Emergency Fire Rehabilitation Handbook

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BLM Manual Handbook H-1742-1

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H-1742-1

July 1999

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PREFACE

This Emergency Fire Handbook is a revision of the previous version, which has been in effect since 1985. The revision was necessary because of significant changes occurring within the Bureau of Land Management (BLM): the health of the land became a much-discussed concept, which led to a greater degree of scrutiny by the public and a higher level of visibility for the overall program, and the impact that noxious or invasive weeds can have on the land, particularly after a fire, was recognized. The revision was also necessary because of society's changing desire for more than a minimalist approach to Emergency Fire Rehabilitation (EFR).

In response to these changes, the USDA Forest Service and BLM have been working together on EFR projects and training for EFR project management and implementation. Furthermore, in the fall of 1996, an ad-hoc committee was formed to examine EFR or Burned Area Emergency Rehabilitation (BAER) programs throughout the Department of the Interior. The committee included personnel from the BLM, National Park Service, Bureau of Indian Affairs, Fish and Wildlife Service, and USDA Forest Service. This committee's work—specifically on the increased emphasis on native plants in prescriptions, the limited use of trees in EFR projects, and the limitation on the use of EFR funds for the repair of damaged facilities—is reflected in this handbook revision. The lack of EFR funds for the repair of burned facilities is a change in policy that may cause significant difficulty in some BLM locations during some fire years. It is, however, an issue that will continue to be studied, as the Department of the Interior realizes that a mechanism is needed to ensure the repair of the BLM's infrastructure. The Department is also examining approaches to address the repair of facilities destroyed not only by fire, but also those destroyed by other natural events such as wind or flood.

The team that worked on this handbook was composed of personnel with years of experience at numerous levels: Tom Roberts, Washington Office; Scott Davis, Colorado State Office; Mike Pellant, Idaho State Office; Bill Brookes, Oregon State Office; Jim Johansen, Lower Snake River District, Idaho; Earl Hindley and Linda MacDonald, Utah State Office; Mike Zielinski, Winnemuca District Office, Nevada; and Bob Clark, National Interagency Fire Center, Idaho. This team worked many hours developing a draft that was sent out for comment in the fall of 1997 and routed throughout the Washington Office in the spring of 1998. The final handbook was produced with editorial and graphics assistance from the Information and Communications Group at the National Applied Resource Sciences Center (NARSC) in Denver.

This handbook revision is meant to enable practitioners at the local level to determine the type of EFR plan that is most applicable to their situation. This handbook will also be useful to other parties who may be interested in how the BLM implements EFR projects. This material should be kept in a three-ring binder or other means so that it can be updated with local, State Office, or Washington Office Instruction Memorandums or Information Bulletins, technical notes, or other useful information. It will be updated periodically as needed and will also be reviewed for compliance with changing philosophies or concepts in planning or fire rehabilitation. Any comments or suggestions should be sent to Tom Roberts, Washington Office (WO-220), 202-452-7769.

I. INTRODUCTION

A. Emergency Fire Rehabilitation (EFR) Policy

National policy states that "it is in the best interest of the Nation to take swift action to rehabilitate burned forests" and public lands (Public Law 101-286, May 9, 1990). The objective of the Bureau of Land Management's (BLM's) EFR program is to mitigate the adverse effects of fire on the soil-vegetation resource in a cost-effective and expeditious manner and to minimize the possibility of wildland fire recurrence or invasion of weeds.

Appropriate use of EFR funds includes implementing practices to:

1. Protect life, property, and soil, water (including water-dependent resources), and/or vegetation resources.

2. Prevent unacceptable on-site or off-site damage.

3. Facilitate meeting land use plan objectives (per the Federal Land Policy and Management Act of 1976) and other Federal laws.

4. Reduce the invasion and establishment of undesirable or invasive species of vegetation.

B. Handbook Objectives

The objectives of this handbook are to provide the resource specialist or manager with sufficient information to:

1. Select the appropriate type of EFR plan, given local resource conditions and wildland fire regime.

2. Evaluate wildland fire effects and implement appropriate EFR practices.

3. Conduct required postrehabilitation activities (reports, livestock exclusion, and monitoring).

4. Utilize appropriate standards to implement EFR practices.

C. Rehabilitation versus Restoration

The terms rehabilitation and restoration are often used synonymously, especially in relationship to the use of native species to revegetate burned areas. Rehabilitation is the "repair" of a wildland fire area utilizing native and/or nonnative plant species to obtain a stable plant community that will protect the burned area from erosion and invasion of weeds. Restoration is the use of a diverse mixture of only native species to obtain a plant community that is similar in appearance and function to the historic vegetation.

Total "restoration" of a burned area is not within the scope of the EFR program, although the use of native plants to rehabilitate burned areas is strongly encouraged. Native plants are to be used on those soils and ecological sites where they are:

(1) adapted, (2) able to survive with weed competition and periodic drought, (3) compatible with other land uses, and (4) reasonably priced relative to the land use and EFR plan objectives. The application of EFR practices should be consistent with the Standards for Rangeland Health and Guidelines for Grazing Management (see Section III.CC) in as much as the constraints of EFR policy will allow.

D. Selection and Preparation of Appropriate EFR Plan

There are three types of activity plans that are used to implement EFR practices on lands managed by the Bureau of Land Management: Normal Fire Rehabilitation Plans (NFRPs), Emergency Fire Rehabilitation Plans (EFRPs), and Burned Area Emergency Rehabilitation (BAER) Plans.

The goal of all three plans is to restore and maintain the stability, productivity, diversity, and integrity of public lands after a wildland fire. These plans are tiered to land use plans; e.g., Resource Management Plans (RMPs) or the older Management Framework Plans (MFPs) and their associated Activity Plans (Allotment Management Plans, Habitat Management Plans). Development of EFR plan objectives is guided by resource management objectives, general management practices, and constraints identified in the appropriate RMP or MFP. Land use plan objectives may not be immediately accomplished by implementing EFR practices after a wildland fire. However, EFR treatments should facilitate the process to meet land use plan objectives.

1. Normal Fire Rehabilitation Plan

The NFRP is a programmatic fire rehabilitation plan/Environmental Assessment (EA) developed at the landscape level prior to wildland fire occurrence (Illustration 1). It should be prepared on an ecoregion/watershed basis at the District or Field Office level by an Interdisciplinary Rehabilitation Team (IRT) with public input. The decision to prepare an NFRP is based on the size and diversity of the ecosystems involved, fire history (wildland fire occurrence and size), resource values, and resource management objectives and decisions in land use plans. State Directors may require that NFRPs be prepared for all or part of the public lands within their jurisdiction in accordance with this handbook and the responsibilities and policy in BLM Manual Sections 1510, 1742, and 9210, and Manual Handbooks H-1625-1 and H-1790-1. State Directors approve NFRPs. State Directors may delegate approval of the supplements prepared for individual fires to the appropriate authorized official.

The NFRP supplement (Illustration 2) describes the site-specific rehabilitation actions to be taken, including public input, and requires a Decision Record; e.g., Decision Record/Rationale. The NFRP contains information about those areas where wildland fires are most likely to occur, where and what type of rehabilitation treatments are needed, and an Environmental Assessment (EA) of the impacts of those rehabilitation practices or of taking no action. A map showing previous 10-year wildland fire occurrence by size of burn should be prepared to assist in determining if an NFRP is warranted for

an administrative unit. A review of fire management activity plans and wildland fire reports for the unit under study may also assist in the decision process. The NFRP reduces the repetitive preparation of individual rehabilitation plans for wildland fires, thereby reducing time and costs, especially where wildland fire occurrence is high and the size of wildland fires is large.

2. Emergency Fire Rehabilitation Plan

A site-specific EFRP is developed by the local or designated IRT for wildland fires requiring rehabilitation in those areas not covered by an NFRP. The development of this plan is based upon the same factors as those for an NFRP (Illustration 1). The EFRP contains a site-specific EA with opportunity for public input and generally is the preferred EFR procedure where wildland fire size and frequency do not warrant the time or effort to prepare a comprehensive NFRP.

An EA will be prepared for Fire Rehabilitation Plans (FRPs) and EFRPs in accordance with instructions in the Bureau's National Environmental Policy Act Handbook (H-1790-1). The EA for the NFRP and EFRP should also:

a. Address applicable land use plans ensuring that treatments identified in NFRPs and EFRPs are consistent with the land use plan objectives and decisions.

b. Discuss how the proposed rehabilitation treatments would facilitate meeting EFR and land use plan objectives, list potential species, and discuss impacts of using introduced and native species [appropriate components of the Native/Nonnative Plant Worksheet (Illustration 3) should be incorporated].

c. Consider cumulative impacts of past wildland fires and rehabilitation projects in the proposed treatment area.

d. Summarize the consultation and coordination efforts with the public and other agencies.

