

DESERT REPORT

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

SEPTEMBER 2016

SPECIAL ISSUE



THE SALTON SEA



FROM THE EDITOR



BY CRAIG DEUTSCHE

COUNTDOWN FOR THE SALTON SEA



Although *Desert Report* has consistently advocated for conservation issues, during the twelve years that I have been associated with this publication, there has never been an editorial opinion printed that advocates for action on a specific issue. The message that follows here is an exception to this policy. The future of the Salton Sea is not a partisan issue. Although there are certainly stakeholders with varying opinions, failure to address its growing problems would have serious consequences for nearly everyone. In addition to the immediately following summary, this issue of *Desert Report* also includes five articles written by persons who are, or will be, directly affected by the future of the Sea.

1. One article (Frances Nicklen) deals with air quality in Imperial County.
2. Another (Chris Schoneman) describes the value of the Sea for bird habitat.
3. An Imperial Valley farmer (Al Kalin) outlines the complexity of the distribution and uses of Colorado River water.
4. Christina Lange is a photographer who lived several years on the west shore of the Sea and writes of the beauty of the land and water.
5. Lastly, a Quechan elder (Preston Arrow-weed) writes of the cultural significance of the ancient sea for his Native American Tribe.

Do consider what is printed here, and when the time comes, please urge your government representatives to take action.

Craig Deutsche, Managing Editor

The clock began ticking in 2003 when California was then obliged to live within its allotted 4.4 million acre-feet of Colorado River water. Among the various stipulations of the Quantification Settlement Agreement was the requirement that the Imperial Irrigation District (IID) would transfer up to 367,000 acre-feet of water annually to the city of San Diego. It also required 800,000 acre-feet of Colorado River water to be added directly to the Salton Sea between 2003 and 2017. This water would be obtained by fallowing agricultural lands in Imperial County and by a variety of other water conservation measures.¹

This obligation to provide water to the Salton Sea would expire on December 31, 2017, and by that date the State of California promised to have a workable plan for preserving the Sea into the future. In 2007, the State completed an Environmental Impact Statement (EIS) which included seven possible alternatives for this preservation.² All the proposals were very expensive, running into billions of dollars. It was no surprise that the California State Legislature took no action.

It is now 2016, and without active intervention, the Salton Sea will soon be shrinking when the water from IID is no longer available. The consequences of such an occurrence are mind-boggling. The Salton Sea with its surrounding wetlands provides habitat for millions of migrating birds, habitat that is no longer available in other parts of the state. Nearly all of this would be lost by 2025 if nothing were done. Perhaps more distressing is the additional dust that would become airborne if the lakebed were exposed to the persistent desert winds. Imperial County (along with Kern County) has the highest incidence of childhood asthma in the state, a condition that is aggravated by airborne particulate matter. Other consequences that can be expected include falling property values, negative impacts to agriculture in the Imperial Valley, and loss of recreational opportunities. The Pacific Institute estimates the accumulated costs of inaction to total between 38 and 70 million dollars by 2047.³

Prodded from several directions, the State of California has formed a Task Force for



the management of the Salton Sea, and has appointed Bruce Wilcox as Assistant Secretary for the Salton Sea within the Department of Natural Resources. Details concerning the Task Force, its organization and committee structure, and its goals are given at <http://resources.ca.gov/salton-sea/> along with links to related websites.⁴ Of particular interest, a series of public outreach workshops have been held between March and August of this year to outline tentative planning and to solicit input from communities that might be affected. These meetings were held in El Centro, Calexico, San Diego, Mecca, Palm Springs, and Los Angeles, among other sites.

There are already large areas of exposed playa along the southern shore, and the first phase of the planned work is intended to address these problems immediately. The IID has conducted a number of studies concerned with airborne dust and has experimented with several means to suppress its formation: planting grasses, chemical stabilization, furrowing contours to reduce surface winds, and of course the use of water to cover the surface. Much of what has been learned in the management of dust at Owens Lake will be relevant in these efforts.

Currently there are three habitat enhancement projects planned for the south end of the Sea and several more at the north end. In one way or another, these all use fresh (but non-potable) water from the Alamo, New, and Whitewater rivers to create a series of shallow ponds that will suppress dust and also create wildlife habitat. Water from one pond will cascade to the next, to the next, and ultimately into the Salton Sea itself, becoming increasingly saline along the way. One of these projects at Red Hill Bay is ready for construction now, and several others have been approved and are in advanced planning stages. The engineering details of these plans are expected to be available to the public this autumn, and the state legislature has approved \$80 million for this work. These near term projects, and others which are being proposed, are targeted for the next three to five years. Medium range planning in a second phase anticipates more shoreline projects that will cover a much greater area. There are specific goals in terms of acres of playa to be covered and target dates for completion.

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Because there is no outlet to the Sea, water is removed only through evaporation, and this has the inevitable result of leaving dissolved salts and agricultural wastes within the shrinking Sea. For the more distant future, shoreline projects will not be sufficient as the Salton Sea continues to shrink and becomes increasingly saline. Among the five advisory committees within the Task Force, one is specifically charged with creating a long range plan. It is almost universally recognized that the future Salton Sea will be significantly smaller than it is today, although there have been several suggestions about its form. The proposal which Bruce Wilcox has tentatively presented at the public outreach meetings includes shoreline habitat projects of varying salinity, a narrow lake following inside the present shoreline with a moderate salinity, and then a central portion that is either intensely saline or else completely dry but covered for dust control.

One long range option which frequently appears in public discussions involves importing water from the Gulf of Mexico through a 100-mile pipeline. Because the Salton Sea is well below sea level, much of the transport can be effected by gravity. Difficulties with this proposal include the fact that the project lies largely within Mexican sovereignty, that it imports far more salt (from the ocean) than is found in other sources, and that the price is estimated to approach 18 billion dollars. In his presentations, Bruce Wilcox has not dismissed this possibility, but he is clear in stating that more study is needed and it will not be possible to import water from the ocean in the immediate future.

Whatever the plan, work will only proceed as funding becomes available. It is counterintuitive that the urgency for action requires that shoreline construction projects begin immediately even in the absence of an overall plan. These near-term plans have been formulated so that if changes are required in the later phases, the initial projects will remain and the work will remain valuable. Details of planning and funding are still to be worked out and will be reported in future public meetings and forums.

Progress, however it evolves, will face two obstacles.

- 1) The plan will be expensive, undoubtedly totaling a minimum of several billion dollars. Some of this money will come from a variety of Federal Agencies, some will come from bond monies already authorized within the State of California, but the greater part will have to be raised by the State Legislature.
- 2) It can be promised that none of the stakeholders will get everything that they want: farmers, health advocates, avian enthusiasts, commercial developers, or recreational advocates. There will have to be compromises. The alternative to compromise is to delay indefinitely and with catastrophic consequences. It is essential that the state should act.

Citizens in Southern California, indeed all citizens in the state, must actively insist that the legislature face the problem directly, evaluate the proposed solutions, and act to provide the money needed to maintain the Sea. In parallel, citizens must also insist that the Salton Sea Task Force (i.e. the administrative branch of state government responsible for formulating a solution) must act decisively. Whatever solution is implemented, the Task Force must accept that its decision will be controversial. But this does not excuse them from acting. We, you and I, must insist that our representatives in the government face their responsibility to manage the oncoming crisis.

References cited in this article are listed on the Desert Report website (www.desertreport.org) in the Notes section.

BY CHRISTIAN SCHONEMAN

WHY WE NEED THE SALTON SEA

FACTS ABOUT THE LAKE AND ITS CURRENT CONDITION

The Salton Sea, near California's southern border, is a GREAT place. It is home to lots of birds, a State Recreation Area, a State Wildlife Area, and a National Wildlife Refuge. It is California's largest lake. It has been a military training ground and a set for movies. NASA uses it to calibrate satellites for measuring global surface temperatures. It hosts some of the most spectacular sunsets on the continent. And it is misunderstood by many. Some are offended by occasional odors. Others wonder why we should bother with what is often called an engineering accident. There is a huge need to understand the facts about the lake and its current condition.

For millions of years wildlife of extreme southern California benefited from flows of the Colorado River, which spilled into the Salton Sink before continuing to the Sea of Cortez. Fossils up to three million years old show that at least forty species of water birds enjoyed the area. Shoreline middens of Native Americans reveal they used a rich birdlife. So this wetland is not an accident at all.

In the last hundred years, the Salton Sea, now maintained by agricultural drain water, has become even more important to birds. Annually, up to 3.5 million migrating eared grebes have feasted on clouds of pileworms. Thirty thousand American white pelicans (80% of the western continental population) have gorged on fish, and 100,000 shore birds have fattened on tons of waterboatmen, midges, and pileworms in the shallows. The Salton Sea has been the most important bird area in the Inter-mountain West and desert regions in the spring, and in the fall is second only to the Great Salt Lake. The Sonny Bono Salton Sea National Wildlife Refuge, described as "California's Everglades," has documented 424 bird species.

Birds are not the only migrants to

visit. In past decades people have visited in numbers rivaling attendance at Yosemite. Birding attracts visitors from nearly all 50 states and an average of 20 foreign countries.

But time is catching up with the Salton Sea. High evaporation is increasing salt concentration, and the productivity that has produced so much life is poisoning itself. The Sea now has 60 parts per thousand (PPT) salt concentration, compared to the Pacific Ocean at 35 PPT. Experts recognize 60 PPT as close the limit for reproduction of tilapia, the remaining game fish. Concurrently, the waste products of the abundant life in the Sea are turning into hydrogen sulfide and ammonia. Scientists have predicted this condition for decades. It happens around the world in terminal lakes. At low levels these products are of little concern, but they have been accumulating for a century, concentrated by a relentless desert sun that annually evaporates icwe five feet of water from the surface.

The tremendous quantity of living and decomposing dead fish, birds, bugs, worms, and algae are part of a natural cycle. Normally the denser layer of saltwater keeps waste products sequestered near the bottom, but strong winds can bring them to the surface. When this happens, oxygen is depleted from the entire water column, and fish cannot survive. Lots of fish are now dying at the Salton Sea. Visitors and neighbors often incorrectly associate the dead fish with pesticides and toxic chemicals they think flow in from



Viewing Platform at the Sony Bono National Wildlife Refuge

JIM POMPY

nearby agriculture. This assumption is incorrect.

In September 2012, people in Ventura County and the San Fernando Valley complained of a foul odor. Air quality officials checked their sensors deployed throughout Southern California and discovered a pattern. It came from the Salton Sea. A strong wind from the south had blown a foul odor far to the north. The Sea had burped up and gassed-off a huge release of hydrogen sulfide into the air. Some farm workers in nearby Mecca reportedly needed medical attention. This was the first such event we know of.

