

Monitoring vegetation response after tamarisk removal

Hisham El waer^{*1}, Dave Stahl² and Anna Sher²

[*hisham98m@yahoo.com](mailto:hisham98m@yahoo.com)

¹University of Denver, 2379 S York St., Denver, CO, 80210

²University of Denver

Removal of *Tamarix* spp (tamarisk) is often involved in restoration of Western, riparian habitat, however monitoring of vegetation after removal is often neglected and thus opportunity for adaptive management lost. To address this need, we are conducting three years of monitoring vegetation response after invasive *Tamarix* removal in several sites on the East and West slope of Colorado, starting fall 2009. This project, in collaboration with The Nature Conservancy (TNC), the Colorado Water Conservation Board (CWCB), US Fish and Wildlife Service (USFWS), and the Bureau of Land Management (BLM) aims to establish the baseline data for long term monitoring, and develop best practices recommendations for monitoring by land managers. We are comparing five different methodologies: Point intercept, line transect, nearest neighbor, meter-square quadrats, and nested Whittaker plots. Data are also being collected at these sites on the presence and impact of bio-control beetles (*Diorhabda carinulata* & *Diorhabda elongata*). This poster describes the methodologies used and presents the baseline data found in our 18 sites, as well as our preliminary recommendations as to which methods are deemed most efficient vs. accurate. Diversity and cover of native species was found to be quite high around (but not under) *Tamarix* trees at many sites, which bodes well for passive revegetation. Our intent is that this monitoring project will help to answer the controversial questions about the ecological impact of *Tamarix* removal, including testing the prediction that removal of *Tamarix* will increase native cover, and that an increase the cover and diversity of desirable species will also prevent secondary invasion of introduced and noxious species. A final product will be an NRCS funded handbook for land managers seeking simple but effective means to monitor vegetation response after *Tamarix* control.