A Finding of No Significant Impact (FONSI) or Decision Record is required for all NFRP supplements and EFRPs. The local authorized officer (Manual Section 1203) is responsible for preparing all EFRPs; however, if the plan proposes introductions of nonnative plants rather than naturalized species, it must be approved by the State Director (Manual Section 1745.16).

The State Director may delegate EFRP approval to a lower level if the intent of Manual Section 1745.16 is met through the EA process or the analysis contained in the Native/Nonnative Plant Worksheet.

Because NFRPs are National Environmental Policy Act (NEPA) documents, public involvement is required on all actions described in the NFRP. This includes providing the public an opportunity to comment on the NFRP and incorporating any revisions or changes into the NFRP.

3. Burned Area Emergency Rehabilitation (BAER) Plan

This approach is generally employed after a wildland fire that involves multiple agency ownership or on large complex wildfires where preparation of an EFR plan is beyond the capability of the local staff. A preselected team of interagency specialists identified prior to the wildland fire (members may be outside the local office area) is brought in to evaluate fire effects and prepare a rehabilitation plan. A BAER team may be requested through the Incident Command System (ICS) prior to wildland fire control or later through the appropriate line management decision process. The usual rehabilitation approach for Bureau wildland fires is to use a local IRT to evaluate wildland fire effects and prepare the appropriate EFR plan. The BAER approach is described in the United States Department of Agriculture Forest Service's Burned-Area Emergency Handbook (FSH 2509.13); therefore, no further description of the BAER procedure is contained in this handbook. The Forest Service BAER Handbook may be available for reference at a local Forest Service Office and should be considered as a reference in other procedures and techniques.

SAMPLE FORMAT FOR NFRPs/EFRPs/EAs

I. PURPOSE AND NEED

II. RELATIONSHIP TO PLANNING

III. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

- A. Proposed Action
- B. Alternatives (minimum)
  1. No Action
  2. Limited Rehabilitation

IV. AFFECTED ENVIRONMENT

V. ENVIRONMENTAL CONSEQUENCES/IMPACTS (see Illustration 2-V for list of critical elements to be addressed in this section)

- A. Proposed Action
- B. Alternatives

VI. CONSULTATION AND COORDINATION

VII. MONITORING

VIII. SUMMARY

IX. ANNUAL WORK PLAN SECTION (include other funding sources)

X. MAPS

XI. COST/RISK ASSESSMENT

XII. NATIVE/NONNATIVE WORKSHEET (consider in NFRP and attach form to EFRP)

XIII. EFR PROJECT SUMMARY

XIV. ENVIRONMENTAL ASSESSMENT DECISION REPORT (Decision Record/Rationale)

XV. LIST OF PREPARERS/REVIEWERS

SAMPLE FORMAT FOR NFRP SUPPLEMENTS

I. ENVIRONMENTAL ASSESSMENT DECISION REPORT (Decision Record/ Rationale)

II. LIST OF PREPARERS/REVIEWERS

III. PROJECT AREA DESCRIPTION

A. Fire Description
B. Vegetation & Soil Description

IV. PROPOSED PROJECT TREATMENTS

A. Revegetation

1. Species & Rate of Application
2. Acres
3. Method
4. Timing

B. Structures

1 New Fence
2. Protective Fence Repair
3. Cattle Guards
4. Water Developments (funded from other sources)
5. Recreation Facilities (funded from other sources)
6. Other (funded from other sources)

C. Erosion Control Treatments

1. Check Dams
2. Ripping, Contour Furrowing/Felling, etc.
3. Other

D. Site Preparation

1. Chemical
2. Mechanical

V. CONSIDERATION OF CRITICAL ELEMENTS

- A. Air Quality
- B. Cultural/Paleontology Resources
- C. Hazardous Substances or Solid Waste
- D. Native American
- E. Noxious Weeds
- F. Prime & Unique Farmlands
- G. Special Management Areas
- H. Special Status Species
- I. Visual Resources
- J. Water Quality
- K. Riparian-Wetland Areas, Floodplains
- L. Wild & Scenic Rivers
- M. Wilderness/WSAs
- N. Wild Horse/Burro Management

VI. PROJECT COST SUMMARY

- A. Labor Costs
- B. Operation Costs
    1. Vehicles, Travel
    2. Contracts/Services
    3. Material Costs (seed, fencing, etc.)
- C. Total Costs by Fiscal Year
- D. Funding From Other Sources

VII. PROJECT MAP(S)

VIII. COST/RISK ASSESSMENT

IX. NATIVE/NONNATIVE WORKSHEET

NATIVE/NONNATIVE PLANT WORKSHEET

This worksheet is required for all EFRPs and NERP supplements. These criteria will be evaluated by the interdisciplinary team preparing the EFR plan. Each element requires a short narrative/rationale. See BLM Manual 1745 for additional information on these criteria.

Proposed Native Plants in Seed Mixture

1. Are the native plants proposed for seeding adapted to the ecological sites in the burned area?
   ☐ Yes ☐ No Rationale:

2. Are seeds or seedlings of native plants available in sufficient quantity for the proposed project?
   ☐ Yes ☐ No Rationale:

3. Is the cost and/or quality of the native seed reasonable given the project size and land use and rehabilitation plan objectives and the guidance in BLM Manual 1745?
   ☐ Yes ☐ No Rationale:

4. Will the native plants establish and survive given the environmental conditions and the current or future competition from other species in the seed mix or from exotic plants?
   ☐ Yes ☐ No Rationale:

5. Will the current or proposed land management (livestock, recreation use, wildlife populations, etc.) after the seeding establishment period maintain the seeded native plants in the seed mixture?
   ☐ Yes ☐ No Rationale:

Use of native species for rehabilitation projects is required if all the answers to this portion of the worksheet are yes (assuming that the native plant species are available).

Proposed Nonnative Plants in Seed Mixture

1. Is the use of nonnative plants necessary to meet objectives; e.g., consistent with applicable land use/activity plans?
   ☐ Yes ☐ No Rationale:

2. Will nonnative plants meet the objective(s) for which they are planted without unacceptably diminishing diversity and disrupting ecological processes (nutrient cycling, water infiltration, energy flow, etc.) in the plant community?
   ☐ Yes ☐ No Rationale:

3. Will nonnative plants stay on the site where they are seeded and not significantly displace or interbreed with native plants?
   ☐ Yes ☐ No Rationale:

A "no" response requires additional analysis in the EA or selection of an alternate species in the seed mixture.

PROPOSED SEED MIXTURE

Nonnative Plants	Native Plants
1._____	1._____
2._____	2._____
3._____	3._____
4._____	4._____
5._____	5._____
6._____	6._____

II. PROCESS TO PREPARE AND IMPLEMENT EFRPs OR NFRP SUPPLEMENTS

Once an NFRP has been approved or a wildland fire occurs in an area without an NFRP, necessitating the preparation of an EFRP, the following actions will be taken.

A. Assembly of the IRT

The appropriate responsible/designated line manager assembles an IRT, including a team leader, to begin the evaluation procedure to determine if and what kind of rehabilitation treatments, weed detection and monitoring, and potential weed controls are needed. The IRT should be assembled and ready to work within 3 days of wildland fire control or earlier if the wildland fire is large and partially controlled.

The disciplines represented by the IRT will vary according to the complexity of the fire and availability of personnel with different skills and backgrounds. Generally the team should include two to four resource specialists (resource advisor, wildlife, ecology, range, watershed, weeds, etc.), a member knowledgeable about soils, and an operations representative familiar with seeding equipment and contracting. A team member may represent several skills. Including expertise from cooperating agencies or offices in the team effort is encouraged, especially when the needed skills are not available within the BLM. As indicated earlier, when an interagency team is needed on a complex wildland fire that crosses agency boundaries, a BAER team may be requested (see Section I.D.3 of this handbook).

B. Funding to Evaluate Wildland Fires for Rehabilitation

District or Field Office managers may request up to 2 workmonths of immediate funding in subactivity 2822 from the State Office Budget Officer to finance fire evaluations and EFRP or NFRP supplement preparation. In all cases, the project number to be used is the same as the wildland fire incident number assigned during the fire management effort. All operational costs (aerial photography, global positioning system work, etc.), travel, and workmonths for District or non-District IRT members may be charged to the appropriate EFR funding/project code.

C. Review of Current Available Resource and Wildland Fire Data

Prior to field inspection of the burned area, the IRT should review the existing NFRP or relevant land use plan decisions if an NFRP is not in place. Resource data important in the review process include monitoring studies and inventories (vegetation; cultural; and threatened and endangered, including sensitive, species). Monitoring studies and vegetation inventories provide valuable information on preburn weed populations and perennial plant composition that may be useful in deciding what actions may be necessary before seeding or whether perennial plant

recovery may preclude the need for reseeding burned areas.

