

# DESERT REPORT

BY JUDY BUNDORF AND JIM STANGER

## Walking Box Ranch: Past, Present And Future

### A unique heritage

Nestled in the heart of the proposed Avi Kwa Ame National Monument, Walking Box Ranch represents a microcosm of Nevada history, including ranching, mining, entertainment, politics, and more recently, conservation of the flora and fauna of the Mojave Desert. Located seven miles west of Searchlight, Nevada, and across Nipton Road from Wee Thump Wilderness, the ranch was listed on the National Register of Historic Places in 2009. The 160 acres is surrounded by the Piute-Eldorado Area of Critical Environmental Concern (ACEC) for the desert tortoise. Although the ranch is now federally owned and is administered by the Bureau of Land Management (BLM), the Nature Conservancy holds two conservation easements on the property.

A 5,000 square foot, Spanish revival style ranch house was built in 1931-32 by silent film stars Rex Bell (whose given name was George Beldam) and Clara Bow, the "It Girl," as an escape from the hectic Hollywood life. Visitors whom they entertained at the ranch are said to have included Clark Gable, Carole Lombard, Errol Flynn, and Lionel Barrymore. General Patton and some of his troops also visited.

Bell purchased the property in 1931 from John Woolf. The land that Bell acquired was originally a portion of the Rock Springs Land and Cattle Company, which was formed in 1894 and consisted of 1,000,000 acres. Bell's purchase included water and grazing rights. The grazing rights were reported to extend from the ranch, north to Railroad Pass, east to Highway 95 and the Colorado River, and west across Crescent Peak and



*Entrance to Walking Box Ranch. Photo by Alan O'Neill*

the California border. The name of the ranch, which was the brand on the cattle, is represented by a camera on a tripod.

Following his departure from Hollywood and his foray into ranching, Rex Bell owned and operated a western wear store on Fremont Street in downtown Las Vegas and became involved in politics. He was elected Nevada Lieutenant Governor in 1954 and served until his death in 1962. He was campaigning for the office of governor when he died suddenly. His son, Rex Bell,

BY CHRIS OTAHAL

# Moving Toward Recovery Of The Amargosa Vole

In the hottest and driest parts of the Mojave Desert lives the endangered Amargosa vole, a small mouse-like rodent with short ears and a short tail. This rare species only lives in small patches of habitat, about 75 acres spread across 55 patches of bulrush marsh along the Amargosa River near Tecopa, California. Near Tecopa, the Amargosa River rises above ground and creates a green oasis for the vole and other rare plants and animals found nowhere else on earth. The Amargosa vole was thought to be extinct in the early 1900s but was rediscovered in the late 1970s.

In 2012, the Amargosa vole's future looked bleak. The world population for the species was hovering around 50-75 individuals. The Borehole Marsh, the voles' main habitat, was in catastrophic decline, and researchers estimated there was an 82% chance of extinction in the next five years without immediate management intervention.

With this charismatic critter on the knife edge of extinction, the Bureau of Land Management's Barstow Field Office, with support from the Desert Management Group, formed the ad hoc Amargosa Vole Recovery Team in 2013. The team is comprised of private land-owners along with federal, state, non-profit, and academic institutions, including the U.S. Fish and Wildlife Service, U.S. Geological Survey, California Department of Fish and Wildlife, Amargosa Conservancy, UC Davis, UC Berkley, Purdue University, and Inyo County Road Department, with the common goal of saving the vole and recovering its populations.

Since 2013, the ad hoc Amargosa Vole Recovery Team has completed several management actions to benefit the Amargosa vole including establishing a captive breeding program at UC Davis, stabilizing the habitat at Borehole Marsh through water management and vegetation enhancement projects, creating new habitat on private lands, releasing captive voles back to the wild, translocating voles to improve distribution and population viability, monitoring populations, and educating the public.

Water is a key issue for maintaining healthy vole habitat. To better understand how the "plumbing" works, the BLM invested in a multi-year effort with the U.S. Geological Survey to determine the source of the water that supports the vole habitat. Researchers

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discovered that a relatively small portion of the water comes from the precipitation that falls within the Amargosa Rivers watershed, but most of the water is supplied through a complex underground carbonate aquifer that extends across state lines into Nevada. The aquifer is ancient and chemical analyses indicate the water may have been underground for more than 20,000 years and traveled hundreds of miles before it resurfaced through a series of artesian springs along the river's edge.

With hard work by a village of dedicated partners and individuals, efforts are paying huge dividends. The Amargosa vole's numbers are increasing, and its habitat is becoming more stable. In 2020, the Amargosa Vole Team was recognized by the U.S. Fish and Wildlife Service with the Recovery Champion Award for staff and partners whose work is advancing the recovery of endangered and threatened species.

"The team's work is an excellent example of how federal and state agencies, academic institutions, non-governmental organizations, and private partners can work together to conserve endangered species," wrote Martha Maciel, Acting Deputy Regional Director for the U.S. Fish and Wildlife Service in her congratulatory email. "Your exceptional work is helping to create the roadmap for long-term survival and recovery of this species."

The voles have a long road ahead and still face

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BY SHANNON SALTER

# When Is A Review Not A Review?

## Greenlink Transmission Line is being fast-tracked

Sometimes a word is repeated so diligently that it detaches from itself and becomes a dead thing. It represents a vague idea, or worse, an abstraction. The danger here lies in that the dead word takes the place of an individual's own thinking. It is a stand-in masquerading as thought. This is a tactic of the Industrial Order; to propagate its war with nature, the Industrial Order has had to colonize the human imagination.

*Among the very best examples is the word "Green."* We all know the connotation. It has something to do with the solution to climate change, something to do with a way of life we can feel better about, that does not pillage and exploit the natural world the way civilization has for centuries.

*The phrase "climate change" has itself become an abstraction.* It detracts from the big picture in which changing climate is but one symptom of a much larger problem. You know where I'm going with this.

We might want the luxury of identifying a singular enemy ("*climate change*") that can be solved by a singular solution ("*green energy*"). The Industrial

Order wants that because it wants to continue to grow itself and increase its profits indefinitely. That is why its "green" and "clean" solution will conveniently grow the economy and fantastically increase the number of "good paying jobs."

Last year, I started an organization called Mojave Green in part to reclaim the wildness that is necessary for all original thought. I started camping outside the Yellow Pine Solar facility under construction in the Pahrump Valley, bearing witness to the catastrophe of "green energy" on our public lands. Let me tell you: they are ripping the heart out of this place.

Below is the Yellow Pine Solar site before and after. We know now that the desert soils and plants are sequestering a significant amount of carbon. In a ten-year study that took place from 1997-2007 at the Nevada Desert's Free Air CO<sub>2</sub> Enrichment Facility (NDFE), scientists pumped excess carbon into the air and walked on boardwalks so as not to disturb the soil's delicate crust.<sup>1</sup> They found that the desert is indeed capturing

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**Yellow Pine solar site, 2018 and 2022. Photos by Shannon Salter**

BY BIRGITTA JANSEN

# Economic Growth And Sustainability

## Introducing Peter Victor, ecological economist

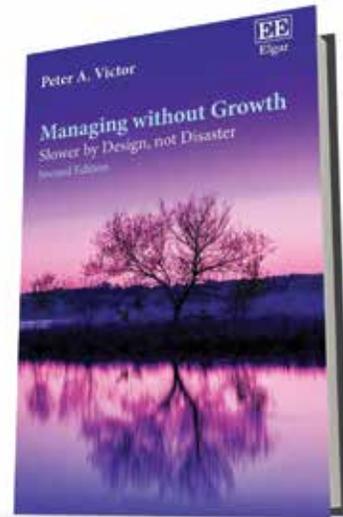
In 1967, when Peter Victor was studying economics at the University of British Columbia, he asked an unusual question: “How is it that a whole economy does this damage to the environment on which our lives depend?” The question was unusual because these were still the golden years of increasing economic growth and prosperity. Economic growth was defined as progress. The GDP was regarded as the most powerful number in the world. Environmental impacts were viewed and accepted as externalities; the unintended consequences of market transactions.<sup>1</sup> In spite of this general worldview, Victor decided to pursue an investigation of how the economy and the environment are interconnected for his thesis.<sup>2</sup>

Victor’s quest to answer his question took him on a journey that straddled two very different disciplines: economics and environmental science. At least, they seemed very different. But it did not take long for Victor to understand that they were inextricably linked and how this came to be so.

