

## Saltcedar 2020 Report

### Introduction

Saltcedar (*Tamarix ramosissima*) is a non-native invasive shrub that is well-established in portions of the Owens Valley. Intentionally introduced from Europe and Asia into the U.S. in the late 1800s, saltcedar has been expanding its range in the Owens Valley since the late 1960s. In the Valley, as elsewhere in the western U.S., this species is assisted by human disturbance in the form of dams, diversions, floods, fires, and water table fluctuations which stress native species and provide conditions that favor saltcedar (Harris, 1966)(Sudbrock,1993).

Once established, saltcedar can out-compete stressed native plants and cover large areas of formerly native habitat. Though plants have pioneered new areas for eons, the pace of human-assisted migrations can surpass the abilities of native plants, animals, and insects to adapt or coexist competitively (Sudbrock, 1993). The result is a less productive and less diverse environment. In riparian areas in the Southwest where this has occurred, entire ecosystems have been displaced or eliminated, fire frequencies have risen, and species biodiversity has declined (Grozier & Angelo, 1965). To limit these negative ecological impacts in the Owens Valley, saltcedar has been actively controlled with a variety of methods since 1997. The program was made possible by funding provided by the Los Angeles Department of Water and Power (LADWP) under the long-term water agreement and from outside granting institutions.

### Background

The Owens Valley has roughly 20,000 acres crowded with saltcedar; joint efforts by ICWD and LADWP are attempting to reduce the spread of saltcedar throughout the Owens Valley. The Inyo County saltcedar program started in 1997 and continued through 2017. This program reduced the saltcedar populations from Laws to Lone Pine, concentrating on removal from the Lower Owens River channel preceding increased water releases associated with the Lower Owens River Project (LORP).

In a typical winter (seven month season), a crew of 4-6 people were hired to cut saltcedar with chainsaws, treat stumps with herbicide, and burn the slash. Since the retirement of the previous project manager in 2017, the ICWD program had been suspended until January 2020, although LADWP continued to control saltcedar throughout the valley. LADWP has made an effort to maintain control of spread by investing in equipment attachments for skid-steer/ASV loaders that allow them to more efficiently remove saltcedar during the winter compared to hand tools alone.

The ICWD saltcedar program this year focused on familiarizing the recently hired project lead on saltcedar control techniques. The goals for this season (2019-2020) were to obtain



## Results

Approximately 170 acres of saltcedar was treated by LADWP and ICWD in the winter of 2020. Roughly 9 river miles on the east side and 6 on the west side of the LOR were treated as of the end of March 2020. All of the locations that were observed during the last Rapid Assessment Survey (RAS) on the LOR in 2018 were located and treated. Many established saltcedar that appeared to be 1-2 year old cohorts were newly detected and these were also treated. Much of the new establishment was within relict oxbows off the main channel. Some individuals were up to 2 meters tall with multi-stemmed trunks. ICWD initially planned to target saltcedar that was observed during the last full RAS in 2018, but when numerous saltcedar were found outside the planned treatment sites, it was decided expand the effort to control as much of the new invasion as possible. This required more time than anticipated for this portion of the project season.

## Recommendation

In future seasons, methods of removal should be tailored to the age and size of saltcedar stands as described above. Thorough surveillance and spatial data management and sharing of those data for prompt treatment should be given high priority. The benefits of GIS data showing how much saltcedar is in an area and its relative size would facilitate planning for the most appropriate method of treatment and associated labor costs. Surveying current saltcedar expansion since 2018 will be considered for the 2020 summer field season; this GIS data will be valuable in defining which treatment strategy is most appropriate for each area.

The recommendation to start work on the LORP earlier in the winter would allow more time to control saltcedar and accelerate the treatment of reproductively mature trees. If efforts can be increased to a level where mature seed-producing individuals are destroyed, the main focus for consecutive seasons could be limited to treating the previous year's re-sprouts and would, therefore, require less time so that efforts can be focused on other areas. Starting the season in November would also provide additional time to coordinate efforts between the two departments and offers the greatest chance for the most control of saltcedar populations.

## References

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