Information on the fire history, fire ecology and effects, fire management planning, and especially the past fire rehabilitation treatments is essential in developing proposed rehabilitation treatments, including seed mixtures. Soil surveys contain important information on characteristics of soils relative to the success of seedings and the operation of seeding equipment (rockiness, steep slopes, shallow soil profiles, etc.). This basic background information could also be instrumental in planning the seeding techniques, including the use of seed drills, aerial application, or the necessity for chaining the seed into the soil surface. Additionally, potential vegetation types can be derived from the ecological site information in the soil survey to assist in the selection of appropriate native species for seeding.

Areas of cultural concern, wilderness and wilderness study areas, areas of critical environmental concern, erosion hazards, threatened and endangered species habitats, etc., should also be identified from office records prior to field inspection.

Aerial photographs and maps are essential tools for the IRT on initial fire inspections. Range improvements and other BLM structures within the wildland fire perimeter should be plotted on maps/photos to assist the IRT in identifying burned structures for reconstruction or replacement consideration (although not funded through the use of EFR funding).

D. Evaluation of Wildland Fire Effects

After the preliminary information has been reviewed and assembled, the IRT will conduct one or more field inspections of the burned area. This should be planned and undertaken in an expeditious manner to ensure the completion of any necessary plan within the appropriate time period. The burned area *must* be evaluated to determine if (related to the EFR program):

1. Life or private property will be threatened if rehabilitation practices are not implemented.

2. The vegetation that will reestablish is unacceptable, e.g., exotic annual grasses or noxious weeds, or will not meet land use plan objectives.

3. Adequate desirable vegetation will recover to stabilize soil and prevent on- or off-site soil erosion problems.

The impacts of wildfire on rangeland health, cultural resources, threatened and endangered species, Native American or other cultural values, etc., should also be evaluated for appropriate action from other benefitting activity sources. The action may take the form of funding to mitigate impacts of the fire or needed coordination with other entities or offices.

The IRT evaluates wildland fire severity and determines the potential for recovery of the burned vegetation throughout the burned area. One of the most important

determinations made by the IRT during the inspections is, "Will the burned area naturally recover or will seeding be required?" Reseeding burned areas that would recover naturally is not cost-effective and can lead to dominance of nonnative plants that inhibit recovery of native plants.

The IRT should review and become familiar with the information contained in the Fire Effects Information System (FEIS), a computerized database, and the Fire Effects Guide, and should seek other relevant literature, documentation, and expertise. The FEIS, sponsored by the National Wildfire Coordinating Group (NWCG), is described in "Fire Effects Information System: User's Guide," USDA Forest Service General Technical Report INT-GTR-327. It contains information on about 900 plant species, 90 animal species, and 25 plant communities. Summaries are updated periodically as new fire ecology information becomes available.

The FEIS is available via several routes on the internet including *http://www.fs.fed.us/database/feis welcome.htm;* additional information can be obtained from fire science personnel in the State Office or National Interagency Fire Center (NIFC). It can easily be accessed through the Forest Service website. The Fire Effects Guide, also sponsored by the NWCG, is available from the Publications Management System Manager at the NIFC warehouse as NFES 2394. Numerous other technical references should also be consulted and are available via the Internet (the Natural Resources Conservation Service websites) and other locations to ensure that the appropriate techniques and plant species are utilized in planned projects.

E. IRT Recommendation(s)

Upon completion of the field inspection(s) of the burned area, the IRT or the team leader reports the findings and recommendations to the authorized officer. Options for rehabilitation, potential costs, consultation and cooperation needs, and potential controversies associated with the proposed EFR treatments are presented at this time. The line manager accepts, modifies, or rejects the IRT's recommendations and gives direction to the team as to whether to proceed with the EFR plan or possible alternatives.

F. Preparation of EFRP or NFRP Supplement

The IRT begins preparation of the appropriate EFR plan based upon the authorized officer's input. The treatments are finalized and the required documents prepared. See Illustration 1 for a sample format for an EFRP and Illustration 2 for an NFRP supplement format.

In addition to preparing the EFR plan, the IRT takes the following actions:

1. Determines the availability and cost of the seed proposed for planting.

2. Begins making arrangements for the cultural and threatened and endangered species clearances, including coordinating with BLM contracting specialists.

3. Determines the availability and makes preliminary arrangements for seeding equipment.

4. Prepares a cost/risk analysis (Appendix B) which includes the proposed action, no action, and alternatives for all proposed rehabilitation projects on the burned area.

5. Coordinates with the authorized officer and with affected or interested parties (including livestock permittees) regarding proposed rehabilitation practices.

6. Coordinates with the State Office on complex or controversial EFR issues or technical questions.

G. EFR Plan Approval

The IRT completes the EFR plan and obtains appropriate review from the necessary policy, technical, or other interested parties, prior to the submission of the plan for approval. If for some reason problems are defined, they should be worked out before the plan is submitted for approval. All EFR plans will be signed by the authorized officer within 21 calendar days from wildland fire control. Plans costing less than $100,000 to implement will be reviewed at either the District or State Office level prior to approval by the authorized officer. Plans costing more than $100,000 are reviewed at the State Office level for technical and policy consistency but must be approved at the Washington Office level.

The IRT or authorized officer may request review and input from the District, State Office, and Washington Office on any EFR plan. The use of electronic means of transmitting EFR plans is encouraged.

Any office conducting an EFR plan review is required to complete the review within 7 calendar days of receiving the document.

Approval of EFR plans may be as simple as a phone call, followed by hard-copy documentation.

After the plan is approved, or earlier if funding to conduct wildland fire evaluations (including aerial photography of the burned area) or plan preparation is authorized by the State Office Budget Officer (see Section II.B), a completed construction and acquisition Project/Subproject Number Assignment and Information Form, Temporary Form 1310-20 (Illustration 4), must be submitted to the Accounting Group, BC-610 (National Business Center, Denver). This step is necessary to set up an account to begin funding EFR actions.

H. EFR Plan Implementation

Actions to implement EFR treatments may begin immediately upon plan approval and submission of Form 1310-20. Implementation should begin as soon as necessary to complete the treatment prior to the onset of winter or weather shutdowns. However, periodic weed monitoring and control may extend well into the next growing season. Clearances (cultural, sensitive species, etc.), equipment, and seed availability may also delay implementing rehabilitation treatments in a timely manner. Therefore, potential delays or issues should be addressed early in the implementation process to facilitate completion of EFR treatments at the proper time, including out-year treatments, to ensure maximum probability of success. All protective fences should be functional prior to livestock use of unburned adjacent rangeland.

Appeals of EFR plans are possible and may delay implementation. All EFR decisions, except "full force and effect" decisions, require a 30-day implementation delay [43 CFR 4.21(a)(1) and (2)]. Therefore, potential concerns should be addressed early in the EFR process to avoid appeals and the subsequent delays in treatment implementation.

I. EFR Plan Completion

Two reports are prepared upon completion of all EFR treatments. A Rangeland Improvement Project System (RIPS) worksheet (1744-1) is submitted via computer to the National Applied Resource Sciences Center (RS-140), with a copy placed in the EFR project file. Districts/programs that do not use RIPS, e.g., Oregon and California Districts in Oregon, should use other appropriate documentation.

An EFR Project Summary (Illustration 5) is prepared and placed in the EFR project file within 90 days of project completion. This report contains information on actual seeding rates (based on pure live seed), timing and conditions during seeding, and information on other treatments (including a map of actual treatment application areas). The information is essential to interpreting results from monitoring studies on the treatment areas.

J. Project Monitoring and Evaluation

Monitoring studies, including use supervision, can be established and used for up to three growing seasons following fire control to determine whether EFR objectives are being met. The IRT that developed and implemented the EFR plan is encouraged to participate in project monitoring. After the end of the third growing season, long-term monitoring is encouraged but must be funded through a benefitting activity. Monitoring studies are encouraged on all EFR projects.

The results from the monitoring studies should be analyzed, evaluated, and shared with others to improve the success of future EFR projects. This includes professional societies, rehabilitation specialists, wildlife groups, resource advisory councils, and when possible, the media, etc. The results of these studies can be shared through workshops, tours, and professional papers. Monitoring data and reports should be permanently filed in the appropriate location such as allotment management plan, habitat management plan, herd management plan, or other files.

