

# **Recreation Resources Working Paper Buttermilk Hill - Talbott Hollow Blowdown Project**

## **Mississippi Bluffs Ranger District Shawnee National Forest**

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### **Introduction and Description of the Proposed Project**

The Mississippi Bluffs Ranger District of Shawnee National Forest proposes to burn about 5650 acres of private and National forest lands in the Buttermilk Hill - Talbott Hollow Blowdown Project to reduce fire risk and restore healthy ecosystems. It also proposes about 25 acres of chipping and mastication on private land near at-risk structures to reduce fuel loads prior to burning. This paper describes the expected direct, indirect, and cumulative effects to timber resources of implementing both the proposed action and the "No Action" Alternative.

On September 22, 2006, a tornado crossed parts of Jackson County, Illinois, affecting about 3800 acres of both and Shawnee National Forest land in T8S, R3W, Sections 19 and 28-33, T8S, R4W, Sections 20-29, 33-36, T9S, R3W, Sections 5-6, and T9S, R4W, Section 1. After beginning in Missouri and traveling southwest-to-northeast, the tornado crossed the Mississippi River into Illinois, crossing private lands and the Middle Mississippi National Wildlife Refuge grounds before slamming into the uplands of the Shawnee National Forest about 10 miles west-northwest of Murphysboro and 1-2 miles south of Johnson Creek Recreation area, where no damage was sustained. The path then turned to a generally west-to-east route where the tornado seemed to skip around on the higher elevations to the Buttermilk Hill Picnic Area, which sustained some tree, but no structural, damage. The tornado then crossed Lake Kinkaid, causing substantial damage to a private campground and marina on the opposite shore. The greatest impact on the recreational resource of the Mississippi Bluffs Ranger District was blowdown damage to the Kinkaid Lake Trail System. The Waterfall Trail sustained damage, but blowdown removal was accomplished and is presently open; the Kinkaid Lake Trail sustained significant damage, a portion of which (west of the picnic area for about a mile) remains closed due to unsafe conditions.

Minor tree damage resulted over much of the area, but in several places moderate and severe canopy damage (areas estimated to have greater than 50% of the ground covered in trees) was sustained, totaling approximately 900 acres. These areas have high fuel loadings that would make it more difficult and expensive to fight fires that occur in the area. Project burns would be conducted on both public (4375 acres) and private land (1256 acres) under agreement. The project area would be subdivided to make burns more manageable while keeping the unit size large enough to mimic presettlement fire regimes and keep per-acre costs down. The Forest identified 19 blocks of land to be treated. The project area includes most of the impacted area, as well as some adjacent undamaged areas. Undamaged areas were included due to intermingled ownership patterns, steep, dissected topography, or existence of features (e.g. roads, streams) that could be used for firelines.

Burns would be conducted between September 1 and May 1 with a combination of ground-based and aerial ignition methods. First entry on all units should be made within two years. Successive burns would be made after 2-5 years. Burn frequency may be adjusted if monitoring shows that the desired future condition is already reached or is not going to be reached within 10-15 years. Three burns

would likely be implemented for each burn unit within 10 years, subject to weather and funding constraints.

Other connected actions include fireline construction and mowing, chipping, or rearranging downed wood near certain structures prior to burning.

## **Current Management Direction**

The Shawnee National Forest 2006 Land and Resource Management Plan, Chap. IV (D) – Forest Management Direction sets management direction: ‘system trails on the Forest will be well-marked, mapped and maintained in order to provide for user safety and to protect natural resources.’ Chapter V Standards and Guidelines, FW23.3, System Trails: ‘A Forest-wide system of non-motorized trails should be provided and maintained to enhance a variety of recreational opportunities, provide resource protection, protect public health and safety and minimize user conflicts’. FW23.3.1 .1, Construction and Maintenance: ‘The development of a mapped, marked and maintained trail system is a priority,’ while FW23.3.2, User Experience-Levels, provides for protection of resources and provide for visitor safety.

