

- DECISION MEMO -
DAVIS COUNTY FUEL REDUCTION PROJECT
Davis County, Utah
Salt Lake Ranger District,
Wasatch-Cache National Forest

INTRODUCTION

This is the second decision issued for the Davis County Fuel Reduction Project. The first Decision Memo was signed on July 2, 2004 and addressed mechanical treatment of fuels in the project area and along the Firebreak Road. Because more time was needed to examine the potential for mud and debris flows, the document deferred any decision on the proposed 1,734 acres of prescribed burning. These reviews have now been completed and the area to be treated with prescribed fire has been reduced to 175 acres to minimize the potential for runoff related problems. In addition, this Decision Memo also approves about 128 acres of manual fuel reduction (hand-thinning) in lower Davis Creek and along the western edge of the project area. The environmental analysis addressed treatments across a relatively broad area of Davis and Steed Creek drainages. Additional opportunities for fuel reduction treatments appear feasible for upper Davis Creek in the future. If these are pursued in the future, the public and other agencies will be contacted and a subsequent decision issued.

This Decision Memo documents: **1)** background information about the project and how the proposal was developed; **2)** the purpose and need for the project and the details of the 2004 proposal; **3)** other treatment options considered; **4)** the details of the 2005 decision and rationale for it; **5)** a required review of extraordinary environmental circumstances; and **6)** implementation dates and conditions for the project.

BACKGROUND

In recent years, the build-up of high levels of fuels in forest and shrub lands has been highlighted across the western United States, as wildfires have burned acreages much greater than they did historically. Nearly a hundred years of fire suppression has resulted in fuel accumulations that often far exceed what would have occurred under more natural conditions. Historically, these "fire dependent" ecosystems developed in response to fairly regular, lower intensity wildfires that kept the fuel build-up in check. In current times this accumulation of both dead and down material and overly dense live vegetation, together with a long-term drought and residential development into fire-prone areas, has created a dangerous situation. Today's wildfires burn at higher intensities, are more difficult and costly to control, and more often threaten residences and communities. In addition, these more intense fires have the potential to cause fundamental changes to ecosystems because they burn hotter and over larger areas.

The build-up of forest fuels has been recognized by the Chief of the Forest Service as one of the four major threats facing the sustainability of public lands managed by the agency. Streamlining environmental review processes to approve fuel reduction projects in a more timely matter was the subject of the Healthy Forests Initiative, developed by the

Departments of Agriculture and Interior in 2002. In 2003, Congress passed the Healthy Forests Restoration Act which encouraged expeditious hazardous fuel treatments on public lands at risk of wildfire and the involvement of State and local governments and citizens in wildland fire planning.

On a local scene, the 2003 fire season demonstrated that fuel accumulations are a serious problem along the flank of the Wasatch Front in Davis County. In all, 5 separate wildfires burned nearly 2,900 acres in the area from Centerville to Fruit Heights. Experienced firefighters were surprised at the rate at which these fires spread and how difficult they were to control. In several instances, the loss of homes was narrowly averted. While the 2003 wildfires did reduce fuels where they burned, substantial hillside areas immediately east of the communities of Farmington and Centerville support dense, mature and sometimes decadent mixed stands of Gambel oak and bigtooth maple that could present threats to residential areas. The project described in this Decision Memo is designed to address the area between these communities (hereafter referred to as the Project Area). This area was selected because its location between two of the 2003 wildfires provides favorable control boundaries to conduct treatments and because of a desire within these two wildland-urban interface communities to address the fuels and wildfire issue. A map showing the location of the project area is included as Exhibit A with this Decision Memo.

FOREST SERVICE FUEL TREATMENT PROPOSAL

Initial Project Proposal

The project proposal presented for public comment in December 2003 involved reducing wildfire fuels on NFS land east of the communities of Farmington and Centerville using multiple techniques. Specifically, the proposed project included:

- ◆ A combination of prescribed burning and mechanical removal of brush, staged over several seasons, on about 1,734 acres within the Steed and Davis Creek drainages.
- ◆ Installation of approximately 15,000 feet of temporary fire line associated with the prescribed burning.
- ◆ Maintaining approximately a 20 to 30 foot wide strip feet of cleared vegetation along either side Forest Road 80236 between Farmington Canyon and Centerville.

Purpose and Need for Action

The purpose and need for this project has three primary components which are discussed below.

1. Reduce hazardous fuels loads on NFS lands near the communities of Farmington and Centerville to help protect residential areas from wildfire.

