

STEWARDSHIP PLAN & CLASSIFIED FOREST AND WILDLANDS REINSPECTION



Prepared for: Indiana Karst Conservancy--"Upper Twin"
c/o Keith Dunlap, Treasurer
PO Box 2401
Indianapolis, IN 46204
(317)882-5420

Date of this inspection:
11/19/2019

Date of last inspection:
1/18/2012

Green Certification Status:
CERTIFIED

Was the landowner or
his/her representative
present for the
reinspection? YES

Is corrective action
required? NO



Section 4, T3n, R1e, Marion Township, Lawrence
County

Mission Statement

The Indiana Department of Natural Resources' Division of Forestry promotes and practices good stewardship of natural, recreational and cultural resources on Indiana's public and private forestlands. This stewardship produces continuing benefits, both tangible and intangible, for present and future generations.

50.31 Acres Classified Forest and Wildland
Parcel ID: #47-0312

Janet Eger, District Forester
14043 Williams Road
Shoals, IN 47581
(812)247-2479
(812)583-9383
jeeger@dnr.IN.gov

Date Prepared: 11/19/2019
Expiration Date: 11/19/2029

The stewardship goals for this property are:

- To provide watershed protection with specific emphasis on protection of the cave/karst system.
- To improve wildlife habitat for a variety of species.
- To provide nature protection with a special emphasis on the karst area and associated plant and animal species, while still managing the land for a variety of purposes.

PROPERTY OVERVIEW

PROPERTY ACCESS AND FOREST ROADS & TRAILS: Access to the tract is a lane that originates off of Highway 60 East at the northeast corner of the tract. The lane is graveled goes southwest then westerly through the tract, ending about in the center of the tract. A good trail system runs through the western two-thirds of the tract giving fairly good access to most of the hardwood areas of the tract. The graveled road runs through the cedar area in the eastern third of the tract.

BOUNDARY MARKINGS: There is fencing on nearly all portions of the boundaries with the exception of some missing fence on part of the north boundary. The tract has been surveyed in the past, and marked with some posts. The tract is surrounded almost completely by open fields also.

TOPOGRAPHY AND SOILS: The tract is a series of sinkholes, both large and small which gives the appearance of moderately rugged topography. There is only one soil type on the tract which is a Crider-Frederick Silt Loam, karst, 6-20% slopes, eroded (CtxD2). This soil has a parent material of thin loess or loess over clayey residuum over limestone. It is a moderately deep soil and well drained. However, erosion has taken place over the years exposing small surface rocks. The steepness of some of the sides of the karst holes is great enough to be an erosion hazard. This soil type, however, can grow some good forested areas.

WATER RESOURCES: There is a natural sinkhole pond southwest of the entrance which no longer holds water except for brief periods. Another small pond on the south side of the open field in the inside northwest corner was breached at the time of the land acquisition, but has been repaired and hold a fairly constant supply of water.

Woodlands and other natural areas are extremely effective at filtering pollutants and minimizing erosion as water moves across the landscape. You can maintain this effectiveness by following basic Best Management Practices (BMPs) when using any type of heavy equipment in your natural areas. BMPs are especially important during timber harvesting operations. For more information on BMPs, go to www.DNR.in.gov/forestry.

PAST USE OF PROPERTY: It is very likely that this property has had livestock grazing in the old field areas, but it has been quite a number of years since this has occurred. The former owner of the property was a timber company who cut the timber quite hard and did no follow-up work. The open field in the insider northwest corner has apparently been open since at least the 1930's (from aerial photographs), and may be a natural barren. Since acquisition the land by IKC, various projects have been undertaken including putting more gravel on the entrance road, making and maintaining trails, invasives control work, cleaning up past trash, and trying to maintain the entrance to the cave which has collapsed at least twice. An area is currently being readied at the loop on the gravel road for erection of a kiosk.