Receding waters have revealed a new problem: an exposed shoreline increasing about a thousand acres a year.

Odors people notice at the Sea likely result from decomposing algae that is blown ashore where it concentrates. Although such incidents are more frequent than hydrogen sulfide gas-offs, they are not common. Different species of algae provide similar events on the Pacific Coast. For some people uncommon events can, of course, make a strong impression.

A final challenge remains for the Salton Sea. It is shrinking. But even if there were sufficient water to maintain its level, accumulated nutrients would create the same condition we have today. Now, the receding waters have revealed a new problem: an exposed shoreline that is increasing about a thousand acres a year. Desert winds raise dust from these exposed shorelines into the air. It is well documented that airborne dust can trigger asthma attacks. These fine particles also contain salt and sulfides that were once dissolved in the water, and these also constitute a threat to the mucous membranes of humans, to other wildlife, and for the growth of nearby crops.

We have predicted the impacts of the declining Salton Sea, and we had a possible glimpse of it this spring. I usually get annoyed when the wind blows. Dust gets everywhere. My eyes water. This spring seemed to be windier than normal. The Sea churned with waves, mixing the hydrogen sulfide into the water column. Along the southeastern shore, where I work, we noticed a fairly continuous tilapia die-off, all of the fish about seven inches long. Did this mean reproduction had failed? Maybe – at least in this part of the Sea.

Then, over the weeks, we noticed our familiar eared grebes washing ashore, dead or dying by the hundreds, emaciated. We submitted some for expert analysis and were not surprised: no obvious disease. The churning of the water had likely reduced their food supply of pileworms and barnacle larvae to starvation levels. They would not make it to their next stop in Mono Lake or Great Salt Lake. My annoyance at the wind was justified.

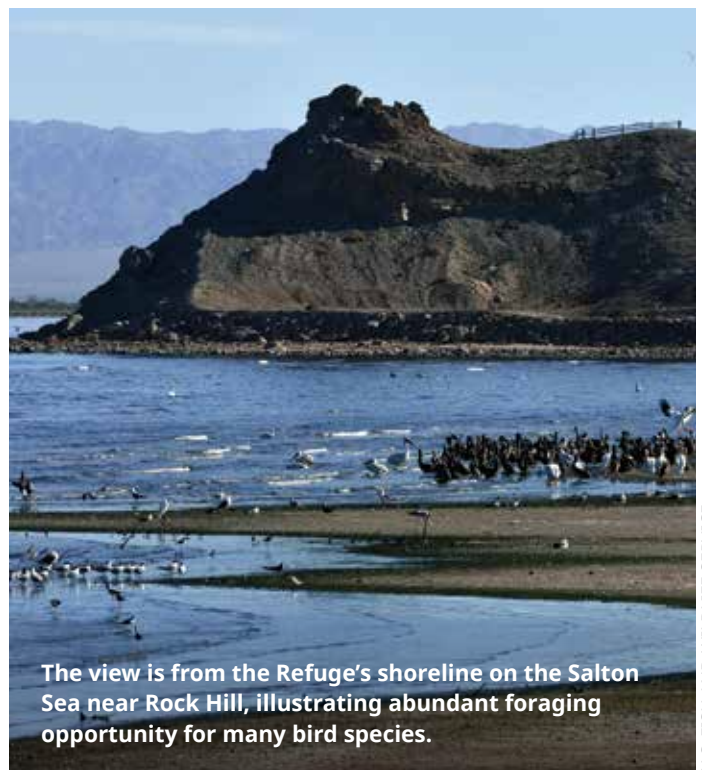
So, in the face of all this, what will happen to the birds that have relied on the Salton Sea? Their former options no longer exist. In historic times dozens of large, reliable wetlands such as Tulare Lake in California would have been back-ups. Now California

has 91 percent fewer wetland acres than it did 150 years ago: the result of filling, draining, and rerouting of water for human uses.

Plans are in place and are being refined by the day to build a large complex of managed ponds or mini-Salton Seas around the existing lake. Each would have out-flowing water to discharge salt and accumulated nutrients. This shallower water will not accumulate hydrogen sulfide, which will volatilize into the air and not accumulate as it does now. The plan has been tested and shown to produce a healthier wetland for birds like eared grebes. For them, it can't come soon enough.

We need the Salton Sea or its next, healthy, managed version. We need it quickly. The birds need it for foraging because their former wetlands have been dried up. We need it so we and future generations can continue to appreciate nature in the Salton Basin. We need it for our health so we will not have to breathe ever more sodium sulfide dust. And we need to control salinity and establish water quality that will protect these values. We need it because we enjoy those few stress-free moments, basking in the last minutes of daylight on the shore of the Salton Sea, watching spectacular sunsets and being in awe. We need the Salton Sea because it is still a great place, but it needs our help.

Chris Schoneman grew up in Southern California with a great interest in wildlife. After getting his degree in Wildlife Management from Humboldt State University, he started his career with the U.S. Fish and Wildlife Service in 1988 working on National Wildlife Refuges. Managing wetlands in the West for maximum wildlife value has been his favorite challenge. He has been the Manager of the Sonny Bono Salton Sea National Wildlife Refuge since 2004.



The view is from the Refuge's shoreline on the Salton Sea near Rock Hill, illustrating abundant foraging opportunity for many bird species.

U.S. FISH AND WILDLIFE SERVICE

BY CHRISTINA LANGE

A PHOTOGRAPHER'S ACCOUNT OF THE SALTON SEA

AND THE COMMUNITY WHICH INSPIRED IT ALL

The blistering sun beat down on the wetlands at the northern end of the Salton Sea. The water was glistening and the reeds were bending back and forth in the wind. Several types of birds were making their presence known through their calls, each beckoning and marking their place. It was 2008, and I was standing with Debi Livesay, head of water resources at the Torres-Martinez Wetland Pilot Project, as she explained how this oasis had been created at the northern end of the Salton Sea near Mecca.

On a cross-country road trip in 2005, a friend and I had randomly driven past the Salton Sea. On that scorching August day, we drove out of the Anza Borrego Desert, and under a hot, cloudy sky, I saw what appeared to be a dry, salt lakebed in the distance. As we headed north on the 86, I began to wonder why it was called a lake when I saw no blue water there. Upon returning to London, England, I began to search the internet, but felt that this research on the Salton Sea led to a dead end. Drawn by curiosity I resolved to return to the Sea.

In February, 2007, I arrived on the shores of the Salton Sea with the idea of creating a photo project. This initial trip led to a six-month stay in 2008, and then I moved to Salton City in 2011 for three more years.

With my life packed up in my backpack, I came from London, England, and decided to stay there for 'a while.' I wanted to be a member of the community rather than an out-

sider. I experienced life there and learned the struggles, the peace, the hardships, and the unfailing bonuses of the area. I had chats at the post office/general store with the store clerks and neighbors. As it got me out of the house, I would cycle to Salton City on an almost daily basis.

Finding work was a very real struggle. Living in a remote area that is poverty-stricken and with high unemployment, it was difficult to find an income. Many people live with the irony of only being able to find jobs that are far away but with wages too low to even make the commute worth the while. I ended up making bare minimum wages using the internet to create websites and graphic designs. I also commuted by bicycle to a nearby Casino for about three weeks. Small things became everyday joys. The stars in the sky, the coyotes yelping at night, the roadrunner that made a home in my yard, these constants were my new normal.

Within my new normal, I interviewed and photographed the people who lived and worked at the Salton Sea: families, biologists, activists, and people like Debi Livesay, who made it their life's work to help save the Salton Sea in whatever way they can. What they were up against was enormous: ignorance, lack of knowledge, lack of interest, and a 'let the sea dry up as it was a mistake anyway' attitude.

I organized and participated in art exhibitions. I gave presentations on the Salton Sea in the surrounding areas from San Diego to Joshua Tree and up and down in Coachella Valley. I traveled to impart knowledge about the urgency surrounding the projects in the Salton Sea area.

I published my book, "Portraits and Voices of the Salton Sea" in the hope that people could read about the personalities, the history of the area, and the im-



CHRISTINA LANGE



CHRISTINA LANGE

pact that doing nothing would have on Southern California in their own time. This was no game, and unfortunately, doing nothing has a huge consequence.

One day about four years ago, the winds were howling yet again in Salton City, throwing up more dust than usual as many of the nearby lots had been illegally bladed, thus disturbing the desert crust. One windy gust became a small tornado and ripped off the top layer of my neighbor's roofing material. The winds, the worsening dust, knowing that the sea levels were dropping significantly and would drop at an even more alarming rate in the future, left me very unsettled. As the Sea level drops, more lake bed would become exposed to the winds that carry "fine-grain soil particles holding farm-field sediments, salts, fertilizers, and pesticides" (<http://saltonseanow.com/a-tipping-point/>). For the residents up and down the valley, in particular for the asthma and respiratory illness sufferers, this is really bad news. Children in Imperial County already visit the emergency room for asthma at three times the state's average according to an article published by LA Times in 2012 (<http://articles.latimes.com/2012/jul/16/local/la-me-imperial-county-asthma-20120716>).

In 2014, along with environmental scientist Abraham Marquez, I started a second book project on asthma in Imperial County. Our focus is on families, teachers, children, and on government officials and leaders in Imperial County who either suffered from Asthma, fought for someone who did, or are involved in air quality management. It became apparent in our interviews that the residents are very worried about the future and feel unimportant. It is a remote county, with high levels of unemployment, poor access to quality health care, and an asthma program that is working for the community but is not receiving the funding it desperately needed.

As a result of a negotiated multiparty settlement in 2003 (the Quantification Settlement Agreement), if nothing is done, significant and dangerous drops in the water level of the Salton Sea will begin in 2017. Perhaps as a result of this deadline, the government is starting to take note and is beginning to work towards a solution. California Governor Jerry Brown has appointed long-term Salton Sea advocate and IID employee Bruce Wilcox as Assistant Secretary for Salton Sea Policy at the California Natural Resources Agency. \$80 million has been allocated for dust mitigation, habitat creation, vegetation en-

hancement, and infrastructure projects. It appears as though things are actually, finally beginning to move along.

