

WILDLIFE RESOURCES

Project and Cumulative Effects Background Information

The geographic boundary of cumulative effects for terrestrial species is primarily the uplands of western Southern Illinois in the Shawnee Hills and the watershed for Kinkaid Lake and the Big Muddy River and its floodplain south of Kinkaid Lake. These are the geographic areas where terrestrial animal populations from the project area interact with others of their species and where habitats in the project area are affected by landscape scale habitat changes and modifications. Wildlife resources farther downstream in the Big Muddy River and Mississippi Rivers were excluded from consideration based on the resources being outside of, or isolated from measurable effects of the proposed activities due to the large amounts of agricultural land in these areas south and west of the project area and the barriers these lands presents to most forest wildlife species. The analysis for cumulative effects takes into account all known past actions, the proposed action, present actions, and reasonably foreseeable future actions, that could or will affect the analysis areas.

The temporal boundary for the cumulative effects analysis is the 15-20 year life of the Forest Plan (2006) for present and future actions. The plan actions on National Forest for the next 15-20 years are logical actions for the Forest during these timeframes. Actions on non-federal land in the project area vicinity are anticipated to be similar to present actions on these areas during this timeframe. The temporal boundary for past actions is the last ten years. Any projects beyond ten years in the past are considered part of the baseline.

Past actions in the project area vicinities were farming, grazing, land clearing of forest and old fields for agriculture and residential developments, pine and hardwood plantation establishment, timber harvest, recreational facility construction and maintenance, abandoned well and cistern filling, road construction, maintenance and use, power line construction and maintenance, homesteads, user-created equestrian and hiker trails, unauthorized user-created all terrain vehicle (ATV) trails, increased equestrian trail use especially in the last ten years, mining, tree planting and timber stand improvements including tree thinning and use of herbicides to reduce vegetative competition, ATV and off highway vehicle (OHV=4-wheel drive and sport utility vehicles (SUV) and trucks and off-road motorcycles) use, outdoor recreational uses (hunting, fishing, and hiking), wildfires, prescribed burning, fire suppression, wildlife opening construction and maintenance, artifact hunting and collection, pond and waterhole construction, reservoir construction and use, and railroad construction and use.

Present actions in the project area vicinities include trail maintenance, construction and use of existing trails; power line maintenance, ATV (mostly unauthorized on National Forest) and OHV use, timber harvest (predominantly on private lands), agricultural

management (row cropping and pasture) on private lands, fires (wild and prescribed), fire suppression, user-created equestrian trails, road maintenance and use, tree planting, reservoir management and bank erosion control, trail rehabilitation, continued and increasing equestrian use; recreational facility management and maintenance, and outdoor recreation use (hiking, hunting and fishing).

Reasonably foreseeable future actions in the project area vicinities include all of the above present actions, proposed actions, and some repeat of the past actions including residential development on private lands.

Project Area

The project area is defined as the area of potential site-specific effects on wildlife habitat and populations, including mammals, birds, reptiles, amphibians and terrestrial invertebrates. The project area includes the forests and fields of the Shawnee Hills Natural Division on slopes and ridges west of Kinkaid Lake.

Analysis Area

The analysis area used in this effects analysis includes the project area as defined above as well as the Kinkaid Lake and the adjacent Mississippi River floodplain areas just west of the project area. Wildlife resources farther downstream in the Big Muddy River and Mississippi Rivers were excluded from consideration based on the resources being outside of, or isolated from measurable effects of the proposed activities.

Effects of the proposed actions on 4 of the 5 MIS for the Forest were analyzed in the BE for RFSS and SVE species as the four were also SVE species. The effects on one additional MIS will be addressed below.

Scarlet Tanager (*Piranga olivacea*)

The species is a common summer resident and migrant on the Shawnee National Forest (Robinson 1996). The species is known to use mature, upland and bottomland hardwoods (Appendix F for the FEIS, Shawnee National Forest Plan 2006). They nest and feed primarily in deciduous forest and mature, deciduous woodland, including deciduous and mixed-swamp and floodplain forests and rich, moist, upland forests. They prefer oak trees for nesting (Bushman and Therres 1988). They are generally considered to be canopy nesting species. The project area is a highly fragmented, forest area but the species is known from the area.

Alternative one would not have any direct or indirect effects on the species as mature, hardwood forests would not be directly or indirectly affected by no action.

Alternative two would have no direct effect on the species as mature forest cover would not be directly affected by planned actions. It would have an indirect positive effect on the species, by maintaining the oak forests that the species prefers for nesting in upland hardwood forests on the Shawnee National Forest.

Cumulative Effects

Alternative one would have no cumulative effects on the species since it would not have any direct or indirect effects on it.