PREHISTORIC & HISTORIC FEATURES: Most land parcels within the State of Indiana may be environmentally suitable to contain archaeological deposits but have not been investigated in order to verify the presence or absence of cultural deposits. Indiana Code 14-21-1 provides protection to archaeological sites and cemeteries on both private and public land by prohibiting digging anywhere with the intent to recover artifacts and disturbing the ground within 100 ft. of a cemetery without an approved plan from the IDNR – Division of Historic Preservation and Archaeology. In addition, if archaeological artifacts (an object made or modified prior to 1870), features (non-portable evidence of human occupations, such as a well), or human remains are uncovered during ground disturbing activities, state law requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. Landowners who need to report archaeological sites or who are interested in learning more about cultural sites should contact the Division of Historic Preservation and Archaeology at 402 W. Washington St., Rm. W274, Indianapolis, IN 46204, 317-232-1646, dhpa@dnr.in.gov, or at <http://www.in.gov/dnr/historic/index.htm>.

This tract has a cave which is part of the Twin Caves system (nearby Spring Mill State Park), and the passages in this system have been fairly extensively mapped over the years. The cave/karst system is utilized by cavers and researchers.

UNIQUE ANIMALS, PLANTS, & HABITATS: The DNR Natural Heritage Data Center is a program designed to track Indiana's special plants, animals, and natural communities. It was contacted November 14, 2019, and while there were no recorded rare plants, wildlife, or unique communities on the tract, there are some in the immediate vicinity of the property. This does not eliminate the possibility of species of concern existing on the property. About ½ mile to the north, an observation of the Northern Cave Fish has been documented with the last observation in 2005. Also in the data base in this same area (with no observation dates) are the Young's cave ground beetle and the mesic upland forest type. Black Vultures were also documented in 2002 close to the site. Often, features on private lands, in particular, are missing from the database. You can find more information on this subject at the Division of Nature Preserves' website: <http://www.in.gov/dnr/naturepreserve/4725.htm>.

To help protect many of the species, careful management of the land is required, and helping to prevent erosion or siltation will go a long way toward protecting the karst system and its inhabitants.

WILDLIFE RESOURCES: This property as a whole should be a fairly good area for a wide variety of wildlife. There is a quite a bit of diversity of vegetation in the woods, although water is not abundant. All of these factors when put together provides for the life needs of birds and mammals can be found on the vicinity.

Many of the common species of this area can be found on or passing through the tract. These may include white-tailed deer, wild turkey, rabbits, woodpeckers, a variety of songbirds, reptiles and other amphibians, and various insects. Raptors such as red tailed, sharp shinned, Coopers, and broad wing hawks along with a variety of owls also likely utilize the area. There is also a possibility of grouse and/or quail utilizing portions of the tract.

EXOTIC AND INVASIVE SPECIES CONCERNS: Several invasive species were noted through the tract. Autumn olive and bush honeysuckle were especially evident as the leaves were still green and present (on the day of reinspection). Work has been done over the years to control these invasives, and will continue. Japanese honeysuckle was present in some areas with most of it being along the ground and less climbing into trees/shrubs. Continue to try to control this aggressive invader. One ailanthus (Tree of Heaven) stem was located along the trail near the south boundary, and this should be treated with a basal bark application of appropriate herbicide. While other ailanthus trees were not found, it is highly likely that others could be present. Japanese stilt grass is infesting many portions of the trails, and should be controlled to prevent further spread. Using a grass-specific herbicide will lessen damage to broadleaves, etc., while still giving control. Multi-flora roses are scattered throughout most of the hardwood portions of the tract, and should be controlled to prevent further spread. And while this portion of the county was among the first to be invaded by the Emerald Ash Borer, there are still some overstory ash trees that remain in the stand. As the trees succumb, they will provide good homes/food for a variety of native fauna that utilize the woodlands.

Continue to be vigilant for other species that may appear such as garlic mustard, privet, barberry, and ailanthus. Early detection and a rapid response to any invasions of exotic species is the key to controlling and eliminating these threats to the woodland ecosystem. For more information on exotic and invasive species, contact the District Forester, or visit www.sicim.info/ or www.bugwood.org.

Invasives have the ability to simply blot out native species, with serious and sometimes unanticipated results. Insects, birds and other animals native to Indiana have evolved along with native plants, and when the foreign plants take over, those animals can lose food sources or foraging grounds.

