



United States  
Department of  
Agriculture

Forest Service



Mark Twain  
National Forest,  
Region 9



March 2004

# DECISION MEMO

## WILLOW SPRINGS PINE FUEL REDUCTION

Project Number: 10411  
Ava/Cassville/Willow Springs Ranger District  
Mark Twain National Forest  
Douglas, Ozark and Howell County, Missouri

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**I. DECISION**

**A. Description of Decision**

As the deciding official on the Ava/Cassville/Willow Springs Ranger District, it is my decision to authorize approximately 722 acres of hazardous fuel reduction on 30 project sites located on the Willow Springs unit of the District (please refer to attached map). These Shortleaf pine stands will be thinned from below, removing primarily smaller diameter suppressed, intermediate, and codominate trees. Additional mechanical treatments may be conducted after the initial thinning to reduce fuel loading. This may include physical removal of slash from stands, chopping or grinding slash in place to promote decomposition, lopping of tops or slash in place to within four feet of the ground to promote faster decomposition. The following Shortleaf pine stands will be thinned on the Willow Spring unit:

Unit	Location	Management Area	Compartment	Stand	Acres
Willow Springs	T. 24 N., R. 10 W., Sec. 17 & 18	3.4	135	42	32
Willow Springs	T. 27 N., R. 11 W., Sec. 3	4.1	100	28	46
Willow Springs	T. 27 N., R. 10 W., Sec 5 & 8	4.1	101	31	19
Willow Springs	T. 27 N., R. 10 W., Sec 16	4.1	101	101	11
Willow Springs	T. 27 N., R. 11 W., Sec 9 & 10	4.1	105	11	10
Willow Springs	T. 27 N., R. 11 W., Sec 10	4.1	105	15	10
Willow Springs	T. 26 N., R. 11 W., Sec 10 & 11	4.1	112	120	19
Willow Springs	T. 26 N., R. 10 W., Sec 24	4.1	121	14	30
Willow Springs	T. 26 N., R. 10 W., Sec 28	4.1	121	26	40
Willow Springs	T. 26 N., R. 10 W., Sec 35	4.1	121	57	12
Willow Springs	T. 26 N., R. 10 W., Sec 35	4.1	121	56	16
Willow Springs	T. 26 N., R. 10 W., Sec 34	4.1	121	46	19
Willow Springs	T. 26 N., R. 10 W., Sec 34	4.1	121	44	32
Willow Springs	T. 26 N., R. 10 W., Sec 34	4.1	121	45	22
Willow Springs	T. 25 & 26 N., R. 10 W., Sec 2 & 35	4.1	121	60	35
Willow Springs	T. 25 N., R. 10 W., Sec 1 & 2	4.1	121	61	47
Willow Springs	T. 25 N., R. 10 W., Sec 1	4.1	121	65	54
Willow Springs	T. 25 N., R. 10 W., Sec 2	4.1	121	71	14
Willow Springs	T. 25 N., R. 10 W., Sec 20	4.1	129	94	2
Willow Springs	T. 25 N., R. 10 W., Sec 20	4.1	129	97	7
Willow Springs	T. 25 N., R. 10 W., Sec 20 & 29	4.1	129	136	16
Willow Springs	T. 25 N., R. 10 W., Sec 20 & 29	4.1	129	135	13
Willow Springs	T. 25 N., R. 10 W., Sec 30 & 29	4.1	133	3	26
Willow Springs	T. 25 N., R. 10 W., Sec 32	4.1	133	47	21
Willow Springs	T. 25 N., R. 10 W., Sec 31	4.1	133	67	28
Willow Springs	T. 24 N., R. 11 W., Sec 4	6.1	138	19	51
Willow Springs	T. 24 N., R. 11 W., Sec 9	6.1	138	89	27
Willow Springs	T. 24 N., R. 11 W., Sec 8 & 9	6.1	138	94	32
Willow Springs	T. 24 N., R. 11 W., Sec 29	6.1	140	61	21
Willow Springs	T. 24 N., R. 11 W., Sec 29	6.1	140	73	10
<b>Willow Springs Total</b>					<b>722</b>

## **B. Purpose of the Decision**

The National Fire Plan laid the foundation for a long-term program to reduce fire risk and restore healthy, fire-adapted ecosystems on the nation's forests and grasslands. Wildfire is considered an unplanned fire that burns organic soil, grasses and forbs, shrubs, trees, and associated fuels in the natural or modified state.

