

**ANNUAL REPORT**

**July 1, 2017 – June 30, 2018**

**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*

**BOARD OF DIRECTORS**

President.....Chuck Bell  
Vice President.....Paul Johnson  
Secretary/Treasurer.....Neville Slade  
Director.....Tom Irwin  
Director..... Eldert Van Dam

**ASSOCIATE DIRECTORS**

Associate Director.....Logan Olds  
Associate Director.....Jim Griffin  
Associate Director.....Jim Johnson

**DISTRICT STAFF**

District Manager.....Dana Raponi  
Consultant.....Jackie Lindgren  
ReLeaf Coordinator..... Cheryl Nagy  
Administrative Assistant.....Rebecca Everett  
Water Conservation Specialist.....Tony Walters  
Conservation Technician II.....Belinda Serrano  
Conservation Technician I.....Luis Cortes

**TECHNICAL STAFF**

**USDA NATURAL RESOURCES CONSERVATION SERVICE (NRCS)**

District Conservationist..... Holly Shiralipour  
Soil Conservationist.....Elizabeth Bickham  
Program Assistant .....Edward Montgomery  
Farm Bill Assistant.....Kevin Kang  
Farm Bill Assistant.....Bonnie Nam  
Area Engineer.....Ernesto DeLaRiva  
Area Resource Soil Scientist ..... Peter Fahnestock  
MLRA Soil Survey Project Leader .....Matthew Ballmer  
MLRA Ecological Site Specialist..... Dustin Detweiler  
Soil Scientist.....Russell Plumb  
Soil Scientist.....Matthew McClintock



**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 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/RUSSIAN-OLIVE ERADICATION/CONTROL PROJECT**



The district is continuing with their invasive plant removal program with the focus remaining on retreatments in the Mojave River. Fall 2017 consisted of retreating saltcedar in an area encompassing approximately 180 acres in the Silverlakes area of Helendale. Funding for this came from the Fish and Wildlife Biological Trust Fund. The district also retreated approximately 200 acres east of the 15 Freeway in the Mojave River (Barstow).

This work was done by our contractor, Forrester and Associates, as well as staff and RCD President, Chuck Bell. There was some chainsaw work required in and around the Cottonwood, Willow, and Mesquite trees but the majority was done using the foliar method. Funding for this project came from Mojave Water Agency as well as the district.

The district also completed retreatment on the Barstow Marine Corps Base in their Wildlife Sanctuary. This work will open up the canopy and allow more water for existing and future (naturally occurring) natives.

Staff canvassed and retreated the area from Rocksprings Rd. to Mojave Forks. Fortunately there is minimal regrowth returning. The majority of regrowth spotted required backpack spraying as you could not reach them with the ATVs.

Work at Camp Cady this year was paused to allow the newly discovered tamarisk beetle to settle and proliferate.

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 were 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. Retreatments will be on-going to make sure all weeds stay eradicated and any new sprouts are treated before they go to seed.

Initial funding for removal efforts was provided by 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 evapo-transpiration 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.

### **Pepperweed**

Fish and Wildlife as well as the district are becoming very concerned about the amount of Pepperweed that is now taking over in the Mojave riverbed. District staff and Chuck Bell, board president, mowed an area of Pepperweed located inside Mojave Narrows Park. After mowing, two different herbicides were used in an attempt to define how best to kill the weeds. One area was sprayed with Habitat and another was sprayed with Telar. This was an experimental plot to see which herbicide will work best with the hope of receiving funding from the Fish and Wildlife Biological Trust Fund to continue spraying this extremely invasive plant in the spring of 2019.



### **MOUNTAIN COMMUNITIES RELEAF**

In completing our 15th planting season we have built strong partner and volunteer relationships. It is now nearly 15 years since the Old Fire burned through so many acres of precious land in the San Bernardino Mountains, and 11 years since the Slide and Grass Valley Fires.

Since 2004, ReLeaf Volunteers, partnering with the Mojave Desert Resource Conservation District and CALFIRE (California Department of Forestry & Fire Protection) have planted over 450,000 native seedlings across several hundred acres of land in the San Bernardino Mountains and additional areas located in San Diego and Riverside counties.

