

ANNUAL REPORT

July 1, 2021 – June 30, 2022

MOJAVE DESERT RESOURCE CONSERVATION DISTRICT 15415 W. Sand St., #103, VICTORVILLE, CA 92392

*Meetings are held the first Wednesday of each month at 1:00 P.M. at the District Office
located at
15415 W. Sand St., #103, Victorville, CA 92392*

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Area Resource Conservationist.....Kim Lary
Area Resource Soil Scientist.....Peter Fahnestock
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Soil Conservationist.....Belinda Serrano
Farm Bill Assistant.....Bonnie Nam
Resource Soil Scientist.....Kaitlyn Valverde
MLRA Soil Survey Project Leader.....Matthew Ballmer
Soil Scientist.....Russell Plumb



MISSION STATEMENT: The Mojave Desert Resource Conservation District is committed to the development of a land stewardship ethic that promotes long-term sustainability of the region's rich and diverse natural resource heritage.

NATURAL RESOURCE OBJECTIVES OF THE DISTRICT:

- Provide resource management information to the community
- Promote the reduction of wind and water erosion
- Promote the proper utilization of our natural resources
- Promote water conservation
- Provide information for improved irrigation water management
- Demonstrate urban and agricultural practices that sustain and improve soil health, water quality and fish and wildlife habitat
- Work with the public and private sector toward land development practices that protect and enhance the region's natural resources and systems

TAMARISK/ARUNDO ERADICATION/CONTROL PROJECT

The Mojave Desert RCD is continuing their invasive plant removal/retreatment program with the focus remaining on retreatments in the Mojave River. Over the years the Tamarisk Beetle (*Diorhabda*) has been slowly migrating its way along the Colorado River and can now be found across the California border and along the Mojave River. Due to the migration of this little beetle the district decided in the fall of 2019 to not treat the usual places and give the beetle a chance to proliferate. Retreatment at Camp Cady in Newberry Springs was paused again this year as well to allow the tamarisk beetle to settle and proliferate.

With bio-fund trust funding through MWA the District again enlisted the services of Dr. Tom Dudley with Restoration Science LLC in Santa Barbara, to monitor the Saltcedar Biological control for the Mojave Basin. In Spring of 2022 Dr Dudley surveyed the Mojave River Tamarisk for beetle activity and found there to be not as much activity as he had hoped, but there were signs of successful overwintering and activity in some areas. According to Dr. Dudley the dry season only delayed the full force of the beetle until later in the summer. As predicted, later in the summer months of 2022 reports came in of high beetle activity and tamarisk browning all along the Mojave river from Silver Lakes in Helendale, through Hinkley and on past Barstow. Beetles have been found to exist at Camp Cady in Newberry springs and along the I-40 half-way between Newberry Springs and the Lava flows. Next generation beetles were in large numbers in the tamarisk at the Marine Corps depot in Barstow and have survived the winter along the riverbed in Hinkley and Oro Grande. The district will follow the progress of the beetle and monitor the various tamarisk spots where they show the most sign. The *Diorhabda* doesn't kill the tamarisk plant but puts it in a suppressed state where it will not produce seed and thereby cannot spread. The hope is while the tamarisk plants are in this suppressed state native vegetation will rehabilitate the areas along the riverbed, using less water and providing habitat for native endangered wildlife.

The district began control of these invasive plants during 2008 and has currently treated the majority of infested acreage from south of the Mojave Forks Dam to ½ mile east of the Barstow Marine Base. Parcels of non-consenting landowners and critical erosion areas have

been avoided. To date, a total of 2,310 “weed” acres of a total of 10,000 assessed acres of these invasive species have been removed/controlled. Chemical retreatments will be ongoing in areas where the beetle is not established to make sure all weeds stay eradicated, and any new sprouts are treated before they go to seed. However, if the tamarisk beetle continues to proliferate within the salt cedar in the Mojave River, the need for chemical treatment may not be as necessary. Initial funding for removal efforts was provided by a USDA NRCS earmark of funds to the Mojave Water Agency, the Mojave River Basin Adjudication’s Biological Resources Trust Fund, State Proposition 50, and direct funding from the Mojave Water Agency.