TEMPORARY FORM 1310-20
AUGUST 1998

PROJECT/SUBPROJECT NUMBER ASSIGNMENT AND INFORMATION FORM

draft

PROGRAM (SUBACTIVITY): __ __ __ __

PROJECT NUMBER: __ __ __ __

SUBPROJECT NUMBER: __ __ __ __

CASE FILE NUMBER: _____

PROJECT NAME: _____

APPLICANT/VENDOR'S NAME: _____

APPLICANT'S ADDRESS: _____

_____

APPLICANT'S TELEPHONE NUMBER: __ __ __ __ __ __ __ __ __ __

ORGANIZATION CODE OF LEAD OFFICE: __ __ __ __ __

ORGANIZATION CODE OF OTHER OFFICES CHARGING TO THE PROJECT (JOB): __ __ __ __ __ / __ __ __ __ __ / __ __ __ __ __

__ __ __ __ __ / __ __ __ __ __ / __ __ __ __ __

ESTIMATED COMPLETION DATE: __ __ / __ __ / __ __

ESTIMATED PROJECT TOTAL COST: $ _____

ESTIMATED SUBPROJECT TOTAL COST: $ _____

NAME OF PROJECT MANAGER: _____

ORGANIZATION CODE OF PROJECT MANAGER: __ __ __ __ __

TELEPHONE NUMBER OF PROJECT MANAGER: __ __ __ __ __ __ __ __ __ __

TRUST FUND PROJECTS IN PROGRAM 7122 MANY BE AUTHORIZED AND INDIRECT COST RATE OTHER THAN THE ANNUAL PREVAILING RATE:

EXCEPTION INDIRECT COST RATE: _____%

APPROVING OFFICER'S NAME (PRINT): _____

APPROVING OFFICER'S SIGNATURE: _____

APPROVING OFFICER'S TITLE: _____ DATE: __ __ / __ __ / __ __

FOR NATIONAL BUSINESS CENTER ACCOUNTING GROUP (BC-610) USE ONLY

VENDOR NUMBER: _____ AGREEMENT NUMBER: _____

RA DOCUMENT NUMBER: _____

INPUT BY: _____ DATE: __ __ /__ __ / __ __

Illustration 4

EFR PROJECT SUMMARY

	DATA COLUMN
Fire Name:	
Fire Number:	
Fire Control Date:	
Acres BLM Burned:	
Start of Rehabilitation Project (Mo./Yr):	
Completion of Rehabilitation Project (Mo./Yr):	
Miles of New Fence:	
Miles of Fence Rebuilt:	
No. of Soil/Watershed Structures:	
Acres Reforestation:	
Acres of Revegetation[1]:	
Acres of Burned Area Protected for Natural Regeneration[2]:	
Total Acres Rehabilitated[3]:	
Estimated Funding Current Year (FY):	
Estimated Funding Second Year (FY):	
Estimated Funding Third Year (FY):	
Total Cost Rehabilitation Project:	

[1] Acres of revegetation refers to the acres of the burn that is drilled, aerial seeded (with or without followup seed covering), seedlings transplanted, etc. Do not double count acreage with multiple revegetation treatments. For example, burned acreage that is drill seeded (100 acres) and aerial seeded (same 100 acres) is only counted as 100 acres of revegetation.

[2] Acres of burned area protected for natural regeneration refers to burned areas that will recover to satisfactory vegetation by grazing or human use exclusion. Protection measures include closures, fencing, herding, etc. This designation does not refer to burned areas that will recover to unacceptable vegetation, e.g., weeds, or to revegetated areas already accounted for in acres of revegetation.

[3] Total acres rehabilitated equals the acres of revegetation plus acres of burned areas protected for natural regeneration.

Illustration

III. STANDARDS FOR USE OF EFR FUNDS

BLM fire rehabilitation actions are intended to stabilize biotic communities to minimize unacceptable change to ecosystem structure and function of the public lands. EFR funds can only be used for rehabilitation of public lands administered by the BLM. Coordination of EFR efforts is encouraged with the USDA Natural Resources Conservation Service (NRCS), USDA Forest Service, and appropriate State agencies, etc., to improve economic efficiencies in their related rehabilitation programs.

The use of EFR funds for fire rehabilitation is subject to a number of criteria.

A. Timeliness

Congress has determined that it is in the best interest of the Nation to take swift action to rehabilitate burned lands. Therefore, EFR treatments must be implemented, to the extent possible, before additional damage occurs to the burned site or undesirable vegetation becomes established. Treatment must occur at a time that will ensure a high or maximum probability of success. Therefore, EFRPs and NFRP supplements should be submitted to the next level of management review or approval within 21 calendar days of wildland fire control. Extensions to the 21-day submission requirement must be approved at either the State or Washington Office level. State Office review or approval and Washington Office budget approval for plans more than $100,000 must be completed within 7 calendar days of receiving the EFRP or NFRP supplement. The plan preparation timeframe is shorter on multiagency rehabilitation projects. Plans must be submitted to the authorizing officer within 10 days following control of fire; if additional time is needed, extensions can be negotiated with the State Office and cooperating agencies.

B. Equipment

Capitalized or noncapitalized equipment will not be purchased with EFR funds without review by the Washington Office, Division of Budget (WO-880), and written approval of the Director. Purchasing equipment must be shown to be more economical than leasing it before it will be considered for approval by WO-880.

C. Livestock Management

Exclusion of livestock is critical for the recovery of burned vegetation or establishment and maintenance of new seedings and livestock use should not be permitted until the vegetation has recovered or has established.

1. Recovery/Establishment Period

Revegetated areas and areas that have been burned but not revegetated will be closed to livestock grazing for at least two growing seasons following the season in which the wildfire occurred to promote recovery of burned perennial plants and/or facilitate the establishment of seeded species. Livestock permittees must be informed of the closure early

during the plan preparation process, and livestock closures will be made a condition or term on the grazing license or permit. Livestock closures for less than two growing seasons may be justified, on a case-by-case basis, based on sound resource data and experience.

2. Grazing Management After Recovery/Establishment Period

An interdisciplinary evaluation is required at the end of the second growing season to determine whether additional livestock exclusion is required to meet rehabilitation objectives. Additional grazing exclusion may be required to achieve rehabilitation objectives, especially when palatable, slow-maturing shrubs are included in the rehabilitation project. Most shrubs should not be grazed until they are able to produce viable seed. Postestablishment livestock management in burned or seeded areas should maintain both the planted species and the native species to meet land use (including Standards for Rangeland Health and Guidelines for Grazing Management) or activity plan objectives.

D. Wild Horses and Burros

Wild horses and burros may also need to be excluded from treatment areas. EFR funds may be used for fencing or temporary relocation (both actions must be consistent with the wild horse and burro policy) until the area recovers. Additional use supervision may be required to ensure that wild horses or burros are not accidentally trapped within the treatment areas if they inadvertently gain access. It is also important to ensure that wild horses or burros do not get trapped without access to water or do damage to seeded or recovering burned areas. Care should be taken to minimize the blocking of migration or water trails with EFR protective fences.

E. Wildlife

Wildlife populations, especially big game species, may depend on habitat lost in wildland fires for survival, and wildlife use may have a significant effect on the success of rehabilitation treatments.

1. Habitat Loss and Replacement

EFR treatments must be consistent with wildlife habitat management objectives in land use and activity plans. For example, if a land use plan identified an area as critical deer winter range and it burned, the EFR plan may make a recommendation to plant appropriate shrub species to meet wintering deer habitat and watershed stabilization needs. As in other vegetation projects, planning and implementation should be within two growing seasons.

As with all seeding prescriptions, a combination of criteria including cost, adaptability, probability of successful establishment, weed competition, etc., should be considered before finalizing a seed prescription in important wildlife habitats.

2. Wildlife Management During Recovery/Establishment Period

Wildlife may cause damage to burned areas during the recovery and/or seeding

establishment period. Most wildlife management programs are the responsibility of State wildlife agencies; therefore, BLM can only indirectly manage these impacts. If wildlife threaten the success of rehabilitation treatments, an agreement should be reached with State wildlife management agencies before the rehabilitation treatments are implemented, prescribing how wildlife will be managed.

F. Threatened, Endangered, and Sensitive Species

The policy of the BLM is to conserve threatened and endangered (T&E) plant and animal species through conservation of the habitats upon which they depend, and to work closely with the U.S. Fish and Wildlife Service on species protection. All fire rehabilitation plans should be reviewed to determine if T&E species or their habitats would be adversely affected by the implementation of rehabilitation treatments. The BLM will consult with the U.S. Fish and Wildlife Service (or National Marine Fisheries Service, as appropriate) on all actions that may affect a listed species or its habitat to ensure compliance with Section 7 of the Endangered Species Act. A similar process is required for State agencies when State-listed species are involved. The BLM policy on Federally listed species, species proposed for listing, candidate species, sensitive species, and State-listed species is contained in Manual Section 6840, it identifies management requirements for proposed species should be reviewed for additional management requirements. Timeframes for review and consultation may last several months. Therefore, every effort should be made to initiate these actions early in the EFR planning process.

G. Forest Rehabilitation

Reforestation of burned commercial forest land is not an appropriate use of EFR funds. However, the costs for removing trees destroyed by fire where they are a danger to the public is appropriate, as is the use of trees in contour felling to reduce the possibility or amount of erosion. Trees may be planted in certain and limited situations (see III.Q.1).

H. Wilderness Study Areas / Wilderness

1. Wilderness Study Areas

Handbook H-8550-1 includes BLM policy and guidance for management of Wilderness Study Areas (WSAs) and should be consulted. In general, WSAs must be managed in a manner so as not to impair their suitability for preservation as wilderness. Impacts from the equipment used for seeding must be carefully planned to be the least intrusive necessary to obtain a successful seeding. The use of native species (does not include naturalized species such as crested wheatgrass) is required in WSAs. Current Instruction Memorandums, WSA Handbook H-8550-1, and the Bureau's local, state, or national wilderness specialists should be consulted prior to implementing EFR treatments in a WSA. Exceptions to the use of nonmotorized equipment in a WSA must be fully justifiable based upon an imminent and severe threat to high downstream values. Coordination with interested public and wilderness organizations is encouraged early in the EFR planning process.

