

DESERT REPORT

NEWS OF THE DESERT FROM SIERRA CLUB CALIFORNIA & NEVADA DESERT COMMITTEE

DECEMBER 2017

BY TOM BUDLONG

ONCE AGAIN THREATENED BY GOLD MINERS

CONGLOMERATE MESA
ON THE WESTERN RIM OF OWENS LAKE

Nine companies* have looked for gold at Conglomerate Mesa. Looked and left.

The early ones started around 1984 when Conglomerate was the Cerro Gordo Wilderness Study Area (WSA). Then in 1994 the California Desert Protection Act (CDPA) released the area from WSA status. More came. They ranged from biggies (Newmont, BHP), to 'penny mining stock' operations. Sungro Minerals left when its shares hit 1/100th of a cent.

The tenth, and current, applicant is Silver Standard Resources (from B.C. Canada), now SSR Mining. (SSRM on the NASDAQ). This operation is **not** a penny mining stock. It has three operating gold mines in three countries and several active explorations; Conglomerate Mesa, fortunately, not yet among them. SSRM's balance sheet shows several hundred million cash in the bank.

Silver Standard wants to explore Conglomerate Mesa. As of this writing, it has prepared an Environmental Assessment to disclose the impacts of drilling seven 1,000 foot exploration holes at the south end of the Mesa.

Mysterious History

Conglomerate Mesa is true wilderness by any common understanding and certainly by the official definition in the 1964 Wilderness Act. The notorious

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Looking south across to the exploration area

TOM BUDLONG

BY LINDA CASTRO

CONSERVATION UNDER ATTACK

PROPOSED FEDERAL LEGISLATION THAT WOULD NEGATIVELY
AFFECT PUBLIC LANDS IN CALIFORNIA

The article following here has no story. It is terribly detailed and factual. It is also terribly important. This is how the present Congress views our natural resources. - Ed.

Members of the current U.S. Congress have introduced a plethora of bills that would negatively affect federal public lands in California (i.e., public lands managed by the National Park Service, National Forest Service, and Bureau of Land Management). The bills listed here are not the only significant land bills before Congress, but these are judged to be the ones most likely to be passed. My selection of these bills as "higher priority" was subjective, although objective standards were used. There may also be other bills that have been introduced about which this author is not yet aware. (November 4, 2017)

H.R. 23 Gaining Responsibility on Water Act (Valadao – CA)

Fast-tracks construction of the Temperance Flat Dam. This would drown the San Joaquin River, which is recommended for Wild & Scenic protection by the Bureau of Land Management. It would inundate several thousand acres of lands with wilderness characteristics, reduce water deliveries to federal and state wildlife refuges in the California Central Valley, increase pumping of water from the Delta, eliminate the San Joaquin River Salmon Restoration Program, and weaken the Endangered Species Act. *The House passed this bill on July 12, 2017.*

H.R. 1349 To amend the Wilderness Act to ensure that the use of bicycles, wheelchairs, strollers, and game carts is not prohibited in Wilderness Areas, and for other purposes (McClintock – CA)

Would allow the use of non-motorized bicycles, motorized or non-motorized wheelchairs, strollers, wheelbarrows, survey wheels, and game carts in wilderness. Wheelchairs are already allowed in Wilderness. The 1990 Americans with Disabilities Act reconciled itself with the Wilderness Act of 1964 by saying that people who use wheelchairs for everyday indoor mobility are allowed to use them in a wilderness area. A wheelchair or mobility device, even one that is battery-powered, so long as it is designed solely for indoor use by a mobility-impaired person, is already allowed anywhere foot travel is allowed, even in federally designated wilderness.

H.R. 2936 Resilient Federal Forests Act (Westerman – AR)

While this bill purports to address wildfires, the many destructive actions it promotes include massive post-fire logging

operations, which destroy ecosystems and actually increase the risk of fire. This bill has a long laundry list of bad provisions. Some of the most troublesome are:

- It includes convoluted language about roadless area management that could be interpreted to eliminate current regulatory protection of Inventoried Roadless Areas under the national Roadless Area Conservation Rule, thereby allowing millions of acres of protected roadless areas to be open to harmful road building and logging.
- It undermines the National Environmental Policy Act (NEPA) by exempting several harmful activities from environmental review and public comment. Those activities include forest clearings for timber production on areas up to 30,000 acres (an area more than 425 times larger than what's currently allowed to take place without review).
- It weakens the Endangered Species Act (ESA), by allowing the Forest Service to avoid consulting with U.S. Fish and Wildlife Service experts when it self-determines that an activity is not likely to adversely affect listed species or critical habitat.
- It forces citizens who want to challenge certain forest management projects to use an industry-biased "binding" agency arbitration process that completely eliminates the possibility of

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BY MARIANA MAGUIRE

ILL-ADVISED NATIONAL MONUMENT REVIEW

MAY FINALLY YIELD LONG-EXPECTED EXECUTIVE ACTION,
SLASHING LANDS IN UTAH FIRST



Mojave Trails National Monument

JOHN DITTL

August 24, 2017 marked the end of President Trump's executive review of 27 national monuments across the U.S., including seven monuments in California: Mojave Trails, Sand to Snow, San Gabriel Mountains, Carrizo Plain, Giant Sequoia, Berryessa-Snow Mountain, and Cascade-Siskiyou. However, to date, Interior Secretary Ryan Zinke has issued few recommendations, his complete report has been leaked but not shared with the public, and the President has yet to take any final action. Multiple rumors have circulated with regard to what the President will ultimately do, and when he will do it, but the public continues to wait.

In the midst of the monument review, Interior Secretary Ryan Zinke issued a recommendation of "no action" for only one of California's seven threatened monuments: Sand to Snow National Monument. But it is unclear if the President will accept this recommendation. There is still a very real possibility that he may override it, although there is no current intelligence suggesting Sand to Snow is under immediate threat.

Likewise, rumors suggest most of California's monuments are not primary targets at this time. The notable exception is Cascade-Siskiyou, which straddles California and Oregon. Rumors suggest it may be reduced, possibly eliminating the California portion of the monument.

There have been multiple false starts on an announcement of White House action on the monuments. Current rumors hold that Trump will visit Utah in December and cut Bears Ears and Grand Staircase-Escalante – the two bookends of the monument review's chronological scope and long-touted by monument opponents as the hallmarks of overreach. Though the timing of an announcement remains uncertain, one thing that has been consistent over these long couple of months is which monuments are potential primary targets. In addition to Bears Ears and Grand Staircase, we continue to hear rumors about Cascade-Siskiyou; Nevada's Gold Butte has long been a concern as

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ONCE AGAIN THREATENED BY GOLD MINERS

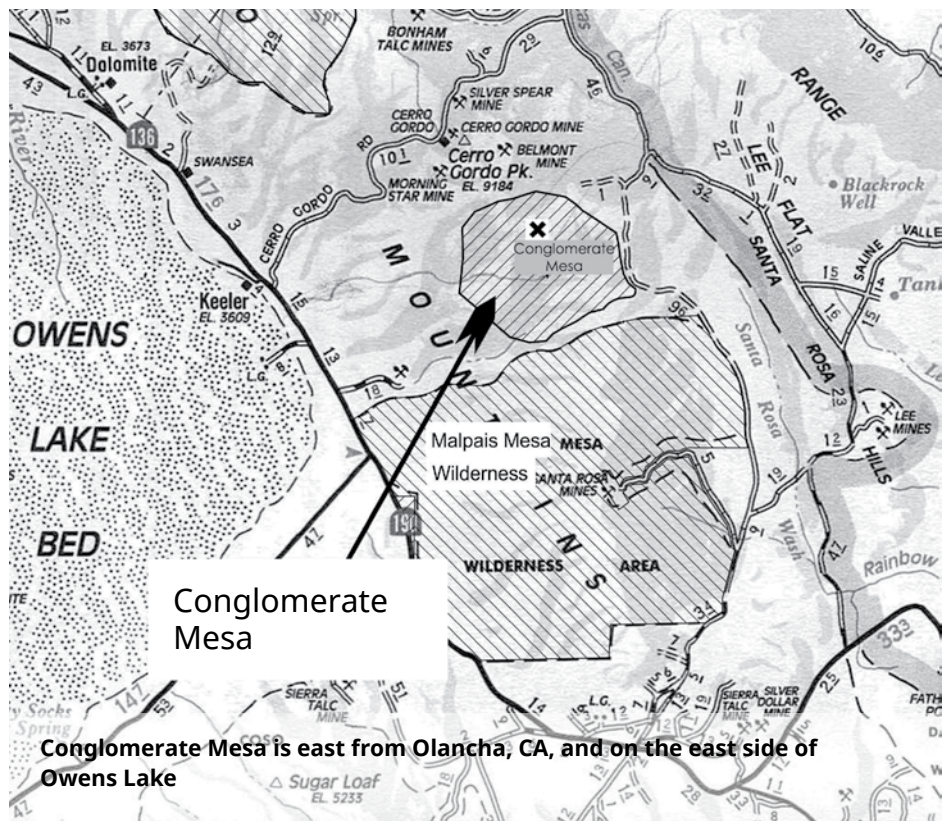
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Wilderness Act word is “untrammeled,” and Conglomerate fits the very definition of that word. I’ve walked Conglomerate at least twenty times and have never seen anyone except those with me. The solitude is overwhelming: views of the Sierra Nevada Range just to the west, views up and down Owens Valley, views looking east with range after range disappearing into the horizon. Primitive and quiet dominate.

Releasing Conglomerate from WSA status in the 1994 CDPA is a well-recognized error. Conglomerate has no roads, lakes, streams, seeps, trails, dirtbikes, pick-and-shovel era mining remains. It does have a pleasant scatter of piñon, Joshua trees, junipers, and numerous smaller native plants. The only evidences of man are scant obsidian flakes and the remains of short-lived charcoal burning camps.

Conglomerate can give us a history lesson in scratching for a living during early western settlement. The most obvious features are small and scattered, from charcoal burners that supplied nearby Cerro Gordo with smelting fuel. Rude piles of harvested piñon pines were open-burned. The “burn pit” locations were so sterilized by fire that nearly 150 years later plants still struggle to grow on them. The pits are a dark color from charcoal bits and dust too small to recover for transport to Cerro Gordo. The charcoaliers did not organize or cooperate to construct more efficient burning kilns, such as the two eroding adobe kilns on the floor of Owens Valley or the rock kilns in Wildrose Canyon forty miles east. They could well have been desperate individuals, scratching enough charcoal to buy bacon and beans for the next meal. Marion Howard, the self-sufficient “Beekeeper of the Inyos,” speculated that, except for modern government support, individuals like the charcoal burners would still be scratching the hills, getting along somehow.

Still unexplained are small stacked rock structures near the burn pits on the Mesa. They appear to be fireplaces, but with little evidence of usage and unexplained features beyond simple utility. Remains of cabins or roof structures at the sites are absent. Piñon stumps, most still standing due to the Mesa’s dry climate, surround the pits.



