





hen my husband and I were planning our courthouse wedding five years ago, we asked Judge Stan Eller to officiate. Judge Eller retired last year from a long, storied career that included preventing DWP from shutting off Rush Creek after a big flood returned water to it in the mid-1980s for the first time in decades (see page 11). I wanted to feel connected to Mono Lake on that very important day for us, and as Judge Eller pronounced us married, I did.

So many people feel connected to Mono Lake, and never more than during exciting periods of weather. This February has brought more days with snow than without, and we hear from people on Facebook (@monolakecommittee) and Instagram (@monolakeca) every day—guessing at how much snow we got, asking about the snowpack, wondering if Mono Lake will rise this year...

We talk with members who call to sign up for Field Seminars and arrange custom guided trips with Nora, both excellent ways to deepen your connection to the Mono Basin (pages 18–23). We open mail containing donations in honor and in memory of loved ones, that keep your beloved people connected to this place (page 27).

In winter, Rose and Santiago migrate to Los Angeles to visit former and prospective Outdoor Education Center participants in their home communities. It's important to keep up the connection between Southern California and the Mono Basin that is embodied by the OEC students, especially in the "off season" (page 13).

In this issue Lisa brings us a very detailed, scientific kind of connection to the Mono Basin in her interview with Dr. Bill Trush and Ross Taylor, State Water Board-appointed Stream Scientists for over 20 years (page 4).

We're here to keep you connected to Mono Lake, online and in person, through the phone lines and the Postal Service, and in the pages of the *Mono Lake Newsletter* too. So wade on into this issue—the water's fine.

-Elin Ljung, Communications Coordinator



Snow blanketing the Mono Basin all the way down to the shore of Mono Lake is a beautiful sight to see ... and ski!

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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Improving stream restoration and lake monitoring in 2019

Temporary measures sought while license revision slowly advances

by Geoffrey McQuilkin

he effort to restore Mono Lake's tributary streams is poised to reach new successes when the drawnout process of authorizing new science-based streamflows and associated infrastructure improvements finally concludes. While that date remains frustratingly uncertain, the Mono Lake Committee is advocating for immediate implementation of currently-feasible restoration measures to take place in 2019 while continuing to push for the rapid completion of the revision of the Los Angeles Department of Water & Power's (DWP) license to divert water from the Mono Basin.

Why wait?

Twenty years ago the California State Water Resources Control Board charted a scientific study process led by two appointed expert Stream Scientists (see page 4) to determine the best way to achieve restoration goals with the water allocated to Mono Lake and its tributary streams. That study produced a major report in 2010 that described new flow regimes for Rush, Lee Vining, Parker, and Walker creeks designed specifically to activate the natural stream processes that build and support healthy ecosystems.

The State Water Board's stream restoration program was designed to restore the creeks damaged by decades of excessive water diversions by DWP and is a requirement of its license to divert water from the streams.

For DWP some parts of the restoration plan require simple adjustments to the operation of the Los Angeles Aqueduct,



In 2010 State Water Board-appointed Stream Scientists submitted a report recommending new, more effective flow regimes for Mono **Basin streams**



In 2013 the Mono Basin Stream Restoration Agreement was signed and then celebrated at Grant Lake Reservoir, but six years later it has yet to be implemented.

but construction of a new outlet in the Grant Lake Dam is required to deliver the necessary high springtime flows to Rush Creek.

In 2013, after three years of intensive negotiations, the Committee, along with partners at the California Department of Fish & Wildlife and California Trout, entered into the Mono Basin Stream Restoration Agreement with DWP to implement the scientific recommendations, identify a feasible plan for the construction of the new outlet, and address monitoring and other important restoration matters.

The legal process of DWP's license revision is moving agonizingly slowly, and six years later the package of restoration measures in the Agreement has yet to be implemented.

Feasible in 2019

The Committee is currently advocating for action in 2019 while the larger authorization process continues. Two elements of the Agreement are straightforward to implement.

First, new ecologically beneficial streamflow patterns can be implemented, in part, this year. Although high flows in Rush Creek can't be achieved until the new outlet is constructed, the rest of the Rush Creek flow pattern can be delivered along with the new flow patterns for Lee Vining, Parker, and Walker creeks.

Second, monitoring Mono Lake's health can be returned to the leadership of skilled scientists with limnology expertise. The Agreement includes this monitoring plan, resolving a

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Wading into stream restoration

A conversation with the State Water Board-appointed Stream Scientists

by Lisa Cutting

he 2017 spring snowmelt runoff was over 200% of average. It was also the single largest peak flow event since the stream restoration ordered by the California State Water Resources Control Board began in 1998 (see Fall 2017 *Mono Lake Newsletter*). Now, almost two years later, conversations and field observations continue to reflect on what is technically called an "Extreme-Wet" year type, validating the principles adopted by the State Water Board and restoration parties over 20 years ago.

The State Water Board appointed two independent experts, the Stream Scientists, to study Mono Lake's tributary streams and inform and guide restoration. Dr. Bill Trush's expertise is in geomorphology and stream ecology, and Ross Taylor focuses on fisheries. Together they are the official scientific experts who monitor physical creek structure, habitat, and trout populations—assessing ecosystem health and making official restoration recommendations. They provide the detailed information needed to achieve full stream ecosystem recovery. As part of the State Water Board's plan, in 2010 Trush and Taylor and their team submitted the Synthesis of Instream Flow Recommendations report based on 12 years of intensive monitoring. The Synthesis Report made recommendations for an improved pattern of streamflow releases on Rush, Lee Vining, Parker, and Walker creeks



Dr. Bill Trush (left) and his team conducting stream monitoring in Rush Creek during the 2018 field season.

to improve restoration outcomes. All parties, including the Los Angeles Department of Water & Power, agreed to adopt these flows when signing the Mono Basin Stream Restoration Agreement in 2013—with the intention that the Agreement components would be included in a revised water license issued by the State Water Board (see page 3).

The restoration principles that have been guiding the stream restoration program for decades include mimicking physical and ecological processes created by the natural hydrograph as closely as possible, providing the full range of flow patterns, and letting the stream restore itself. 2017 confirmed these principles are working and are the key to successful restoration for the future.

We thought *Newsletter* readers would like to hear directly from the Stream Scientists to get a sense of their field observations from the past two years, insights on what the 2017 flood hydrograph accomplished, and an overall sense of the status of restoration.

Lisa Cutting: Your report to the State Water Resources Control Board calls for higher springtime peak flows than are currently required. What are the benefits of these higher peak flows, and what are the benefits of a springtime peak flow like what we saw in 2017?

Bill Trush: Extreme-Wet year-type peak floods occur infrequently, yet these events are extremely important geomorphically, and consequently, important ecologically. They mobilize and transport bedload and fine sediment, create or improve pool habitat, scour undercut banks, deposit fine sediment onto contemporary floodplains benefiting riparian vegetation, and create new floodplains. Groundwater recharge also occurs across more of the floodplains during wetter-year runoffs.

Ross Taylor: The recommended peak flow for an Extreme-Wet year type is a minimum flow—we knew that in some years snowmelt runoff would likely cause peaks in excess of the recommended minimums.

In the Mono Basin, wetter year types like 2017 also mean that Grant Lake Reservoir is likely full of cooler water all summer, which is extremely important for brown trout growth and overall health of the trout population downstream. During the five drought years, we documented stressful summer thermal conditions for trout in Rush Creek downstream of Grant and population decreases upwards of 90%. The trout we did sample typically exhibited poor condition factors (an analysis of body weight versus length).

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During the peak of the 2017 record spring runoff, Mono Lake Committee staff and hydrology experts monitored the physical changes happening in Rush Creek.

Cutting: Years like 2017 get all the press, but those are the outliers, not the norm. Are Extreme-Wet year-type spring flows more important than others? Obviously, the system is not going to get big year events every year, so how do the other runoff year types factor into the health of the system?

Trush: Whenever we think of snowmelt peak floods as a physical process, we have to consider the four primary characteristics that come into play: the magnitude, duration, frequency, and timing of each event. Each annual peak flow (i.e., whether a 1.5-year flood, a 5-year flood, etc.) offers a unique combination of these four primary characteristics that creates unique geomorphic and ecological outcomes.

Broadly, healthy stream ecosystems thrive as a balancing act between opposing tendencies. Small flood hydrographs encourage riparian encroachment into the mainstem channel, whereas bigger floods tend to scour streamside riparian vegetation. Small and big are important for floodplain connectivity and for creating/sustaining fish and macrobenthic invertebrate habitat complexity. All flow regimes address specific ecological needs and are essential in maintaining a stream ecosystem's capacity for self-renewal.