2. Designated Wilderness Areas

Manual Section 8560 and Handbook H-8560-1 (Management of Designated Wilderness Areas) provide guidance on surface-disturbing activities in Wilderness Areas. Wilderness Management Plans are required for all designated Wilderness Areas and should be reviewed during EFR plan development. EFR treatments in designated Wilderness Areas may use native or naturalized nonnative species such as crested wheatgrass where there is no reasonable expectation of natural regeneration. Seeding equipment used in these areas must be the minimum necessary to successfully distribute the seed into a suitable seedbed. Overland motorized equipment will not be used where nonmotorized equipment can accomplish the rehabilitation objective(s). Activity plans, such as NFRPs, and EFRPs must conform with Wilderness Management Plans.

I. Recreation

Burned or seeded areas may be temporarily closed to the public (43 CFR 1840.11) by excluding vehicle, bicycle, horse, and foot use if unacceptable resource damage would occur or if danger to the public is present due to fire damage or rehabilitation activities. Such closures require following the NEPA process and issuing a Federal Register Notice and sufficient public notices.

Costs to enforce public restrictions or closures should be reasonable and accomplished within existing program funding (e.g., benefitting activities), except in extraordinary situations, which require justification and approval in the EFR plan. Land use or activity plans should be reviewed prior to implementing rehabilitation measures to identify other areas of special management concern (Areas of Critical Environmental Concern, outstanding natural areas, primitive areas, Wild and Scenic Rivers, National Trails, Research Natural Areas, National Conservation Areas, National Monuments) to ensure rehabilitation treatments are consistent with management objectives for these areas.

J. Visual Resources

Impacts of rehabilitation practices on visual resources (see Visual Resource Inventory Manual Handbook H-8410-1) should be considered in all EFR plans. A Visual Contrast Rating Worksheet (Form 8400-4) or a checklist is required for all rehabilitation projects (see Manual Handbook H-8431-1, Visual Resource Contrast Rating).

K. Cultural Resources

Rehabilitation treatments that disturb the soil surface must be reviewed for potential effects on significant cultural resources. The appropriate Field Office cultural specialist should become involved in treatment planning as early as possible to determine if survey, protection measures, and consultation with Native American tribes and other parties are required prior to treatment. This early coordination is especially important where delays in obtaining cultural clearances could delay or halt timely reseeding or project implementation. Where significant cultural resources are physically avoided by rehabilitation treatments, the avoided areas should be manually or mechanically reseeded with equipment that causes minimum surface disturbance (for example, broadcast

seeded and seed covered by pickups or four-wheelers with drag chains). Close coordination with the District or State Office staff personnel may help in this process.

Cultural clearances should be addressed early in the EFR plan development to ensure that treatments are installed at the proper time. Cultural clearances are covered by the EFR program. Efforts should be made to address the clearance questions in a timely manner, as this can be a constraint to reseeding and the subsequent success of the EFR project. Cultural clearances must be performed in a cost-effective manner relative to the cultural values at risk. Where appropriate, Tribal input should be included in the development of NFRPs and EFRPs.

Wildfires often expose cultural sites to vandalism, especially after these sites are flagged for treatment avoidance. Aerial surveillance to detect cultural site vandalism and all actions required to apprehend individuals vandalizing cultural sites are charged to the benefitting activity. Special cultural situations requiring EFR funding may be requested with a written justification included with the plan or supplement.

L. Treatment Specifications

All EFR treatments (fences, culverts, water bars, etc.) must comply with applicable BLM policy and standards (as specified in the Engineering Guide Specifications and Standard Drawings and Manual Section 9170). Treatments should be designed to be cost-effective and to meet rehabilitation objectives. Rehabilitation treatments which could cause unacceptable soil disturbance require input and recommendations from soil specialists on project design and mitigation.

M. Suppression Activity Damage

Damage to improvements or to resources caused by fire suppression activities should be repaired or restored using Emergency Fire Suppression funds (2821). This work should be completed prior to final demobilization of the suppression forces whenever practical. However, it may be more cost-effective and practical to delay some repairs to improve the chance of success. For example, repair of road damage by heavy engine traffic is not practical until sufficient moisture is present, usually in the fall. Ordinarily, road repairs should be limited to $5,000 or less and be completed within 10 months of wildland fire control. Also, it is usually better to wait to reseed fire control disturbances (hand or dozer lines) until the fall season in the Great Basin.

The following repair activities (necessitated by suppression work) should be accomplished with wildland fire suppression, not EFR, funds:

1. Replacement of soil and seeding vegetation on fire control lines.

2. Construction of water bars on primary and secondary fire control lines.

3. Repair of structural improvements or facilities (e.g., fences) damaged by suppression activity.

4. Repair of damage caused by operating the Incident Command Base (spike camps and roads.)

N. Repair or Reconstruction of Improvements Damaged by Fire

The repair or replacement of improvements burned or damaged by fire is not authorized with the use of EFR funds. Consequently, other funding sources must be used for fences, corrals, guzzlers, recreation facilities, or other structures destroyed by fire. Sources of funds include program funds and contributed funds. It is also suggested that Field Offices make every attempt to share costs among program activities, administrative levels, and cooperators before requesting funds from the Washington Office. However, while alternative routes of funding are being developed at the Departmental level, estimated costs for repair or replacement of these facilities should be sent to the Washington Office for tracking purposes. It is also emphasized that the restoration of burned improvements can be planned and funded in subsequent years' budgets. In the event that the estimated cost is beyond any reasonable expectation or possibility of funding before the anticipated rehabilitation of the site, and the facilities will be needed when the site is ready for use, requests for additional funding should be made through WO-220 and WO-880 in the fiscal year the fire occurred.

O. Protective Fencing and Cattle Guards

Protective fences may be constructed or reconstructed, if burned, to protect burned areas from grazing during the recovery period for burned vegetation or the establishment period for new seedings. Protective fencing may serve as either temporary protection or as a permanent management fence. Temporary fences are generally installed where native rangeland will recover after a rest period from grazing, and the area will not require further special grazing management to maintain plant vigor or composition. Temporary fences should be moved to new EFR projects after the protection period is over.

Permanent management fences are generally installed to protect a new EFR seeding from grazing during the establishment period and to manage the seeding after it is established to maintain the seeded species. Permanent fences should be placed around the perimeter of the burn to the degree possible, considering topography, rock outcrops, soils, existing fences, etc.

Fencing that exceeds the amount required to protect new seedings or burned area should be funded with a benefitting subactivity. The fencing of private land to keep nonpermittees' livestock off adjacent burned or rehabilitated public lands is the responsibility of the private landowner(s). Therefore, EFR funds will not be used to fence the private/public land boundary unless State laws require a different approach (e.g., herd districts are in place).

Herding and total pasture or allotment exclusion from grazing (closure) are alternatives to consider in lieu of fencing. For example, if 80 percent of an allotment or pasture is burned, it may be more cost-effective to close the grazing unit rather

than fencing the burned area to allow 20 percent of the unit's former grazing capacity to be used.

Cattle guards may be installed on County, Bureau, or State roads, highways, and areas of high recreation use, where a gate would present a safety hazard to the public. Cattle guards will not be installed with EFR funds on lightly traveled roads and two-track trails. Any cattle guard installed in conjunction with a temporary fence may be removed with EFR funds and be used on future EFR projects.

P. Vegetative Fuel Breaks / Greenstrips

Vegetative fuel breaks, e.g., greenstrips, are strips or blocks of fire-resistant vegetation placed at strategic locations within burned areas to reduce the size or frequency of future wildland fires. Vegetative fuel breaks may be installed with EFR funds if approved in an NFRP or EFRP. The plant species seeded in a vegetative fuel break should provide protection for the soil, water, and other resource values in addition to being fire-resistant.

Vegetative fuel breaks may be planted outside the burned area for short distances (no more that 1 mile) to link existing fuel breaks, including greenstrips, natural barriers, roads, irrigated fields, etc. Vegetative fuel breaks may be planted across unburned "fingers" within the fire perimeter to increase their effectiveness in slowing or stopping future wildland fires.

Q. Revegetation of Burned Areas

Revegetation consists of either planting seed with equipment or transplanting, e.g., planting seedlings (live plants) with mechanical equipment or by hand. Transplanting is generally done with either shrub or tree seedlings.