Under the proposed alternative, actions such as road and utility right of way maintenance, openland management, residential development and brush-pile creation continue to fragment habitat for the tanager. Future prescribed burning and timber stand improvement work help to perpetuate the oak hickory forest preferred by the tanager. Indirect habitat improvements combined with these past and present actions would not improve overall fragmentation and poor habitat quality for the species in the project area. Populations of the species would continue to be low or non-existent in the project area vicinity. Populations of the species on the Forest would not change. Populations of the species should be maintained in the project area vicinities barring any problems on the wintering grounds for the species in Central and South America. Neither alternative would result in species trending toward federal listing.

-Concern for effects of prescribed burning in the Blowdown project area on hunting.

Two wildlife species that are hunted most in the blowdown area are white-tailed deer (*Odocoileus virginianus*) and Eastern wild turkey (*Melagris gallapavo*). Populations of white-tailed deer and Eastern wild turkey generally determine the hunting success for these species in a particular area. Based upon observations and sign, populations of both species are moderate-high in the project area and vicinity (Widowski, personal observations 2007).

Direct effects of fire on wild turkeys

Spring fires may destroy nests as turkeys are ground nesters. Burning after April 1 will have a chance to burn up some turkey nests. The species is known to re-nest in some cases following fires. In the proposed action, most burning will be done prior to April 1 but in some years burning would occur into Mid-April and until prevented by green-up of the understory vegetation, and thus some nesting could be affected.

Fast-moving fires may kill newly hatched poults, but once wild turkeys can fly, fires are not much of a problem; and losses to the population are negligible. Burning in this project would not be done when poults would be present.

Indirect effects of fire on wild turkey habitats

Prescribed fire can stimulate the growth of food plants and promote early spring green up of grasses (Schroeder 1985), reduce litter, exposing seeds and insects; and reduce brush so that turkeys can be wary of predators (Hurst 1978 and Campo 1989). Fire can create edges to increase nesting habitat and it can also reduce parasites such as ticks and lice (Jacobson and Hurst 1979). Fire is an important ecological disturbance for the maintenance of oak forests which are one of the preferred wild turkey foraging and roosting areas.

Prescribed burns stimulate the growth of important wild turkey food plants like legumes and grasses (Buckner 1979) and can increase desired food plants such as sumac and beggartick. Seed production of important foods usually increases following fires. Prescribed burning is encouraged as a habitat improvement practice to improve brood habitat for wild turkeys by the National Wild Turkey Federation (National Wild Turkey Federation in ESPN Outdoors 5/06). Brood habitat is considered critical to maintaining and improving wild turkey populations. Brood habitat for turkeys includes grasses and herbaceous plants that harbor good insect populations usually in or near forested areas. The proposed prescribed burning in both the forests and adjacent fields would provide and maintain good brood habitats.

Other indirect effects predicted by the proposed action are maintenance or increases in wild turkey populations and subsequently continued or improved turkey hunting success.

Cumulative effects on wild turkeys

Taking into account past, present and future actions in the project area, cumulative effects of prescribed burning on wild turkey populations are predicted to be increases in populations in the project area following burning because of positive indirect effects on habitats. Any negative, direct effects on turkeys are predicted to be small and offset by improvements in numbers following improvements in brood, foraging and roosting habitats as indirect effects of prescribed burning. Agricultural and utility corridor habitats on non-federal lands within the project area vicinities are not likely to change in the near future. They would continue to contribute to maintaining field and forest edges important to wild turkey populations.

Direct effects of fire on white-tailed deer

Fast-moving fires can confuse, trap, and kill some deer (Blendell 1974). This has not occurred to date in any prescribed burning on the Forest (Widowski, personal observations following burns 1987-2007). Burning as part of the proposed action would occur well before late-May to early June fawning seasons when young deer that are most vulnerable to ground disturbances would be present.

Indirect effects of fire on white-tailed deer habitats

Prescribed burning is done across the country to improve habitats for white-tailed deer. Patchy burns that create a mosaic of browse and cover are usually beneficial to whitetail populations (Dill 1970). Fire improves the quality and quantity of deer foods in fields and forests. Fire improves the quantity and quality of oak forests, an extremely important deer feeding habitat. Fire also removes woody obstacles to deer movement that result from excessive woody debris such as the Blowdown areas.

Other indirect effects are increases in deer populations and subsequently in deer hunting success.

Cumulative effects on white-tailed deer

Taking into account past, present and future actions in the project area primarily land uses on private and federal lands that have resulted in the creation of forest and field

edges, cumulative effects of prescribed burning on white-tailed deer populations are predicted to result in small increases in populations in the project area as a result of indirect effects of prescribed burning above on habitats for the species. Agricultural and utility corridor habitats on non-federal lands within the project area vicinities are not likely to change in the near future and will continue to contribute to maintaining field and forest edges important to white-tailed deer populations.

References

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