Taylor: Yes, the infrequent large peak flows are extremely important for the geomorphic work performed. Conversely, from the fisheries perspective, we made a huge leap in recommending lower than currently-released flows during the wintertime. I think the conservation groups initially thought we had lost our minds and were giving LADWP access to more water. However, our instream flow studies, our radio telemetry study, and the examination of unregulated hydrographs from Buckeye Creek near Bridgeport convinced us that lower winter flows were more "natural" on the east slope of the Sierra and that lower winter flows also created more slow-velocity pool habitat for overwintering brown trout. We also showed that lower winter flows would result in more water being held back in Grant Lake Reservoir and that a higher reservoir level going into the following spring/ summer could provide more favorable summer thermal regimes for trout.

Below-average water years affect the summer water temperatures in Rush Creek below Grant and often create stressful conditions from daily high peak temperatures, high daily average temperatures, and high diurnal fluctuations. Summer water temperature monitoring has documented that LADWP's facilities (Grant Lake Reservoir and the Mono Gate One Return Ditch) add a thermal load to Rush Creek, especially during below-average water years.

Cutting: What were your first impressions when you returned to the Mono Basin in 2017 and saw the creeks?

Trush: The Extreme-Wet year-type flows may not be as "extreme" as some might want to believe. Bedload transport increases sharply in these infrequent hydrological events. In 2018, we surveyed annual peak flow elevations for 2017 and 2018 in the mainstem in lower Rush. The 2017 runoff fluctuated approximately 1.5 to 2.0 feet higher in alluvial mainstem reaches than the not-quite bankfull 2018 "Normal" year-type peak flow. We expected that a particularly overlytight, right bank meander bend, several meanders upstream of the bottomlands, was due an adjustment (meaning it was likely to be cut off). Lateral scour into the right bank eightfoot-high terrace was significant, leaving behind a newly formed, broad, left bank gravel/cobble bar. The 2017 peak flows set the stage for a newly-evolving, contemporary floodplain that will grow cottonwoods and willows, provide a depositional surface for finer bedload and suspended load, and offer complex off-channel habitat.

Taylor: The Rush and Lee Vining creek channels looked Continued on page 24



Ross Taylor (left) and his crew monitoring the Rush Creek trout population.

A growing problem for California Gulls

Invasive weed rapidly encroaches on nesting habitat

by Bartshé Miller

ast century's water diversions from the Mono Basin greatly changed the ecosystem of Mono Lake, and that legacy continues to test successive generations of California Gulls. A falling lake level, the first emergence of the landbridge in 1979, coyotes crossing to Negit Island, and gulls abandoning their once-secure breeding colony-these were tragic events. California Gulls (Larus californicus) became one of the rallying points for saving Mono Lake, and while the colony suffered, the birds adapted and shifted nesting to the newly-emerged islets adjacent to Negit that provided refuge from coyotes because they were still surrounded by water.

Challenges stack up

Because of lake level fluctuations the coyote problem never completely went away, and even as recently as the last two years, coyotes have posed a threat to the colony (see Winter & Spring 2018 Mono Lake Newsletter). With a rising lake and the timely deployment of an electric fence, the gulls dodged the most recent coyote incursion. But now a new and rapidly intensifying threat is testing the colony's endurance. An invasive weed, long-known in the Mono Basin, is suddenly overwhelming California Gull nesting habitat, covering open areas the birds need to nest successfully.

Bassia hyssopifolia is an annual, non-native weed. It is widely distributed in the West, and it was first documented near Fallon, Nevada, a century ago. Growth can exceed three vertical feet with multiple branches that extend outward and upward. Bassia favors damp, alkaline soil where other plants

don't typically grow. The weed has long been present on the islets, but plants were few in number, of minimal size, and their distribution marginal.

Gull researchers first documented a pocket of concentrated Bassia growth in 2012 on Tahiti Islet, where its sudden appearance caused concern. However, at that point it did not appear to be a serious threat, and limited hand-pulling in one of the research plots seemed to assuage the problem. From 2012 to 2016, extreme drought lowered Mono Lake and temporarily minimized the advance of Bassia. As Mono Lake fell during the drought, the landbridge expanded, increasing the threat of coyote predation. Evidence of coyotes reaching Negit and the islets caused alarm in 2016 and the Mono Lake Committee fundraised and coordinated efforts to build a temporary, electrified fence on the landbridge. The fence required a significant investment in logistics, labor, and funds. It worked, and prevented coyotes from reaching the gulls during the 2017 nesting season.

Barrage of Bassia

While attention was focused on the immediate threat of coyotes, Bassia growth exploded. During 2017, record winter precipitation and warmer than average temperatures may have contributed to its rapid expansion. The weed was now growing into extensive, thick stands that would die and form dense, woody tangles, persisting into the next growing season. Today Bassia has been documented carpeting 70% of the available California Gull nesting habitat on the Negit Islets. Continued on page 12



California Gulls need open areas for nesting, like the habitat shown above in 2016.



By 2018, Bassia hyssopifolia had spread rapidly on the Negit Islets, significantly reducing California Gull nesting habitat.

Phalaropes in focus



Migrating phalaropes are a summer phenomenon to behold at Mono Lake. When tens of thousands of them arrive they gather and flock—weaving like schools of aerial fish, erupting from and falling to the surface of the lake in giant tornadoes.

Wilson's and Red-necked phalaropes are shorebirds that rely on alkali fly larvae at Mono Lake in order to molt and double their weight in preparation for migration to South America. These graceful and diminutive shorebirds connect North and South America through a migratory odyssey that spans up to 20,000 miles. Loss of habitat due to human water use and changes forced by a warming climate are threatening phalaropes throughout their range.

Growing concern about the status and distribution of phalaropes is driving efforts to survey these birds at Mono Lake anew. Population data on Wilson's and Red-necked phalaropes is almost three decades old, but the birds will be counted this summer thanks to California State Parks, Ryan Carle of Oikonos, Dr. Margaret Rubega of the University of Connecticut, and the Mono Lake Committee.

The survey partners are also organizing an international phalarope conference at Mono Lake in June, funded by a Switzer Fellowship Grant. Researchers and conservationists will convene to share scientific information and build new, cooperative relationships to benefit phalaropes at Mono Lake and throughout the Western Hemisphere. Mono Lake is one of very few Great Basin lake habitats not in decline, and its continuing protection—thanks to the public trust and State Water Board decision, as well as Mono Lake's designation as both an Audubon Important Bird Area and a Western Hemisphere Shorebird Reserve Network site—make it an ideal setting for this gathering. ❖

Vorster Center tackles critical hydrology questions

by Geoffrey McQuilkin

or over 40 years, the Mono Lake Committee has pursued the best scientific understanding of Mono Basin hydrology. Last year we created the Vorster Center for Mono Basin Hydrology (see Fall 2018 *Mono Lake Newsletter*) to address new questions in an era of climate change and to serve as a hub for data collection, modeling, analysis, forecasting, and real world hydrology applications. The Vorster Center supports the work of Committee staff and advisors, including expert Mono Lake hydrologist Peter Vorster, and brings new resources to the essential study of the lake, its tributary streams, and the Mono Basin.

The work of the Vorster Center is already underway, with

capacity for new analysis and creating tools to address bigpicture questions about the future of Mono Lake, including: Is the lake rising on the expected timeline? If not, what hydrology factors are different than expected? How does climate change fit in?

The ever-important question is this: How long will it take for Mono Lake to reach its ecologically-sound management level? Thanks to the Vorster Center, the Committee hydrology team has this new capacity and ability to tackle these questions and find answers that will make a real difference for the health of Mono Lake and its tributary streams.

Policy notes

by Lisa Cutting, Geoffrey McQuilkin, and Bartshé Miller

Caltrans Lee Vining US 395 Rehab Project

The California Department of Transportation (Caltrans) is developing plans for a new highway project along five miles of Highway 395. The project area is between Highway 120 west and Cemetery Road past The Mono Inn (see Fall 2018 *Mono Lake Newsletter*). The Lee Vining US 395 Rehab Project will replace pavement throughout the project area, improve sidewalks and curbs in Lee Vining, upgrade drainage systems, and improve safety for pedestrians and cyclists.

While the in-town section allows for significant transportation amenities on which the community has provided initial input, Caltrans has been less clear regarding design possibilities for the section along the west shore of Mono Lake. The Mono Lake Committee is reaching out to Caltrans before the completion of the Project Initiation Document in anticipation that the success of the recent Rockfall Project can be replicated. The Rockfall Project (see following note) achieved transportation goals and protected environmental and scenic values along the west shore of Mono Lake, and the Committee will propose a similar



Plans for the Caltrans Rehab Project include significant amenities for the town of Lee Vining, such as upgrading sidewalks and drainage, replacing pavement, and improving safety.

collaborative process for the Rehab Project. While the project is several years away from the construction phase, the critical planning and environmental CEQA process begins after the completion of the Project Initiation Document.