1. Decision to Revegetate

Planting (by seeding or transplanting) of grasses, forbs and shrubs, and trees in burned rangelands, riparian areas, forests and woodlands is an appropriate use of EFR funds if:

a. Natural regeneration of plants will not establish sufficient cover in time to protect the burned site or off-site resources, such as dwellings, from unacceptable erosion or damage.

b. The vegetation that will establish after the fire is not acceptable.

c. Land use or activity plans require certain plant communities to meet objectives.

d. The use of trees as (or as part of) an EFR treatment is permitted only if the rehabilitation plan demonstrates that trees are necessary to minimize unacceptable change to ecosystem structure and function. This would include the prevention or mitigation of nonnative plant infestation. Acceptable uses may include circumstances where:

(1) Succession of native woody species and the eventual reestablishment of native communities that included tree species would be precluded by the immediate and aggressive invasion of nonnative species; e.g., where the natural reestablishment of native cottonwoods and willows in southwestern riparian areas is difficult due to the invasion of nonnative saltcedar or where stabilization of slopes using only grasses, forbs, and shrubs precludes natural recolonization by native tree species.

(2) Critical habitat for T&E species will be permanently impaired. In this circumstance, planting trees must significantly mitigate deleterious impacts to the species of concern within the timeframe for EFR/BAER project completion; e.g., a tree planting project cannot be authorized if its purpose is to accelerate reforestation to benefit a species that requires old-growth forest for critical habitat.

(3) Use of trees as (or as part of) an EFR treatment is limited to no more than $25,000 regardless of the percentage costs, unless approved by the Bureau Director, who may make the decision to approve or disapprove the use of trees in consultation with other bureaus and the Department.

It is essential that the potential for recovery of native or seeded vegetation and invasion by weeds be evaluated prior to making a decision whether to seed a burned area. Revegetation of burned areas is not an appropriate use of EFR funds if natural regeneration will result in a vegetation type that will meet EFR and land use plan objectives.

Herbicide application may be funded with EFR funds after a wildland fire if noxious weeds are expected to increase to an unacceptable level (see Section III.U). The potential for weed invasion should be considered in developing the seed prescription. Don't include forb, shrub, or grass species that are susceptible to herbicides in the seed mixture if it is likely that weed control may be needed after the rehabilitation seeding is established.

The FEIS is a good source of information on fire effects and recovery potential for many western plants. The Fire Effects Guide also provides useful information on fire effects. Fire severity as indicated by consumption of standing material, color of ash, depth of ash, and soil hydrophobicity, etc., is an indicator of the probability of the burned area to recover naturally and therefore not require seeding. Another source of information about potential species to be used in revegetation is the NRCS-USGS Biological Resources Division VegSpec website. The VegSpec is a web-based, expert system that aids technical people or managers in making sound decisions on what species to plant on specific sites. It is available on the World Wide Web at *http://plants.usda.gov* or can easily be accessed through the NRCS website. It integrates the NRCS soils, plants, and climate databases to select plants to solve conservation problems.

Other sources of information on vegetation (including the potential for invasion by undesirable species), soils, and site potential (ecological site) should also be

reviewed to help determine if seeding is necessary for the success of the rehabilitation project.

Untreated control areas, i.e., unseeded areas, should be incorporated into EFR treatments that include seedings to evaluate the recovery of native vegetation without the influence of revegetation treatments. This information is useful in making future decisions on the need to seed a burned area versus allowing it to recover naturally.

2. What to Plant (Native versus Nonnative Plants)

Species planted on burned areas must provide the protection required by EFR plan objectives, be consistent with the appropriate land use/activity plan (including State Standards for Rangeland Health and Guidelines for Grazing Management), and be in compliance with the guidance contained in BLM Manual Section 1745, "Introduction, Transplant, Augmentation, and Reestablishment of Fish, Wildlife, and Plants." This manual states that: "native species shall be used, unless through the NEPA process it is determined that: (1) Suitable native species are not available; (2) The natural biological diversity of the proposed management area will not be diminished; (3) Exotic and naturalized species can be confined within the proposed management area; (4) Analysis of ecological site inventory information indicates that a site will not support reestablishment of a species that historically was part of the natural environment; (5) Resource management objectives cannot be met with native species."

The Native/Nonnative Plant Worksheet (Illustration 3) helps EFR planners analyze the impacts of using nonnative plants and lists the criteria for selecting native plants for revegetation. This information is required for all NFRP supplements and EFRPs and can be included either as a separate worksheet or by incorporating all of the worksheet elements into an EA.

In addition to using the criteria listed in Illustration 3, using local seed sources for native plants is recommended, especially the proper subspecies of plants like big sagebrush. Important elements to consider in selecting a seed mixture that includes native plants include:

a. Availability at a reasonable price. Reasonable price is not defined here because managers need the flexibility to make this determination on a case-by-case basis. Managers also need to consider that as the demand for native seed increases, more may be produced, ultimately reducing its cost.

b. Adaptation to the area proposed for treatment (avoid use of "one size fits all" seed mixtures on landscapes with different site potentials). The use of local native genotypes is encouraged.

c. Impacts of competition (weeds, other plants in the seed mixture, land uses) on native plant establishment and persistence.

d. Land use plan decisions; e.g., natives only in WSAs.

Use of native species is preferred to the use of nonnatives for rehabilitation projects. However, a mixture of native and nonnative

species is preferable to using only nonnatives if all the desired natives are not available and if the use of nonnatives is consistent with land use plans, including the State Standards for Rangeland Health and Guidelines for Grazing Management. Competitive nonnatives, e.g., crested wheatgrass, or in some locations, yellow sweet clover, should be minimized in the seed mixture to facilitate the establishment and persistence of the native species. Each State should incorporate this guidance on planting natives into a State policy that recognizes local issues and needs.

3. Seed Application

Planting techniques should be based on the seedbed requirements of different plants. For example, some species may need to be planted in separate rows or at different depths than other plant species. Seed should be drilled or covered by dragging a chain, harrow, or other implement. Aerial broadcast seeding should be used only where it has proven successful, based on experience or studies. Numerous scientific studies and technical specialists with experience should be consulted since success or failure of this type of project is contingent on proper seed application and coverage.

4. Timeliness

Seed should be planted during the appropriate season to ensure seed stratification (cold temperatures), germination, and establishment. Fall seedings are recommended for much of the public land managed by the BLM, particularly for sites requiring cool-season species revegetation. Spring seeding may be appropriate for warm-season species in certain regions, such as in the desert Southwest. Early spring transplanting of seedlings is recommended to better utilize available moisture, thereby improving the success of seedling establishment.

R. Testing of Seed and Vegetative Materials

All seed must be tested for noxious weeds to ensure compliance with Federal and State seed laws (a legal requirement). All seed should also be tested for purity and germination (contracting requirements). Certified seed (“blue tag”) should be tested for the same factors (noxious weed, purity, and germination), as should all other seed, unless small quantities (less than 200 pounds) are being used (testing is still recommended).

Tetrazolium tests, performed by State seed laboratories, may be used on shrub seeds and for species where dormant or hard seeds are common. Tetrazolium tests may also be authorized by BLM when seed laboratories do not have enough lead time to use a full germination test.

The use of certified seed is highly recommended (when available) to ensure that desired genetic traits are present. The use of “source identified seed” is recommended when native seed is collected from wildland sites to ensure that a local or otherwise adapted seed source is used to revegetate the burned area.

Straw and other vegetative materials (rice hulls) should be purchased as “certified weed-free” by a State agricultural agency or

should be sampled and tested for noxious weeds prior to use.

S. Public Coordination and Consultation

Interested members of the public must be given reasonable opportunities for input and comment on all EFR plans. Consultation with resource users, other agencies, scientists, and private and public interests are recommended to a degree appropriate to the complexity and level of controversy associated with each EFR plan. The origin of plants used in revegetation (native or nonnative) or techniques used in planting can be controversial and should be addressed early in the EFR planning process.

Due to the need for prompt action following a wildland fire, public participation may be more limited than with other types of nonemergency project proposals. However, the public may still appeal the Decision Record/Rationale for the EFRP or NFRP supplement, possibly delaying implementation of all rehabilitation treatments for at least 30 days. Therefore, every effort should be made to resolve issues with the interested public to avoid delays in implementing emergency treatments required to meet EFR objectives.

During the course of coordination and consultation, excellent opportunities exist to make or improve partnerships with permittees, conservation groups, public volunteers, and State or local government agencies for funding, material, or labor for rehabilitation projects. Joint planning and implementation with other land management agencies are encouraged on multiagency fires.

T. Treatment of Rehabilitation Failures

Treatments (seedings, erosion control structures, etc.) installed through the EFR program sometimes fail. If EFR treatments fail due to natural factors, such as drought or flooding, retreatment (reseeding or reconstruction) may be considered. All retreatments must be approved by the State Director after determination that the proposed actions are still required to meet EFR program objectives (Section I.A). Retreatment of seedings, where one component of the mix did not successfully establish and other EFR objectives were met, is not appropriate with EFR funds. Proper timing and planting techniques will minimize the chances of project failure and the need for retreatment.

U. Pesticide/Fertilizer Use

The use of herbicides to control postfire noxious weeds is appropriate and may be funded through the EFR program if:

1. The herbicides proposed are approved for use on public lands per the Record of Decision for the vegetation treatment. All other applicable label and environmental restrictions must be followed.

