Tag Alder (Speckled Alder) Management

Wisconsin Biology Technical Note 9
Companion Document for Wisconsin Conservation Practice Standard, Early Successional Habitat Development/Management (Code 647)
PURPOSE
Development of early successional habitat that provides a diversity of alder age classes to enhance habitat value for a diversity of wildlife species.

SELECTION OF SITES BENEFITING FROM ALDER MANAGEMENT

- Sites containing greater than 75% percent canopy cover of mature alder with greater than 10% of the limbs having horizontal growth within 24 inches of soil surface will benefit greatly from alder management.

- Avoid shearing areas in alder stands that have less than 75% alder canopy cover and have uniformly vertical limbs. These more open sites have ample light penetration to support a diverse herbaceous layer and thus benefit less from shearing.

SPECIES SPECIFIC ALDER MANAGEMENT

**Ruffed Grouse, Whitetail Deer.** Habitat value for these species can be enhanced by intensive management of upland areas adjacent to the alder wetland. Referred to as edge feathering, this practice increases stem densities and provides protective cover for both deer and grouse, and browse for deer. Clear-cutting of aspen, if present, will produce maximal benefit, but heavy thinning of adjacent hardwood stands will also increase stem densities and soften the edge between the alder wetland and associated upland areas. Thinning of hardwood stands should be most intense directly adjacent to the alder wetland, with the goal being removal of 75% of the canopy. Intensity of thinning can then decline moving away from the alder, creating a gradual transition from the alder wetland into associated upland habitats. Edge feathering can be implemented in the fringe area 10 to 100 feet wide.

**Woodcock.** Dense alder stands can provide important feeding habitat for American woodcock. High stem densities provide protective cover, and the nitrogen-fixing ability of alder helps create rich soils with abundant earthworm populations. However, the ability for alder stands to provide feeding habitat for woodcock depends upon existing hydrology. Stands with water at or above the soil surface and/or with heavy sedge growth are likely too wet to provide quality feeding habitat. Management should focus on alder sites where the water table is low enough to allow earthworms to be present in the soil. As alder stands age, their stem density decreases substantially and the understory becomes dominated by grasses; woodcock cannot feed freely in such stands. Where possible, manage alder in strips 50-100 feet wide perpendicular to the drainage course to maximize habitat interspersion along the soil moisture gradient so that feeding habitat is available during both wet and dry periods.

**Speckled Alder – small diameter and vertical growth indicate young healthy alder**
**Golden Winged Warbler.** A high level of structural heterogeneity within the patch is important for golden-winged warblers, with large trees, shrubs, and herbaceous patches all providing habitat elements. Select sites adjacent to aspen and create openings in the driest possible locations to encourage the growth of herbaceous material utilized for nesting. Scattered residual trees (5-15/acre) greater than 4 inches in diameter should be maintained for perch trees, with at least 50% of remaining overstory trees being deciduous. Conducting management in areas where the alder site creates a narrow band between aspen stands (less than 200 feet) is especially beneficial.

**MANAGEMENT CONSIDERATIONS**

- No more than 20% of the alder on a property should be managed in any given year and management activities should be spaced a minimum of five years apart to create a mosaic of successional stages.

- If the total acreage of alder on a property is located in one stand that is 5 acres or less and additional alder stands are present within one-quarter mile of the management, the entire alder stand may be managed at one time.

**SITE CONDITIONS AND CHARACTERISTICS WHERE ALDER MANAGEMENT SHOULD BE AVOIDED**

- Openings are present or spacing between alder clumps exists such that > 25% of the project site contains sufficient light penetration to support herbaceous vegetation.

- Alder is less than 1 in diameter on average (silver dollar size).

- Less than 10% of alder is growing horizontally within 24” of the soil surface.

- Rocks > 10 inch are present.

- For sites with < 5 acres of alder, no additional alder stands are present within .25 mile.

- Trees > 4 inch diameter breast height (dbh) comprise more than 50% of the alder stand.

- Site has pronounced hummocks.

- Alder site is depressional (kettle) to the point that no drainage outlets are apparent.

- Site is a bog – peatland dominated by sphagnum mosses, sedges and hummocks.

- Willow comprises more than 10% of stand.
• Sites that contain stumps from timber harvests or significant windfall which create obstacles for equipment.

• Beaver dams are influencing the hydrology of the project area.

• Evidence of wetland plants associated with ponded water (i.e. marsh marigold) or continual soil saturation.

• Areas where Tamarack or Black Spruce are dominant.

ALDER MANAGEMENT TECHNIQUES

• Alder will re-sprout from the stump thus management activities that have the potential to disturb the root system such as roller choppers or blading with heavy equipment is not recommended.

• Acceptable alder management techniques include hydraulic shearing equipment, rotary forestry mowers, and hand cutting.

SOIL CONDITIONS

• Select sites that lack distinct hummocks exceeding 8 inches in height. The presence of tall hummocks are indicative of wet sites that may not freeze sufficiently to support the weight of equipment. The topography created by hummocks make it very difficult to operate machinery even when sufficient ice is present to support equipment.

• The best sites have no muck cap or a muck cap of less than eight inches. These sites will be easier to access in the average winter than those with thicker muck caps.

• Sites that contain true peats should be avoided due to equipment access problems.

EQUIPMENT CONSIDERATIONS

• The best sites have logging trails or access roads close to the site. A site where the only access is across a watercourse, road ditch or bog can make it impossible for equipment to access the site.

• The best sites have legal easements. Note: some properties have legal easements that would not allow for equipment to cross the easement without impacting the easement area, e.g., rutting unimproved trails or need to cross streams or wet areas.
The best sites are not immediately adjacent to streams. These areas are often the lowest elevation with the highest amounts of shallow base flow which hinders freezing to a depth that will support equipment.