

# Indiana Department of Natural Resources - Division of Forestry

## Phragmites Management Plan – 02/01/2011 Pike State Forest Cup Creek Area

**General Description:** The Cup Creek area of Pike State Forest is located in the recent Ellis acquisition. This area was purchased between 2002 and 2009 and includes a mixture of coal mined and non-mined areas. The mined areas have had varying degrees of reclamation completed on them depending on when they were mined. Areas mined prior to 1977 probably had little reclamation performed besides possibly tree planting. Areas mined since 1977 were supposedly reclaimed to the standards set in the law.

The Division of Reclamation has used the Abandoned Mine Lands Program extensively on this area to deal with some of the problems from past mining including acid drainage, open mine shafts and unprotected soils. The main valley of the south part of this purchase has an unnamed stream that flows into the Patoka River. The Division of Reclamation has created a number of ponds and filter systems along this drainage to treat acidic water before it reaches the river. These ponds have proven to be good sites for the invasive aquatic species known as *Phragmites australis* or common reed.

**Location:** The area with the worst infestation of phragmites is in the main drainage where the ponds and filter systems were installed. This is in Sections 14 and 23 of T2S, R7W in Pike County. This is parts of Tracts 1205, 1209, 1401, 1402, 1403 and 1405. Smaller infestations are found in small retaining ponds on the slopes up and down the drainage.

**Wildlife:** The ponds are not acid enough to prohibit wildlife from using and drinking from them. Ducks and other waterfowl are often seen and beavers have made dams and lodges there as well. Other birds and animals, both aquatic and terrestrial also use the waters. It is not known if fish and amphibians are found in them however. Also, native plant species, most notably cattails are fairly common.

The problem with phragmites stems from their invasive nature where they can overrun an aquatic area and crowd out native vegetation. They also offer poor wildlife food or nesting habitat though they can offer some cover.

**Proposed Management:** The proposed management for this area is to use a prescribed fire to thin out the old stems and built up vegetative matter. This would occur early spring 2011 prior to bird nesting activity. The main area is about 27 acres but is not solid phragmites or any other vegetation. Following the burn the stems would be allowed to sprout back. Later this spring or summer when the shoots reach a predetermined height they would be treated chemically with an approved aquatic herbicide containing imazapyr and/or glyphosate. By removing the built up stems and vegetation in the burn, the spraying is easier and covers the emerging stems better. The outlying pockets of phragmites will also be treated. They may be treated either with fire or mowing prior to spraying. Annual follow up treatments will be necessary for a number of years.

**Desired Future Condition:** The goal of these treatments is to eliminate or greatly reduce the phragmites population to allow the native species to dominate the site. This will benefit wildlife and allow for a healthier aquatic area. Elimination of a major phragmites seed source is also important to protect adjacent and downstream aquatic areas.

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Phragmites Control Area  
Pike State Forest  
Cup Creek Area  
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