The need for this project was illustrated by the Farmington and Centerville wildfires during the summer of 2003, both of which threatened residences in these communities. Hazardous fuel loads observed in these mixed Gambel oak/bigtooth maple shrub communities in the project area average 25 to 35 tons per acre and canopy heights in many places range from 20 to 30 feet. Prescribed burning would reduce the older, decadent shrub stands by consuming dead wood and leaf litter accumulations and kill the above ground portions of 30 to 40 percent of the Gambel oak in patches scattered over the treatment areas. The optimum outcome would be to break up the thick continuous stands of brush to produce more of a mosaic pattern of uneven-aged brush and some open grassy areas. This would reduce the fuel height, resulting in a vegetation structure and mosaic that will help to control the spread of future wildfires.

Reducing fuel loads on these NFS lands will help to lower intensities when future wildfires occur and reduce the potential for their spread into adjacent residential areas. In addition, the creation of fuel breaks along the NFS - private land boundary will help to provide additional assurance that evening down slope winds are less likely to "push" a wildfire into developed areas.

2. Improve the ecologic health of Gambel oak/bigtooth maple vegetation in the Davis and Steed Creek drainages.

Fire suppression activities throughout much of the last century have interrupted the natural fire regime and most of this vegetation type across the Wasatch Front consists of older, less healthy age classes of shrubs. A measure used by the Forest Service to assess the degree to which natural conditions have been affected by fire suppression and other factors is called *fire regime condition class* and its results correlate directly to how vegetation species composition, stand age, structure, and landscape patterns have been affected. On NFS lands adjacent to Farmington and Centerville, wildfires historically burned the same area on cycles ranging from 35 to 100 years. Thus, fire suppression has meant that many areas have missed one or more burn cycles over the succeeding decades. The obvious exception to this are the areas that burned during the 2003 season. This means that this watershed falls into a moderate (class 2) fire regime condition class and that it also is at moderate risk of losing key ecosystem components in the event of wildfires.

Although the Farmington and Centerville wildfires have provided some younger age class patches, (which also function as potential control areas for the proposed prescribed burn), additional young shrub stands are needed in order to bring this landscape into proper functioning conditions for ecological processes. In addition, the prescribed fire treatments would increase forage for wildlife, particularly for deer; increase opportunities for wildlife viewing; draw deer use out of residential areas and onto the National Forest; and potentially increase hunting opportunities. Prescribed burning is also likely to increase plant species diversity.

3. Modify fuel patterns in the area to help provide for more effective, timely, and safe fire suppression efforts for future wildfires.

Large, contiguous areas of overly dense Gambel oak/bigtooth maple vegetation along the Wasatch Front in Davis County present serious difficulties in controlling wildfires. Depending on wind and a variety of other factors, this vegetation pattern can allow fires to move from one drainage to another relatively easily. The lack of natural fuel breaks and steep side slopes severely limits the capability to use ground-based suppression resources in mid-slope positions safely. These limitations force more reliance on air tanker and helicopter resources, which add considerable cost to fire suppression efforts. In addition, aerial retardant drops have limited effectiveness in areas of high, dense shrub vegetation where wildfires can creep under retardant lines and spread. Though treated areas may burn in subsequent years, fuel heights and overall fuel loads would be reduced which will aid in achieving containment and control.

Other Options Considered

A variety of other options for reducing wildfire threats were considered during the environmental review process. These are discussed below, along with an explanation of why they were not selected.

1. Livestock grazing

In the early 1900s, livestock grazing was common in this area. At the current time no livestock grazing occurs within the project area. Sheep and cattle prefer grass and herbaceous vegetation and generally do not consume woody shrubs. Thus, grazing using these animals would do little to address the build-up of fuels. In recent years, research in Utah suggests that concentrated, closely managed grazing with domestic goats may be effective in reducing shrub densities and the wildfire hazard. A recommendation that this be used surfaced during public scoping. This is an approach that should be considered in the future in selected areas and could be authorized following a subsequent detailed environmental review.

2. Mechanical thinning and removal across the treatment units

Steep slopes and rough, rocky soils make mechanical thinning on a large scale quite difficult and costly. Most areas are not suitable for mechanized equipment and would have to be done by hand crews using chainsaws.

3. Hand thinning in selected areas to remove dead and down woody shrub material

During scoping it was suggested that thinning should be conducted only in the immediate area surrounding homes and that larger scale fuel treatments were unnecessary. Similarly, it was recommended that pockets of dead and down material could be removed from the project area by hand, or placed in piles and burned. Hand thinning and removal is an important technique to help establish prescribed fire control lines in areas near private property and along the Fire Break Road, but is an impractical approach at a larger scale. Further, selected removal in the manner suggested would not have addressed the ecologic needs across the broader project area in terms of restoring vigor and diversity to plant communities because larger scale mechanical thinning or burning stimulates

sprouting of new stems, opens the open the shrub canopy to the sun, and returns nutrients to the soil. Finally, hand thinning in selected areas would not substantially provide for safer and more effective suppression of future wildfires over project area.