There are no key issues that pertain directly to Recreation and Visual-Resource Management, but indirect consequences of elements of the proposed action can be mitigated and are included in the Design Criteria of the project:

- 1) **Design Criteria:** Ensure visitor safety before, during and after burning activities. Burn areas should be closed to the public.
  - *Mitigation Measure:* Safety of the forest visitor is paramount. Follow standard SOP’s with particular emphasis on public notification, posting and blocking all entrances (roads, trails boat point-of-entries, etc.) to the burn unit pre- through post-burn.
  - *Purpose:* to ensure public safety.
  - *Effectiveness:* Measures must be effective; failure to meet any existing safety precautions could result in visitor injury or death.
  - *Mitigation Monitoring:* Law Enforcement and assigned personnel should monitor all possible entry points to the burn unit.
  - *Responsible Person:* Project Leader and all employees of the Shawnee National Forest
- 2) **Design Criteria:** Protect existing recreational improvements, such as campgrounds, trailheads and trail signing and other amenities.
  - *Mitigation Measure:* can protect facilities pre-burn by raking flammables away from structures (e.g. sign posts), or by removal and post-burn replacement. Damages to existing facilities will be repaired or replaced to standard.
  - *Purpose:* to maintain trails and recreation facilities to standard
  - *Effectiveness:* if protection measures fail, and damages result, replacement will ensure compliance to maintaining to standard.
  - *Mitigation Monitoring:* Routine maintenance by trail crews will include checking for any possible damages resulting from this project, as well as normal trail and facility maintenance. A trail and facility condition survey would be completed on all system trails and recreation areas every 5 years that would identify maintenance needs.
  - *Responsible Person:* designated trails: Project Leader; facilities: Recreation Facility Manager
- 3) **Design Criteria:** Damage to existing trails and roads employed as firebreaks or for access should be repaired to standard.

- *Mitigation Measure:* Repair damages to system trails by installing waterbars or grade dips located and spaced using the Trails Management Handbook FSH 2309.18 as a guideline.
- *Purpose:* To reduce accelerated erosion from the system trails. Native surface roads that receive more than incidental recreational use will be maintained as trails.
- *Effectiveness:* Installing drainage structures will shorten the slope length of the trails. The lesser and shorter the slope, the less erosion is expected during an event that produces runoff (Dissmeyer 1984).
- *Mitigation Monitoring:* Spot checks will be done annually following initial maintenance activities to check spacing and construction of drainage structures. A trail condition survey would be completed on all system trails every 5 years that would identify maintenance needs.
- *Responsible Person:* designated trails: Project Leader; roads: Soil Scientist or Civil Engineering Technician