Rockfall revegetation on track for success

Three years into the five year project, results from the Plant Establishment Program (PEP) for the Caltrans Lee Vining Rockfall Safety Project are encouraging. The Committee and Caltrans negotiated for the PEP early on in the project



As part of the Rockfall Project Plant Establishment Program, large bags of pine needle mulch were delivered by helicopter to the slopes in late 2017 to aid in revegetation.

planning process to ensure successful revegetation of the six Rockfall Project slopes adjacent to Highway 395 along Mono Lake (see Summer 2018 *Mono Lake Newsletter*).

The PEP has been successful in reducing erosion, meeting native plant cover criteria, and providing slope stability. Specific criteria for species diversity, plant density, and survival rates are monitored annually and remedial action is required if pre-established targets are not met. Invasive plant species such as cheatgrass and sweet clover, while present, are at manageable levels and less pervasive than anticipated. In 2018 only one area in Slope 1 was found to be low in native plant density, species diversity, and mulch cover. Caltrans is coordinating with the PEP project contractor to reapply native seed mix and add an additional layer of pine needle mulch to remedy this deficiency.

Caltrans Conway Ranch Shoulder Widening Project

Late last year, Caltrans introduced three shoulder widening projects in Mono County, one of which is in the Mono Basin at the bottom of Conway Summit. The Conway Ranch Shoulder Widening Project proposes to widen shoulders along Highway 395 from Highway 167 north to the bottom of



The Committee advocated for additional Mono Basin stream segments to be included as eligible for Wild & Scenic River designation in the revised Forest Land Management Plan.

the Conway grade adjacent to Conway Ranch, as well as install rumble strips, correct a substandard curve, and lengthen the tire chain installation area. At times this stretch of highway experiences high wind speeds, which makes it more prone to traffic accidents. Widening the shoulders will provide additional room to maneuver when wind events occur.

The Committee has already submitted preliminary scoping comments focused on the revegetation of cut and fill slopes. Caltrans and the Committee have learned a lot from revegetating the Rockfall Project, and we are encouraging Caltrans to model future revegetation plans on these successfully proven methods.

The Committee plans to meet with Caltrans on-site this summer to inform the draft environmental document scheduled for release in January 2020. Project construction is scheduled for spring of 2023.

Forest Plan objection process nears completion

The Invo National Forest Land Management Plan development process is nearing resolution. A final procedural phase of the process is the objection phase, during which interested parties

who previously filed comments on the plan could object to specific findings of the draft final decision. The Committee has been involved in the public plan revision process since 2014 with an eye on the parts of the plan that affect the Mono Basin.

Unfortunately, the plan draft record of decision issued in August 2018 did not include a number of Mono Basin stream segments that meet Wild & Scenic River eligibility. The Committee made the case for Wild & Scenic River eligibility for portions of Rush, Lee

Vining, Mill, Parker, and Walker creeks. These creeks have made, and continue to make, great restoration progress and possess "Outstandingly Remarkable Values" (ORV) under US Forest Service criteria that allow for eligibility.

The objection meetings with US Forest Service staff in mid-February were the final opportunity for interested parties to provide input on topics that were formally objected to in the draft plan. Committee staff presented images and details demonstrating how Mono Basin creek segments met ORV criteria. After the presentation, reviewing US Forest Service staff from the Inyo and Region Five indicated they were optimistic about including additional stream segments for eligibility. The outcome of the objections and a final record of decision are expected this year.

Mill Creek return ditch improved

Southern California Edison (SCE) is continuing to look for creative solutions to comply with an 11-yearold hydropower settlement, namely returning water to Mill Creek in accordance with long-established and adjudicated water rights. The Mill Creek return ditch, which returns water back to Mill Creek after it passes through the hydropower plant, is a

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The Mill Creek return ditch is a critical piece of infrastructure used to return water back to Mill Creek after it passes through SCE's hydropower plant.

critical infrastructure component. SCE tested the return ditch in 2017 and then again last year (see Winter & Spring 2018 *Mono Lake Newsletter*). Both test flows and associated monitoring periods have revealed opportunities for structural improvements, which SCE has made, increasing the capacity and reliability of the system.

SCE is planning to use the return ditch again this year in a good-faith effort to return at least a portion of the water rights associated with Mill Creek. However, the current capacity of the ditch still falls well below the size needed to return all of Mill's legal allocation of water. The Committee and five other agencies and stakeholders, including SCE, are looking at alternatives to make up the shortfall and begin Mill Creek's long-awaited restoration process.

Preserving a historic house

The Committee has worked for many years to protect a land parcel on Mono Lake's west shore from proposed extensive development (see Fall 2007 *Mono Lake Newsletter*). The solution is the transfer of the property to the Inyo National Forest for public ownership, a long process that will soon be complete. But what will happen to the small house that currently sits on the site? Its long history dates back many decades, making it a home of local significance, although not an officially designated historical building.

The Committee is helping our friends at the Mono Basin Historical Society with a plan to relocate the building to Hess Park in Lee Vining to expand the existing museum. In December we connected Mammoth Mountain, which currently owns the property, with the Historical Society to develop a plan to move the house. It's not often that you see a building driving down Highway 395, but by summer that may be exactly what happens.

Government shutdown

The partial federal government shutdown from December 22, 2018 to January 25, 2019 was the longest in US history, affecting many dedicated federal employees and their families. In the Eastern Sierra, the US Forest Service, Bureau of Land Management, and National Park Service were all affected, and visitor centers were shuttered. The Mono Basin National Forest Scenic Area Visitor Center was already closed for the winter, but South Tufa remained open and accessible throughout the shutdown. Thanks to Mono Lake Tufa State Natural Reserve staff. Committee volunteers, and a mindful public, the South Tufa bathrooms were kept clean and trash cans emptied.

Regular business between the public and the Inyo National Forest was halted during the shutdown. The Inyo National Forest Land Management Plan objection meetings were canceled (later rescheduled), annual specialuse permitting was suspended, and seasonal federal employee hiring delayed. While the visiting public was not severely inconvenienced in the region due to the timing, the shutdown

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The DeChambeau Ponds support migratory waterfowl and wildlife on the north shore of Mono Lake. A historic artesian well, which is a relic of an unsuccessful oil drilling effort, provides year-round warm water—but the piping system has failed in recent years. Committee staff recently visited the site with local residents, Friends of the Inyo, and the US Forest

Fixing the pipes at DeChambeau Ponds

Service to explore possible fixes to benefit the ponds.



During the government shutdown, the South Tufa area remained open and Committee staff continued to lead 1:00pm weekend interpretive tours for visitors, on skis if necessary.

did create a number of headaches and delays in federal government function that will take time to fully overcome.

Long Valley court case moves ahead

As detailed in the Fall 2018 *Mono Lake Newsletter*, Mono County filed a lawsuit against the Los Angeles Department of Water & Power (DWP) regarding DWP's abrupt dewatering of over 6,000 acres of land in Long Valley. The County is reasonably asking for an environmental analysis and public decision-making process before decades-old land management practices are abandoned. DWP promptly requested that the lawsuit be dismissed and the Alameda Superior Court overruled DWP's request in late February; the case will proceed.

DWP cut off irrigation to the lands last year, apparently to increase supply to the Los Angeles Aqueduct, and concerns include impacts to important Greater Sage-Grouse habitat, fire risk, and the lack of communication with local leaders. The Committee has asked whether DWP has more unannounced plans throughout the Eastern Sierra, including the Mono Basin, to export additional water in the Los Angeles Aqueduct. DWP is now working on an Environmental Impact Report for the dewatering; no completion date is available at this time.

Judge Stan Eller retires

After a long and widely lauded career, Mono County Superior Court

Judge Stan Eller retired at the end of 2018. At a ceremonial court proceeding in November, speakers emphasized Eller's fairness, integrity, and compassion for all who appeared before him in court, with one recalling a defendant just sentenced to years in state prison who thanked Eller for treating him with dignity.

The lands and waters of Mono County, and Rush Creek specifically, are the better for Eller's service to the public. Eller was assistant district attorney prior to becoming a judge, and he made the fateful decision to enforce Fish & Game codes for the first time to stop DWP from shutting off water in Rush Creek after the wet 1984 winter. Eller's bold move led to a minimum flow injunction and started a cascade of legal events that today are the foundation of the restoration flow requirements and habitat restoration programs on Rush, Lee Vining, Parker, and Walker creeks. For these reasons the Committee awarded Eller the Defender of the Trust Award in 2001.

Committee Executive Director Geoff McQuilkin was honored to recount these events at the retirement proceedings along with local attorney Tim Sanford, who was "in the room" in 1984, and Department of Fish & Wildlife representative Steve Parmenter, who explained how the precedent came to be applied in the Owens Gorge as well.

Eller looks forward to remaining in Mono County with his family, having more time to ski and explore, and, we hope, new opportunities to fish the recovering pools and meanders of Rush Creek. �



In November 1984 at a demonstration organized by the Mono Lake Committee, assistant district attorney Stan Eller speaks to the press about the return of water to Rush Creek.

SoCal water notes

by Geoffrey McQuilkin

A re Californians willing to tax themselves to fund a more sustainable water future? In Los Angeles County, the answer is a strong *yes*.