PROPERTY SETTING AND REGIONAL CONSERVATION CONCERNS: This tract is located within the Highland Rim Natural Region of the Interior Plateau. It is also

part of the Mill Creek—Mosquito Creek Watershed, and activities on the tract can impact water quality which is especially important in this karst region.

FOREST RESILIENCE AND CARBON SEQUESTRATION: A forest that is healthy and vigorously growing will be better able to contend environmental extremes. Managing the forest through harvesting timber, timber stand improvement, and controlling invasive species will help to maintain the forest in a healthy state. Proper harvesting of timber and regenerating forests can also result in net carbon sequestration in wood products and new forest growth.

AREA DESCRIPTION AND MANAGEMENT RECOMMENDATIONS

AREA NAME: Softwoods

RESOURCE DESCRIPTION: The major area for the eastern red cedars is in the eastern third of the tract. The cedars are generally post/pole in size and smaller, and fairly thick. Hardwoods such as yellow poplar, honeylocust, sassafras, and some oaks have become established among the cedars. The far eastern end of the field near the highway and access entrance was used as the log yard during the previous harvest, and this area has also reverted to quite a few cedars. Along the western end of the northern most north boundary area has several cedars that are also on the neighboring property—currently owned by Keith Dunlap with future plans to transfer to IKC.

A smaller area of softwoods is located in the old field which runs parallel to the north side of the western third of the tract. This area has cedars along with Virginia pine trees. The pines are post/pole to small timber sized and fairly straight and tall. These were likely planted for erosion control 40-60 years ago. Hardwoods have become fairly well established around and through the understory of this area of pines.

DESIRED FUTURE CONDITION: The desired future condition for the softwoods is to have them continue to grow and develop and provide wildlife cover and food, while allowing the hardwoods to continue to develop.

ACTIVITIES TO ACHIEVE DESIRED FUTURE CONDITION: There are some grapevines in the cedars in the eastern third, especially north of the old pond area. Many of these should be deadened, especially where they threaten the development of desirable hardwoods. The Virginia pines provide a bit of diversity among the hardwoods, and while their wildlife value is much less than the hardwoods of the area, they can be left to grow until the end of their natural life span. The cedars near the northern most north boundary can be cleared to expand the field, and the tops used for wildlife brush piles and the stems for posts/poles that can be sold or utilized on the property.

AREA NAME: Hardwoods

RESOURCE DESCRIPTION: The hardwoods were harvested very hard around 2010 by the previous owner. The stocking level of the overstory is still somewhat below average, although the overall stocking level is adequate to high. The overstory trees are fairly tall, but many were damaged in the top or at the butt by the logging operation. The western third of the tract is dominated by an oak-hickory timber type as is the upper slopes in the main body of the hardwoods. However, there are also areas where there is a mix of species including white oak, black oak, red oak, pignut hickory, yellow poplar, sugar maple, black cherry, black gum, sassafras, chinkapin oak, black walnut, white ash, persimmon, red maple, eastern red cedar, dogwood, paw paw, shingle oak, and honeylocust. Some areas have a decent amount of oak regeneration (above 4 ½" tall), although the heaviest understory layer is made up of American beech. Brambles are still somewhat thick in some areas where the overstory is thin, but they are beginning to die out as more shading takes place from the overstory as well as the regeneration layer. There is a very small amount of grapevines in the hardwoods, and most of the vines are still fairly small.

DESIRED FUTURE CONDITION: The desired future condition for the hardwoods is to bring the area back to a healthy and vigorous stand of trees that will help protect the watershed and provide wildlife benefits.

ACTIVITIES TO ACHIEVE DESIRED FUTURE CONDITION: Continue to work on the invasive species across the tract. This is a good late fall/early spring activity, and where possible, incorporate a variety of methods to achieve the control including hand pulling and the proper use of chemicals. Without control of the invasives, the tract will struggle to provide good wildlife habitat, quality timber, good quality soil and water, and other desired values.