The non-profit organization, Ecomedia Compass, which is based in Salton City, is working on raising awareness throughout the state of California by organizing art, music, and political awareness events. They are advocating for a pipeline to run from the Sea of Cortez to the Salton Sea, and it looks like this solution is gaining traction. Imari Kariotis and her husband John Kariotis, residents of Salton City, have been very active for at least fourteen years, tirelessly advocating and creating awareness via the internet and in public appearances. They are putting their heart and soul into creating educational resources, such as free information online, or via pdf's, talks, and power point presentations. They also rally community members to attend water board meetings and tirelessly speak out on behalf of those who cannot. Norm Niver, recently passed away, was an avid Salton Sea advocate and planning commissioner. Beginning in 1974 he worked to implement solutions with his tagline of 'Let's keep the Salton Sea wet.' This is a tag line that I have adopted.

I have returned time and again to the Salton Sea because I am drawn to its beauty, its fascinating geographical, cultural, and social history. The feeling of an approaching environmental disaster is very real and is a foreboding presence in everyday life. Many people there have taken on the very impressive attitude that in order to make change, one should not wait but must be that change.

Debi Livesay had a vision that took on the enormous task of creating a pilot wetlands project at the northern end on Torres-Martinez Tribal land. With determination, grit and hard work, and after more than a decade of work, this has come to fruition. As California has lost most of its wetland areas, this is hugely important and a step in the right direction. As I stood there listening to Debi Livesay explain how wetlands worked, it dawned on me that there were many active members in this community. This is a desolate land, deep in California's most Southeastern edge, far away from the glitz and financial centers of the Coastal cities. And yet,

CONTINUED ON PAGE 11

BY AL KALIN

THE SALTON SEA THROUGH THE EYES OF A FARMER

IT'S ALL ABOUT WATER

The Salton Sea and agriculture are two sides of the same, many-faceted problem. It might seem that water sent to one of these is water denied the other, but the actual situation is far more complicated. Let's look at the story from the beginning.

The Salton Sea's main source of water is agricultural runoff from 470,000 acres of farmland in Imperial County. The fields are irrigated yearly with approximately 2.6 million acre-feet of water delivered by the Imperial Irrigation District (IID) through the All American Canal from the Colorado River. Once the water reaches the Imperial Valley, it is distributed through 1,500 miles of canals to over 5,600 farm turnouts. This is the largest gravity fed irrigation system in the United States.

By the time the Imperial Valley farmers receive their irrigation water from the Colorado River it has been used and returned to the river over and over. It has traveled over 1,400 miles and has become very salty, carrying one ton of salt for each acre-foot.

To grow crops farmers must apply more water than needed by the crops alone in order to leach the salt downwards and out of the fields. This salty water is collected by 32,000 miles of tile

drainage lines installed beneath most of the fields and is diverted to IID's drainage system where, along with surface runoff, it eventually ends up in the Salton Sea.

The Sea evaporates about six feet of water per year. Up until a few years ago, when the Quantification Settlement Agreement (QSA) took effect, farm runoff offset evaporation. Currently the Salton Sea is 1.7 times saltier than the Pacific Ocean.

When the QSA was signed in 2003, it determined how California, other states, and the irrigation districts on the Lower Colorado River must live within their 7.5 million acre-foot yearly apportionment. IID, which held some of the oldest water rights on the Colorado River, was apportioned 3.1 million acre-feet per year.

In 2016, the QSA and other agreements require IID to transfer 480,200 acre-feet of water through conservation efforts to various agencies and to the Salton Sea. Landowners following their ground conserved much of this water.

This agreement was supposed to allow the State of California time to develop and implement a restoration plan for the Salton Sea as well as on-farm conservation methods needed to produce water for transfers to mitigate the dust created by the growing playa as the Sea shrank.

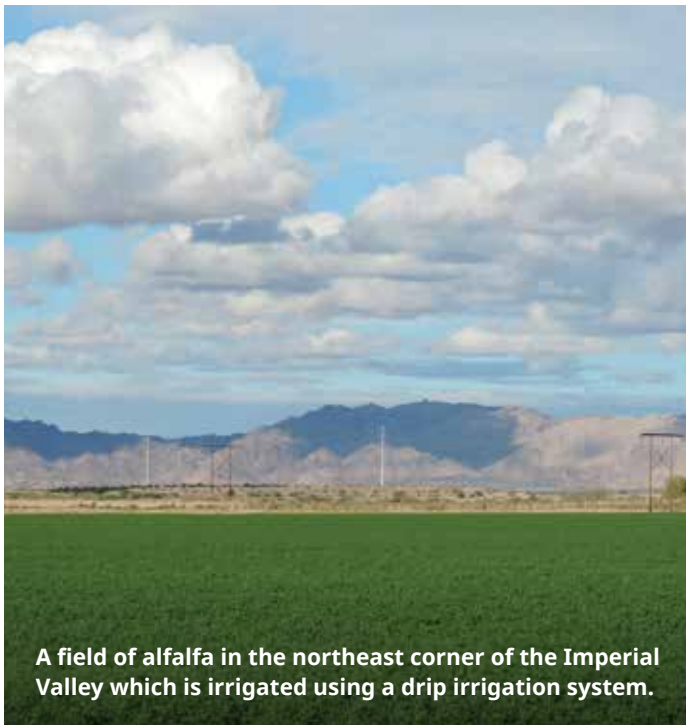
In 2006 the Department of Water Resources appointed a committee that met for three years. The resulting \$8.9 billion Salton Sea mitigation plan turned out to be a financial impossibility and one that required more water than would be available in the coming years. Although the State initially wavered on their responsibility to pay for the restoration efforts, they now recognize that it is responsible for restoration efforts, but little funding has been forthcoming.

Meanwhile back at the ranch, the QSA calls for 800,000 acre-feet of Colorado River water to be added to the Salton Sea between 2003 and 2017. By the end of 2016 633,327 acre-feet of water will have been added to the Sea with the remaining amount being added in 2017. This will bring the total to 800,000 acre-feet added. Most of this mitigation water has been conserved through fallowing land.

The mitigation water which the IID has been sending directly to the Salton Sea will end after 2017, yet few realize it has already dropped 6.40 feet since 2003 due to reduced inflows. This has already created over 15,000 acres of toxic dust generating playa.

So why did the Sea shrink with all the mitigation water being put back in? The answer is not simple and multiple issues caused the reduced inflows, but the QSA played a large part.

IID is paying landowners \$175 per acre-foot of conserved water on each acre of fallowed ground. Water use history is uti-



A field of alfalfa in the northeast corner of the Imperial Valley which is irrigated using a drip irrigation system.

AL KALIN

lized to determine payments for individual parcels. Much of the fallowed ground had a six acre-foot per year history or even more. IID capped the payments at six acre-feet. At this rate landowners with a six foot history could get \$1,050 per acre to fallow their ground compared to rent income that ranged from \$250 - \$400 per acre depending on the quality of ground.

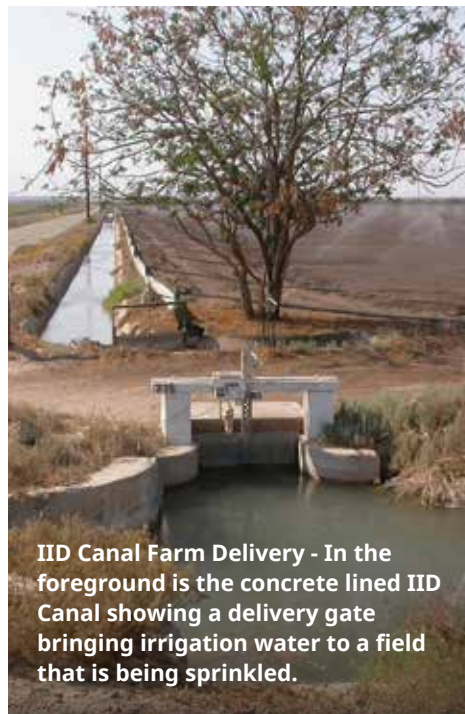
Many tenant farmers were put out of business when landowners switched to fallowing their fields for more money. Just as bad though, the fallowing created false lease rates and land rents shot up.

Now landowners could enter into yearly contracts with IID to fallow their property for up to four times what they had been getting from the tenant farmer. Much of this land ordinarily would have been planted to perennial crops such as alfalfa or bermudagrass, both of which are only replanted every three to eight years and watered all year long while using more than six acre-feet per year.

With tenants unable to get multiple year leases from landowners and at best only getting one-year leases at a higher price, the tenant farmer had to plant short-term crops such as wheat or broccoli which used half the water. So no drain water flowed to the sea from fallowed ground, and short-term leased fields used half the water as long-term leased fields planted to perennial crops. Again, less surface runoff flowed to the Sea.

To reduce silt entering the Salton Sea, the Regional Water Quality Control Board required Imperial Valley farmers to implement a Total Maximum Daily Load (TMDL) using Best Management Practices. This was important because high phosphate loading was producing massive algae blooms in the Sea and creating polluted water. Phosphate is not water-soluble. It can only travel in the water when attached electrically to a silt particle. By reducing silt leaving the farmer's field less phosphate fertilizer ends up in the Sea.

The farmer's efforts created a 50% silt reduction in the New River and a 38% silt reduction in the Alamo River, the two major agricultural drains into the Sea. The Regional Board proclaimed this to be the most productive effort of any TMDL in California if not the nation. Farmers continue to implement their Silt TMDL but the Best Management Practice's produce up



IID Canal Farm Delivery - In the foreground is the concrete lined IID Canal showing a delivery gate bringing irrigation water to a field that is being sprinkled.



IID Drain Tile Outlet - A photo of one of numerous IID drains (1,407 miles) that collects surface run-off as well as tile drain water. The tile drain water can be seen coming out of the pipe dumping into the drain ditch.

AL KALIN

to 15% less surface runoff.

Since 2003 over 12,000 acres of farmland have been taken out of production and leased for 35-year terms for solar installations. Again, less land available for tenant farmers and no runoff to the Sea from these fields.

The Coachella Valley also received irrigation water from the Colorado River through the Coachella Branch of the All American Canal, a dirt canal which ran along the eastern side of the Imperial Valley. For decades the seepage water from Coachella Branch flowed downhill to the IID's drain system and into the Salton Sea. But 30 years ago the southern half of the canal was concrete lined, which stopped most of the seepage in that stretch. Then nine years ago San Diego Water Authority agreed to pay for lining the northern half of the unlined Coachella Branch, and as a result received 26,000 acre-feet per year of conserved seepage water. Without the concrete lining that seepage water would have also eventually ended up in the Salton Sea.