Measure W carried the day last November with 69% of residents voting in favor. The ballot measure funds water quality and stormwater management measures across the county, including the City of Los Angeles, and is expected to generate \$300 million annually through a parcel tax of 2.5 cents per square foot of impermeable space on a property.

Plans for the funding are visionary: capture rainfall, store it underground, and treat and reuse surface runoff from local storms. Cleanup of remaining stormwater before discharge into the Los Angeles River and ocean will also be an important outcome of the funding.

Funds will become available later this year and will support everything from large-scale government projects such as major stormwater capture basins, to smaller scale community efforts, such as removing pavement and constructing swales at schools and parks to allow rain to soak into the ground.

Doing more—a lot more—to capture and use local water is a major part of the strategy to make Los Angeles more water independent. Many environmentally-minded community groups in Los Angeles have worked hard to advocate for water sustainability, and the Mono Lake Committee has been proud to be part of the effort.

Los Angeles Mayor Eric Garcetti has set a visionary goal of sourcing 50% of the city's water locally by 2035. Increasing local supply makes the region more resilient during droughts and will reduce the need for imported water supplies, including from the Eastern Sierra and Mono Lake.

Estimates put the potential for new rainfall capture at an impressive 100 billion gallons per year—enough to meet the water needs of three million Angelenos.

As our friends at the non-profit Heal the Bay put it: "Save the rain. Save LA." \clubsuit

California Gulls from page 6

In fall 2017, after the *Bassia* problem intensified, Committee staff and Kristie Nelson, biologist with Point Blue Conservation Science, met with California State Parks and US Forest Service staff to discuss strategies and solutions. The group decided to pursue a controlled burn on the Negit Islets. Thick woody *Bassia* skeletons that had built up after just one year would likely be cleared by fire—as long as the burn did not take place during the critical nesting season (April to August).

A burn on the Negit Islets before or after the 2018 nesting season never materialized. The details of planning a controlled burn, finalizing permits and management plans, and identifying an appropriate window of weather for both burning and boat transport to the islands were challenging to organize and time correctly. Another layer of logistical challenge in 2018 was wildfire. Last year proved to be the deadliest and most extreme year for wildfire in California history, so resources and crews were stretched thin.

A burn this spring?

The Committee is ready to assist the US Forest Service with a controlled burn in March before the start of the 2019 nesting season, and the Committee's new research boat is available to ferry people and equipment required for the burn. The permitting is complete and all that is required are dry conditions, a good weather window, and boats ready to deploy before April 1. If the burn falls through, the Committee will move to stage weed pulling with staff and volunteers to assess the current extent of the *Bassia* stand and the possibility of future, focused, hand-removal on the most impacted islets. Weather will be the determining factor.

Over four decades of excessive water diversions from the Mono Basin displaced the gulls from a formerly stable colony to a collection of ecologically dynamic and extremely young islets. Coyotes and invasive weeds are threats afforded by an artificially lower lake level, and an ecosystem set off balance decades ago. As Mono Lake rises toward its management level, the gulls will have the chance to return to Negit and resume nesting on more stable habitat. Until then, if you see smoke rising from the islands in Mono Lake, it's a signal that help is on the way for the gulls. �

Generous donation funds a new research boat

This winter the Mono Lake Committee purchased a new, 16-foot research boat with a generous gift from **Marjorie Rachlin**, a longtime member from Washington, DC. The boat replaces a decades-old vessel that was wellworn by Mono's wind and waves. The new boat allows for more seating, has an extra-thick reinforced hull to withstand rough conditions on the islands, and has a more powerful motor for safety. Thank you to Marjorie!



CBE honors OEC

Members of Communities for a Better Environment (CBE), an environmental justice group based in Huntington Park, have been coming to the Mono Basin Outdoor Education Center (OEC) since 2008. This spring CBE is celebrating its 40th anniversary and recognizing key people who have supported their community, including the Mono Basin Outdoor Education Center Manager, Santiago Escruceria.

Through OEC programs, Santiago has inspired Los Angeles youth to learn more about their watershed connection to the Mono Basin and to use this knowledge and inspiration to make positive change in their own neighborhoods. He is honored to receive this special recognition.



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

OEC staff connect with groups in LA

ach winter OEC staff travel from Mono Lake to Los Angeles to visit our Southern California participants. From humble buildings at the center of LA's environmental justice movement to the beautiful and diverse neighborhoods to the classrooms in the heart of the city, it's important to visit the students on their home turf and see how they integrate their OEC program experiences into their daily lives and communities.

This year's visit was made interesting by uncommonly heavy rain, the LA Unified School District strike (many long-term OEC groups come from LAUSD schools), and my first visit to LA as the Mono Lake Committee's Education Program Manager. Santiago, Herley Jim Bowling, and I traversed the city to meet with members of East Yard Communities for Environmental Justice, Communities for a Better Environment, Homeboy Industries, and others. Groups opened their doors to share information on the issues they are facing and working to solve, to reminisce about past OEC trips, and to plan for their 2019 visits to Mono Lake. It's important for the Lee Vining-based staff to experience life at the southern end of the LA Aqueduct firsthand to gain a better understanding of where our groups are coming from.

There were some especially memorable moments—a reunion with Dorsey High School's 11-year OEC alumni, a field trip to the La Brea Tar Pits with middle school students from Pacoima Beautiful, and a meeting with teachers from Roosevelt High School and Crown Preparatory Academy who have been bringing students to the Mono Basin for many years. Strong connections between the leaders, students, and the OEC staff are critical to our program goals—we've worked with some of these groups since the OEC's founding, 25 years ago. This time in Los Angeles is critical to keeping the program connections alive and vibrant.

On the horizon

his year is looking like another record-breaking year for OEC participation with 29 groups already on the schedule.

- Trail Chic, the fashion show fundraiser for the OEC Access Fund, is July 20 in Lee Vining. See *monolake.org/trailchic* for more.
- The OEC accepts donations to improve facilities, purchase gear for students in need, and help groups with travel costs. If you have goods or services to donate, please contact Education Program Manager Rose Nelson (*rose@monolake.org*) at (760) 647-6595.

Mono Lake will rise in 2019

by Greg Reis

n October 1, 2018, Mono Lake was at the same level it was on October 1, 2017. The lake level dropped lower through the end of 2018, only to catch up again in early February 2019. It is unusual for winter lake levels to track so similarly, since there is usually a lot more variability from year to year. However, this year by late February the level had already exceeded the April 1, 2018 level and is expected to continue rising.

Mono Lake—at 6381.85 feet above sea level in late February—is still about 2 feet lower than it was at the beginning of the 2012–2016 drought. Currently, Mono Lake has about 10 vertical feet to go before it reaches the management level of 6392 feet above sea level. That gap will certainly decrease this year as we watch storm after storm inundate the Mono Basin with well-aboveaverage snowpack. With well-aboveaverage snowmelt runoff certain in 2019, Mono Lake will rise. How much? It depends on when the barrage of snowstorms stops. ❖



Regular reading of the lake level gauge is a whole new adventure during snowy winters, and is especially fun when the only way to get there is on skis.

Streamwatch

February snowfall will yield a wetter-than-average runoff year

by Greg Reis

6417' rom October through January, Mono Basin winter snowpack tracked close to average, and February 1 snow surveys found 102% of average snow water content in the upper watershed. Then on February 2 it started snowing hard, and the water supply 6392' outlook improved dramatically. That storm dropped 37 inches of snow in Lee Vining in four days, bringing the season total to 74.5 inches 6372' and putting this year in the top third of rediversion lake level, 1941 years for snowfall. **Aanagement lake level** Over 2.5 inches of Historic low, 1982 water was recorded in Lee Vining with many times more than that in the High Sierramore than typically

falls in the whole month of February.

During this storm, June Mountain Ski Area, located in the Rush Creek watershed, unofficially reported 73 inches of snow in 24 hours, beating the official state record for a 24-hour snowfall. A total of 130 inches of snow fell at June Mountain from February 2 through February 5, three feet more than was recorded at nearby Mammoth Mountain, which usually receives considerably more snow.

By late February, another 15 inches of snow had fallen in Lee Vining. The February storms were relatively cold, depositing considerably more snow in the 7,000 to 9,000 foot elevation range than in recent years. Early March storms were also on the horizon at press time.

At the start of February, the Los Angeles Department of Water & Power's (DWP) preliminary runoff forecast for April–July was 122% of average. That forecast will only increase, which means a "Wet-Normal" or wetter runoff year type is certain. These runoff year types require a Rush Creek peak flow greater than the current Grant Lake Reservoir outlet capacity. This is why the Mono Basin Stream Restoration Agreement with DWP is so important—it provides for a new outlet in Grant Lake Reservoir that can deliver peak flows recommended for restoration (see page 3). ❖

Greg Reis is the Committee's Information & Restoration Specialist. He hasn't used his rock climbing gear much lately, but recently started climbing trees with it—and while retrieving his son's model rocket, got poison oak for the first time in 20 years.