During his university years, his study focused on what he called “throughput,” which refers to the use of fossil fuels, materials, and biomass extracted from the environment, and the corresponding amount of waste returned to the environment. The sheer weight of materials that propelled the world’s economies increased 800% in the 20th century.<sup>3</sup> The economic growth during that time was unprecedented.<sup>4</sup> But Victor doubted that the planet could sustain economic growth at this rate.

In Canada and in other countries, Victor worked for fifty years on economic and environmental issues in various positions. He was Assistant Deputy Minister for the Environmental Science and Standards Division in the Ontario Ministry of the Environment and Dean of the Faculty of Environmental Studies at York University. He was the founding president for the Canadian Society for Ecological Economics.

Victor retired from York University in 2018 but actively continued thinking, talking, and writing about Ecological Economics. He remains deeply concerned about humanity’s future if we continue on the path we’re on. In 2008 *Managing without Growth, Slower by Design, not Disaster* was published (and a second edition appeared in 2019). This was followed by *The Costs of Economic Growth* (ed) in 2013, the *Handbook on*



*Growth and Sustainability* (co-ed) in 2017, and *Herman Daly’s Economics for a Full World. His Life and Ideas* (2021). *Escape from Overshoot. Economics for a Planet in Peril* will be published in 2023.

Victor does not only address the environmental impact of continuing economic growth, but also whether economic growth improves people’s well-being. He explains that studies have been done showing that immediately after World War II, people’s happiness increased along with increases in the GDP but that happiness then leveled off in the nineteen seventies. Even though people’s average income increased, studies show that increased growth beyond a certain point does not increase wellbeing or make for happier lives.

In a telephone interview on May 5, 2022, from his home in Toronto, Ontario, Victor explained the concept of “overshoot” which he defined as, “the use of the planet’s resources in a way that takes us beyond what is sustainable.” Although he has lived in Canada for many years, a slight British accent characterizes his speech. His voice takes on a tone of urgency when he goes on to say that “The rich countries are responsible for the overshoot or they oblige other countries to do the dirty work for them. The poorer countries’ responsibility is limited.” This has led him to focus much of his research on the richer countries.

Then he developed ways to answer the question: “Is it possible to have an economy that grows very little or

not at all? Is it even possible to have an economy that shrinks? And given the various possibilities, would it still be possible to maintain a good quality of life?

In order to develop strategies to slow down or even decrease economic growth, he constructed various computer models. This allowed him to explore possibilities and simulate changes to see which strategies will have a smaller footprint on the environment while maintaining a decent quality of life within the limits of our biosphere. What he found was, that yes, economic growth can be slowed, halted even, while quality of life, broadly understood, improves.

But this raises other questions. Even though his research results support the feasibility of a reduced use of resources and consumption, would people be willing to accept a major shift in behavior, habits, beliefs, values, life style, and so on? Can there be a time when people do not view economic growth as essential to the functioning of a society? Will people be able to accept the necessity of this for environmental reasons? A transition in values is usually a slow process requiring a length of time that we may or may not have.

Victor sees a number of other issues that complicate slowing or decreasing economic growth. One of these is the close relationship between politicians and corporations. It appears to be common practice that politics favor business and support economic growth. Also many institutions, such as financial, political, educational, religious and so on, have developed within the context of a growing economy and have become integral to the functioning of our society. Firmly entrenched institutions tend to be resistant to change.

Another issue that concerns Victor is fragmentation and he explains, “We have Ministries of Natural Resources, the Environment and Finance, and they focus on their own priorities rather than on working closely with each other on a shared agenda. When knowledge is divided into different disciplines, it can make it difficult to understand and solve problems that are essentially interdisciplinary in nature.”

When I asked Victor about the trajectory we are on given the current global situation, I heard him sigh before he answered, “Currently it looks like we are continuing to maintain an emphasis on economic growth. What we are seeing for example, is an increasing gig economy, short term employment, lack of benefits for workers, and so on. Everything is sacrificed to economic growth. We hear a great deal about green growth, poverty sensitive growth, inclusive growth and so on. But these are just other ways to continue defending growth.”

Victor concludes, “If we give up economic growth as a priority we can look at what matters in life and shift the emphasis away from growth. That will be the beginning of a change.” He continues, “Covid has shown us that significant changes can happen much faster than we thought. People have understood the value of

community, growing one’s own food, etc.” This gives Victor reason to hold on to his vision that it is possible to slow down by design, not disaster.

*Birgitta Jansen has been an active volunteer in Death Valley National Park. Currently residing in British Columbia, she is a managing editor of the Desert Report, has written previously on a number of environmental topics, and has completed a book about the October 2015 flash floods in Death Valley NP.*

An article written by Peter Victor will be published in the December issue of the *Desert Report*.

- 1) *Slower by Design, Not Disaster; Managing Without Growth*, Gideon Rosenbluth Lecture given by Peter Victor, University of British Columbia, February 24, 2021. <https://vimeo.com/516928327>. Accessed October 13, 2021.
- 2) Ibid.
- 3) Victor, Peter. Questioning economic growth. *Nature*, 468 (7322): 370-371. November 17, 2010. [https://www.researchgate.net/publication/47812447\\_Questioning\\_economic\\_growth](https://www.researchgate.net/publication/47812447_Questioning_economic_growth). Accessed November 7, 2021
- 4) Ibid.



## **Desert Website**

**The Desert Report website has been rebuilt to feature material in a more timely manner than the three-month interval between printed issues. The material that appears on the Home page will also be more action oriented than has been customary in the past. The archive of past issues will be largely unchanged. The Index to past issues and References provided in articles can be accessed from the bottom of any page.**

[www.desertreport.org](http://www.desertreport.org)

BY SUSY BOYD

# Carbon Sequestration In Our Desert Lands

## Essential to California's 30X30 Initiative

California's laudable efforts to conserve 30% of our state's lands and coastal waters by 2030 have not been lost on our desert region. In fact, a small but steadfast collection of environmental groups and scientists have been working over the past year to ensure that the desert takes its proper place at the 30X30 table. As the largest intact ecosystem in the lower 48 states, comprising a quarter of the state's landscape, it seemed reasonable enough that the desert region would play a significant role in 30X30. But it hasn't been quite that simple.

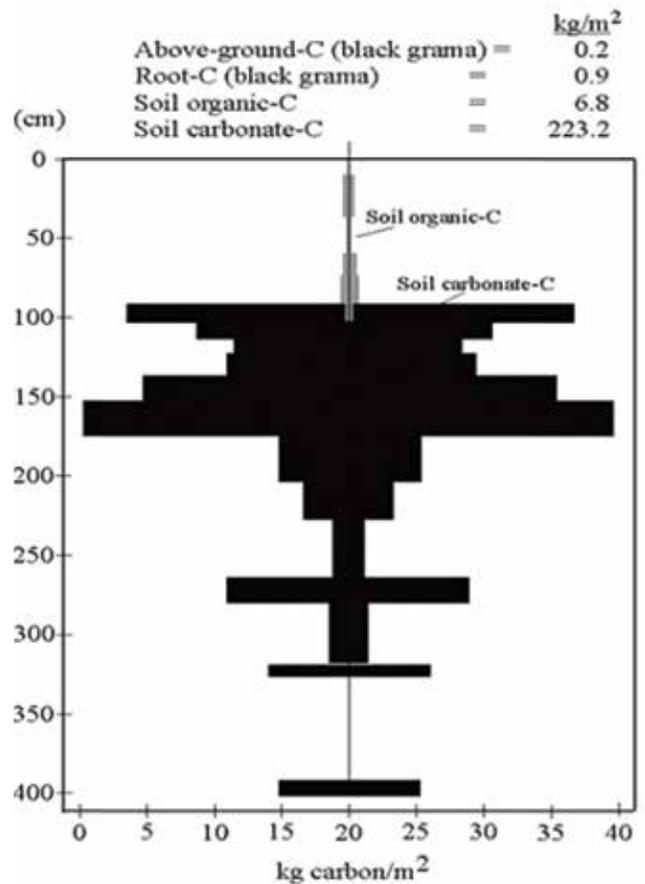
The California desert has been hung up in a limbo state of perception. The public is catching on to its supernatural beauty evidenced not only by record-snapping visitation to our National Parks, Monuments, and Preserves but more recently by a real estate boon spurred by city dwellers looking to change up their world. In 2011, visitation to Joshua Tree National Park was about 1.4 million. By 2021, it had surpassed 3 million visitors for the first time. Real estate analyst Redfin reports 69% growth in home values in Joshua Tree between 2020-2022. Demand outstrips supply.