These “entrepreneurs” of the 1870 era were out-competed by charcoal from the Sierras and imports from Nevada when the Carson and Colorado RR got to Keeler in 1883. The scarcity of burn pits indicates a short active period.

Few Native American artifacts are seen. With its scarcity of water, the attraction to Native Americans would be piñon nut harvests for short periods during years when the trees produced. Other than the few obsidian flakes, only one small drilled sea shell has been located.

Where is Conglomerate Mesa?

Look east from Mt. Whitney. Ten thousand feet below is Owens Valley. Mountains on the other side of Owens Valley are the White/Inyo range, the first of the Basin and Range sequence, 100 miles long with 11,000 to 14,000’ peaks. Most of the northern hundred miles are in the White and Inyo Mountains Wilderness. The Malpais Mesa Wilderness is in the south. The gap between is the Cerro Gordo mining site (dating to 1860s) opposite Owens Lake and Conglomerate Mesa south of Cerro Gordo.

From Owens Lake look east, Conglomerate sits 3000’ above the floor of Owens Valley. Looking north from the Saline turnoff on Hwy 190, Conglomerate looks mysterious. You could imagine isolated relict dinosaurs up there.

SSR wants an open-pit cyanide heap-leach operation

They want this for profit, salaries, and share prices, of course. Since environmental consideration reduces profit, their motive for environmental consideration is only what’s needed to get a mining permit. The promoters don’t live there.

Evidence so far indicates Conglomerate, if it has gold, is a Carlin type deposit. Carlin is a Nevada location where gold ore has a tiny concentration of sparsely distributed invisible gold particles. “Good” ore is quantified in a few grams per ton. That’s why the pick-and-shovel miners were not there. The miners could not see the gold.

Carlin type gold indicates **open-pit cyanide heap-leach mining** as the only eco-

nomically possible way to extract gold particles from this kind of low-grade ore. Carlin, NV makes significant use of cyanide open pit heap-leaching. In fact, Newmont Mining, one of the nine previous Conglomerate explorers, is credited as one of the major developers of the method that was used at the Carlin site. The production at Carlin has been rich.

Few ore bodies are on the surface. The open-pit cyanide heap-leach mine process hauls barren overburden (rock lying above the gold-bearing ore) to waste piles adjacent to the mine. The exposed ore is then dug out of the pit and hauled to leaching piles (the heaps) where the gold is extracted by cyanide solution sprinkled on the heap. The solution percolates through the heap, picking up the microscopic gold, and is collected at the bottom of the heap. Giant trucks move the overburden and ore, burning huge amounts of fuel. The process is an alchemy that converts diesel to gold.

If Silver Standard exploration is successful and a mine is permitted, Conglomerate will almost certainly become an open-pit cyanide heap-leach mine. The Briggs Mine in Panamint Valley, Inyo County's only such mine, is well-hidden. Access roads, large haul roads, the mine's piles and heaps are moderately remote. A Conglomerate mine would be in full view of travelers on U.S. 395 visiting the Sierras in the summer and Mammoth skiing areas in the winter. Travelers on Hwy 190 going to and from Death Valley, along with Saline Valley recreationists, would also have a full view of the mine's open pit.

An open pit mine leaves a giant hole in the ground adjacent to giant piles of dirt and rock. The pit, haul roads, and piles of waste rock and depleted ore destroy everything of cultural and historic value, all vegetation and wildlife habitat. High winds create plumes of airborne dust. Recreation opportunities are eliminated. Natural vistas are replaced with jarring unnatural landscape.



Joshua Tree forest on Conglomerate

TOM BUDLONG



Looking north during a winter storm, March 2005. Inyo mountains are in the distance

TOM BUDLONG

The question after the ore is depleted and the mine closed, will be "What happened here?" The only answer would be "It seemed like a good idea at the time. People needed jobs." And Inyo County had a budget problem. These arguments will be trivial for our descendants, and forever. Millions of years would not heal the scar.

** In order of appearance, the nine companies who abandoned their search for gold at Conglomerate Mesa are; Mobil, Asamara, Newmont, Compass, BHP, Timberline, Sungro, North American, Great Bear Research.*

Tom Budlong is the Desert Committee's coordinator for the Inyo and Panamint Ranges. He travels widely in the desert and is active in Off Road Vehicle and Mining issues.

CONGLOMERATE MINING CLAIMS

Mining requires mining claims, properly recorded with the BLM and the local county. Conglomerate Mesa is blanketed with claims. Most are rectangular, 600' x 1500' (20.66 acres). Various mining companies have recorded claims as needed then abandoned them when interest died.

Claim registration must be maintained. The cost is about \$150 per year. Two partners, Steven Van Ert of Chatsworth, CA, and Noel Cousins of Tucson, AZ, recorded several hundred Conglomerate claims around the time Conglomerate was released from WSA status in 1994. The claims have been maintained since. As the various companies have shown interest Van Ert and Cousins have leased them to the companies. Silver Standard's March 22, 2016 report shows lease terms include payments of \$710,000 for a three year option and several million up to the start of production.

BY SARAH CREWS AND LAUREN ESPOSITO

LIFE ON THE EDGE

TERRESTRIAL ARTHROPOD COMMUNITIES ON SALT FLATS

The Southwest has undergone major changes in recent geological history, transforming from a lush, riparian landscape to an area containing some of the world's driest deserts. Although today they may occasionally contain water, these empty basins and arroyos were once deep lakes and rushing rivers, sometimes connected to one another. At the end of the last ice age, when aridification began, salts and minerals remained after the water evaporated. Today we call these salty expanses salt flats. The salts comprise various materials – some are simply sodium chloride, while others are sodium hydroxide or potassium hydroxide. These differences arise because of what the soils and mountains surrounding the basins are made of and what remains after evaporation. Many of these salt flats are

visible from major interstate highways (e.g. Soda Dry Lake off I-15 in the Mojave National Preserve) or are major tourist destinations (e.g. Badwater Basin in Death Valley National Park). Some of the salts at various salt flats are mined—which you've likely noticed if you've driven by Searles, Bristol, or Cadiz Lakes in the Mojave Desert.

To many, a salt-flat can look desolate, deserted, devoid of life. No plants grow on them and only a few grow around them. Even people familiar with the hidden treasures that the desert has to offer might look at a salt-flat and assume that no animals would call it home. This assumption is incorrect, however. No full surveys of salt flats have been completed, so we don't have a complete inventory of everything that lives there, but salt flats are actually home to some fascinating critters. These include several endemic terrestrial arthropods (insects, arachnids, etc.) that occupy the interstices between the soil substrate and the salt layer.

The two that we have studied most extensively are the salt-flat meshweaver spider (*Saltonia incerta*, from the family Dictynidae) and the salt-flat ant-like flower beetles of the genus *Tanarthrus* in the family Anthicidae. The first author first read about the meshweaver spider as a master's student. At the time, it was not clear whether any populations still existed. This spider had been collected at two areas around the Salton Sea, one of which was submerged when the Salton Basin was filled in the early 1900s while the other area had been extensively developed. The spider was also known from a third locality in the Gulf of California, but it wasn't known exactly where it had been collect-



Sites where the *Saltonia incerta* spider is now known to occur

ed. Vince Roth, who wrote about these cryptic spiders, had not been able to relocate them. The first author had heard, however, that some arachnologists had collected these spiders, presumed extinct for nearly a century, during the 1990s using pitfall traps. They were found in China Lake which is hundreds of kilometers north of the Salton Basin. Because the first author had been conducting fieldwork throughout the Mojave, she had seen lots of salt flats and began to wonder if the spider could be found on all of them. So, she set out on a trip visiting a myriad of salt flats in the Mojave Desert. To her surprise, she found the spiders in multiple localities on that trip. Since that time, she has visited additional salt flats throughout the Southwest, including several in New Mexico, and has found *Saltonia incerta* from the shores of the Gulf of California north to Cottonball Basin in Death Valley and east to Bottomless Lakes State Park in New Mexico.

During this fieldwork, the first author often saw tiny black or reddish ant-like beetles on the salt flats and developed an interest in those as well. These are beetles of the genus *Tanarthrus*. They come out during the heat of the day during the hottest months to eat debris blowing across the salt flats, including plant material as well as dead and live insects. They are more diverse and widespread than *Saltonia*, reaching the Great Salt Lake in Utah. This raised the question of why *Tanarthrus* has diversified across salt flats whereas *Saltonia* has not.

Using DNA data, the first author has found that while there are no morphological differences in the *Saltonia* populations, there are some genetic differences, indicating some amount of isolation between populations found on different salt flats. The greatest differences occur between the California and New Mexico populations. Given the distance, this isn't that surprising. However, spiders don't fly, although some can balloon. (Balloon-ing occurs when a spider climbs to a high point and releases silk

which is then caught by the wind, and the spider is transported to a new area.) *Saltonia*, however, has not been observed ballooning. Adults are probably too large to balloon, there are no high points to launch from on a salt-flat, and this behavior seems particularly risky in such a harsh environment where the spiders are more likely to land in an area with few resources than otherwise. Finally, *Saltonia* has never been found outside of a salt flat or salty shore, even though they survive just fine in captivity without the presence of salt. So, why are they distributed as they are? Our findings indicate that the spiders were perhaps more widespread in wetter times, and as drying occurred, they retreated to salt flats.

To many, a salt-flat seems inhospitable, but a closer look shows that it may actually be quite inviting. First, there is nearly always some moisture under the salt crust, whereas humidity is low to non-existent in other parts of the desert. The daytime temperature beneath the salt is also much cooler than the ambient air. There are several other arthropods that live there in large numbers, providing ample food for a predator. Additionally, there aren't a lot of vertebrate predators because they likely can't tolerate the harsh conditions, lack of hiding places, and harsh chemicals. Therefore, it is possible the salt flats are acting as oases or refuges to the arthropods that can tolerate the harsh chemical conditions. In addition to the spiders surviving and being far more widespread than anyone imagined, we have also learned that their closest relatives include intertidal spiders and the world's only fully aquatic spider. Therefore, these spiders together represent an aquatic to semi-aquatic group.

Currently, we are interested in learning what organisms live on the salt flats and their interactions. The salt flats make excellent natural laboratories, as they are nearly repeatable systems, a rather uncommon attribute. We hope to demonstrate that even though a habitat may look unlivable, there are many specialized organisms that call these places home. These organisms should be taken into consideration when altering the areas around the salt flats in any way, such as building solar farms. They should also be considered when studying the effects of climate change, which can cause changes in weather patterns. These effects include further aridification and flooding at unusual times, which can greatly affect life on the salt flats. You don't have to go to a remote rainforest canopy or the bottom of the ocean to make new discoveries. These habitats are "in our own backyards".

In the future, we hope to conduct detailed surveys of a few of the salt flats to compare and contrast their inhabitants, obtain more genetic data for the various organisms, construct DNA barcode-based food webs, and model how climate change could affect these rare habitats and the organisms for which they provide refuge.

