

State Water Board Hearing

Fisheries Monitoring

Free Drawing

Fall Catalog

his issue of the *Mono Lake Newsletter* contains a hard question: Will I see Mono Lake rise to the healthy, mandated level in my lifetime?

We've been hearing that question, and others, from members. As Geoff writes in his article on page 4, we hope so. We have seen how fast the lake can rise in wet years. We know that if stream diversions can be paused, the gains in lake level from wet years will stop being eroded away.

At the same time, maybe not. We know how intractable DWP can be, deploying delay tactics for years. And we've seen, during dry years like this one, Mono Lake recede steadily before our eyes, the dusty shore growing wider week to week.

Will we see Mono Lake rise to its healthy level in our lifetime? We hope so, but maybe not.

You can read the official Mono Lake Committee mission at the bottom of this page. Our overarching goal is on the wall in the Information Center & Bookstore here in Lee Vining: *protecting Mono Lake for future generations*.

Those future generations—some of them are already here. The youngest students at the OEC this year were born during the "recent" drought. We got to greet members' children and grandchildren in the bookstore and on South Tufa tours all summer. Phalarope chicks that were counted at Mono Lake this summer are now growing stronger at their wintering grounds in Argentina. As this issue goes to press we heard happy news of the arrival of a former Mono Lake intern's baby, a new little shrimp for Mono.

So maybe the question should be: Will they see Mono Lake rise in their lifetime?

There's so much work happening to protect the lake. There's so much determination to see it rise. There's so much support from people to make it happen. Because of all that—which you'll see in the pages that follow—I think the answer is *yes*.

-Elin Ljung, Communications Coordinator



In early August, reporters from the Great Salt Lake Collaborative visited Mono Lake. The Collaborative is a group of news, education, and media organizations that have come together to better inform and engage the public about the lake level crisis facing the Great Salt Lake and what can be done to make a difference. We were happy to offer perspectives and lessons from Mono, a sister salt lake at the other side of the Great Basin.

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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Looking toward the future State Water Board hearing

Purpose: Raise Mono Lake to the Public Trust lake level of 6392 feet

ith Mono Lake painfully low, talk has been frequent in recent months about the California State Water Resources Control Board's future hearing on the matter.

A hearing is required because the State Water Board itself set forth the requirement within the water rights of the Los Angeles Department of Water & Power (DWP). The Board stated it "will hold a hearing" if the lake did not rise to the mandated protection level by September 28, 2020. Unfortunately, the lake was only 30% of the way to the requirement on that date, and is even lower today.

There's no question that a hearing is in the future. So what will the hearing take a look at? And when will it happen?

Lake protection is settled

The State Water Board's first Mono Lake hearing was decades ago longtime members and Mono Lake supporters remember those 1993–94 proceedings well. Many people turned out for public comment forums around the state, and the hearing itself journeyed through the seasons with over 40 days of testimony and cross examination. The transcripts exceeded 30,000 pages.

The Board had a big job to accomplish and compelling legal and scientific reasons to spend so much time on its intensive effort.

First, the Board had to determine the streamflows necessary to protect fish in order to resolve violations of State Fish & Game codes and meet court requirements for Mono's tributaries.

And second, it had to determine the lake level necessary to protect the Public Trust resources of Mono Lake

by Geoffrey McQuilkin

for the people of California, as required by the state Supreme Court ruling won by the Committee and our partners at Audubon in 1983.

The Board summarized those Public Trust resources to be:

"...air quality in the Mono Basin; water quality in Mono Lake; the Mono Lake brine shrimp and brine fly which provide food for migratory birds; secure, long-term nesting habitat for California gulls and other migratory birds; easily accessible recreational opportunities for the large number of visitors to the Mono Lake Tufa State Reserve; and the panoramic and scenic views which attract many people to the Mono Basin."

The Board's rigorous analysis led to the landmark protection of Mono Lake in 1994. "This decision," it wrote, "amends Los Angeles's water right licenses to include specified water diversion criteria which are intended to gradually restore the average water elevation of Mono Lake to approximately 6,392 feet above mean sea level in order to protect Public Trust resources at Mono Lake."

The protective 6392-foot lake level goes by many names: the State Water Board mandate, the management level, the ecologically healthy level, and more. Recognizing its roots in the state's obligation to balance LA's water supply with protecting Mono Lake for future generations, we also call it the Public Trust lake level.

Focus on stream diversion rules

The problem facing Mono Lake today is that the water diversion criteria established in 1994 haven't raised the lake to 6392 feet on the 20-year schedule expected by the Board. In

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The rules for stream diversions established by the State Water Board in 1994 haven't allowed Mono Lake to rise to the healthy Public Trust lake level on the expected 20-year schedule.

Getting Mono Lake to rise

Answers to common questions we're hearing about the low lake



rom the shore of Mono Lake to the streets of Los Angeles, the Committee had a busy summer answering questions about the current low lake level, its causes, and what the future holds.

In 1994, nearly 30 years ago now, the California State Water Resources Control Board issued its landmark water rights decision after extensively reviewing the devastating impacts of excessive stream diversions by the Los Angeles Department of Water & Power (DWP), which began in 1941 and continued for decades. As a result, Mono Lake dropped more than 45 vertical feet, lost half its volume, doubled in salinity, and motivated a citizen-driven protection effort led by the Mono Lake Committee.

After extensive scientific analysis and consideration, the State Water Board required that Mono Lake be restored to a level that protects its Public Trust values—6392 feet above sea level—and that its tributary streams and wetlands be restored. The Board mandated that level to protect the lake ecosystem from collapse, safeguard millions of birds, prevent predators from accessing nesting islands, and cover the dusty exposed lakebed that generates some of the worst particulate air pollution in the nation. To achieve the sustainable lake level, the Board reduced DWP's stream diversions and expected that in about 20 years Mono Lake would be higher and healthier, with the capacity to endure droughts.

The Board acknowledged that its plan to raise the lake could be thrown off schedule by actual climate and hydrology in the years following the decision. The Board wisely said that if the lake had not risen as expected, a hearing would be held to see if the stream diversions allocated to DWP might need adjusting to solve the problem.

Today Mono Lake is only 25% of the way to the 6392foot Public Trust lake level; therefore, the State Water Board will hold a hearing to look at changes to DWP's annual stream diversion amounts (see page 3). The Committee has been modeling projections of the lake's possible levels under different stream diversion scenarios. If stream diversions continue unchanged, Mono Lake will not rise to 6392 feet in the next 30 years. The same is true if diversions are reduced by half—Mono Lake will not rise enough.

However, pausing diversions would ensure that Mono Lake rises to its healthy management level.

After years of waiting and watching to see if Mono Lake would reach the Public Trust lake level under the current State Water Board rules, it is time to take a new course. We have heard from many members and friends that you have questions about this new path, so we have set out to answer the most common ones here.

Is Mono Lake's low level due to the drought or DWP's diversions?

Mono Lake is at an artificially low level today because of past decades of unrestrained DWP water diversions.

It is true that Mono Lake naturally goes up and down in response to wet and dry years, and wetter-than-average years are required to meaningfully raise the lake. However, if DWP had never extended the Los Angeles Aqueduct to the Mono Basin, hydrologic models show that Mono Lake would be nearly identical in size and volume to its pre-diversion level, despite recent droughts and climate change.

We have recently seen DWP statements in the press suggesting its water exports have no impact on lake elevation, which seems to be an attempt to ignore history.

The State Water Board already reduced DWP's stream diversions are the remaining exports really affecting lake level?

Yes. In 1994 the State Water Board reduced DWP's stream diversions to a level that, models at the time projected, would provide water to the city while the lake rose to the ecologically healthy level of 6392 feet in elevation—the Public Trust lake level. Since 1994, DWP has diverted 381,000 acre-feet of surface water under those rules, supplemented by 151,000 acre-feet of Mono Basin groundwater captured in the Mono Craters tunnel—a total that is enough to supply the City of Los Angeles for an entire year. Lake level model projections at the time suggested this would all work out in 20 years, but when we look back to the actual pattern of wet and dry years we see that these exports have prevented Mono Lake from rising as expected.

For comparison, if DWP had diverted no stream water since 1994, the city still would have benefitted from its export of Mono Basin groundwater and, at the same time, our model projections show Mono Lake would have risen substantially to around 6388 feet before the recent drought—almost nine feet higher than it is today, creating significant benefits for wildlife, birds, nesting gulls, and air quality.

What will happen to Mono Lake if the drought continues?

Mono Lake will fall lower if the drought, now in its third consecutive year, continues. We expect the current dry year to result in an April 1, 2023 lake level of around 6379 feet—about a foot lower than the same date in 2022.

If the drought continues next year, Mono Lake could fall below the 6377-foot "emergency" level that causes stream diversions to be halted. If the drought continues another year, by the end of 2024 the lake could be a foot or two lower than that. This is a serious problem that would significantly increase the landbridge size, imperiling the gull colony; increase salinity to worrying levels that violate the Clean Water Act; and expose 2,000 more acres of dry dusty lakebed, likely increasing the severity of already hazardous dust storms that violate air quality health standards.