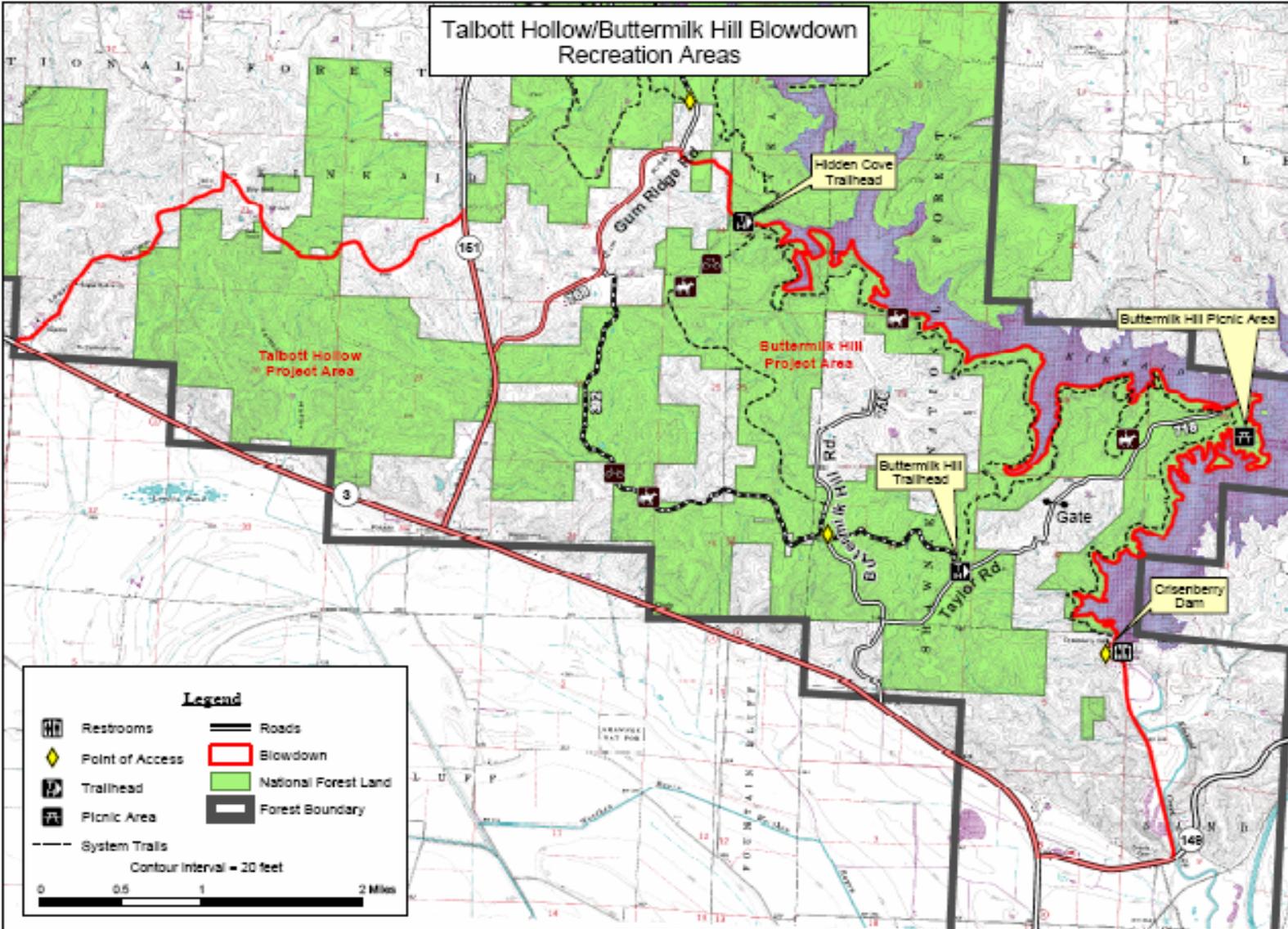
## Existing Conditions

The Talbott Hollow/Buttermilk Hill Blowdown project area includes most of the Kinkaid Lake Trail System (see map 1) which offers the forest visitor opportunities for both long, linear trails and shorter loop trails. The Kinkaid Lake Trail is ideal for longer hikes or horseback rides and mountain biking is allowed on the Waterfall Trail. The Mississippi Bluffs Ranger District (MBRD) currently maintains 29.5 miles of trail within the blowdown area (mileage extracted from the Infra Trails Database). Current plans are to continue to maintain all miles every year with some realignment projects occurring along the Kinkaid Lake Trail over the next few years. Two trailheads accessing the Kinkaid Lake Trail System are within the project boundary – The Hidden Cove Trailhead in the north-central edge of the Buttermilk Hill Project Area, off Gum Ridge Road, and the Buttermilk Hill Trailhead off Buttermilk Hill Rd. on Taylor Road in the southern part of the project area. These two trailheads are maintained to standard. Trail infrastructure includes an information board at each trailhead (2), six trail directional signs and one, thirty-six foot section of split rail fencing. The Forest Service also manages two small graveled parking areas at the Hidden Cove and Buttermilk Hill trailheads. The trail system can also be accessed in the southeastern portion of the project area at Crisenberry Dam – not Forest Service owned, but within the project boundary, and with infrastructure to be protected.