Timber Stand Improvement (TSI) work will help speed the recovery of this woods and get it back in the best productive state as possible. Broken and severely damaged trees should be deadened as well as any grapevines and trees that are competing against more desirable stems. Other TSI work should include a reduction in the amount of understory American beech trees that provide shade on the forest floor which inhibits the growth and development of more desirable species such as oaks, cherries, poplars, etc. Some beeches can be left near trails to be used by deer for scrapes and rubs. Where oak trees are already present, try to push back the competition through TSI work which allows the young oaks the light and space needed for good development. The TSI work can be overwhelming on this many acres. Breaking the woods down into smaller areas—and prioritizing which areas are most in need of the work—will help achieve the desired results without taxing the volunteer help that is used to maintain the property.

For Timber Stand Improvement (TSI), invasives control, and other woodland projects, there may be cost-share funds available to help off-set the cost of doing the practice. Check with the Natural Resources Conservation Service (NRCS) office or the district forester for fund availability.

This woodland is not near ready for a harvest, and need several years to grow. At the time a harvest might be contemplated, however, it is highly recommended to use a professional forester and qualified logger when undertaking a timber sale and harvest. High grading (the removal of the highest grade timber, leaving only lower quality, less desirable trees) is not a valid management option. A diameter limit harvest is also not a valid management option except in very limited cases. A diameter limit harvest should not be used in your forest stand unless it is recommended in this plan.

You must call your District Forester before you begin planning your timber sale. It is important for you to meet with your District Forester before a timber sale to discuss important details for your harvest including any BMP issues that may need to be addressed, and any environmentally sensitive areas that may need to be avoided.

AREA NAME: Open fields

RESOURCE DESCRIPTION: There is a very small (less than ¼ A) field just south of the neighbor's house on the north boundary line. This was last used for livestock, and contains mostly fescue. The other field is in the inside northwest corner of the tract and this area may be a true barren. There is a fairly good population of Indian grass as well as Elliott's sedge in the area. There are some eastern red cedar trees along with a few persimmon, white ash, and yellow poplar trees that have popped up in a few areas of the field. Several trees have been cut back, especially cedars to try to maintain the open field areas.

DESIRED FUTURE CONDITION: The desired future condition for the fields are primarily for providing good wildlife habitat.

ACTIVITIES TO ACHIEVE DESIRED FUTURE CONDITION: The small fescue field could be planted to some desirable hardwood trees such as oak or persimmons. However, the fescue will have to be deadened so as to not compete with the trees.

The other field on the north boundary would be an ideal area to continue to maintain with the native Indian grass and other natives already there. This can be accomplished by removing the invading cedars and hardwoods, and then burning the area which will help re-established other natives as well as help the Indian grass. Periodic burning would be needed to maintain the site also. However, prior to burning, seek professional help and have a burn plan in place which includes safety precautions for volunteers, etc.

FUTURE LONG-TERM LAND CONSERVATION: This property was originally enrolled in the Classified Forest and Wildlands Program on February 9, 2012. Under the program you receive a significantly lowered property tax assessment, a periodic forester inspection, and an option to participate in and sell forest products as being 'green certified'. In return, you agree to care for the land and its resources according to program standards and the approved plan tailored to your objectives and property resources.

CONSERVATION-BASED ESTATE PLANNING: The first step to ensuring the personal and family legacy of you land is to talk about its future. This includes the co-owners, heirs, or others affected by the transfer of ownership. Common legacy tools include Family Partnerships, Gift or Sell to Heirs, Land Trusts, Last Will and Testament, Limited Liability Company (LLC), and Conservation Easements among others. Each method of transfer has its advantages and drawbacks. Discussion of these tools with the future owners is necessary to ensure the land is conserved for future generations.

In the case of storm, fire, pest outbreak, or other widespread damage, consult with your forester to adjust management activities and recommendations to put the property back on track to meet your goals.

CONTACTS: This plan offers general guidelines to manage your natural resources and some recommended or required action(s) is (are) needed. The use of a professional forester is encouraged as you undertake significant or unfamiliar land management actions. This is especially true with timber resources, where missteps can have consequences lasting for decades. A list of consultant foresters and industry foresters is available at www.findindianaforester.org.