If the lake had entered the drought at the Public Trust lake level, consecutive dry years would pose less of a problem because the lake would be more productive, more resilient, and better buffered from these dire ecological consequences.

Does groundwater captured in the Mono Craters tunnel count toward DWP's export maximums?

No. The State Water Board rules only apply to the diversion and export of water flowing in the tributary streams. The Mono Basin groundwater captured in the tunnel is unregulated. However, groundwater export deprives Mono Lake of inflow, thus lowering lake level, which in turn affects the rules for stream diversions. If stream diversions were paused while the lake rises to the management level, DWP would still benefit from the export of an average of 5,500 acre-feet of Mono Basin groundwater annually.

Since the State Water Board decision has DWP ever taken steps to boost the lake level toward the requirement, like voluntarily reducing diversions?

No, DWP has taken the maximum stream diversions allowed each year since 1994. The Committee has discussed voluntary reductions with DWP a number of times extremely wet years, like 2017, when LA's supply is plentiful are obvious times to divert less—but DWP has chosen to divert the maximum allowed each year.

Will I see Mono Lake rise to the ecologically healthy level of 6392 feet in my lifetime?

We certainly hope so. The future pattern of wet and dry years is, of course, unknown, but the Committee's hydrologic model shows that the lake will rise much faster if it's not held back by DWP diversions (see Summer 2022 *Mono Lake Newsletter*).

Wet years are the key. The abundant snowmelt from the mountains can add multiple feet to the lake's surface elevation relatively quickly—that's what happened in 2017 when the lake rose 4.5 feet in nine months. Preserving the gains made in wet years is essential, and history has shown that the current stream diversion rules allow the progress made to be eroded. The lake will rise—but only if we get new stream diversion rules in place and ensure that DWP follows them. *****

Gull protection fence to go up in 2023

Low lake means California Gulls will need protection from coyotes next spring

s California weathers another drought and Mono Lake's level continues to drop, the landbridge from the mainland to one of the world's largest California Gull nesting colonies is re-emerging, and with it, concern for the gull population put at risk of coyote predation.

Lake level projections for next year indicate Mono Lake, which entered the drought well below the required management level that would buffer it from these problems, will be at a dangerously low level for nesting gulls because the landbridge will be further exposed. A narrower water channel, shallow water, and exposed shoals will allow coyotes easier access to vulnerable gull eggs and chicks. Anticipating this, Mono Lake Committee staff are once again planning to install the temporary electric fence that successfully protected the gulls five years ago.

Familiar fence, new route

In early 2017 the Committee, in partnership with land management agencies, installed a mile-long, solarpowered electric fence. The fence was the

by Ryan Garrett

type normally used for livestock—a light mesh construction designed for temporary setup and quick adjustment. While fence installation across a mile of barren, silty, alkaline lakebed was anything but easy, the fence was highly effective.

In early fall of this year, we began surveying the landbridge for fence installation once again. It proved challenging even to land the boat on the landbridge because the water was only about a foot deep for over 70 yards to the shoreline. After paddling the boat to the exposed muddy shore, we walked across the landbridge to map out the fence's length, which is projected to be more than a mile long. Before leaving the exposed island, we installed a camera at the landbridge's edge to track the changing shoreline.

Back in Lee Vining, we have pulled the fence and solar panels from storage and prepared them for redeployment. Committee staff are discussing logistics, permitting, and funding for the effort with California State Parks and the California Department of Fish & Wildlife. The fence requires detailed



In preparation for putting up the gull protection fence, Committee staff installed a camera on the landbridge to observe changes in the shoreline as Mono Lake continues to drop this fall.

coordination and cooperation with land management agencies prior to the arduous winter installation before the California Gulls arrive to breed and nest in spring 2023.

Stop-gap protection measures

In November 2021, the Committee planned to install the fence for the 2022 nesting season. However, a wet December ensured that Mono Lake would stay around the 6380foot elevation level for the nesting season—the minimum level that keeps the landbridge from being critically exposed. When Mono Lake drops below 6380 feet, landbridge exposure begins to accelerate, creating increasing opportunities for coyotes to reach the gull nesting habitat.

In consultation with California Gull biologists from Point Blue Conservation Science, a decision was made to deploy a monitoring system of six motiondetecting wildlife cameras strategically placed across the length of the exposed landbridge. On three occasions we were alerted to coyotes patrolling the edge of the landbridge, but there was no photographic evidence of coyotes attempting to access the nesting islets. This was confirmed when Point Blue conducted their annual California Gull study and found no coyote activity at the nesting sites.

However, with the landbridge expected to expand in the months ahead, action is needed. Until Mono Lake can rise significantly closer to the Public Trust lake level mandated by the State Water Board, the Committee will stay ready to implement these kinds of stop-gap measures in order to protect the gulls. To permanently protect the gulls and solve countless other problems in the Mono Basin there is only one solution—raise Mono Lake. �

First MAT-coordinated research benefits stream restoration

by Bartshé Miller

ne year ago, the California State Water Resources Control Board issued Order 21-86, mandating enhanced requirements for the restoration of 20 miles of stream habitat in the Mono Basin (see Fall 2021 Mono Lake Newsletter). The order launched a new era of restoration, including specific programs directed toward advancing restoration, one of which is the formation of the Mono Basin Monitoring Administration Team (MAT).

Developing a functioning MAT has required a year of collaborative work led by the Mono Lake Committee and California Trout together with the California Department of Fish & Wildlife and the Los Angeles Department of Water & Power (DWP) to set up protocols and secure a fiscal administrator to manage the restoration funds deposited by DWP. As of this fall, MAT-coordinated independent research is now underway.

A legacy of research in greater focus

The Mono Basin fisheries monitoring program was the first project to be funded and began in September. The project focuses on assessing the condition of brown and rainbow trout in Rush, Lee Vining, and Parker creeks through hands-on evaluation of the fish along with other data collection. Fisheries monitoring for the State Water Board has a long history in the Mono Basin and this work is now collaboratively managed under the MAT.

Ross Taylor returned to lead the fisheries monitoring-this is his 26th year conducting the monitoring, but his first under



Fisheries scientist Ross Taylor and his research team conducted electrofishing sampling in the Mono Gate One Return Ditch.



Collecting water temperature data on Mono Basin creeks is an important component of fisheries monitoring.

the streamlined process facilitated by the MAT. In past years, Taylor was required to contract with DWP directly and utilize DWP field technicians for monitoring work. Now, under the MAT, Taylor is operating as a fully independent researcher, using his own staff and resources. His results and analysis will be shared directly with the MAT members and State Water Board, which will efficiently inform management and operation decisions that affect Mono Basin streams.

Fishing for data

Taylor and his associate field researchers conducted electrofishing sampling in four different sites: the mile-long Mono Gate One Return Ditch, Rush Creek upstream of Highway 395, the Rush Creek bottomlands, and Lee Vining Creek below the Lee Vining diversion dam.

The electrofishing spanned ten days of sampling, during which researchers gathered data on fish numbers, age class, and condition. Electrofishing temporarily stuns fish and allows researchers to safely handle the trout, take measurements, and assess their health. The work is not easy, and it involves operating carefully with safety gear in water that can be charged with upwards of 700 volts and two amps. Researchers also installed temporary fencing at each section of creek, above and below each electrofishing reach, to stop fish from entering or leaving the sampling sections. Maintaining the sampling sections is a significant chore in the work, requiring that researchers keep the fencing and screens free from leaves, sticks, and other stream debris. These sampling sections are established, long-term monitoring reaches and provide yearto-year comparisons of the fish population.

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Research from Mono Lake to Jupiter

Scientists across disciplines flock to the Mono Basin

by Claire Landowski

ono Lake is a place where fascinating geology gives rise to vital ecosystems, and the support offered to researchers through our Mono Basin Field Station means that the Mono Lake Committee has the privilege of a front-row seat to the most exciting research in the Eastern Sierra. The Field Station has been humming at full capacity, housing researchers from across the country, and the Committee's research boat has been in use nearly every week since the beginning of June ferrying gear, personnel, and instrumentation.

Heat flow and temperature change

In fall 2021, the US Geological Survey, Southern Methodist University (SMU), University of California at Berkeley, and the Mono Lake Tufa State Natural Reserve embarked on a research project funded by the National Science Foundation to assess heat flow and temperature change in Mono Lake. Matt Hornbach, researcher at SMU, deployed a series of probes into the lake and lake bottom that measure changes in temperature, pressure, and slope stability at the lake floor. The instruments also closely monitor lake water temperatures with depth.