Working with our partners at Southern California Edison and CalFire we completed a spring 2017 planting at Camp Whittle YMCA Camp in Big Bear and the Boy Scout Camp in Cedar Glen, California, including spending time working with our partner American Forests. We are also working closely with



our partners at Southern California Edison to once again grow the seedlings needed for the 2018-2019 planting season. We have had a drier winter/spring than in the past, but all seems to be going well. Our relationship with American Forests is still as strong as ever and we

work together regularly to make sure all of their partners are ready when our planting dates are announced.

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. The website is: [www.mountaincommunitieswildfirereleaf.org](http://www.mountaincommunitieswildfirereleaf.org)



### **MOJAVE WEED MANAGEMENT AREA (MWMA)**

The Mojave WMA continues to be coordinated by the district, which organizes and hosts quarterly meetings and oversees ongoing projects and outreach efforts. The tamarisk beetle (*diorhabda*) has been steadily moving along the rivers and has entered California. The tamarisk beetle has been confirmed at Camp Cady, the Ironwood Christian Camp, located east and across the Mojave River, and farther east along the Mojave River to Afton Canyon. The Tamarisk Alliance has been actively promoting the beetle with educational handouts. More monitoring and possible releases of the tamarisk beetle are scheduled for the 2018 year. Also in the foreground of weed and pest management is the Polyphagous shot hole borer, a new pest in Southern California. This invasive beetle attacks dozens of common native and landscape trees with the potential to devastate areas it invades. Monitoring of this borer is currently being done as well. While already found in the San Diego area, the hope is the shot hole borer will not be able to survive the dry conditions of the high desert. 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.

Assembly bills are going through the process and look very promising for weed management area funding.

We continue to work with our partners on prevention and control of noxious/invasive weeds on both public and private lands in the Mojave Desert.

### **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 plants were monitored in November of 2017 and again in April of 2018. At this time the highest survival across both planting sites was shown by desert willow. The only additional species exhibiting greater than 80% survival on either planting sites was fourwing saltbush. Some nearby tamarisk had grown large enough to possibly affect the micro-habitat of some of the plants. Fremont cottonwood was seen with holes on the bark of the dead trees. Many of

the plants also did not receive adequate water over summer of 2017, because of issues with the irrigation system. The highest survival across the planting sites was shown by desert willow and the fourwing saltbush, while Fremont cottonwood did surprisingly poor.



Desertbroom, desert willow, and water jacket were flowering/fruitleting or showed signs of recent flowering/fruitleting. The monitoring in April of 2018 showed an even greater mortality of the re-sprouts from spring of 2016 leading to honey mesquite completely dying off with this survey and the screwbean mesquite dying off with the previous survey. The April monitoring showed the fourwing saltbush surpassing the desert willow, which had previously showed the highest survival rating. The planting study sites include

locations in a salt cedar understory and in an open wash. The higher survival ratings for this monitoring were seen in the sandy loam understory without exception. Some nearby tamarisk have grown large enough to possibly affect the micro-habitat of some of the plants, and some tamarisk are growing along the line, providing direct competition. Tamarisk treatment was postponed in the fall of 2017 to allow the newly discovered tamarisk beetle a chance to proliferate. Dune sand has built up on the slope down to the revegetation lines. The environmentally stressful situations that have caused an increase in mortality have also been beneficial in the determination of what native species to use in the future for Mojave River riparian restoration. Not only for activities at Camp Cady, but at other locations along the full river reach, as the outlier extremes will determine the plants that survive these situations.

Due to changes in staffing the next monitoring of this project is not planned at this time.

### **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 has 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. The district conducts workshops on water efficient irrigation and healthy soil management to homeowners, homeowner associations, cities and agricultural entities.

### **ASSISTANCE TO DAIRY OWNERS**

One of the districts role as a non-regulatory agency has been to facilitate communication between the Natural Resources Conservation Service 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 has determined a general order will eventually come out that will apply to all Confined Animal Facilities. Although the deadlines for the draft Monitoring and Reporting Program portion of the order have passed, the draft order is expected by early 2019. This draft will then go through dairy and public comment before going to the Lahontan board. 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 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.

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 or lower and continue to position agencies for meeting future conservation needs.
- Exchange ideas between agencies, especially at quarterly meetings.

The district will be working with AWAC to present workshops on irrigation systems both residential and agricultural, for the underserved communities in the area.

A calendar that features 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.