At the same time, misperceptions about ecological processes and carbon sinks in the desert have remained persistent. And these misperceptions have created roadblocks for the desert region in taking on its full role in the state's far-reaching conservation efforts. A coalition of environmentalists and scientists, the Inland Deserts Working Group<sup>1</sup> (IDWG) Science Team, functions as an informal liaison between desert concerns and the state's 30X30 work. Much of IDWG's work has been to engage cooperatively with California Natural Resources Agency (CNRA) staff who are leading the 30X30 work to create a more holistic understanding of the desert as an ecosystem.

### The intersection of 30X30 and our desert lands

While the broad goal of 30X30 is to conserve 30% of the state's lands and waters, there are three pillars of the plan to get there. One of the foundations is carbon sequestration to combat climate change, a second is protecting California's spectacular biodiversity, and a third is access for all. This report focuses on the first pillar, though there's much to be said for the other two. The state has put a great deal of emphasis on "Nature Based Solutions" as a result of Governor Gavin

Newsom's Executive Order N-82-20. The EO seeks to advance biodiversity conservation as an administration priority and elevate the role of nature in the fight against climate change. To meet atmospheric carbon reduction goals, nature itself, if conserved, functions as



**Comparison of amounts of carbon stored as inorganic carbon (223.2 kg/m<sup>2</sup>) [soil carbonate-C] vs. organic carbon (6.8 kg/m<sup>2</sup>) [soil organic-C] within layers of desert soil at the USDA-ARS Jornada Experimental Range in northern Chihuahuan Desert New Mexico. In the desert, carbon sequestration is primarily an underground process. Graph by Dr. H.C. Monger, New Mexico State University**

a carbon sink. The challenge for the desert region isn't so much its capacity to store carbon, but the widespread mis-perception that the desert ecosystem lacks that capacity.

**California's deserts store up to 10% of the state's carbon emissions**

Visually, it's an understandable flaw to dismiss the desert as a carbon sink. When we look at a redwood tree and make the case that carbon is stored in its tall broad trunk, in its fine needles and overstory, in its roots, in its deep red soil, there's little room for dispute. But the desert's carbon sequestration capacity operates in its own unique way. A way that makes complete sense for its harsh, water-deprived environment. In a desert, carbon sequestration is upside down. Botanist Robin Kobaly aptly describes the ecosystem as an underground forest.<sup>2</sup> We can't see it, but it exists. The desert mesquite tree is a good example. Older mesquites reach an aboveground height of 20-30 feet and appear almost more shrub-like than as a tree. But their roots can extend for several hundred feet, far into soil depth, reaching for life-sustaining water.

Roots and their attached fungal root partners exhale CO<sub>2</sub> which reacts with calcium to form calcium carbonate crystals, or caliche. Atmospheric carbon is transferred – and stored – under-ground, in the caliche. If the soil is left undisturbed, the carbon remains underground for thousands of years. Glomalin is another critical means of carbon storage in the desert ecosystem. It's made from atmospheric carbon that's been converted to sugars and sent down to the roots, then secreted around the fungal threads connected to these roots.

There are miles of carbon-storing glomalin threads in one cubic foot of undisturbed desert soil. And glomalin stores a third of the world's soil carbon.

The desert distinguishes itself from other ecosystems by having high amounts of soil inorganic carbon (SIC). Inorganic carbon "counts" when it comes to carbon sequestration. The desert's carbon storage capacity is primarily owed to soil inorganic carbon, which has long been neglected as a significant C sink. A 2000 study found that globally, desert soils sequester about 800-1700 Petagrams of carbon. Studies estimate soil inorganic carbon to account for a third of the total C pool in soils worldwide. With soil inorganic carbon constituting such a large component of the global carbon pool, excluding this segment skews global carbon accounting.

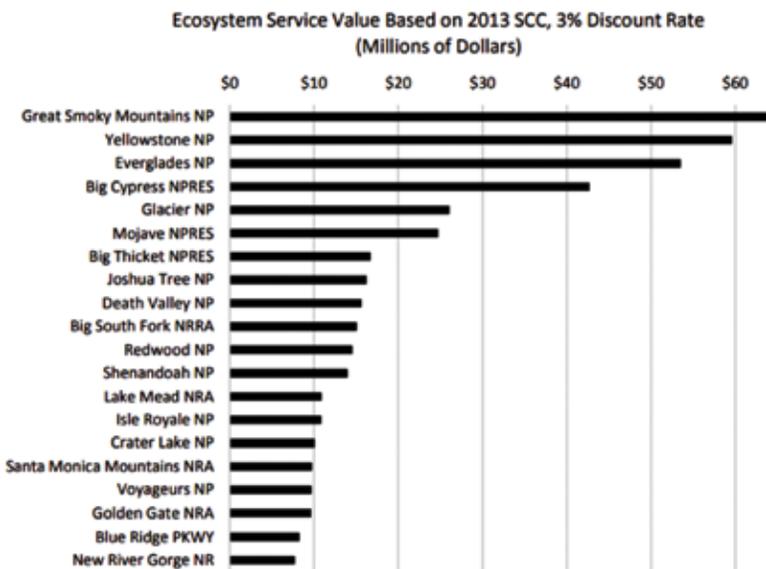
In the state's 30X30 carbon accounting framework, this exclusion appears to be a result of difficulty in modeling SIC. Since one goal of 30X30 is to develop management strategies across state ecosystems to maximize carbon sinks, inability to assess projections and changes in desert carbon stock (also called "flux") creates a challenge for inclusion of SIC. At the same time, the SIC pool is an integral part of the global carbon pool and excluding this crucial component minimizes the fundamental importance of desert ecosystems in addressing climate change goals at both regional and global scales.

**The desert time scale**

Just as our iconic desert tortoise is slow but steady, so too is carbon storage in the desert. The ecosystems that 30X30 work focuses on are forests, grasslands, wetlands, croplands... even developed lands. Carbon in these ecosystems is stored primarily in aboveground biomass. As you would imagine, these systems are exposed to weathering, hydrology events, and human impact. Especially in a managed forest where inventory is regularly harvested, grown, and measured, carbon moves around a lot. Even carbon stored in cut lumber is part of the accounting trajectory. Carbon in a forest is prone to a great deal of flux. The same doesn't hold true for the desert. Because carbon is stored primarily underground, in roots, in caliche, it stays put for the most part, *barring human disturbance*. Caliche layers can be thousands of years old. It takes a very long time to form the caliche, but just minutes of a bulldozer's work to release ancient carbon stores back into the atmosphere. The simplicity of carbon sequestration in the desert can be difficult for decision makers working on 30X30 strategies to grasp because the best management strategy for desert carbon sequestration is to leave it alone.

**A macro look at desert carbon sequestration**

One of the ways to think about how deserts function as carbon sinks is in terms of area units. So, acre for acre, a forest stores more carbon than a desert. But what if there are many acres of desert lands relative



**Top 20 NPS units by carbon sequestration value. Chart by NPS/Dept of Interior**

# Walking Box Ranch: Past, Present And Future

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Jr., was also in politics, served as Clark County District Attorney, and was elected to one term as Lieutenant Governor. He passed away in 2011.

