

## PROJECT REVEGETATION SUMMARY

**Park: Yellowstone**

**Project Title: Fairy Falls Trailhead Temporary Parking Area**

**Proposed Construction Date: Spring 2017**

### **Description/Objective:**

Proposed construction activities to complete the 74-vehicle Fairy Falls temporary parking area would result in short and long term alterations to the area's soils and vegetation. Removal of approximately five <6-inch DBH trees would result in a minor decrease in canopy cover and minor increases in soil temperatures and evaporation rates. The surface vegetation, organic layer, and topsoil will be cleared to a depth of 2-inches within the designated disturbance limits of approximately 32,400 square feet. This action could alter soil horizons, soil structure, and increase short-term erosion potential.

A result of these types of construction projects includes alterations to plant communities, including the potential introduction or increased abundance of non-native plants. Mechanisms for the increase in non-native plants include soil disturbance and the removal of competitive indigenous late-successional species.

The goals of this revegetation plan are to re-establish native vegetation in the disturbed area as rapidly as possible, implement a soil stabilization strategy that will minimize loss of topsoil, and define a non-native plant management plan for the project site.

### **Revegetation Objectives and Mitigations**

#### **Short Term:**

- *Site Selection:* The proposed parking expansion site was chosen, in part, because it was historically used as a road corridor and therefore, previously disturbed.
- *Topsoil Salvage:* The Vegetation Management for Construction Disturbance in Yellowstone National Park states that revegetation efforts within the park should focus on careful management of topsoil as an available growing medium and seed source. Due to the limited amount of topsoil in Yellowstone and the need to establish the best growing medium possible to revegetate disturbed sites, non-conventional methods are required to excavate, stockpile, and place conserved topsoil.
- *Excess Topsoil Storage:* A 2-inch depth topsoil layer will be removed from the parking site and placed behind the 12-inch diameter log curbing, at a depth not to exceed 12-inches. In the event that the parking expansion area (and material) is to be removed, this topsoil stockpile can then be reapplied evenly over the disturbed/mitigated area.
- *Minimize Soil Compaction:* Utilize best management practices that minimize equipment and vehicle traffic on native soils in and outside of the construction areas. Exclude all traffic from intact or salvaged topsoil. 12-inch diameter log curbing will be placed along the parking area perimeter to contain vehicular traffic and protect resources.

- *Native Plant Revegetation:* Through the application of native seed and/or plant materials, establish an average of >30-50% native plant cover by the third growing season after construction.
- *Erosion Control:* Stabilize soils impacted by construction activities. The use of mulch, native seed, and indigenous slash, will be used to minimize surface runoff and protect water quality, until native vegetation has re-established.
- *Non-Native Plants:* Reduce the establishment of non-native plant species by re-establishing diverse native plant communities as rapidly as possible in all disturbed areas and in employing appropriate control measures when necessary.

**Long Term:**

- *Visual Enhancement:* Improve the visual quality of the construction zone by returning native plant species to disturbed sites.
- *Plant Community Re-vegetation:* The long-term goal of this revegetation effort is to establish native dominated stable plant communities. Species included in the initial seeding and/or planting will be a mix of grasses, forbs, and shrubs of locally occurring genotypes. Revegetation efforts will include a mix of quick establishing ruderal species and long lasting late seral species with anticipated seed rain from adjacent, intact habitats.

**Plant Material Methods:**

**NATIVE SEED**

Indigenous native seed is generally collected for up to five years before a project starts. The distribution of native seed will not be more than five miles from the collection site for grass species and three miles for forb species. The seed will be mixed to match the different habitat types found within the construction site. Spreading of seed will be at a rate of 11 pounds per acre, which includes 8 pounds of grass and 3 pounds of forb seed.

**MULCH SPECIFICATION**

Once the seed is distributed over the disturbed site, fibrous mulch will be applied. The mulch consists of 2/3 fibrous fir bark and 1/3 fibrous, shredded Western Red cedar ranging in size from 1/8 inch minus to 6 inches in length. This size helps maintain moisture retention, keeps the native seed protected from animals and keep it from blowing away. Mulch will be spread at a loose depth of 1 inch along road edges and open areas.