journal workshops all over the US for over 20 years.

Visions of the Past:

Bodie & Aurora

September 12–13 • 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. Your leader Terri Geissinger is a Bodie State Historic Park interpreter and guide, with a talent for making history come alive.

Mono Basin

Moonlight Photography

September 25–27 • 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.

Geology of the Mono Basin

October 2–4 • 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 in understandable fashion the geologic stories of the Mono Basin. Greg Stock is the first ever Yosemite National Park geologist. He has authored or co-authored over 50 papers and abstracts on Sierra Nevada geology and is co-author of the book *Geology Underfoot in Yosemite National Park*.

Mono Basin Fall Photography

October 9–11 • Robb Hirsch

\$225 per person / \$200 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.



PHOTO COURTESY OF ROBB HIRSCH

Colorful local aspen groves provide plentiful photo opportunities.

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 the field seminar date, but tuition can be applied to another seminar that takes place within one calendar year of the 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 operate under permits from the Inyo National Forest and California State Park system.

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 1st
for members.

tributaries to Rush Creek. They are also the smallest streams diverted by DWP in the Mono Basin—in a normal year they contribute about 40 cfs to Rush Creek in July and August.

However, this water is very important, especially in a year like this. The Parker and Walker confluence with Rush is well below the reservoir and the infusion of cold water helps offset warm temperatures caused by the very low Grant Lake Reservoir. In fact, the Mono Basin Stream Scientists specifically included all of Parker and Walker flows into their final recommendations for Rush Creek, citing the thermal contribution as a significant component to the health of lower Rush Creek.

Last year Parker and Walker hit peak flows of 39 cfs but got down to 5 cfs by the end of the summer. This year it's possible that Walker Creek will dry up

before reaching Rush Creek. DWP does not plan to divert water from either of these two creeks.

A similar story for Mill Creek

Mono Lake's third-largest tributary, Mill Creek has many of the same complicating factors affecting its flow this summer. Lundy Lake Reservoir is already quite low and the quickly diminishing snowpack isn't expected to raise it significantly. SCE's power plant will be operating at near minimum levels to preserve the little water there is in Lundy as long as possible.

With a record low snowpack and a low Lundy Lake Reservoir level, conditions will be especially hard on the fish and streamside vegetation. Given the fact that Mill Creek has been struggling for many years now (see Summer 2012 Mono Lake Newsletter) this string of drought years will have an even greater impact on the already-

stressed system. There is an outside chance that Mill Creek could dry up completely before reaching Mono Lake this summer.

Summer of firsts

This will prove to be a summer of firsts in terms of recorded streamflows and conditions. As a result, the Mono Lake Committee has expanded our core monitoring program. This is a unique opportunity to collect data to help make the best decisions possible for the streams and the lake as well as to navigate different scenarios in the uncertain climate future. ❖

Lisa Cutting is the Committee's Eastern Sierra Policy Director. This summer she plans to fish high and early or not at all.

A toast to Randy Arnold and 25 Barefoot years at Mono Lake

by Arya Degenhardt

In spring 2003, the Mono Lake Committee got an intern application that stood out—Randy Arnold, 13-year ambassador for Barefoot Winery and 20-year Mono Lake Committee volunteer and member, wanted to be the Birding Intern. We were probably as surprised as his employers—Barefoot Wine founders Bonnie Harvey and Michael Houlihan, who had just given

their #1 employee a sabbatical to follow his dream of working for Mono Lake.

Fast-forward to 2015 and Randy is celebrating his 25th anniversary with Barefoot. He continues to make good on the promise he made at age 14 (when he first visited Mono Lake on his way to 4-H summer camp) to return to the Eastern Sierra as often as possible.