Changing crop patterns have also played a large roll in reducing the water going to the Sea. Leafy greens, those countless varieties of lettuce mixes and spinach, neatly packaged and ready to eat in bags, are grown in our Valley during the cool season. Not only do these crops require less water to grow, they use sprinkler systems to grow them and no surface runoff is produced to flow to the Sea. The same is true of the 14,000 acres of onions grown yearly. Historically onions have used up to eight acre-feet of water per acre and produced large amounts of surface runoff but most farmers have switched to more efficient drip or sprinkler irrigation. This practice has cut total water usage in half with little surface runoff going to the Sea.

Market conditions affect the amount of water going to the Sea. More wheat is planted after winter vegetables when wheat markets are high. At times we have grown over 100,000 acres of wheat. In the past four years wheat prices have been low, and we have only averaged 36,000 acres grown in the Imperial Valley. The same is true of sudangrass, a forage crop grown for cattle feed, meaning that less surface run-off ends up in the Sea.

From 1995 to 2003, with 1.1 to 1.3 million acre-feet flowing into the Salton Sea yearly, its elevation declined an average of only .18 feet per year, but from 2003, when the QSA was signed, to July of 2016, the Sea declined an average of .44 feet per year for the reasons mentioned above.

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BY PRESTON J. ARROW-WEED

XA-WIILTH-KAW-TAI (THE BIG WATER)

LAKE CAHUILLA - THE SALTON SEA

To look back into the history of the Salton Sea, one has to look at the ancient history of the Hokan People. This history was told in songs and folklore stories, and in ceremonies performed by the ancient Hokan People. Anthropology and Archeology do not go back far enough to inform the people today of the importance of the Salton Sea and why it must be saved. Why is it important? The Salton Sea was a part of a great body of water, and an ancient tribe of people lived along the shores of this great body of water. If anyone is to believe there is a divine reason for existence, as I have heard the American people say that this country is blessed, then the Salton Sea should be saved. The ancient shoreline went far beyond Palm Springs, and the Hokan People lived along this shoreline, and when this shoreline receded, the people followed it south to the Imperial Valley. For some time this body of water was a lake.

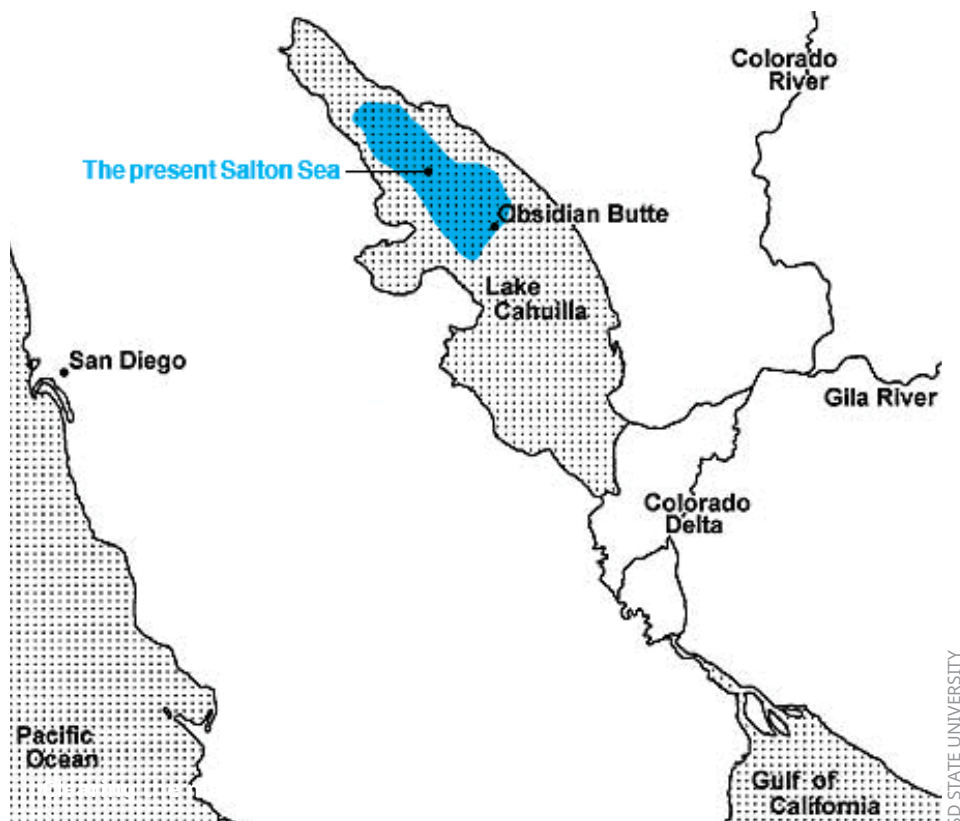
There is evidence found in all these areas where the people once lived. They came from the north along the Colorado River, and somehow they saw the San Jacinto Mountain, which is told in the Quechan Lightning Song. The song tells of the birth of lightning on this mountain, and the people went south to Jacumba, and they went farther south where they saw

the sea coyote and the Bufadora near Ensenada in Baja California. As they stood by the shores of the ocean, they saw the body of a great creature swimming by, and it threw water from its head. One of its eyes was the morning star. The small creature that taught the people how to cry when the Creator left, lived by the ocean, and the people went along the ocean shore until they reached San Juan Capistrano where the swallows were given the power of the wind and the rain. The Hokan people went again and passed through the home of the reed people. Then they went father and turned to the east where they reached what was left of the great body of water which was the lake. The Hokan People began living by this lake which was called the big water, Xa-wiilth-kaw-tai. The creosote plants were swaying from side to side and all the creatures of this area were alive, and the jack rabbit, with its big feet, started a mirage to distract his getaway. There were many other living things that are a part of this lake which was once part of a greater body of water. This is the history of the Hokan people and the great lake.

Preston Arrow-weed has worked on protecting archaeological sites, sacred sites, and wilderness in the California deserts. He is Kamya/Quechan tribal singer and a cultural bearer, and in the modern world, he is a member of SAG-AFTRA, an actor, and a playwright.



CHRISTINA LANGE



THROUGH THE EYES OF A FARMER

CONTINUED FROM PAGE 9



Alamo River - Taken close to where it dumps into the Salton Sea

AL KALIN

In 2018 farmers must conserve water through on-farm conservation efforts only, and no fallowing will be allowed. Much of this water, needed for transfers, will be obtained from more efficient and costly irrigation methods that produce very little surface runoff – resulting in a drastic reduction of water going to the Salton Sea.

No mitigation water going to the sea plus conservation efforts that produce much less surface run-off will cut inflow to the Sea almost in half within the next 20 years, and the water that does flow into the Salton Sea will be much saltier, made up primarily of tile drainage water.

The futures of agriculture in Imperial County and of the Salton Sea are bound to each other. They can not be disentangled, and it will require diplomacy, money, and thought to find compromises that will be satisfactory for farmers and which will still allow the survival of the Salton Sea.

A lifelong resident of Imperial County and a second generation farmer, Al Kalin has served on a large number of advisory boards related to agriculture in the imperial Valley, has served as consultant for Audubon California, and is a member of the advisory committee for the Salton Sea Bird Festival. He has also been a trustee of the Westmorland Union Elementary School district and has been a community 4-H leader.

A PHOTOGRAPHER'S ACCOUNT

CONTINUED FROM PAGE 7

these citizens make their own way where they can, with ingenuity, sheer will, determination, and a dedication that is breathtaking and absolutely admirable. Instead of giving up, they continue making their voices heard, resisting defeat, and continuing forward. I wanted to do what was available to me and thus came to document this area, a tribute in my own way, to showcase this community, which should serve as an inspiration to all.

Christina Lange has been photographing for more than a decade with a focus on environmental documentaries. Based in San Jose, California, since September 2015, she has been advocating for saving the Salton Sea in the Bay area.

Breathless: Asthma in Imperial County will be published 2017

Portraits and Voices of the Salton Sea is available at amazon.com

Links for more information

<http://saltonseanow.com>

<http://ecomediacompass.org>

Salton Sea facebook group

facebook.com/groups/64337476896

To report environmental issues in Imperial or Coachella Valley

<http://ivanonline.org>

www.christinalange.com

www.thesaltonseaspeaks.com



CHRISTINA LANGE

BY FRANCES NICKLEN

IT IS UP TO US

CITIZEN SCIENCE IN IMPERIAL COUNTY

I have lived in the Imperial Valley, specifically the city of El Centro, since I was four years old. I have suffered through dust storms and dry spells and polluted air for fourteen years of my life - but I didn't always know it. Before my family moved to the valley, we lived in Los Angeles where my mother worked as a teacher and community organizer and my father was a freelance interpreter. With my mom's background in organizing, she was quickly drawn into the valley's environmentalist community, where she stood up against the construction of a destructive paramilitary training facility and other misguided local proposals. By the time I was in sixth grade, I was showing up in newspaper reports at her side as we protested issues at local County board meetings. Through all of the time I spent with people who cared about our local environment, I learned about the many concerns that residents have about our community and its well being.


The valley has one of the highest rates of asthma hospitalizations for school aged children and has exceeded the state standard for airborne particulate matter (PM) for decades. Many schools in the valley still have not adopted the Flag Program in which a colored flag lets students and teachers know the quality of the air. For example, a green flag signals a good day to be out, and a red one means it is a bad day. This program has depended on the five air quality monitors that the Imperial County currently has. These are not enough to encompass every community in this 4,000 square mile area, and the information provided is not consistent and is often incorrect.

On a day when we cannot see the mountains because of all the pollution from pesticide spraying, field burning, car exhaust, and wind-borne dust, the county

monitors often tell us that it is a good day to be out. It became apparent that the monitors are not working and are not dependable. Unfortunately the County continues approving new construction projects that are making our air quality even worse, and they do not always take into account the negative health and environmental impacts. For this reason a more widespread air monitoring network in the Valley was necessary. In early 2014 when I was a sophomore in high school, I had the opportunity to participate in a Community Air Monitoring Project as a Steering Committee Member. The purpose of the project was to set up forty additional air monitors throughout the Imperial Valley that can make data on air quality available to the public so that the community can make educated decisions about their outdoor activities.