The ranch has undergone several changes in ownership since 1930. Bell sold the property to Karl Weikel in 1951, and Weikel changed the name to YKL Ranch, representing his brand. Weikel ranched there until 1989, when he sold it to Viceroy Gold Corporation as a corporate retreat. The mining company removed a number of the outbuildings and built a new bunkhouse and adjacent tennis courts. The ranch was purchased by the federal government in 2005, and the house has since undergone historical restoration.

Even though tours were given at the ranch, it has never been officially open to the public as a tourist destination. That is BLM's goal, however, and is one of the reasons that the Friends of Walking Box Ranch (FWBR) organization was created. With limited staff devoted to managing the ranch site on a day-to-day basis, partnering with another organization brings extra resources to bear in reaching the milestones necessary to open the site to the public much sooner than it would otherwise take.

The first task, especially post-pandemic, was to continue site improvements. This started with establishing and maintaining a basic site stewardship regime. During the pandemic, with BLM's volunteer program on hiatus, most on-site ranch work was paused. During that time nature started taking over. Once volunteer activity was allowed, on-site work crews arrived to find Russian thistle and other undesirable plant life covering the grounds between buildings and throughout the corral area. Groundskeeping work began immediately, and with assistance from community volunteers and the business community, we've been able to clear away much of that overgrowth. Inside the ranch house, floors and other surfaces were cleaned, and traps were deployed to remove critters from the residence. Of

course, this will be a never-ending endeavor, and the Friends group's ultimate goal here is to recruit standing groundskeeping and house teams to maintain the grounds on a schedule.

As FWBR has been working on ground and interior surfaces, BLM has been working on infrastructure and restoration efforts. The building's fire and security systems are outdated, and work is being done to build in current equipment and services.

These services are necessary if the house is to be refurbished which is, indeed, the plan. Many items from the Bell's life at Walking Box Ranch were donated by the Family to UNLV: furniture, ranch equipment, personal items, and more. BLM is working with the university on an agreement that would place furniture and other items back in the house. Clara Bow brought a unique aesthetic to their desert ranch. Some of their mission-style furniture and other items from their time at the ranch will help tell their story and bring a sense of homeyness back to the ranch house. Future tours of the site will be much more interesting if it looks more like it did when the Bell Family lived in it.

The story of the Bell Family is only part of the rich history of the ranch. There are other stories that make up the tapestry of experiences that are part of Southern Nevada's history, including early cattle ranching and indigenous culture and history. BLM is working with UNLV's Public History Department, regional indigenous groups, and FWBR in creating interpretive programs that place those stories into context. Public History graduate students have been researching and cataloging items from the Bell Family Collection since 2019, and some interpretive material has already been produced. The next step here is placing equipment currently stored throughout the site in strategic places that help visitors understand the ranch during its cattle working heyday combined with informative panels, kiosks, and other signage. Programs are being developed that can be included in house and site tours plus on-site "living history" style experiences.

As the site gets closer to being ready to open to the public, we'll be recruiting people to fill new roles. Greeters will meet visitors as they arrive and tour the site grounds. Although signage is helpful, having people available to answer questions will keep visitors engaged until the next scheduled tour starts. Those tours will be facilitated by a team of docents, people trained in leading visitors on tours of the house or grounds following one of a handful of interpretive programs. Although initially the greeters and docents will likely be volunteer positions, those are two roles that have the potential to evolve into paid positions.

Current plans call for the ranch to open to the public for scheduled tours during the weekend. As interest grows and staff and volunteer availability increases, hours of operations will extend into the week.



**Walking Box Ranch house. Photo by Alan O'Neill**

The following is from FWBR website:

*Friends of Walking Box Ranch was formed in December 2019 by leaders in the Southern Nevada public lands community. After recent restoration efforts, in 2019 the Bureau of Land Management began planning to open the ranch on a regular schedule. They reached out to a current nonprofit partner, the Friends of Sloan Canyon, to help identify members of the community that could partner with BLM on telling the story of Clara Bow, Rex Bell, the cattle ranch they built, and highlighting a period of history in Southern Nevada before the world saw Las Vegas as a tourism destination. From these efforts Friends of Walking Box Ranch was born!*

The mission statement for the group reads:  
*Friends of Walking Box Ranch supports the preservation of this historic ranch through interpretive and educational programming, academic research, site stewardship, and restoration efforts.*

*Jim Stanger is the Board President of Friends of Walking Box Ranch and Friends of Sloan Canyon. Working at the ranch has given him a voracious appetite for learning about historical preservation and interpretation. During the pandemic he discovered the joy of motorcycles, and so you may hear of that also if you should meet him.*

*Judy Bundorf has been a resident of Nevada for 60 years, lives in Henderson, NV, and has a second home off the grid near Searchlight. She is on the Board of Directors of Basin and Range Watch and Friends of Walking Box Ranch. Since 2008, she has been actively working to prevent industrial development on pristine Mojave Desert lands in Nevada, Arizona, and California.*

References: Walking Box Ranch Master Plan and Preservation Plan Report (June 2008); Friends of Walking Box Ranch website (friendsofwbr.org)



**Clara Bow and Rex Bell at the Ranch.**

## Outings

As a result of the coronavirus outbreak, there are currently no Desert Committee outings scheduled. For updated information visit the Outings section of the Desert Report website at [desertreport.org](http://desertreport.org). You may also want to consult with other groups that conduct recreational and service outings in the desert.

**Desert Survivors:** [desert-survivors.org](http://desert-survivors.org)

**Friends of the Inyo:** [friendsoftheinyo.org](http://friendsoftheinyo.org)

**Friends of NV Wilderness:** [nevadawilderness.org](http://nevadawilderness.org)

## Future Committee Meetings

The Autumn meeting of the Desert Committee will be held by Zoom on Saturday, November 19, 2022. Details will be posted later.

The Winter meeting of the Desert Committee is tentatively scheduled to be held in Shoshone, California, on the weekend of February 11-12, 2023. Details of the meeting will be dependent upon the need (or lack thereof) for COVID precautions. The date is definite, and details will be published as the date draws near.

## Join Us On The Desert Forum

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

### SIGNING UP IS EASY

Just send this e-mail:

To: [Listserv@lists.sierraclub.org](mailto:Listserv@lists.sierraclub.org)

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

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

Message: SUBSCRIBE

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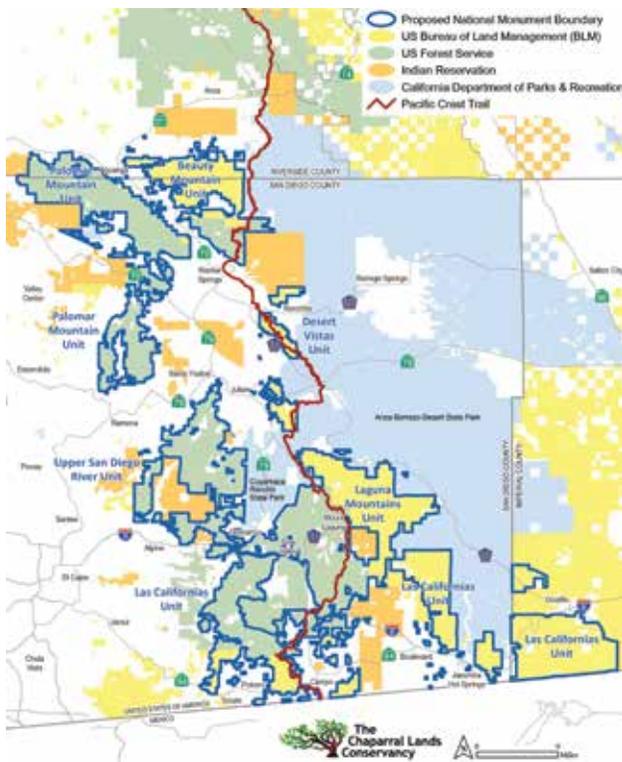
[this must fit on one line.]

