

Current Conditions

The 40-acre Grace Tract on the Sherburne South Farm consist of a black willow overstory of stems 6-18 inches in diameter. Tree density of black willow is approximately 200 stems per acre with about half of those stems being 10 inches or greater. The area was planted in 2003, however very little of the planted hardwood remains. Planted pecan along with volunteer green ash, red maple, and sugarberry make up the non-willow species on the site. These stems are positioned below the willow overstory and are 6-10 inches in diameter. The understory consists of various *Carex* species, smartweed, button bush, and other moist soil species. Tallow tree is present but at a very low stem count.

Objectives

- Improve diurnal habitat for woodcock
- Improve habitat for other disturbance dependent wildlife
- Release non-willow hardwood stems
- Increase understory diversity and structure
- Provide snags for woodpeckers and cavity nesters

Methods

- Inject all black willow stems 10 inches and greater with herbicide
- Utilize hack-and-squirt method applying Imazapyr at a ratio of 2:1 (herbicide:water)
- Hack and squirt using a hatchet or other blade
- Hack through the bark into the sapwood making a cup to hold the squirt of herbicide
- Make at least 1 "hack and squirt" per every 3 inches of tree diameter
- Inject all tallow tree encountered


Treatment

In order to improve wildlife habitat and release all non-willow species, herbicide will be used to kill approximately half of the black willow on the site. Stems greater than 10 inches make up approximately half of the stems but contribute to approximately 65% of the overstory canopy closure. For this reason all stems greater than 10 inches will be injected. If all black willow were to be treated at this time, the area would become much more open than desired. A complete black willow removal would essentially set the site back to an early successional stage and perhaps lead to another willow encroachment. By removing only stems 10 inches and greater the canopy will be reduced by approximately 65%. This will allow ample light to reach the forest floor to increase understory structure and diversity without providing black willow with optimal germination conditions. Additionally, the removal of only half of the black willow stems will more than adequately release the non-willow species, while still keeping the site forested. Retaining the forested or wooded structure of the site is especially important for providing woodcock diurnal habitat, notwithstanding, additional stem removal above what is proposed would not necessarily increase understory structural development. Injected stems will become snags, providing foraging and nesting opportunities for several species of woodpeckers and subsequently providing cavities for species such as Prothonotary Warblers. Fallen snags will become coarse woody material which is limited at this time on the site.

Proposed Improvement Site
40 Acres



Legend

-  Improvement Area
-  WMA Boundary