The Buttermilk Hill Picnic Area lies at the eastern edge of the Kinkaid Lake Trail System and includes restroom facilities, picnic tables, and boat docks. Main access to the area is by boat from Kinkaid Lake. Buttermilk Hill Picnic Area is within the project boundary.

Johnson Creek, a Forest Service developed recreation area, is within two miles north of the Buttermilk Hill Project Area western boundary, state highway 151. Johnson Creek Group Campground caters to equestrians, but is presently inaccessible by road due to access road slippage. There is an associated dump station with the campground, but is also temporarily inaccessible. There is parking available that accommodates horse trailers – the campground is still open as a hike- or ride-in. A single unit campground at Johnson Creek has been closed for several years due to maintenance issues. Johnson Creek has several day-use facilities – a beach, picnic area with shelters, grills, beach house, boat launch and fishing pier. The two-lane boat launch and trailer parking area are located in the day-use area. Kinkaid Lake is one of the few large lakes (2750 acres) in southern Illinois, and is popular location for fishing, water skiing, boating, canoeing, kayaking and waterfowl hunting. The Buttermilk Hill Project Area is a popular hunting destination, as well, with several hunters utilizing Johnson Creek for camp. There is a trailhead at Johnson Creek that accesses the Kinkaid Lake Trail System.

# Talbott Hollow/Buttermilk Hill Blowdown Recreation Areas



## Legend

- Restrooms
  - Point of Access
  - Trailhead
  - Picnic Area
  - System Trails
  - Roads
  - Blowdown
  - National Forest Land
  - Forest Boundary
- Contour Interval = 20 feet
- 0 0.5 1 2 Miles

Just across the lake from Buttermilk Hill Picnic Area is a privately-administered marina with associated developed recreation area and full-service campground. Lake Murphysboro State Park is nearby, to the east of the project area.

At the time of this analysis, the Forest is conducting a National Visitor Use Monitoring (NVUM) survey, but data collection is not complete. However, a previous survey conducted in 2001-2002, Shawnee National Forest National Visitor Use Monitoring Results, USDA Forest Service, Region 9 (August 2002) provides useful data pertinent to this project.

The NVUM project was implemented as a response to the need to better understand the use and importance of and satisfaction with national forest system recreation opportunities. This level of understanding is required by national forest plans, Executive Order 12862 (Setting Customer Service Standards), and implementation of the National Recreation Agenda. To improve public service, the agency's Strategic and Annual Performance Plans require measuring trends in user satisfaction and use levels. It will assist Congress, Forest Service leaders, and program managers in making sound decisions that best serve the public and protect valuable natural resources by providing science based, reliable information about the type, quantity, quality and location of recreation use on public lands.

The results report warns, however, that the information is valid and applicable at the forest level. It is not designed to be accurate at the district or site level. From personal observations, however, it is believed that the data in Table 1 is valid for the Johnson Creek/Kinkaid Lake Trail System complex. The result report states for the Shawnee National Forest, the top five recreation activities of the visitors were relaxing, viewing natural features, viewing wildlife, hiking/walking, and picnicking. Each visitor also picked one of these activities as their primary activity for their current recreation visit to the forest. The top primary activities were hiking/walking, nonmotorized sports like swimming, viewing natural features, relaxing, and fishing. One possible addition to this list that has grown in recent years is equestrian activities. The average length of stay on the Shawnee National Forest was found to be 18 hours. Over eleven (11.1) percent of visitors stayed overnight on the forest.

Selected tables from the report on the next pages can help gauge the use of the project area.