Sarah Crews, PhD is the Schlinger Chair of Arachnology Post-Doctoral Fellow at the California Academy of Sciences, where she studies salt-flat arthropods in addition to everything you ever wanted to know about flattie spiders.

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Saltonia incerta, the salt flat spider, at Death Valley National Park

SARAH CREWS

BY CRAIG DEUTSCHE

SEVERAL STEPS FORWARD, MANY MORE ^{TO} GO

PROGRESS AT THE SALTON SEA

Planning for the Salton Sea has moved forward on several fronts. The State Water Resources Control Board has initiated steps that will codify the short and medium term planning. The State of California has taken positive steps toward providing money for a part of the work. And plans for the long term remain unknown. Before describing these developments, it will be best to review the currently proposed plans.

The State Water Resources Control Board (SWRCB) has a legislative mandate to create and implement a plan to avert the looming crisis at the Salton Sea. Without intervention, water flowing into the sea will decrease with consequences for both public health and wildlife habitat. In March of this year, the Short- and Medium-Term Plan: Phase I was published.¹ This plan, more commonly known as the Salton Sea Management Plan (SSMP), was largely described in a previous article (June, 2017, *Desert Report*), but some facts ought to be noted here. It is anticipated that between 2018 and 2028, the Salton Sea will shrink exposing 58,000 acres of lakebed. Of this, the plan proposes to treat 28,000 for dust control by creating watered habitat in some areas and by waterless methods in others. This work is planned for the northern and southern ends of the Sea where fresh water is available for habitat creation and where the greatest areas of lakebed will be exposed. Something of this planning is shown in the accompanying figure.

The SSMP also includes a tentative timeline for the various planning and construction phases. It outlines the expected costs for each of the phases, and it indicates where

money might be obtained, although these sources can certainly not be guaranteed. As most of the engineering details remain to be outlined, the document represents a goal as much as it does a plan.

Shortly after publication of the Phase I of the SSMP, the Imperial Irrigation District (IID) sought to make it legally binding on the State of California. Although the procedure is somewhat convoluted, the goal was to modify an order given by the SWRCB in 2002 concerning water management and restoration at the Salton Sea. The IID requested a hearing to consider a Stipulated Order that would revise the 2002 order. If passed, this would 1) acknowledge the State's responsibility for restoring the Sea, 2) list a very specific schedule for treatment of the exposed lakebed areas, 3) outline procedures for an independent review of progress with consequences if goals were not met, and 4) require that 50% of the treatments should be for the benefit of wildlife habitat. On September 7, 2017, the SWRCB conducted a hearing for public comment on this Stipulated Order. After small revisions, another hearing was held on November 7, and the items listed in this paragraph were approved.²

The estimated cost for Phase I of the SSMP is \$380 million. Of this, \$120 million has been either appropriated by the state or promised from other sources. This sum will cover work that is planned for the next three years. Funding beyond this time remains uncertain, although a \$7.5 billion state bond initiative has been authorized by Senate Bill 5 and has been signed by the governor.³ The bond initiative, which includes \$200 million for restoration of the Salton Sea, will be presented to the public in the June, 2018, ballot.

While these developments represent progress in the near future, there are



Geothermal field at the south end of the Salton Sea. The plumes in the distance are water vapor from the cooling towers.

JIM POMPY

many unresolved problems. Even with implementation of Phase I of the SSMP, there will still be 30,000 acres of untreated playa, and after the year 2028 there will be even more lakebed exposed. While current planning calls for dust control at the north and south ends of the Sea, the east and west shores are not scheduled for treatment. Salton City (population 3800 in 2010) and several other lakeside communities will be directly affected by the shrinking Sea. And perhaps of most significance, the current plan inevitably allows the center of the Sea to become more and more saline until aquatic life becomes problematic at best. Water delivered from agricultural drainage will continue to bring dissolved salts into the Sea, and although evaporation removes water, it does not remove the accumulating salts.

A long range plan is needed, and the Stipulated Order referenced above sets a deadline for this. Additionally, the current plan, Phase I, specifies that if long range projects are to be evaluated, they must include engineering details and cost estimates.

So what ideas are being proposed, and who are the proponents?

One plan, first evaluated in an EIR prepared in 2007, calls for a narrow freshwater lake along the present shoreline with a highly saline (probably toxic) interior center. An extensive berm would separate these two. This proposal would require no water beyond what naturally drains from the agricultural fields. It would also be expensive, on the order of 3 to 6 billion dollars.

Alternatively, if the Salton Sea is to be maintained much as it is now, it is acknowledged that water must be imported from somewhere outside the basin. Proposed sources for this water include the Sea of Cortez, the Pacific Ocean, Northern California, and the Colorado River. The first two of these would require construction of extensive (and expensive) pipelines or canals. The second two proposed sources are handicapped by the fact that many other jurisdictions lay claim to these sources and would not willingly give up their current share.

The map at right indicates the extent of the SSMP Phase I

The short term projects which are already underway are quite small: the two red blocks at the south end of the Sea and the third at the north end. The four lines circling the Sea indicate the recession of the shoreline expected between 2003 and 2028. The area between these lines will become exposed playa as indicated. The colored areas are those which are to be treated for habitat and dust control under Phase I of the Management Plan.

Yellow and shaded grey areas represent ponds where fresh and saline water are mixed.

Green areas are those which will be exposed and treated between 2018 and 2023.

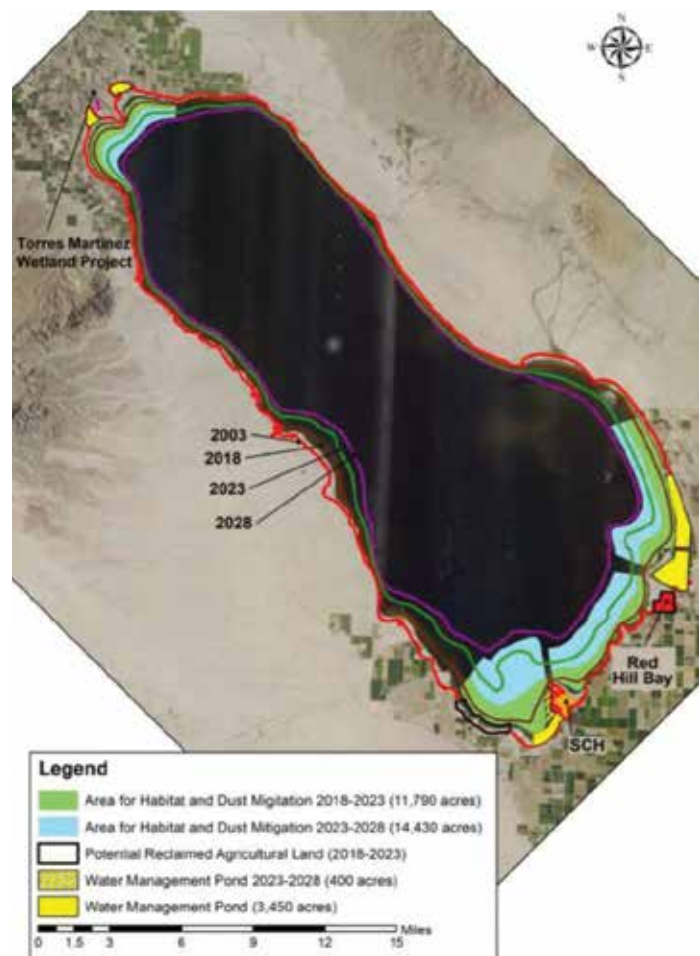
Blue areas are those which will be exposed and treated between 2023 and 2028.

A great deal of exposed lakebed on the east and west shores of the Sea will not be treated in the medium term planning, and the fate of the large (black) center of the Sea remains to be considered in long term planning.

Currently the IID sends about 50,000 to 100,000 acre feet of water to the Salton Sea each year as mitigation for water transferred to the San Diego Water Authority. This arrangement was the result of a multi-state agreement signed in 2003. This mitigation water requirement ceases at the end of 2017. A proposal offered by the advocacy group People over Pollution asks that this mitigation water be continued for another five years to allow time for more extensive planning. Although the cost of this water would not be prohibitive, the negotiations needed for such an arrangement would be formidable.

A proposal to import water from the Sea of Cortez to the Salton Sea has attracted the most attention. This has been actively supported by People over Pollution located in the Coachella Valley and by Ecomedia Compass⁴ located in Salton City. An obvious advantage for such a proposal is that the Pacific Ocean is LESS saline than the Salton Sea. It is also at a higher elevation than the Sea so that the imported water would be flowing downhill. Difficulties include environmental concerns about introducing ocean organisms into the Salton Sea, the international agreements that would be needed, the very considerable costs (by some estimates, billions of dollars), and the more mundane matters of land acquisition, local concerns, and construction protocols.

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BY WYNNE BENTI

NEAR LAS VEGAS, TRAGEDY BREWS FOR DESERT NATIONAL WILDLIFE REFUGE

DESERT BIGHORN THREATENED BY MILITARY EXPANSION.
LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT OPENS FOR
PUBLIC REVIEW DECEMBER 2017

In the heart of the Desert National Wildlife Refuge, north of Las Vegas, the Sheep Range is home to one of the *most isolated and biologically diverse communities in the Mojave Desert*. Sheltered by massive Paleozoic limestone walls, large populations of native and migratory wildlife emerge after dark and thrive, protected by the refuge status. They gather at springs, travel within canyons, and climb along ridges forested with bristlecone pines and mixed conifers.

Named for the species it was created to protect, the Sheep Range is slated to become part the Nevada Test and Training Range as both a training area and as an expanded safety zone for the United States Air Force's high-altitude missile launches. This would be done through a Legislative Environmental Impact Statement (LEIS) to be considered by Congress.

At stake . . .

East of Pahrump and the Spring Mountains, the Desert National Wildlife Refuge is the last public lands buffer between Las Vegas city limits and the 2.9 million-acre Nevada Test and Training Range (NTTR) operated by the United States Air Force. During the 2016 scoping period, the Air Force proposed to withdraw 301,507 acres of public lands, most of it from the refuge. With the expansion, jets will be able to fly directly from Nellis Air Force

Base over the Sheep Range into the Test & Training Range's South (bombing) Range without having to zig-zag around public lands or restricted areas. Moveable threat emitters simulating enemy fire will be installed within the Sheep Range, and the range itself will serve as a catch-basin for high-altitude missiles that stray off target.

At present, 846,000 acres have already been withdrawn from Desert National Wildlife Refuge for Air Force use. The proposed expansion, in conjunction with the Navy's looming 669,949-acre expansion at the Fallon Range and Training Center east of Reno (EIS to be released in 2018), will rank Nevada number one as the state with the most military-dedicated acreage—4.5 million acres—outranking California at 3.8 million acres.