Many dense pine stands scattered across the District consist of 30 to 60 year-old, overcrowded stands where tree canopies interconnect. Trees growing in these conditions tend to be weakened through competition for available growing space and become more susceptible to disease, insects and drought. Dead or dying trees and accumulated forest debris that provide fuel for wildfires also characterize overcrowded stands. The current fuels condition, amount, density and arrangement are conducive to wildfires that would burn intensely under adverse fire weather conditions of high winds and low relative humidity. These wildfires could fundamentally change the vegetative composition of the ecosystem, destroy communities and/or habitat, or be stand replacing.

The primary purpose of the Pine Fuel Reduction Project is to reduce the risk of wildfire damage by disrupting fuel continuity, and reducing the available fuels. The Pine Fuel Project meets this purpose by thinning and using low to moderate intensity prescribed burning to achieve the following objectives:

- Reduce the risk of crown fire by eliminating or reducing the interconnection of pine tree crowns
- Reduce the available long-term fuel loads and interrupt the fuel continuity by removing or consuming accumulated fuels.

These actions would reduce the impacts of future wildfires, maintain stand health to delay tree mortality induced by crowding, and enhance wildlife diversity. The areas selected for this project are within Condition Classes 2 or 3 within Fire Regime Groups I, II, and III, as established in the 10-Year Comprehensive Strategy Implementation Plan for Reducing Wildland Fire Risks to Communities and the Environment, and the proximity of the areas to communities and structures.

These activities to reduce the accumulation of fuels buildup are consistent with the Forest Plan for the purpose of decreasing the risk of catastrophic fire (Forest Plan, pp. IV- 3, 4), forest management which emphasizes wildlife habitat diversity (Forest Plan, pp. IV- 2, 115), and to provide for production of Shortleaf pine and other resources (Forest Plan, p. IV-125). Planned activities, including mitigation measures, are consistent for management areas involved.

## **II. REASONS FOR CATEGORICALLY EXCLUDING THE DECISION**

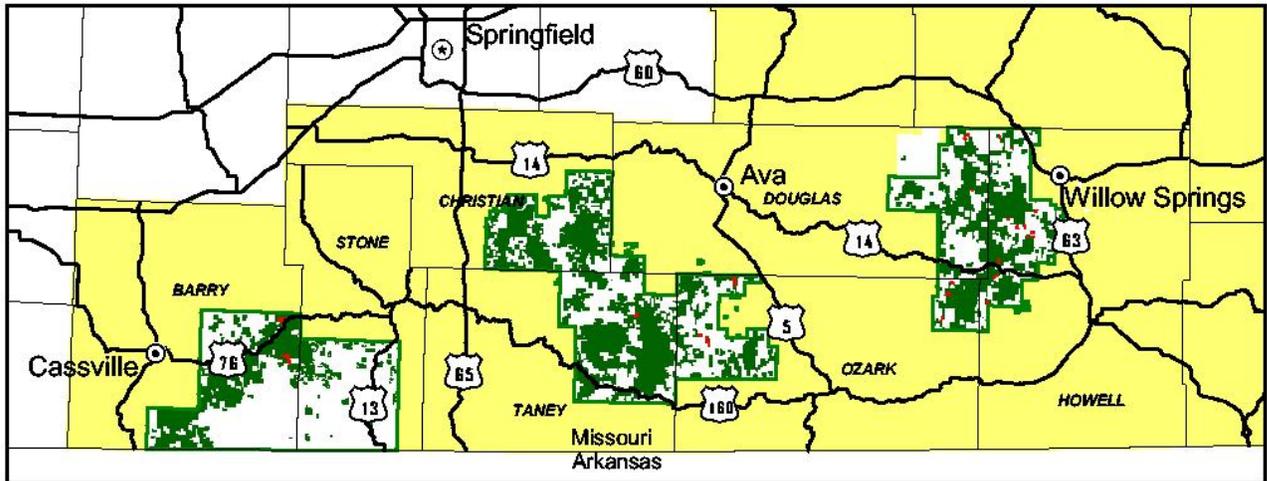
I have concluded that this decision may be categorically excluded from documentation in an environmental impact statement or environmental assessment as it is within one of the categories identified by the U. S. Department of Agriculture in 7 CFR part 1b, and that the degree of the potential effects of the proposed actions on resources conditions listed Section II, Items 1 through 7 does not constitute extraordinary circumstances. This decision will not result in a significant environmental effect.