By return e-mail, you will get a welcome message and some tips on using the system. Questions? Contact Stacy Goss, [stacy.goss@comcast.net](mailto:stacy.goss@comcast.net), (408) 248-8206.

BY DAVID HOGAN

# Mutt Kupshuw – ‘Éexil Kwáavichush National Monument

California’s chaparral ecosystems and Tribal cultural values



## Proposed Mutt Kupshuw –‘Éexil Kwáavichush NM

A global hotspot for biological diversity. Special cultural places and resources to Indigenous people. Outdoor recreation backyard to millions of southern Californians. Sublime natural quiet and views. These are just a few of the values supporting designation of a proposed new Mutt Kupshuw/‘Éexil Kwáavichush National Monument on federal public land in southernmost California.

Pronounced “Mutt cup-show Éch-hill kwáh-ve-chush” and meaning “take care of the land” in local Luiseño and Kumeyaay/Diegueño Native American languages, a new National Monument would help ensure that federal land centered around California’s southern Pacific Crest is better protected and managed far into the future.

## Location of the Monument

The proposed Mutt Kupshuw - ‘Éexil Kwáavichush National Monument would be located on approximately 480,000 acres of the Cleveland National Forest and adjoining Bureau of Land Management lands in the foothills, mountains, and desert of eastern San Diego County, southern Riverside County, and western Imperial County (map). The proposed Monument includes six places that could become units of the new Monument including Beauty Mountain, Palomar Mountain, Desert Vistas, Upper San Diego River, Laguna Mountains, and Las Californias. Large areas of conserved lands in Anza-Borrego Desert State Park, Cuyamaca Rancho State Park, and Volcan Mountain Preserve among many others border and connect proposed Monument units to provide ecological connectivity across this special landscape.

## California’s unique chaparral nature

Many values support designation of the proposed National Monument including important natural, cultural, historic, and other resources. But the one primary and unifying resource found across the area is California’s unique and rich chaparral shrublands ecosystem. Chaparral is ubiquitous and forms the original natural vegetation cover across foothills and mountains of the area alongside a relatively few areas of conifer forests, oak woodlands, mountain meadows, and desert scrub. Contributing to the concentration of biodiversity and ecological importance of the area, much of the proposed Monument is located along the very edge of the California Floristic Province where the semi-arid Mediterranean climate and vegetation transitions in just a few miles across the Pacific Crest from a narrow 50-mile band along the Pacific coast to 1000 miles of arid southwestern continental deserts.

Just as forests can consist of various kinds of trees, chaparral vegetation is defined by dominant associations of shrubs such as chamise, manzanita, mountain mahogany, and scrub oak. Chaparral shrublands make up the majority of wildlands in California and are the core nature experienced by millions of visitors to natural parks and preserves around our largest cities.

Unfortunately, chaparral still attracts negative attention from fire agencies and disaster media as a threat to people, rather than positive attention for its true values as a globally unique ecosystem and Californians' connection to nature. Western culture also seems to love tree forests to the exclusion of other important natural communities, and at best chaparral is overlooked, or at worst it is wrongfully perceived and managed as temporarily frustrated tree forests. Key messages of the campaign for the new Monument will elevate the ecological importance and improved protective management of chaparral.

### Indigenous people

The name of the proposed Mutt Kupshuw - 'Éxil Kwáavichush National Monument was recommended by local Tribal leaders and reflects a cultural history and continuing presence of Indigenous people. Despite a history of genocide and oppression, San Diego County is still home to thousands of Native Americans and has eighteen reservations, more than any other county in the United States. Several of these would border the proposed Monument,

All of the proposed Monument area was the original territory the Cahuilla, Cupeño, Kumeyaay/Diegueño, and Luiseño people. Yet to this day, Indigenous people are disenfranchised from their original lands and sacred sites when they are barred access to private land and from input to resource management and use. Despite the location of original territories on federal lands, opportunities for Tribal nations to assist in land and resource management is limited by government agency culture and bureaucracies. A new National Monument must recognize and honor the essential cultural history of the region and empower Tribal Nations in management of the Monument.

### Other special values

Chaparral shrublands and other natural communities in the proposed National Monument are a part of a California biodiversity hotspot, one of thirty-six places with the richest concentrations of native animals and plants on Earth. San Diego County is also home to more listed endangered species than any other county in the continental United States, and many imperiled animals and plants are found in the Monument. These include the infamous California gnatcatcher, endemic butterflies like the Hermes copper and the Laguna Mountain skipper, plants like Cuyamaca cypress and San Diego thornmint, and even a population of native rainbow trout. And the proposed Monument includes the only documented locations of movement of mountain lions and Peninsular bighorn sheep between California and Baja California. Establishment of the Monument would permanently protect a particular concentration of California's special biodiversity, support regional habitat

conservation plans, and support federal and state goals to conserve 30% of our Nation's lands and waters by 2030.

Historic values of the proposed Monument include many unique events and places that have shaped local and even national history. The Monument would include parts of the route followed by the Cupeño people in the early 20th Century when they became the last Tribe in the United States to be forcibly removed from their home. Two of the most significant wildfire tragedies in U.S. history took place in the mid-20th Century when twelve firefighters each were killed in the Hauser Creek and Inaja fires and that resulted in changes used to this day in wildfire engagement. The "Impossible Railroad" and early trails and roads connecting San Diego to the continental United States wind through the area. And the Laguna Mountain Recreation Area will be 100 years old in 2026.

The proposed Monument would also help protect the resiliency of natural lands and resources in our era of extreme climate change. The Monument would provide key climate values like carbon storage in the relatively huge and dense roots of chaparral shrubs which live on following wildfire. And ecosystem connectivity would allow animals and plants to move upward and northward in elevation and direction as they're harried by increasing temperatures and drought.

Areas included in the proposed Monument include extraordinarily popular outdoor recreation destinations for millions of nearby southern California residents. Destinations like the Pacific Crest Trail, Laguna Meadows, Cedar Creek and Three Sisters waterfalls, and snow play areas on Laguna and Palomar mountains attract visitation rivaling some of the Country's most popular national parks but with far less infrastructure and

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McCain Valley. Photo by Bob Wick



# Desert Updates

*MTNLM. Photo by BLM*

## Mojave Trails National Monument

### Update

The original vision for Mojave Trails National Monument may yet come to fruition. A core group led by the Wildlands Conservancy and Sierra Club is preparing and vetting a proposal to complete Mojave Trails as originally proposed. Discussions with the Chemuevi Tribe are positive and ongoing. Frazier Haney of Wildlands, plus Vicky Hoover assisted by Moises Cisneros of the Club are leading the way. More later!

Meanwhile, after years of inaction under the Trump administration, the Bureau of Land Management's effort to prepare a management plan for the six-year-old Mojave Trails National Monument is back on track. This spring BLM hosted pre-planning educational zooms, to receive suggestions about important topics for the plan, and now asserts that writing the management plan will begin in earnest before the end of the year.

### Future Planning

A Community Alternative has been written to guide management strategies for the Mojave Trails National Monument. This document advocates not only to preserve the natural resources of the Monument but also to give voice to local constituencies, cities, underserved communities, and Native American Tribes. This effort was backed by major environmental organizations and brought to fruition primarily through the efforts of Frazier Haney, then of Conservation Lands Foundation, and Linda Castro of CalWild. Involved participants continue to advocate that the Community Alternative be analyzed and adopted as the foundation for managing the Monument.

The government website for the Mojave Trails Monument should provide future notices and dates and can be accessed at: <https://tinyurl.com/2cnfhraw>

The full Community Alternative may be accessed at: <https://tinyurl.com/y6sakayk>

### Correction to article in the special edition of *Desert Report*

An article by Craig Deutsche in the Special Issue of the *Desert Report* (August 2022, page 36) needs further comment. It referenced a study reported in 2016 by Ferruccio Ferroni and Robert J. Hopkirk which concluded that for several photovoltaic solar facilities in Germany and Switzerland the energy invested in building the facilities exceeded the total energy expected to be produced in their working lifetime. Regrettably, this study appears to be deficient in several ways,<sup>1</sup> and a number of other reports suggest that the energy returned by similar installations may exceed that invested in even one to four years.<sup>2</sup> It is encouraging that the efficiency of photovoltaic energy production is greater than was implied in the article in special edition, and the author regrets that a more accurate report was not given.

