**Indiana Division of Forestry**
**Response to Monroe County Commissioners**
**Position on State Forest Management of June 29, 2009**

The Division of Forestry manages the Indiana State Forest system under the guidelines provided by the Indiana General Assembly. Those guidelines provide the multiple use mission that combines conservation of natural resources, recreational use by citizens, resource base for industry, and revenue to the state and counties. The state forests are managed on a sustainable basis, providing a diversity of habitat. The Division of Forestry's commitment to quality and broad based natural resource management has allowed the state forest program to receive certification from two nationally and internationally recognized forest management certification bodies, the Forest Stewardship Council (FSC) and the Sustainable Forestry Initiative (SFI).

The Division of Forestry appreciates your comments. We would like to offer the following clarification of facts as you discuss these matters further.

The ecology in the Lake Monroe watershed is a product of past land use, heavily impacted by human activities. But contrary to popular misconception, the terrestrial ecology and connectivity is far more intact than the aquatic. The terrestrial components can still cross or go around the various human features. However, the upper portions of the various streams of the Salt Creek watershed are now isolated remnants, no longer able to connect to other portions of the system. This is because Lake Monroe and its impounded flowage create a completely foreign habitat for the normal stream wildlife. And it is a hostile environment with a silted (not rocky) bottom, new predators, minimal stream current, reduced oxygen, and warmer waters. In fact, the tributaries flowing into Lake Monroe were treated to kill all the fish in those tributaries ("Lake Monroe Diagnostic and Feasibility Study", Indiana University, School of Public and Environmental Affairs, March 1997). Lake Monroe was then stocked with a variety of game fish, most not native to the previous Salt Creek watershed. Yet it is this artificial system that many claim to be championing. A similar action on the state forest would be cutting down all the native hardwoods and creating a 48,000 acre plantation of southern pine.

Water quality in the Lake Monroe watershed is impacted by a number of factors, and land use is one of the major ones. The same report in the previous paragraph highlights the importance of land use in sedimentation. Woodland sediment rate is on the order of 100 tons per square mile per year. The annual rate for mixed rural areas is 300 tons per square mile. The annual rate for farmland is 500 tons per square mile. The annual rate for light development is 10,000 tons per square mile. The annual rate for heavy development is 100,000 tons per square mile. To quote the report "Wooded land has the lowest soil erosion rates…", and "Agriculture has the potential for being the most significant source of NPS (*non-point source*) pollution in Lake Monroe's watershed." The report also identifies streambank erosion as a serious problem, with trees that naturally fall into streams and divert water flow as one contributing cause.

A thorough and complete environmental assessment of state forest timber management has been completed.  It is available at http://www.in.gov/dnr/forestry/files/fo-ea.pdf. Site specific management information is available for each of our management sites for a 30 day public comment period.  These are available at http://www.in.gov/dnr/3635.htm.

The Division of Forestry has a thorough Best Management Practices program on state forests.  The SFI certification monitoring team stated that "The program for monitoring of BMP use and effectiveness is the strongest the team has seen."  The FSC certification report stated "DoF has a good track record of conforming with BMPs.  The most recent BMP monitoring report in Indiana reports a rate of 89% compliance on state forest timber sales, which means that 89% of the 58 BMP specifications on 97 timber sales met the requirements of the BMP guidelines."  And it said "The program for implementing BMP's and monitoring BMPs remains exceptionally strong…"  State forest timber sales also achieved a 94 % effectiveness rating.  No other land disturbing activity in the watershed or county can make similar claims.  Reports from the certification and BMP monitorings can be found at http://www.in.gov/dnr/forestry/files/INDivForNov2006.pdf, http://www.in.gov/dnr/forestry/files/FSC_audit_report.pdf, http://www.in.gov/dnr/forestry/files/fo_State_of_IN_2008_AA_Report_Final_3-3-08.pdf, and http://www.in.gov/dnr/forestry/files/fo-1996-2007BMP.pdf.

Forests are now known to be in a constant dynamic state, with changes related to type, intensity, and frequency of disturbance events.  Oak-hickory forest types dominated in the region according to data from pre-settlement land surveys.  Oaks and hickories are well known disturbance dependent, early/mid successional species.  Large scale disturbance was a factor in the region well before Euro-American settlement in order to create the conditions for these species.  And fire is one of these events, having occurred in these hardwood habitats at a mean rate of 8.4 years.  And this is not necessarily wildfire, but, more often than not it is human caused fire, and was often on purpose.  And fire's use is not restricted to the last 150 years because prior to European colonization American Indians used fire to clear the woods of brush, manage game, eliminate venomous snakes, clear areas for agriculture, and to manipulate plant growth and composition for foraging/gathering.