The USGS report, *Hydroclimate of the Spring Mountains and Sheep Range, Clark County, Nevada*, describes the Sheep Range's high elevation communities as "sky islands," noting that the sky islands harbor more than forty-one percent of the endemic species in the Mojave Desert Ecoregion. 550 million years in the making, and evolved from the Paleozoic Age, the extraordinary biological communities of the Sheep Range have adapted both to the arid Mojave Desert and to the Basin and Range Physiographic Province.

The Nevada Test and Training Range dates to World War II when environmental awareness and concern were quite different from the present. Because the Range is off-limits to the public, we don't know the extent of the contamination inside. If California bases are an example, contaminants were buried, dumped or released on the ground, in the air, and in



Southern Nevada map showing the proposed expansion of the Nevada Test and Training Range

the water.

Of the 98 EPA Superfund sites in California, twenty-six are operated by the military, their contractors, or the Department of Energy. Of those, nine are operated by the Air Force, and at those bases, soil and groundwater have been contaminated by volatile organic compounds (VOCs), metals, polychlorinated biphenyls (PCBs), battery acids, leaded fuels, industrial solvents, caustic cleansers, paints, metal plating wastes, low-level radioactive wastes, a variety of fuel oils and lubricants, dioxins, heavy metals, acids, and polycyclic aromatic hydrocarbons (PAHs). These toxins have been linked to cancer in humans.

These would be in addition to arsenic and tungsten which already occur naturally in Nevada's groundwater and soils. Tungsten exposure, like that seen in Fallon, has been linked to reproductive and developmental effects such as decreased sperm motility, increased embryotoxicity, and delayed fetal skeletal ossification in animals. (Agency for Toxic Substances & Disease Registry, Toxicological Profile for Tungsten 12 (2005), <http://www.atsdr.cdc.gov/toxprofiles/tp186.pdf>)

Unlike the final decision on an Environmental Impact Statement, which is made by a land management agency, a LEIS is decided by Congress. Unless the rules change, Congress will act on this in 2021.

Of the five alternatives introduced during last year's scoping period, alternatives 1 and 4 are preferred by US Fish and Wildlife Service and by a wide range of desert advocates.

The proposed alternatives . . .

Alternative (1) will preserve the "status quo"—leaving things as they are now. However, the time period for this arrangement would be extended (without adding any additional acreage); the Air Force will manage the range as they always have. U.S. Fish and Wildlife Service will continue as the lead managing agency of the refuge. Most importantly, the 227,027 acres of refuge lands encompassing the Sheep Range, will not be withdrawn for military use.

Alternative (2) will make no changes to the current NTTR land boundary. It will provide the Air Force with increased



access for military activities in the South Range. This may involve changes in Proposed Wilderness status, changes in primary jurisdiction for who manages the lands, or development of future agreements with specific legislative provisions for military use. *Of note, the U.S. Fish and Wildlife Service currently has primary jurisdiction and is the reason that the South Range and its inhabitants are still intact.*

Alternative (3) will expand the existing withdrawal by including up to 301,507 additional acres, via three sub-alternative public land acquisitions:

3A: Increases NTTR boundary to add the R77 Expansion—17,960 acres; no munitions use or construction disturbance would occur in R77.

3B: Increases NTTR boundary to add 56,520 acres, combining the R64C/D Expansion (referred to as Creech/Box Canyon/R63 on the website) at 7,621 acres and the R65D Expansion at 48,899 acres.

3C: Increases NTTR boundary to add the Alamo Expansion—227,027 acres in the Desert National Wildlife Refuge, including most of the Sheep Range, which will become the safety buffer for the South (bombing) Range. No new target impact areas are *currently* proposed. Portable threat emitters simulating enemy fire would be placed within the Sheep Range.

Alternative (4) offers three time limits (20-year, 50-year, or indefinite) for the military withdrawals. Those timeframes could apply to the existing 2.9 million acre NTTR in its current boundaries or to any of the proposed new (3A, B, C) withdrawal alternatives and would begin up-on the expiration of the existing withdrawal period scheduled to end November 5, 2021.

Alternative (5) is the No Action Alternative. It would return NTTR lands to the Department of the Interior when the currently legislated withdrawal expires November 5, 2021.

Speaking on behalf of the U.S. Fish and Wildlife Service, Desert National Wildlife Refuge Complex Project Leader, Christy Smith said, "We strongly support the Air Force Mission, but are concerned about any proposal that could diminish our ability to manage wildlife and their habitats or would decrease or inhibit public access in any way. We want to limit military expansion into Desert National Wildlife Refuge."

Alternative 3 and its sub-alternatives, particularly 3C, will strip 227,027 acres from the Desert National Wildlife Refuge, mostly from the Sheep Range. All public access will

CONTINUED ON PAGE 21

CONSERVATION UNDER ATTACK

CONTINUED FROM PAGE 2

judicial review in federal courts.

- It allows logging of old-growth forests in Oregon and Washington, thereby destroying the habitat of the threatened northern spotted owl and other at-risk species.
- The Cascade-Siskiyou National Monument spanning Oregon and Northern California would lose its designation as a national monument and fall prey to logging.

The House passed this bill on November 1, 2017. It was received in the Senate and referred to the Committee on Agriculture, Nutrition and Forestry on November 2, 2017.

H.R. 3270 Historic Routes Preservation Act (Cook – CA) (Senate version S. 468 – Flake – AZ)

Would allow any state, county, political subdivision, or other specified parties to file a claim (or notice of intent to file suit) for vehicular right-of-way within the 25-year period beginning on the date of enactment of the bill. Overwrites long-standing state and federal case law concerning the nature, validity, and scope of RS 2477 rights-of-way (see footnote)*, allowing claimants to gain title to untold thousands of rights-of-way across public lands, regardless of their validity under RS 2477. Drastically lowers evidentiary burdens and fundamentally redefines the law surrounding RS 2477, so as to rubberstamp RS 2477 claims. Specifically allows claims in wilderness study areas, areas of critical environmental concern, and lands with wilderness characteristics.

H.R. 3543 Sage-Grouse and Mule Deer Habitat Conservation and Restoration Act (Stewart – UT) (Senate version S. 1417 – Hatch – UT)

Would require the Department of the Interior (DOI) to develop a categorical exclusion from environmental review for “covered vegetative management activities” that are carried out to establish/improve habitat for greater sage-grouse and mule deer, thus providing the ability to increase oil and gas development and cattle grazing in existing sage grouse habitat and increase opportunities for hunters. “Covered” activities include: removal of juniper trees, piñon pine trees, and other conifers of any age; mechanical piling and burning; use of herbicides, pesticides, or biological control agents; installation of new fencing; and construction of temporary roads.

H.R. 3548 Border Security for America Act (McCaul – TX)

Would allow Customs and Border Protection to utilize federal lands (including wilderness, wilderness study areas, Areas of Critical Environmental Concern, California Desert National Conservation Lands, and other conservation areas) that are within 100 miles of the border and would provide \$10 billion for the deployment and construction of tactical infrastructure and technology, including walls, fencing, technology, air assets, and other barriers.

H.R. 3593 Securing Our Borders and Wilderness Act (Johnson – LA)

Would amend the Wilderness Act to allow U.S. Customs and Border Protection, subject to approval by DOI, to gain access to structures, use motor vehicles and aircraft, deploy temporary infrastructure in “emergency situations” (without defining “emer-

gency”) and to construct and maintain roads and fences within Wilderness areas.

H.R. 3668 Sportsmen’s Heritage and Recreational Enhancement (SHARE) Act (Duncan – SC)

Would virtually eviscerate the Wilderness Act by making the provision of opportunities for hunting, fishing, recreational shooting, and fish and wildlife management the top priority in wilderness, rather than protection of wilderness characteristics. Would allow virtually any activity that would provide fish- and wildlife-dependent recreation opportunities in Wilderness Areas, Wilderness Study Areas, lands designated as wilderness or administratively classified as wilderness-eligible, suitable, primitive or semi-primitive areas, and National Monuments. It would exempt all of those activities from any environmental review under NEPA.

This bill was scheduled for a House vote the week of September 25, 2017, but the vote was indefinitely delayed because of the shooting in Las Vegas (because the bill also makes it easier to buy, sell, and possess a silencer).

H.R. 3990 National Monument Creation and Protection Act (Bishop – UT)

Limits the Antiquities Act to “object or objects of antiquity” instead of “historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest.” These are defined narrowly to include relics, artifacts, skeletal remains, fossils (but not fossil fuels), and buildings constructed before the date of enactment. Does not include geographic features, or natural objects (except for human or animal skeletal remains).

Creates an emergency exception where “designation is made to prevent imminent and irreparable harm to the object or objects of antiquity to be protected by the designation” that is effective for one year, which cannot be repeated, and which cannot restrict any uses allowed on the land before designated. Would allow the President to reduce the size of any national monument by 85,000 acres or less if reduction “has been reviewed under NEPA” and if reduction has been approved by the elected governing body of each county, the state legislature, and the Governor of each state where the monument is located. No national monuments would be permitted that would place non-federal property within the external boundaries of the monument without express written consent of the property owner. “Land” in monuments would not include submerged land or water (so presumably no marine monuments), and there would be no federally reserved water rights for monuments.

The bill deletes the “smallest area compatible” language and creates new size-based classifications for monuments and rules for each:

- Under 640 acres: no restrictions.
- Between 640 and 5,000 acres: All exterior boundaries of the monument must be at least 50 miles from the closest exterior boundary of another national monument. Interior or Agriculture Secretary must “review under NEPA.”
- Between 5,000 and 10,000 acres: All exterior boundaries of the monument must be at least 50 miles from the closest exterior boundary of another national monument. Interior or Agriculture Secretary must prepare an EA or EIS under NEPA.

ILL-ADVISED NATIONAL MONUMENT REVIEW

CONTINUED FROM PAGE 3

- Between 10,000 and 85,000 acres: All exterior boundaries of the monument must be at least 50 miles from the closest exterior boundary of another national monument. Must be approved by the elected governing body of each county, the state legislature, and the Governor of each state where the monument is located. (Oddly, there is no NEPA requirement here).
- More than 85,000 acres: not permitted.

Representative Rob Bishop introduced this bill on October 6, 2017. It was immediately approved by the House Natural Resources Committee (October 11, 2017) which is chaired by Rob Bishop. Representative Bishop was recently quoted as saying that this bill is unlikely to go before the House for a vote until the new year, but it is clear that he is still making this bill one of his priorities.

S. 1757 Building America's Trust Act (Cornyn – TX)

Would prohibit the U.S. Departments of the Interior and Agriculture from impeding, prohibiting or restricting Customs and Border Protection (CBP) access to federal lands within 100 miles of the border and exempts CBP from a myriad of laws, including many environmental and wildlife acts.

For more details or to see updates on the status of any of the bills mentioned in this article, visit www.calwild.org/defense.

*RS 2477 was enacted in 1866 to grant rights-of-way across federal lands to prospectors and homesteaders. Congress repealed RS 2477 in 1976 when it passed FLPMA, but provided that valid existing rights established prior to 1976 would be recognized if the terms of the grant were met. Opponents of FLPMA began using RS 2477 to claim faded two-tracks, cow paths, and wash bottoms as “highways” that, if developed, could disqualify lands from wilderness eligibility and other protections.

