

Indiana DNR Division of Forestry

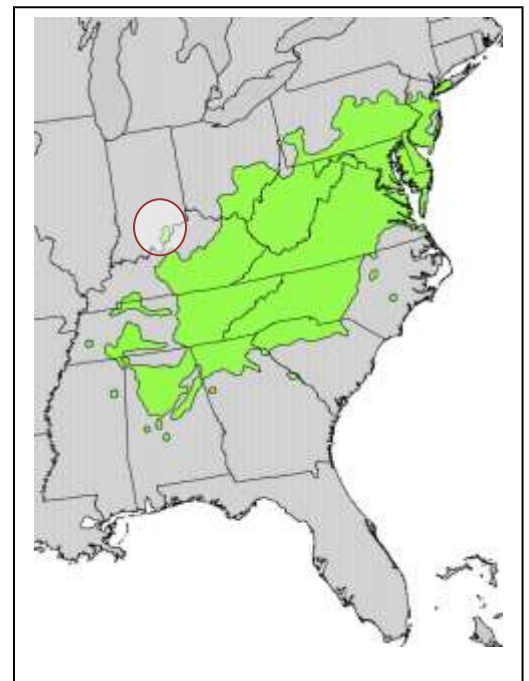
High Conservation Value Forest Proposal- **Outbrook Ravine**



Out Brook Ravine at Clark State Forest

Description

The proposed approximately 360 acre High Conservation Value Forest (HCVF) area encompasses a large, rugged area with a range of high quality forest community types (mesic through dry), including the northwestern most extension of naturally occurring Virginia pine. Naturally occurring Virginia pine is of very limited occurrence in Indiana, being found only on the southern reaches of the Knobstone Escarpment in Floyd, Clark, and Scott counties. According to C.P. Smith (A Report Upon the Plant Life of the Reservation, 1903), in describing the occurrence of Virginia pine on the knobs of the new State Forest Reservation (Clark State Forest), pine is "Found generally in patches, upon the crests of the knobs, frequently extending down the slopes" In areas selected by Smith, he found the pines to range from 40 to 150 trees per acre, and reported that: "The largest pines are about eighteen to twenty-four inches in diameter." Almost 100 years earlier, notes of the area from U.S. General Land Office surveyors also document the presence of naturally occurring pine, specifically found in their recording of the northern boundary of Section 3, T1N R6E (which traverses the proposed preserve). While heading east along the survey line, their notes read: "First ½ mile hilly poor pine land—last ½ mile very high and poor hills, timber oak and pine." Another line, just east of the previous, reads: "Very high poor hills. Timber pine, oak, chestnut, etc." These recordings were made in 1806.



Map of natural range of Virginia pine

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Why HCVF?

High Conservation Value Forests are State Forest areas which due to their unique high conservation values receive added consideration of management activities in order to maintain or enhance these conservation values. These values may be of biological, ecological or cultural significance.

HCVFs are also considered as areas for potential dedication as State Natures Preserves. The Nature Preserve system provides permanent protection for significant natural areas within the state.

Significant High Conservation Value attributes include:

1. State Threatened and State Endangered Species: The proposed HCVF is the core area of occurrence for State Endangered *Solidago squarrosa* and State Threatened *Calamagrostis porteri* in the state.

Solidago squarrosa occurs here as a disjunct from its main range in the northeastern U.S., with the nearest populations almost 150 miles away. The proposed design provides large scale landscape opportunities for *Solidago squarrosa* habitation. Ray Friesner, a botany professor from Butler University and Charles Deam, a Research Forester of the Indiana Department of Conservation, found the first known plants near the fire tower in 1930 and 1938 respectively. In Deam's Flora of Indiana, he reports that: "It is frequent in the Clark County State Forest... [near] the fire tower" Population has declined over the decades, only 9 individuals are known to occur in the state today.

It is core area also for state threatened *Calamagrostis porteri* (Porter's reed grass). This unusual grass rarely acquires anthesis (flowering), and no viable seeds are produced when it does, and thus no new populations are being established in the wild.



Stout Goldenrod (*Solidago squarrosa*)