Preliminary results show that the thermal gradient below the lake is anomalously hot—likely the direct result of very recent volcanism within and below the lake floor. There is also significant, anomalous warming of the deep water in the lake that began in late summer 2021 and continued through fall 2022. Their team also deployed a series of atmospheric sensors on Mono Lake's northeast shore to better assess lakeatmosphere dynamics. The study will continue to monitor lake and atmospheric conditions through 2022. Last spring, Matt and fellow SMU faculty brought an undergraduate geology class to Mono Lake during their spring break to learn about the geologic setting and volcanic history of the Mono Basin. We were pleased to host the class at the Mono Basin Field Station—the largest group to date!

Paoha Island volcanic history

A group from the US Geological Survey's California Volcano Observatory visited twice this year as part of a new initiative to better understand the volcanic eruptions in the Mono Basin, improve the age estimates of those eruptions, and assess the probability and possible hazard of a future eruption. Researchers mapped lava flows on Paoha Island, collected rock samples from as many islets as possible, and installed a GPS instrument on Paoha to measure any uplift or subsidence of the island. First impressions from the surveys are that there may be more, and younger, lava flows on Paoha than previously mapped, and that the north end of Paoha is subsiding a bit, though the reason is unclear.

Water sampling for future space missions

In June four researchers from NASA's Jet Propulsion Laboratory (JPL) came to Mono Lake to test an instrument

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Researchers from NASA's Jet Propulsion Laboratory tested an instrument that is in development for future space missions to two distant planetary moons. They collected Mono Lake water and analyzed it at their mobile laboratory at the Mono Basin Scenic Area Visitor Center.

Education programs back in full swing

his summer marked an exciting return to the Mono Lake Committee's full lineup of education programs after we scaled back in-person programs during the pandemic. The Mono Basin Outdoor Education Center (OEC) program has been bustling, hosting groups from Los Angeles nearly every week. Our education staff has also been thrilled to lead a number of different programs for local students at Mono Lake this summer.

Stories from the OEC

The OEC program lends itself to creating lifelong memories, friendships, and connecting folks from Los Angeles to the top of their watershed here in the Mono Basin.

While many of the schools and organizations that visit the OEC have been coming to Mono Lake for many years, most of the individual participants each year are visiting for the first time. OEC Program Manager Santiago Escruceria describes these first-time participants as "deer in the headlights" when they arrive. After the first couple of days, their nervous energy begins to fade as participants spend time immersed in the beauty and peacefulness of the Mono Basin.

During their time here, OEC participants complete a short, solo walk under the stars, spend time at the shore of Mono Lake learning about its unique ecology, hike in the mountains above Mono Lake to learn about the source of their water, and spend time reflecting on their experience as a group and also in their individual journals. By the end of their trip, many participants begin to feel that Mono Lake is a home away from home. Recently, a young OEC participant watched dusk turn to dark on the last day of the program, and as the stars began to light up the sky, turned to Santiago and asked if they could stay just a few more days.

Every group that visits the OEC is unique, and we work to customize the

by Rose Nelson



Members of Pacoima Beautiful learn about Mono Lake's salinity at South Tufa.

curriculum each week for the visiting group. This summer when a sciencefocused group from East Los Angeles Performing Arts Magnet School visited, we led them on a hike near the headwaters of one of Mono Lake's tributary streams where they were able to dive deeper into the lessons they were studying back home.

The OEC will continue to host students through November, including groups from Homeboy Industries, Communities for a Better Environment, Pacoima Beautiful, and others.

Programs for local students

In addition to hosting groups from Los Angeles, this summer the Committee worked with many local groups as well. We partnered with the Owens Valley Indian Water Commission during their summer camp for local youth, bringing the kids to Rush Creek to water trees that were planted to help with stream restoration.

This summer we once again cohosted an art and nature camp with the Mono Arts Council, during which students from Lee Vining, June Lake, and Mammoth Lakes explored different ecosystems around Mono Lake, learning about new art techniques and local natural history.

We were also pleased to host a new

group from Inyo County. Many of the participants are affiliated with the Bishop Paiute Tribe and were deeply familiar with how the Los Angeles Aqueduct affects the Owens Valley and learned more about how it affects Mono Lake.

This fall we are welcoming more Eastern Sierra students on field trips before the snow begins to fall. \diamondsuit



Local students in the art and nature camp worked on their nature journaling skills at the State Natural Reserve boardwalk.

Policy notes

by Robert Di Paolo, Elin Ljung, & Bartshé Miller

Progress at the DeChambeau Ponds

In the year and a half since a reliable flow of hot water returned to the DeChambeau Ponds (see *monolake.org/ pondrehab*), we've seen improved pond stability and more consistently high pond levels. This means the habitat provided by the ponds is more reliable for nesting and migratory waterfowl and other birds.

The ponds still require frequent attention to make sure that the water available to them is used efficiently, and regular monitoring of the system has proven instrumental for maintaining habitat. The Mono Lake Committee works closely with the Inyo National Forest, DeChambeau Creek Foundation, Beaver's Sporting Goods, and other community volunteers to help monitor and document conditions at the ponds. Mono Lake Intern Emma Rosen helped with monitoring this season, taking weekly pond level readings and conducting bird surveys to help characterize habitat usage.



Community and agency collaboration has resulted in more reliable habitat for nesting and migratory waterfowl and other birds at the DeChambeau Ponds.

In the spring, the Inyo also hosted its second annual DeChambeau Ponds community workday. Volunteers helped clear overgrown vegetation and ditches early in the season, allowing for more efficient water conveyance throughout the pond system for the summer. Additional pond infrastructure and maintenance needs remain, but a strong coalition of partners and increased community stewardship has paved the way for achieving the goal of more reliable and productive habitat for waterfowl and other birds.

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CalRecycle project missteps waiting on revegetation plan



The Mono Lake Committee continues to pursue a settlement agreement to fix work that took place at the Lee Vining Burn Dump project site next to the Mono Basin Scenic Area Visitor Center. CalRecycle, the state agency tasked with the project, did not complete environmental review and permitting ahead of starting work. Because of the lack of review and oversight, contractors removed an important landscaping berm, failed to fully control erosion, and did not construct the drainage channels to specifications. Fixing the problems must include replacing the berm and implementing a successful soil stabilization and revegetation plan.

Collaborative solutions could benefit Mono Lake and LA—again

by Martha Davis

The Mono Lake Committee has long supported Los Angeles' vision for obtaining the city's water supplies from local sources, including increased stormwater capture, restoration of LA's substantial groundwater basins, water efficiency, and increased recycling of its highly treated wastewater.

In fact, 30 years ago we raised more than \$120 million in state and federal funds for Los Angeles to invest in the development of water efficiency measures to permanently replace a portion of the stream diversions from the Mono Basin. Those funds were strongly supported by LA community groups, such as our friends at Mothers of East Los Angeles, because they helped make water bills more affordable for low-income residents and simultaneously helped protect Mono Lake.

Now the problem of having sufficient water is once again a shared challenge. With Mono Lake currently too low, air quality, nesting gull safety, and ecosystem health are critical problems. In LA, where record numbers of residents need debt relief and affordable rates on their water and energy bills, drought has necessitated water conservation.

That's why last spring, the Committee, once again, offered our assistance to the City of Los Angeles. Our proposal was to jointly obtain \$60 million in state funding to invest in local water supplies, with a focus on direct installation of water efficiency devices in low-income communities to reduce water bills for these customers while saving water for Mono Lake. Mono Basin benefits would come through a commitment by the Los Angeles Department of Water & Power (DWP) to voluntarily pause stream diversions until Mono Lake reaches the state-mandated 6392-foot elevation, at which time authorized stream diversions could resume, supplementing water supplies developed using the state funds.

We presented our proposal to a wide array of state and city leaders and received strong encouragement to bring the proposal forward in partnership with the city as part of the state's summer budget negotiations. However, DWP did not agree to join us and so the state did not take action. We are keeping this collaborative proposal on the table because we believe it is the best way to meet the needs of both the people in LA and Mono Lake.

As fall approaches, Mono Lake's ecosystem faces dire conditions. It is disappointing to see that problems we solved decades ago, like coyote predation of the California Gull colony, return as urgent action items. It will be up to the State Water Board to review stream diversion levels at their future hearing (see page 3). In the meantime, the Mono Lake Committee will continue to pursue collaborative action with LA to support efficient and affordable water services for its residents while implementing the city's commitment to protect Mono Lake. �

Martha Davis is the Committee's former Executive Director and a current Board member.

Policy notes from page 1

Court affirms environmental review requirement for Long Valley

In late June, in a somewhat mixed court ruling, the First District Court of Appeals reversed the Superior Court of California's order requiring the Los Angeles Department of Water & Power (DWP) to comply with the California Environmental Quality Act (CEQA) before making annual decisions about its provision of water to lessees in Long Valley near Mammoth Lakes.

The appellate court's decision confirmed for DWP that it can change

allocations of water year-to-year under current leases. However, it also affirmed that DWP cannot stop providing water, sharply reduce water deliveries to lessees, nor issue dry leases for grazing lands without first conducting an environmental review.