Linda Castro is the Assistant Policy Director for the California Wilderness Coalition (Cal-Wild). She's a recovering attorney who doesn't miss her old job and who loves working to protect California's last remaining wild places. When not working, Linda spends her time hiking, camping, exploring, and reading.

well. Regardless, California stands ready to respond strongly and in solidarity with any impacted monuments.

In all things, lack of transparency, lack of process, confusion, and shadow games are the modus operandi of President Trump. Secretary Zinke's monument review appears to be no exception to the rule. It has been suggested that the President's intentions are partly to tire the conservation community. The White House clearly feels no urgency to provide a conclusion to this review and certainty to the American people. The President and/or his advisers likely also recognize that executive action – which would be based on an interpretation of powers provided by the Antiquities Act that is widely considered false – will be immediately contested in court.

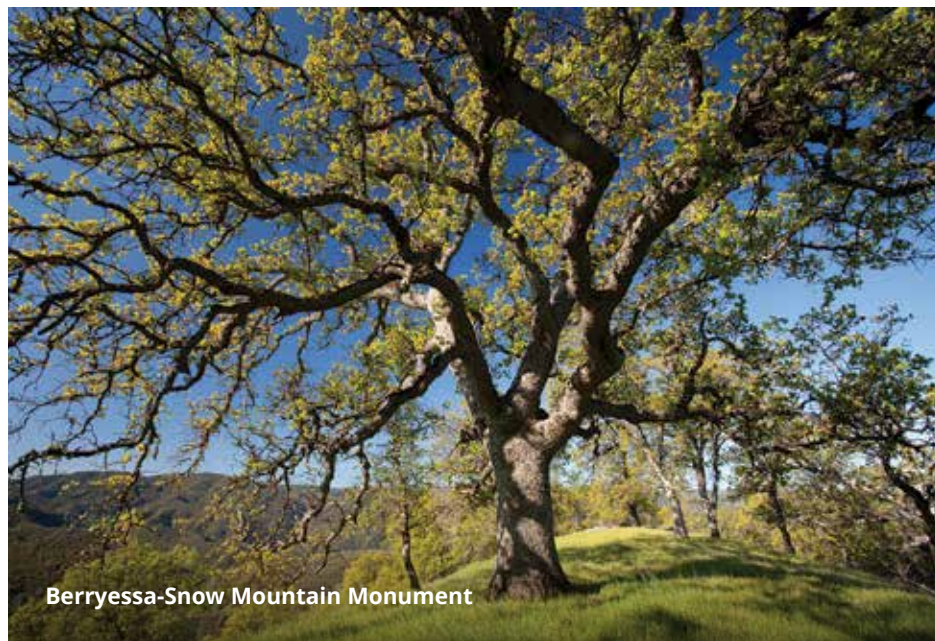
That said, it is important to remain engaged and resilient as this fight with the Administration drags out, and as Congress takes the reins with bad bills, riders, and other insidious legislative measures.

We have already seen the first steps in Congress to undermine our public lands by dismantling the Antiquities Act. This measure, introduced by Rob Bishop is H.R. 3990 – the National Monuments Creation and Protection Act (otherwise known as the No New Parks bill). As Chairman of the House Natural Resources Committee, Rep. Bishop has authority over which bills advance or stall in the Committee. H.R. 3990 skipped a hearing and went directly to markup, where it was voted through along party lines.

Recently, Rep. Bishop announced publicly that the bill would not appear for a vote on the House floor until 2018, suggesting that it will move forward. Conflicting information suggests Rep. Bishop may have actually been indulging in wishful thinking. However, even if H.R. 3990 does not advance as an intact, stand-alone bill, its provisions may find their way into other “must pass” bills.

It is imperative that we leverage social media to hold Members of Congress accountable for bad bills and bad votes that undermine public lands protections. It must be clear that this is an issue their constituents are watching. And it is imperative that we do not assume or suggest that any monument is “safe” by omission.

Mariana Maguire is the Southern California Associate Director for Conservation at the Conservation Lands Foundation, working primarily on developing and leading strategic campaigns in the California Desert to expand, restore, protect and defend BLM's National Conservation Lands. She lives in Joshua Tree and works closely with a wide range of local community and grassroots partners.



Berryessa-Snow Mountain Monument

BOB WICK

BY ALYSSA BRAVO AND ISAAC OTERO

BRINGING ENVIRONMENTAL CHANGES

ONE YOUNG MIND AT A TIME

What is the next step in addressing environmental issues in our world today? Comite Civico Del Valle* believes that involving the youth will be beneficial. This is one of the reasons why Comite Civico Del Valle (CCV) started the Environmental Health Internship that we have been fortunate to participate in. Comite came to our high school to promote this internship and also gave a presentation on IVAN, a community network that Identifies Violations that Affect Neighborhoods.

Alyssa Bravo

I wanted to participate for many reasons, and one of them would be because I thought the internship would help on applications for college and resumes. Besides that I also find environmental issues today interesting, and I wanted to know more on how I can help. We live on this earth, and it is frightening to know that it has been getting worse as shown by the hurricanes and fires that have happened. So when a representative from Comite Civico Del Valle, Mariana Claustro, came to my class to present the opportunity, I knew immediately I wanted to sign up. After the presentation she asked who was interested in the internship and handed those individuals an application. On the application it asked why you wanted to participate, do you have any extracurricular activities, and more. I filled it out and gave it to Ms. Claustro directly. She said that only ten students would be selected, and I am grateful for being one of those students.

Isaac Otero

I found out about the Comite Civico Del Valle health internship when helping at the bi-weekly food drive for farm workers affected by the drought. I overheard a few friends talking about the internship, and I asked what it was about. After talking to one of the ladies involved in the internship, I instantly knew I wanted to be involved in the program.

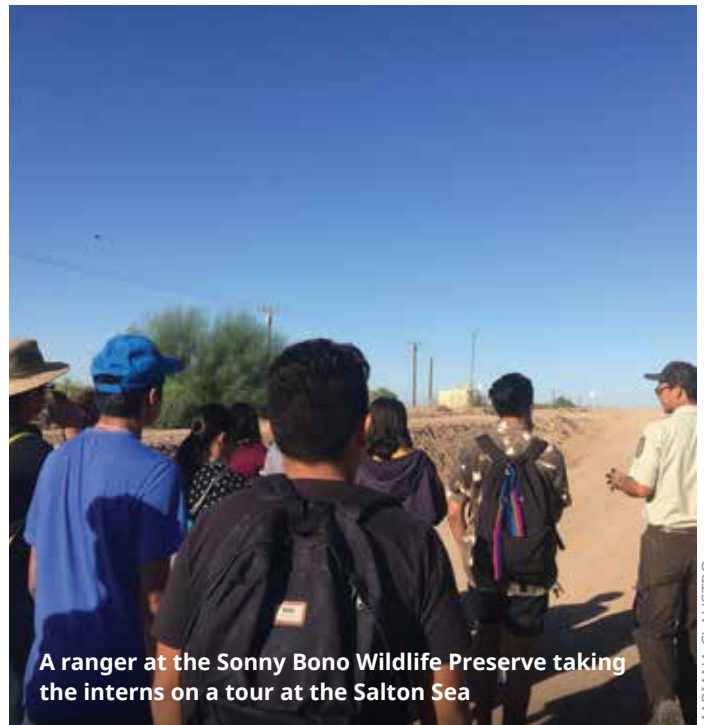
All my life since I was a kid, my life had to do with the environment from going out and fishing to biking around my hometown. Recently as I had gone out fishing, I saw how much people didn't care about the environment around them – with all the trash scattered around. By joining this internship I thought I could be informed and help more. So later that same Monday, I applied, and luckily I was accepted.

The Program

Basically how the internship works is that the students meet every Saturday from 9 am to 12 pm for about a three month period. We are expected to attend all of the meetings, but sometimes

we are able to miss one if it is for a good reason such as taking the ACT. When it first started we mainly learned some aspects of air pollution that we needed to know such as what are PM 2.5 and PM 10, which are small particles that get deep into our lungs. They told us from the get-go that we would need to present on air pollution and the Community Air Monitoring Network on the IVAN site. We learned important facts about air pollution, that it can help cause dementia, cancer, heart disease, etc. The following meeting we watched videos on how to present well and what makes a intriguing presentation.

Another video that we watched and discussed as a group was on the impact of the Salton Sea on the Imperial Valley. The Salton Sea is receding, and if it continues to recede, the fine particles on the exposed seabed will be picked up by the wind and travel, causing tiny particles to get deep into our lungs when we breathe. Learning this made us happy to learn something new, but sad that it is happening. For one of the meetings, we visited the Salton Sea to see what all the commotion was about. "When we went, I [Alyssa] was surprised to see how much dirt there was



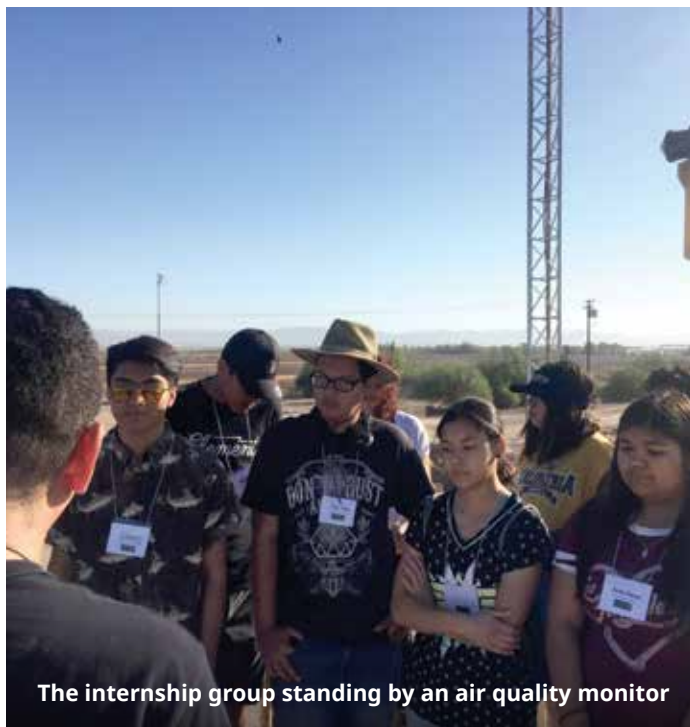
MARIANA CLAUSTRO

instead of water. When I heard that a lot of fish were dying in the Salton Sea, I thought of the saying, 'There are plenty of fish in the sea,' and then realized that, no, there really isn't."

In later meetings we had speakers taking their time to talk to us. One speaker was an environmentalist lawyer that spoke about how we can further our interest for the environment and how there are all kinds of majors pertaining to the environment. He also spoke a little about himself and what issues we have today. The editor of the *Desert Report*, Craig Deutsche, came as well and offered us opportunities to spread the word about what we are doing. We focused, practiced, and went over the standard presentation that we will be presenting in many places, such as our school, possibly the Imperial Valley mall, and any other places that we have came up with.