**Table 1. Shawnee NF activity participation and primary activity**

<b>Activity</b>	<b>Percent participation</b>	<b>Percent who said it was their primary activity</b>
Camping in developed sites (family or group)	14	6
Primitive camping	2	0
Backpacking, camping in unroaded areas	4	0
Resorts, cabins and other accommodations on Forest Service managed lands (private or Forest Service run)	1	0
Picnicking and family day gatherings in developed sites (family or group)	24	5
Viewing wildlife, birds, fish, etc on national forest system lands	44	0
Viewing natural features such as scenery, flowers, etc on national forest system lands	54	9
Visiting historic and prehistoric sites/area	10	0
Visiting a nature center, nature trail or visitor information services	13	0
Nature Study	7	0
General/other- relaxing, hanging out, escaping noise and heat, etc,	61	9
Fishing- all types	13	8
Hunting- all types	8	7
Off-highway vehicle travel (4-wheelers, dirt bikes, etc)	0	0
Driving for pleasure on roads	17	1
Snowmobile travel	0	0
Motorized water travel (boats, ski sleds, etc)	4	1
Other motorized land/air activities (plane, other)	0	0
Hiking or walking	42	16
Horseback riding	8	5
Bicycling, including mountain bikes	2	0
Non-motorized water travel (canoe, raft, etc.)	1	0
Downhill skiing or snowboarding	0	0
Cross-country skiing, snow shoeing	0	0
Other non-motorized activities (swimming, games and sports)	15	10
Gathering mushrooms, berries, firewood, or other natural products	4	1

Table 2. Shawnee NF activity participation and primary activity

<b>Activity</b>	<b>Percent participation</b>	<b>Percent who said it was their primary activity</b>
Camping in developed sites (family or group)	14.8	6.1
Primitive camping	2.5	0.2
Backpacking, camping in unroaded areas	4.0	0.2
Resorts, cabins and other accommodations on Forest Service managed lands (private or Forest Service run)	1.1	0.0
Picnicking and family day gatherings in developed sites (family or group)	24.2	5.7
Viewing wildlife, birds, fish, etc on national forest system lands	44.4	0.8
Viewing natural features such as scenery, flowers, etc on national forest system lands	54.9	9.4
Visiting historic and prehistoric sites/area	10.9	0.0
Visiting a nature center, nature trail or visitor information services	13.7	0.5
Nature Study	7.5	0.2
General/other- relaxing, hanging out, escaping noise and heat, etc,	61.1	9.3
Fishing- all types	13.1	8.0
Hunting- all types	8.2	7.8
Off-highway vehicle travel (4-wheelers, dirt bikes, etc)	0.3	0.0
Driving for pleasure on roads	17.5	1.2
Snowmobile travel	0.0	0.0
Motorized water travel (boats, ski sleds, etc)	4.2	1.8
Other motorized land/air activities (plane, other)	0.6	0.3
Hiking or walking	42.5	16.6
Horseback riding	8.2	5.8
Bicycling, including mountain bikes	2.2	0.6
Non-motorized water travel (canoe, raft, etc.)	1.0	0.5
Downhill skiing or snowboarding	0.1	0.0
Cross-country skiing, snow shoeing	0.0	0.0
Other non-motorized activities (swimming, games and sports)	15.9	10.7
Gathering mushrooms, berries, firewood, or other natural products	4.4	1.8

Twenty-five percent of the last exiting recreation visitors interviewed were asked about the types of constructed facilities and special designated areas they used during their visit. The most used facilities and areas were: nonmotorized trails, picnic areas, swim areas, interpretive sites, and scenic byways. Table 14 provides a summary of facility and special area use.