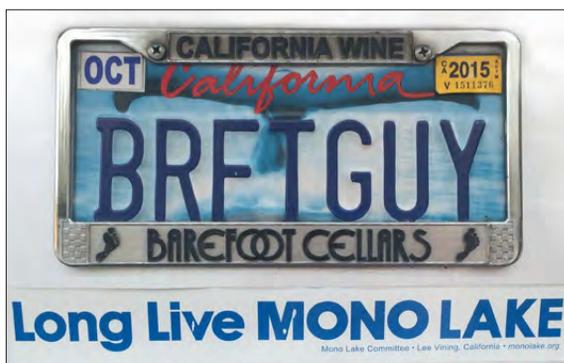
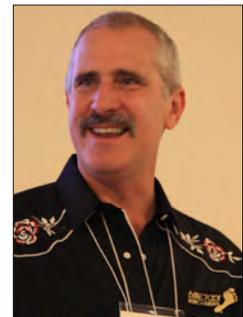
Randy measures time in fundraisers, dollars raised, and hands-on work for non-profit organizations. He has donated Barefoot Wine and Bubbies to over 200 non-profits so far.

With countless fundraisers, Randy has supported all facets of the Committee's work—from

bird research to outdoor education. The hallmark of everything Randy does is fun—one year we even got to feature

Mono Lake Committee co-founder Sally Gaines as an inspirational figure on a wine label.

This year at the Trail Chic fashion show fundraiser (July 24th) we will raise our glasses especially high to toast to Randy's 25-year milestone, and to his ongoing legacy of hard work, and fun, for the myriad places he, with the help of Barefoot, supports, including Mono Lake.



2015 Andrea Lawrence Award

by Lily Pastel

Community members, friends, and family of Andrea Mead Lawrence gathered at Mammoth Mountain's Parallax Restaurant in late April to commemorate Andrea's life and honor those who carry on her legacy of passionate engagement in community and the land with the presentation of the Andrea Lawrence Award. Proceeds from the event go to the Andrea Lawrence Fund to encourage collaboration and to inspire youth to become environmental leaders.

Andrea was a visionary environmental leader, two-time Olympic gold medalist, mother of five, 16-year Mono County Supervisor, and Mono Lake Committee Board member.

The 2015 award was presented to Ted Schade, recently retired from the Great Basin Unified Air Pollution Control District, for his decades of tireless work to protect and improve Eastern Sierra air quality. Ted was a driving force in the 2014 Owens Lake Agreement with the Los Angeles Department of Water & Power (DWP), which implements water-saving techniques to control dust at Owens Lake and secures important wetland habitat for migratory birds.

The spirit of the Owens Lake Agreement was evident throughout the evening—keynote speaker, DWP General Manager Marcie Edwards, highlighted the efforts taking place in Los Angeles to establish a more self-sufficient water supply. Andrea would have loved seeing representatives from the two main parties involved in the Owens Lake Agreement sitting together at the same table enjoying a meal and



Quentin Lawrence, left, with 2015 Andrea Lawrence Award winner Ted Schade, and Geoff McQuilkin.

celebrating their accomplishments.

The Committee is honored to celebrate Andrea's legacy by hosting this annual event, but it would not be possible without the generous support of the Lawrence family and Mammoth Mountain Ski Area. Thank you also to our guests, to photographer Robb Hirsch, and to award recipients like Ted Schade for their important work. ❖

Mono Lake Committee divests from fossil fuels

by Geoffrey McQuilkin

A worldwide fossil fuel divestment movement has begun involving governments, educational institutions, foundations, faith-based groups, individuals, and non-profit organizations. Participants range from Stanford University to the City of Seattle to the Ben & Jerry's Foundation to Britain's Prince Charles. We're pleased to inform members that the Mono Lake Committee is part of the movement.

As inspirational climate leader and Mono Lake Committee member Bill McKibben says, divestment is a simple, direct action that counters "the scary new math of climate change."

The Committee's savings

account hardly rivals those of big institutions. But similar to our solar panel installation several years ago, we need to continue to do our part to counter carbon pollution—an issue close to home as we grapple with the effects of a changing climate at Mono Lake.