Mono Basin Journal

A roundup of quiet happenings at Mono Lake by Geoffrey McQuilkin



When winter storms last for days, shutting the highway and dropping layer upon layer of fresh snow across the Mono Basin, the season gets interesting. Two feet of snow is a solid statement of winter, sifting in amongst the sagebrush and piling up atop tufa towers. Add two more feet of snow, as four days of storms did this year, and the Mono Basin is transformed.

In this seldom-seen winter landscape, every bush and boulder disappears beneath a continuous blanket of sparkling snow that drapes from lofty peaks across sagebrush flats and out to the east shore of Mono Lake. One can glide on skis in all directions, across the tops of bitterbrush and desert peach that would be prickly obstacles on any other day. The winds of winter enjoy the same unencumbered freedom in this smoothly-surfaced world and they embark on new artistic pursuits, rearranging snow across the miles and sculpting monuments along the way. Wind-crafted ridges, spirals, and waves of snow invite exploration, undulating across the basin, creating an ever-changing frozen terrain that leaves, for a short time, only hints of the familiar world that lies beneath. \diamondsuit

Geoff McQuilkin is the Committee's Executive Director. Winters that provide sledding, skiing, and significant Mono Lake rise make him happy.

Benchmarks



February 28, 2018: A total of 4.6 inches of snow fell last February, leaving just a dusting of snow on the mountains. The season to date was 8.8 inches, and the season total was 27.2 inches.



February 22, 2019: After 52.8 inches of snow in February, the Mono Basin is covered in white from the highest peaks to the shores of Mono Lake. Season to date: 90.2 inches.

MONO LAKE COMMITTEE INFORMATION CENTER & BOOKSTORE

It's WORTH SAVING BASEBALL SHIRT Ellen and Andrew model the very first shirt that the fledgling Mono Lake Committee ever sold—it's been popular now for over 40 years. This 52% cotton, 48% polyester unisex shirt features a baseball-style cut with three-quarter-length sleeves and "Mono Lake: it's worth saving" on the front. *Mono Lake Committee exclusive. It's worth saving baseball shirt, unisex, S–L: \$26.00 XL–XXL: \$28.00*





MONO LAKE BRINE SHRIMP T-SHIRT



Like Robbie and Rose, show your love for Mono Lake's endemic brine shrimp with these Artemia monica shirts. The unisex cut is moss green and the women's cut is light turquoise. These super soft 100% cotton shirts are very comfortable and look great on everyone. Mono Lake Committee exclusive. Mono Lake brine shrimp T-shirt, unisex, moss green, S-XL: \$25.00, XXL: \$27.00 Women's, light turquoise, S-XL: \$25.00

GLASS MONO LAKE COMMITTEE LOGO CUP

By JOCO

Enjoy your favorite hot beverage on the go in this beautiful 16-ounce borosilicate glass cup. Designed to keep hands comfortable and beverages hot, it has a removable navy blue silicone lid and thermal sleeve with our favorite logo. Dishwasher and microwave safe, these cups are a great way to reduce consumption of single-use cups. They also rank as the new favorite of Mono Lake Committee co-founder, Board chair, and resident mug aficionado, Sally Gaines. *Mono Lake Committee exclusive. Glass Mono Lake Committee logo cup, 16-oz: \$24.00*

Forty years with Designs Unlimited

S ince 1979, when the Mono Lake Committee Information Center & Bookstore first opened its doors, we've sold T-shirts to help raise money and spread the word about the importance of protecting Mono Lake. These shirts have come in many shapes, styles, and colors—from baseball tees to crop tops and 80s neon to muted earth tones. While some have fallen out of style (perhaps for the better) others are still popular today, and many of them are still printed at our local print and design shop, Designs Unlimited in Mammoth Lakes.

We have worked with our friends at Designs Unlimited to produce the majority of the T-shirts we have sold in the bookstore over the last 40 years. At roughly 1,000 shirts per year, that's enough T-shirts to clothe all Mono County residents three times over. We are grateful to have longstanding partners like the good folks at Designs Unlimited so that together we can keep saving Mono Lake!

order at monolake.org/store or (760) 647-6595

Naturalist notes

by Nora Livingston

W inter is the most challenging time for animals to survive, yet when exploring the Mono Basin on even the chilliest days there is always a track to study, a bird that flits across the path, or a surprise encounter with creatures out looking for food.

In the past month, wildlife experiences have been plentiful. Red-tailed Hawks and American Kestrels circled on thermals over the snow. A graceful Great Blue Heron flew to the top of a Jeffrey pine and perched like an angel atop a Christmas tree. A young mountain lion was spotted a few times down by Mono Lake, making her way back up into the rocky hillsides after a lakeside foray. A rare Harris' Sparrow visited in the midst of a blizzard.

A red fox has been in town since October, and geneticists are working to identify it using collected scat and hair samples. Is it an incredibly rare Sierra Nevada red fox or a fox with Great Basin or domesticated ancestry? We will let you know when the DNA results are in. �



2018 Free Drawing for Mono Lake

by Joslyn Rogers

Thank you to everyone who entered the 2018 Free Drawing—your donations help us protect and restore Mono Lake! Congratulations to the winners, and a huge thank you to the generous businesses and organizations who donated prizes.

The iPad Mini 4 went to Marta Beryt of Fresno. Mono Basin retreat: Ross & Evelyn Kay Oswald of Glendora. Mammoth & June Mountain ski pass: Stephanie Macho of Sonora. Yosemite holiday retreat: Bob & Carol Drescher of Ventura. Experience the Channel Islands: John Limbeson of Salinas and Lawrence Phillips of Henderson, NV. National Parks grand adventure and Patagonia sweater: Steve Leonard of Santa Cruz. A Day on the Bay: James W. Royale, Jr. of San Diego.

Anthony W. Podell of Hermosa Beach won the Hope Valley retreat. Mammoth Lakes adventure: Louise E. Jackson of San Francisco. Escape to Benton Hot Springs: Terry Hill of Huntington Beach. Golden Gate vacation: Tony Barnard of San Pedro. Tamarack cross country ski pass: Rodney Robinson of Davis. Bodie Photo Day and 2019 Owens Valley Bird Festival: Mike Dineen of San Francisco. Mono Lake Committee field seminar: Isabel Auerbach of Rohnert Park. Eastern Sierra experience: Mary Jane Moore of La Mesa. Henry Pietropaoli of Albany and Jessea Greenman of Oakland won the canoe tours on Mono Lake. Patagonia sweater: Glen & Cheryl Lewis of Santa Paula. Mono Lake Committee gift packs: Juliana Feriani of Tuolumne and Carolyn McNamara of Phelan. REI Flexlite chair: Elaine Elinson of San Francisco. Explore the USS Midway: Carol Boyer of Vancouver, WA. A Day at the Huntington: James & Claudia Tedford of San Luis Obispo. Friends of the River gift pack: Robert & Betty Gage of Montclair.



Maureen pulls a winning ticket in the 2018 Free Drawing for Mono Lake in the Mono Lake Committee Information Center & Bookstore.

Custom guided trips

he Mono Lake Committee offers custom guided trips for those looking for a personalized experience. Let us do the planning we will craft a trip tailored to your specific interests, your group, and your schedule. Our staff has over 100 years of collective experience in the region, so whether you are looking for a natural history adventure, a new hiking spot, a special canoe tour, or a birding trip, we've got you covered. See more, do more, and learn more on a custom guided trip!

Better birding

Working on your life list? Hoping to take great bird photos? We'll take you to the best habitats and help you make the most of your time birding.

A glimpse into the past

Jump back in time while you discover the rich and complex history of the Mono Basin on a custom trip tailored to your specific interests.





Mono Lake: The whole picture

Spend a day learning all about the natural history of the lake while exploring the basin with an expert.

Ice & fire

Explore the Mono Basin's fascinating geology and transport yourself millions of years into the past.

Photography

Want to get that early morning sunrise shot? Let us lead you in the dark.

e jumped at the chance for a full day of birding with Nora. We were delighted to find that she is not only an expert birder who knows her patch well, but has a broad range of associated skills in natural history as well. If you are looking for a birding guide in the Mono Lake area, Nora and the Mono Lake Committee can't be beat." —Jess Morton, custom trip client

A note from the Lead Naturalist Guide

he Mono Basin is filled with endless natural history mysteries, just waiting to be explored. Each time you visit, there is something new to learn, see, and experience. This year, I'm taking on a challenge to dig even deeper into Mono Basin natural history so I can better share it with you. It's called the 5-Mile Radius Challenge and it focuses on getting to know the flora and fauna within five miles of your home. More than keeping lists of birds seen and plants found-it is a way to pay careful attention to my community and fall in love every time I set foot outside my door. Come join me this summer as I go out to discover more about the Mono Basin-inch by inch, bird by bird, petal by petal.