Here are some passages describing pre-European impacts of human land management.

Jefferies, Richard W
		2008   *Holocene Hunter-Gatherers of the Lower Ohio River Valley.*  The University of Alabama Press, Tuscaloosa, Alabama.
		*"In addition to altering the area around their settlements, hunter-gatherers likely impacted other parts of the surrounding landscape through the removal of forest cover for firewood and building material or selectively clearing or burning vegetation to facilitate the growth and productivity of desirable trees (nut- and fruit-bearing species), bushes (fruit-bearing species), and annual plants (starchy and oily seep-bearing species)."*

Stafford, C. Russell

1997   "Prehistoric Peoples of Indiana." *The Natural Heritage of Indiana*. Edited by Marion T. Jackson, Indiana University Press, Bloomington and Indianapolis, Indiana.

*"…cultivation of native oily and starch seed crops assumed a meaningful role in the diets of the Middle Woodland peoples.  Oily seed consisted of sunflower and sumpweed, while archaeologically more abundant starch seeded planes include goosefoot, knotweed, and maygrass.  The latter plants are weedy annuals that pioneer disturbed ground locations such as today's roadsides."*

And of Mississippian sites... *"Fields were cleared by cutting and burning trees, but after a period the land was left fallow as soil fertility fell and new fields were cleared."*

The clearing that took place did remove large areas of trees.  It is not the clearing of the trees that caused heavy soil loss, it was the creation of bare soil conditions through crop agriculture and intensive grazing.  The areas that remained wooded were often used as wooded pastures, and/or supplied firewood and building materials for use around farmsteads.  When these were abandoned, the trees that reestablished were most often trees that were in the original canopy mix – oaks, hickories, and maples.

The trees are relatively young, the forest, with some interruption, has been around for millennia.  The attached pair of aerial photos show the same location at the entrance of Morgan-Monroe State Forest marked the Y-intersection of Main Forest Road with Old SR 37.  The 1929 photo shows numerous field areas, some showing the whitish scars of severe erosion.  There are woods scattered amongst these fields, but a close examination of these shows mostly small crowns and large gaps between the crowns.  These are forest remnants that provide the seed source for reforestation of the agricultural lands.  The most severe sites were often planted to hasten soil stabilization.  The other photo taken decades later shows a largely closed canopy forest with large tree crowns.

The management for the backcountry area is no different than the management that helped it reach its present condition.  Attached is a photo from the backcountry area that shows three stumps and the cut tops from past harvesting.  We are proud of the past management that has created a condition that is so highly valued.  We would like to continue that management to maintain the backcountry area in the same oak-hickory forest it was pre-settlement.  The back country area is not more remote than anywhere else on the state forest, having been accessed by multiple old public roads that now serve as state forest access roads.  Sales occurred on this area a management cycle ago – stumps and tree tops are still visible.  Logging activity is no less economically feasible today as it was then as the available equipment has not changed significantly.  The trees in the backcountry are also no different than other areas of the state forests, achieving the same size.  Logging in this area will not destabilize slopes, and habitat will be retained in a closed canopy forest system.  Hardwood Ecosystem Experiment researchers report that in the last three years of monitoring "the most common bird species were mature forest breeders: red-eyed vireo, Acadian flycatcher, eastern wood peewee, tufted titmouse, and ovenbird."  Monitoring results from this summer at 50 stations across Morgan-Monroe State Forest had ovenbird, woodthrush and Acadian flycatcher occupying 90%, 75% and

86% of the sites, respectively.  Conversely, yellow-breasted chat, a good indicator of young, early-successional habitat in forest openings, only occupied 2% of the sites.  Best management practices are designed to minimize and even to prevent any loss of soil from a site.

The attached photo taken in the backcountry area along one of the old public roads shows a large, wolf white oak that grew up under open field conditions on the edge of the public road.  The smaller, younger trees around it grew up once the fields were abandoned.  The old truck body is from a vehicle abandoned along the road.  The carpet of green ion the road is Asian stiltgrass, and exotic, invasive plant that is here despite there being no forest management activities in this area.  There were no management activities here because the trees in the old fields were still too small and young – they were still maturing.