The Mono Lake Committee has now fully divested from fossil fuels.

While coal, gas, and oil companies were never a special focus in the Committee's investments, they were often present in the diversified funds we used to safeguard endowment gifts, member bequests, and other savings. But no longer. The Mono Lake Committee has now fully divested from fossil fuels.

Staff migrations

by Jessica Horn

Nothing indicates summer is near quite like the arrival of our seasonal staff. Every spring I look forward to the infusion of new energy as the Mono Basin shakes off its winter calm. Although we are sad to say goodbye to one staff member, we have eight returning employees, which I think speaks to how wonderful it is to spend a summer at Mono Lake!

In her time with the Mono Lake Committee, Information Center & Bookstore Manger **Barbara Ball** expanded the book selection with new and relevant titles and took on the busy bookstore with an expert eye. Barb moved back to her native Vermont this spring, and we wish her all the best.

In her stead, **Terry McLaughlin** will be the Information Center & Bookstore Manager for the summer. The Committee is fortunate to have Terry's unending commitment, and we are happy to have her back after her brief attempt at retirement.

After a winter as Project Specialist, **Robert Di Paolo** will spend the summer pulling invasive sweet clover along Mill Creek, monitoring streamflows, and putting his boundless energy toward helping with membership.

Lily Pastel stayed on through the winter as Project Specialist and took on projects such as the Andrea Lawrence Award Dinner and the Eared Grebe count. She is switching gears and will be spending her time on Mono Lake as Canoe Coordinator this summer.

Melissa Boyd is returning for a second summer as an Outdoor Education Instructor at the Mono Basin Outdoor Education Center. Previously a 2013 intern, **Edie Harris** is back this year as an Outdoor Education Instructor. We are excited for these two trail runners to meet and take off through the Sierra on their weekends. Welcome back to both of you!

As birders tend to do, **Erv Nichols** and **Sandra Noll** have migrated back to Mono Lake for another summer. They will be sharing the Birding Intern position after a winter of birding in Costa Rica and around the United States.

Make your way to the Information Center & Bookstore this summer and say hello to our new Information Center & Bookstore Assistants. As a Geography and Environmental Studies major at UCLA, **Grace Aleman** is a welcome addition to the bookstore team. **Gabrielle Renteria** brings her good nature and retail experience to the position.

We welcome back Mono Lake Intern **Tina Weedman**, who spent the winter studying Conservation Biology and Applied Vertebrate Ecology at Humboldt State University.

We have four new Mono Lake Interns this season. After visiting Mono Lake last year with UC Santa Cruz's Natural History Field Quarter, **Sarah Angulo** is ecstatic to spend the entire summer here. Intern **Sara Matthews** finished field work in the Modoc National Forest this winter after graduating from Humboldt State University with a BA in Geography. Shortly after completing his environmental biology degree at University of La Verne, **Matt Rice** drove to Mono Lake to pay us a visit at the Committee's office this spring! Intern **Andrew Youssef** spent last summer as an Interpretation Intern in Tuolumne Meadows and has taught middle school science in Arizona with Teach for America.

As always, you can meet our wonderful seasonal staff members by visiting the Information Center & Bookstore in Lee Vining, taking a canoe tour, attending a South Tufa tour, or enjoying a bird walk at County Park. ❖

Jessica Horn is the Mono Lake Committee's Office Manager. Her tiny (11-pound) adopted puppy Oliver is gradually learning to be a mountain dog.



At the annual Mono Lake Committee strategic planning retreat, staff and Board members worked with climate communications specialist Gabriel Harp (right) on ways to speak with members and the public about anthropogenic climate change that is affecting the Mono Basin.



From the mailbag

News from members and friends

by Ellen King

Thank you to all of you who sent in contributions in honor or in memory of your friends and loved ones. These gifts help us carry on the work that will keep Mono Lake special for many generations.