Yours in nature, Nora Livingston



2019 Field Seminars



Birding Mono Basin Hotspots

May 31 (half day) • Nora Livingston \$110 per person / \$100 for members

Mono Basin creeks and canyons are hidden jewels for breeding and migrating songbirds in a region where high desert habitat dominates. This half-day birding trip will explore lush riparian areas that are rich with bird life.

Breeding Birds of the Mono Basin

June 1 • Nora Livingston \$140 per person / \$130 for members

Late spring and early summer are the best times to find breeding birds in the Mono Basin. This one-day seminar will visit several spots in the Mono Basin to learn about the many breeding birds that raise their families here.

Visions of the Past: Sierra Gold, Aurora Silver

June 1–2 • Terri Geissinger \$197 per person / \$182 for members

The gold-mining operations of Bennettville and the Log Cabin Mine and the silver-mining town of Aurora offer visions of the past to those who visit these now-deserted outposts at the Sierra crest and in the high desert. During this seminar we will visit huge mills that once processed millions of dollars' worth of gold and silver ore and get a sense of people's lives in these early settlements.

Twilight Birding & Owling

June 2 (half day) • Nora Livingston \$90 per person / \$80 for members

Spend the twilight hours with a naturalist while clouds light up with vivid color, fading light turns the landscape inky blue, and unique wildlife emerges. We will look for songbirds, search for snipes and nighthawks, scan the trees for owls, and scour the backroads for poorwills.

Natural History of Mono Basin Woodpeckers

June 11–13 • Steve Shunk \$182 per person / \$167 for members

Join this seminar for a dynamic overview of Mono Basin woodpeckers. One of the most specialized bird families in the world, 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.

Mono Basin & Bodie Photography

June 21–23 • David Gubernick \$300 per person / \$275 for members

Enhance your photography skills 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, and the group will visit Bodie for private after-hours evening access.

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

Capturing the Mono Basin in Pastel

June 28–30 • Ane Carla Rovetta \$192 per person / \$177 for members

The sparkling light and radiant skies of the Mono Basin are pure inspiration. Add a set of brilliant pastel chalks and your own imagination, and you have an incredible weekend of color exploration and art. Each participant will go home with at least one small finished painting and several sketches, color studies, and value experiments that will fuel future artistic endeavors.

Wildflower Waltz

July 5 (half day) • Nora Livingston \$110 per person / \$100 for members

Working on your wildflower identification? July is the perfect month to practice as the flowers will be out in abundance, taking advantage of plentiful sunlight and warm temperatures. We will scour meadows and canyons for the plethora of blooms that grace the trails, focusing on the identification and natural history of the flowers we see.

Mono Basin Big Day Birding

July 6 • Nora Livingston \$140 per person / \$130 for members

This fast-paced birding seminar will attempt to record as many bird species as possible in the Mono Basin in one day. Over 300 species have been recorded in Mono County, with over 150 species occurring regularly in the summer. Throughout the day, we will visit a variety of lakes, streams, ponds, forests, and fields to build our list.

Birding the White Mountains

July 12 • Nora Livingston \$140 per person / \$130 for members

The gradient from the Owens Valley to the White Mountains provides a great swath of diverse habitat, from desert oasis to high-elevation woodland. This one-day field seminar will search high and low for a great variety of bird species.

Butterflies of the Mono Basin & Sierra Nevada

July 13–14 • Kristie Nelson \$172 per person / \$157 for members

With a range of habitats and plant species that butterflies depend on, the Mono Basin and Sierra Nevada high country are excellent regions to get acquainted with these bright splashes of living color. In this seminar, we'll focus on noticing and keying into butterflies, identifying their host plants and habitat preferences, and understanding their life cycles.



Plumbeous Vireo is one of more than one hundred bird species that can be seen in the Mono Basin during early summer migration.

Full Moon Hike

July 16 (half day) • Nora Livingston \$90 per person / \$80 for members

There is no better way to deeply immerse yourself in the majestic calm of the Mono Basin than to experience it by moonlight. On this seminar, we will take a natural history hike as the sun sets and the full moon rises. We will find a perch to enjoy moonrise and hear stories about the night.

Wildflower Waltz

July 18 (half day) • Nora Livingston \$110 per person / \$100 for members

See the July 5 seminar description above.

Mono Basin Mammals

July 19–21 • John Harris \$182 per person / \$167 for members

This class will cover the diversity of mammals found in the Mono Basin, from desert sand dunes to forests and alpine meadows of the high Sierra. More mammals occur here than in many states, and the group will try to see as many as possible by live-trapping and field observation.

The Art of Wildflower Macrophotography

July 26–28 • David Gubernick \$275 per person / \$250 for members

Learn to take creative and beautiful close-up images, further develop your artistic vision, and enhance your photographic skills. This seminar will emphasize the artistry

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

of macrophotography and the technical means to render such images; this is not a course in botanical identification.

Mono Basin Landscapes & Milky Way Photography

August 2–4 • Jeff Sullivan \$275 per person / \$250 for members

Summer is a special time in the Mono Basin, with wildflowers blooming, Sierra Nevada peaks catching morning alpenglow, and afternoon cloud formations for potential sunset color, often yielding to clear skies for night photography. This seminar will cover techniques for composing and capturing stunning landscape and night sky photographs.

Mono Basin Natural History: Aquatic & Terrestrial Habitats

August 2–4 • David Wimpfheimer \$207 per person / \$192 for members

The Mono Basin is one of the most diverse ecosystems on the continent; this seminar will be an overview of the varied habitats found here. We will enjoy the rich diversity of mammals, butterflies, wildflowers, and trees, and a major focus will be the identification and ecology of birds that breed here. A guided canoeing exploration of Mono's south shore is included.

En Plein Air at Mono Lake: Beginning Oil Painting

August 9–11 • Penny Otwell \$192 per person / \$177 for members

Painting outdoors allows an instant connection with landscape, and the textural possibilities and complete-coverage quality of oil paint allow students to portray their own unique feelings in their work. This field seminar is designed to be an introduction to the sometimes-intimidating subject of oil painting for students who want to learn oil painting outdoors.

Mining the Past through Binoculars

August 10 • Nora Livingston \$140 per person / \$130 for members

This seminar will visit locations that give historic context to the tenacious pioneers, legendary basket weavers, and hardscrabble miners who came before us. We'll also learn about the animals and plants that inhabit these places now.

Falling for the Migration: Bridgeport Valley & Mono Basin

August 15–16 • Dave Shuford \$172 per person / \$157 for members

Falling for the Migration: Crowley, Mammoth, Mono

August 17–18 • Dave Shuford \$172 per person / \$157 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, Bridgeport, Crowley, and Mammoth areas.

Geology of the Mono Basin

August 16–18 • Greg Stock \$182 per person / \$167 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. If you've ever wanted to know more about the geologic forces that formed the diverse landscapes of the Mono Basin, this seminar is for you.

Miwok-Paiute Basketry

August 23–25 • Lucy Parker, Julia Parker, & Ursula Jones \$265 per person / \$250 for members

During this seminar, participants will prepare materials and create a small Miwok-Paiute basket using a twining method. 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.



Painting en plein air allows an instant connection with the landscape.

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

Birding the White Mountains

August 30 • Nora Livingston \$140 per person / \$130 for members

See the July 12 seminar description on page 20.

Volcanism of the Mono Basin

August 31 • Nora Livingston \$140 per person / \$130 for members

Mono Lake sits in a geologic bowl formed by ancient volcanic sediments and recent volcanic eruptions. This seminar will visit several volcanic formations around Mono Lake while addressing the overall picture of volcanism in the Mono Basin and its role in shaping the landscape we see today.

A Long Journey: Shorebird Migration

September 1 • Nora Livingston \$140 per person / \$130 for members

As birds fly south for winter, we wonder "Where exactly are they going? Where are they coming from? How long does it take them to get there? How do they know where to go?" This seminar strives to answer these questions and more while observing these ultra-lightweight travelers as they fuel up along their migration.

Creating the Illuminated Field Journal

September 6–8 • Hannah Hinchman \$192 per person / \$177 for members

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. Through guided explorations of nearby habitats, you'll learn to personalize these experiences through journal entries, both drawn and written.

Mono Basin Tree Identification

September 13 • Nora Livingston \$140 per person / \$130 for members

This seminar will delve into the diversity of trees in the Mono Basin and their identifying features. We will examine, observe, and even smell the trees to help ingrain the knowledge into our senses.

Fire Ecology of the Eastern Sierra

September 14–15 • Malcolm North \$172 per person / \$157 for members

Fires are inevitable in much of the western United States, but many modern fires burn differently than what forests evolved with. This seminar will visit several recently burned areas in the Mono Basin, show fire effects on forest ecosystems, and discuss the good, bad, and ugly of current fire management and policy.

Los Angeles Aqueduct Tour

September 20 • Bartshé Miller \$165 per person / \$150 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 their modern relationship with Los Angeles, Mono Lake, and its tributary streams.