### **A. Category of Exclusion**

The project is within FSH 1909.15, Category 31.2 (10), "Hazardous fuels reduction activities using prescribed fire, not to exceed 4,500 acres, and mechanical methods for crushing, pruning, cutting, chipping, mulching, and mowing, not to exceed 1,000 acres." The project is consistent with agency and departmental procedures and applicable land and resource management plans, was identified through a collaborative framework, does not exceed 4,500 acres of prescribed fire or 1,000 acres of thinning or other mechanical treatments, is not in a wilderness area, and does not include the use of herbicide or construction of new roads.

The Ava/Cassville/Willow Springs Ranger District consist of approximately 312,669 acres of NFS lands and is comprised of three geographically separate and distinct units consisting of fragmented federal, state and private property (see Figure 1). The Willow Springs unit represents 33% of the NFS lands on the District and is approximately 16 air miles from the Ava unit and 64 air miles from the Cassville unit. Less than 1% of NFS lands on the Willow Springs unit will be affected by this activity. This decision authorizing the thinning of 722 acres of pine stands on the Willow Springs unit is identical to the activities authorized on the Cassville and Ava units of the District. However, Willow Springs unit is outside the geographic bounds of the Cassville and Ava units, therefore, separate decisions will be made for each unit.

**Figure 1 - Ava, Cassville and Willow Springs units**



## B. Relationship to Extraordinary Circumstances

### 1. Threatened and Endangered Species or Their Critical Habitat

The Endangered Species Act requires that federal activities do not jeopardize the continued existence of any species federally listed or proposed as threatened or endangered, or result in adverse modification to such species' designated critical habitat. As required by this Act, potential effects of this decision on listed species have been analyzed and documented in the *Biological Evaluation for Forest-Wide Pine Fuel Reduction Project* (Project File, Document A3). The activities proposed will comply with reasonable and prudent measures (RPM's) and terms and conditions (TC's) of the June 23, 1999, Biological Opinion by the U.S. Fish and Wildlife Service (FWS). The proposed action will have no additional effects outside those evaluated in the programmatic Biological Assessment and Biological Opinion for Indiana bat, gray bat, bald eagle, or Mead's milkweed. Formal consultation with the U.S. Fish and Wildlife Service was conducted for this project which concurred with the effects determination of the site-specific Biological Evaluation (Project File, Document A4)

### 2. Floodplains, Wetlands, or Municipal Watersheds

***Floodplains:*** Executive Order 11988 requires avoiding adverse impacts associated with the occupancy and modification of floodplains. Floodplains are defined by this order as, "... the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any one year." Floodplains, consisting of those valley bottom areas, which are typically inundated by storm floodwaters, are located along the low gradient stream reaches. This decision will not result in significant negative impacts to floodplains as disclosed in the project file (Project File A8 page 42 to 52, 77,78).

Wetlands: Executive Order 11990 directs us to avoid adverse impacts associated with destruction or modification of wetlands. Wetlands are defined by this order as, “. . . areas inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or will support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. No significant changes in soil erosion, stream flow regimes or ground-water tables will occur (Project File A8, pages 42 to 52, 77, 78).

Municipal Watersheds: Municipal watersheds are designated by Congress, and managed under multiple use prescriptions in forest plans. There is no congressionally designated municipal watershed on the Forest. This decision will not affect municipal watersheds.

### 3. Congressionally Designated Areas

Wilderness: This decision will not affect the Hercules, Piney Creek or Devils Backbone Wildernesses.

Wilderness Study Areas: There are no Wilderness Study Areas on the Forest (Forest Plan FEIS, p. III-23). This decision will not affect Wilderness Study Areas.

