Hoosier National Forest
Administrative Change 15
January 2018

Monitoring Change to Chapter 4
Monitoring, Evaluation, and Research

Administrative changes, as defined at 36 CFR 219.13(c), are not plan amendments or revisions, do not require the preparation of an environmental document under Forest Service National Environmental Policy Act procedures, and can be made any time following public notice (219.16 (c)(6)).

Administrative changes include the following:
(1) Corrections of clerical errors;
(2) Changes to ensure conformance with new statutory or regulatory requirements; and
(3) Changes to other content in the plan (219.7(f)).

Administrative changes should be printed on salmon colored paper and distributed to all employees for inclusion in their copy of the Forest Plan.

The following monitoring question has been removed from the existing monitoring program: *Are sulfate and nitrate depositions affecting forest health?* This monitoring question has been moved to the Research Needs section in Chapter 4, page 4-8.

This question was added to the monitoring program in 2016; however, the Forest lacks the capacity to monitor in terms of expertise and available funding.

Administrative Change 15 replaces pages 4-3 of and 4-8 of the Forest Plan.

Prepared by:

/s/ Kevin Amick

KEVIN AMICK
NEPA Planner

Approved by:

/s/ Michael Chaveas 12/12/2017

MICHAEL CHAVEAS
Forest Supervisor

Date

This page intentionally left blank.

Table 4.1 MONITORING AND EVALUATION PROGRAM

Selected Plan Component	Monitoring Question	Indicator
CONSERVATION OF THREATENED AND ENDANGERED SPECIES HABITAT		
Maintain, protect or improve the habitat for threatened and endangered species	Are standards and guidelines for T&E species conservation implemented and effective?	Forest Plan standards and guideline implementation and effectiveness Population Trends Effectiveness of project implementation Habitat changes
	Are hibernacula conditions changing?	Hibernacula temperature and humidity
MAINTAIN AND RESTORE SUSTAINABLE ECOSYSTEMS		
Provide the diversity of habitats needed for viable populations of all native and desired non-native species.	Are Forest Plan goals for vegetation composition and age class being met?	Acres of various forest types by age Populations of species associated with the various habitats
	Are populations of species dependent on early successional habitat stable or increasing?	
	Are populations of species dependent on late seral habitats stable or increasing?	
Use prescribed fire to restore ecological processes	Are objectives being met through the use of prescribed fire?	Species composition change
Prevent establishment and spread of non-native invasive species (NNIS)	Are NNIS affecting the sustainability of desired ecosystems?	Changes in Forest composition
Sustainability of desired ecosystems	Is the trend of undesirable occurrence of fire, insects, disease and other mortality increasing?	Plant species mortality, insect and disease outbreaks Forest type or component shift
	Are climate stressors (drought, flooding and storm frequency and/or severity) affecting sustainability?	
	Are forest management systems substantially and permanently affecting the productivity of the land?	Forest regeneration Forest soil properties Site Index trend
	Is ecosystem health maintained or improved?	Wood Frog population trends

Selected Plan Components	Monitoring Questions	Indicators
MAINTAIN AND RESTORE WATERSHED HEALTH		
Maintenance or restoration of watershed health and function.	Are priority watersheds functioning properly?	Best Management Practices (BMP's) implementation and effectiveness Aquatic organism passage
	Are standards and guidelines implemented and effective?	Aquatic organism diversity Stream water quality Effectiveness of project implementation
	Are roads degrading watershed health and function?	Miles of high risk roads in Transportation Analysis Process
PROTECT OUR CULTURAL HERITAGE		
Protect our cultural heritage.	Are cultural resource sites being identified, evaluated, protected and interpreted?	Heritage program managed to standard Presence of a curation agreement Acres surveyed and sites evaluated Direct protection efforts Number of interpretive products
	Are project design criteria and mitigation measures being followed during implementation?	Number of sites disturbed
	Are cultural resource sites being damaged?	Number of site disturbed Number of Archeological Resource Protection Act violations
PROVIDE FOR A VISUALLY PLEASING LANSCAPE		
Emphasize natural appearing landscapes with attention given to views from roads, trails and high use areas.	Are the existing scenic resources meeting or trending toward desired conditions?	Acres of Retention, Partial Retention, Modification and Preservation met or exceeded in areas of high use and visitation