We appreciate the fact that the Monroe County Commissioners recognize that state forest management should provide economic support for the state, counties and communities.  While some interests proclaim that timber harvesting on state forests creates a net loss to the state and local governments, the facts clearly indicate otherwise and show a net gain.  Timber management and harvesting are well known as viable income producing ventures.  That is why woodland owners manage and sell timber off their land.  And why hardwoods have been recognized as the largest economic sector of Indiana agriculture employing people and providing goods and services.  State forest timber sales are tracked to provide a record of net revenue, which is gross revenue less expenses.  These figures show that state forest timber harvests generate far more revenue than they cost.

We would like to see the study the Monroe County Commissioners used to make the claim that the trees we sell are only receiving pennies on the dollar.  State forest timber sales typically contain a mix trees.  Undergrowth is not large enough to produce lumber.  And because of good management we have a limited amount of "trash trees".  The $59,500 Monroe County received last year as a result of state forest timber sales is the combination of $513,500 in gross sale revenue and $51,400 in sale expenses (including harvest access, tree marking and tallying, and sale setup).  In FY 2007-2008 at Morgan-Monroe/Yellowwood the average gross revenue per tree from timber sales was $53.46.  The average stumpage price was $251 per MBF.  According to the Purdue Extension 2008 Price Report the average delivered price for the average stand in 2008 was $434 per MBF.  Less the average logging/hauling cost of $227 per MBF, would mean a stumpage price for the average stand of $207 per MBF.  That means the timber sales at Morgan-Monroe/Yellowwood brought in 21% more money than the average as per the Price Report, despite having some of the tightest harvest restrictions in the state.  State forest timber sales are sold (except for salvage) in an open, competitive bidding process in order to obtain the best price available.  The average size of the trees sold at Morgan-Monroe/Yellowwood is 213 board feet (Doyle).  This would be roughly equivalent to an 18 inch DBH 3 log tree or a 20 inch DBH 2 log tree.

State forest timber sales are a gain for many Indiana counties.  Sixteen counties received $366,800 as their share of FY 2007-2008 timber sale revenue.  A minimum of $90,500 in

those counties were available for fire departments. The Division of Forestry commends the Monroe County Commissioners for distributing an additional allotment of these funds than required by law. The law specifies a maximum allotment of $1,000 unless raised by the county. Monroe County Commissioners opted to provide each department in the county an allotment of $2,500. This is very helpful to these small departments where fish fries are used as fund raisers, and recent high fuel costs have eaten into budgets.

The State Forest timber management program compliments, not undercuts, private timber harvests. The Indiana Forest and Woodland Owners Association wholeheartedly endorses state forest management. With the rise of certification on state forests at the same time of the economic downturn, the certified wood from state forests are providing many forest products businesses a resource to allow them to compete in a niche market that helps save jobs in Indiana. Actually what undercuts private sales and forestland in Monroe County are regulations that unduly restrict scientifically sound forest management and timber harvesting. This makes timber land less valuable, making it more likely to be converted to another use, a use that leads to more erosion and sedimentation. The Division of Forestry would instead recommend taking steps that would make maintaining forestland more valuable to landowners.

As stated on the first page, an environmental assessment is available for review.

The Division of Forestry is confused by the Monroe County Commissioners statement that state and national parks are the second largest tourist draw to the county. Neither State nor National parks exist in the county. Also the statement claiming that 2 million visitors come to Monroe County forest for hiking and recreation in forests is disputed by the Bloomington/Monroe County Convention and Visitors Bureau. It states that the swimming, picnicking and boating were the most common visitor activities, with Lake Monroe and Fourwinds Marina the only two of the top four attractions in Monroe County having to do with outdoor recreation

The Division of Forestry is keeping abreast of current trends in carbon emission management and the role state forests may play. That role may range from carbon storage in trees and biomass to source material for biomass electrical generation or liquid fuel production to replace fossilized carbon fuels.

The Division of Forestry appreciates that the Monroe County Commissioners agrees with its position that state forests be protected in perpetuity as forestland. This is so future generations have this forestland to conserve, use and enjoy. The Division of Forestry not only wants to maintain the existing state forest land, but it wants to increase the state forest landholdings. Because of the revenue generated from state forest timber sales, the Division of Forestry is able to buy thousands of acres of additional forest land for future generations to enjoy and support conservation efforts on private forestlands.

Morgan –Monroe State Forest entrance circa 1930
Notice the open and often eroded fields.  Wooded areas have low density of trees and
small crowns.

Morgan –Monroe State Forest entrance circa 1980
Junction of Old SR 37 and Main Forest Road
Notice the fields have been reforested and trees canopies have closed.  Tree crowns are
much larger.

Backcountry Area that had previous harvest – three stumps visible with cut tops

Old public roadway in Backcountry Area with wolf white oak and younger timber in old field with stiltgrass in the groundcover.