Benefits of this program are:

1. Implement the Mojave Basin Area Judgment (improve riparian habitats, maintain ground/surface water saturation at root zone, increase downstream flows).
2. Reduce evapotranspiration of ground and surface waters (water conservation).
3. Reduce salt deposits in the riverbed (water quality).
4. Reduce wildfire potential.
5. Keep channels open – reduce debris damming and severity of flooding.

MOJAVE RIVER RIPARIAN AREA FIRE PRIVENTION/HAZARD PROJECT

In late summer of 2021 and early spring of 2022, the district again oversaw the mowing of tumbleweeds and other invasive species along the pasture fences and imbedded in the trees along the edge of the forested riparian area of the Mojave Narrows Regional Park. The pastures of the park are mowed as well keeping the Russian thistle from massing along the fences and then into the forest edges. This bi-annual mowing has kept the fire hazard down due to fuel reduction on the edges of the forested park areas. This work was done by Marty Frazier Weed Abatement services and was funded by the Fish and Wildlife Biological Trust Fund. An interior trail clearing plan is being discussed between the San Bernardino County, Fenner Canyon Correctional Facility, and the district to clear the established trails within the forested areas twice per year for hikers, equestrians, and fire access to the forest interior.

PEPPERWEED

California Fish and Wildlife as well as the district are concerned about the amount of Pepperweed now taking over in the Mojave riverbed. As pepperweed is a very difficult invasive species to eradicate, different avenues to attack the weed are being discussed including a possible biological control. The pepperweed is prolific in the Mojave Narrows Park and downstream where it has taken advantage of a fire at the Mojave Desert Land Trust’s Palisades Ranch riverbed. Discussions are taking place to eradicate and/or control this very invasive species.

MOUNTAIN COMMUNITIES RELEAF

In 2003 the Old Fire burned through thousands of acres of precious land in the San Bernardino Mountains – in 2007 once again fire struck during the Slide and Grass Valley Fires.

Developed in 2004 after the 2003 Wildfires, Mountain Communities Wildfire ReLeaf is an ongoing program educating private landowners in the value of reforesting the burn areas and areas devastated by the bark beetle infestation. The ReLeaf program uses seeds previously collected in the San Bernardino Mountain burned areas. These seedlings are grown at the Southern California Edison Nursery in Auburn, CA and delivered to the sites for direct plantings as weather and climate conditions permit. Citizen and student volunteers are used on much of the larger burned areas, and professional planting crews in the more hazardous areas.

Working for over 18 years with Southern California Edison and CalFire we continue to work to grow and plant seedlings each year. Due to funding from American Forests, we have been able to complete site visits, land treatments, and the planting of additional seedlings across the San Bernardino Mountains of Southern California. Southern California Edison will continue growing the seedlings needed as we move forward for our 2023 and 2024 planting seasons. New partnerships are being created as ReLeaf continues assisting in areas devastated by additional wildfires.

ReLeaf completed a two-year project partnering with American Forests and CalFire under the "Resilient Communities" grant program sponsored by the National Fish and Wildlife Foundation and Wells Fargo. The funding supported planting, restoration treatments, community engagement and development of a climate – informed restoration plan for the San Bernardino Mountains over a two-year period. Our 2022 planting season closed out with planting 10,000 seedlings in partnership with American Forest, Cal Fire, and the California Conservation Corps.

Since 2004, ReLeaf Volunteers, partnering with the Mojave Desert Resource Conservation District and CALFIRE (California Department of Forestry & Fire Protection) have planted over 475,000 native seedlings across several hundred acres of land in the San Bernardino Mountains and additional areas located in San Diego and Riverside Counties.

MOJAVE WEED MANAGEMENT AREA (MWMA)

The Mojave WMA continues to be coordinated by the district, which organizes and hosts meetings and oversees ongoing projects and outreach efforts. Cal-Ipc has been working tirelessly on assembly bills to provide funding for the Weed Management Areas. State funding has finally been secured for Weed Management Areas and hopefully this will increase the capacity and momentum of the Mojave Weed Management Area. The Memorandum of Understanding for the MWMA currently has 23 signatories from agencies such as San Bernardino County Dept. of Agriculture, US Fish and Wildlife Service, Bureau of Land Management, California Dept. of Fish and Game, Joshua Tree National Park, and Mojave National Preserve, to name a few.