1) [https://www.academia.edu/68249696/Energy\\_Return\\_on\\_Energy\\_Invested\\_ERoEI\\_for\\_photovoltaic\\_solar\\_systems\\_in\\_regions\\_of\\_moderate\\_insolation\\_a\\_comprehensive\\_response](https://www.academia.edu/68249696/Energy_Return_on_Energy_Invested_ERoEI_for_photovoltaic_solar_systems_in_regions_of_moderate_insolation_a_comprehensive_response) (2017)

2) <https://www.pveurope.eu/markets/fraunhofer-ise-pv-report-facts-about-solar-energy-worldwide> (2021)

# Mutt Kupshuw – ‘Éexil Kwáavichush NM

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services. A new Monument would permanently protect these destinations, enhance recreation, and help improve equitable access to nature for all.

## Threatened lands and resources

At first glance, many lands within the Mutt Kupshuw-‘Éexil Kwáavichush National Monument may appear as if it’s already protected by federal ownership. But these lands actually exist in a patchwork of conservation areas and conflicting, multiple use management areas, and with the majority of federal lands still available for development. Threats have included energy and utility development, landfills, mining, and under-management. Biodiversity and wildlife corridors and other ecological connections are at risk from development and climate change. Culturally sacred places have been developed, vandalized, or looted. And Tribal access to original territories, traditional resources, and cultural uses have been limited.

## Campaign origin & progress

The idea for a new national monument in this region originated years ago with The Chaparral Lands Conservancy\* following the bitter loss of the Sunrise Powerlink. The Monument campaign took off following inauguration of President Biden and the renewed possibility of support for major conservation initiatives. Thanks to the early support of several environmental organizations, an experienced campaign organizer was retained, and a broad coalition formed to pursue designation of the Monument with a an Antiquities Act proclamation during President Biden’s current term.

The coalition for the proposed Mutt Kupshuw - ‘Éexil Kwáavichush National Monument has been busy with presentations to agencies, stakeholders, and elected officials. We’ve secured nearly 100 endorsements for the Monument from groups, businesses, and individuals including San Diego & Imperial Counties Labor Council, Julian Chamber of Commerce, San Diego County Democratic Party, Anza-Borrego Foundation, San Diego River Park Foundation, Camp Stevens (Episcopal Camp) Julian, and Dr. Bronner’s Magic Soaps among many others.

## Benefits of the proposed National Monument

National monuments are designated to protect federally-owned lands and waters with significant cultural, historic, ecological, and scientific values for conservation and enjoyment by future generations. The proposed Mutt Kupshuw - ‘Éexil Kwáavichush National Monument would:

- Keep beautiful undeveloped mountain and desert lands as they are;
- Protect and support Indigenous cultural uses and places;
- Protect biodiversity and help address climate change;

- Enhance outdoor recreation and equitable access to nature for all;
- Increase resources for conservation management and improved visitor experience;
- Benefit nearby communities.

Establishment of a new Mutt Kupshuw - ‘Éexil Kwáavichush National Monument would ultimately benefit nature and people by reducing the threat of harmful future development. It would provide improved management to protect and maintain this special place and its resources. It would serve as a centerpiece of interconnected and protected natural lands and would help ensure our communities can enjoy these precious natural lands for generations to come.

More information is available at the webpage of The Chaparral Lands Conservancy ([tinyurl.com/y69y82ky](http://tinyurl.com/y69y82ky)).

*David Hogan has worked as a professional environmental advocate for over thirty years. He founded The Chaparral Lands Conservancy in 2009 to advance conservation of California shrublands, dependent plants and animals, and especially endangered species through acquisition of land and/or management rights, habitat restoration and enhancement, stewardship, research, and education. David is also currently Vice Chair of the San Diego Chapter of the Sierra Club.*

*All the photos have been contributed by photographer Bob Wick who asks that they not be reproduced or used without explicit authorization.*

*\*Not to be confused with the California Chaparral Institute ([californiachaparral.org](http://californiachaparral.org)), also based and doing awesome work in San Diego County.*



**Overlook, Laguna Recreation Area. Photo by Bob Wick**

# Transmission Line Is Being Fast-Tracked

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carbon from the atmosphere, just like a forest. When we bulldoze these places, we get more carbon dioxide in the air.

I must tell you now about Nevada Energy's Greenlink Transmission Line proposal. Nevada Energy is owned by the investment firm Berkshire Hathaway, which is owned by the billionaire Warren Buffet. There would be two parts to the transmission line: Greenlink West and Greenlink North. The western portion would run from Las Vegas to Yerington, near Reno. The northern portion would cut across the center of Nevada, through the depths of a wild outback country.

The Nevada Bureau of Land Management is in the midst of an environmental review (what does that even mean anymore?) for Greenlink West. Like everything else, they are doing it piecemeal. But the BLM is only reviewing the impacts of the transmission line itself. They are not taking into account the *cumulative impacts* of the all-out Solar Disaster to which it would open the door. That is, after all, the purpose of the so-called "Greenlink" line. Their strategy is to turn the landscape into an abstraction, a series of fragmented markings on a map in some corporate office, in a hundred corporate offices, a thousand corporate offices, with abstract names and language to reinforce their incessant turning away from what is.



**Figure 1: NV Energy map of Greenlink West and North, with green squiggly lines added to represent solar facilities.**

I have added my own green squiggly lines to NV Energy's marketing materials above. These represent the solar build-out that is being ignored in the Greenlink West's environmental review. Look at the blue sky. Look at the language in the description: Greenlink will help

Nevada "cost-effectively achieve its renewable energy and carbon reduction goals, promote economic development, and create thousands of jobs." The emphasis is not on a new direction to change and save life as we know it. It's on the "green energy economy."

Solar that destroys intact ecosystems is cost-effective for the Big Solar industry because it is cheap. They could build solar over the 2.5 million acres of parking lots in the United States, but that would not translate into high enough profit margins. Greenlink is also "cost effective" for Nevada Energy because the 2 billion dollar price tag will be passed on to its customers.<sup>2</sup>

In 2021, the Nevada State Senate passed Senate Bill 448, an omnibus bill which contained legislation about both electric vehicle charging stations and transmission. Had the transmission portion been introduced alone, it might not have passed so easily. The bill *requires* that Nevada Energy produce a plan for "transmission infrastructure for a clean energy economy" and construction must be completed by 2028.<sup>3</sup> This overrides the Nevada Public Utilities Commission's authority to reject the project, and it calls into question the validity of an environmental review for a project that must be approved.

Senate Bill 448 was written and introduced by State Senator Chris Brooks. It happens that Chris Brooks owns a consulting firm that advises developers on utility-scale solar projects, such as the 7000 acre Gemini project outside Valley of Fire State Park. One year after introducing SB 448, Brooks resigned from political office to accept a private-sector position in the Renewable Energy Industry.

Furthermore, the way in which the Bureau of Land Management is evaluating the project is illegal. By not considering cumulative impacts, BLM is violating the Code of Federal Regulations for the NEPA process. Section 651.6 states that:

*"NEPA analyses must assess cumulative effects, which are the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Actions by federal, non-federal agencies, and private parties must be considered."*<sup>4</sup>

In the case of the Greenlink transmission line, "reasonably foreseeable future actions" should obviously include the immense areas of Nevada wilderness that would be mowed down for utility scale solar projects.