The air monitoring project was proposed by the California Environmental Health Tracking program in partnership with Comité Civico del Valle, University of Washington, George Washington University, University of California at Berkeley, National Latino Research Center, Cal State San Marcos, and Z-Data Solutions and is funded through a grant from the National Institutes of Health. Part of this project was to create a Community Steering Committee to help with project design, implementation and decision-making, and to collect data, install the air monitors, interpret the results, and disseminate the information. The resulting Air Quality Monitoring Network (AQMN) will consist of forty portable air monitors, twenty of which have been installed already. In order to identify these impacted communities, members of the Steering Committee mapped environmental hazards and community assets and discussed the placement of these monitors. To have a successful mapping activity, community members from the various cities, including several high school students, were invited to add their input on which areas are the most impacted and should be key points for the placement of the monitors. There was group discussion on each area's pros and cons as well as the availability of someone to maintain the monitor. In this way members of the Valley are included in the decision-making process as well as taking care of the monitors and learning about how to access the information when it is made open to the public. In addition, some of the students from Southwest High School's Leaders for Environmental Awareness and Protection (LEAP) club and Brawley High School students have become involved in spreading the word about this program and the impact it will have on the Valley.

The members of this project hope to make information readily available to the community about air quality each day in all the different regions of the Imperial Valley. Having this information as well as being able to understand it will help families to make good decisions regarding the prevention of asthma attacks and other health problems. This



Air quality monitor installed
Instalado un monitor, para c
de la escuela

CONTINUED ON PAGE 14

POR FRANCES NICKLEN

TODO DEPENDE DE NOSOTROS

CIENCIA CIUDADANA EN EL CONDADO DE IMPERIAL



He vivido en el Valle Imperial, específicamente la ciudad del Centro, desde que tenía cuatro años. He sufrido las tormentas de polvo y los períodos de sequía y el aire contaminado durante catorce años de mi vida- Pero no lo sabía. Antes de que mi familia se mudara al Valle, vivíamos en Los Angeles donde mi madre trabajaba como maestra y como organizadora comunitaria, y mi padre trabajaba como intérprete contratista. Con su experiencia en organizar, mi madre se integró rápidamente a la comunidad defensora del medio ambiente del Valle y luchó contra la construcción de un centro de entrenamiento privado paramilitar y otros proyectos locales muy destructivos.

En sexto grado, yo ya estaba apareciendo a lado de ella en el periódico cuando asistíamos a reuniones del condado para cuestionar asuntos y decisiones que los supervisores estaban tomando. Es así que yo empecé a aprender sobre las preocupaciones que los residentes tenían sobre los problemas medioambientales y los efectos en la salud.

El Valle tiene una de las tasas más altas de hospitalización por asma en los niños de edad escolar y por décadas ha excedido el estándar del estado en partículas contaminantes en el aire (PM). Muchas escuelas en el Valle no han adoptado todavía el Programa de bandera, el color de la bandera haría saber a maestros y estudiantes cómo está la calidad del aire. Por ejemplo, una bandera verde significa que es un buen día para estar afuera y una ban-

dera roja significa que es un mal día. El programa de banderas ha funcionado basado en la información de los cinco monitores de aire que el Condado de Imperial tiene. Pero estos cinco monitores no son suficientes para cubrir a todas las comunidades que están dispersas en un espacio de 4.000 millas cuadradas, y a menudo la información proporcionada no es correcta ni constante.

En un día en que no podemos ver las montañas a causa de toda la contaminación de la fumigación con pesticidas, la quema de campos, escape de los automóviles, y el polvo transportado por el viento, los monitores del condado a menudo nos dicen que es un buen día para estar afuera. Es evidente que los monitores no están funcionando y no son confiables. Por desgracia, el Condado continúa aprobando la construcción de nuevos proyectos que están haciendo que la calidad del aire sea peor, y no siempre toman en cuenta el impacto ambiental negativo y acumulativo en la salud. Por esta razón, una red de monitoreo de aire más extendido en el Valle era necesario. A principios de 2014, cuando era estudiante de segundo año en la escuela preparatoria, tuve la oportunidad de participar como miembro del Comité Directivo en un Proyecto Comunitario para el Control del aire. El propósito del proyecto era instalar 40 monitores de aire adicionales en todo el Valle Imperial para que proporcionen datos e información sobre la calidad del aire y que esté a disposición del público de manera que la comunidad informada y ed-

ucada pueda tomar decisiones sobre sus actividades al aire libre.

Este proyecto de monitores de aire fue propuesto por el programa de monitoreo de salud ambiental de California y en colaboración con Comité Cívico del Valle, la Universidad de Washington, la Universidad George Washington, la Universidad de California en Berkeley, el Centro Nacional de Investigación Latino, la Universidad Estatal de San Marcos, y soluciones Z -Data, y está financiado a través de una subvención del Institutos nacionales de Salud.

Parte de este proyecto era crear un Comité Directivo de la Comunidad para ayudar con el diseño del proyecto, la ejecución y la toma de decisiones para recopilar datos, colocar los monitores de aire, interpretar los resultados, y difundir la información. La Red de Monitoreo de Calidad del Aire (RMCA) constará de 40 monitores de aire portátiles, 20 de los cuales han sido ya instalados. Con el fin de identificar estas comunidades impactadas, los miembros del Comité identificaron los riesgos ambientales y recursos de la comunidad; de acuerdo a eso, discutieron las posibilidades de donde colocar los monitores.

Con mapas del condado y de las ciudades, los miembros de diversas comunidades, entre ellos varios estudiantes de preparatoria, fueron invitados a participar y así identificar las áreas más afectadas y los puntos claves para la instalación de los monitores. Hubo discusión en grupo sobre los pros y los contras de cada área, así como la disponibilidad de una persona para mantener el monitor. De esta manera, se ha incluido a los miembros del Valle en el proceso de toma de decisiones, así como en el cuidado de los monitores y a aprender a cómo utilizar esta información cuando esté disponible para el público.

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IT IS UP TO US

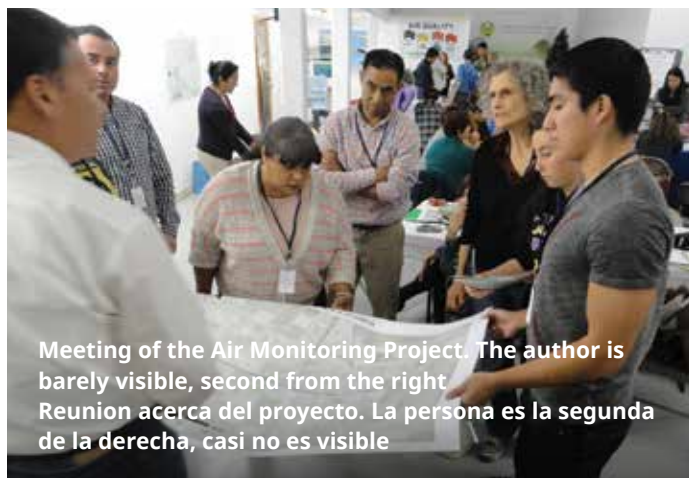
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information will be accessible on a website that is easy to navigate as well as a phone application that allows people to quickly decide what is best for their health. When all the monitors have been installed and data has been collected, the participants will examine the data and discuss issues of concern to develop action plans for reducing exposures to pollution and improving health in this region.

We want to help reduce health problems, especially because we are a farm-worker community with some of the highest rates of poverty and unemployment in the country. Field workers are one of the most impacted groups of people due to the amount of time they spend outdoors working with pesticide sprayings, dust storms, and other health hazards. The high rate of poverty means most residents cannot afford to pay for their medical bills and hospitalizations. There have been many deaths from cancers and asthma that could have been prevented if the correct procedures were in place to help people make healthy decisions. I have a sister who has allergy attacks every time she visits the Imperial Valley. She was very fortunate to get a job in another city, but many residents do not have the option to move away. They suffer chronically and cannot do anything to prevent asthma attacks and allergies. Because of this Air Monitoring Project, residents can now make better decisions about their health based on information that will now be continuously available.

I am glad I have had the chance to participate in a project that will have such positive effects. We are the first ones to undertake this kind of project in the entire world, and we hope to be an example to others so that this project can be reproduced in other areas where air quality is a problem. I feel that many of these most polluting activities should be subject to more stringent environmental regulation and enforcement. For example, agricultural burning is generally not permitted in most of the United States. Government agencies will now have concrete data upon which to create policy around these questions of public health which should be their primary responsibility.

Frances Nicklen has been a resident of the Imperial Valley for fourteen years and will be starting at UC Irvine in the fall with a major in Biomedical Engineering. She will miss the beautiful landscape of her home town that was a source of inspiration for her art.



Meeting of the Air Monitoring Project. The author is barely visible, second from the right
Reunion acerca del proyecto. La persona es la segunda de la derecha, casi no es visible

ANITA NICKLEN

TODO DEPENDE DE NOSOTROS

CONTINUED FROM PAGE 13

Además, algunos de los miembros del club de Líderes para la Protección Medioambiental(LEAP) de la Preparatoria Southwest en El Centro y los estudiantes de la Preparatoria de Brawley se han involucrado para difundir la información sobre este proyecto y educar a la comunidad sobre los impactos que va a tener para el Valle. Los miembros de este proyecto esperan que la información sobre la calidad del aire esté fácilmente disponible para la comunidad diariamente en todas las diferentes regiones del Valle Imperial. Tener esta información, además de entenderla, será muy útil para que las familias puedan tomar buenas decisiones para la prevención de ataques de asma y otros problemas de salud. Parte de esta información estará disponible a través de un sitio web que será fácil de navegar, así como una aplicación en el teléfono celular que permitiría a las personas decidir rápidamente qué es lo mejor para su salud. Cuando todos los monitores se hayan instalado y estén recopilando los datos, los participantes los podrán examinar y analizar y de acuerdo a sus intereses podrán desarrollar planes de acción para reducir la exposición a la contaminación y mejorar la salud en esta región.

Queremos ayudar a reducir los problemas de salud, sobre todo porque somos una comunidad de trabajadores agrícolas con algunos de los más altos índices de pobreza y desempleo en el país. Los trabajadores de campo son uno de los grupos más afectados porque pasan mucho tiempo al aire libre, trabajan con las fumigaciones de plaguicidas, están expuestos a las tormentas de polvo y otros peligros para la salud. La alta tasa de pobreza significa que la mayoría de los residentes no pueden permitirse el lujo de pagar sus cuentas médicas y hospitalizaciones. Han habido muchas muertes por cáncer y asma, muertes que podrían haberse evitado si se hubiesen establecido los procedimientos correctos para ayudar a las personas a tomar decisiones saludables. Tengo una hermana que tiene ataques de alergia cada vez que visita el Valle Imperial. Ella es muy afortunada porque pudo conseguir un trabajo en otra ciudad, pero muchos residentes no tienen la opción de irse del Valle. El sufrimiento es crónico y no pueden hacer nada para prevenir los ataques de asma y alergias. Debido a este Proyecto de Monitoreo de Aire, los residentes ahora podrán tomar mejores decisiones sobre su salud en base a la información que ahora continuamente estará disponible.