A wildlife biologist can help refine plans and provide detailed guidance where needed for specific wildlife issues and habitats of interest. The State District Wildlife Biologist for this county is Mark Bennett and he can be reached at (812)849-4586, or mbennett@dnr.IN.gov.

For cost-share information, contact Evan Smith, District Conservationist, in the NRCS office in Bedford. He can be contacted at (812)279-8117, Ext. 3, or e-mail at Evan.Smith2@usda.gov.

MANAGEMENT PROJECT SUMMARY

SCHEDULED YEAR	AREA NAME or NUMBER	PROJECT DESCRIPTION	ACRES	IMPORTANCE
2020	Tract	Continue invasives control	50.31	High
2020	Tract	Continue cave protection	0.25	High
2021	Field	Clear hardwoods and burn warm season grasses	~2.0	Medium
2021	Woods	Begin TSI work	~35.0	High
2022	Tract	Continue trail maintenance	50.31	High

ADDITIONAL RESOURCES:
SICIM Calendar of Control

ACKNOWLEDGEMENTS

I have reviewed the attached Stewardship Plan dated November 19, 2019, and agree with its recommendations for reaching my management objectives. I also agree to follow this plan as written, unless circumstances arise that amendments need to be made. The administrating State District Forester must agree upon any amendments in the plan.

Landowner's Name: Indiana Karst Conservancy

"Upper Twin"

County: Lawrence

Landowner's Acceptance: _____
(Signature)

Date Signed: _____

Plan Preparer: _____ Janet Eger

District Forester: _____
Janet Eger

Date Signed: _____

Please sign this page and return it to:

Janet Eger, District Forester

14043 Williams Road

Shoals, IN 47581



MANAGEMENT ACTIVITY TRACKING LOG

SCHEDULED YEAR	AREA NAME or NUMBER	PROJECT DESCRIPTION	ACRES	IMPORTANCE	DATE COMPLETED	ACRES COMPLETED	CHEMICALS USED	COMMENTS	NON-NATIVE PLANTS/SEEDS USED
2020	Tract	Continue invasives control	50.31	High					
2020	Tract	Continue cave protection	~0.25	High					
2021	Fields	Clear fields and burn warm season grasses	~2.0	Medium					
2021	Tract	Begin TSI work	~35.00	High					
2021	Tract	Continue trail maintenance	50.31	High					

If planning an activity not on this list, please contact your District Forester.


The following questions deal with requirements established by the Classified Forest & Wildlands Act and the standards set by the Department of Natural Resources:

1. Is the acreage correct?	YES	6. Any evidence of dumping of material observed?	NO
2. Are Classified Forest & Wildland signs posted?	YES	7. Is the management plan being followed?	YES
3. Any evidence of grazing observed in Classified area?	NO	8. Was any insect, fire, disease, or soil damage observed?	YES
4. Any unauthorized buildings observed?	NO	9. Are any special permits needed?	NO
5. Any evidence of haying or harvesting of crops observed?	NO	10. Any other violations noticed?	NO

Is there any corrective action needed? **NO**

Insect damage is from Emerald Ash Borers (EAB).

I have personally examined the above tract(s) of Classified Forest & Wildlands and certify that the information herein contained is correct to the best of my knowledge.

SIGNED: 

DATE: 11/19/2019

JANET EGER, DISTRICT FORESTER





Indiana Karst Conservancy

Lawrence County
Marion Township
Section 4, T3N, R1E

Prepared By:
Janet Eger
District Forester
Date: 11/14/2019



Legend

 Boundary for Classified Forest & Wildlands



1:7,920

1 inch = 660 feet

All Boundaries Are Approximated

(Original Map Scale)