The objective of this internship is to inform the Imperial Valley Community about ways to protect their health and their loved ones. There are a lot of people with asthma in the Valley, and the IVAN website could be helpful when deciding what outside activities to do that won't cause their condition to worsen if the air quality is bad that day – or even those who don't have asthma. The goal is to open the community's eyes to the issues and how we can be involved and informed citizens. The staff of Comité Civico Del Valle and its director, Luis Omeldo, hope this internship can bring changes to the valley. When the State sees people of the community caring and demanding change, they make them. That is one of the reasons that Comité Civico has sponsored several environmental justice summits. There are legislators, students, and other community members that attend. These Environmental Justice summits include the officials that could make beneficial changes in our community. We will be attending one

CONTINUED ON PAGE 22



The internship group standing by an air quality monitor

MARIANA CLAUSTRO

THANK YOU

There have been many significant contributions for the printing expenses of *Desert Report* in the past year.

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Many individuals have also contributed to *Desert Report* during the past nine months, and their support is both essential and appreciated. A sponsor is a donor of \$100+. A contributor is a donor of less than \$100.

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A. DOWBROWSKI, CREATIVE COMMONS

BY LAURA CUNNINGHAM

AVIAN-SOLAR INTERACTIONS SYMPOSIUM

DECISIONS BASED ON SOUND SCIENCE

Land managers must balance the desires of developers wishing to build on public wildlands with the need to conserve natural communities, wildlife, and rare species. Good decision making is critically dependent on understanding how biodiversity and landscapes are impacted by new technologies and policies, including large-scale renewable energy production on public lands. *These decisions need to be science based.*

This August 16, Basin and Range Watch attended a Technical Symposium on Avian-Solar Interactions in Sacramento, California, organized by the Collaborative Working Group of federal and state government agencies. The working group strives to produce better understanding of avian-solar issues and to develop an Avian-Solar Science Coordination Plan for future research to support agency decisions regarding utility-scale solar development (see more at the website <https://tinyurl.com/y992wwwj>).

These studies are increasingly important as large-scale solar projects blanket the California and southern Nevada desert with still more in review – such as the Palen Solar Photovoltaic Project, which could cover over 4000 acres with reflective panels in Chuckwalla Valley, California.

At the symposium, Todd Katzner of USGS said the goal was to understand population-level effects of solar projects on birds. He admitted that we are a long way from that goal. Collection of bird mortality data has not yet been standardized – for example, how often are facilities using rigorous study designs, reference sites, and searcher bias correction? Katzner pointed out that only 6% of solar and wind project surveys estimated the *probability of detection of carcasses* by surveyors. Access to data by independent



The Technical Symposium on Avian-Solar Interactions

LAURA CUNNINGHAM

scientists was also an issue. Therefore, assessing the ecological effects of solar projects has been difficult so far.

Wally Erickson of WEST Inc., an environmental and statistical consulting firm, explained that at projects like Desert Sunlight Solar Farm in Riverside County, 20-45% of the solar arrays were searched by walking through the rows, and 25-100% of chain-link fences were searched by driving. The solar field was searched two, three, or four days per week. Carcass persistence trials were done, as well as searcher efficiency trials, game cameras were set up, and estimators for missing carcasses were run. But scavengers such as ravens began to learn to follow surveyors in some cases to dine on dead birds.

At California Valley Solar ranch in Carrizo Plain, Kern County CA, the most common deaths were mourning doves (202), horned larks (99), western meadowlarks (31), and burrowing owls (7) in a little over one year.

Sometimes claims are made that bird mortality on solar projects may be no greater than the natural background rate on undisturbed deserts. Amy Fesnock, Threatened and Endangered Species Biologist for the California office of Bureau of Land Management, designed a brilliant scientific study to address this question. Her study piggy-backed on extensive and well-vetted line-distance surveys that have been used in the California Desert to estimate the Federally threatened Agassiz's desert tortoise numbers and trends. In these studies, a twelve kilometer-square transect is walked by trained surveyors who look for tortoises and record the perpendicular distance of tortoises from the transect line. Transects are randomly placed in desert tortoise conservation management areas, and a statistical analysis of the data is used to estimate populations. In the study conducted by Fesnock, the biologists were trained to look for both tortoises *and* fallen birds.

To estimate natural avian mortality, 453 transects were walked by biologists from March to May in 2015 in a variety of natural areas: the Fremont-Kramer Area of Critical Environmental Concern (ACEC), the Superior-Cronese ACEC, the Ord-Rodman ACEC, the Chuckwalla ACEC, the Pinto Mountains, the Chocolate Mountains, and Joshua Tree National Park. These surveys covered thirty-seven square miles of relatively natural desert, walking and searching the ground.

In all this survey effort, only six avian mortalities were found: one adult red-tailed hawk, apparently killed by a great-horned

Sometimes claims are made that bird mortality on solar projects may be no greater than the natural background rate on undisturbed deserts. Amy Fesnock, a biologist for the California office of Bureau of Land Management, designed a brilliant scientific study to address this question.

owl, as it lay below an owl nest; one juvenile red-tailed hawk; one rock wren that was apparently predated by a loggerhead shrike, as it was preserved on a shrike perch impaled on a cactus; and three feather spots of unknown species.

This is far, far less than the avian mortality rate on solar projects. The desert *background* mortality rate determined from line distance sampling in 2015 was 0.024 birds/acre/year. But on three unnamed *solar projects*, Fesnock explained that the avian mortality rate increased to 1.7 birds/acre/year, 0.4 birds/acre/year, and 0.6 birds/acre/year.

At Desert Sunlight Solar Farm in Chuckwalla Valley, California, Erickson reported that 26 grebes and 18 coots were killed in one year. Phalaropes and white pelicans have also died at solar projects, but these numbers were not given. There were few signs of collision, and so apparently the waterbirds landed and could not take off without water. Erickson said the lake effect of the solar fields needed more study.

Scientists are just beginning to research the lake effect hypothesis. Birds like grebes and loons may be attracted to the reflective glossy surfaces of photovoltaic solar fields in the desert basins that appear like lakes. They land but are unable to take off again without water. Many dehydrate and die.

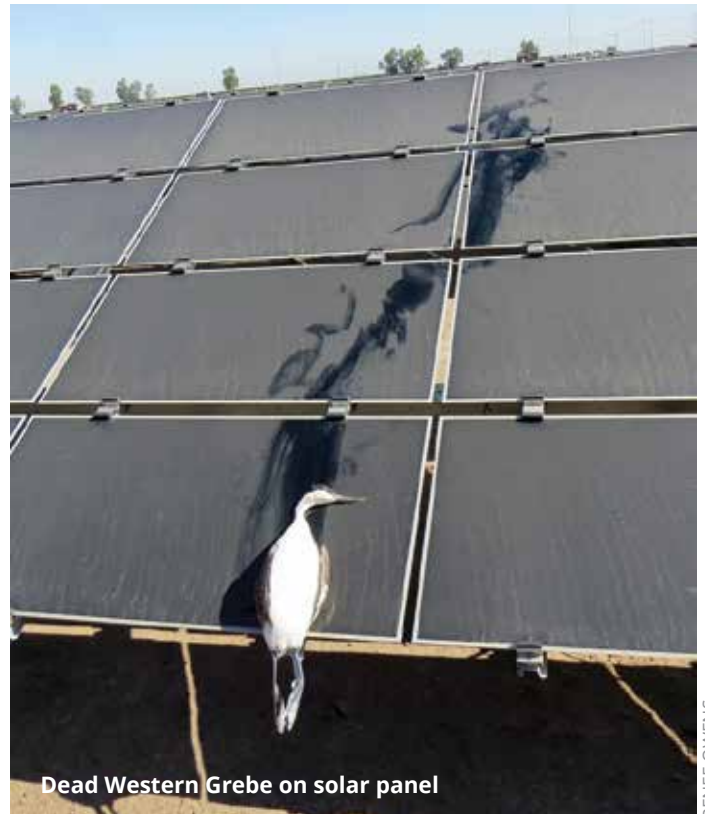
Robb Diehl of USGS discussed how polarized light bouncing off the panels may be an attractor along with the landscape con-

text of the solar projects. Radars have tracked eared grebes departing Great Salt Lake in Utah at dusk, passing east of Las Vegas, Nevada, six hours later, and headed for southern California and possible interactions with lake-like solar fields.

In a private conversation, Basin and Range Watch talked with avian biologist Dr. Esteban Fernandez out of Purdue University. He hypothesized that visual receptors in bird eyes may indicate alternative attractors that sense the color or brightness of solar panels and mirrors. Based on anatomical studies, birds can see colors we cannot see and have organelles that can detect certain colors much better than human eyes can. He said no one has yet studied how humans have modified the avian visual landscape and how birds react as they fly over the desert on migrations or during movements.

Bird biology and ecology need much more research. Bird survey techniques, for both species diversity in the desert and mortality rates on solar projects, are getting better year-by-year. But every project should use the same standardized methods in reporting numbers for scientists to analysis. And the public should continue to be a watchdog to insure that science is utilized consistently in resource management and renewable energy development.

Laura Cunningham is Executive Director and Co-founder of Basin & Range Watch, a 501(c)3 nonprofit organization dedicated to conservation of the Mojave, Colorado, and Great Basin Deserts. She has worked in the field of wildlife and fishery biology and is author of A State of Change: Forgotten Landscapes of California (Heyday, 2010).



Dead Western Grebe on solar panel

RENEE OWENS

DESERT UPDATES

WATER FOR PROFIT: CADIZ INC. IS STILL TRYING

The controversial Cadiz water mining project has hit a series of significant obstacles in the last few months, and the latest may offer an opportunity for California to stop the Trump-backed water project for good.

Cadiz, which hopes to pump an average of 50,000 acre-feet of water a year from beneath Mojave Trails National Monument, plans to build a 43-mile pipeline along a little-used railroad right of way to connect its pumps to the Metropolitan Water District's aqueduct east of 29-Palms. The company contends that an obscure 1875 railroad law exempts its destructive project from federal environmental review. In October, reversing a previous Obama-era decision, the Trump administration formally agreed with Cadiz and said the company wouldn't be required to draft an Environmental Impact Statement for its pumping project. A legislative attempt to force environmental review of the project, AB 1000, failed to pass out of the State Senate Appropriations Committee in September.

But that didn't mean Cadiz was free to start up the bulldozers. In September, in response to a query by U.S. Senator Dianne Feinstein, the Metropolitan Water District (MWD) said it wasn't sure it had room in its aqueduct for Cadiz's water. Cadiz had not approached MWD to discuss either that issue or the carcinogenic contaminants like chromium 6 and arsenic found in Cadiz's water. As Cadiz's plan relies on using the MWD aqueduct, the correspondence with Senator Feinstein introduced a serious note of uncertainty as to the project's viability.