Me alegro de haber tenido la oportunidad de participar en un proyecto que va a tener efectos tan positivos. En el mundo, somos los primeros en desarrollar un proyecto como éste y esperamos ser un ejemplo para los demás, esperamos que este proyecto pueda ser reproducido en otras áreas donde la calidad del aire es un problema. Creo que muchas de estas actividades más contaminantes deben ser restringidas y estar sujetas a una regulación ambiental más estricta. Por ejemplo, la quema agrícola en general no se permite en la mayoría de los Estados Unidos. Las agencias gubernamentales ahora tendrán estos datos concretos para que puedan formular políticas sobre salud pública, la cual debería ser su mayor prioridad.

Frances Nicklen ha residido en el Valle Imperial durante los últimos catorce años y en el otoño comenzará su carrera en Ingeniería biomédica en la Universidad de California, Irvine. Ella extrañará los hermosos paisajes desérticos de su pueblo que han sido la fuente de inspiración para sus pinturas.

DESERT UPDATES

DRINKING STRAWBERRY CREEK DRY FOR CORPORATE PROFIT

Water is essential to life. It's not something that a corporation can simply claim and monopolize, particularly in California where overtaxed water resources must meet a variety of societal and biological needs. That's why Nestlé's claim that it can continue to drain San Bernardino National Forest's Strawberry Creek to produce bottled water during a drought is simply wrong – legally, morally, and in terms of what's best for the world that we must all share.

In 2014, an estimated 28 million gallons were piped away from Strawberry Creek to be bottled and sold under Nestlé's Arrowhead brand of bottled water, even though the permit for the four-mile pipe expired nearly three decades ago. The siphoning comes at a cost and certainly impacts wildlife in the forest that relies on water for survival.

Because Nestlé's Arrowhead permits from the U.S. Forest Service expired in 1988, the Center for Biological Diversity, Story of Stuff, and Courage Campaign have initiated a lawsuit to restrict water diversions from Strawberry Creek while the Forest Service studies ecosystem impacts before issuing any new permit. Meanwhile, the Forest Service is proposing to allow the company to continue draining Strawberry Creek for another five years – without even considering impacts to the forest in a time of extended drought.

by Ileene Anderson, Center for Biological Diversity

IVANPAH SOLAR ELECTRIC GENERATING SYSTEM (ISEG)

The solar generating system at Ivanpah continues to have problems. Past stories in the *Desert Report* have chronicled impacts to desert tortoises ("A Conservation Alternative for Ivanpah Valley," March 2012) and to birds ("The Not so Friendly Green Skies," June 2015). Now additional concerns about generating capacity and public safety have arisen.

ISEGS is not producing the electricity it is contractually required to deliver to Pacific Gas and Electric. Yet in March 2016, the California Public Utilities Commission approved a PG&E agreement with investors at NRG Energy, Google, and BrightSource which gives Units 1 and 3 at least six months, possibly a year, to meet production targets under current power purchase agreements. The Office of Ratepayer Advocates opposed the forbearance agreement, commenting that the original agreement with ISEGS was too costly.

On May 19, 2016, Tower 3 caught fire, caused apparently by misaligned mirrors focusing concentrated sunlight on a portion of the tower below the receiver section. The public may never know the actual causes of the fire as the California Energy Commission granted NRG Energy's request that the report of its June 16, 2016, investigation be kept confidential. NRG claims that the report contains "competitively sensitive information regarding the operation of the project" and should not be disclosed to the public.

Where matters of safety are concerned, transparency should be a paramount concern. It would appear that ISEGS is damaging to wildlife, is not performing as expected, and may not even be safe.

by Sid Silliman, Sierra Club Desert Committee



KEVIN EMMRICH

TWENTYNINE PALMS MARINE BASE EXPANSION AND DESERT TORTOISE

According to Barstow Bureau of Land Management a Draft Supplemental Environmental Impact Statement (SEIS) will be prepared, specifically on desert tortoise (*Gopherus agassizii*) translocation plans for the base expansion. The target date for releasing this document for public comment is November 2016. A quick turnaround is expected with a final version out in December. Locations of receptor sites for tortoises are said to be areas from east of Barstow to Needles. Details will be available in the Draft SEIS.

This is apparently in response to a letter sent by Center for Biological Diversity in March 2016 giving sixty-day Notice of Intent to sue Bureau of Land Management (BLM), the Marine Corps, and US Fish and Wildlife Service for violations of the Endangered Species Act relating to the proposed translocation of tortoises.

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BY WILLIAM HUGGINS

A TRIP TO MT. IRISH

TRAVELING IN CENTRAL NEVADA

North from Las Vegas on I-15, twelve people and two dogs in two cars. Tires thrum. The city fades behind us, and the dry basin opens up ahead, vast brown valleys and peaks, widening like arms. We enter the real Nevada, Highway 93. So many people come to try their luck in the neon tunnel that defines the southern part of this state – so few venture forth into what makes this place truly amazing. Only Alaska has more mountain ranges than Nevada. A hundred miles to the east, the campsites, parks, and valleys of Utah are crammed full of nature seekers when what they should really be looking for is here.

Every time I drive into eastern Nevada, the basin sucks me in – I'm devoured by landscape. This is public land, our American heritage. To our right the Mormon Mountains slowly fade as Arrow Canyon takes their place, to be filled later by the Meadow Valley and Delamar ranges, while on the left the Sheep Range paces us for over sixty miles, peaks sheathed in dark foliage.

The road climbs until we plateau alongside the Pahrnagat National Wildlife Refuge, upper and lower lakes fed by the ancient White River. The lakes leap out like blue jewels in the surrounding dryness. Over 240 species of birds call the refuge home at various parts of the year. On one visit I got buzzed by a pair of honking Canada geese.

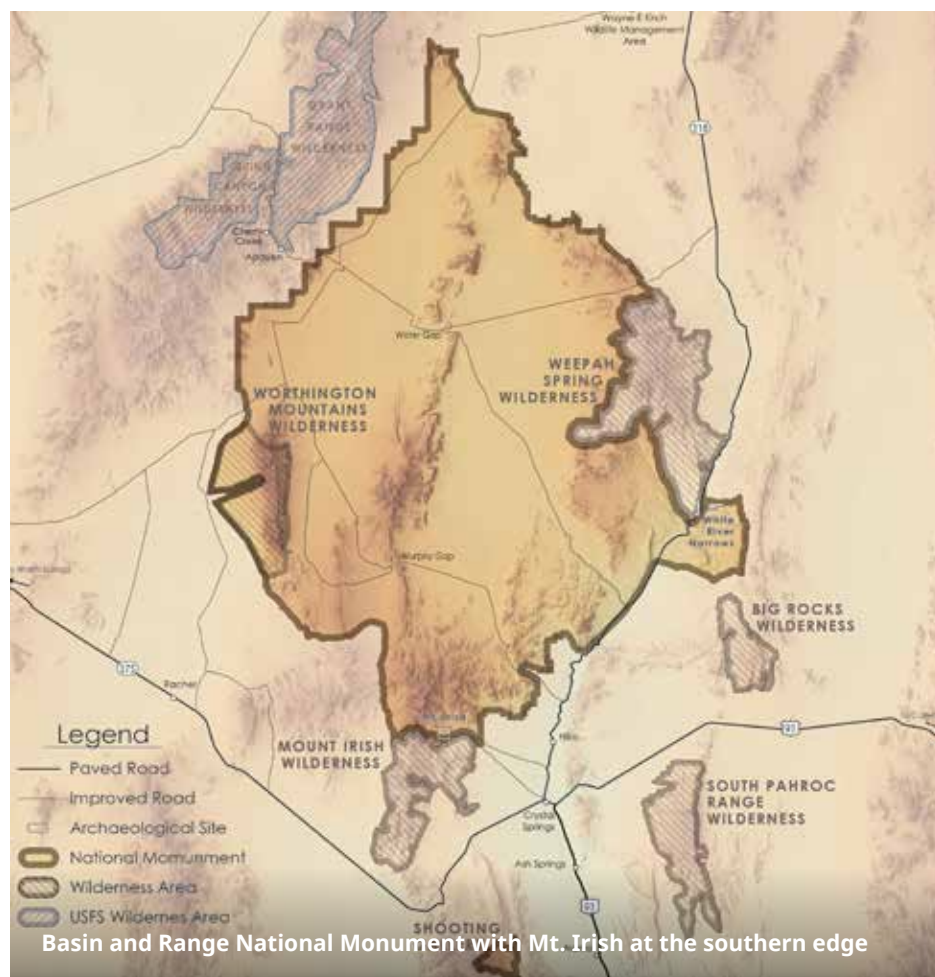
We enjoy the refuge but don't linger – pressing north, to a wilder place. We stop at the village of Alamo to top off fuel tanks, grab a snack. I always support the local towns – tourist dollars benefit public lands.

North of Alamo we take the 318 northwest. The remains of the ancient White River stand apparent in green lushness in the valley bottom along both sides of the road. We pass the picnic area at Crystal Springs and two little lakes to our

right side. Ranching families have worked this area for generations and are vital to the local economy.

Just past the lakes and ranch, we turn left onto Logan Pass Road. I open the stock gate and let the cars through, close it behind us and wave away the dust raised by our move from pavement to dirt.

The peak is ahead, a Wilderness, Congress' highest designation for pristine public wildlands. So much of what we protect is high and majestic. Lowlands have value, as well, connectors of the basins between the ranges. Life doesn't just sit in a convenient place because legislators created a specific designation – life moves, wanders, mixes. Everything is interconnected, even this long sweep of grassland we pass through. It's just as important as the peak we'll climb tomorrow.



BUREAU OF LAND MANAGEMENT

Dust trails us as we move down the rough road. Some miles in we pause between a group of rocks taller than our vehicles. We step out with cameras to look at the petroglyphs. Beautiful, austere – communications from a culture far different and perhaps simpler than ours. I feel profoundly connected in the presence of the old, the deep time of our human ancestry, our occupancy of this world. Those cultures seemed to hold the land in higher regard. Mobility makes our culture temporary. Looking at these petroglyphs, I think that's what we need to reconsider: our relationship with the land, what wilderness designation really means.

From the rock art, the road rises in bends and turns. We climb steadily, the road narrowing, bumpy, stunted trees pressing in on both sides. Several old mines remain down Silver Canyon, but we continue past those roads. Plenty of turnouts exist. We find one that fits both cars.

