

Northern Utah Bonneville Shoreline Trail Fire-Resistant Vegetation Plan

Prepared by the Cache Chapter of the Utah Native Plant Society

Introduction

Construction standards in the Bonneville Shoreline Trail (BST) Master Plan specify an optional firebreak of “fire resistant native vegetation.” This section provides guidelines to help accomplish this goal. Utah Native Plant Society (UNPS) and USU Extension personnel are available for advice, training, and technical support of this activity.

Background

In recent years, wildfires in Logan’s foothills have threatened to spread into city and private property. Plants growing on the dry foothills will never be “fireproof,” but this fire hazard is reduced where “fire resistant” native vegetation grows. Healthy stands of native perennial bunchgrasses, flowers, and shrubs tend to exclude annual grass weeds, the main fuel source for foothill fires.

A firebreak along the proposed path of the BST could reduce this wildfire risk. The trail’s firebreak properties are improved by encouraging the growth of desirable native plants, along with activity to control weeds. Trail *construction*, however, has the potential to aggravate this fire hazard. Soil disturbed by construction is ideal for the growth of annual weeds and the trail could act as a corridor to accelerate the spread of weeds to new locations if precautions are not taken.

Trail Construction

Trail construction activity should be conducted in a manner that discourages weeds:

- Soil should be disturbed as little as possible, since this disturbance destroys native vegetation and promotes the spread and growth of annual weeds.
- Do not remove topsoil
- Do not allow construction equipment to compress off-trail soil
- Avoid bringing fill or material from other locations to reduce the chances of introducing weeds. Any fill brought onto the site should be as free as possible of weed seeds.
- Construction equipment should be cleaned before it is brought to the site.

Revegetation

Similarly, revegetation activities in firebreaks or trail areas should follow these basic guidelines:

- Revegetation activity should disturb the soil as little as possible to inhibit weeds. Areas along the trail can be over-seeded with desirable plant species *without* disturbing existing native perennial vegetation. Container plants can be transplanted along the trail in a similar fashion.
- Planting should be done at an appropriate time, usually in fall or late winter, using established protocols under the supervision of experienced planters.
- Planted areas should be monitored for plant survival and weed growth during the first growing season. Spot replanting or weeding may be necessary.

Recommended Plant Species

An inventory of existing native vegetation will be used to identify locally native perennial bunchgrasses, flowers and shrubs with “fire resistant” qualities. This list will be developed by UNPS volunteers and maintained on the website of the Intermountain Herbarium at USU, <http://herbarium.usu.edu>.

The BST plant list has not yet been fully developed. However, the following list is provided as an initial example of recommended plant species for revegetation:

Agropyron dasystachyum (Thickspike Wheatgrass)
Agropyron smithii (Western Wheatgrass)
Agropyron spicatum (Bluebunch Wheatgrass)
Artemisia tridentata vaseyana (Mountain Big Sagebrush)
Balsamorhiza sagittata (Arrowleaf Balsamroot)
Elymus cinereus (Basin Wildrye)
Hedysarum boreale (Utah Sweetvetch)
Linum lewisii (Lewis Flax)
Penstemon cyananthus (Wasatch Penstemon)
Purshia tridentata (Antelope Bitterbrush)
Rhus trilobata (Squawbush Sumac)

This list is based on UNPS work with the BST near Provo. These plants should also be appropriate for northern BST locations. Please refer to the list at <http://herbarium.usu.edu> for final recommendations. Factors of soil type and aspect (sun exposure) also should be considered when choosing plant species for revegetation.

Weed Control

The most critical time to control weeds, annual or other, is during the first three years after revegetation. Native perennials expend much effort at this time to develop extensive root systems and *cannot establish themselves* if weeds are allowed to compete for scarce resources. Plans for regular weed control should be built into BST/firebreak construction activities.

Weed control should consist of spot control for weeds of concern that are identified during the inventory. This can consist of weed-whipping or mowing to reduce seed set, hand-pulling or grubbing, mechanical treatment (e.g., tillage) and/or herbicide treatment, depending on weeds present.

Plant Sources

Many Utah native plants and seeds are available commercially. Care must be taken to obtain revegetation materials from reliable sources which *do not add annual grass seeds or other fillers* to their seed mixes. Many wholesale seed companies are also willing to mix custom blends at no extra charge, thus giving the project managers a fine degree of control over what species are planted. The UNPS maintains a partial list of local suppliers of Utah native plants and seeds on its website, www.unps.org.

The *best* seed source, however, is existing local vegetation. These endemic plants are already adapted to the site and produce seeds which will have more successful germination. Using seeds from local sources also maintains the genetic diversity of the plant populations. Seeds can be collected from desirable trailside plants for direct planting or for propagation and subsequent transplanting from containers.

Should container plant propagation be considered for trail revegetation, there are local resources available. The UNPS Cache Chapter and USU Cache County Extension sponsor an annual workshop which has already trained dozens of community members in Utah native plant propagation techniques. These workshops, given suitable resources, could be expanded to provide plants for the BST in an affordable, community-based effort.