That uncertainty was reinforced a week later, when it was revealed that Cadiz's pipeline would cross a mile-long strip of land owned by the State of California. The State Lands Commission (SLC), which manages the land in question, sent Cadiz a letter pointing out that the 1875 railroad law applies only to federal lands; that Cadiz must apply for a lease for its pipeline from the SLC; and that the Commission may require further environmental review before deciding whether to grant the lease.

If SLC decides not to grant the lease, Cadiz's pipeline will have to cross BLM land, triggering federal environmental review of the project's effects on the Mojave Desert's ecosystems, including numerous springs and seeps within the basin above the aquifer that Cadiz would tap.

OFF ROAD VEHICLE NEWS

On October 3, 2017, Governor Brown signed Senate Bill 249 into law. Written by Senator Ben Allen (D-Santa Monica), it permanently reauthorizes the State Parks OHV program which was due to expire at the end of 2017. It received qualified support from most, but not all, environmental organization. One glaring omission was any requirement that all off highway vehicles carry easily visible license plates.

The following material is from the website of the California Native Plant Society:

"Over time, damage from OHV use has outpaced California's efforts to repair and regulate it," says CNPS Conservation Director Greg Suba. "We're thankful to Senator Allen and his staff for helping us take an important first step to improve conservation standards without penalizing responsible riders."

SB 249 will put into law a number of important environmental protection measures, including:

- Formally recognizing natural and cultural resources protection as a priority for the OHV Program
- Incorporating best available science into the Program's planning, monitoring, and management
- Preventing unauthorized OHV trails from being grandfathered into the State Parks trail system
- Requiring a full California Environmental Quality Act (CEQA) review process for new trails
- Increasing repair and restoration opportunities through the OHV Grants Program
- Revisiting the Commission's leadership through a stakeholder review process and a 5-year sunset

ALERT: NAVY TO RELEASE DRAFT EIS ON ITS 650,000-ACRE PUBLIC LAND WITHDRAWAL IN NORTHERN NEVADA

The Navy's Fallon Range and Training Center (FRTC) plans to release a Draft EIS, for its massive base expansion east of Reno, Nevada. Though no date has yet been published on their website, the report could be released as early as January 2018.

The Navy's highly controversial 650,000-acre expansion into public lands, which met with opposition from communities across Nevada, will significantly impact the Pony Express National Historic Trail; Stillwater National Wildlife Refuge; Fallon Nation-

al Wildlife Refuge; Stillwater Range, Job Peak, and Clan Alpine Wilderness Study Areas; and the entire Monte Cristo Mountains range west of Gabbs Valley. Expanded bombing ranges will adversely affect several rural Nevada counties and at least a half dozen wilderness study areas outside the proposed expansion perimeter. Public access to some of Nevada's most beautiful landscapes will be lost, and wildlife will be impacted, taking a toll on Nevada's tourism dollars.

At last year's public meeting in Gabbs, Nevada, FRTC Base Commander Carroll said, "The Navy doesn't like to lose." The strategy in addressing the local communities, at least during public meetings, was that of divide and conquer. No open mic public comment was allowed at any of the public scoping meetings, effectively quashing any unity in community opposition. Initial presentation maps were void of scale, detail, and lacked landmarks, making it impossible for the public to understand the massive scale of the expansion. The Navy identified and worked only with 'stakeholders' and excluded individuals such as ranch owners, farmers, and those Nevadans holding inactive but patented mining claims.

In February 2017, the Navy released its Summary Review based on information gathered during the 2016 public scoping period, which can be found here: tinyurl.com/yc2pher6.

Please continue to check the FRTC website for updates and potential Draft EIS release date: <https://frtcmodernization.com/>

NATIONAL PARK SERVICE FEE-INCREASE MISSES THE MARK

November 23rd marked the end of the 30-day comment period for public comments on the controversial proposal to significantly increase the entrance fees for seventeen of America's most visited National Parks during their peak visitation seasons. This rule change, which has been proposed as a way to deal with the National Park Service's deferred maintenance backlog, undermines decades of work to include youth and new audiences to our National Parks. It has left park-lovers and gate-way community business owners alike scrambling to understand what the effects would be.

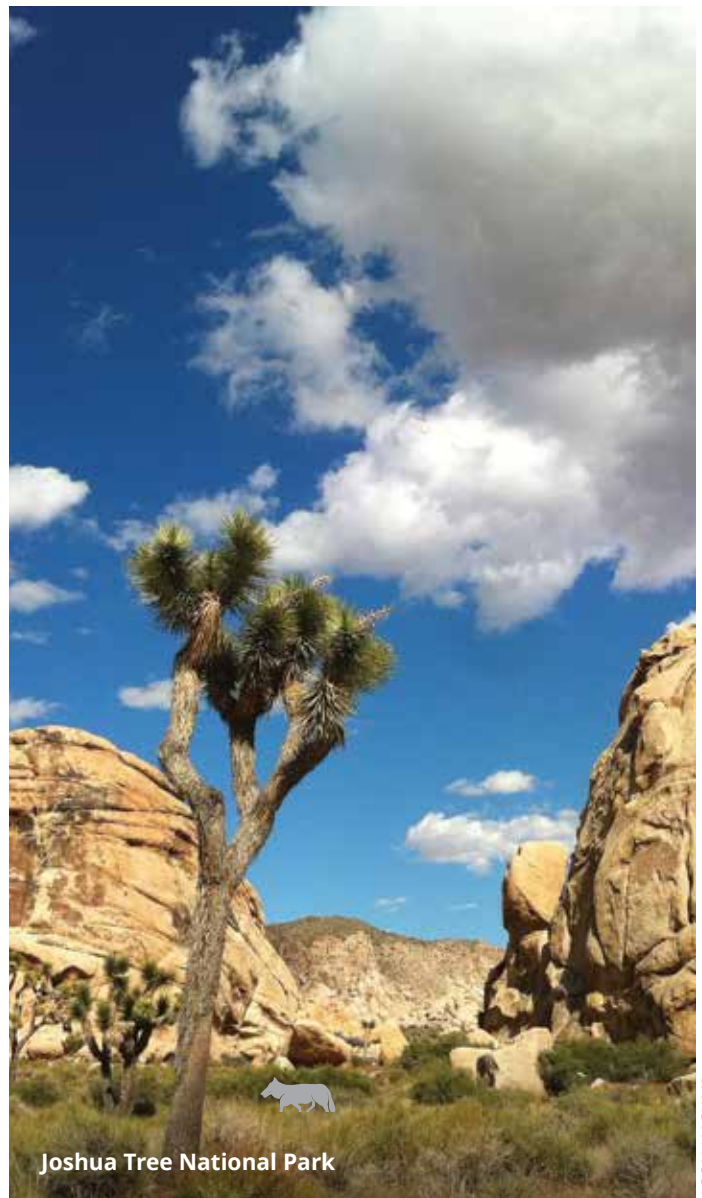
It is important to note that 118 park units do not currently charge an entrance fee, and that all other park entrance fees, besides the seventeen most visited, would remain at their current prices for now. To bring this into focus, for an individual entering Joshua Tree, the entrance fee would jump from \$12 to \$30. For a vehicle entering the park, the price would jump from \$25 to \$70. The parks that are included in this fee hike include: Denali, Grand Canyon, Yellowstone, Zion, Rocky Mountain, Grand Teton, Glacier, Bryce, Arches, Canyonlands, Shenandoah, Acadia, Yosemite, Sequoia/Kings Canyon, Joshua Tree, Mount Rainier, and Olympic. This proposal comes on the heels of a fee increase process affecting over 100 National Parks in 2015-2016. That process adjusted park fees by a more modest amount, generally \$5-\$10 dollars, accepted seven months of comment and feedback, and featured multiple public meetings. The current process pales in compari-

son, only offering up 30 days for comment and not providing public meetings.

The stated purpose of the proposed rate hike is to generate revenue to address the maintenance backlog. We agree that the backlog is a hugely important issue that needs to be addressed. We recognize that this process is not the solution. A better option currently exists in congress. The bi-partisan National Parks Legacy Act (S.751) would create a dedicated fund to address the 12-billion-dollar maintenance backlog over the next thirty years using royalties from oil and gas leasing.

Please consider taking action. Calls and letters to elected officials and the Administration are helpful. If you only do one thing, visit this link to let the Department of Interior know that you oppose this fee hike: tinyurl.com/y7cb4zul

From David Lamfrom, National Parks Conservation Association



OUTINGS

CALIFORNIA & NEVADA REGIONAL CONSERVATION COMMITTEE DESERT COMMITTEE

Sierra Club outings are open to non-members unless otherwise noted. The Sierra Club requires participants to sign a standard liability waiver at the beginning of each trip. To read the liability waiver before you choose to participate, go to <http://www.sierraclub.org/outings/chapter/forms>, or call 415-977-5528 to request a printed version.



For any questions concerning an outing, contact the leader. For questions about Desert Committee outings in general, or to receive the outings list by e-mail, please contact Kate Allen at kj.allen96@gmail.com or 661-944-4056. For the most current listing, visit the *Desert Report* website at www.desertreport.org and click on outings.

The Sierra Club California Seller of Travel number is CST 2087766-40. (Registration as a seller of travel does not constitute approval by the State of California.)

Activities marked "Non-Sierra Club" are not sponsored by the Sierra Club. The Sierra Club has no information about the planning of these activities and makes no representations or warranties about the quality, safety, supervision, or management of such activities. They are published only as a reader service because they may be of interest to the readers of this publication.

DEATH VALLEY TOUR

Feb. 26-March 1, Monday-Thursday

The trip will begin in Shoshone near Death Valley at noon for a tour of the historic community and then primitive camping in the area. The next day we will go to China Ranch and hike in Amargosa Canyon. The third day we will drive through the heart of Death Valley visiting scenic sites and hiking some of the beautiful canyons. We will camp that night in the Furnace Creek area. The last morning we will hike the dunes and then head home. Details will be available later. To sign-up contact Carol Wiley at desertlily1@verizon.net or call 760-245-8734. Mojave Group/CNRCC Desert Committee

JOSHUA TREE NATIONAL PARK LATE WINTER WEEKEND

February 28-March 4, Wednesday-Sunday

We will visit Joshua Tree National Park when temperatures are

cooler and wild flowers may be blooming. During our stay, we may explore palm oases, boulder areas, and desert canyons or climb peaks within the Park. We have the campsites from 12pm Wednesday until 12pm on Sunday. Hikes may require walking over rocky trails and some areas of rock scrambling off trail. Maximum hiking distance is 10 miles with up to 2000 feet of elevation gain. Some vehicle travel on dirt roads may be required. Cost is \$30 per person

and includes 4 nights of camping. \$20 deposit required to confirm participation. There is an additional Park entrance fee of \$25 per vehicle. We may also take a guided tour of the historic Keys Ranch (\$10 per person extra). Group size limited to 18 people. Email or call leader for reservation information. Leader: Rich Jurich, rich.sierraclub@pacbell.net, 916-492-2181. Sacramento Group/CNRCC Desert Committee

TOUR OF MOJAVE NATIONAL PRESERVE

March 20-23, Tuesday-Friday

The outing will begin on Tuesday at noon at Sunrise Rock campground on Cima Road. That afternoon we will hike Teutonia Peak for scenic views of the area. (3 miles rd. trip.) The next day we will drive to the Rock House and hike the loop trail (1 mile) and then go the Midhills to camp. Thursday we will hike in the area. Friday we will go to Mitchell's Cavern for a tour of the famous caverns at 11:00 am. Details will be available later. To sign up contact Carol Wiley at desertlily1@verizon.net or call 760-245-8734. Mojave Group/CNRCC Desert Committee

NON-SIERRA CLUB EVENT

MOJAVE NATIONAL PRESERVE RESTORATION EVENT Friday, February 9, 2018

Join the California/Nevada Desert Committee and the National Park Service for a restoration project in the Mojave National Preserve (MNP) on February 9, one day before the Desert Committee meeting on Saturday and Sunday. We will gather on Friday at 8:45 am, work through the afternoon, and adjourn in time to reach Shoshone for the dinner hour. Our primary task will be to remove "culturally planted species" (tamarisk, fan palm, sunflowers) at the Desert Studies Center, Zzyzx. Contact Sid Silliman for project details, directions, camping options, and to RSVP (gssilliman@cpp.edu). Don't miss this annual, pre-Shoshone service opportunity.

