

## Dos Palmas Post-Tamarisk Removal Restoration Challenges and Solutions

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BLM is doing tamarisk removal and restoration at the Dos Palmas Preserve in the Colorado Desert, near the Salton Sea, California. The Dos Palmas Preserve is a 14,000 acre Area of Critical Environmental Concern that lies below sea level in the Salton Basin. Soils are alluvial sands and gravels overlaid with lakebed sediments, containing unusually high levels of salts and even boron in many locations. Salt cedar infested the area almost a century ago and has since over taken many of the natural artesian springs and oasis within the preserve. As part of mitigation for the Coachella Canal Lining Project and a restoration grant from the Wildlife Conservation Board, BLM has been removing tamarisk starting from the top of the watershed. In addition, BLM is attempting to re-establish native vegetation, such as *Prosopis glandulosa*, *Prosopis pubescens*, *Atriplex lentiformis*, *Lycium brevipes*, *Suaeda moquinii*, *Olneya tesota*, *Psoralea argophylla*, and *Parkinsonia florida* where salt cedar was once prolific. Restoration efforts have been complicated by severe soil conditions as well as receding depth to ground water. As such, these environmental conditions and the challenges they present suggest that not all areas where salt cedar once grew can be expected to recover or convert to equivalent stands of native vegetation. In effect, the environmental range of salt cedar at Dos Palmas appears to be wider than that of native plants. In addition, the long term presence of salt cedar may exasperate conditions that preclude the establishment of native species long after tamarisk has been eradicated. This poster explains the challenges faced in restoring native plants at Dos Palmas in places where tamarisk has been successfully removed and details various innovative techniques that are being employed to facilitate the recruitment of native desert wash woodland trees in these areas. Techniques employed include: the innovative use of Aquapro Holland's new Waterboxx, one of *Popular Science Magazine's* top inventions of 2010; augmenting the native seed bank using clay bound seedballs that prime seeds for appropriate germination conditions; cutting and transplanting native shrubs to grow for seed production; and more traditional restoration techniques such as growing tall plugs in nursery conditions followed by deep planting.