While the CEQA requirement has been upheld, the Long Valley situation remains murky—it is not clear how much DWP might modify the amount of water it provides to lessees annually.

The original lawsuit was filed by Mono County and the Sierra Club in 2018 in response to DWP's abrupt announcement that it would no longer continue its long-term management practice of providing water to lessees who have, for generations, spread the water over 6,000 acres of ranchland. The water also benefits Bi-State Sage Grouse, which are being studied and actively conserved in the area.

The coalition of groups working on behalf of Long Valley is asking DWP to provide a binding, annual water supply commitment, adjusted for year type, in order to maintain this historical and beloved landscape in the Eastern Sierra. For more information go to *keeplongvalleygreen.org.* �

August thunderstorms improve streamflow conditions

by Greg Reis

ugust thunderstorms brought near-record rainfall to the Mono Basin, increased streamflows, and triggered small debris flows around the June Lake Loop. Parker Creek reached its highest flow of the year, which combined with the augmentation of Rush Creek with cooler water from Lee Vining Creek to cause an 88 cubic feet per second (cfs) rain-fed peak flow on August 6 in the Rush Creek bottomlands. This almost reached June's impaired snowmelt peak of 112 cfs but was likely less than half the unimpaired snowmelt peak.

Grant Lake Reservoir started out the 2022 runoff year (April 1, 2022-

n September, Mono Lake dropped

March 31, 2023) just above its required minimum level of 11,500 acre-feet, but by July 1 it was still below the July-September required minimum of 20,000 acre-feet. Near-record August rain generated enough runoff into Grant that it finally rose above the 20,000 acrefoot summer minimum on August 28.

On July 1, Grant was also below the 25,000 acre-foot threshold that, in a Dry year type, requires augmentation of Rush Creek with colder water from Lee Vining Creek. Instead of Lee Vining Creek diversions entering Grant via a conduit, they are released from the conduit into Rush Creek. This cooling operation is required when the low

reservoir causes releases to be too warm for maintaining a healthy trout population in Rush Creek (see page 7).

The Los Angeles Department of Water & Power (DWP) plans to begin exporting this year's allowable 4,500 acre-feet of surface water from the Mono Basin in October. The reduction from last year's permitted 16,000 acrefeet of export means Grant will be able to meet minimum storage requirements next summer. It is likely that additional water will be released to Mono Lake in spring 2023 to keep the reservoir below the maximum 23,700 acre-feet of storage during construction of the new Grant Lake Outlet. �

Lakewatch

Mono Lake drops below 6379 feet

by Greg Reis

below 6379 feet above sea level, and will likely remain below that 6417′ level through at least the end of the calendar year. The lake was this low from 2015–2017 at the end of the last drought, but before that it hadn't been this low since early 1996. Assuming 61% of average April-July snowmelt runoff and a wet winter to come, DWP forecasts the lake to be at 6379.3' on April 1, 2023. The Committee's initial forecast, assuming dry 6372' conditions, was about a half a foot lower ediversion lake level, 1941 than the DWP forecast. level April-July runoff lanagement lake Historic low, 1982 was only about 49% of average, but even when combined with the wet August, our projection (assuming a

relatively dry winter) is for Mono Lake to be around 6378.9' next April 1.

That is not good news for the California Gull colony on Mono Lake's islets (see page 6). Whether this winter is wet or dry, Mono Lake will still be too low in the spring to safeguard the colony from coyote predation during nesting season. And if it is a dry winter, Mono

Lake will continue to drop, posing greater risks for nesting gulls in 2023.

Greg Reis is the Committee's Information & Restoration Specialist. He has spent a lot of time lately learning where groundwater seeping into the Mono Craters Tunnel went during tunnel construction in the late 1930s.





Thanks to the Committee's frequent lake level measurements, we know that Mono Lake rose briefly in early August due to rain.

Mono Basin Journal

A roundup of quiet happenings at Mono Lake by Geoffrey McQuilkin



The Mono Basin felt close at hand as I walked through a neighborhood in Los Angeles recently—the signs of drought are apparent in both places. A bright spot though: Here in LA the remarkable water conservation efforts of residents really showed. Sure, there were a few luxurious lawns, and I could imagine sorting through the drops of water spraying from sprinklers, trying to identify which ones originated in Rush Creek. But where there was grass in front of homes, it was mostly dry and dormant, a sign of the water saving efforts of citizens that, house by house, added up to a record set in July of an 11% reduction in use.

What really stood out, though, is that Angelenos are clearly moving beyond lawns. Many yards featured beautiful and varied palettes of drought-tolerant plants, succulents bright green and native flowers glowing orange and yellow in the sun. At one curbside strip, freshly planted native trees promised future cooling shade in place of a water hogging "non-functional lawn," to use a recently minted term. All in all, it was a welcome demonstration of how water conservation can reduce water taken from places like Mono Lake while simultaneously enhancing the landscape and improving life in the city. �

Geoff McQuilkin is the Committee's Executive Director. Based at Mono Lake, he enjoys returning to the Los Angeles area where he grew up, and recently traveled to Massachusetts with his family to move his daughter Ellery into the dorms for her first year at college.

Benchmarks





Twain Islet, September 2019. This California Gull nesting location was nearly covered in the invasive weed Bassia hyssopifolia. The brush made the formerly open-ground nesting habitat inhospitable to the gulls and decreased gull productivity.



Twain Islet, September 2022. The Mono Lake Committee collaborated with the Inyo National Forest on a series of prescribed burns in early 2020 to restore nesting habitat. The gulls returned to nest successfully and the islet is still largely clear of Bassia today.

fact, 28 years later, the lake is only 25% of the way there. The stream diversions allowed by these criteria, and taken by DWP, have significantly slowed the lake's progress in rising toward the Public Trust lake level. The hearing could change these rules.

The diversion criteria are familiar to Mono Lake enthusiasts: no stream diversions when the lake is below 6377 feet; 4,500 acre-feet of diversions in years like this one when Mono Lake is between 6377 and 6380 feet; and up to 16,000 acre-feet allowed when the lake is above 6380 feet. But what we now understand in this era of drier conditions is that the fixed water diversion amounts that have given DWP more than 381,000 acre-feet of Mono Basin surface water since 1994 have held back the lake's recovery. If DWP had not diverted that water, Mono Lake would be almost seven feet higher than it is today, and in much better shape for wildlife, birds, nesting California Gulls, and clean air.

And so the topic of the future hearing will be, put simply: What new water diversion criteria will get the job done? In fact, this is the reason the State Water Board planned to have a hearing in the first place, writing in 1994 that the Board was "keenly aware of the limitations of computer modeling hydrologic systems and the probability that future hydrologic conditions may differ significantly from historical conditions."

The Board's plan was designed to adapt to changing conditions—if the lake didn't rise on schedule, that would be a sign that hydrologic conditions had varied from expectations, and a hearing would take place. And at the hearing, "the [Board] could adjust the water diversion criteria in an appropriate manner under the exercise of its continuing authority over water rights."

One thing we do not expect the hearing to include is consideration of lowering the Public Trust lake level. The extensive Public Trust analysis and supporting science was



Mono Lake's low level causes many problems, including coyotes venturing closer to California Gull nesting grounds.

completed in the 1994 decision and the biology of brine shrimp and needs of nesting gulls, to name just a couple of considerations, remain the same—there would be no basis for reopening that determination.

No date on the calendar, yet

The hearing is required because on September 28, 2020, the date specified by the State Water Board, the lake surface elevation was below the Public Trust lake level (more than ten feet below, and has fallen farther since then). But the question of when, exactly, the hearing will take place is currently unanswered.

Hearings take time to schedule and staff and financial capacity to run. Most likely a dozen or more parties—the Committee, state agencies, the regional air quality regulator, Mono Lake Kutzadika'a Tribe, DWP, and more—will show up with attorneys in tow, meaning it is a very large undertaking. On the other hand, it will not be nearly as extensive as the original proceedings because the topic is limited to the stream diversion rules.

As the lake lingers at low levels it is no surprise that low lake problems are generating concern. This summer the Great Basin Unified Air Pollution Control District wrote to the State Water Board, requesting the hearing be scheduled soon in light of the serious air quality violations caused by dust storms from the exposed lakebed. "Measurements of PM_{10} [particulates] at the District's Mono Shore monitoring station, located on the northeast shore of Mono Lake, are some of the highest PM_{10} concentrations in the United States," the District wrote, noting that raising the lake to the Public Trust lake level is "the only feasible solution to controlling the windblown dust at Mono Lake."

The Mono County Board of Supervisors sent a letter in the early fall requesting the hearing be scheduled, and the Kutzadika'a Tribe is drafting a letter of concern as well.