DESERT FORUM

If you find *Desert Report* interesting, sign up for the CNRCC Desert Committee's e-mail Listserv, Desert Forum. Here you'll find open discussions of items interesting to desert lovers. Many articles in this issue of *Desert Report* were developed through Forum discussions. Electronic subscribers will continue to receive current news on these issues — plus the opportunity to join in the discussions and contribute their own insights. Desert Forum runs on a Sierra Club Listserv system.

TO SIGN UP

Signing up is easy, Just send this e-mail:

To: Listserv@lists.sierraclub.org

From: Your real e-mail address [very important!]

Subject: [this line is ignored and may be left blank]

Message: SUBSCRIBE CONS-CNRCC-DESERT-FORUM
YOURFIRSTNAME YOURLASTNAME

[this must fit on one line.]

By return e-mail, you will get a welcome message and some tips on using the system. Please join us! Questions? Contact Cal French, cal.french@gmail.com (805) 239-7338

NEXT DESERT COMMITTEE MEETINGS

WINTER MEETING
FEBRUARY 10 & 11, 2018

The winter meeting is a joint one with the Sierra Club Wilderness Committee. It will take place in Shoshone, CA, and will be chaired by Terry Frewin and Ann Henny.

SPRING MEETING
MAY 19 & 20, 2018

This meeting will be held at the Black Canyon group camp in the Mojave National Preserve. Chair is yet to be determined.

RENNETT STOWE, CREATIVE COMMONS

TRAGEDY BREWS FOR REFUGE

CONTINUED FROM PAGE 11

end. U.S. Fish and Wildlife Service will lose at least 95% of its current access and most of its ability to monitor wildlife within the range, as the Air Force will control all access.

Communities come together in opposition to the expansion

Between Las Vegas and Tonopah, Alamo Road is the only public north-south road from US Hwy. 95 at Corn Creek Station, to US 93, near Alamo, Nevada, and it provides the only vehicular access to the Sheep Range. If Alternatives 3A, B, and C prevail, most of Alamo Road will close. With no viable access to the Sheep Range, the area will be under Air Force control. Only a short stretch of road will remain open to the public, eastbound, from Corn Creek Station to Hidden Forest Road.

In 1936, Congress set aside 1.615 million acres for the Desert National Wildlife Refuge to protect the desert bighorn sheep. When the Air Force introduced its plan to the public in 2016, it was one of the rare times that the ranching, farming, hunting, environmental, and off-road communities came together to oppose the expansion.

The Air Force has many excellent alternatives and expanding into the Desert National Wildlife Refuge and the Sheep Range is not one. Now is the time to let Senators and Representatives know, *relentlessly*, that taking a third of a million acres from the Desert National Wildlife Refuge for the base expansion is not an option. Once the boundary lines are redrawn, the public will lose all contact with the valuable wildlife communities. Eventually, the land will change and not for the better. The Sheep Range, gem of the Desert National Wildlife Refuge will be lost forever.

Past Chairperson of the Angeles Chapter Rivers Conservation Subcommittee and Los Angeles River Task Force, Wynne Benti currently works with the Toiyabe Chapter's Public Lands Committee on military expansions and DOE projects.

TAKE ACTION

The public can comment on the Nevada Test and Training Range Legislative Environmental Statement scheduled for release in December 2017 online at: <http://www.nttrleis.com/>

Tentative public meeting dates are set for January 2018. Be sure to check the website for updated info:

Jan. 17 - Caliente, NV (Caliente Elementary School)
Jan. 18 - Alamo, NV (Pahrnagat Valley High School)
Jan. 23 - Las Vegas (Aliante Casino + Hotel)
Jan. 24 - Beatty, NV (Beatty Community Center)
Jan. 25 - Tonopah, NV (Tonopah Convention Center)

Tentative hours:

5:30-6:15 pm (open house/written comments)
6:15-7:00 pm (USAF presentation)
7:00-9:00 pm (hearing/verbal comments)

SALTON SEA

CONTINUED FROM PAGE 9

With any long range solution, including those that use imported water, it is certain that unless remedial actions are taken, the salinity of the Salton Sea will increase. In parallel with the proposal to import water from the Sea of Cortez, it is sometimes proposed that a parallel pipeline might carry highly saline water back to the southern Gulf. Other suggestions propose desalinization projects using either sunlight for an energy source or using electrical energy that might be generated from geothermal resources at the south end of the Sea. Desalinization also requires the disposal of the salts that have been removed. Whatever is done, it will not be simple.

Among the groups affected by the future of the Salton Sea, almost certainly those with the greatest stake are the citizens living in Riverside and Imperial Counties whose health will be directly affected by dust originating from the exposed surface of the lakebed. In Imperial County eighty percent of the population is of Hispanic origin, and twenty percent live below the federal poverty level. Questions of environmental justice are clearly involved. It would be negligent if decisions of the magnitude required were to be made by state and county agencies and without broad public participation. Meetings of the Salton Sea advisory committees are open to the public and are announced on the Task Force website.⁵ It has sometimes been said and with considerable truth: "If you are not at the table, then you are on the menu."

Craig Deutsche has been active with the Sierra Club for many years, has volunteered extensively in the Carrizo Plain National Monument. He is a member of the Air Quality Advisory Committee for the Salton Sea Task Force, and is current editor of the Desert Report.

1 http://resources.ca.gov/docs/salton_sea/ssmp-10-year-plan/SSMP-Phase-I-10-YR-Plan-with-appendices.pdf

2 https://www.waterboards.ca.gov/press_room/press_releases/2017/pr110717_salton_sea.pdf

3 https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB5

4 <http://ecomediacompass.org>

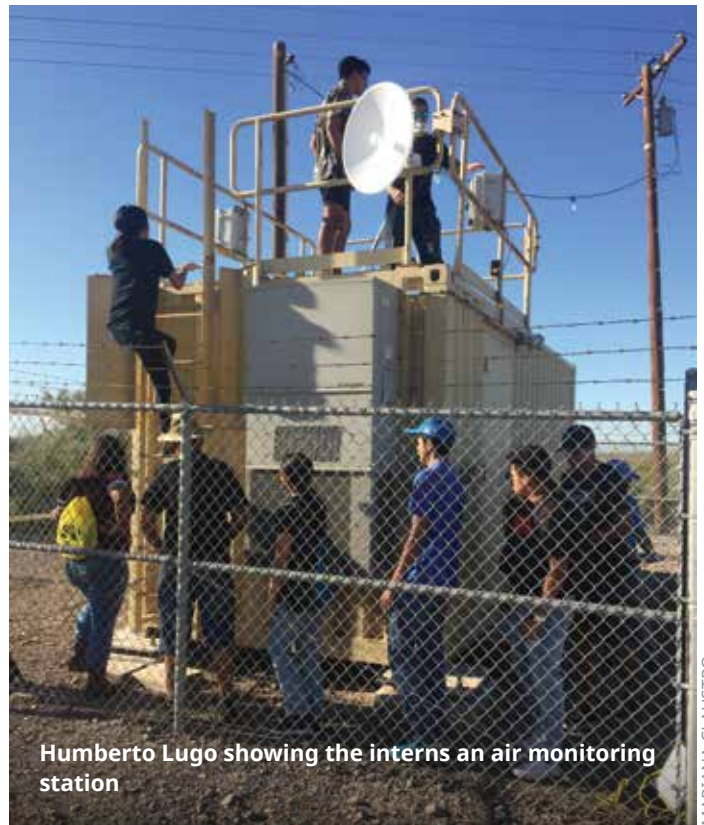
5 <http://resources.ca.gov/salton-sea/>



The Red Hill Bay Project will divert enough Alamo River water to fill over 400 acres of exposed lakebed. This will create a shallow-water-habitat destination for more than 400 bird species and help prevent dust emissions.

BRINGING ENVIRONMENTAL CHANGES

CONTINUED FROM PAGE 15



Humberto Lugo showing the interns an air monitoring station

MARIANA CLAUSTRO

or both days of the summit to see what and how we can make a change. We wish people will try to take care of their health by taking care of their environment. It is sad to know that there are individuals out there ruining our environment for money or for other reasons.

This internship has strengthened our interest in the environment. Our environment is important because if we continue polluting the air, there will be many downsides: climate change will get worse and so will our health. We hope we can make a difference.

**Comite Civico del Valle is a non-profit organization centered in Imperial County that works actively to promote the health of both the environment and people. Issues of environmental justice are foremost.*

Allysa: I am a senior at Brawley Union High School, and I have lived in Brawley for almost five years now with my grandparents who motivate me to do well in school. I enjoy drawing, running, wrestling, watching TV, and staying busy. I am interested in majoring in the sciences and becoming a pediatrician because I love kids and learning about biological processes.

Isaac: I have lived in Brawley California all my life. I don't back down from anything I set my mind on. I want to help as much people as I can, especially poorer families since that is how I grew up. In the next few years I hope to be in a UC or any college to become a neurologist which is my life goal.



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OUR MISSION

The Sierra Club California/Nevada Desert Committee works for the protection and conservation of the deserts of California, Nevada, and other areas in the Southwest; monitors and works with public, private, and non-profit agencies to promote preservation of our arid lands; sponsors education and service trips; encourages and supports others to work for similar objectives; and maintains, shares and publishes information about the desert.

JOIN SIERRA CLUB

From community issues and action to lobbying on a national level, membership helps you take action on many issues. As a member, you'll have opportunities to get involved with local chapters, as well as be part of a large national network of environmental advocates. Your voice will be heard through congressional lobbying and grassroots action. www.sierraclub.org/membership

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