Acres: 50.31
Parcel: #47-0312

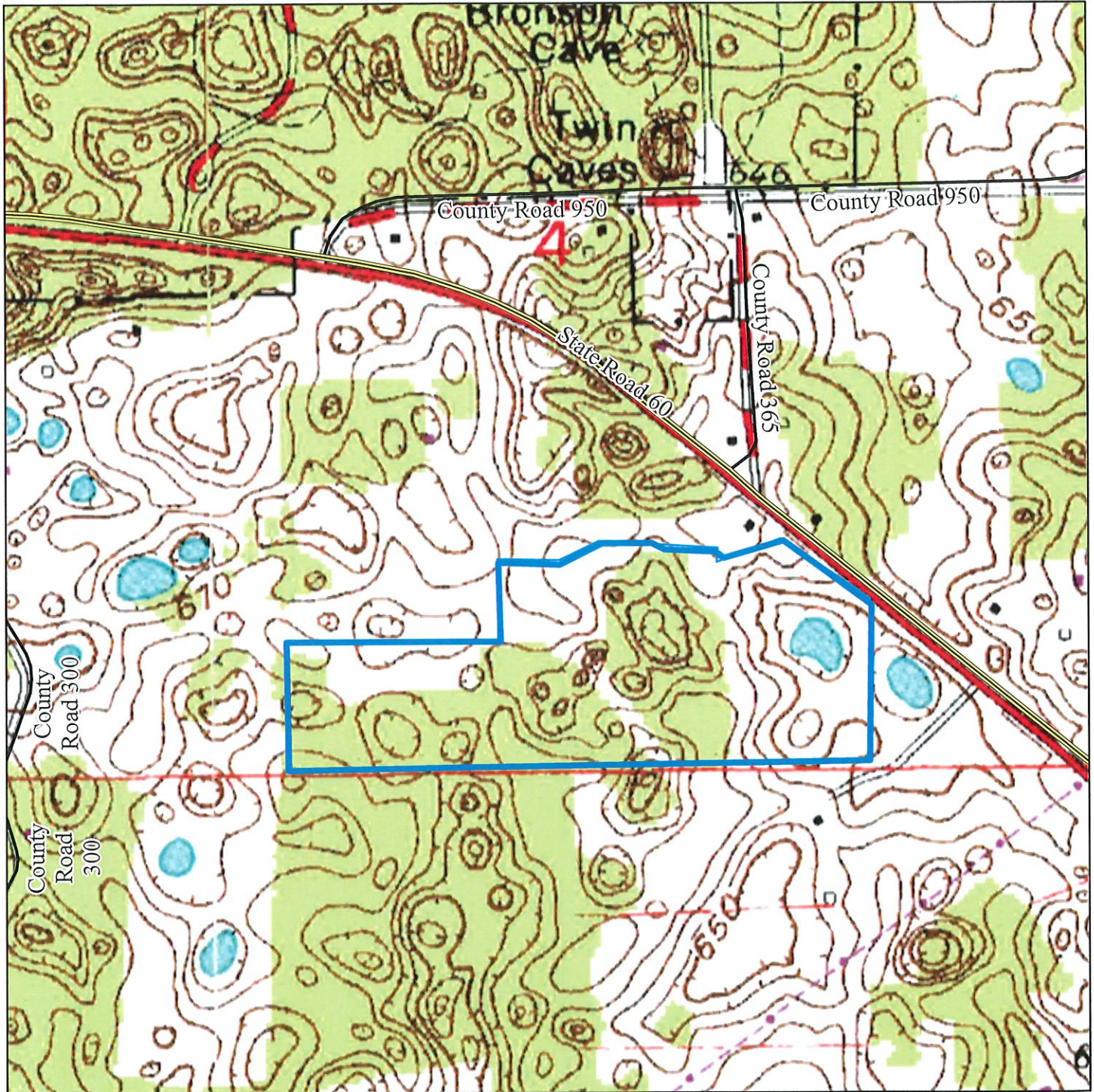




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Marion Township
Section 4, T3N, R1E

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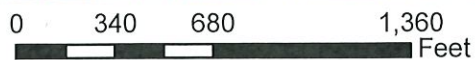
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Lawrence County
Marion Township
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District Forester
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Legend

 Property Boundary



1:7,920

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(Original Map Scale)