In May, I attended the BLM's public meeting in Las Vegas. The meeting was at Centennial High School's auditorium, and the school didn't provide the BLM with projector equipment, so they made do with poster boards placed around the stage. When they said that they weren't going to post a recording of the meeting online, I decided to capture video with my iPhone camera. I posted this to my Mojave Green Youtube Channel.<sup>5</sup>

It shows the BLM representative walking back and forth across the stage with the poster boards on easels

behind him, mostly obscure maps that are notoriously difficult to discern. The maps show closeups of a dozen or so different areas, areas of concern for the transmission line and showcasing the eight different alternatives throughout various regions. He reads off a paper script with a single staple in the upper corner.

When I watch the recording, the first thing that stands out to me is that the BLM representative speaks about the project as if it is happening, and not as if it is under review, using verbs like “will” and “going to.” At 2:35, beginning to address the “project location,” he says, “we’re gonna go through Clark, Nye, Esmerelda, Mineral, Lyon, Story and Washoe counties. We’ve got approximately 469 miles of new transmission and associated substations that we’ll be working with. The right of way will include approximately 13,600 acres.” [He reads thirteen hundred at first.] At 15:00, the presenter starts to talk about the Resource Management Plan amendments: “so, we’re gonna amend the plans. There will be—it’s quite a few—there are six Resource Management Plans...There are gonna be some visual resource amendments.”

Who is the “we” that he refers to? The Bureau of Land Management is supposed to be objectively evaluating project proposals; this “we” feels uncomfortably out of place.

At 21:55, Kevin Emmerich asks a question about where Visual Resource Management plans in Southern Nevada would be amended. He asks for a “ballpark.” The BLM presenter answers that he doesn’t know, so Emmerich adds that “this should be on a map.” The response is, “okay, can you put that on a comment card and send it to us, please?” The problem is, from the tone of this meeting, it sounds like all the comment cards in the world won’t make much difference.

Let’s say we do it BLM’s way and ignore the code of regulations. Let’s only look at Greenlink West, not North, and have a rundown of some of the impacts of just the western transmission line itself.

The line would likely be built within the boundaries of the Tule Springs Fossil Beds National Monument<sup>6</sup> which was established to protect Ice Age fossils and the visual integrity of the surrounding landscape. Poles would need to be driven up to thirty feet into the Earth, easily causing damage to irreplaceable fossils. Adequate study according to the Paleontological Resources Preservation Act of 2009<sup>7</sup> (PRPA) (16 U.S.C. § 470aaa 1-11) would take up to three years (and NV Energy wants to start construction on the line next year). This prompted the Hopi Tribe to call out the BLM’s “rogue actions” in their letter to the National Park Service.

Critical Mojave and Great Basin ecosystems and connectivity corridors that support desert tortoise, Bi-State sage grouse, pronghorn antelope, bighorn sheep, and Joshua trees are all on the line (pun intended!). Connectivity corridors are especially important because

if we lose them, the animals can’t migrate, mingle, and breed as they were intended and this leads to degradation in the health of not just the animal species, but the entire ecosystem. Animals and birds eat plants and poop out their seeds elsewhere. Things have a way that they need to move, like an invisible current we cannot see (something *electric*).

The line would cut through special wetlands at the Amargosa River outside Beatty. And it would sever Sarcobatus Flat, where pronghorn go to give birth. There would be exceptional impacts to scenic areas throughout the state. These areas include the Desert National Wildlife Refuge, and the Spring Mountain National Recreation Area outside Las Vegas. They include Walker Lake, the Specter Range, the Amargosa Valley, Oasis Valley, Sarcobatus Flat, Lida Valley, Big Smokey Valley, Gold Mountain, the Mina area, Wassuk Range, Fort Churchill, and Mason Valley. There would be massive microwave towers adjacent to Wilderness study areas. *These places will never feel the same in our lifetimes or our children’s lifetimes.*

The proposed “green energy” buildout in ecosystems that provide crucial carbon storage, biodiversity, and cultural landscapes, is not the solution to anything. It will only exacerbate the extinction crisis, the climate crisis—the crisis of perpetual harm. The BLM is folding under the pressure of industry and NV industry’s corporate empire. They are failing to evaluate the Greenlink West project according to NEPA regulations. This is undemocratic, illegal, and it must be challenged in a court of law.

*Thank you to Basin and Range Watch for information about Greenlink West’s biological and cultural impacts.*

*Shannon Salter lives in the Mojave Desert of Nevada and California, is a Ph.D candidate at the University of Nevada, Las Vegas, and is an advocate for preservation of unspoiled deserts.*

1) <https://www-nature-com.ezproxy.library.unlv.edu/articles/nclimate2184>

2) <https://www.nevadacurrent.com/2022/08/02/nv-energy-seeks-right-to-stick-ratepayers-with-greenlink-bill/>

3) Section 21 of NV SB448, <https://www.leg.state.nv.us/App/NELIS/REL/81st2021/Bill/8201/Text>

4) Code of Federal Regulations Section 651.16, <https://www.ecfr.gov/current/title-32/subtitle-A/chapter-V/subchapter-K/part-651/subpart-B/section-651.16>

5) Mojave Green Youtube Channel

6) <https://www.nps.gov/tusk/index.htm>

7) <https://irma.nps.gov/DataStore/Reference/Profile/2274127>

BY A. MEDINA SR.

# Air Pollution And The Lack Of Awareness

## How awareness can help solve the air pollution problem in Imperial Valley

*When the governor visited the Master before beginning his campaign in the region, he begged for advice that could help him during his journey. "But I don't have time for long speeches so keep it as short as possible," he instructed. "Of course, Your Lordship, and it can be done in a single word." "Let's hear that unusual word" replied the governor. The Master took paper and pencil and wrote the word "Awareness." But since the governor still did not understand the Master wrote again "Awareness means Awareness."*

Some of the most dangerous days for the health of residents in the Mexicali and Imperial Valleys are those when the wind blows. Like tiny dots on a map, the cities of the Imperial Valley are completely surrounded by a sea of agricultural fields whose land has accumulated tons of chemicals left by decades of industrial agriculture. These chemicals are harmful to the health of all living things, and according to research by Dr. Calderas of Econciencia y Salud and Mr. Patrick De Feo of Flight Pattern Kids, they are directly associated with respiratory and cardiovascular diseases. It is the wind that brings these chemicals into the air that we breathe.

These chemicals do not disappear. Rather, they adhere to the cells of foods grown in this region, hence the preference of many consumers for "organic" foods. These chemicals seep into the aquifers and contaminate them. They also stick to dust particles, and when these are stirred up by wind or industrial farming processes, they rise into the air and we breathe them. In a similar way, an agricultural burn is equivalent to a chemical bomb that quickly spreads throughout the environment, suffocating neighboring communities. The hazard is especially acute when those burns go wrong - which they do all too often.

Imagine the immune system of a three-year-old child exposed to a highly polluted environment like that of the Imperial Valley where approximately 300 agricultural burns are authorized per year, with multiple accidental hay fires (sometimes entire warehouses burn for days). Thousands of tractors are tilling the land and sending dust in all directions, applying manure and fertilizer and pesticides day and night. Eventually, this developing immune system will tire of eliminating these toxins and will succumb to asthma or any other air pollution-related illness. Of course, not all children are the same, but in these marginalized communities

where generational poverty plagues a large part of the population, children are the first to suffer the consequences. Each new generation of students that arrive in the classroom where I teach will have more illnesses closely related to the impacts of air pollution than the previous one. It is easier to raise healthy children in a healthy community.

It is important to point out some of the reasons why a problem as harmful to health as air pollution continues to plague our communities. Part of the responsibility falls on the agencies in charge of implementing the Clean Air Act such as the California Environmental Protection Agency (CalEPA), the California Air Resource Board (CARB), and the Imperial County Air Pollution Control District (ICAPCD). These agencies have sufficient funds and access to the most important academic institutions on the planet, and yet they have utterly failed to reduce pollution levels or implement sustainable and effective agricultural practices that benefit our communities. Their failure to take responsibility has placed the burden of advocating against the harmful actions of a powerful industry on the shoulders of the residents in these underserved communities.