2. The application of herbicides is necessary to keep noxious weeds from invading and dominating the postfire environment.

3. The use of herbicides funded by the EFR program is limited to two growing seasons following fire control.

V. Monitoring

Monitoring to determine if EFR objectives were met, as well as evaluating new technology, is encouraged through the EFR program. Monitoring studies, including use supervision, may be conducted with EFR funds for up to three growing seasons following wildland fire control. Monitoring priority should be given to those areas where unique treatments were implemented or areas with greater resource values or public concerns. Priority for those areas where monitoring can detect changes between untreated control (natural revegetation) and treated (revegetation) areas should also be considered. Monitoring intensity should be commensurate with the complexity of the rehabilitation treatments and level of concern or controversy associated with the EFR plan. Monitoring methods are addressed in the Interagency Technical References *Sampling Vegetation Attributes* and *Utilization Studies and Residual Measurements*, or in-place monitoring protocols. Cooperative efforts in monitoring the results of EFR projects are encouraged; these efforts could be with neighboring offices, agencies, or universities.

Monitoring information and results should be retained in a central location in at least one permanent retention file (EFR project, monitoring, or allotment files). Information gained in monitoring is strongly encouraged to be shared through professional papers, technical bulletins, symposia, workshops, etc. Long-term monitoring related to treatment longevity and effectiveness and the plant community dynamics of the project is encouraged through normal funding (not EFR).

W. Evaluation of Experimental or New Technology

The evaluation of new technology (equipment, plant materials, etc.) on a limited scale is appropriate through the EFR program if the potential to improve cost efficiency or success of EFR treatments is likely. The evaluation of experimental technology may include EFR monitoring studies or contracting of studies with research agencies or universities for more complex technologies. Caution must be used in the use of experimental technology to maintain the appropriate size and scope of treatment relative to the overall project. If the monitoring or evaluation of experimental technology involves an outside source (university or private contractor), Washington Office approval is required.

Results of all evaluations of experimental technology funded through the EFR program will require a technology transfer product upon completion of the evaluation. As noted above, the product may be in the form of technical notes or bulletins for distribution through the BLM, professional papers, presentations, or other products. These products should describe the problem, solution, methods, or techniques and should be directed to a variety of audiences, including the public where feasible. At a minimum, the appropriate party (BLM office, university, etc.) should be required to publish and distribute a BLM Technical Note. Publication of results in scientific journals is encouraged, especially if outside cooperators conduct the evaluation.

X. Recovering EFR Costs of Human-Caused Wildland Fires

Costs associated with rehabilitating burned range or forest lands should be recovered to the extent possible from the person or persons responsible if the fire was human caused. Reimbursement of the EFR program should take place if the treatments required to protect burned areas are installed with EFR funds and costs are later recovered.

Y. EFR Funding Approval

The State Director has delegated authority to approve funding or redelegate the approval authority for all EFR plans describing actions costing less than $100,000. Plans costing more than $100,000 to implement require Washington Office approval for funding although primary EFR plan review for technical and procedural content remains at the State Office level. The Washington Office may review EFR plans for policy and fiscal accountability and consistency. All EFR plans must be reviewed at the level above the plan preparation/approval level prior to final approval by the authorized official.

Each State must develop a policy within 1 year of final approval of this handbook to accommodate this review requirement in accordance with the complexity/cost of EFR plans and consistent with the State organization.

An EFR Project Summary (Illustration 5) for all EFRPs or NFRP supplements should be forwarded by the State Office to the Washington Office for budget tracking purposes. EFRPs or NFRP supplements costing more than $100,000 to implement must also be forwarded, within 3 weeks of the control of the fire, with a request for approval (see Section III.A) All EFR plans costing less than $100,000 will be considered funded after approval by the authorized official unless the Washington Office has withdrawn EFR approval authority due to lack of funds.

Within 7 calendar days of receipt, the State Office should submit appropriate EFR documents to the Washington Office. The Washington Office has 7 calendar days after receipt of the required documents to notify the appropriate State Director(s) of funding approval or plan modification. Documentation of EFR plan approval by the Washington Office or the State Office may be a phone call or fax, followed by original hard-copy documentation. See Section III.A for a discussion of the timeframe for approval on multiagency fire rehabilitation projects.

The authority to obligate funds may be temporarily withdrawn from State Directors by the BLM Budget Officer when all available emergency fire rehabilitation funds have been allocated.

Z. EFR Policy on Prescribed Fires

Under the Federal Wildland Fire Policy, approved by the Secretary of the Interior in December 1995, all wildland fire (both planned and unplanned ignitions) will be managed by the “appropriate management action.” In general, planned ignitions and unplanned ignitions that are managed to obtain resource benefits are not appropriate candidates for emergency rehabilitation. In all cases, damages caused by suppression actions are repaired, with associated costs

charged against the incident (fire) project code. All wildland fires that escape approved management actions will be managed in accordance with decisions in a Wildland Fire Situation Analysis (WFSA). Rehabilitation costs are included in the cost analysis portion of the WFSA. Further questions on this subject should be directed to either WO-880 or WO-220.

AA. Cadastral Survey

Cadastral survey work will only be done with EFR funds where land ownership adjacent to proposed EFR treatments is in question and not where there are long-standing, large-scale ownership questions. Section and quarter corners should be located and flagged for avoidance prior to any surface-disturbing activity that could result in damage to or destruction of the corner.

BB. Clean Water Act Compliance

Certain EFR treatments may be regulated under the Clean Water Act. The placement of earthen dams and/or straw bale or rock check dams in stream channels may have impacts to aquatic resources and thus require authorization under Sections 404 and 401 of the Clean Water Act.

1. Section 404. Rehabilitation activities, such as the installation of straw check dams, rock dams, culverts, and other measures intended to stabilize ground cover and slow the rate of soil erosion in perennial and intermittent stream channels and other waters of the U.S., including wetlands, require written notification to the local Corps of Engineers District Office. Locations of these types of treatments should be included in the written notification.

The Corps of Engineers may require modifications to EFR treatments to ensure that the environmental impacts to stream channels or wetlands are minimal. In the unusual circumstances that adverse impacts of the proposed activities are more than minimal, the Corps will notify the applicant that an individual permit is required. Examples of certain EFR activities that may require Section 404 authorization include:

a. Placing rocks in a stream channel to create a check dam.

b. Where roads or trails are being rehabilitated, the Corps of Engineers needs to be notified if the activity involves the discharge of fill material into stream channels or wetlands. Installing a larger culvert to accommodate increased flow in a stream channel would require Corps notification; however, cleaning sediment-clogged culverts where that material is not discharged into the waterway would not require notification or permitting.

2. Section 401. Section 401 of the Clean Water Act allows State and Tribal governments to review and approve or deny Federal permits and licenses that might result in a discharge to State or Tribal waters. States or Tribes make these decisions primarily by evaluating how the activity will affect their water quality standards and water-dependent resources, including salmonids. Activities in the EFR program requiring Section 404 authorization must receive certification from the State that an activity meets its water quality standards.

CC. Standards for Rangeland Health and Guidelines for Grazing Management

On August 21, 1997, new BLM grazing regulations were implemented that, among other things, established a framework for the development of Standards for Rangeland Health and Guidelines for Grazing Management (43 CFR 4180.1). These standards and guidelines were developed on a State-by-State basis in coordination with Resource Advisory Councils to ensure that rangelands were being managed for long-term health (e.g., proper functioning of ecological processes, "stable watersheds," clean water, and T&E species habitat).

BLM State-specific standards and guidelines should be reviewed and incorporated as part of the EFR planning process to ensure compliance with the intent of these regulations and the land use plan in concert with the objectives of the EFR program. All existing NFRPs should be reviewed and modified (if necessary) prior to the next fire season to ensure compliance with standards and guidelines. The EFR program is not intended to fully restore ecological processes per the Standards for Rangeland Health. The purpose of the EFR program is to stabilize burned areas (prevent unacceptable erosion and invasion of weeds) so as not to preclude the eventual restoration of ecological processes through either natural succession or application of additional restoration practices. The application of additional restoration processes to obtain full ecological process function must be funded through sources other than the EFR program.

IV. REGIONAL SEED WAREHOUSE

The Regional Seed Warehouse is located at the Lower Snake River District Office in Boise, Idaho. A wide variety of native and introduced seed is purchased, tested, and stored at this facility. This facility will purchase and store seed for other States as described in a formal agreement (Memorandum of Understanding) with the Idaho State Director. The amount of seed each State can reserve should be based on a reasonable projection of the annual acreage to be rehabilitated over a 5-year period and the storage capacity of the warehouse.