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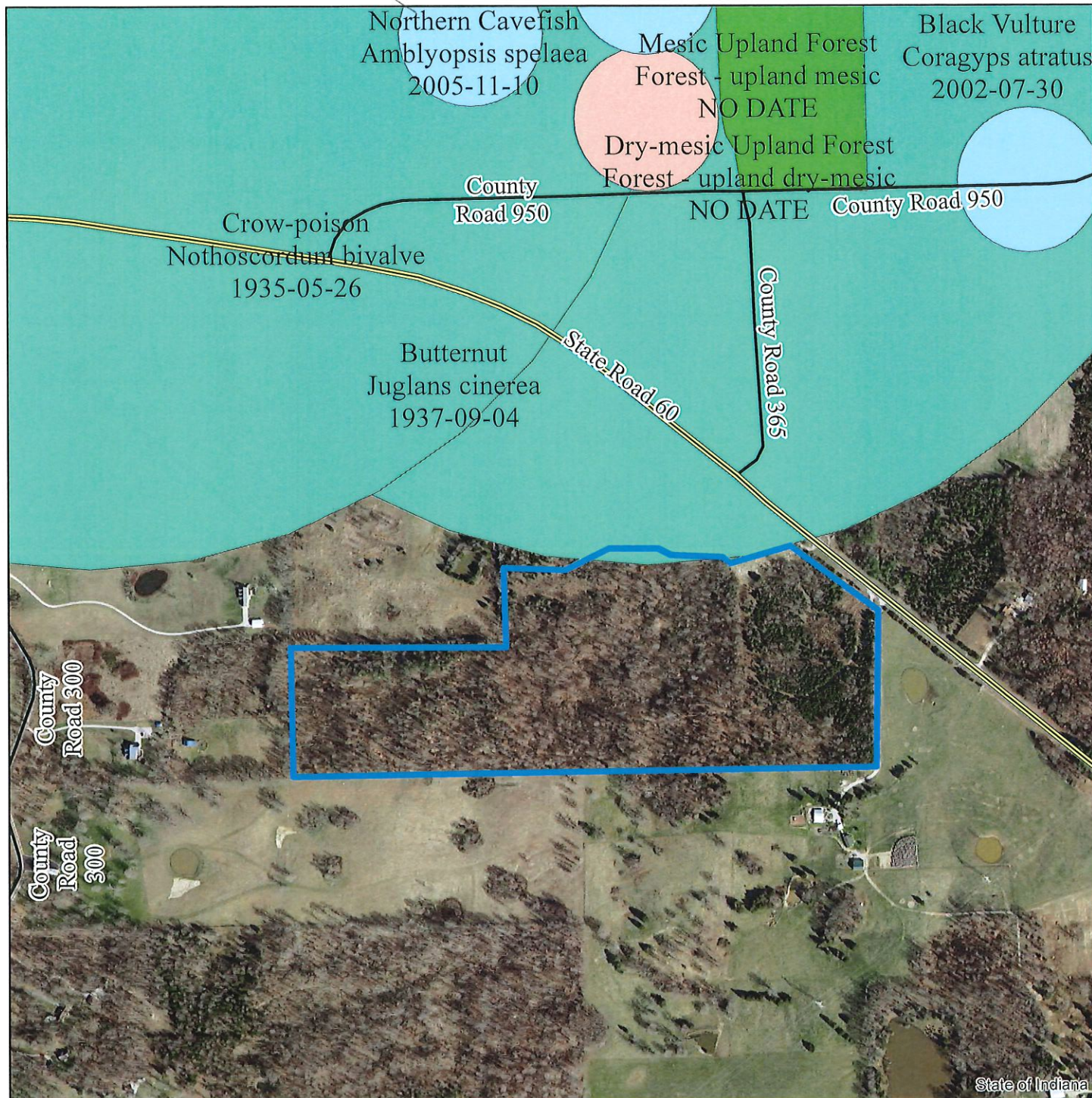




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Legend

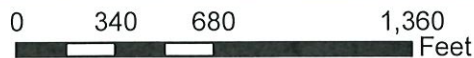
Boundary for Classified Forest & Wildlands

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