Developing a Coarse Scale Tamarisk Removal and Revegetation Plan on Walker River Paiute Tribal Lands

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Walker River Paiute Tribe
Funded by the US Fish and Wildlife Service-LNFH Complex through Desert Terminal Lakes Funds
Walker River Paiute Tribal Lands cover about 10% of the Walker River Basin.
Goals

Restore sustainable native plant communities over 1600+ acres currently classified as tamarisk.
Tamarisk invaded the site as lake levels declined.
Outline

- Previous Treatments
- Demonstration Site
  - Removal
  - Site Preparation for Planting: Mulching and Creating Microtopography
  - Continued Tamarisk Treatments
  - Species selection for planting
- Prioritizing Sites for Future Efforts
- Treatments for Site Types
  - Low infestations
  - High infestations with a water source
  - High infestations without a water source
Previous Treatments

Tamarisk Leaf Beetle *Diorhabda elongata*
The beetles will help...

Beetles were released in Lovelock, and Schurz, on Walker River Paute Tribal Lands
Demonstration Site Removal

-Tamarisk were removed with an excavator and placed in windrows

-Some windrows are being left to decrease wind erosion

-Windrows are being mulched to increase water and seed retention for revegetation efforts
Demonstration Site Mulching
Demonstration Site
Creating Microtopography

Courtesy of K. Lair
Demonstration Site
Herbicide Treatments
Species selection with additional concerns

There is a need for pasture restoration.
Natives

Common Spikerush
*Eleocharis palustris* (L.) Roemer & J.A. Schultes

Photo Courtesy of USDA Plants assessed November 3, 2008

Beardless Wildrye
*Leymus triticoides* (Buckl.) Pilger

Photo Courtesy of USDA Plants assessed November 3, 2008

Indian Ricegrass
*Achnatherum hymenoides* (Roem. And Schult.) Barkworth

Photo Courtesy of USDA Plants assessed November 3, 2008
Natives that do well with disturbance

Desert Saltgrass
*Distichlis spicata* (L.) Greene

Baltic Rush
*Juncus arcticus* Willd. *spp.*
*littoralis* (Engelm.) Hulten

Poverty Weed
*Iva axillaris* Pursh

Photos Courtesy of CalPhotos assessed November 3, 2008
# Natives Under Serious Consideration

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>Palatable to Cattle</th>
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</thead>
<tbody>
<tr>
<td>Saltbush Fourwing</td>
<td><em>Atriplex canescens</em></td>
<td>Yes</td>
</tr>
<tr>
<td>Saltbush Shadscale</td>
<td><em>Atriplex confertifolia</em></td>
<td>Yes</td>
</tr>
<tr>
<td>Saltbush Quailbush</td>
<td><em>Atriplex lentiformis</em></td>
<td>No (low)</td>
</tr>
<tr>
<td>Indian Ricegrass Rimrock</td>
<td><em>Achnatherum hymenoides</em></td>
<td>Yes</td>
</tr>
<tr>
<td>Inland Saltgrass</td>
<td><em>Distichlis spicata</em></td>
<td>No (low)</td>
</tr>
<tr>
<td>Squirreltail</td>
<td><em>Elymus elymoides</em></td>
<td>Yes</td>
</tr>
<tr>
<td>Wheatgrass Thickspike</td>
<td><em>Elymus lanceolatus</em></td>
<td>Yes</td>
</tr>
<tr>
<td>Wheatgrass Slender</td>
<td><em>Elymus trachycaulus</em></td>
<td>Yes</td>
</tr>
<tr>
<td>Wildrye Basin Magnar</td>
<td><em>Leymus cinerus</em></td>
<td>Yes</td>
</tr>
<tr>
<td>Wildrye Creeping Shoshone</td>
<td><em>Leymus triticoides</em></td>
<td>Yes</td>
</tr>
<tr>
<td>Alkalai Sacaton</td>
<td><em>Sporobolus airoides</em></td>
<td>Yes</td>
</tr>
<tr>
<td>Sand Dropseed</td>
<td><em>Sporobolus cryptandrus</em></td>
<td>Yes</td>
</tr>
</tbody>
</table>
Irrigation

The site will be irrigated from February through May with 0.25 inches per week.
Monitoring

The site will be monitored, throughout the wet season and into the beginning of the dry season to compare treatments.
Prioritizing Sites for Restoration

1st Priority
- Some sites are just starting to experience tamarisk establishment

- Some of these sites are no longer viewed as favorable to grazing (undesirable native species)

2nd Priority
- Some are closer to wells
Treatments for Site Types

- Low infestations
  Tamarisk removal and follow-up herbicide treatments may be sufficient.

- High infestations with access to water
  Tamarisk removal, herbicide treatments and irrigated plantings.

- High infestations without access to water
  Lowest priority...
Prioritization by Location
Partners

Walker River Paiute Tribe

Great Basin Irrigation