Table 3. Percentage use of Shawnee NF facilities and specially designated areas

<b>Facility / Area Type</b>	<b>Percent who said they used (national forest visits)</b>
Developed campground	9.9
Swimming area	26.2
Hiking, biking, or horseback trails	47.9
Scenic byway	17.2
Designated Wilderness	6.1
Visitor center, museum	3.6
Forest Service office or other info site	7.9
Picnic area	29.7
Boat launch	9.1
Designated Off Road Vehicle area	0.0
Other forest roads	13.0
Interpretive site	19.3
Organization camp	4.5
Developed fishing site/ dock	4.1
Designated snowmobile area	0.0
Downhill ski area	0.0
Nordic ski area	0.0
Lodges/Resorts on National Forest System land	0.0
Fire Lookouts/Cabins Forest Service owned	0.0
Designated snow play area	0.0
Motorized developed trails	0.0
Recreation residences	1.7

Table 4. Satisfaction of Shawnee NF recreation visitors at Developed Overnight sites

Item Name	Item by Percent response by *					Mean ** Satisfaction Of visitors (n)		Mean ** Importance To Visitors (n)	
	P	F	A	G	VG				
Scenery	0	0	0	17.7	82.3	4.8	20	4.8	21
Available parking	0	3.9	3.9	29.3	62.9	4.5	21	4.1	21
Parking lot condition	0	3.7	0	42.8	53.4	4.5	19	3.7	21
Cleanliness of restrooms	4.9	0	15.4	27.1	52.6	4.2	20	4.5	21
Condition of the natural environment	0	0	9	13.8	77.2	4.7	19	4.6	21
Condition of developed recreation facilities	0	3	4.1	30.1	62.8	4.5	20	4.4	20
Condition of forest roads	0	13	8.3	29.2	49.4	4.2	21	4.2	20
Condition of forest trails	0	0	26.4	40.7	32.9	4.1	16	4.3	18
Availability of information on recreation	3	26.6	31.1	3	36.4	3.4	18	4.2	18
Feeling of safety	0	0	0	15.4	84.6	4.8	21	4.7	21
Adequacy of signage	8.3	10.7	26	28.4	26.5	3.5	10	4.3	10
Helpfulness of employees	0	0	0	31.1	68.9	4.7	19	4.8	19
Attractiveness of the forest landscape	0	0	0	25.4	74.6	4.7	21	4.7	21
Value for fee paid	0	0	16.6	22.6	60.7	4.4	20	4.2	20

\* Scale is: P = poor F = fair A = average G = good VG = very good

\*\* Scale is: 1= not important 2= somewhat important 3=moderately important 4= important 5 = very important  
(n) = number of responses upon which this rating is based

## Effects Analysis

This section predicts the effects of the proposed action and no action alternatives on certain aspects of the recreation and visual resources within and beyond the project area. As stated above, a critical concern is the health and safety of the forest user.

### Alternative 1 – No Action

#### *Direct and Indirect Effects*

The spatial boundary used to evaluate direct and indirect consequences was the project area, totaling 9582 acres. However, since there are recreation areas, both public (federal and state) and privately-administered, on Kinkaid Lake and smoke effects will travel beyond the project boundary, effects to any known recreation areas, recreational opportunities, and visual resources will be considered in this analysis. Effects to the vegetation resource are analyzed here for 10 years because that is the expected lifespan of the project. Thus the analysis period for project effects is from 2008 to 2018.

Under the no action alternative, no management actions would be applied that would affect recreation or visual-resources. This is not to say that there would be no effect. If the project did not occur, there would be continued reduction in visual quality in an increasing thick understory and fewer vistas, Additionally, the segment of the Kinkaid Lake Trail that is currently closed for safety concerns due to the blowdown damage would likely be re-routed.

### ***Cumulative Effects***

The cumulative effects discussion assesses the combined effects from past, present, and reasonably foreseeable future actions from activities on Federal and non-NFS land within the cumulative effects area. The spatial boundary used to address cumulative impacts was the project area, totaling 9582 acres. Expanding the geographic scope to include National Forest, state, and privately administered recreational areas, as well as Lake Kinkaid and it's recreational users is useful, at least in the short term and smoke management activities. When combined with past, present, and reasonably foreseeable future actions this expanded special area gives a good picture of the cumulative impacts on especially the visual resources outside the project area. Past activities completed within the last ten years will be analyzed for cumulative effects. Thus the analysis period of past actions will be 1998-2008. Cumulative effects are not expected to last beyond 20 years because the proposed action alternative would be completed by then and the resulting effects to both recreation and visual resources and vegetation changes would be significantly complete. Thus, analysis of reasonably foreseeable future actions will be from 2008 to 2028.

