



**File Code:** 1950

**Date:** May 29, 2002

Dear Interested Party:

The Beaverhead-Deerlodge National Forest is proposing the "Basin Creek Fire Plan Project" on approximately 3977 acres in the Basin Creek Watershed. The project area is located in the southern half of the Basin Creek Watershed within the Highland Mountains on the Butte Ranger District, Beaverhead-Deerlodge National Forest in southwestern Montana.

#### Purpose and Need

The purpose and need of the Basin Creek Fire Plan Project is to minimize the risks of negative impacts to water quality in the event of wildfire in the Basin Creek Municipal Watershed (which is a smaller part of the Basin Creek watershed located immediately around the reservoirs). This project is responsive to the hazardous fuel reduction element of the 10-Year Comprehensive Strategy and the National Fire Plan, which states:

*"Hazardous Fuel Reduction---*Assign highest priority for hazardous fuels reduction to communities at risk, readily accessible municipal watersheds, threatened and endangered species habitat, and other important local features, where conditions favor uncharacteristically intense fires."

The Basin Creek Municipal watershed contains 1146 acres of county and privately owned lands in addition to Forest Service lands. Numerous residences are located on the eastern side of the project area along Roosevelt Drive, and along the Forest boundary to the north.

Portions of the watershed were heavily harvested at the turn of the century, and currently contain limited fine and ladder fuels. Because of this, it would be very difficult for a surface fire to start in the watershed and spread to the crowns, but the area could sustain a crown fire if it initiated elsewhere and moved into Basin Creek. In addition, mountain pine beetle activity in the watershed increases short term and long-term fire hazard. Short-term hazards (2-3 years) are associated with standing dead lodgepole pine with red needles. Long-term hazards are associated with higher intensity surface fires from fallen dead lodgepole. Increased fire intensity may make it unsafe for crews to get close enough to a fire to initiate direct line construction in the event of a wildfire.

The Basin Creek Watershed serves as a municipal water supply for the City of Butte and Butte Silver Bow County. The reservoir is one of three water sources, providing approximately 40 - 50% of the city's water. This water supply is unique because it qualifies as a non-filtered water source under DEQ Circular PWS-3, *Criteria to Avoid Filtration of a Surface Water Source or a Groundwater Source Under the Influence of Surface Water*. A stand replacing fire could threaten the integrity of the water supply. If this happens, Butte could lose their State exemption for water filtration, and would be required to construct a treatment facility.

The treatments proposed under this project serve the following needs:

1. **Critical Watershed Protection:** Reduce the potential for negative impacts to water quality in a critical zone adjacent to the reservoir and its tributaries. Should a fire spread through the area, this zone may contribute sediment and nutrients to the reservoir. Treatments are proposed to reduce fuels in this area.
2. **Wildland Urban Interface:** Reduce the potential for outside fires from spreading into the municipal watershed. Human-caused fires started outside the project boundary are more likely to initiate a crown fire that could spread into Basin Creek, than a crown fire initiating inside the



watershed. Treatments are proposed along the urban interface to serve as a buffer between the watershed and the urban interface. The treatments are intended to help reduce wildland fire severity by altering fuel arrangements to allow suppression forces a better probability of successfully attacking a wild fire and increase fire fighter safety.

### Proposed Action

The Forest proposes to reduce hazardous fuels on approximately 3977 acres within the 12,448 acres Basin Creek watershed, including 2257 acres within a critical zone around the reservoirs, (within 1 mile), and 1720 acres in the wildland urban interface. Approximately 1382 acres of the critical watershed treatments occur in an Inventoried Roadless Area. Refer to the enclosed map. The proposed action includes:

- In dense lodgepole dominated stands, a basal area thinning is proposed. Basal areas between 80-120 will be required to maintain a wind firm stand. Douglas-fir and aspen will be retained where possible.
- In dense lodgepole dominated stands with significant mountain pine beetle infestation, infested trees will be removed. Snags will be retained in accordance with the Deerlodge Forest Plan Standard.
- In mixed stands that are dominated by Douglas-fir, a variable basal area thinning is proposed. These stands will be thinned to a basal area ranging from 20-60 depending upon aspect. Southern aspects will have less, northern aspects will have more basal area retained. Douglas-fir and aspen will be favored over lodgepole for retention.