Geology of the Mono Basin

September 20–22 • Greg Stock \$182 per person / \$167 for members

See the August 16 description on page 21.

Fall Color Foray

October 4 (half day) • Nora Livingston \$90 per person / \$80 for members

Every fall, quaking aspen trees paint the landscape with golden hues as their leaves change. This half-day seminar will visit the most colorful aspen groves during peak season. We will enjoy glittering golden, ruby, and emerald forests while learning about aspen ecology.



Mono Lake sits in a geologic bowl formed by ancient volcanic sediments and recent volcanic eruptions.

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

Watercolors in the Wild: Autumn Flora

October 4–6 • Andie Thrams \$192 per person / \$177 for members

Painting in wild places is powerfully transforming, yet working outdoors can be overwhelming. During guided studies focused on autumn flora, with a particular emphasis on fall's color palette, we'll carefully observe local plant life, collect ideas, and experiment with drawing and painting techniques using watercolor, gouache, and ink.

Arborglyphs & Aspen Natural History

October 5–6 • Richard Potashin & Nancy Hadlock \$197 per person / \$182 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 at peak color to explore this historic art form and to learn about the wildlife, insects, and birds that are drawn to the groves.

Fall Color Foray

October 11 (half day) • Nora Livingston \$90 per person / \$80 for members

See the October 4 description on page 22.

Mono Basin Fall Photography

October 11–13 • Robb Hirsch \$275 per person / \$250 for members

In autumn spectacular foliage and skies combine with exceptional light, presenting ample subject matter to photograph. Explore shoreline locations at sunrise and sunset,



In autumn, quaking aspen trees light up Mono Basin canyons with hues of gold.

fall color in nearby canyons, and grand overviews of the Mono Basin in this seminar.

Mono Basin Landscapes & Moon Photography

November 8–10 • Jeff Sullivan \$275 per person / \$250 for members

Late fall is the season for sunset, moonrise, and reflections at Mono Lake. The departure of summer heat reduces wind, leaving the dense, salty water of Mono Lake mirror-smooth. A passing storm may leave a dusting of snow or bring clouds to decorate our compositions. This seminar will cover techniques for composing and capturing stunning landscape and night sky photographs.

Field Seminar Information

To register for a Field Seminar, please visit monolake.org/seminars or call (760) 647-6595.

To see complete Field Seminar itineraries, cancellation and refund policies, seminar leader information, and answers to frequently asked questions, visit *monolake.org/seminars*.

Field Seminars are open to all, but Mono Lake Committee members get to register early and receive discounts. All instructors are experts 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 Field Seminars benefit research and education in the Mono Basin.

All Field Seminars and custom trips operate under Inyo National Forest and California State Parks permits.

Restoration and monitoring from page 3

significant dispute that originated when DWP used contracting procedures to displace the long-established scientific experts in favor of in-house staff. A simple contracting change at DWP can put this change into motion, significantly enhancing understanding of Mono Lake's ecosystem.

Both of these items are under active discussion between the Agreement parties and the State Water Board, which has expressed concern about the slow pace of overall progress and support for moving the interim measures forward.

DWP has begun work on the approvals needed for interim implementation of the streamflows, and the Committee technical team is working with DWP to ensure data collection and continuity accuracy. DWP has yet to respond to the Mono Lake monitoring topic, and Committee staff are actively working on advancing it.

The pressure is on

Implementation of the full Stream Restoration Agreement remains a critical focus for the Committee. The State Water Board is waiting on just one thing: a supporting environmental document from DWP. Delivery of this document has been promised for years but has yet to happen. The State Water Board has recently expressed impatience about the protracted delays, and Committee attorneys and staff are working to prod quick delivery from DWP.

In the months ahead, with dedicated effort from Committee staff and support from Committee members, two goals can be achieved: progress on Agreement implementation and achievement of real on-the-ground actions that advance stream restoration in 2019. \diamondsuit

Stream Scientists from page 5

fairly similar—there was some noticeable bank scour and filling of some pools and creation of new pools within our annual sampling sections, but there was not an overall impression of radical change or negative impacts from 2017.

I was pleased to see that the Mono Gate One Return Ditch had experienced a good "flush" and that the beds of elodea looked healthier than they had during the five drought years when they were smothered in fine sediment.

I had expected that the brown trout population in Rush Creek would respond positively to the high flows and cooler summer water temperatures with a modest increase in numbers of fish and higher growth rates. My expectation of increased fish numbers was met, and growth rates exceeded expectations. In our upper Rush monitoring section the population estimate of Age-0 fish tripled from the previous year and the numbers of older fish experienced a modest increase. Recaptures of previously tagged fish documented the fastest growth rates we've seen of brown trout.

Cutting: Can you tell us about a favorite moment, sight, or memory from your field time in 2017?

Trush: Winding tracks recently left (maybe just hours before) by a Great Blue Heron exploring a newly created side channel reminded me how "nature" quickly adapts to and relies on change.

Taylor: My favorite memory from the 2017 field season was the recapture of a large, previously tagged brown trout. When we scanned the fish and saw the tag number, I immediately knew it was from our original batch of tags implanted in fish back in 2009—I confirmed it was a trout tagged in 2009 that we recaptured in 2010, 2013, 2014, and 2017. The fish was at least 11 or 12 years old and had survived the drought. It was 15.5 inches long and weighed 1.1 pounds when tagged in 2009 and was 25 inches long and 5.5 pounds when caught in 2017.



Ross Taylor measures a trout from Rush Creek to assess its condition factor (an analysis of body weight versus length).

Cutting: 2018's Normal year-type runoff allowed easier access for stream monitoring because water levels were lower than 2017. What struck you when you started to explore the creeks 2018? What was the biggest impact to the restoration process in your respective areas of expertise?

Taylor: What struck me the most was the resiliency of the brown trout population in Rush Creek and the fish's ability to quickly bounce back from the five-year drought. Although 2018 was an average runoff year, water levels in Grant Lake Reservoir remained high throughout the summer, so lower Rush Creek experienced cooler water temperatures, and the brown trout population responded with increased recruitment of Age-0 fish and the older fish continued to exhibit good growth rates. Cooler water and peak flows of around 380 cubic feet per second through the Mono Gate One Return Ditch in 2018 allowed the beds of elodea to continue to recover from the drought. When healthy, this aquatic vegetation grows long thick mats that float on the surface, creating excellent overhead cover for trout and extensive surface area for algae colonization that then provides abundant food for aquatic invertebrates, thus abundant forage for trout.

Trush: Several come to mind. The geomorphic role of beavers really struck me—they engineered dams using live willows as surrogate "concrete reinforcement rods" for anchoring their dams that stymied removal by the 2017 peak flood. That was impressive.

Intensive cottonwood and willow seedling establishment in early October 2018 was the greatest I've witnessed in 25 years as a Mono Basin Stream Scientist. Other highlights include: construction of "meaty" vertical logjams; subtle accretion of fine sediment onto floodplains; diversification/ amplification of channel margin habitats such as side channels with deep alcoves; and the rising importance of maturing woody vegetation in stabilizing, yet still promoting, a dynamic channel morphology.

Cutting: Looking into the future say, ten to 20 years from now, what on-the-ground change or processes in action would you like to be seeing?

Taylor: The biggest unknown will be the effects of climate change on the hydrologic patterns in the Eastern Sierra and how these altered patterns of snow, rain, and snowmelt will affect the Mono Basin. The fisheries perspective has always been tricky because there were no trout native to Mono Basin streams, let alone brown trout, a native to the European continent. Will there be viable, self-sustaining trout populations in Rush and Lee Vining creeks? I expect the answer will be "yes," as long as streamflow patterns continue to mimic unimpaired flows as closely as possible and provide the ecological functions we deemed important in the Synthesis Report.

Having a more mature riparian canopy of cottonwoods will assist in alleviating summer water temperature concerns. The past 20 years of fisheries monitoring have shown that the trout populations will fluctuate with year type and that drier years will be unfavorable. Ultimately, the health of the creeks and implementation of the springtime peak flows provide Mono Lake the opportunity to refill to the ecologically healthy level established by the State Water Board.

Trush: I'd like to see a greater role of riparian vegetation influencing alluvial channel dynamics, particularly by maturing cottonwoods (especially those closest to the mainstem channel) and Jeffrey pines (if beavers allow).

I'd also like more extensive floodplain reconstruction and subsequent rebuilding and maintenance through the interplay of Extreme-wet through above Normal snowmelt hydrographs.

Cutting: People often ask us "When will restoration be done, completed, or finished?" What's your perspective on that question?

Trush: The term "restoration" should be considered a self-sustaining verb rather than an endpoint noun. Our Synthesis Report flow recommendations to the State Water Board included flow releases designed as natural hydrographs to perpetuate Lee Vining and Rush creeks' ongoing capacity for self-renewal.