The Committee's own letter on the hearing reviews the record surrounding the hearing requirement and documents the intended hearing focus on modifying stream diversion rules to ensure Mono Lake rises to the Public Trust lake level. The Committee has been preparing for the hearing for years, notably by modernizing our hydrologic model of the lake in anticipation of the need to quickly and accurately evaluate the effectiveness of new stream diversion concepts (see Summer 2022 *Mono Lake Newsletter*).

Fortunately this year, under the existing rules, the low lake caused stream diversions to be automatically reduced, providing some respite for Mono Lake. The Mono Lake Committee will continue to engage with the State Water Board on the hearing in the months ahead, and at the same time we are working on collaborative water solutions for Los Angeles (see page 11).

We will be keeping members and friends updated about the progress toward the hearing; check out *monolake.org/blog* for the most current news.

Monitoring for success

Stream temperature data is another component of Taylor's fisheries monitoring; he asked Committee staff to help collect temperature data on Mono Basin creeks, in Grant Lake Reservoir, and along neighboring aqueduct infrastructure. In a drought year like this one, water temperature is a critical factor in the condition and distribution of trout. Following Taylor's protocols, Committee staff deployed and recovered data loggers from June through September to help inform the success of adaptive management actions to maintain fish habitat conditions in Rush Creek while Grant Lake Reservoir is low. These low water levels result in warmer, more turbid water, a detrimental combination for trout populations when the water is then released downstream into Rush Creek.

State Water Board Order 21-86 anticipated challenges like this, and through specific requirements that include the development of an Annual Operations Plan and Mono Basin Operations Plan, lays out a thoughtful, integrated process for minimizing impacts to fish using science and monitoring to inform adaptive management decisions. Science directed by the State Water Board, funded by DWP, and coordinated by the MAT will be used to efficiently restore and recover Mono Basin stream habitat and fisheries toward pre-diversion conditions.

Science-fueled restoration

The new State Water Board-ordered structure for overseeing research and monitoring activities is working. The MAT has adopted protocols for collaborative decision-making among all its members—the Mono Lake Committee, California Trout, California Department of Fish & Wildlife, and DWP—and is now making on-the-ground and on-the-water projects possible. Under MAT administration these research projects are more efficiently integrated into the restoration decision-making process and are enabling the recovery of more than 20 miles of stream habitat in the Mono Basin ecosystem. �

Trail Chic gets its groove back

by Arya Harp

A fter a three-year hiatus, the fun and creative fashion show fundraiser, Trail Chic, sprang back into life this summer thanks to the generosity of Randy Arnold of Barefoot Wine & Bubbly combined with the creativity and sense of humor of the local community.

This unique event depends on Mono Lake Committee staff and local residents coming up with clever outfits for the AstroTurf runway. Strutting, skateboarding, stomping, and galloping down the runway this year were: fashionable lumberjacks and firefighters, humans birding and birds

humaning, the sun, the moon, and stars, a prickly poppy and a tiger lily, a monarch butterfly and a ladybug, a "Glamper Camper's Little Helper," a surfer, a climber, a canoe paddler, a moth and a flame, two Jack Russell terriers with their glamorous human, Mono Lake Volunteers keeping tufa towers safe for birds, and even a small herd of marauding wild horses.

Trail Chic is a fundraiser for the Mono Lake Committee's Outdoor Education Center (OEC). Funds help groups of students from Los Angeles get to the Mono Basin for week-long trips to learn about the source of their water, enjoy outdoor activities, and participate in stewardship projects. This year's event raised enough money for ten OEC group transportation grants to help offset travel expenses and make it possible for more students to participate in the program.

At the event we raised a glass to celebrate Randy Arnold's retirement. Randy, also known as "The Barefoot Guy," put his career in sales and marketing for Barefoot on hold to be a Mono Lake Committee Birding Intern in 2003, and is a lifelong supporter of all things Mono Lake. Thank you, Randy!



We were blown away by the creative fashions at Trail Chic this year!

Research from page 8

that is in development for future space missions. The Ocean Worlds Life Surveyor project, or OWLS, is preparing to look for microbial life on Enceladus, one of Saturn's moons, or Europa, a moon of Jupiter. Both Enceladus and Europa are covered by ice, but it's hoped that liquid water—probably salty—is beneath the ice and that it may host life. The JPL team collected Mono Lake water and then brought it to their mobile laboratory trailer at the Mono Basin Scenic Area Visitor Center, where the samples were filtered and run through a mass spectrometer to detect molecules like amino acids and peptides. The future mission to Enceladus or Europa would likely launch between 2030 and 2050.

Monitoring bird populations

In addition to the interest in Mono Basin geology, researchers worked on several new and continuing projects about birds at Mono Lake and in the Mono-Yosemite high country. The Tuolumne Meadows White-crowned Sparrow project continued for its 54th year, and this year a new graduate student extended the observation period into the early fall. California State Parks counted and banded 18 young Osprey fledged on Mono Lake nests, a lower number than usual. State Parks staff also banded 25 Black-crowned Night Heron chicks that hatched on Twain Islet—the first year of that effort. This summer, Point Blue Conservation Science completed the 40th year of the Mono Lake California Gull study, and as of press time, Eared Grebe survey flights are underway.

Another important long-term project, monitoring the Greater Sage Grouse populations in the Eastern Sierra, returned for a seventh consecutive year of observing the Parker Meadows and Bodie Hills nesting and brooding seasons. The team reported 29 nests in the Bodie Hills study area and one in Parker Meadows, and a hatching success rate of nearly 70% in 2022. Other crews working in Long Valley



The first lake-wide shorebird survey since 2008 took place in August, with participants, including Mono Lake Intern Emma Rosen, counting more than 26,000 birds of 20 different species.



A USGS researcher examining a basalt flow on Paoha Island.

and the White Mountains reported similar hatching success rates this year but noted that the Sage Grouse seemed to be nesting a few weeks earlier than in previous seasons.

Phalarope and shorebird surveys

Surveys of Wilson's and Red-necked phalaropes continued for the fourth consecutive year, regularly counting birds that visit Mono in July, August, and September before making their migration to Argentina. The team from Oikonos Ecosystem Knowledge observed the peak number of Wilson's Phalaropes in mid-July—12,000 individuals—and Red-necked Phalaropes peaked a bit later, in mid-August, with around 11,000 individuals. Next year the team hopes to be able to track phalaropes throughout their migration by attaching tiny radio transmitters to the birds' backs. Wildlife tracking systems to be installed at Mono and in Argentina will hopefully pick up their signals at either end of their hemispheric journey.

In conjunction with the phalarope survey in August, the Mono Lake Committee and Oikonos partnered with the Eastern Sierra Audubon Society and Point Blue Conservation Science to conduct a lake-wide survey of shorebirds at Mono Lake. A full survey hadn't been completed since 2008, and as the climate changes and lake levels fluctuate, understanding how shorebirds use and depend on this unique saline lake is more important than ever. On August 15, 23 participants divvied up all 37 miles of Mono Lake shoreline into walkable sections and set out with binoculars and spotting scopes to identify and count every shorebird. All together, the group counted more than 26,000 birds of 20 different species, from the tiny Least Sandpiper to the massive Long-billed Curlew.

We hope that this exciting year of research is the leading edge of a much deeper understanding of Mono Lake and environments like it. It is safe to say that the Mono Basin Field Station is fulfilling the goal of enhancing the scientific knowledge of the Mono Basin, and far beyond. \clubsuit

2022 Free Drawing to protect Mono Lake

Tickets due by December 9

hen you enter the Mono Lake Committee's Free Drawing you get a chance to win one (or more!) of these exciting prizes, and you give Mono Lake a chance for a bright future. Thank you to all the generous businesses and organizations who donated prizes for this year's Free Drawing, which is one of our largest annual fundraisers. Mail in your tickets today (find them in the center of this *Newsletter*) for a chance to win and see all the prize details at *monolake.org/freedrawing*. Thank you, and good luck!