**Past Actions** - Some actions have occurred in the project area during 1998-2008 that has affected recreational resources: land acquisition, hunting, fishing, hiking, horseback riding, boating, mushroom and berry collecting, recreational facility maintenance, recreational events, water treatment, fish stocking, road and trail maintenance and construction, artifact hunting and collection, and shoreline stabilization.

A Decision Memo was signed in 2007 for a 5-year maintenance and reconstruction projects of an indeterminate mileage for Lake Kinkaid Trail System. The district currently maintains 29.5 miles of trail within the blowdown area. Current plans are to continue to maintain all miles every year with some reconstruction projects occurring along the Kinkaid Lake Trail over the next 5 years. Last year, 2.5 miles of the system trails were reconstructed.

**Present Action** - Present Actions are very similar to past actions. All facilities are expected to be operated to standard, with the exception of Johnson Creek Campground – due to access road slippage, the public cannot drive to the campground or park at the campsite – garbage collection, restroom facilities, and fees are still in effect. The approximately 2 mile section of the system trail closed due to blowdown damage is still closed. Present actions would likely have the same effects as past actions.

**Foreseeable Future Actions** - In addition to present and ongoing actions, some actions are planned for the future within the project area.

Approximately, one-half mile of trail reconstruction/realignment per year is expected to be accomplished.

Although not in the project area, Johnson Creek Recreation Area is expected to reduce deferred maintenance, repair and replace access road, and construct a new toilet in the campground area.

**Determination** - Taking into account all present, past, and reasonably foreseeable future actions in the project area including farming, timber harvesting, residential developments, prescribed burning, wildfire, NNIS treatments (pulling, cutting, torching, herbicides), road and trail construction and maintenance, and recreational use, I have determined that Alternative 1 will have an overall negative effect on recreational activities in the project area.

## **Alternative 2 – Proposed Action**

### *Direct and Indirect Effects*

The spatial boundary used to evaluate direct and indirect consequences was the project area, totaling 9582 acres. However, since there are recreation areas, both public (federal and state) and privately-administered, on Kinkaid Lake and smoke effects will travel beyond the project boundary, effects to any known recreation areas, recreational opportunities, and visual resources will be considered in this analysis. Effects to the vegetation resource are analyzed here for 10 years because that is the expected lifespan of the project. Thus the analysis period for project effects is from 2008 to 2018.

Under the proposed action alternative, there would be some actions applied that would affect recreation or visual-resources. If the project does occur, there would be an increase in visual quality, creating vistas in an increasing thick understory. Burn units include the Kinkaid Lake Trail System. Portions of the trail system were damaged and buried under considerable slash as a result of the tornado blowdown; one 2.5 mile segment of the trail is still closed due to the inability to safely clear the blowdown debris. This project would greatly assist the maintainance of the trail system by removing larger stems, and settling overhead hazards either manually prior to, or by direct result of, the burn. Additionally, the burn project will clear the smaller debris from the system trails, allowing routine maintenance of the trail system. Trails that are used as firebreaks and access trails during the duration of the project may be damaged by crews and equipment and, if so damaged, should be returned to prior, pre-burn condition. Any created trails should be closed post-burn. A critical part of the burn restoration includes closing fire lines.

In addition, there would be short-term impacts to visual resources following burn activities. This would last until after a new growing season. The proposed multiple burn entries would produce the same short-term effects with each entry. In the long term, users would see more oak and hickory regeneration and grasses and forbs in the understory, as well as improved visual quality as a result of possible vista creation and reduction of the amount of underbrush, post burn. Effects of the burn activity to the visual resources from Kinkaid Lake, if any, should be short term, especially if the Buttermilk Hill Picnic Area segment is planned as a late-winter or early spring burn. The quick green-up that this timing provides also reduces erosion in the lake.

