Latah SWCD Spalding's Catchfly Planting Protocol
Paradise Ridge/Gormsen Butte Key Conservation Area

This document outlines protocols for Latah Soil and Water Conservation District's (Latah SWCD) Spalding's catchfly planting efforts. Details for Latah SWCD's other Spalding's catchfly protocols and monitoring progress reports can be found on the Latah SWCD Resources web page.

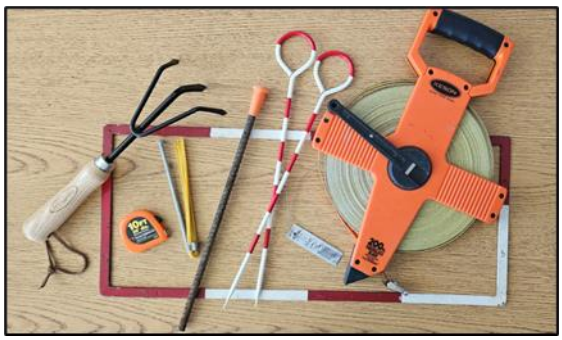
Beginning in 2013, Spalding's catchfly (*Silene spaldingii*) recovery plantings will be planted onto Palouse Prairie remnants in Latah County, Idaho to support recovery efforts as detailed in the Recovery Plan for Spalding's catchfly (USFWS 2007). Planting and monitoring will be conducted by Latah SWCD staff. Recovery goals include establishing 500+ individuals within the boundary of the Paradise Ridge/Gormsen Butte Key Conservation Area (Paradise KCA) (USFWS 2007). Prior to the onset of Spalding's catchfly planting efforts in 2013, zero Spalding's catchfly plants occurred within the Paradise KCA.

Planting sites will be located within the Paradise KCA based on landowner permission, accessibility, and suitable site conditions (e.g., good condition Palouse Prairie remnant or agricultural field sites that have been restored to native plant communities).

Notes for field crew: Walk lightly in sensitive prairie remnants, do not drive ATV in prairie remnants, haul planting gear via sleds and backpacks, use gas-powered augers with appropriately sized drill-bit to make holes for plants, plant the Spalding's catchfly plant carefully and firmly, pack native soil around planting medium to eliminate air pockets, spread certified weed-free straw mulch around planting zone to prevent weed encroachment and to help retain moisture, and water each individual plant at least twice on planting day. Each planting site will have a monitoring transect associated with it. A 20% subset of the plants installed at each planting location will be monitored annually for survival for a minimum of three years (optimally four to five years).

Planting Equipment

1. Gas powered augers, drill bits, fuel
2. Planting trowels (A.M. Leonard soil knives)
3. Water jugs
4. Pin flags or bamboo stakes with spray-painted tops
5. Weed-free straw mulch
6. Trugs with shoulder straps
7. Sleds for transporting gear
8. Monitoring Equipment (see monitoring protocol)
9. Camera
10. Compass (no declination set)
11. Hand lens
12. GPS unit
13. Extra batteries (for GPS and camera)
14. Field notebook
15. Map of planting site locations
16. Pencils and permanent markers



Monitoring tools

Initial Spalding's catchfly monitoring results have helped determine the best practices to optimize Spalding's catchfly survival in the Paradise KCA. Based on these past results, Latah SWCD will move forward with fall plantings of 10 cubic inch pots. Additional monitoring details may be found in the Latah SWCD Spalding's Catchfly Survival Monitoring Protocol.