In honor

Eileen Haussmann of Torrance gave a gift in honor of retired State Park Ranger **David Carle**. “Many years ago I found several articles you had written or presented about your ‘love fest’ with Mono Lake and I caught your fever. Now years later ... I am joining the Mono Lake Committee in your honor and writing this note to let you know your articles are still encouraging someone to join in preserving the lake.” **Margie Rittenhouse** of Painesville, OH sent a contribution in honor of **Dr. Charles Blumle**. Mono Lake Committee Board member **Kristine Zeigler** of Walnut Creek made a donation in honor of her mother **Wanda Zeigler** for Mother’s Day.

In memory

Linda Fitch of San Carlos and **Elaine Light** of Sacramento gave gifts in memory of **Rick Knepp**. Elaine wrote, “I worked with Rick at the Mono Lake Committee in 1992–1994. He was a wonderful human being and it’s a great loss.” **Kathy Horikoshi** of Richmond sent a contribution in memory of **Barbara Beatty**—“she was a lover of Mono Lake and the good work that you do.” **Chris & Rosie Howard** of Bishop sent a contribution in memory of Chris’ grandparents, **Bruce & Jeannette Howard**. **Patricia Myers** of Modesto and **Carmel Peterson** of Coulterville sent contributions in memory of **Richard “Dick” Campbell**. **Cathie Haynes & Dwight Sims** of Sebastopol made a donation in memory of her uncle, **Bill Gardner**.

Farewell Don Banta

Local resident **Don Banta** passed away on February 10, 2015 at the age of 87. Born in Bishop, Don moved to Lee Vining in 1930 and lived here for the rest of his life. Don was a beloved fixture in town—a dedicated family and community member, avid birder and photographer, wild storyteller, the unofficial Mayor, town historian, and a friend to anyone who knew him for more than ten seconds.

Mono Lake Committee co-founder Sally Gaines fondly remembers Don from when she and David Gaines first moved to Lee Vining in 1978. Don was happy to share his invaluable knowledge of local birds and Mono Lake, as well as his memories of growing up in Lee Vining while life in the Mono Basin was changing.



Don Banta, 1928–2015.

We offer our condolences to the Banta family. Don was a good friend to Mono Lake, and he will be missed.

Wish list angels

We were blown away by the swift and generous response to our call for picnic tables for the Mono Basin Outdoor Education Center. Thank you **Art Carey, Dawn Cope, Linda Edwards, and Bryan Wilson**. ❖

Ellen King is the Committee’s Membership Coordinator. She was disappointed to miss the big May snowstorm that dropped 14 inches of snow on Lee Vining.

Wish list

The policy team is in need of an optical dissolved oxygen meter—a high-tech thermometer that measures both water temperature and dissolved oxygen. We have added temperature and dissolved oxygen monitoring to our field checks this year, in order to keep a close eye on trout habitat (see page 6).

In order to monitor coyote activity around the growing landbridge (see page 3), we need special motion sensor cameras. With 40,000 California Gulls nesting on the Negit islets, our goal is to literally keep a close eye on their safety.

Please contact Eastern Sierra Policy Director Lisa Cutting (lisa@monolake.org) at (760) 647-6595 if you can help.



MONO LAKE COMMITTEE

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Volunteer at Mono Lake this summer!

- lead South Tufa tours
- rove at County Park & Old Marina
- pull invasive plants
- share the Mono Lake story

Free training.
Call (760) 647-6595 to sign up.



CARL DENNIS BUELL

Tioga Pass Run September 13, 2015



tiogapassrun.com

DICK EBB

Trail Chic Fashion Show

.....
July 24, 2015
at the Lee Vining
Community Center
.....

a fundraiser for the
Committee's Outdoor
Education Center Access Fund



WILD & SCENIC[®] FILM FESTIVAL *Los Angeles*

March 10, 2016

7:00PM
Old Town Music Hall
El Segundo

a fundraiser for the
Mono Basin Outdoor Education Center

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