The sun dips behind the ridgeline above us. Shadows of the ponderosa pines enclose the camp. We unload quickly, humans, dogs marking territory, sky clear and cloudless, no need for tents. I roll out my sleeping bag in a declivity between trees, a perfect spot to fall asleep watching the stars play out overhead. Coolers are opened with beers close behind – the long workweek behind us, we settle into camp chairs for food and conversation, slowly quieting as night encroaches. Rustling in the brush ceases. Soon the only sounds are voices and the crashing of dogs in the undergrowth, chasing night sounds through patches of deepening darkness.

I call my Jack Russell and he squirrels into the sleeping bag, circles until he's comfortable. I watch the play of stars across a clear expanse – no light pollution here, just thousands of crystals polished as if for my own viewing – until I drift into sleep.

I wake twice during the night. The silence overwhelms me, the deep calm of the wild. Waking on first nights always shocks me: opening eyes to that blazing starscape truly has to be experienced to be understood. I wake refreshed. Breathe deeply from a night of wilderness sleep, and the pine fills your nose and lungs like a tonic. The body knows these places intuitively, responds to the wild stimuli. Waking on the ground, with a dog stirring at your feet and slowly working his way up the bag to lick your face...ah, no city morning can compare to that.

We're up first, the dog and I. I set water to boil for tea and coffee as he treks into the pines to take care of business of his own. He trots back a few minutes later, I set down his food bowl, and he munches contentedly, eyes bright, tail wagging. I suck down two mugs of dark Irish breakfast tea and a bowl of oatmeal while the camp slowly wakes. Coffee and tea move through mugs and mouths, and the group's mood rises with the sun.

Conversation: most of us came to do the peak, but a few want to explore the mines we drove past yesterday. We break into two groups, six of us heading up, grabbing our gear: backpacks, water bottles, snacks, sunscreen. I always feel better with a pack on my shoulders. Boots knotted tight, Jack at my side, we start up the road.

Two miles to Logan Pass, where we'll split north to climb to the summit. Mid-September: the morning warms as we climb the fairly easy grade, some steady pushes with a gentle turn or two. In less than an hour we're at the pass. We stop to take in the view to the west: basin and range, beautiful in the rise and fall that just



Lone hiker on Mt. Irish summit approach

TYLER ROEMER

goes on and on, not a human in sight but for us.

The ridge blocked the wind for us below, that warm southern breath always coming from the Mojave. Once we hike past the empty car turnouts and primitive campsites, it's wind and tough limestone, hard on boots and dogs' paws. I lift the Jack through a few passes where it's too challenging for him to jump or climb. There's no trail to follow, but the views from the top pummel the ones from the road below: sweeping vistas in all directions, like a rumpled bedspread – wild Nevada, home.

We've come to climb and hike and sleep under the stars, yes – but we've also come to sign testaments of our passion for this place. In the shade of the ponderosas, we pass around pen and paper. Silence descends on the camp as we take time to tell our Congressional representatives how we feel about this place. Hands move pens across pages, and the words grow with the shadows as the sun swings west.

We finish, collect the pages, then prepare for dinner. The fire grows in the twilight, pasta and bread and red sauce get passed around on plates, people dodging woodsmoke between bites. The day's stories get told, dogs beg for bites and ear rubs. The fire drops, stillness descends on the camp and the woods again. I sit by the coals and breathe in the fullness of it all, and for the thousandth time feel so lucky to live here, to have all this wilderness around me. If the wild and all things that call it home are essential, then so is making the time to visit as often as we can. Sitting in a camp chair, with the embers of a fire cooling beside you, looking into a sky like the one our ancestors saw every evening, catching a glimpse of the smoky trail of the Milky Way with the naked eye – trust me, it's a much deeper connection than anything contrived by modern society's digital fakery.

I fall asleep to the thought that by protecting these places we keep the potential open for someone, someday, to sleep on this same ground and understand exactly what I mean.

In the morning we rise and breakfast again, pack the vehicles. We're subdued – another day would have been nice. But we fire up our carbon monsters, breaking the stillness with their engines, and roll down the hill.

I will be back – as often as time and fate allow me.

Bill Huggins lives, writes, works, hikes, and camps with his wife, daughter, and three rescue dogs in and around Las Vegas, NV. He's an open space addict. His writing has appeared in diverse places such as Expanded Horizons, Third Flatiron Anthologies, Studies in American Indian Literatures, and Texas Books in Review.

BY RUTH NOLAN

A HOT, CLEAN BURN

FIRE ON THE MOJAVE

"In the beginning...they laid a woman, *Ninmaiwaut* (palm) on her back...took a wooden spindle and drilled her. First blood, then fire came forth. This woman then became a palm tree." -from *Tempalpakh: Cahuilla Indian knowledge and usage of plants*

It's a very windy March afternoon, and I've just driven into Joshua Tree National Park. A sign by the road catches my eye: "Today's Fire Danger: Moderate." Perfect.

As I drive into the Park, I'm surrounded by craggy boulder-riddled vistas and, of course, the ubiquitous Joshua Trees. I'm stunned by the colors of spring wildflowers popping up everywhere along the roadside: fields of yellow desert dandelions; sultry pink sand verbena and iridescent purple lupine have turned the usually tan-colored desert expanses into a beautiful symphony of color and passing beauty. Even the Joshua Trees themselves are tipped with fat white blossoms at the outermost reaches of their thick-thorned crowns. It's hard to concentrate on driving with all of this beauty surrounding me.

But I'm not here to see the wildflowers of this year's so-called "superbloom," spawned by last October's monsoon rains and a favorable early January rainfall. I'm not here to rock climb, or camp, or marvel at the Wonderland of Rocks. I'm here to look for evidence of desert wildfire. I'm here to look for evidence of some of the major fire events that have occurred here in recent years and to see up close the scars they've left behind.

Soon enough, I get lucky. I see a break in the thick groves of giant Joshua Trees that the road cuts through. Then, I see one of the rare pullouts along the road. I pull over, and park next to a big metal kiosk that says, "Memorial Fire, May 27-30, 1999." According to the kiosk,

14,000 acres burned here for three days, ignited by a passing afternoon thunderstorm, making this a major Mojave Desert wildfire event.

I've struck wildfire gold.

I'm the only car that's stopped here, and I don't blame others for racing by. This grotesquely transformed desert scene isn't what most visitors have come to the Park to see. In the distance are healthy, thriving, blossoming Joshua Trees with one of the Park's small mountain ranges behind, but in front of me is the old burn zone with only a few wildflowers and what looks uncannily like large human or animal limbs strewn about. They're the trunks and limbs of Joshua Trees that burned and fell apart in the Memorial Fire all those years ago.

I wander far into this desert graveyard, taking my time. Up close, I see that many of the downed Joshua Tree limbs are still intact; some still bear charred stains on their fibrous skin that rub easily off onto my fingers when I touch them, even after all this



Entering Joshua Tree National Park

RUTH NOLAN

time. It's as if the Memorial Fire burned just last season, that it hasn't been 17 years since these trees were torched with flames. But it has. And the site of this burn has been making very slow progress in its recovery toward what it once was. I wonder what's been sacrificed here, by the Memorial Fire. Certainly, the fire has taken a long-term toll on this patch of the Park's 1.2 million acres.

According to Matthew Brooks, a Research Ecologist for the USGS and author of many books on Mojave Desert fire ecology, even the desert wildfires spawned by natural causes can now cause irreparable damage to the desert's fragile botanic and biologic communities. Unprecedented factors such as periods of extended drought, climate change, and, possibly the worst of all, the proliferation of invasive grasses can all combine to make desert fires burn much hotter and faster than in previous historic times. "The high abundance of invasive annual grasses," he writes, "may lead to excessively short fire return intervals that do not allow Mojave desert scrub species to reestablish."

After a wildfire event, burned Joshua Trees can survive but often die within the first few years after fires, due to drought and other stresses on their re-sprouts. It's likely that the Memorial Fire has left behind permanent scars; these sacrificial Joshua Trees will not be replaced. I wonder what these facts mean for the Joshua Tree ecologic zones throughout the rest of the Mojave Desert; after all, Joshua Tree National Park is a microcosm of the Mojave's huge matrix.

I'm deep in the old burn zone now and feeling a little sad at the overwhelming sense of loss I see all around me. A kit fox scurries past me and disappears into a hole. Overhead, a lone raven makes its timeless and haunting "caw, caw," as if to wonder aloud what I'm doing out there. I look towards the road. Not one other car has stopped at the Memorial Zone lookout and kiosk pullout.

As I sift through this desert, I imagine the sequence of events that took place in the frantic efforts to subdue and control the Memorial Fire.

I imagine how this fire may have played out. As a lightning strike, it probably started when a pinyon pine tree caught fire on the small mountain that rises to what I guess is around 5,000 feet. It then was fueled by heavy winds from the passing, late spring thunderstorm and then ripped through the chaparral at lower elevations: plants that include Manzanita and Juniper. Unfortunately, all of the pinyon pine and chaparral plants are highly flammable and burn clean and hot. The fire may have made its way downhill until it reached the Joshua Trees in this high desert woodland-featured terrain. Here it torched through many acres of invasive grasses that would have been thick, calf-high, and tinder-brown, dried to easy flammability by the hot daily temperatures of a long spring season.

For months, there would have been vivid reminders that a fire had shredded the area: bits of burned fire hoses, perhaps the odd backpack, even a firefighter's shovel left behind. Yellow police tape would have clung to healthy Joshua Trees on the edge of the burn zone to keep the public out, tourists zipping through the Park. Then winter rains would have come, and the charred reminders of the Memorial Day Fire would begin to fade into the comfort zone of smudged memories.

With the arrival of spring, the burn area would have been beautifully, if briefly, transformed with the appearance of some

of the wildflowers I still see here today. And just like today, numerous species of invasive grasses would have made the burn zone, temporarily, just a little more green than it had been for so many months before the massive burn.

If other Park visitors took the time today to get up close to the beautiful-ugly remains of the Memorial Fire, they'd be shocked, like me, to see how little of the permanent desert woodland has regrown. They would see only a few lone cholla cactus – their twisted, needled fists on the verge of breaking into their spring blooms – and a few Joshua Trees, defiantly upright, burned on their upper arms, but healthily alive on their trunks and lower limbs. Some even had flowers bursting from their crowns, just like their neighbors outside the burn zone.

It's time for me to get back to the car and drive onward. The afternoon is deepening, the wind is picking up momentum, and the temperature is dropping as clouds from a predicted spring rainstorm begin to move in and cast long shadows across the Wonderland of Rocks. I will be heading to the Park visitor center at 29 Palms, an hour away where I plan to visit the Oasis of Mara, filled with a centuries-old grove of native *Washingtonian Filifera* palms. Here the desert Indian people routinely set burns to remove the dead thatch and maintain the health of the grove. I will see the evidence of old burn scars on their trunks.