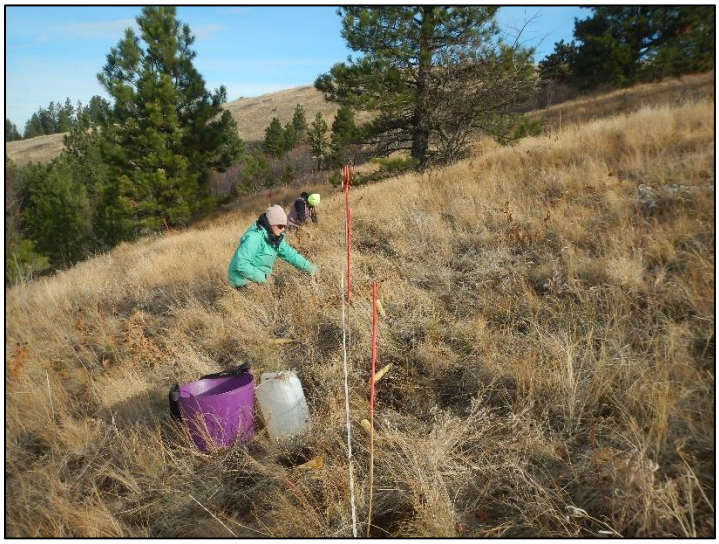
Planting Techniques

1. Fall planting
    a. Fall and spring plantings were compared with monitoring data collected from the 2013-2016 plantings, and overall, there was no season effect found on survival. However, fall plantings resulted in a higher survival rate in planting locations that showed higher success of plantings overall.
    b. Fall plantings allow for greater flexibility with planting timing and obtaining plants from the nursery.
    c. Best planting dates are typically from late October through November depending on fall moisture patterns.
    d. It is best to delay planting until at least one significant rainfall event to allow for easier drilling and planting.
    e. Planting should occur prior to ground freeze or significant snowfall.
2. Pot size
    a. 10 cubic inch and 58 cubic inch pot survival rates were compared with monitoring data collected from the 2013-2016 plantings. No pot size effect was found, and Latah SWCD will move forward with 10 cubic inch pots as they are smaller and lighter, which allows for easier transport to the planting locations.
    b. 58 cubic inch pots may be used if needed. For example, plants that need to be carried over to the next year in the plant nursery may need to be potted up from 10 to 58 cubic inch pots to allow for additional plant growth.
3. Planting site locations
    a. Aspect - previous monitoring of Spalding's catchfly within the Paradise KCA (data collected from 2013-2020) has shown that the highest survival rates have consistently been occurring on sites located on west, northwest, and west-northwest aspects.
    b. Sites to be avoided on the Paradise KCA include south aspects (thin soils, and less moisture), and north aspects (often densely covered by sedge and forb communities or shrub and tree dominated on the Palouse). This is counter to habitat suitability in other physiographic regions like the Canyon grasslands where Spalding's catchfly is primarily found on north-facing slopes.
    c. Palouse Prairie remnants are sensitive areas, and extra care should be taken during planting to minimize disturbance of the site.
4. Planting arrangement
    a. Plant Spalding's catchfly in clumps of 3-10 for easier relocation and to enhance pollination success
    b. For planting at transect locations, plants are arranged in clumps of 5 in a star pattern. See monitoring protocol for details.
5. Drilling
    a. Use gas-powered augers with appropriately sized bits.
    b. Drillers should ensure that they are drilling into the interspaces between existing bunchgrasses and forbs as much as possible.
    c. The holes should be drilled deep enough for the planter to insert the plant without j-hooking the root. If the hole is too deep, planters may need to fill the hole with extra soil to prevent the plant from being planted too deeply. A small depression in the soil surrounding the plant is okay and may be beneficial to encourage water pooling and infiltration in the planting zone. The top of the plant should be just below the natural soil surface with no potting soil or roots exposed.
6. Watering
    a. Each plant will be watered at least twice on planting day. During fall plantings, Spalding's catchfly plants may be dormant or nearly so, and watering may seem

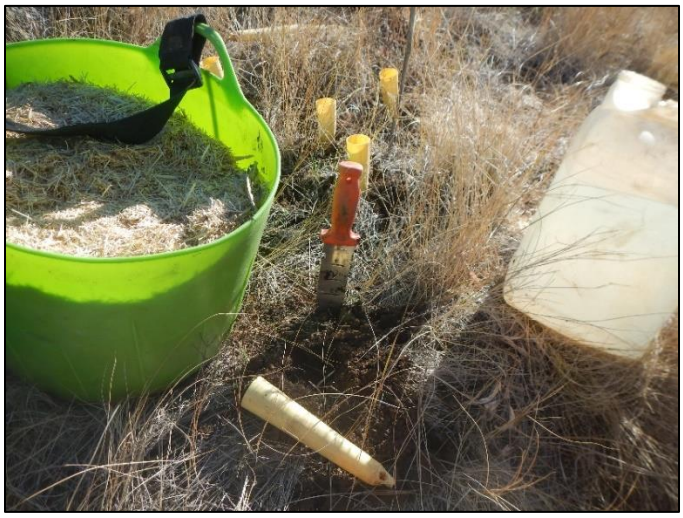
unnecessary if there is seemingly sufficient soil moisture. However, watering helps to eliminate air pockets and provides additional soil moisture for the plants to utilize in the case of unseasonably dry/warm conditions.

