

BAER Guidance Paper Treatments in Wilderness

May 2003 and July 2009

Notes –

1) *This paper does not represent new FS policy but instead attempts to interpret policy and display management practices.*

2) *The original (May 2003) version of this paper may be found at:*

<http://fsweb.wo.fs.fed.us/wfw/baer/index.html>

Issue or Topic Name: Emergency stabilization (BAER) treatments in designated wilderness.

Brief Description: Fire in wilderness is considered to be a part of the ecological processes that create the natural conditions that have statutory protection in wilderness. BAER stabilization treatments in wilderness are limited to those consistent with law and agency policy.

Current Direction and Sideboards: Guidance in FSM 2523.03 #6 provides that: “Propose treatments in wilderness only if necessary to protect life or property (inside or outside wilderness) or resource values outside wilderness, or to prevent an unnatural loss of wilderness resources (FSM 2323.43b).”

Specific Forest Service Policy regarding BAER activities in wilderness is contained in FSM 2323.43b: “Permit emergency burned area rehabilitation only if necessary to prevent an unnatural loss of the wilderness resource or to protect life, property, and other resource values outside of wilderness. Normally use hand tools and equipment to install selected land and channel treatments” and in 2323.43a; “Use indigenous or appropriate naturalized species to reestablish vegetation where there is no reasonable expectation of natural healing.”

Additional direction regarding use of non-motorized equipment applicable to emergency stabilization is contained in FSM 2323.43a: “Use non-motorized equipment to accomplish improvement objectives. Only imminent threat to important values downstream justifies the use of motorized equipment.”

Forest Service decision authority regarding approval for use of motorized equipment, mechanical transport and landing of aircraft for emergency stabilization activities in wilderness is contained in FSM 2326 and, in some Regions, supplemented through Regional directives.

Discussion: When wilderness is involved in burned area emergency stabilization assessments, “no treatment” is always the preferred action. FS policy provides for two situations where further investigation may be warranted: 1) unnatural loss of the wilderness resource, or 2) to protect life, property or other resource values outside of wilderness.

An ‘unnatural loss’ is a degradation of the wilderness resource caused by modern human impacts or manipulations, or interference in biophysical processes. In many cases there is no demonstrable, objective basis for the assertion that the effects of a fire will lead to an unnatural loss of the wilderness resource. Because Forest Service policy does not explicitly discuss all the possibilities regarding the identification of potential unnatural losses of the wilderness resource and techniques to prevent such

losses, BAER Team members are encouraged to seek advice from local or Regional wilderness specialists. In most cases it is difficult to justify BAER treatments in wilderness to prevent an ‘unnatural loss of the wilderness resource’.

The vast majority of BAER treatments proposed for wilderness will be due to threats to life and property outside wilderness. Treatments proposed for wilderness must address imminent threats to downstream or down slope human life or property or unacceptable degradation of critical natural or cultural resources. If imminent threats are identified, and treatments exist to prevent or minimize the effects, then a determination must be made regarding the best location for those treatments. Treatments should only be proposed in wilderness when it is the most efficient location for providing needed mitigative or preventative effects or when needed to ensure the success of treatments located outside of wilderness.

Once the determination has been made that wilderness must be included in the treatment area, determine the least impacting method and minimum tools that will meet the emergency stabilization objectives, while maintaining natural or naturally appearing conditions. Rationale supporting any needed use of motorized equipment should be documented in the 2500-8. Treatments should be maintenance-free and not interfere with long-term social and biophysical wilderness values. Treatments that involve marking sites, access routes, or the use of temporary structures should have a plan for removal when no longer needed.

Where treatments must be used in wilderness, the following options (not an all-inclusive list) may be considered on a case-by-case basis. The scope and intensity of any treatment chosen should be commensurate with the magnitude of the values at risk. Non-structural prevention and stabilization treatments are always preferred over structural treatments in wilderness.