4. No Action

Fire dependent ecosystems, such as this one, will burn at some point and many of these stands of oakbrush have probably missed multiple cycles of burning because of suppression. Records indicate fairly regular lightning-caused ignitions and that increasing levels of recreational activity along the foothills has resulted in more cases of human-caused wildfires. If no action is taken, future wildfires will be increasingly difficult and costly to contain, will burn at higher severities and over greater areas than they would have historically, will have greater potential for damaging soils and creating runoff related problems, and will have a higher probability of permanently altering vegetative conditions because of their higher severities. Finally, taking no action will also mean that it will be increasingly difficult to protect residential areas from wildfires near the project area.

Forest Plan Consistency

This project is consistent with, and advances the goals and objectives of, the Revised Forest Land and Resource Management Plan for the Wasatch-Cache National Forest (2003). In particular, the Revised Forest Plan notes:

- ◆ Reduce hazardous fuels (prescribed fire, silvicultural and mechanical treatments) with emphasis on interface communities (wildland/urban) and increase proactive participation of communities at risk. (Subgoal 4d, page 4-21)
- ◆ Treat approximately 2,000 wildland urban interfaces acres annually for a 10-year total of 20,000 acres. (Objective 4.a, page 4-31)
- ◆ Fuel loads, especially in oakbrush, across the urban interface in Box Elder, Weber, and Davis Counties will be reduced and broken up to protect life and property. Access will be provided for fire protection. (page 4-142)
- ◆ Maintain an age class distribution of in the Gambel oak cover type, of about 10-20% in the grass/forb stage, 20-40% in the early seral stage, 20-40% in the mid seral stage, and 20-40% in the late seral stage, across a landscape scale. (page 4-41)

The project area is located entirely within a 3.1W management area prescription, which emphasizes maintaining or improving watershed conditions. The proposed vegetation treatments are consistent with applicable standards and guidelines for 3.1W areas.

DECISION AND RATIONALE

In the 2004 Decision Memo I approved about 116 acres of hazardous fuels reduction work by mechanical and manual methods. These treatments were largely completed

2004. However, in the initial Decision Memo I decided to “defer most aspects of the prescribed burning treatments until a further review has been completed of the relationship between fire and the potential for mudflows.” Following the April 2004 mudflows on Compton Bench, I asked Forest Service watershed specialists to investigate what had occurred there and to reexamine the mudflow potential associated with the project proposal. Their review has been completed and the conclusions summarized below.

The lower benches of the Wasatch Front in Davis County are mostly comprised of alluvial (water-deposited) soil material associated with Lake Bonneville beach deposits and fans of material transported down the drainages from upper mountain areas. These materials are loosely consolidated and are susceptible to failure when saturated. In terms of relative risk, the broad, steep lower slopes above the valley floor, situated between well-defined stream channels and side canyons (e.g., Davis and Steed), present the greatest risk. These areas contain deep deposits of soil and the smaller ephemeral channels there tend to contain a large volume of material that could be transported during a high precipitation event. Consequently, prescribed burning should be avoided in these areas.

Slopes that drain directly into Davis Creek tend to lack the thick depositional soil material noted above and are less susceptible to mass movement. In addition, in the unlikely event of mudflow occurring in any area treated by prescribed fire, homes and other residential developments located below are unlikely to be damaged because they are protected by constructed levees.

I am aware that the water content of the 2005 snowpack is at above average levels. While the proposed use of prescribed fire will create a somewhat higher runoff potential for the first few seasons after treatments, the total area to be treated is a relatively small part of the nearly 1,000-acre Davis Creek watershed. Thus, it is unlikely that the incremental runoff would be sufficient to trigger a flood event.

While I delayed the decision to use prescribed fire last year so that we could more closely investigate the mudflow potential in the project area, I remain convinced of the need for fuel reduction work on a larger scale. By itself, hand and mechanical thinning and fuel breaks will do little to affect the overall build-up of fuels and the potential for catastrophic wildfires. In addition, these limited efforts will not create the landscape mosaic that will slow advancing wildfires, or provide relatively safe positions from which firefighters can attack these fires. These larger, hotter, summer wildfires will have a much greater potential for creating flooding and property damage than a well-planned and executed spring prescribed fire. The oakbrush vegetation along Wasatch Front in Davis County is an ecosystem that evolved in response to frequent wildfires that removed the build-up of hazardous fuels. Fire suppression in the past 75 years has only delayed the inevitable and made the consequences of future wildfires much more intense.