You could win one of these fabulous prizes:

• one-night stay at the Double Eagle Resort & Spa in June Lake, full-day boat rental and breakfast at Silver Lake Resort, a movie at Minaret Cinemas, and a gift card to Stellar Brew

• one-night stay at Evergreen Lodge outside Yosemite and a Yosemite Conservancy guided outdoor adventure

• one-night stay at Murphey's Motel in Lee Vining, plus a Mono Basin Field Seminar for two

• two-night stay at the historic Wawowa Hotel plus a National Parks Annual Pass

- June Mountain ski pass
- Tamarack Cross Country Ski Center season pass
- Mammoth Bike Park season pass
- Mono Lake Committee canoe tour for four
- REI camp chair and Rumpl recycled puffy blanket
- Patagonia Nano Puff jackets and gear
- Mono Lake Committee gift packs: reusable glass cup,
- T-shirt, hat, and 2023 Mono Lake Calendar

- one-night stay at El Mono Motel in Lee Vining with a half-day Mono Lake custom trip, plus breakfast at Latte Da Coffee Café and a Mono Lake hat and water bottle
- one-night stay at Lake View Lodge in Lee Vining, plus a Mono Lake canoe tour for two, and lunch at Hermitage Juice Bar in June Lake
- one night stay at the Inn at Benton Hot Springs
- sailing trip on San Francisco Bay with Captain Kirk's Sailing Adventures
- Island Packers cruise to Channel Islands National Park
- registration for two for the Mono Basin Bird Chautauqua
- gift certificates to Eastside Sports and Great Basin
- Bakery in Bishop, plus dinner at Convict Lake Resort and a movie at Minaret Cinemas
- Bodie Foundation custom tour for four
- Pentax Papilio II 8.5 x 21 binoculars
- Photography books by Robb Hirsch, Dennis Flaherty, and Jeff Sullivan





MONO LAKE COMMITTEE INFORMATION CENTER & BOOKSTORE Fall Catalog

See more product photos online at MONOLAKE. ORG/SHOP

VINTAGE-DESIGN MONO LAKE T-SHIRT

This throwback design modeled by Spencer and KJ features geometric gulls, water, and tufa printed on an organic cotton, dove-grey shirt. These soft, 100% organic cotton, unisex shirts are comfortable and eco-friendly, making them a great fit for all. *Mono Lake Committee exclusive*.

Vintage-design Mono Lake T-shirt, unisex sizes S–XXL: \$30.00



SALTY & BASIC MONO LAKE T-SHIRT

Share some Mono Lake facts and show off this sassy slogan like Amelia and Holly in this soft, 100% cotton shirt. Each light pink, unisex shirt is printed with "Salty & Basic, Mono Lake, Calif." along with Mono Lake's current salinity and alkalinity measurements and a silhouette of Mono Lake. Perfect for the cheeky Mono Lake lover in your life. *Mono Lake Committee exclusive. Salty & basic Mono Lake T-shirt, unisex sizes S–XXL: \$30.00*



MONO LAKE FAIR ISLE KNIT BEANIE

This USA-made custom beanie, worn by Ellen, is too fun not to wear this winter! It features a *Mono Lake Committee exclusive* design of tufa towers, gulls, and rippling water on a deep navy-blue background. This 95% acrylic and 5% lycra beanie is as warm and comfortable as it is unique. *Mono Lake Fair Isle knit beanie, one size fits most: \$20.00*

Fall Catalog



BRINE SHRIMP ORNAMENT

\$

Liven up your holiday decorations with a brine shrimp ornament. These shiny ornaments measure 3 inches long and serve as a festive tribute to the endemic *Artemia monica* of Mono Lake. This *Mono Lake Committee exclusive* is available in either silver or gold.

Brine shrimp ornament, please specify color: \$10.00

KINGFISHER IN THE SNOW HOLIDAY CARDS Send holiday wishes with this boxed set of 12 cards. Each card features the captivating relief print *Kingfisher in the Snow* by artist Molly Hashimoto with "Season's Greetings" written inside. *Kingfisher in the Snow holiday cards, set of 12 cards with envelopes,* 5"x 7": \$15.95



SIERRA WINTER NOTE CARD BOX

This beautiful assortment of 12 cards features the works of California artist Tom Killion. His signature woodcut style illuminates four beautiful snowy Sierra scenes. This set features three cards of each of the following prints, which are all blank inside: *Yosemite Moonrise, Half Dome, Snow Camping,* and *Glacial Erratic.* Sierra winter note card box, set of 12 assorted cards with envelopes, 5"x 7": \$22.00



YOSEMITE MOONRISE



HALF DOME



SNOW CAMPING



GLACIAL ERRATIC

LETTERPRESS HOLIDAY BIRD CARDS

Spread some cheer with these whimsical letterpress cards, hand printed in the USA. Each playful card is sold individually with a corresponding colored envelope. Choose from the following blank-inside cards or grab a few of each: slopeside nuthatch, bundled up goldfinch, candy cane chickadee, and winter beanie downy.

Letterpress holiday bird cards, individually sold, envelope included, please specify bird, 4¼"x 5½": \$6.00



SLOPESIDE NUTHATCH





CANDY CANE CHICKADEE



WINTER BEANIE DOWNY

Fall Catalog

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MONO LAKE NALGENE WATER BOTTLE

Stay hydrated during all your outdoor activities with this durable and lightweight water bottle. This wide-mouth bottle is made in the USA and features a Mono Lake design of tufa towers and a flock of birds. It has a leak-proof lid, is BPA/BPS free, dishwasher safe, and is available in two colors: clear (clear bottle with blue and green lid) and aubergine (translucent purple bottle with pink and berry lid). *Mono Lake Committee exclusive.*

Mono Lake Nalgene water bottle, 32 ounces, please specify color: \$17.00

MONO LAKE PATTERNED INSULATED BOTTLE Keep your favorite drinks the perfect temperature at home or on the go with a vacuum-insulated bottle from

Klean Kanteen. Printed with a Mono Lake pattern of birds, brine shrimp, mammals, and flowers, the pattern includes reds, pinks, and blues on a mustard yellow background with a matte finish. This BPA-free bottle is constructed of food-grade stainless steel with a leak-proof to-go lid and collapsible carry handle for easy drinking and transportation. The wide-mouth design makes adding ice cubes easy and simplifies cleaning (it's also dishwasher safe). This versatile bottle will keep beverages hot for up to 14 hours and cold for up to 47

hours. *Mono Lake Committee exclusive.* Mono Lake patterned insulated bottle, 16 ounces: \$35.00





Plush Pika

Snuggle up with a favorite Mono Basin mammal made with recycled PET fill. It doesn't matter how old you are—these plush pikas are cute, soft, and make excellent cuddle buddies. *Plush pika, 7" tall: \$14.00*

Make-your-own nature kaleidoscope

Kids ages three and up will delight in exploring and creating in nature by making a custom kaleidoscope with found treasures from the outdoors. Simply collect small feathers, leaves, seeds, or stones and place them in the removable cap,

then hold the kaleidoscope to the light to see a one-of-a-kind patterned masterpiece.

Make-your-own nature kaleidoscope, 8"x 11/2": \$8.95

Owl 3D wooden puzzle

This laser-cut wooden puzzle is a snap to assemble for children ages 14+. No tools or glue are required to piece the 42 interlocking pieces together to create a 3D Great Horned Owl. Perfect for budding birders and puzzle fans.

Owl 3D wooden puzzle, 3½"x 5" when assembled: \$11.25

See all catalog products and more in color online at MONOLAKE.ORG/SHOP.

🎭 Fall Catalog 🤘

MAGNIFICENT MAJESTIC MONO LAKE

BY ANDREW SMITH & HARRIET SMITH ILLUSTRATED BY RONI ALEXANDER

Featuring a plethora of full-page illustrations and packed full of information, this book is a great introduction to all things Mono Lake. From tufa and ecology to water chemistry and policy, this brand-new book is a wonderful resource for children and adults alike who want to know more about this



unique and beautiful place. Magnificent Majestic Mono Lake, paperback, 84 pages, Publish Authority, 8½″x 8½″: \$19.95

BE A TREE!

by Maria Gianferrari illustrated by Felicita Sala

Have you ever considered the similarities between humans and trees? This delightful and playfully illustrated children's book does just that. We have a lot in common with trees—we have limbs, grow tall, and we form communities, support each other, and are stronger because of our connections.

Be a Tree, hardcover, 40 pages, Harry N. Abrams, 9"x 11½": \$19.99

> Berry Song by Michaela Goade

Caldecott medalist Michaela Goade's new book is a rich and colorful celebration of ancestral Indigenous knowledge and tradition, relationships with nature, and gratitude for our connection to the Earth. Immersive full-page color illustrations and spare lyrical text will take you on a journey through a wild landscape with a young girl and her grandmother as they collect berries and other gifts of the land.

> Berry Song, hardcover, 40 pages, Little Brown Books for Young Readers, 9½"x 12": \$18.99

BIRD BOY

BY MATTHEW BURGESS

illustrated by Shahrzad Maydani

We all feel nervous and out of place sometimes, especially in new situations like starting at a new school. This heartwarming story, complete with soft and imaginative illustrations, follows Nico as he learns to make friends at school while being true to himself and doing the thing he

loves most, observing nature—especially birds. Bird Boy, hardcover, 32 pages, Knopf Books for Young Readers, 9"x 11½": \$17.99

> THE VAST WONDER OF THE WORLD: BIOLOGIST ERNEST EVERETT JUST BY MÉLINA MANGAL ILLUSTRATED BY LUISA URIBE

Sink into striking illustrations as you learn more about this long overlooked scientific pioneer: Ernest Everett Just. The story follows the African American biologist as he persists in his studies of marine life despite discrimination and limitations imposed upon him, ultimately revealing new insights into sea creatures, egg cells, and the origins of life. *The Vast Wonder of the World, hardcover, 40 pages, Millbrook Press, 9½"x 1114": \$19.99*



CALDECOTT MEDALIST

Michaela Goade







🎭 🛛 Fall Catalog



THE HIGH SIERRA: A LOVE STORY

BY KIM STANLEY ROBINSON

This newest book from science fiction master Kim Stanley Robinson is exactly what it claims to be: a love story. This genre-defying work is equal parts memoir, regional and natural history, and hiking guide: a biography of place that will speak to many who likewise love the Sierra Nevada. *The High Sierra, hardcover, 560 pages, Little Brown & Company, 7!/2"x 9!/2": \$40.00*

50 Classic Day Hikes of the Eastern Sierra, Third Edition

BY DEVON FREDERICKSEN & REED HARVEY The newest edition of this handy hiking guide is a must-have for your next journey in the Eastern Sierra. With over 300 full color pages of maps and photographs as well as detailed descriptions

and directions for featured trails from Lee Vining to Lone Pine, this comprehensive guide will quickly become the one you reach for when planning your next trip.