Use with Caution

- Hillslope treatment using existing downed logs or excelsior wattles
- Hazard warning
- Trail drainage improvement
- Protective fences or barriers
- Seeding of sterile nurse species or native species from local source
- Weed-free mulch
- Treatment of invasive species

Treatments to Avoid

- Hay/straw bales (due to visual effect and potential for weed and non-native seeds)
- Seeding non-natives or non-local natives (to avoid introducing non-native genetics)
- Contour felling (due to visual effects, and loss of natural conditions)
- In-stream structures or riparian planting (due to effects of human actions on habitat)
- Pre-fab erosion control structures (loss of natural conditions)

Application: In one situation, post-fire erosion and flooding effects were determined to be potentially significant to a subdivision immediately adjacent to the wilderness boundary. The only effective place to locate mitigative treatments was in the wilderness. Mulching of weed-free rice straw was prescribed in the 150-acre subwatershed that directly affected the homes in the subdivision. The rest of the wilderness area (3000 acres) was left untreated. Because the potential effects were associated with storms that were less than a month away, the Forest Supervisor requested approval for the use of motorized equipment (helicopters) to apply the mulch. Approval was granted, the helispots

and staging areas were located outside of the wilderness, and the treatment was completed in one week.

In another situation, wildfire burned the entire headwaters (10% wilderness and 90% non-wilderness) of a watershed that provides the direct municipal water supply to a city of 10,000 people. It was determined that the wilderness contribution area could be left untreated and that aggressive treatment of the non-wilderness portion would provide adequate protection of the human health values at risk.

Frequently Asked Questions:

Q. Are past suppression effects justification for BAER treatments?

A. A proposal to implement treatments based solely on an assertion that the fire has burned hotter and more intensely because of human actions to suppress fires in the past is not appropriate. Burn severity should be evaluated based on its potential to contribute to threats to life and property or unacceptable degradation to natural and cultural resources. Treatments should only be proposed in the areas that are the most efficient locations for providing needed mitigative or preventative effects. In wilderness, unless there are unacceptable risks to wilderness or non-wilderness values, natural fire is a wanted event, whatever the effects.

Q. The Forest Supervisor has determined that the use of motorized equipment (helicopter transport of erosion control materials) is needed for BAER activities in the wilderness. Can we use the original approval granted for use of helicopters during suppression?

A. Emergency use authority approved for fire suppression actions do not automatically apply to subsequent BAER activities. Determine if the use of motorized equipment is the minimum necessary requirement and, if necessary, request a new authorization for BAER treatments. In most regions, the Regional Forester is the approving official for this authorization.

Q. When is invasive species treatment in wilderness justified?

A. If the fire creates a situation that will greatly increase the expansion of pre-existing invasives (an unnatural wilderness condition), allowing them to further out-compete native vegetation, treatment to reduce the further spread of invasive species may be allowed. However, in designated wilderness, specific statutory direction is in place and any proposed treatment must be within the management objectives for the wilderness. When determining if treatment in wilderness is appropriate and justified consider: 1) pre-planned treatment strategies included in any existing integrated invasive species management plan for the wilderness, and 2) plans for treatment of affected adjacent non-wilderness lands. In some regions herbicide use in wilderness must be approved by the Regional Forester.

Q. Are BAER activities automatically justified when the fire was human-caused?

A. The cause of the fire is irrelevant. What is important is the location of any critical onsite or downstream values, the risk of unacceptable degradation and the most efficient and effective location for needed preventative or mitigative treatments.

Q. Can treatments be implemented in wilderness to restock wildlife or fish populations or restore fire-damaged critical habitat for listed species?

A. No, BAER treatments are not intended to restore damaged habitat or replace lost species populations. For more information on this subject see the BAER technical guidance paper titled "Habitat Protection Treatments".

Q. Can I install a silt fence or a stream gage in the wilderness for BAER monitoring?

A. Since BAER-funded monitoring is limited to direct observation of treatment functioning, structures that measure downstream or down slope effects are not appropriate.

Q. Where can I find out more information on wilderness, wilderness management, and the minimum requirements analysis process?

A. Please visit the Wilderness Manager's Home Page at: <http://fsweb.wo.fs.fed.us/rhwr/wilderness/> and Wilderness.net at: <http://www.wilderness.net>.