

Establishment of Native Warm Season Grasses and Forbs at Tanglewood Park

Developed by John Isenhour, NC Wildlife Resources Commission

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There are many benefits to establishing and managing native early successional species for wildlife. Native warm season grasses provide a bunch grass habitat which mat-forming exotic grasses such as tall fescue and Bermuda grass do not offer. Native herbaceous broadleaf plants, referred to as forbs, provide a food source for many species of wildlife as well as vital pollinator habitat. At one time early successional habitats abounded across North Carolina, however in the last 50 years changes in land use have caused this diverse habitat type to decline, and the animals that depend on early successional habitat have followed. The old bottomland fields available at Tanglewood provide an excellent opportunity to improve habitat for a whole suite of grassland songbirds, small mammals, reptiles, amphibians and beneficial insects.

The conversion of these fields will require varied levels of site preparation using chemical herbicides. Non-native plant species grow rapidly and can be very persistence in the seed bank, making herbicides mandatory in all conversions to native species. To most effectively control exotic species while maintaining beneficial native species already growing in the fields, two distinct treatments should be utilized. The attached map designates area "1" and "2" to provide a rough idea of which portion of the field will be treated each manner. The following recommendations should be followed for successful site preparation, establishment and management of native plants.

Area 1: Common Bermuda is a very persistent non-native warm season grass which is all but impossible to control in a native grass stand. For this reason the portions of the fields labeled "1" will require an intensive herbicide treatment to prepare for native plant conversion. To make sure steps are clear a schedule for site preparation and planting is listed below.

Early June 2011: Apply 3 quarts of glyphosate herbicide (41% active ingredient formula) and 2 pints methylated seed oil per acre.

Mid July 2011: Apply 3 quarts of glyphosate herbicide and 2 pints methylated seed oil per acre.

Early August 2011: Scout treated area, identify and flag residual Bermuda grass areas.

Mid to Late August 2011: Treat residual Bermuda grass areas with 4 quarts of glyphosate herbicide and 2 pints methylated seed oil per acre. Do not take chances, if any Bermuda is present spray the area.

Early May 2012: Final site prep herbicide treatment. This treatment will consist of 3 quarts of glyphosate, 2 pints methylated seed oil and 4 ounces of Imazapic per acre. Imazapic provides pre-emergent control of numerous weeds, but many native grasses, forbs and wildflowers are tolerant of this herbicide.

Mid May 2012: Plant a mixture of 2.5 pounds pure live seed (PLS) Little Bluestem, 1.5 pounds PLS Indiangrass, 1 pound PLS Big Bluestem, 4 pounds partridge pea and 1.5 pounds wildflower mix per acre. Different varieties of native grasses are available and wildflower mixes vary greatly from one supplier to the next. If project moves forward contact biologist for more details on seed selection.

Area 2: This portion of the field seems to have much less exotic grass and more native vegetation, especially near the stream along the east boundary. With this in mind a different approach will be taken in this area.

Late August or Early September 2010: Apply 6 ounces of Imazapic and 2 pints methylated seed oil per acre. This herbicide will control many cool season grasses such as tall fescue while having little impact on native grasses.

Early March 2011: Conduct a prescribed burn on area 2. This burn will promote native species.

May-June 2011: Scout the area for non-native warm season grasses such as Bermuda grass
***** Depending on what is observed during scouting, Area 2 can either be allowed to grow with volunteer vegetation, or exotic grasses can be controlled and planting can occur following recommendations for area 1.

Trails/Firebreaks: See map for proposed fire breaks and trails. The same site preparation recommended for Area 1 should occur in these strips to remove invasive plant species; however the final herbicide treatment which includes Imazapic should be excluded. A less invasive turf grass such as Creeping Red Fescue should be established in these linear strips to allow them to be used as firebreaks and walking paths. A width of 15 feet for these strips will allow for easy maintenance and adequate fire control.

Long Term Management: The long term management will consist of burning half of the established native vegetation during the early spring each year. Ideally, alternating blocks of habitat would be burned on rotation to insure that there is nesting and brooding habitat available for wildlife each year. An additional management requirement is annual scouting and spot treatment of woody and invasive vegetation. Most woody and invasive species can be controlled by wetting foliage during the growing season with a 5% solution of glyphosate.

Following these recommendations will improve early successional habitat in the designated field. This conversion will provide not only habitat for a wide variety of wildlife species, but also new opportunities for passive recreation and environmental education for the visitors to Tanglewood and the citizens of Forsyth County.