50 Classic Day Hikes of the Eastern Sierra, paperback, 368 pages, K. Daniels & Associates, 5¼"x 8¼": \$28.95





NEW YORK TIMES BESTSELLER

pical....Fox and Eexplores whe etween people and creatures of WALL STREET JOURNAL

FOX AND

AN UNCOMMON FRIENDSHIP

CATHERINE RAVEN

EMBRACE FEARLESSLY THE BURNING WORLD BY BARRY LOPEZ INTRODUCTION BY REBECCA SOLNIT

This final collection of essays by Barry Lopez includes previously unpublished work, some of which was written in the months preceding his death. The compilation is more than a memorial for the traveler, observer, and steward of the land; it's a poignant personal history and an exploration of the cycles of life and the challenges ahead for the Earth, its creatures, and its people.

Embrace Fearlessly the Burning World, hardcover, 352 pages, Random House, 5¾"x 8½": \$28.00

KINDRED: NEANDERTHAL LIFE, LOVE, DEATH AND ART

BY REBECCA WRAGG SYKES

We've all heard of Neanderthals, but how much is really known about our ancient relatives? Rebecca Wragg Sykes, a Neanderthal expert and researcher, delves into that very question, revealing

details on the Neanderthal way of life and drawing a new picture of these mysterious hominins as culturally complex and more like us than expected. *Kindred, paperback, 416 pages, Bloomsbury Sigma,* 5½"x 8¼": \$20.00



FOX AND I: AN UNCOMMON FRIENDSHIP

by Catherine Raven

Biologist Catherine Raven recounts her experience living and working in a remote location in Montana. While physically and emotionally isolated, she develops a friendship with a wild fox who regularly visits her cabin, proving that we are never truly alone if we are immersed in the natural world.

Fox and I, paperback, 304 pages, Spiegel & Grau, 51/2"x 8": \$18.00



🐝 🛛 Fall Catalog 🦂

ALL WE CAN SAVE: TRUTH, COURAGE, AND SOLUTIONS FOR THE CLIMATE CRISIS

EDITED BY AYANA ELIZABETH JOHNSON & KATHARINE K. WILKINSON This compilation of essays elevates the diverse voices of dozens of women climate leaders. From scientists and journalists to activists and designers, this selection spans race, generations, and geography. A fusion of essays, poetry, and art, this volume both inspires and soothes while also serving as a guide to change our perspective and reshape our society.

All We Can Save, paperback, 448 pages, One World, 5"x 8": \$18.00



POET WARRIOR

by Joy Harjo

In her memoir, Joy Harjo, the first Indigenous American to serve as a US poet laureate, takes us on a journey down the poet-warrior

path of her trailblazing life. Steeped in personal history and cultural tradition, this piece moves fluidly between prose and poetry, offering an inspiring message of compassion, justice, and contemplation. *Poet Warrior, paperback, 256 pages, W.W. Norton & Company,*

5½″x 8¼″: \$16.95

FINDING THE MOTHER TREE: DISCOVERING THE WISDOM OF THE FOREST

BY SUZANNE SIMARD

Suzanne Simard is a professor of forest ecology and is at the frontier of understanding plant communication and intelligence. In this book she delves into cooperative networks of trees facilitated by below-ground communication and resource sharing. Inspiring, informative, and accessible, *Finding the Mother Tree* explores the intelligence of forests and how these discoveries help

> us understand our own place in the world. Finding the Mother Tree, paperback, 384 pages, Vintage, 5¼"x 8": \$17.00





Hummingbird Salamander

by Jeff VanderMeer

This gripping and cinematic fiction is a mix of mystery, crime,

and psychological thriller with an environmental spin. The plot is centered on the mysterious discovery of taxidermied specimens of an endangered hummingbird and salamander by the story's protagonist "Jane Smith." This discovery sets in motion a series of events

beyond her control and puts her in harm's way. An inventive page-turner packed with wildlife smugglers, amoral energy companies, extremists, and eco-terrorists.

Hummingbird Salamander, paperback, 384 pages, Picador, 5"x 7½": \$18.00

The Sentence by Louise Erdrich

Pulitzer Prize and National Book Award-winning author Louise

Erdrich has created a humorous ghost story, a tale of passion and errors, and a contemporary political and cultural commentary in her newest novel. In Minneapolis a small independent bookstore is haunted by its most annoying customer and Tookie, the new bookseller who has been recently released from incarceration, is attempting to solve the mystery of the haunting. This novel, set in 2020, is a compelling story that captures the challenging year in America when grief, injustice, and fear were at the forefront for many.

The Sentence, paperback, 400 pages, Harper, 6"x 9": \$18.00



NATIONAL BESTSELLER





Fall Catalog *



MONO LAKE REUSABLE SNACK BAG SET

Say goodbye to single-use plastic bags and spice up snack time with these reusable snack bags, printed with a Mono Lake pattern. Each variety pack includes three snack bags with different Mono Lake designs. These reusable bags are made of eco-friendly, BPA-free rePETe fabric, are machine washable, and can be expanded up to 9.5 inches or folded down to 5.5 inches to fit a variety of snacks or other items. Perfect for your next bag lunch, picnic, or hike. Mono Lake Committee exclusive.

Mono Lake reusable snack bag set, set of three: \$24.00

ALPINE

This vegan rosemary and mint lip balm from Alpine Provisions contains a hydrating blend of organic oils to condition lips and features plastic-free recycled paper packaging, making it gentle on both your skin and the Earth. Perfect for protecting lips from dry winter air. Rosemary & mint lip balm, 0.53 ounces: \$8.00





LOCALLY HAND-CRAFTED BAR SOAP

This fresh and invigorating soap is hand-crafted in Mammoth Lakes. These bars are available in two scents that are perfect for the holidays or year-round. Choose "lavender rose" with pumice for floral exfoliation or "forest bath" with pine and patchouli to be transported to the woods.

ROSEMARY & MINT LIP BALM

Locally hand-crafted bar soap, approximately 4 ounces, please specify fragrance: \$11.00

Soy candle tin

Let these double-wick soy candles ignite your holiday spirit and transport you into nature with their festive outdoorsy fragrances. Once the candles are finished, the food-safe enamel vessels can be reused as mugs. Choose between two fragrances: woodsy and

earthy "evergreen and embers" in a green vessel or fruity and spicy "pomegranate spruce" in a red vessel. Soy candle tin, 9 ounces, 3" tall, please specify fragrance: \$30.00





DICK TAYLOR CRAFT CHOCOLATE

Made in small batches from organic ingredients, these California handcrafted chocolates are a true delight for dark chocolate lovers. Choose between brown butter with cocoa nibs and sea salt or black fig, and treat yourself or your loved ones to a curated chocolate experience. Please note that chocolates will be shipped in an insulated sleeve; however, we do not recommend ordering this product if temperatures in your region are currently above 80°F. See monolake.org/chocolate for ingredient lists. Dick Taylor craft chocolate, 2 ounces, please specify flavor: \$10.00

🐝 🛛 Fall Catalog



2023 MONO LAKE CALENDAR

The 2023 Mono Lake Calendar features stunning images of our favorite wild and wonderful watershed. Bring Mono Lake into your home 365 days of the year, with views of the Mono Basin's tufa towers, sunsets, streams, wildlife, storms, fall colors, and winter landscapes as captured by skilled photographers. Printed in the USA on recycled paper. Special bulk pricing is available on orders of two or more calendars. *Mono Lake Committee exclusive.*

2023 Mono Lake Calendar, 13"x 9½": \$14.95

MONO LAKE CRITTER COLLAGE ORNAMENT Add the art of John Muir Laws to your holiday decorations with this stainless-steel ornament printed with a vibrant Mono Lake design. This ornament features some of the Mono Basin's notable animal species and a tufa landscape, all protected under an epoxy coating. *Mono Lake Committee exclusive.*

Mono Lake critter collage ornament, 3": \$10.00



Mono Lake holiday card set

Artist Wendy Morgan's original designs make this seasonal card set a beautiful way to send holiday wishes. Each set includes ten cards with different wildlife designs and the message "May you have a Happy Holiday and joyous New Year" printed in red ink inside. *Mono Lake Committee exclusive.*

Mono Lake holiday card set, 10 unique cards with envelopes, 61/4"x 41/2": \$15.00



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ERMINE

Staff migrations

by Claire Landowski

ummer 2022 marked the Mono Lake Committee's return to full seasonal staffing and programming, and it was a classic Mono Lake summer indeed: flocking phalaropes delighted South Tufa tour-goers, monsoon rain brought that rich sagebrush scent, and blessedly little smoke interrupted our field programs. Autumn's crisp arrival means birds and staff alike are on the move toward their wintering grounds. Some staff migrated locally and some across the country, but the phalaropes still take the cake for longest migration to and from Mono Lake!