Basal area is defined as the cross sectional area of all the trees on an acre of land at breast height (4.5 feet off the ground), and is measured in square feet per acre. Treatment would be accomplished by mechanical means. No roads, permanent or temporary, would be constructed in the inventoried roadless area. Approximately 2.5 miles of temporary roads will be constructed outside the roadless boundary, which will be obliterated after the project is completed.

The treatments are designed to reduce the potential for the stands to initiate or sustain a crown fire, and increase fire fighter safety. Crown fire occurrence plays an important role in determining the impact of fire in a stand because any tree that experiences crowning will die. Because crown fires are fast moving and difficult to suppress, their likelihood is an important indicator of the fire hazard caused by stand and fuel conditions (Beukema et al, 1999).<sup>1</sup>

The Fire and Fuels Extension to the Forest Vegetation Simulator Model, (FFE-FVS) was used to estimate the potential for crown fire with and without the proposed treatment for representative stands. This model represents the effects of fire on stand characteristics and stand development, and also represents the impacts of fuels treatments. The model does not simulate fire spread or the probability of fire. Rather, it calculates potential fire intensity over time, under user-defined conditions, as a measure of the fire hazard of stand and fuel conditions (Beukema et al, 1999).

Initial results of FFE-FVS model simulations reveal that the main concern is crown fires moving into the watershed. Pictures generated from the FFE-FVS model depicting what the stands look like pre and post treatment are enclosed.

### Scope

The scope of this proposal is limited to those lands in the Basin Creek Watershed. Treatment activities will occur adjacent to the reservoir and in the wildland urban interface on the east side of the project area along Roosevelt Drive, and on the north side of the project area along the Forest boundary. Treatment will not occur in designated Wilderness Areas or Research Natural Areas (RNA's). Treatment is proposed in approximately 1382 acres of an Inventoried Roadless area, but would not involve any permanent or temporary road construction within the roadless boundary.

Please submit any written comments to Amy Nerbun, Beaverhead-Deerlodge National Forest, 420 Barrett Street, Dillon, MT 59725, by July 1, 2002. We are looking for feedback related to the purpose and need, proposed action, and alternatives to the proposed action that should be developed for detailed analysis. **If you wish to remain on the mailing list and receive a copy of the environmental impact statement prepared for this project, please indicate if you would like a printed copy or compact disc. If we do not hear back from you we, we will assume you want your name removed from this project's mailing list.**

Comments may also be submitted electronically to [r1\\_b-d\\_comments@fs.fed.us](mailto:r1_b-d_comments@fs.fed.us). Please note that there is a "one" after the letter r, not an "L". The subject line in an email message should contain the title "Basin Creek Fire Plan Project." If you choose to comment by email, please include your name and your regular mailing address with the comment.

Comments received in response to this solicitation, including names and addresses of those who comment, will be considered part of the public record on this proposed action and will be available for public inspection. Comments submitted anonymously will be accepted and considered; however those who submit anonymous comments may not have standing to appeal the subsequent decision under 36 CFR Part 215. Additionally, pursuant to 7 CFR 1.27(d), any person may request the agency to withhold a submission from the public record by showing how the Freedom of Information Act (FOIA) permits such confidentiality. Persons requesting such confidentiality should be aware that, under the FOIA, confidentiality may be granted in only very limited circumstances, such as to protect trade secrets. The Forest Service will inform the requester of the agency's decision regarding the request for confidentiality, and where the request is denied, the agency will return the submission and notify the requester that the comments may be resubmitted with or without name and address.

If you have any questions, or would like to discuss this proposal further, please call Amy Nerbun at the Supervisor's Office in Dillon at (406) 683-3948.

