

PROJECT SUMMARY

*Prescribed Burning to Reduce Fuel Accumulations and Restoration-related Activities in Specific
Tornado-Damaged Areas
Carter and Butler Counties, Missouri*

Project Areas

The project areas are located in Compartments 110, 135, 142, 103, and 144, respectively. Compartment 110 is located in Township 26 North, Range 4 East, Sections 10, 11, 14, 15, and 16. Proposed activities would occur only in Sections 15 and 16. Compartment 135 is located in Township 26 North, Range 5 East, Sections 23, 25, and 26. Proposed project activities would occur only in Sections 25 and 26. Compartment 142 is located in Township 26 North, Range 4 East, Sections 9, 15, 16, 21, and 22. Proposed project activities are proposed in Sections 15, 16, and 21. Compartment 103 is located in Township 26 North, Range 3 East, Sections 11, and 12. Proposed project activities would occur only in Section 12. Compartment 144 is located in Township 26 North, Range 4 East, Sections 7, and 8. Proposed project activities would occur only in Section 12.

Proposed Action

The Proposed Action is to first prescribe burn specific stands in Compartment 110, 135, and 142 identified on the attached map to reduce excessive fuel loading conditions created by a tornado in April 2002, and second, implement management activities to help restore these stand areas, and other stands in Compartments 103 and 144, respectively, to more naturally appearing forest conditions.

Prescribed burning activities would first be implemented beginning in early 2004. Additional burning treatments may be required based on fuel loading conditions. Following initial prescribed burning treatments, several stands (six stands in Compartment 110 totaling 96.02 acres, stand in Compartment 135 totaling 204.8- acres, and –twenty stands in Compartment 142 totaling -333.18 acres) would be planted with native tree species, including shortleaf pine and/or oak. Two other stands (Compartment 103, Stand 26-9.5 acres and Compartment 144, Stand 63-5.0 acres) would also be planted with native shortleaf pine and/or oak species. These stand areas will be treated with prescribed burning authorized under a separate decision (Carter Corner Project, Decision Notice and Finding of No Significant Impact, July 18, 2003). Planting was not authorized for these two stands under that decision. Following further on-the-ground evaluation since that time, it was determined these two stands could not adequately be restored by natural seed throw from residual trees.

All of the above areas would receive site preparation treatments well as release treatments over the next ten years on an as needed basis to establish and maintain better growing conditions in the restored areas. Site prep involves using handtools and/or prescribed burning to remove undesirable trees so remaining trees will have less competition for nutrients and water. Additional prescribed burning treatments would be implemented on an as needed basis over the next ten years, generally on a 3-5 year rotational basis. Release involves removing competing vegetation with handtools to establish or otherwise maintain better growing conditions for remaining trees.

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Background

On April 24, 2002, a tornado cut diagonally across the Poplar Bluff Ranger District for a distance of 23 miles. Another tornado touched down on the Potosi-Fredericktown Ranger District for approximately 14 miles. Both tornados sustained winds of 207-260 mph.

The tornado created major alterations to fuel accumulations (fuel loads) in areas along its path. Whole trees were up-rooted, tops broken off, and stems splintered. Alterations to the fuels conditions include an increase of five to twenty-five times the overall fuel load from pre-tornado conditions. Hazardous fuel conditions create the potential for severe forest fires that could have a significant effect on the health and safety of the public and firefighters in the area. If a wildfire were to occur, state and county roadways are at risk of receiving heavy smoke resulting in unsafe conditions for vehicles. The private property and the citizens who live near or visit the area are at risk due to this increased potential for severe wild fire. The ability to respond to and safely suppress potential fires is severely decreased by the large fuel accumulations and the physical obstacles created by the downed trees.

The fuel loading caused by the tornados on National Forest lands threatens approximately 478 valuable structures within $\frac{3}{4}$ mile of the tornados' paths. Thirty-eight of those structures are within 250 feet of National Forest land on the Poplar Bluff District.

The Forest Service asked the Council of Environmental Quality (CEQ) for alternative arrangements for NEPA compliance for emergency treatment of the hazardous fuels and to reduce the potential for high intensity wildland fires occurring on National Forest lands from spreading onto the intermingled private ownerships. CEQ approved the agency's request and issued "Alternative Arrangements Workplan for Compliance with The National Environmental Policy Act"(Alternative Arrangements) on July 12, 2002.

Alternative Arrangements also listed ten provisions for compliance. The second provision required the Forest Service to identify actions that needed to be taken as soon as possible to address public safety concerns and imminent risk to valuable private property, and to identify actions that would be considered over the longer term under the normal NEPA process. The latter actions were deferred because they did not require immediate action to reduce risk of catastrophic fire, lie outside a $\frac{3}{4}$ -mile limiting zone established under Alternative Arrangements, or could not be assessed until initial treatments authorized by CEQ were accomplished.

The third and fourth provisions required the Forest Service to prepare and distribute for review and comment an environmental analysis document (EAD). This document was a companion to the July 31, 2002 "Final Programmatic Environmental Analysis for Fuel Reduction Activities to be Implemented on the Mark Twain National Forest Under Alternative NEPA Arrangements Granted by the Council on Environmental Quality"(Final PEA).