CAMP CADY WILDLIFE MANAGEMENT AREA RESTORATION PROJECT

The objective of this continuing demonstration study is to determine the potential suitability and sustainability of selected plant materials for site restoration/revegetation on riparian salt cedar infestation sites along the Mojave River, within the Camp Cady Wildlife Management Area's jurisdiction.

The Camp Cady water infrastructure has been replaced with not only new piping but pressure tanks and flow meters as well. With the aging water lines replaced not only for the office and bunkhouse areas but the surrounding restoration areas, new plantings are taking place. The Camp Cady caretaker Bruce Kenyon, Quail Forever, has been replacing plants in the restoration areas that died due to water pipe breakage in years past. Fish and Wildlife is in the process of installing a weather station at the office to collect vital data. The tamarisk beetle (*Diorhabda*) has shown to be proliferating in the tamarisk at Camp Cady, stalling mechanical and chemical eradication measures on tamarisk trees until the damage done by the beetle can be determined. Other native plants have established in the study area showing what species will survive in the salty and sandy environment. The water uptake from the saltcedar may affect the nearby plants water availability, depending on the amount of stress the existing beetles are placing on the trees. Also, the partial shading from the remaining controlled saltcedar debris may affect the plant survival for these species in the sandy loam understory.

CAMP CADY FIELD AT HARVARD ROAD SAND BLOW REDUCTION

The district, in partnership with California Department of Fish and Wildlife, San Bernardino County and Quail Forever, has completed the well repairs for the continuation of the Camp Cady grain field to be put into full circle operation. This last year the field was planted by a local farmer with grain for the Quail Forever quail hunts to take place and then replanted with Sudan grass seed. This full field restoration will greatly diminish or possibly stop dune sand from blowing onto Harvard Road in Newberry Springs. Every year Harvard Road, a main road off the 15 freeway, in Newberry Springs must be closed due to sand blowing across the road making it unsafe for traffic. This road stays closed for several days until the sand can be bulldozed onto the shoulder to allow traffic to continue. This closing of Harvard Road has happened several times per year in the past in the winter and spring but especially in the fall. The planting of Sudan grass on this agricultural field up wind from Harvard Road will not only work to diminish sand blow but provide a larger source of food and shelter for local wildlife. This is an ongoing project funded by Fish and Wildlife Biological Trust Fund and in partnership with Quail Forever, San Bernardino County and the local farming community.

INVASIVE GARLIC MUSTARD PROJECT

In early Spring of 2022, the District was approached by Chris McDonald with the University of Riverside Extension concerning a newly discovered invasive garlic mustard infestation within the district boundaries in Hook Creek near Lake Arrowhead. Garlic mustard is highly invasive in the eastern United States, and this is the first known invasion in California. This invasive plant grows for two years with the second-year plants flowering and dropping the seeds for the



next generation. The invasive weed crew strategically focused on the second-year plants and pulled them from the base (to prevent re-sprouts) and bagged them in plastic bags for removal to the USFS disposal facility.

Through partnerships with the UCANR, the US Forest Service and an MOU with Inland Empire RCD a crew was dispatched for three days in June of 2022 to remove the garlic mustard. Future mapping efforts are planned for this fall to conduct surveys in other nearby water ways for more wayward garlic mustard infestations.

IRRIGATION WATER MANAGEMENT

In partnership with Mojave Water Agency the District is dedicated to water conservation within the Mojave Desert RCD's large area. The District and MWA have implemented a program of water conservation alternatives through evaluation and field assistance for irrigation efficiency improvement, including enhancement irrigation water management automation, soil moisture and soil quality testing. With Covid-19 still very much present assessment visits were again mostly conducted through cell phone operations and coordinated site and cell phone program applications. As the Victorville Field Office was held to minimum public interactions the district team was still able to assist communities and educate customers on water conservation and irrigation. In Fall and Winter of 2021, the focus was on winterizing irrigation systems and scheduling less irrigation days and times. The IWM visits consist of a comprehensive evaluation that quantifies current outdoor water use. Clients are then given options to help conserve and reduce their water use. Conservation options include System evaluation, soil health in relation to water savings, installation options of current irrigation technologies, irrigation scheduling and mulching options for our area.