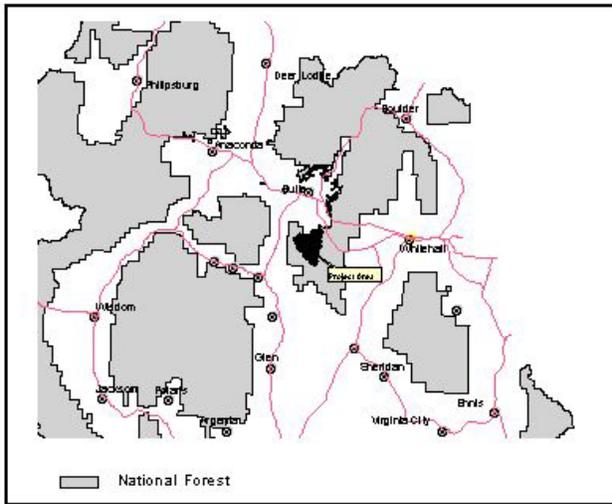
Sincerely,

/s/ Peri Suenram for  
GARY A. MORRISON  
Acting Forest Supervisor

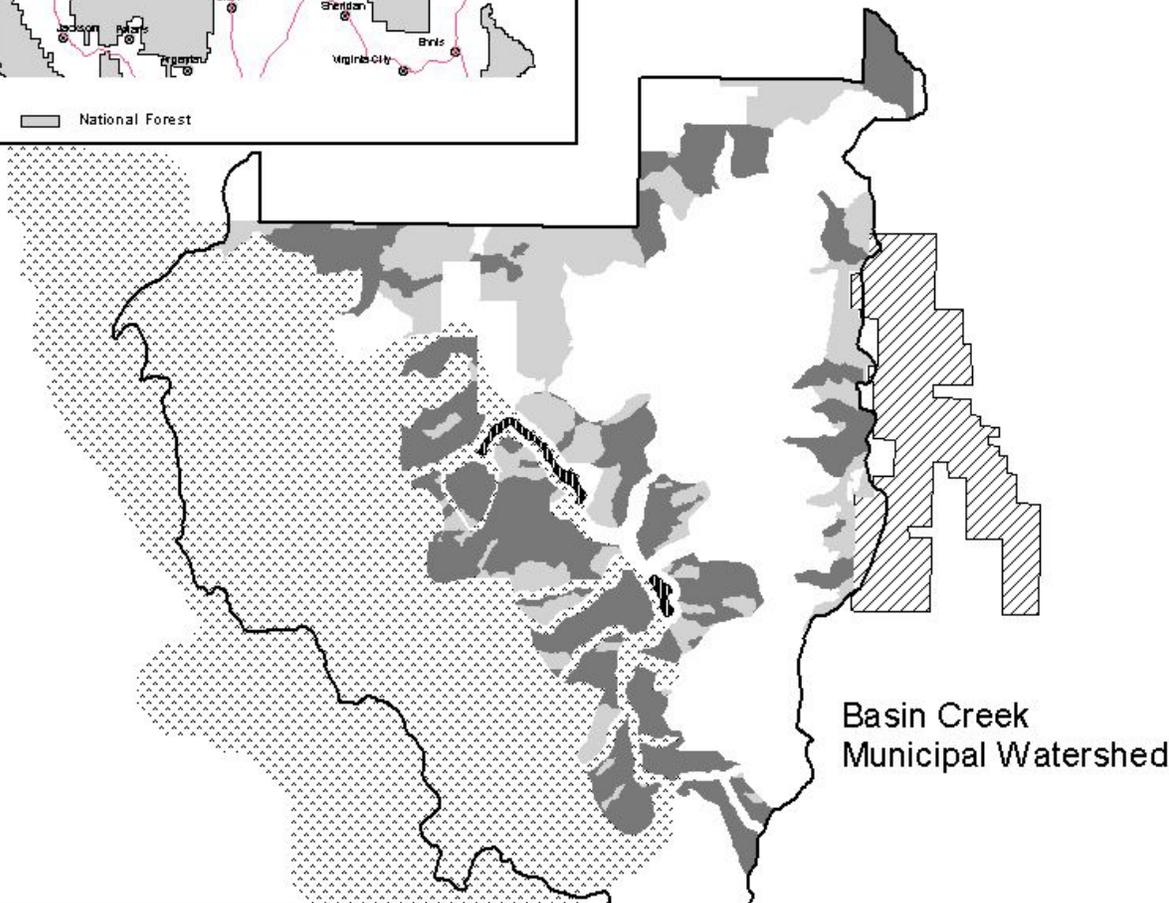
2 Enclosures

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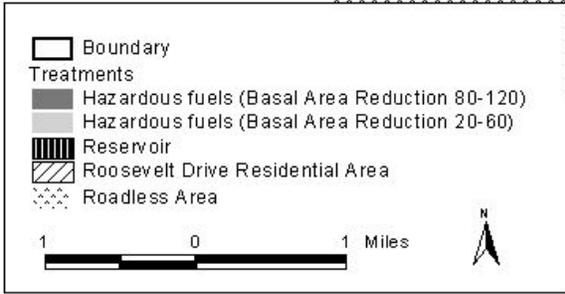
<sup>i</sup> Beukema, Sarah et al. 1999. Fire and Fuels Extension: Model Description, Working Draft. ESSA Technologies Ltd., USDA Forest Service Rocky Mountain Research Station, Missoula, MT and Moscow, ID.