National Recreation Areas: There are no National Recreation Areas on the Forest. This decision will not affect National Recreation Areas.

### 4. Inventoried Roadless Areas

This decision will not affect inventoried roadless areas on the Mark Twain National Forest (MTNF).

### 5. Research Natural Areas

There are no Research Natural Areas on the Forest, (Forest Plan FEIS, pp. III-25, 26.) This decision will not affect Research Natural Areas.

### 6. Native American Religious or Cultural Sites, Archaeological Sites, or Historic Properties or Areas

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effect of a project on any district, site, building, structure, or object that is included in, or eligible for inclusion in the National Register. Section 106 of the National Historic Preservation Act also requires federal agencies to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. The Archaeological Resources Protection Act covers the discovery and protection of historic properties (prehistoric and historic) that are excavated or discovered in federal lands. It affords lawful protection of archaeological resources and sites that are on public and Indian lands. The Native American Graves Protection and Repatriation Act covers the discovery and protection of Native American human remains and objects that are excavated or discovered in federal lands. It encourages avoidance of archaeological sites that contain burials or portions of sites that contain graves through “in situ” preservation, but may encompass other actions to preserve these remains and items. This decision complies with the cited Acts. A cultural resource survey has been completed for this project (Project File, Document A1), and was determined that the proposed undertaking will have “no historic property affected.”

## III. PUBLIC INVOLVEMENT

The public involvement phase of this project was completed in accordance with FSH 1909.15 and 40 CFR 1501.7. This project began as a Forest-wide initiative at the Forest Supervisor’s Office in 2001. This Forest-wide project included the thinning and/or prescribed burning of approximately 12,050 acres of pine stands across the Mark Twain National Forest including 1,850 acres pine thinning on the Ava/Cassville/Willow

Springs Ranger District. A scoping letter was sent to 454 interested parties and agencies on September 28, 2001. Thirty-one comments were received (Project File, Document A6). These comments were addressed under an Environmental Assessment prepared in 2003. During this public involvement phase adjacent landowner and local interested parties were not notified of the project.

In June of 2003 the project was turned over to individual Districts to complete the NEPA process. The District reinitiated a 30-day scoping period. A total of 283 scoping documents describing the proposed actions were mailed on October 31, 2003. Scoping reports were sent to 212 recipients on the Ava/Cassville/Willow Springs Mailing list, and 61 individuals that are adjacent landowner to the proposed project areas. The District received 15 responses. The comments are addressed in the Project File (Document A11). No significant issues or extraordinary circumstances were identified.

#### **IV. FINDINGS RELATED TO OTHER LAWS AND REGULATIONS**

This decision will comply with all applicable laws and regulations. I have summarized some below:

Forest Plan Consistency (National Forest Management Act) - This Act requires the development of long-range land and resource management plans. The Mark Twain Forest Plan was approved on June 23, 1986, as required by this Act. The plan provides for guidance for all natural resource management activities on the Forest. The Act requires that all projects and activities be consistent with the Forest Plan. The Forest Plan has been reviewed in consideration of this project. This decision is responsive to guiding direction contained in the Plan, as summarized in Section I of this document. The Forest Plan identifies a number of multiple-use and resource management goals that are achieved by implementing the plan. The Forest Plan Fire Management Goals include:

- Identify a cost-efficient response to fire prevention and suppression based on objectives for the management area and the values that are at risk.
- Implement prescribed fire as a tool to meet resource management objectives.

As part of the direction for fire management, the Forest Plan states, "... fuels management will be planned based on an analysis of probable fire location, expected fire intensities, potential net resource value change, and risk to health and safety, and will be addressed in the development of management area action plans." This project is tiered to the Forest Plan and will contribute to accomplishment of the Desired Future Conditions found on pages IV-115 and IV-125 to provide for a natural appearing mosaic of stands, emphasizing; 1) wildlife habitat diversity, and 2) provide for production of other resources. This project will also protect heritage resource sites as found on page IV-30 and ensure continued viable habitat for sensitive species as found on page IV-50.