ASSISTANCE TO DAIRY OWNERS

One of the Districts roles as a non-regulatory agency has been to facilitate communication between the Natural Resources Conservation Service, the Lahontan Water Board, and the dairy owners to develop a collaborative solution to the nitrate concerns raised by the Lahontan Region Water Quality Control Board. The NRCS Conservation Nutrient Management Program (CNMP) can help producers utilize their manure sources available for nutrient application and to reduce nitrate intrusion into surface and/or ground water. The CNMP will also help with the infrastructure and in obtaining management resources available to aid in delivery and monitoring of nutrient and irrigated water applications to the cropland (i.e., flow meters, pipeline, manure spreading, pond liners, etc.). Lahontan hosted an in-person and online public listening session on June 15, 2022, asking for public comments on a newly released fact sheet and excerpts from the order that will apply to all Confined Animal Facilities. Nothing has been heard regarding the outcome of the meeting and incorporating the comments into the order as of yet. Unfortunately, the number of dairies has dwindled to less than five in the area. It is paramount all parties work together to achieve the most efficient and cost productive avenues that will determine the effectiveness of nitrate mitigation.

ALLIANCE for WATER AWARENESS and CONSERVATION

The district remains an active participant in the Alliance for Water Awareness and Conservation (AWAC). The district is partnering with Mojave Water Agency to provide educational outreach in irrigation water conservation in both residential and agricultural forums as well as other water conservation topics for the AWAC, both in attending events and currently in the video workshop arena. The mission of this dynamic coalition of over 20 regional organizations is to promote the efficient use of water and increase awareness of conservation as an important tool to ensure an adequate water supply.

A desert cleanup outreach in partnership with McDonalds was held in the Fall of 2021. Several slide dumpsters were filled along with abandoned boats, spas and various other items littering our desert. This AWAC program covers the entire Mojave Water Agency service area including, Victorville, Apple Valley, Barstow, Newberry Springs, and Joshua Tree.

Workshop presentations cover a variety of water conservation topics such as but not limited to irrigation design, irrigation maintenance, irrigation scheduling and new irrigation technologies. Outdoor garden education such as soil amendments for conservation, desert native plants and xeriscaping were high attendance presentations. Even topics on how the desert gets its water, how a growing garden can flourish in the desert and still conserve water, and the benefits of mulching were presented.

The four specific goals of AWAC are:

- Serve as a network to assist agencies in educating the public on water conservation.
- Provide resources with a consistent message to help agencies meet their respective conservation goals.
- Maintain current gallons per capita per day (GPCD) or lower and continue to position agencies for meeting future conservation needs.
- Exchange ideas between agencies, especially at quarterly meetings.

A calendar featuring low water use plants is published annually to heighten the public's awareness of water efficient landscaping. These calendars are freely available to the public through AWAC members.

NATIONAL RANGELAND INVENTORY

An extended agreement with NRCS increasing the program funding, finds the district on its fifth year providing assistance in the USDA National Rangeland Inventory (NRI) program. This program is federally mandated throughout the nation. The district provides assistance in the form of surveying and documenting designated points in southern California. Each point is an onsite data collection for grazing and range inventory. Each point is surveyed via 150 foot transects to collect environmental data including but not limited to plant life, land cover/use, landscape and soils, disturbance indicators and biomass/production, cover, density, and height. Points are revisited every 5 years

The National Rangeland Inventory (NRI) 2022 season was like the 2021 season, still with fewer segments available than in previous years. There continues to be a dropping rate in the permissions granted by private owners to access their properties. The powers-that-be have assured us that leadership is aware of this trend and the initial number of segments picked will

be “significantly” increased going forward. NRI work includes segments on private rangeland and public lands administered by the Bureau of Land Management (BLM). BLM segments were bid to private contractors for completion in all but Mono, Kern, Los Angeles, Ventura, and San Diego counties. For the 2022 season only Mono and Kern counties had any BLM segments which this Project had responsibility for. For 2022, there were 6 BLM segments and 4 private segments. The BLM segments constituted 18 possible points. All segments but one were completed during this time period. All segment surveys required travel with some being multiple overnight stays. In rugged terrain, hiking is required for up to 2 miles from the point with an additional mile for travel between points within each segment. Not every segment can be ultimately reached but the attempt must be made. The private segments were in Mono, Los Angeles, and San Diego counties. All but 1 of these private segments required travel with overnight stays in hotels. The work this year was done by one experienced and one first time employee of the Mojave Desert Resource Conservation District. The experienced employee moved up to team leader for this year and is to be commended as he was responsible for the entire project with some assistance from NRCS in the form of a field data collection partner. He also used his time in the field to provide OJT for an NRCS employee interested in the NRI program. The NRI 2022 field work season was completed within the required timeframe. The current NRI agreement will be ending in September of 2022, however another agreement is in place to fund the next few years of NRI surveys.

