Native Area Management Presentation Jim Tolstrup, Executive Director High Plains Environmental Center



Management goals

Improve aesthetic, recreational, educational, and habitat value and manage noxious weeds in compliance with State, County and City requirements.





Management Strategies

Undesirable Plants

Minimize the reproduction of undesirable plants through the following methods:

- Identify and prioritize eradication of weed species
- Spray weeds at appropriate times (typically spring or fall) in order to destroy existing plants
- Timely mowing in or to minimize seed production (spring - fall)
- Cut or pull and remove weeds in order to reduce proliferation through seeds (fall).
- Spray regrowth, or plants missed in spring (fall)
- Minimize further disturbance
- Alert neighboring land owners about weed issues and request cooperative management.
- Continue to manage known existing weeds and monitor for new introductions.

Desirable Plants

Increase valuable native plant species and manage to increase habitat value through the following methods:

- Outreach to contractors and community about protecting desirable plants
- Remove competing undesirable plants
- Seed high value plants after disturbance and weed management are stabilized
- Let nature take its course and introduce species through ecological processes, wind, water, migration, and existing seed bed

Year 1 (Fall 2017-Fall 2018)

Address larger issues of perennial and biennial weeds

Fall 2017

- Cut and remove seed heads of knapweed, mullein, curly dock, velvet leaf.
- Cut and spray Tamarisk and Russian Olive (removal of these species should be largely accomplished in 2017, spray regrowth in spring.
- As season and temperature allows, spray perennial and biennial weeds teasel, thistle, knapweed.

2018

- Spray perennial and biennial weeds teasel, thistle, knapweed spring/fall.
- Mow any perennial weeds that escape spraying to prevent seed production.
- Mow annual weeds in recently seeded areas. (August)
- Encourage grasses in recently seeded areas to establish by minimizing mowing to what is essential for minimizing annual weed seed production.
- Mow trail edge monthly, apply pre-emergent herbicide April/May or spray weeds that emerge.
- Grass seeding may be implemented in Fall 2018 or Early Spring 2019.

Year Two (2019)

- All areas should be showing significant improvement, continue weed reduction.
- Spray perennial and biennial weeds teasel, thistle, knapweed spring/fall.
- Mow any perennial weeds that escape spraying to prevent seed production.
- Mow annual weeds in seeded areas. (August)
- Encourage grasses in seeded areas to establish by <u>minimizing mowing to what</u> <u>is essential</u> for minimizing annual weed seed production.
- Mow trail edge monthly, apply pre-emergent herbicide April/May

Year three (2020)

- Perennial weeds should require much less maintenance. Searching out and spraying will be a continual effort but on a reduced scale.
- Annuals will continue to be a relatively minor issue on bare areas; spray in spring.
- Enhancement through the addition of wildflowers and shrubs could be begin in fall of this year.
- Mow trail edge monthly, apply pre-emergent herbicide April/May

The following invasive species were observed at Barefoot Lakes on September 15, 2017. Others may exist on the site the were not visible or were not in the growing stage at the time.

Annual weeds

Velvetleaf (Abutilon theophrasti) Koshia (Kochia scoparia) Russian Thistle - Tumbleweed (Salsola tragus)

Biennial weeds

Common teasel (*Dipsacus fulanum***) Common mullein (***Verbascum thapsus***) Diffuse knapweed** (*Centaurea diffusa*) **Musk thistle** (*Carduus nutans*)

Perennial weeds Hoary cress (Cardaria draba) Spotted knapweed (Centaurea stoebe) Canada thistle (Cirsium arvense) Russian olive (Elaeagnus angustifoilia) Perennial pepperweed (Lepidium latifolium) Scotch thistle (Onopordum acanthium or O. tauricum) Tamarisk (Tamarix spp.)

Plant identification and management

• When natural areas are properly managed herbicides are applied at very low rates per acre, to specific targets, by well trained applicators who can discern weeds from beneficial natives.