It's not a little astonishing that different ecologic zones in the same Mojave Desert can be so devastated, or regenerated, by wildfire. This is another one of the desert's great mysteries and intrigues, and another demonstration of the powerful presence and role of wildfire here.

Before I can drive away from the Memorial Fire site, something catches my eye across the road. At first, I think it's a red balloon, snagged on a creosote bush. As I walk closer, I see that it's a huge Hedgehog Cactus, covered with giant red blossoms, flaming up against the subdued earth tones of a Joshua Tree and the granite boulders rising behind it.

They're red. The color of fire.

"A Hot, Clean Burn" is excerpted from the forthcoming book, "Fire On the Mojave: Stories from the Deserts and Mountains of Inland Southern California," by former USFS and BLM/CA Desert District wildland firefighter Ruth Nolan, M.F.A., Professor of English, Creative Writing and American Indian Literature at College of the Desert in Palm Desert, CA.

Works Cited

Interview with Serrano/Cahuilla Indian Elder, Singer and Cultural Historian Ernest Siva March 22, 2016 at Dorothy Ramon Learning Center, Banning, CA.

Field Trip to Joshua Tree National Park, March 22: Site of Memorial Burn, 1999; and 29 Palms Visitor Center/Oasis of Mara.

"Mojave Desert Scrub Ecosystem" taken from p. 88-89 in Chapter 5 from the forthcoming book *Fire History, Effects, and Management in Southern Nevada* ed. Matthew Brooks, Jeanne Chambers and Randy McKinley.

Tempalpakh: Cahuilla Indian knowledge and usage of plants, by Lowell J. Bean and Katherine Siva Sauvel. Malki Museum Press, 1972.

CONTINUED FROM PAGE 15

The U.S. Department of the Navy, on behalf of the Marine Corps and in cooperation with the BLM and the Federal Aviation Administration, planned to establish a large-scale Marine Air Ground Task Force training area to include parts of Johnson and Wonder Valleys in San Bernardino County, areas which include habitat for the Federally Threatened desert tortoise. The Shared Use Area of 56,439 acres would be managed by the Bureau of Land Management (BLM) for recreation use 10 months of the year and by the Marine Corps during two months when it is used for military training.

WESTERN MOJAVE (WEMO) TRAVEL MANAGEMENT PLAN

The Record of Decision for the West Mojave Plan/Amendment to the California Desert Conservation Area Plan was signed in March 2006. In September of 2009, a Federal District Court issued a summary judgment remanding the portion of the document designating routes of travel. To satisfy this order, new route designations were to be completed, consistent with the court's order, by September 30, 2015.

The West Mojave Route Network Project (WMRNP) is preparing a supplemental EIS which will form the revised framework for route designation in the West Mojave. The BLM is now requesting nearly four more years to complete this work: 2020 is the target. They believe it will take them that much time to analyze and comply with the requirements of the Desert Renewable Energy and Conservation Plan (DRECP) – presuming that the DRECP gets signed in August or September 2016. All the plaintiffs groups from the original lawsuit (including SC and CBD, Desert Survivors, PEER and the ARR group) are pushing to get stronger interim measures to protect the desert during this very long additional delay.

POLLUTION OFFSET CREDIT FOR PAVING DIRT ROADS?

Imperial County is among those with the worst air quality in the nation. Particularly noxious is particulate matter (PM) pollution that impacts the health of local residents as well as sensitive species. In response to this, the Imperial County Air Pollution Control District (APCD) is proposing the adoption of rule 214.2 which would create Pollution Emission Reduction Credits (PERCs) through the paving of otherwise dirt and gravel county roads. These credits could be purchased by companies to offset excessive pollution that accompanied their other and usual business practices.

Scoping for this proposal is underway, and it is expected that six months will be needed before the Draft EIR is issued. While the plan appears reasonable at first glance, it should be noted that it merely trades one form of pollution for another with no net decrease. Worse yet, the paving would principally reduce

PM10 pollution while the emissions that would be permitted in exchange would very probably be the much smaller and more insidious PM2.5 particles. Additional issues include the facts that paved roads increase traffic speed and roadkill and that paved roads increase development and are growth inducing. Of course there are questions about how to quantify the benefits and the costs of paving a specific road in a particular way.

The Center for Biological Diversity and the Sierra Club Desert Committee have submitted extensive comments outlining these and other issues.

OFF HIGHWAY MOTOR VEHICLE RECREATION (OHMVR) LEGISLATION NEEDED

The State OHMVR legislation sunsets in 2017. There will certainly be a legislative bill to keep the Off Highway Vehicle Division of State Parks alive, but the details of such a bill are quite open. With this new legislation, there will be opportunities to make significant changes and to propose improvements in the management of this form of recreation. The Sierra Club and the Center for Biological Diversity will undoubtedly be involved, and anyone with an interest or concern related to off-highway travel will have the opportunity to be heard.

SHAVER'S VALLEY DEVELOPMENT TO BE RECONFIGURED

The developer Glorious Land Company has recently withdrawn its application for a development known as Paradise Valley. This project would create a new city in an environmentally sensitive area south of Joshua Tree National Park and north of the Mecca Hills Wilderness Area. The application was withdrawn after the County received many letters in opposition, including a very detailed analysis from the Tahquitz Group of the Sierra Club. The County is expecting a new application in December or January for a slightly reduced project. The same groups are planning to oppose any new developments in this area when and if they are proposed.

SEARCHLIGHT WIND ENERGY

The Searchlight Wind Project, situated south of Las Vegas and immediately east of the California-Nevada border, remains in limbo. The developer, Apex Clean Energy, is pursuing an appeal of a district court order (October 2015) that voided the project's right-of-way and required BLM and U.S. Fish & Wildlife Service to do more environmental analysis. Hazards encountered by golden eagles were among the issues involved. Apex filed the opening

brief of its appeal in early July 2016. On August 3, the plaintiffs in the case (including Judy Bundorf and Basin and Range Watch) filed a motion asking the Ninth Circuit Court of Appeals to dismiss Apex's appeal. They contend that the district court's order is not appealable except by the federal agencies, BLM and U.S. Fish & Wildlife, who have declined to participate. The Court of Appeals is expected to rule on the motion in the next couple of months.

Apex suspended its quarterly lease payments for the Searchlight Wind Project after the district court voided its right-of-way in October 2015. Although BLM proposed a tentative schedule for conducting further environmental analysis to Apex in December 2015, information obtained through FOIA suggests that Apex has not agreed to pay BLM to conduct that additional analysis. It appears – at least for the moment – that Apex is putting all of its hopes on its legal appeal, and not moving forward with new environmental analysis on the project at this time.

CONGLOMERATE MESA

Conglomerate Mesa, the 7000' high de-facto wilderness six miles east of Keeler in Owens Valley and within sight of Mt. Whitney, is again targeted for mineral exploration. Silver Standard Resources Inc. is asking BLM for a permit to construct access roads to drill exploratory holes. This is the ninth company since Conglomerate Mesa was released from Wilderness Study Status in 1984 – the others have looked and left. Silver Standard's expectation is discovery of fine grained gold, the kind that did not attract the early 'pick-and-shovel' miners. Discovery could eventually result in an open-pit cyanide heap leach mine.

To stay informed of the status email Tom Budlong, TomBudlong@RoadRunner.com.

NEXT DESERT COMMITTEE MEETINGS

FALL MEETING
NOVEMBER 5 & 6

The fall meeting is November 5-6 at the Mission Creek Preserve. The meeting chair is Jeff Morgan.

WINTER MEETING
FEBRUARY 11 & 12

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



Several organizations have made significant contributions for the printing expenses of *Desert Report*.

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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.sierra-club.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.)

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If we finish early, there will be time for exploring this interesting historical area. Not a beginning backpack. There is water in the canyon, but may require a hike to get it, and it must be filtered before drinking. Be prepared to carry all the food and equipment needed for the trip, as well as helping to carry some of the tools we will be using. Contact leader Kate Allen, kj.allen96@gmail.com, 661-944-4056. Group size limited.

GHOST TOWN EXTRAVAGANZA

October 22-23, Saturday-Sunday

Celebrate Halloween by visiting the ghosts of California's colorful past in the eerie desert landscape near Death Valley. Camp near the historic ghost town of Ballarat. Saturday, a challenging hike to ghost town Lookout City with historian Hal Fowler who will regale us with tales of this wild west town. We'll return to camp for Happy Hour and a potluck feast, followed by a midnight visit to Ballarat's graveyard. On Sunday, we'll tour the town of Ballarat itself before heading home. Send \$8 per person (check payable to Lygeia Gerard), home and work phones, email address and rideshare preferences to Leader: Lygeia Gerard, P.O. Box 721039, Pinon Hills, CA 92372, 760-868-2179. (Assisted by Marguerite McGuigan) Mojave Group/CNRCC Desert Committee

NON-SIERRA CLUB ACTIVITY

MOJAVE NATIONAL PRESERVE RESTORATION EVENT

February 10, Friday

Join the California/Nevada Desert Committee and the National Park Service for a restoration project in the Mojave National Preserve (MNP) on February 10, one day before the Desert Committee meeting on Saturday and Sunday. We will gather on Friday at 9 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) along Zzyzx Road and at the Desert Studies Center. Bring water, sunscreen, a hat, gloves, and lunch. Tools will be provided. Contact Sid Silliman for project details, directions, camping options, and to RSVP (gssilliman@cpp.edu). Don't miss this annual, pre-Shoshone service opportunity. The work will be rigorous yet rewarding.

NATIONAL PUBLIC LANDS DAY IN THE BLACK ROCK DESERT

September 23-25, Friday-Sunday

Join us in helping in this beautiful and remote desert about 100 Miles north of Reno. Plans are not definite yet, but we will be doing a work project of some sort. The trip usually includes a day of work and day of play. More information will be available as the time draws nearer. Leader: David Book 775/843-6443. Great Basin Group/CNRCC Desert Committee

PANAMINT CITY BACKPACK & BACKCOUNTRY CABIN ASSESSMENT

October 15-19, Saturday-Wednesday

Come assist Park volunteer Birgitta Jansen in assessing the state of backcountry cabins in Death Valley National Park. We will meet Saturday evening at Chris Wickt camp and backpack up Surprise Canyon to Panamint City on Sunday. Monday and Tuesday, we will work with Birgitta on assessing the condition of the cabins.



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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.

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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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