PALISADES RANCH RESTORATION PROJECT

In August of 2019 the District agreed to be the lead agency for the CEQA in the restoration of the Palisades ranch in Oro Grande. The Mojave Desert Land Trust purchased the retired agriculture farm with plans to restore the native wildlife habitat and plant species to the original Mojave river wash and desert landscape. Consultants Dodson and Associates have prepared the Initial Study with the CEQA requirements for the Palisades Ranch Restoration Project and with the public comment period completed for the CEQA documents the Palisades Ranch Project can go into the next phase of restoring the ranch property. Due to a fire in the riverbed portion of the ranch during the summer of 2022 a new wrinkle must be ironed out with invasive plants in the riparian portion of the Palisades Ranch riverbed. The district has offered to assist in the tamarisk/Arundo removal and is consulting on a plan to control/eradicate the invasive pepperweed that has replaced the native vegetation in the burned path.

CIMIS

The district continues to maintain one California Irrigation Management Information System (CIMIS) station. Due to water conditions and subsequent sale of the field, the station previously located in Newberry Springs has been removed and stored while another suitable location can be found. A possible site in Hinkley is being considered. The Victorville station remains at Victor Valley College in Victorville. These weather stations assist not only agricultural producers but urban landowners as well. Evapotranspiration data for alfalfa and turf grasses is updated Monday through Friday by RCD staff and is available on our website: www.mojavedesertgcd.org.

MOJAVE DESERT-MOUNTAIN RC&D

With the Covid-19 restrictions, personnel difficulties, and lack of funding the MDMRC&D is currently inactive but hopes to be operating again soon. Their office is located in Antelope Valley.

NRCS FARM BILL PROGRAM

The NRCS Victorville Service Center boundaries comprise most of San Bernardino County including the mountains in the Mojave River watershed and the High Desert extending east to the Arizona/Nevada borders. (The southwest corner of the County lies in the Redlands Service Center area.)

The final report on NRCS agreement C020 has been filed as of June 30, 2022. Another agreement is in place with funds added to continue with district assistance to NRCS for another two years. In summary, throughout the ending grant period RCD staff have provided assistance with the following practices: 560) Access Road; (372) Combustion System Improvement; (340) Cover Crop; (300) Existing Activity Payments (CSP); (666) Forest Stand Improvement; (106) Forest Management Plan; (422) Hedgerow; (325) High Tunnel; (449) Irrigation Water Management – Including Fundamentals, Advanced, Soil Sensors, Evaluation, Moisture Monitoring, Pump Evaluations; (441) Irrigation System; (516) Livestock Pipeline; (484) Mulching; (590) Nutrient Management; (533) Pumping Plant; (345) Reduced Tillage; (442) Sprinkler System; (578) Stream Crossing; (587) Structure for Water Control – flow meter; (612) Tree/Shrub Plantings - Cultural Plantings and Wildlife Planting; (660) Tree/Shrub Pruning; (645) Upland Wildlife Habitat Management; (614) Watering Facility; (420) Wildlife Planting; (380) Windbreak; and (384) Woody Residue Treatment. The district continues to provide assistance NRCS in various capacities and program practices.

KOREAN OUTREACH PROGRAM

The district continues to support work with the Korean farming community in San Bernardino County. Korean farmers are moving to the High Desert to join existing Koreans to grow jujubes, pistachios, Japanese Ume Plums, and apples, among other crops. The NRCS & RCD team is working with Korean farmers to improve their irrigation water management, and develop conservation plans and contracts for their farms. Korean farm bill assistant, Bonnie Nam, continues to assist with helping Korean producers understand the farm bill contracts and practice specifications.

As of July 2022, the office is open, however, still with limited staffing depending on the level of Covid in the County, according to the NRCS FPAC statistics. Customers are seen with appointments. NRCS and RCD staff continue to provide the same high level of service utilizing creative strategies to get the work done.