This project is responsive to the Forest Plan Goal (page IV-2) to "Provide for wildlife species requiring specialized habitat including those recognized by both Federal and State authorities as being threatened, endangered, rare, or sensitive."

Vegetation Manipulation (National Forest Management Act) – Proposed actions often carry out management prescriptions selected and scheduled during land and resource management plan development. This decision is consistent with the requirements for management prescriptions. The regulations found at 36 CFR 219.27 require that "Management prescriptions that involve vegetative manipulation of tree cover for any purpose shall" comply with the following seven requirements:

*Be best suited to the goals in the Forest Plan.* The applicable goals are stated in Section I of this document. This decision is responsive to those goals and is best suited to meet those goals.

*Assure that technology and knowledge exists to adequately restock lands within five years after final harvest when trees are cut to achieve timber production.* Restocking is not applicable; the area treated will remain fully stocked after treatment (Project File, Document A8).

*Not to be chosen primarily because they give the greatest dollar return or the greatest output of timber (although these factors shall be considered).* This decision was made to reduce the natural fuel buildup. Subsequent measures in species richness, diversity, and frequency would continue for years following a fire, and benefit in reducing fuel loading at a reasonable cost. This decision was not based on timber outputs.

*Be chosen after considering potential effects on residual trees and adjacent stands.* The effects on residual trees and adjacent stands were considered in development of the Plan. The decision, including adherence to applicable Plan Standards and Guidelines, is designed to provide the desired effects of management practices on the resource values. This decision is consistent with the Plan and provides the desired effect on residual trees and adjacent stands (Project File, Document A8).

*Be selected to avoid permanent impairment of site productivity and to ensure conservation of soil and water resources.* This decision avoids impairment of site productivity. The nature of the decision and use of Best Management Practices will protect soil and water resources (Project File, Document A8).

*Be selected to provide the desired effects on water quality and quantity, wildlife and fish habitat, regeneration of desired tree species, forage production, recreation users, aesthetic values, and other resource yields.* The decision, including adherence to applicable Plan Standards and Guidelines, is designed to provide the desired effects of management practices on the resource values. This decision is consistent with the Plan and provides the desired effect on the above resources (Project File, Document A8).

*Be practical in terms of transportation and harvesting requirements and total costs of preparation, logging, and administration.* The project area is adequately roaded, no new permanent or temporary roads are necessary to implement this decision. The treatment in this decision is appropriate to accomplish project objectives, and is economically practical.

Endangered Species Act – See Section II, Item B1 of this document (Project File, Document A3 & A4).

Sensitive Species (Forest Service Manual 2670) - This Manual direction requires analysis of potential impacts to sensitive species, those species for which population viability is a concern. On February 29, 2000, the Regional Forester approved the sensitive species list. This decision will have “no impact” on sensitive species (Project File, Document A3 & A8).

Clean Water Act - This Act is intended to restore and maintain the integrity of waters. The Forest Service complies with this Act with Best Management Practices. This decision incorporates Best Management Practices to ensure protection of soil and water resources, in compliance with this Act (Project File, Document A8, table 4.4 and Section X of this document)

Wetlands (Executive Order 11990) – See Section II, Item B2 of this document.

Floodplains (Executive Order 11988) – See Section II, Item B2 of this document.

Clean Air Act – under this Act, areas of the country were designated as Class I, II, or III airsheds for Prevention of Significant Deterioration purposes. Class I areas generally include national parks and wilderness areas. Class I provides the most protection to pristine lands by severely limiting the amount of additional human-caused air pollution that can be added to these areas. Hercules Glade Wilderness, 11 miles southeast of one project, is the only Class I airshed on the Forest. The remainder of the Forest is classified as a Class II airshed. No areas on the Forest have been designated as Class III. This project will not affect air quality.

Federal Cave Resources Protection Act –The intent of this Act is to secure, protect, preserve, and maintain significant caves, to the extent practical. No known cave resources will be affected by this decision.

National Historic Preservation Act - See Section II, Item B6 of this document.

Archaeological Resources Protection Act - See Section II, Item B6 of this document.

Native American Graves Protection and Repatriation Act - See Section II, Item B6 of this document.