Sometimes the short migrations are the most meaningful, though, and so it is this season as we announce Ellen King's transition from Membership Coordinator to Policy Library Coordinator. Ellen has been the pillar of the Committee's membership department for more than 15 years, managing everything from new member recruitment to address changes, and being the friendly voice on the phone for innumerable calls from members and visitors alike. Though she could have simply retired, we are pleased that she wasn't quite ready to leave and will instead be putting to work her Master's degree in library science by cataloging and organizing the Committee's sizeable archives. Our reference library is home to many rare and unique documents regarding Mono Lake's history, water policy, litigation, and restoration, as well as memorabilia about the Committee itself, and Ellen has already made impressive headway in curating the collections.

Our members are in capable hands, though: we are thrilled to welcome **Leslie Redman** as the new Membership Coordinator. Originally from Florida, Leslie's westward migration began with a summer at Devils Postpile as an



The 2022 Mono Lake Committee staff.

interpretive ranger in 2013. She comes to the Committee from Mammoth Mountain Ski Area, where she was the Office Manager for the Lift Maintenance Department. Leslie spent her free time this summer ticking off some big hikes, taking in new views of Mono Lake from the likes of Carson Peak and Mt. Dana.



Leslie Redman, Membership Coordinator.

The 2022 summer season brought a complete schedule of weekend canoe tours and bird walks, daily South Tufa tours, weekly restoration monitoring, field seminars, and extended hours in the Information Center & Bookstore, so we were grateful for the help of an excellent seasonal staff.

Project Specialist **Zoe Klein** was an anchor of our restoration and monitoring efforts; she has moved on to a position at Sequoia-Kings Canyon National Park assessing the impacts of stock trains on high-elevation meadow ecosystems.

After a summer captaining the canoe fleet, Canoe Coordinator **Holly Alvarez** headed to the Bay Area to reunite with her partner and her dog—we wish her the best in her future work in wildlife biology. Education Assistant **KJ Franklin** helped develop curriculum for younger kids visiting Mono, and we look forward to hearing about all her future work in children's outdoor education.

Mono Lake Interns Amelia Beaumont, Spencer Dutton, Firdausi "Fairy" Noorzay, Emma Rosen, and Sophia Schuldt all brought fresh energy and perspectives to their work in the Information Center & Bookstore and on tours and projects, and all have migrated on for the fall. Amelia accepted a stream restoration fellowship through the Pennsylvania Sea Grant. Emma and Fairy headed back to college, at St. Olaf in Minnesota and Moorpark in Southern California, respectively. Sophia accepted a position with Mammoth Hospital, and Spencer headed home to the San Diego area to look for work in the native plant community. We wish all of them the best in their future endeavors and hope to see them back in the Mono Basin before long. \diamondsuit

Claire Landowski is the Committee's Office Director. One of her favorite experiences over the summer was a morning in August spent watching five ptarmigan forage near her campsite in the High Sierra.



From the mailbag

News from members and friends

by Leslie Redman

This summer was a welcome return to normalcy in the Eastern Sierra. While we endured relentless high desert heat most afternoons, frequent rainstorms led to cooler evenings and the gratifying scents of damp sagebrush and petrichor. When I wasn't busy logging miles on the trail and reveling in the return of monsoonal rainstorms, I spent the summer acclimating to my new position as Membership Coordinator and soaking in my predecessor's bountiful knowledge. I've enjoyed settling into the ebbs and flows of life at the Mono Lake Committee and as our annual stream of summer visitors slows to a trickle, I am looking forward to quieter hiking trails and sweater weather.

Thanks to all who sent gifts in honor or in memory of friends and loved ones. Your support makes our work possible.

In honor

Christopher Benham of San Francisco donated to celebrate Phyllis Benham's birthday. Kimberly Girard of Sandy, UT gave a gift in honor of Jennifer Guthrie. Erin Kenison of Boise, ID sent a contribution in honor of Dave Hopper, "in celebration of his tireless commitment to all things wild." Helen Nelson of Santa Fe, NM gave a gift in honor of Jessie Bunkley. Kathleen Paulson of Ventura donated in honor of Andy Fried & Patti Mailman. Barbara Robben of Berkeley gave a gift in honor of Committee co-founder David Gaines. Alexandra Rome & Burr Heneman of Point Reyes Station sent a contribution in honor of Nora Livingston, the Committee's Lead Naturalist Guide. Peter Stenkel of Seattle, WA donated in honor of Sylvia & Peter Jones of Conwy, Wales, supporters of the Mono Lake Committee's mission.

In memory

Bob Austin of Napa gave a gift in memory of his friend **Frank Fowle**, who quoted Bob's poem about Mono Lake during arguments before the State Water Board. **Kathleen Barry** of Whittier sent a contribution in memory of **Carl Spencer**. **Sharen Gasior** donated in memory of her friend **Sandra McNeill**. **David Hughes** of Lincoln gave a gift in memory of **Warren E. Hughes**, who supported our efforts to save Mono Lake. **Linda Judd** of Windsor sent a contribution in memory of **Robert** Judd. Steve Knight of Fullerton donated in memory of Jan Heater. Jonathon Marion of Mojave gave a gift in memory of Philip LaRiviere. Carol Mathews of Walnut Creek sent a contribution in loving memory of Robert Mathews. Tamra McGrath of Yorktown, VA and Roberta Tugendreich of Sunnyvale gave gifts in memory of Wanda Fellom-Belland. Glenda McKibben donated in memory of Robert McKibben.

Mark & Alice Perry of Bakersfield sent a contribution in memory of **Elinore Patterson. Albert Pritchard** of Sebastopol gave a gift in memory of Gayle Skoff, "longtime backpacking friend." Mary Lou Reed of Coeur d'Alene, ID sent a contribution in memory of Scott W. Reed, who "considered Mono Lake a beautiful sight to behold." Joan Rubel of Newport Beach and Tena Taormina of Campbell made donations in memory of Laine Gaites, "a deeply caring and selfless individual." Kathleen Sundmark of Tujunga gave a gift in memory of her husband Paul Sundmark. Kirsten Winter of Poway sent a contribution in memory of Karen Danielsen. Joanne Yoshii donated in memory of Michio Yoshii.

We received gifts in memory of **David Siemens** from **Katherine Bennett** on behalf of the University of Washington's Division of Gerontology & Geriatric Medicine, **Kylie Bird** of Aurora, CO, **John Bishop** of Vancouver, WA, Annika Boulet of Bend, OR, Logan Brumm and Elena Morrison of Flagstaff, AZ, Mark Gabel of Spearfish, SD, Melissa Hagman and Kelly Kirkland of Boise, ID, Jennifer Holder of Phoenix, AZ, Jerry & Jeanette Jessop of La Valle, WI, Sara Lozano of Round Rock, TX, Hunter Quon of Covina, Kelly Siemens of Davis, Hannah Siemens of Jamaica Plains, MA, Mark Siemens of Yuma, AZ, and Hannah Siemens, Kyle Travers, and Dara Abraham of Portland, OR.

We received contributions in memory of **Dwight Sims**, a longtime advocate for the restoration of the Mono Basin, from **Jenny Blaker** of Cotati, **Jennifer Bugley** of Vancouver, WA, **Louise Cochran** of Marlboro, VT, **Diana Denker** of Arvada, CO, **Shelly Gardner** of Oakland, **Lynette Sheppard** of Hoolehua, HI, **Steve Sweaney** of Santa Rosa, and **Tanis Walters** of Point Reyes Station.

Longtime Mono Lake Volunteer **Dave Hurst** passed away in August 2022. Dave led South Tufa tours and star talks at Bodie for many years and is greatly missed. We received gifts in his memory from **Steven Elie** of Chino Hills, **Flavio Frontini** and **Jeanette Stirdivant**, both of Glendale, and **Lisa & Gunter Rieg** of Manhattan Beach.

Leslie Redman is the Committee's Membership Coordinator. She spent the summer taking long walks up tall mountains and paddling the Rush Creek "jungle cruise" as often as possible.



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