### Basin Creek Fire Plan Project Vicinity Map



### Basin Creek Municipal Watershed



## ATTACHMENT B.

Pictures generated by the FFE-FVS Model showing what stands in the Basin Creek project area look like before and after treatment.

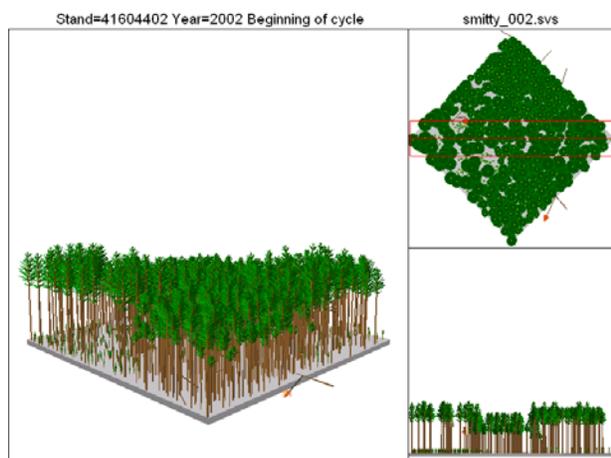


Figure 1: Dense lodgepole pine stand before treatment.

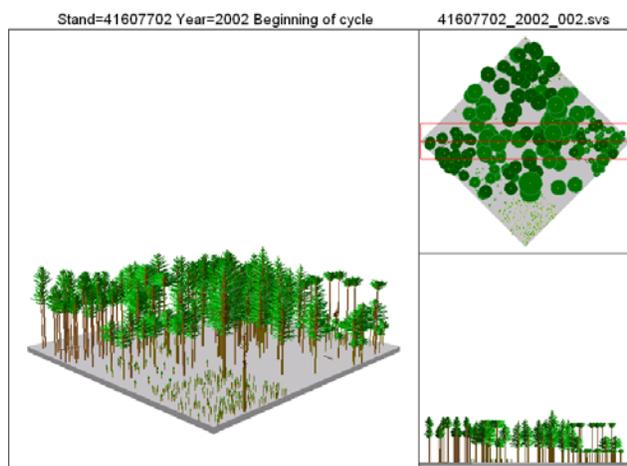
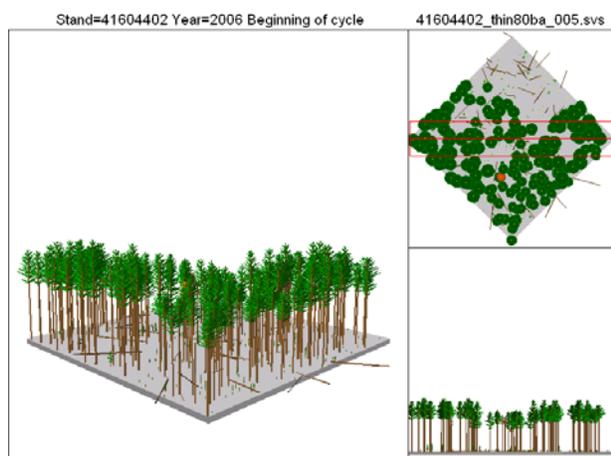
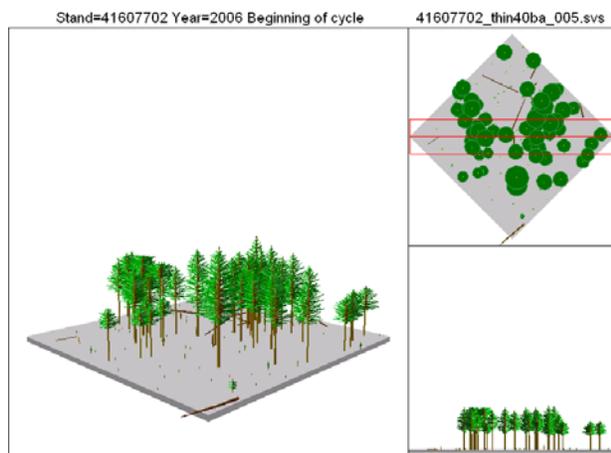


Figure 3: Mixed lodgepole pine / Douglas-fir stand before treatment.



**Figure 2: Dense lodgepole pine stand after treatment.**



**Figure 4: Mixed lodgepole pine / Douglas-fir stand after treatment.**