American Indian Religious Freedom Act – This Act protects American Indians’ inherent right of the freedom to believe, express, and exercise their traditional religions. The federal government has trust responsibilities to Tribes under a government-to-government relationship to insure that the Tribes reserved rights are protected. No tribal concerns were identified for this project.

Environmental Justice (Executive Order 12898) - This Order requires consideration of whether projects would disproportionately impact minority or low-income populations. This decision complies with this Act. Public involvement occurred for this project, the results of which I have considered in this decision-making. Public involvement did not identify any adversely impacted local minority or low-income populations. This decision is not expected to adversely impact minority or low-income populations.

National Environmental Policy Act - This Act requires public involvement and consideration of potential environmental effects. The entirety of documentation for this decision supports compliance with this Act.

**V. ADMINISTRATIVE REVIEW OR APPEAL**

This decision is not subject to appeal pursuant to 36 CFR 215.12(f).

**VI. IMPLEMENTATION DATE**

This project can begin after this Decision Memo has been signed.

**VII. CONTACT PERSON**

Further information about this decision can be obtained from Brian Davidson, NEPA Coordinator or Jenny Farenbaugh, District Ranger at the Ava/Cassville/Willow Springs, Ranger District: P.O. Box 188, Ava, Missouri 65608; (417) 683-4428; fax (417) 683-5722.

**VIII. SIGNATURE AND DATE**

*/s/ Jenny Farenbaugh*

JENNY FARENBAUGH

District Ranger

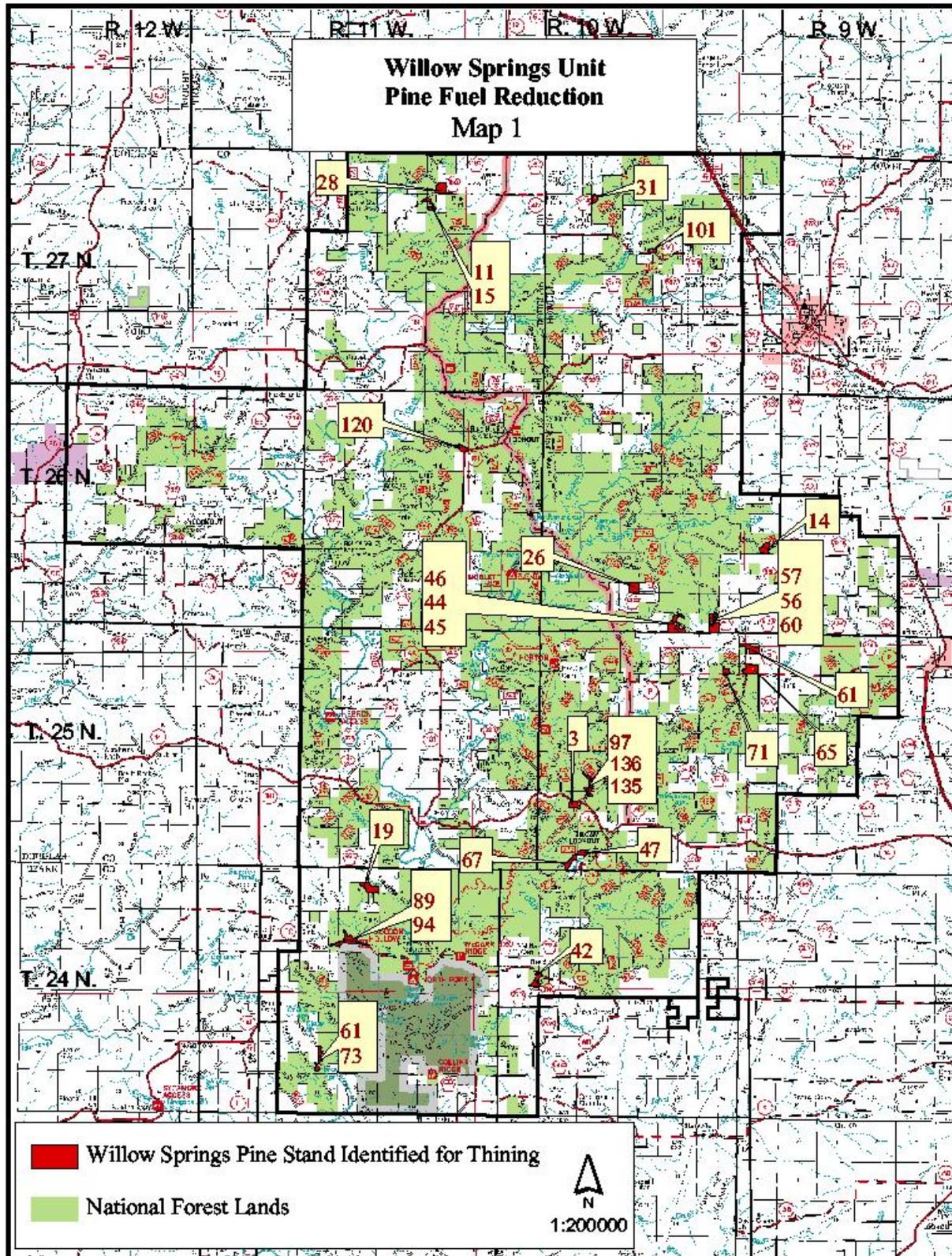
Ava/Cassville/Willow Springs Ranger District