Taylor: Never! As long as there are competing needs (water export and power generation) for the finite amount of water in Mono Basin streams, there will be human-induced stressors on the systems that will impede or confound restoration and recovery. Our recommended springtime peak flows will allow the streams to mimic nature as closely as possible, while some water is exported by LADWP. The peak flows were also intended to create a stream ecosystem that is resilient to varying year types, where recovery from stressors is possible when subsequent "good" years occur following "bad" years.

Finally, it bears remembering that the creek channels are still adjusting to the rapid (geologically-speaking) drop of Mono Lake's elevation from LADWP's post-1941 exports. The 45-foot drop in lake level was the catalyst for dramatic channel adjustments and impacts that are still in play today and will still be in play for many decades to come. \diamondsuit

Lisa Cutting is the Committee's Associate Policy Director. Twenty years of stream restoration has forever shaped her understanding of her favorite place to be—knee-deep in cold, clear, flowing water—fly rod in hand or not.



Mono Lake Committee staff explore the Rush Creek bottomlands in 2018, a year after the record peak flows of 2017.

Staff migrations

by Geoffrey McQuilkin and Jessica Schneider

hile many Mono Lake Committee staff migrate with the seasons, sightings of senior staff in migration are rare. This year, we have two of these noteworthy migrations afoot.

After 17 years as Eastern Sierra Policy Director, Lisa Cutting is moving into a part-time role as Associate Policy Director. Lisa started with the Committee as an intern in 1999 and quickly developed a deep commitment to the protection of Mono Lake and restoration of the tributary streams. She then served as Environmental Resource Coordinator for two years before becoming Eastern Sierra Policy Director in 2002.

Lisa has seen many policy issues during her tenure from shaping Caltrans projects to incorporate Mono Basinspecific revegetation techniques, to keeping the Mono Lake Tufa State Natural Reserve open, working with state and federal agencies to achieve goals in an era of diminishing resources, and accomplishing the daily work of implementing State Water Board-ordered mandates for Mono Lake and its tributary streams. But her passion has always been stream restoration—specifically bridging the gaps between restoration science, land management, and rules and regulations to achieve the most successful on-the-ground ecological health possible.

Lisa's calm and deft approach to complex water issues combined with her ability to bring often-polarized parties together to garner positive results for Mono Lake has set the bar for navigating future balanced solutions. She is excited to have more personal time for fishing, backpacking, and exploration, but fortunately for the Committee Lisa will also continue to put her skills to work on focused projects with the policy team.

Taking over the Eastern Sierra Policy Director position is **Bartshé Miller**, who has been Education Director for the Committee since 1996. Bartshé developed the Committee's fledgling education activities into the robust program we have today, giving him a deep knowledge of Mono Lake and experience with a broad range of local and regional issues.

Education programs have flourished under Bartshé's careful watch, and his enthusiasm for learning, understanding, and knowing more about the Mono Basin has inspired visitors, students, experts, and staff alike. Securing a long-term home for the Mono Basin Outdoor Education Center program, expanding the Committee's naturalist tour program, and fledging the Mono Basin Bird Chautauqua were among his successes as Education Director. We are excited to have Bartshé in the policy department as someone who knows the Committee and Mono Lake well and is willing to stand on the shoulders of previous policy giants.

We bid farewell to three seasonal staff who stayed with us through last fall. Outdoor Education Instructors **Savanna** **Deger** and **Ava Stavros** finished the 2018 season with the Outdoor Education Center in October. As OEC Instructors they spent a week at a time with groups of visiting Southern California students, teaching them about the Mono Basin watershed. It was a busy summer with 26 groups comprised of 326 students and 80 chaperones—Savanna and Ava helped them become better acquainted with the Mono Basin and water-wise habits to take home.

We are grateful to have had **Max Price**, Mono Lake Intern, stay into December. He spent much of his summer traipsing around the Mono Basin—he read piezometers, resurfaced memorial benches, rebuilt our dilapidated staff picnic table, and made progress on the huge project of scanning items into our digital photo archive. We have the feeling that the magic of the Mono Basin will bring Max back to Mono Lake once he finishes his Master's degree. �

Jessica Schneider is the Committee's Office Director. She has been enjoying the extreme winter by skiing out her back door and playing with her new baby goats that arrived right in the middle of the first big storm in February.

Farewell Edith Gaines

dith Gaines, mother of Mono Lake Committee cofounder **David Gaines**, passed away in January. Edith was a staunch supporter of David, his work on behalf of Mono Lake, and the Committee. She enjoyed seeing the ongoing success of what her son started, stayed connected to the Committee's work, and had a touching tradition of sending a contribution to the Committee each year on David's birthday—including what would have been his 71st this past December.



Edith Gaines with grandchildren Sage and Vireo, and greatgrandson Everett.



From the mailbag

News from members and friends

by Ellen King

Two years ago we were wondering where to put all the snow that had fallen here in town. Last year we were bemoaning the lack of snow. Today we're happy to be facing, once again, the dilemma of snow covering every possible parking spot near the Committee. What it means, of course, is more water for Mono Lake, and that makes everyone happy! We thank all of you who sent in contributions in honor or in memory of your friends and loved ones. Your gifts help us carry on the work that will keep Mono Lake a special place through wet years and dry.

In honor

Virginia Holmquist of Monrovia made a donation in honor of the Patrick & Monika O'Kane Family. Kathleen Mugele of Sonoma sent a contribution in celebration of Margaret Spaulding.

In memory

Bob Battagin of Woodacre gave a gift in memory of Rich Stallcup. Tom Bohigian of Fresno sent a contribution in memory of his wife Sheri Bohigian. Michael & Deborah Boucher of Mammoth Lakes made a donation in memory of Bill Taylor. Jeff Chavez of Lancaster gave a gift in memory of his father Michael Chavez. Reanne H. Douglass of Anacortes, WA sent a contribution in memory of her husband **Donald C. Douglass. Julie Eckstrom** of Morgan Hill made a donation in memory of Chris Wardle. Susan Grove of Berkeley gave a gift in memory of her husband Eric Anderson. Matthew Lawrence & Kimberly Seater of Seattle, WA sent a contribution "in loving memory" of Andrea Lawrence. Jim & Sue Liskovec of Cupertino made a donation in memory of "our dear friend" Genny Smith. Carol Mathews of Walnut Creek gave a gift "in loving memory" of **Robert Mathews. Marilyn & Michael** Miller of Rye, NH sent a contribution in memory of "our very good friend" Lee Vorobvoff. Barbara Randolph-Anderson & Steven Anderson of Hopkins, MN made a donation in memory of Dr. John E. Boynton.

Gordon Ray of La Honda gave

a gift in memory of Leslie Ray. Ted Reeves of Claremont sent a contribution in memory of David Van Fleet. Gloria Spanier of San Jose made a donation in memory of her husband Evan Spanier. Patricia Wright of Sausalito gave a gift in memory of Genny Smith.

Donations to the Vorster Center

We received donations to the Vorster Center for Mono Basin Hydrology from **Tom Appelbaum** of Soda Springs, **Tanya Atwater** of Santa Barbara, **Martha Davis** of Nicasio, and **Robert Meyers & Sylvia Sykora** of Oakland. To learn more about the Vorster Center, see page 7.

Augie Hess, 1914-2018

The Eastern Sierra lost a revered community member and knowledgeable historian and

storyteller when **Augie Hess** passed away on October 20, 2018 just days shy of his 104th birthday. Born and raised in the Mono Basin, Augie was one of the residents interviewed by Mono Lake Committee staff to help document stream and lake conditions prior to DWP diversions—these interviews informed deliberations at the State Water Board hearings.

In the 1930s Augie's father Gus built a dance hall in the center of Lee Vining where the Hess family band, with Augie on trumpet, entertained miners, ranchers, and laborers constructing the northern extension of the Los Angeles Aqueduct. In 1989 the building was sold to the Committee and it houses the bookstore and offices to this day. You can read more about Augie's life in his autobiography, *The Kid from Mono Mills: Augie's Century*, or by contacting the Mono Basin Historical Society (*curator@monobasinhistory.org*). *****



Last August Augie Hess (black hat, center) cut the ribbon at the dedication of Lee Vining's Pioneer Solar Pavilion, which is located in Gus Hess Community Park, named for his father.



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Andrea Lawrence Award Dinner

May 3, 2019 **Parallax Restaurant** Mammoth Mountain Ski Area

reserve your seat by April 10: (760) 647-6595

Trail Chic Fashion Show

July 20, 2019 Lee Vining **Community Center**

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

Ever Rising: **Etchings of Sierra Birds** by Stephanie Martin

Stop by any day, 9:00AM to 5:00PM. through July to see this beau iful show.

Volunteer at Mono Lake this summer!

- lead patio talks
- rove at County Park and Old Marina
- pull invasive plants
- share the Mono Lake story

free training takes place May 31–June 2 sian up by calling (760) 647-6595