Accordingly, my decision includes the following components and conditions below and is depicted on the attached map and photo.

- Use prescribed fire to reduce hazardous fuels on about 175 acres in two treatment areas (Units 1 and 2) in Davis Creek drainage. In order to better manage the treatments, no ignition would occur in Unit 2 until Unit 1 has been successfully treated. Ignition would be conducted by a combination of hand and helicopter applications. The potential for escape will be minimized by constructing a fireline on the northern boundary of Unit 1 and burning to snowline and/or damp conditions on the northern and eastern boundaries of Units 1 and 2. Along the southern boundary of Units 1 and 2, a combination of damp fuel conditions, sparse fuels, and hand (holding) crews will be used.
- In order to address the flood and mudflow potential, the Forest Service will install a temporary structure at the road crossing on Davis Creek. This deflection structure will be installed so that if a mudflow blocks the culvert at Davis Creek the flow will be directed back into Davis Creek. Residential traffic will be rerouted around the structure. In the event that the road crossing is reconstructed in the future as has been proposed, it will be designed to accommodate a mudflow without blockage.
- Prescribed burning will be conducted only within the specific weather and fuel conditions outlined in the Burn Plan. In addition, the ignitions will be managed to achieve the objectives of the Burn Plan, specifically to create a mosaic pattern of low and moderate intensity burns interspersed with unburned vegetation.
- Approximately 88 acres of fuels in Unit 3 will be treated by hand-thinning and piling cut materials. Piles would be later burned during winter or other wet periods. Forest Service staff will coordinate these treatments with local citizen trails advocates. In addition, up to 40 acres of additional hand-thinning is approved on NFS lands situated west of Unit 3 and east of the Armstrong property and associated residences. Treatments here will be focused on creating a firebreak between along the private – public land boundary.

CATEGORICAL EXCLUSION AND EXTRAORDINARY CIRCUMSTANCES SUMMARY

1. Categorical Exclusion

A project may be categorically excluded from documentation in an Environmental Assessment or Environmental Impact Statement if it falls within one of the defined categories and if no extraordinary circumstances are present (FSH 1909.15, Ch. 30.3). It is the degree of the potential effect on specific resources which determines whether extraordinary circumstances are present (FSH 1909.15-2004-1). In this case, the applicable category is:

"Hazardous fuels reduction activities using prescribed fire, not to exceed 4,500 acres, and mechanical methods for crushing, piling, thinning, pruning, cutting, chipping, mulching, and mowing, not to exceed 1,000 acres."

This project conforms with other requirements pertaining to this category. Specifically, this project: 1) is located within a wildland-urban interface area; 2) is in Fire Regime Condition Class 2 and Fire Regime Group III; 3) has been developed using a community-

based, collaborative approach; 4) is consistent with applicable Forest Service and USDA procedures and the 2003 Wasatch-Cache National Forest Land and Resource Management Plan; 5) will not be conducted in a wilderness area or affect wilderness study areas; and 6) does not involve the use of herbicides, pesticides, or the construction of new roads or other infrastructure.

2. Extraordinary Circumstances Summary

Below is the list of extraordinary circumstances that must be considered and a brief discussion of how this project relates to these considerations.

Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species. A Biological Assessment and Biological Evaluation were completed by Forest Service biologists for this project. Determinations for pertinent wildlife species are noted below:

Bald eagle - *may affect, not likely to adversely affect*
Northern goshawk - *may impact individuals or habitat, but not likely to trend toward Federal listing or cause loss of viability*

Finally, primarily because of the absence of suitable habitat, it was determined that there would be *no effect* on any Federally listed plant species, and *no impact* to any Forest Service sensitive species.

Flood plains, wetlands or municipal watersheds. The treatment area is located in a portion of the municipal watershed for the City of Farmington. However, no adverse effects are expected to occur to wetlands, floodplains, or municipal watersheds as a result of the treatments.

Congressionally designated areas, such as Wilderness, Wilderness study areas or National Recreation Areas. No Congressionally designated areas are located in the area, or would be affected.

Inventoried roadless areas. The project is located within the 10,900-acre Farmington inventoried roadless area, but it will not have adverse effects on roadless values. Activities such as reduction of hazardous fuels and restoration of essential wildlife habitat are allowed to occur in roadless areas.

Research Natural Areas (RNAs). The project area is not located within any RNA and would not affect the Morris Creek RNA, located about 1.5 miles to the north in Farmington Canyon.