Air pollution is not limited to the Imperial Valley since we share a common border with the city of Mexicali where industry also pollutes. It would be as serious to minimize the pollution generated by industry in Mexicali as it would be to ignore the activities of industrial agriculture in the Imperial Valley. Both sources harm the health of residents on both sides of the border. A major problem is that for decades the United States agencies have blamed Mexicali for the pollution while securing tax-payer funds for inefficient projects in the U.S. At the same time, they use regulatory monitoring where data is averaged every eight, twelve, or twenty-four hours (depending on the pollutant) and then declare that the Imperial Valley has met the required standards for particulate matter to avoid being sanctioned by the Environmental Protection Agency (EPA). It should be obvious that half an hour of extreme air pollution is quite capable of sending susceptible persons to the hospital without significantly affecting the twelve or twenty-four hour average that is used for reporting purposes.

These practices misinform the residents of our communities exposing them to unknown levels of air pollution and, in turn, promote the idea that it is safe to



***An agricultural burn in Imperial County.  
Photo by Alondra Gil***

raise a healthy family in this toxic environment. Neglecting the needs of marginalized communities will continue as long as residents do not construct a satisfactory response to the question: How am I contributing to the deterioration of my own health?

As a result of an unauthorized burn gone bad, where 100 inhabitants of this community had to be temporarily evacuated, a recent fire in Seeley, California, provides us with yet another opportunity to reflect on the need to eliminate agricultural burning throughout the region. The embers from the fire spread 1/2 mile into the surrounding area, scorching more than 330 acres, and seriously injuring a county firefighter who was rushed to the hospital.<sup>1</sup> Fortunately, this disaster did not end in tragedy thanks to the timely intervention of firefighters. Though legal in Imperial County, it is immoral to expose residents to agricultural burning and to toxic levels of air pollution. The ICAPCD should issue a citation to whoever is responsible for this fire. To date they have deliberately dodged my questions.

Someone who understands the consequences of applying toxic chemicals to the food we eat and then burning the crop residues will conclude that eliminating agricultural burning is essential to reduce air pollution levels throughout this region. In the San Joaquin Valley environmental activists have already stepped forward in pressing CARB to take decisive steps to reduce agricultural burning.<sup>2</sup> This legislation was authored by Senator Dean Florez in 2003, and it is ONLY NOW that loopholes in implementation are being addressed.<sup>3</sup> There are huge geographic, social, and economic differences between the two valleys, and our communities cannot afford to wait two decades for positive change to arrive while a silent killer like air pollution continues to claim lives.

The problem of air pollution itself is abetted by lack of awareness on the part of all those involved, be they farmers, bureaucrats, politicians, or community representatives. Knowing is not the same as understanding in the same way that hearing is not the same as listening. Endless problems could be avoided if we learned to listen properly. Understanding is a deeper act that is acquired only by using all your senses without allowing

a cloud to distract your attention. People involved in air pollution only know and hear but do not listen or understand and their actions are tainted by personal interest and not by the welfare of the communities around them.

To become aware of something is to see it in its entirety with all the implications that it entails. It is useless to sweep dust under the rug because becoming aware eliminates self-deception and leads to responsibility and action. However, becoming aware of something is not a simple thing. The first time I realized the impact of pollution on health was thanks to a corrosion study that Dr. Calderas was conducting for her doctoral degree at UABC, where she placed small copper and silver plates in the open air. The purpose was to measure the corrosion of the plates over two years but the plates were completely corroded in less than three months. I was shocked to realize that the deterioration caused by air pollution in metal could also do the same in my body and that of my children.

By this time, I had already seen thousands of agricultural burns since my arrival in the valley, and I still had not understood, so it is most likely that you do not understand either. The scientific literature from all parts of the world where the problem of air pollution is faced clearly indicates that annually about nine million people die due to their exposure to pollution.<sup>4</sup> Countless articles have also been written about the impact of air pollution on the health of residents of this region.

More information is available on the websites for IV4Change,<sup>5</sup> FPK,<sup>6</sup> and in Econciencia y Salud<sup>7</sup> where the harmful activities of industrial agriculture have been documented in detail. If you are still not convinced, do not worry but remember: in the same way that a child throws a stick into the sea cannot change the coming and going of the waves, prevent the sun from heating the waters, or prevent the silvery reflection of the moon from being reflected in them, you will not prevent this message from reaching your consciousness and, sooner or later, you will realize the impact that your actions have on others and you will simply modify them.

*Since the 1980s, Arturo Medina Sr. has been advocating for community issues as well as farm-worker issues. As a migrant worker during his youth, he knew the difficulties of working in the fields as he traveled with his family across the state in search of seasonal work. His educational background includes degrees from UC Santa Cruz, UC Los Angeles, and San Diego State University, and he has worked as an educator for more than three decades.*

*Footnotes cited in the article can be accessed at [www.desertreport.org](http://www.desertreport.org) by selecting "references" at the bottom of the home page.*

# Carbon Sequestration

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to acres of forest or grasslands? The vastness of arid lands across the planet accumulatively make them a grand carbon sink. Arid regions, which cover about 47 percent of the earth's land mass, are thought to make up the world's third-largest carbon sink on land. This phenomenon is expressed when we look at the rankings of carbon storage in our National Parks.<sup>3</sup>

It may be surprising to find Death Valley and Joshua Tree National Parks, and Mojave National Preserve, ranked higher for Carbon Sequestration Value than Redwood National Park and the Santa Monica Mountains NRA. Per unit of area, this would not be the case. But the sheer vastness in size of our desert parks makes up for carbon accounting. And this same scale plays out across our planet.

Carbon sequestration in deserts is an understudied, poorly funded, and perhaps most importantly undervalued process. But there's enough scientific evidence to date showing that deserts and arid lands may well be a critical, overlooked component of the global carbon pool. And if we are to enact policies such as state and federal 30X30 efforts with the intent of addressing our climate change challenge, it becomes of the utmost importance to start taking our desert lands seriously as a critical carbon sink.

*Susy Boyd works as Public Policy Coordinator for Mojave Desert Land Trust. She holds a Master of Natural Resources degree from Oregon State University where she researched climate change impacts on Mexico's Yucatan forests. She is an avid explorer and outdoors lover.*

*Footnotes cited in the article can be accessed at [www.desertreport.org](http://www.desertreport.org) by selecting "references" at the bottom of the home page.*



**Caliche forms the uppermost layer—the “caprock”—of the sediment. Edge of La Mesa Surface, west of the Rio Grande Valley. Photo by Dr. A.H. Harris, UTEP Biodiversity Collections**

# Amargosa Vole

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**Preparing to release captive voles into the marsh. Photo by Deanna Clifford, CDF&W**

threats from habitat loss and challenges around water security for their marsh habitat. Based on current climate change projections, the Mojave Desert will continue to face hotter and drier conditions with more severe periods of prolonged drought. The long-term survival of this species and its habitat remains in question, so building resilience into the surviving population is paramount.

The BLM's Barstow Field Office, with its partners, is focusing on future projects which will build upon the foundation established to this point. These projects include establishing water rights to maintain groundwater for the vole's habitat, completing range-wide surveys to determine current population estimates, planning for the development of a large marsh complex adjacent to Borehole Marsh, as well as continued management of vole habitat. The Amargosa Vole Recovery Team remains hopeful that their hard work and combined efforts will continue to move this rare and important species toward recovery.

*Chris Otahal is currently the Wildlife Biologist at the Bureau of Land Management, Barstow Field Office in California. Chris has held this position for almost 10 years. Prior to this position, Chris worked with the US Fish and Wildlife Service and with the US Forest Service. He has participated in many studies of a number of reptile species.*



# Desert Report Is Published By Sierra Club California / Nevada Desert Committee

To receive *Desert Report* please see details on the back cover. Articles, photos, and original art are welcome. Please contact Craig Deutsche (craig.deutsche@gmail.com, 310-477-6670) about contributions well in advance of deadline dates: February 1, May 1, August 1, and November 1.

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# DESERT REPORT

**PUBLISHED BY**

California/Nevada Desert Committee of the Sierra Club  
3250 Wilshire Blvd #1106  
Los Angeles, CA 90010

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