   b. Care should be taken to gently water near the base of the plants to prevent soil wash out and subsequent root exposure.

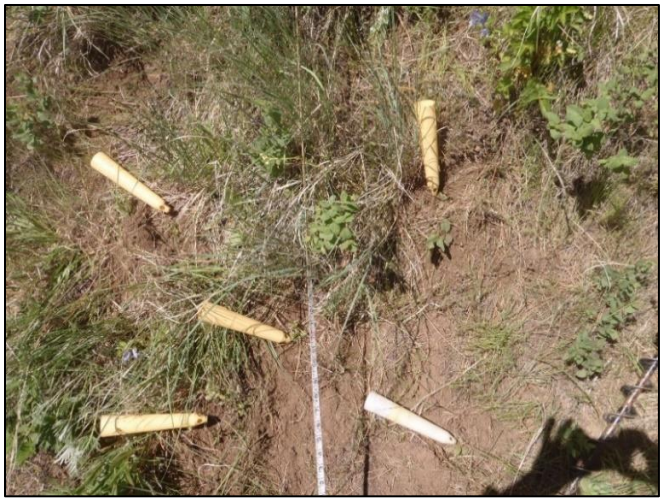
7. Mulching
   a. Placing a certified weed-free straw mulch around the base of the plants is beneficial for multiple reasons:
      i. Increases soil moisture
      ii. Prevents weed encroachment as plants are establishing
      iii. Highlights planting location for easier relocation
   b. Pelletized and shredded straw mulch have been used successfully in the past.
8. Data management
   a. Data sheets, field notes, site maps, shapefiles and photos will be stored in a monitoring folder on the Latah SWCD network in the landowner's customer folder.
   b. Monitoring techniques are detailed in the updated monitoring protocol.



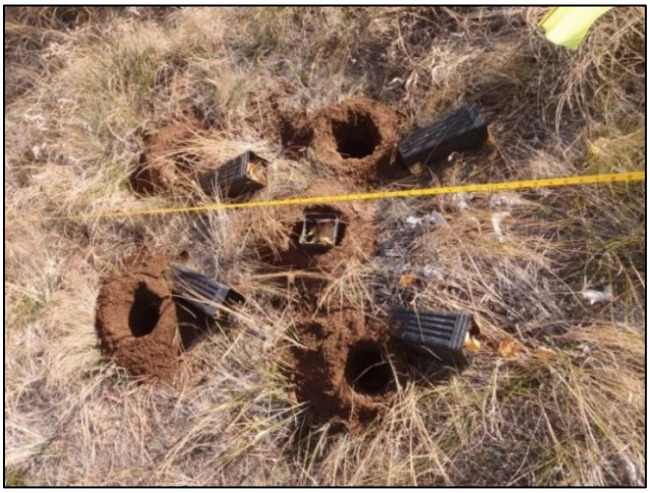
Latah SWCD field crew on planting day



Planting materials



Group of 5 Spalding's catchfly: 10 cubic inch pots



Group of 5 Spalding's catchfly planting: 58-cubic inch pots

Clump of 10 Spalding's catchfly with straw mulch

Newly planted Spalding's catchfly with straw mulch

Spalding's Catchfly Growth Forms

Rosette

Stem plant

Flowering

Seedling

REFERENCES

Latah SWCD. 2025. Spalding's Catchfly Survival Monitoring Protocol. https://www.latahswcd.org/spaldingscatchfly

U.S. Fish and Wildlife Service. 2007. Recovery Plan for *Silene spaldingii* (Spalding's Catchfly). U.S. Fish and Wildlife Service, Portland, Oregon. Xiii + 187 pages.