American Indians and Alaska Native religious or cultural sites. This project will comply with the terms of the National Historic Preservation Act, the Archaeological Resources Protection Act; and the Native American Graves Protection and Repatriation Act. In addition, the Forest Service consulted with potentially affected Tribes during scoping.

Archaeological sites, or historic properties or areas. Surveys were completed for these sites and areas and a "no properties affected" determination was made.

FINDINGS REQUIRED BY OTHER LAWS

Forest Plan Consistency (National Forest Management Act). As noted above, this decision complies with the goals, standards, and guidelines of the Forest Plan, and other provisions of the National Forest Management Act.

Endangered Species Act. In association with the environmental review for this project, a Biological Assessment was completed. The determinations for Federally listed species is noted above.

Migratory Bird Treaty Act. Based on suitable habitat considerations for 43 species that might occur in the project area, it was determined that this project would be unlikely to affect migratory birds.

Clean Water Act. Compliance with this Act has been provided for through project design and implementation of watershed best management practices.

Clean Air Act. The analysis indicates that, though there may be some short term lingering smoke during and immediately after the treatments in adjacent communities, this can be minimized by closely following standards in the Utah Smoke Management Program. The analysis for the original proposal also concludes that no Class I airsheds would be adversely affected and emissions modeling indicates that there should be no violations of Federal particulate matter standards (PM 10 and PM 2.5). As noted previously, this assessment was developed for the original project proposal, which involved prescribed burning of over about 1,734 acres. The Burn Plan will further address conformance with the Clean Air Act.

Healthy Forest Restoration Act. This project would reduce hazardous fuels conditions that have moderate to high departure from the natural fire regimes in an urban interface area. As such, this project would further the goals of this Act.

PUBLIC INVOLVEMENT AND COLLABORATION

Public involvement for the Davis Fuels Project was conducted in two phases, with the first leading up to the Decision Memo issued in July 2004, and the other in advance of this Decision Memo.

In the first phase, informal discussions began between the Forest Service and local government officials about the need to address the wildfire hazard in this area while the 2003 wildfires were still in progress. More formally, a collaborative process to develop a proposal was initiated on November 25, 2003 when Forest Service staff presented a conceptual plan to representatives from Layton City, Bountiful City, Kaysville City, Farmington City and Davis County Fire Departments.

A scoping document which detailed the project proposal was mailed to citizens and organizations and Federal, State and local governments and groups on December 16, 2003 and was posted to the Wasatch-Cache National Forest web site.

On January 16, 2004, the Forest Service, Davis County, Centerville City, and Farmington City officials, jointly issued a news release announcing three public meetings in Davis County to present the fuel reduction and firebreak road improvement proposals. These meetings were held in Centerville on January 20 and in Farmington on January 21 and 22. There was time allotted during each meeting for representatives from the Forest Service to present proposals for both the fuels reduction prescribed burning and firebreak road improvement. In each session, time was provided for a brief presentation and question and answer period for City and County officials and staff and citizens.

In all, approximately 80 people attended the three meetings. Records from the various meetings are included in the project file, as well as other information related to public involvement and the scoping process. This project was also discussed at an Emergency Awareness Fair held in Farmington on March 20, 2004. The Farmington Trails Committee was consulted at various times to discuss ways to conduct the prescribed burning, while providing some protection for trails and popular dispersed recreation sites in the project area.

In the second phase of public involvement, Forest Service staff met with several officials from the City of Farmington on March 9, 2005, to discuss agency plans for the use of prescribed fire in the project area. Following this meeting, a brochure described the update plans were mailed to about 130 residents on the south end of Farmington, below Davis Canyon. The brochure described the proposal and invited residents to a public meeting on March 17, 2005 for discussions about the refined proposal. Approximately 15 people attended this session.

IMPLEMENTATION DATE(S)

This decision may be implemented immediately, though completion of the project may span a number of years. It is estimated that acceptable burn conditions will exist only during March and April each year. If weather and fuel conditions are not acceptable during this period in any given year, the prescribed burn treatments will be deferred into the following year. It is estimated that the hand and mechanical thinning will be initiated during the summer of 2005 and that the work will take several seasons to complete.

ADMINISTRATIVE REVIEW OR APPEAL OPPORTUNITIES

This decision is not subject to an administrative review or appeal pursuant to 36 CFR 215 .12(f).

CONTACTS

Further information about this decision can be obtained from Loren Kroenke, District Ranger, (801-733-2675) during normal working hours (week days, 8am to 4:30pm) at the

Salt Lake Ranger District office (6944 So. 3000 E., Salt Lake City, Utah 84121). E-mail: lkroenke@fs.fed.us

/s/ Loren M. Kroenke
LOREN M. KROENKE
District Ranger

April 5, 2005
Date

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