



## TAMARISK REMOVAL PROTOCOL

**GOAL:** To implement effective volunteer program for removing small to medium sized tamarisk on the Poudre Learning Center, Hall-133 parcel

**TOOLS/EQUIPMENT:** For one crew of 3-4 persons

- Tractor-truck with tow hooks
- Two spade shovels
- One long tow strap, 5,000lb. Minimum capacity
- Hard rake or landscaping rake
- Sandhills seed mix
- Personal protective gear:
- Leather gloves, safety glasses, closed toe shoes preferably
- Boots, sunscreen, water, light first aid kit
- Covid-19 PPE:
- Facemask, nitrile gloves(?)

### CREW ROLES:

1. **Root-Opener** -Selects the individual tamarisk to work on, using spade shovel digs around and exposes roots down 6-8 inches. Moves to the next plant in progression. Determines crew movement across the patch
2. **Root Wrapper** -Takes tow strap and tightly wraps distal end around the tamarisk root base. Attaches the proximal end of the strap to the appropriate link on the vehicle. Signals the equipment operator when safe to apply pressure on the tow strap. Signals equipment operator when the tamarisk has been extracted from ground. Unwraps strap from root wad/s and heavy equipment. For safety, the Root Wrapper controls all movement of heavy equipment
3. **Equipment Operator** -Drives tractor-truck to pull tamarisk. Follows directions of the Root Wrapper.
4. **Back-Filler** : Using spade and rake, backfills and smooths the surface of the hole, scatters a hand full of grass-forb seed, piles and keeps count of the extracted tamarisk.

### PROCESS:

Working with project lead, each crew will select the area they will operate in, well distanced from adjacent crews, and determine in advance where the slash piles will be located, and a logical sequence for extracting tamarisk.

Using a spade, the Root-Opener will dig around the base of individual tamarisk piling dirt a few inches away. On completion of this task the top of the root will be open and exposed. The Root-Opener will then move to adjacent nearby plants repeating the process. As the work is in sandy soil, spading out around the root should not be difficult. Once the root is exposed, the Root-Wrapper will tightly wrap the root of the tamarisk with one or two wraps of the strap and securely fasten the strap hook. They will take the



other end of the strap and attach it to the heavy equipment using a predesignated attachment point. They will step back well away from the strap and equipment, and upon determining the site is safe will signal the operator to pull back until the tamarisk is extracted from the ground, signaling the equipment operator to stop. Once safe the Root Wrapper will unhook the strap from the equipment and from the detached plant and carry the strap to the next plant, to continue removal across the site. Where tamarisk are growing in close proximity up to five plants may be wrapped and removed with a single pull. Root-Wrapper should keep track of the total number of plants removed during the session. For safety, the Equipment-Operator will strictly follow the directions of the Root-Wrapper. Following instructions from the Root-Wrapper the Equipment Operator will apply slow, steady pressure, preferably backward with the tractor or truck to pull the tamarisk from the ground. A quick tug should be avoided as it tends to snap the root at the plant base, leaving significant root tissue in the ground that may allow the plant to re-establish. The Equipment-Operator also has a lead role in safety and must scan the immediate work site locating all crew members prior to moving the vehicle. After the Root-Wrapper has removed the tow strap from the extracted tamarisk, the Back-Filler will use their spade and the piled soil to fill in the hole created by the extraction and use the rake to smooth the surface to blend in with contour of surrounding ground.

As a final step they will scatter a handful of grass-forb seed, lightly backrake to cover the seed with  $\frac{1}{4}$  inch of soil and tamp the site one final time. They will move extracted plants to the slash pile and keep the final count of the total number of plants extracted, and move on to the next site. Throughout the process each crew member should focus and maintain appropriate separation from other crew to minimize covid-19 spread. At the end of the day, the crew will do a final site inspection, collect and return all tools and equipment debrief and report back to the project lead on any injuries, safety issues, equipment problems or other significant matters during the work session and will report the total number of tamarisk extracted. The project lead will document the effort before leaving for the day.

#### **FOLLOWUP:**

Site should be photo-documented pre and post treatment. Hours of effort, number of participants, and equipment and materials used need to be recorded and documented. Opportunity for media contact and coverage should be considered prior to project onset and press release created and distributed as appropriate.

Slash piles will need to be placed in a manner that minimizes dispersal by wind. If the piles are not to be used for wildlife cover, the slash should be placed in a minimum number of large piles on a site with little or no surrounding vegetation. Once the slash has adequately dried, with proper conditions and notifications the slash should be burned.

At one month post-extraction, the site should be cruised, and if necessary regrowth herbicided. Follow-up surveillance and herbicide application should continue at least once/growing season for the next five years. It would be best to coincide this effort with curly dock control efforts, early-mid growing season.