Structures, such as signposts, should be protected prior to the burn, and are included in the Recreation & Visual Resource section of the Design Criteria Summary listed as Table 3 of the Environmental Assessment. If damages do occur, facilities will be repaired or replaced as necessary.

An annual recreational special use permit is issued to the North American Trail Ride Conference (NATRC) for an equestrian event ride on the Kinkaid Lake Trail System in late summer or early fall (In FY 08 – scheduled for 3<sup>rd</sup> week in August). The timing of the event and designated trails used are set in the permit by spring or early summer, and fees are paid by the permittee. Prior coordination must be maintained between the event and burn operations to prevent use conflicts and provide forest user safety.

During prescribed burn activities, hunters, equestrians, and other users may temporarily be displaced. Scenery would be altered in the short-term. Long-term effects would create more diversity and resiliency for the surrounding forest while also providing additional access for activities such as hunting and mushroom gathering. Design criteria found in Table 3 of the Environmental Assessment would mitigate these effects

### ***Cumulative Effects***

The cumulative effects discussion assesses the combined effects from past, present, and reasonably foreseeable future actions from activities on Federal and non-NFS land within the cumulative effects area. The spatial boundary used to address cumulative impacts was the project area, totaling 9582 acres. Expanding the geographic scope to include National Forest, state, and privately administered recreational areas, as well as Lake Kinkaid and its recreational users is useful, at least in the short term and smoke management activities. When combined with past, present, and reasonably foreseeable future actions this expanded special area gives a good picture of the cumulative impacts on especially the visual resources outside the project area. Past activities completed within the last ten years will be analyzed for cumulative effects. Thus the analysis period of past actions will be 1998-2008. Cumulative effects are not expected to last beyond 20 years because the proposed action alternative would be completed by then and the resulting effects to both recreation and visual resources and vegetation changes would be significantly complete. Thus, analysis of reasonably foreseeable future actions will be from 2008 to 2028.

**Past Actions** – Some actions have occurred in the project area during 1998-2008 that has affected recreational resources: land acquisition, hunting, fishing, hiking, horseback riding, boating, mushroom and berry collecting, recreational facility maintenance, recreational events, water treatment, fish stocking, road and trail maintenance and construction, artifact hunting and collection, and shoreline stabilization.

**Present Action** – Present Actions are very similar to past actions. All facilities are expected to be operated to standard, with the exception of Johnson Creek Campground – due to access road slippage, the public cannot drive to the campground or park at the campsite – garbage collection, restroom facilities, and fees are still in effect. The approximately 2 mile section of the system trail closed due to blowdown damage is still closed. Present actions would likely have the same effects as past actions.

**Foreseeable Future Actions** - In addition to present and ongoing actions, some recreation management actions are planned for the future within the project area.

Approximately, one-half mile of trail reconstruction/realignment per year is expected to be accomplished.

Although not in the project area, Johnson Creek Recreation Area is expected to reduce deferred maintenance, repair and replace access road, and construct a new toilet in the campground area.

**Determination** - From a recreational standpoint, any impact on recreational facilities within or near the project area can be mitigated with proper planning and project design features in concert with a good smoke management plan. Public safety is paramount and is addressed in the Design Criteria Summary for Buttermilk Hill – Talbott Hollow Blowdown Project. - All area access points should be manned during actual burn unit activities. Any damage to natural or manmade facilities should be repaired upon completion of the project. To enhance the existing trail system, special emphasis

should be concentrated along trails to clear blowdown slash. With these design features and plans implemented, only short term effects to the recreational features and the visual resources of the area should be realized; with additional pre-burn activities conducted, the long term effects on the visual resources and the system trails would be an overall positive effect.