## **MITIGATION AND EASEMENTS**

The District remains actively engaged in providing mitigation/compensation and environmental credits for developers wanting to build in the San Bernardino County portion of the High Desert area. Mitigation practices include the removal/retreatment of tamarisk and arundo in the Mojave River as well as trash removal on the designated sites. Approximately 23 weed acres were retreated/removed by Forester and Associates in Fall of 2017. Two other mitigations were completed for a total of 2.5 acres of high density salt cedar removal using the cut stump method (chain saws). To date, the District has 4 active contracts totaling over 75 full acres, with more being negotiated. Thirteen contracts have been fulfilled since the start of this program in 2006.



## NATIONAL RANGELAND INVENTORY



The District is on its second year of an agreement with NRCS to provide assistance in the National Rangeland Inventory (NRI). 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. Point surveying is usually done in the months of March to October of each year. Last fiscal year data was collected on 39 points out of the Victorville Office from Bridgeport to the California/Mexican border. This agreement is in the process of being extended and funds added.



## MOJAVE DESERT SOIL SURVEYS

The Victorville Soil Survey Office discontinued field and office work mapping the Mojave National Preserve in December 2017 due to the lack of a formal agreement with the National Park Service. Completion of the survey area is expected once a new agreement is established. We continued mapping for the Bureau of Land Management priority areas of concern, solar energy development zone along the I-10 between Desert Center and Blythe, CA. The soil survey office held a Progress Field Review in April 2018. This project area addresses about 200k acres pre-designated for solar development. The soil survey work will be parlayed into about 600k acres of adjacent landforms being mapped and published to the Web Soil Survey platform.



The Soil Survey office is also engaged with updating the Major Land Resource Area (MLRA) geographic database criteria, and making improvements to the MLRA concepts. This database updating, will allow clearer distinctions between adjacent MLRAs and enabling better development and application of the ecological site description technology. The MLRA designation has potential implications that could affect a variety of management tools and or systems. Drafts for these updated definitions will be completed by December 2018. A broad circle of input is encouraged with this endeavor. I would appreciate feedback about this from the RCDs in the scope of the Mojave, Lower Colorado and Sonoran Deserts and a chance to address the topic with each district. Our proposal basically eliminates the MLRA 31 and merges us back into the rest of the greater Sonoran Desert MLRA 40.

Other news that impacts the NRCS Soil Survey Division is another reorganization from Nation Head Quarters. This moved 50 Full Time Equivalent employee from the Soil Survey Division to the NRCS Programs staff. The Victorville Soil Survey Office lost 1 FTE for a soil

scientist position which was vacant. This position will no longer be available in our work group.

### **KOREAN OUTREACH PROGRAM**

The district continues to support work with the Korean farming community in San Bernardino County. An increasing number of Korean farmers are moving to the High Desert to join existing Koreans that grow jujubes, pistachios, Japanese Ume Plums, and apples, among other crops. The NRCS & RCD team is working with the Korean farmers, who have sufficient water rights or are in the process of obtaining them, to develop conservation plans and contracts for their farms. If a question arises on water rights, the NRCS and RCD staff will refer farmers to the WaterMaster's office. More than half of the total NRCS active contracts are Korean farmers working with the Victorville Field office. Korean farm bill assistant's, Kevin Kang and Bonnie Nam, continue to assist with helping the Korean producers understand the farm bill contracts and specifications. Bonnie Nam also works with the Lancaster NRCS office, assisting their Korean producers.

### **CIMIS**

The district continues to maintain two California Irrigation Management Information System (CIMIS) stations. The station previously located in Barstow has been relocated to Newberry Springs to better service the agricultural community. 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](http://www.mojavedesertgcd.org).



### **MOJAVE DESERT-MOUNTAIN RC&D**

The district continues to support and participate in the Mojave Desert-Mountain RC&D. This six county organization works as an extension of the Resource Conservation District and assists in the economic development of the rural segments of San Bernardino County.

### **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 Victorville Field Office has approximately 60 active contracts with over 3.2 million in obligated funds, and over 5,000 acres under contract. These contracts include agricultural practices and forestry practices from the San Bernardino Mountains. There were a total of 3 application deadline periods during this fiscal year. Agricultural assistance has been focusing on High tunnel practices which extend the growing



season of crops on smaller acreages. Other practices include the replacement of older farm tractors with new ones that have improved emissions for better air quality.

These contracts include plans addressing resource concerns such as air quality, water quality, water quantity, soil erosion, inadequate wildlife cover and food, and energy conservation.