CEQ limited the Alternative Arrangements to those actions necessary to reduce fire risks to acceptable levels on those areas with valuable structures within $\frac{3}{4}$ mile of National Forest land affected by the tornados. Since that time, several of the areas (nine identified for administrative purposes) that were most severely affected by the tornado event were salvage logged to reduce the extreme fuel-loading conditions. Several others had a firebreak constructed around them, and a few received relatively no treatments at all.

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Deferred were additional treatments not authorized for emergency actions through Alternative Arrangements, and would be considered over the longer term under normal NEPA processes. Some areas did not require immediate actions to reduce risk of catastrophic fire, were outside the ¾ mile-limiting zone, or couldn't be assessed until authorized treatments under Alternative Arrangements were accomplished. Potential actions that were initially identified included such things as: additional fuels reduction (prescribed burning, etc.), trail maintenance and/or relocation, reforestation, stream course restoration, road maintenance/rehabilitation, recreation area restoration, old growth designations, interpretation opportunities, and visual enhancements.

Salvage and other operations authorized under Alternative Arrangements are now complete. Most of the large diameter fuels were removed. Treatments still remaining to be done include prescribed burning to reduce fuel-loading conditions, reforestation, road maintenance, interpretive information, including signing, and visual resource mitigation/enhancements. Other treatments, such as recreation area restoration and trail maintenance were already been addressed under separate decisions.

Reforestation involves planting new trees to replace those that were blowdown. There are few, if any, residual trees remaining in those stands where large diameter fuels were removed. What seed tree sources that do remain are considered insufficient to reforest the area by natural regeneration from residual trees.

The post-tornado fuels are in an almost continuous bed with a deep, loosely arranged mix of light, medium, and heavy fuels. The fuels are arranged in a continuous horizontal layer with few breaks except for cleared roads and areas that have been salvaged. All fuels on or near the ground are available to carry a fire. Normally, this means only the leaf litter/pine needles/small shrubs with fuel loadings of around 2 tons/acre. Under pre-tornado fuel conditions, heavy fuels existed, but in low quantities and scattered sparsely across the forest floor. When fire hit them, it usually did not ignite the entire log, and may have gone out entirely depending on how moist the log was. Under pre-tornado extreme or drought conditions however, these large logs would fully ignite.

Fuel loading surveys were conducted in both tornado paths during May-June 2002. Fuel loading ranges from 12-22 tons/acre for 100-hour fuels and from 35-78 tons/acre for 1000-hour fuels. This means that now, even the heavy fuels are likely to ignite and contribute to fire behavior. To estimate fire behavior in these fuels, the existing fuel model with heaviest fuel loadings was used. However, this model considers heavy logging slash as the fire carrying fuel, and assumes that all the logs have been removed with only slash left on-site. In the case of the tornado-affected areas, not only does heavy slash exist, whole trees provide fuel. This means the model predicts fire behavior less than what could actually occur and makes determining potential fire behavior and effects more complex.

Purpose and Need

Address resource management activities not authorized for emergency action under Alternative Arrangements granted by the Council on Environmental Quality (CEQ), and not addressed under other NEPA authority.

Decisions to be Made

Whether or not to conduct resource management activities not authorized under Alternative Arrangements (prescribed burning, planting, site prep) in certain tornado-damaged compartments and

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stands on the Poplar Bluff Ranger District to help restore these areas to more naturally appearing forest conditions.

Target Date for Completion of Analysis and a decision

January 2004

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***Prescribed Burning to Reduce Fuel Accumulations and Restoration-related Activities in Specific
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COMPARTMENT	STAND	GIS_Acres	SALE_NAME
00110	046	31.19	Walton Chapel
00110	047	19.60	Walton Chapel
00110	048	21.30	Walton Chapel
00110	057	1.94	Walton Chapel
00110	061	10.93	Walton Chapel
00110	062	11.06	Walton Chapel
00142	001	26.02	Walton Chapel
		96.02	
00142	002	32.69	Cane Creek
00142	003	35.38	Cane Creek
00142	004	10.90	Cane Creek
00142	006	43.26	Cane Creek
00142	007	4.70	Cane Creek
00142	008	30.72	Cane Creek
00142	010	19.22	Cane Creek
00142	011	1.17	Cane Creek
00142	012	9.10	Cane Creek
00142	013	26.31	Cane Creek
00142	014	8.76	Cane Creek
00142	015	15.82	Cane Creek
00142	016	39.98	Cane Creek
00142	017	12.10	Cane Creek
00142	052	9.21	Cane Creek
00142	057	17.18	Cane Creek
00142	058	0.12	Cane Creek
00142	060	1.79	Cane Creek
00142	060	0.04	Cane Creek
		333.18	

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COMPARTMENT	STAND	GIS_Acres	SALE_NAME
00135	012	11.30	Three Springs
00135	013	10.60	Three Springs
00135	015	20.80	Three Springs
00135	019	11.80	Three Springs
00135	020	18.40	Three Springs
00135	022	8.10	Three Springs
00135	023	31.90	Three Springs
00135	026	20.70	Three Springs
00135	027	22.10	Three Springs
00135	028	28.10	Three Springs
00135	029	7.90	Three Springs
00135	030	12.10	Three Springs
		204.80	
00103	026	9.50	Northfork
00144	063	5.00	Northfork
		14.50	
5 Compartments	40 stands	648.50	