03/01/04

Date

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IX. **MAP**



**X. MITIGATION MEASURES**

Resource	Mitigation Measures
<b>Physical</b>	
<i>Watershed</i>	<ul style="list-style-type: none"> <li>➤ Prioritize stands listed with severe limitations for low severity prescription fire</li> <li>➤ Limit mechanical disturbances to soil with water table restrictions, avoiding December through April</li> <li>➤ Locate skid trails and landings to comply with trail grade and water control structures; divert skid trail and landing runoff to forest floor</li> <li>➤ Designate filter strips in stands that contain or border water bodies</li> <li>➤ Implement higher intensity administrative controls at stands near surface water and with severe equipment limitations</li> <li>➤ Suspend skidding during wet periods, when rutting begins, or when runoff from skid trails is turbid and fails to infiltrate near skid trail</li> <li>➤ Establish a no cut zone 50 feet from any sinkhole</li> <li>➤ Minimize stream crossings, locate at right angles and at points with least impact</li> </ul>
<b>Biological</b>	
<i>Vegetation</i>	<ul style="list-style-type: none"> <li>➤ A 100-foot protection zone would be established around all igneous glades identified containing open, grass-dominated patches or continuous grass/herb cover</li> <li>➤ Burn slash piles on roads or landing sites</li> <li>➤ Revegetate bare soil with annual wheat, oat, or rye seed</li> </ul>
<b>Resource</b>	
<i>Wildlife/Wildlife Habitat</i>	<ul style="list-style-type: none"> <li>➤ Leave snag trees surrounded by several live trees</li> <li>➤ Avoid cutting within 50 feet of a sinkhole</li> <li>➤ Retain shagbark hickory, shellbark hickory, and lightning struck trees greater than 9 inches diameter at breast height (dbh), and sycamore trees greater than 12 inches dbh</li> <li>➤ Designate a 100 foot buffer strip of no cutting either side of perennial and intermittent streams and water bodies</li> <li>➤ Hawk nest protection</li> <li>➤ All harvest areas would have den trees, snags, and large live trees left at the specified number (at a minimum).</li> </ul>
<i>Visual</i>	<ul style="list-style-type: none"> <li>➤ Feather edges where treated stands adjoin open land</li> <li>➤ Lay out thinned areas to reflect natural lines and be visually subordinate to the landscape</li> <li>➤ Dispose of slash adjacent to travelways within 30 inches of the ground for a distance of 300 feet from the travelway</li> <li>➤ Mitigate any negative visual impacts concurrently with or immediately after each activity</li> <li>➤ Prohibit log landings within 100 feet of a recreation trail</li> <li>➤ Avoid skidding across a recreation trail and where unavoidable place at a right angle and at designated locations</li> </ul>
<i>Heritage</i>	<ul style="list-style-type: none"> <li>➤ Site avoidance and protection</li> <li>➤ Halt activities upon any discovery of previously unknown sites</li> </ul>