Research Needs

Research and monitoring are related activities that allow for adaptive management of national forests. Research activities include planning, design, quality control, and peer review of studies, and relatively rigid publication standards. Monitoring, in contrast with research, is generally conducted under less controlled conditions and results are often more general. Research needs for management of the National Forests are identified during the planning process and reviewed periodically during monitoring and evaluation of the implemented Forest Plan.

Research is often done on an ad hoc basis as opportunities arise with other agencies or universities. Some needs, included here, have been identified during forest planning; other needs which surface as a result of monitoring will be reported in the annual Monitoring and Evaluation Reports.

Conservation Of Threatened And Endangered Species Habitat

Research is needed to determine the distribution, abundance, genetics, ecology, and needs of endangered and threatened species.

Maintain And Restore Sustainable Ecosystems

Native plant communities need to be better defined in terms of floral composition, distribution, genetics, abundance, site relationships (soil, slope, and aspect), indicator plants, and ecological requirements. The ecological classification system needs further development and analysis to increase understanding of natural communities, particularly site relationships affecting population distribution and abundance.

Research is needed to determine the current and historic distribution and relative abundance of animal species and communities and their ecological relationships with plant communities.

Research is needed to determine if sulfate and nitrate deposition are affecting forest health?

Research is needed to determine the effects of management for early successional forest habitat on biological diversity. Better understanding of the needs of young forest plant and animal species and communities, including Neotropical migrant birds, is a specific research need.

Effects need to be determined on biological diversity of management for extensive, closed-canopied forest; of forested corridors which link forest areas across the landscape; of old growth forests; and of restoration of natural plant communities. Better understanding of the needs of forest interior plant and animal species and communities, including Neotropical migrant birds, is a specific research need.

Research could focus on defining conditions that cause oak to regenerate well within those ecosystems (ECS units) where oak is a natural member of that plant community or successional

or seral stage. Research needs to identify methods to ensure desired amounts of oak regeneration and the role of natural species selection in determining the final stand composition.

Better information needs to be developed on what plant species can coexist in a stable community and what appropriate control objectives and activities should be undertaken when these communities become out of balance or are invaded by exotic species. Research is needed to determine what native plants are best suited to what activities and how they can best be established.

More information on vegetation response to prescribed fire is needed to help managers make better decisions for timing and uses of prescribed fire in central hardwoods management. Determine the effects of prescribed fire and various silvicutural treatments on animal and plant species in the area, including beneficial effects to native plants and potential adverse effects to nonnative plants, animals, and karst systems.

Maintain And Restore Watershed Health

Research is needed on the effect of different types of stream crossing structures on aquatic species and stream channel hydrology.

Research is needed on presettlement stream geomorphology and hydrological function.

Protect Our Heritage Resources

Conduct non-project driven surveys to locate heritage resources on the Forest. Work toward completing surveys for all NFS lands.

Continue research of rock shelters including those at the end of their developmental cycle, i.e. those that are collapsed or have completely filled in. Because these may contain the oldest deposits, research will contribute to our understanding of the earliest humans.

Develop heritage contexts as an aid in evaluating the significance of heritage resources. Focus research on each context and identify prominent examples for intensive excavation. Interpret a range of these sites.

Emphasize oral history interviews of local elderly people to record unwritten history.

Research and compile a Forest history to document our contribution to the region and celebrate our organizational past.

Provide For A Visually Pleasing Landscape

Research is needed on the role of the visual management system and its effectiveness in national forest management.