Range map of *S. squarrosa*

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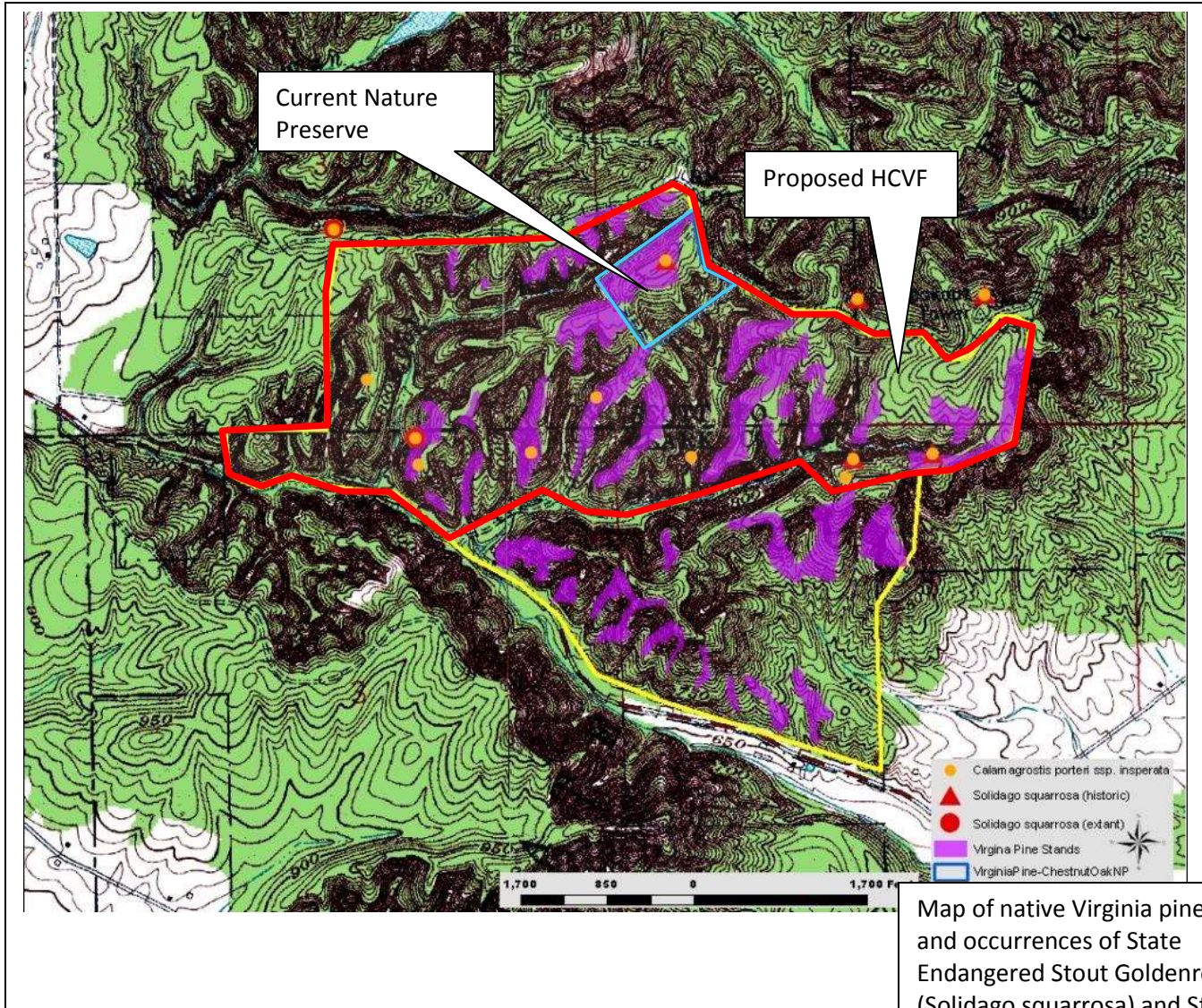
2. Uncommon native Virginia Pine Communities: Currently, only 76 acres of Virginia pine communities are in nature preserve status statewide. This proposed HCVF adds significantly to the conservation of that natural forest community. The area possesses a natural community quality and diversity as good as or better than elsewhere in state forest and region with relatively low occurrences of non-native invasive species. Provides opportunity to serve as a representative sample area on the landscape for native Virginia pine to be perpetuated by natural means (fire) and active management.
3. Nature Preserve enhancement: HCVF designation will enlarge the existing Virginia pine conservation area, from the current small Virginia Pine – Chestnut Oak Nature Preserve to a more landscape level design, providing better opportunities to research natural population fluctuations of this timber type at the northwestern extent of its Midwestern range.
4. Natural features: Topographically, has one of highest points in Indiana, and some of the deepest ravines. Bedrock outcrops are present, an uncommon feature in Knobstone Escarpment. Conservation of unique ‘knobs and escarpment’ landscape and locally well-known natural and scenic topographical features. Consistent with FSC Certification goals that includes protection of special areas and rare/unique forest community types.

Management Considerations and Strategy

- Design HCVF large enough to include significant portion of the watershed and allow natural processes such as fire to occur. Tract almost completely surrounded by public and forest roads to provide a good fire break. Undertake prescribed fire necessary to remove leaf litter and to thin mid-canopy; this enhances germination and growth of dry forest species, including Virginia pine.
- Target select areas for mechanical thinning of small-large trees and application of herbicide (to enhance habitat for *Solidago squarrosa* in known historic sites).
- Intense focus on controlling invasive species, especially those encroaching on the proposed HCVF (e.g. stilt grass, garlic mustard, round-leaved bittersweet, Japanese honeysuckle, jet bead, and Amur cork tree).
- Provide for recreation trail corridor(s) in a manner that will not conflict with the noted primary high conservation values of the area. The Knobstone Hiking Trail currently transects the area.
- Provide a comparative area reference point to areas managed more extensively for timber production, with adjusted silvicultural and harvest practices managing more specifically for the health and sustainability of the Virginia Pine forest community, *Solidago squarrosa*, *Calamagrostis porter* and the noted high conservation values.

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Map of native Virginia pine stands and occurrences of State Endangered Stout Goldenrod (*Solidago squarrosa*) and State Threatened Porter's Reed Grass.

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