Seed reserved through the Memorandum of Understanding (MOU) is held until September 1 each year for the requesting State and is available by requisition until this date. After September 1, any part of a State's reserved seed that has not been obligated with a requisition is available for any other State/District use. State or Districts that do not have MOUs with the Idaho State Director can acquire seed not reserved by another State at any time by submitting a requisition. The use of the Regional Seed Warehouse is not mandatory. Seed may be purchased locally if it is more practical or desirable to do so.

All seed purchased by the Regional Seed Warehouse is tested for purity, germination, and State-listed noxious and other weeds for Idaho, Oregon, Nevada, Utah, and Colorado.

V. RANGELAND DRILLS

The Vale District in Oregon maintains the BLM's fleet of rangeland drills and plows for site preparation and seeding of burned rangeland. Reservation of these drills is based on the supply of drills on hand when the request is made. Transportation of the drills should be negotiated between the requesting office and Vale District personnel. If equipment transportation is requested, a charge code and project number are required by the Vale District.

All drills should be returned as soon as practical to the Vale District for required maintenance. Private individuals can use the BLM's rangeland drills only if a signed agreement is arranged through the NRCS. A maintenance fee of $1/acre seeded is charged for all drills used by State, other Federal, or private entities when seeding is done on non-BLM lands.

VI. PROCUREMENT FOR SERVICES AND SUPPLIES

A procurement strategy for obtaining services and supplies used for burned areas should be developed as early as possible in the EFR process (Appendix A). The "Availability of Funds" clause must be included in the solicitations issued prior to EFR plan approval; award of contracts cannot be made until EFR funding is approved. The use of emergency procurement procedures may also be used to expedite the process if justification is submitted to the Contracting Officer. Early requests for Labor Department current wage rates for pilots, tractor operators, fence contractors, etc., will also decrease the procurement time.

Statewide or Districtwide Requirements Contracts or Basic Ordering Agreements can be competed and awarded by BC-670 for requirements which exceed the small purchase limitation. If vendors will commit to reasonable prices beyond the current year, options to extend the contract term for up to 3 years can be included in the solicitation and contract. This will provide long-term coverage if similar rehabilitation treatments are required in the same geographic area year after year.

Rehabilitation treatments can also be completed using Requests for Quotations or Master Solicitations. Master Solicitations work well because they save time and paperwork. All of these types of contracts, agreements, and solicitations also work well for emergency cultural clearance projects.

VII. FIRE REHABILITATION WORKGROUP

A standing Fire Rehabilitation Workgroup will be maintained after this handbook is approved. This workgroup will include a standing membership consisting of one representative each from the Washington Office; National Interagency Fire Center; National Weed Team; Regional Seed Warehouse in Boise, Idaho; Rehabilitation Equipment Maintenance Center in Vale, Oregon; and one representative from the States of Utah, Oregon, Nevada, and Idaho. These States have the majority of the BLM's rehabilitation projects. Other States or technical expertise may be included on the workgroup on a short-term basis depending on wildland fire situations requiring rehabilitation or other criteria developed by the workgroup. The chair of the workgroup will be selected by a majority of the current workgroup members. The purposes of this workgroup are to:

A. Provide internal support and technical assistance for rehabilitation issues or problems that arise in a State or at a national level.

B. Plan, develop, and carry out rehabilitation training on an as-needed basis.

C. Share rehabilitation successes and failures among States to improve the cost effectiveness and success of rehabilitation projects.

D. Recommend changes in rehabilitation policy.

E. Coordinate with other agencies or the public on rehabilitation issues or concerns.

VIII. PROGRAM EVALUATION

Each State/District is responsible for evaluating the effectiveness of its EFR program. Each State's or District's EFR program should be evaluated at a specified interval, preferably at least once every 5 years. If revisions in the NFRP are necessary, they will be submitted to the authorized officer for approval.

BLM's entire EFR program, or that of a particular State or District, will be evaluated for compliance with BLM policy through program evaluation or by a special evaluation (Manual Handbook H-1242-1).

IX. GLOSSARY

Burned Area Emergency Rehabilitation (BAER) - plan preparation approach used when multiple jurisdictions are involved and/or on large complex fire rehabilitation projects that exceed the capability of the local office to handle. See the USDA Forest Service's BAER Handbook (FSH 2509.13).

Burned Area Emergency Rehabilitation (BAER) Team - a team of varied land use and resource specialists formed to provide a coordinated, integrated information base for emergency fire rehabilitation planning. Further, through the Incident Command System (ICS), a team is available to develop the BAER plan. The concept is utilized in the Forest Service, National Park Service, and Bureau of Indian Affairs.

Emergency Fire Rehabilitation Plan (EFRP) - a document developed that describes the tasks to be accomplished to curb erosion and sustain watershed functionality, and ultimately, ecosystem functionality for wildland recovery.

Exotic plant - a plant species that is not native to the region in which it is found. (Executive Order 11987 more broadly defines "exotic" as any species not naturally occurring either presently or historically in an ecosystem in the United States.)

Hydrophobic soils - soils that have developed a water-repellent character. Extreme fire intensity can cause some soils to change from hydrophillic to hydrophobic. This condition is frequently a result of heat and the vegetation community consumed by the fire. Soils so changed may require more aggressive rehabilitation techniques to prevent a "mass-failure effect" if they are steep slopes.

Interdisciplinary Rehabilitation Team (IRT) - a team of varied land use and resource specialists formed to provide a coordinated and integrated information base for emergency fire rehabilitation planning and management.

Native plant - a species that is part of the original fauna or flora of the area in question. (Executive Order 11987 more broadly defines "native" as any species naturally occurring either presently or historically in any ecosystem of the United States.)

Nonnative plant (synonymous with introduced plant) - a plant species that is not a part of the original flora of the area in question.

Naturalized species - those exotic species that are already occurring within defined areas in a self-sustaining wild state; examples include cheatgrass, red brome grass, and crested wheatgrass.

Normal Fire Rehabilitation Plan (NFRP) - a programmatic fire rehabilitation plan (and Environmental Assessment) developed at a landscape level (Field Office, Resource Area, etc.) prior to a fire occurrence. It provides for the recovery and maintenance of watershed stability, soil productivity, species diversity, and ultimately, ecosystem integrity after a fire has occurred. It is developed by an interdisciplinary team and is generally reviewed and updated at 10-year intervals.

Normal Fire Rehabilitation Plan (NFRP) Supplement - a programmatic fire rehabilitation plan update developed at the landscape level with public input that incorporates new science, data, or techniques in response to a need because of a fire.

Prescribed fire - an approved, controlled application of fire that is meeting land use or other planning objectives regardless of ignition source.

Rehabilitation - the "repair" of a wildland fire area utilizing native and or nonnative plant species to obtain a stable plant community that will protect the burned area from erosion and invasion by weeds.

Restoration - the use of a diverse mixture of only native species to obtain a plant community that is similar in appearance and function to the historic vegetation.

Seedlings - young plant species that have not reached maturity (i.e., are not capable of reproducing).

Wildland fire - any fire, regardless of ignition source, that is burning outside of a prescribed fire and any fire burning on public lands or threatening public land resources, where no fire prescription standards have been prepared.

X. REFERENCES

This section will consist of technical references or other documents that are being developed on a regional or State basis. Although these references are not a part of this handbook, they may be kept in the same binder as this document to facilitate EFR planning and implementation using the appropriate science.

APPENDIX A. PROCUREMENT INFORMATION FOR SERVICES AND SUPPLIES

Drill Seeding

Purchase requisitions for drill seeding projects must contain the following information for seeding with rangeland or grain drills:

Approximate acreage to be seeded
Approximate starting date
Number of days to complete the work
Location of seed
Type of seed and rate of application
Average depth of seeding in inches
How the measurement for payment will be made (e.g., Global Positioning System work, aerial photos, maps)
Work location maps
Estimated cost and charge codes

If rangeland drills are to be provided by the Government, the following additional information must be furnished:

Number of drills to be furnished
Location of drills
Location of spare parts
How many drills can be pulled by each tractor

Aerial Seeding

For aerial seeding projects, early contact with the District or State Aviation Manager is strongly encouraged. Specifications must include:

Approximate acreage to be seeded
Approximate starting date
Number of days to complete the work
Location of seed
Type of seed

Rate of seed application per acre
Work location maps

Type of aircraft and capabilities
Who will furnish a ground crew for handling seed and loading the aircraft
Who will furnish the flaggers and flagging materials
Estimated cost and charge codes

Cultural Clearance Service

Any project that will disturb the soil surface requires a Cultural Class III Inventory for clearance or mitigation. Specifications should be prepared by the District or Resource Area Archeologist before the need arises. A bidders' list should also be developed listing firms that can act quickly to fulfill the need. If cultural clearances are required year after year, establishing Requirements Contracts, Basic Ordering Agreements, or Master Solicitations should be considered.

Supply Contracts for Seed Purchases

The BLM Regional Seed Warehouse in Boise is often the first place to check for seed availability because the seed is already tested and can be planted immediately. If the Regional Warehouse cannot supply the desired seed, an open market purchase will probably be needed. Time is critical because it may take 90 to 120 days or more for solicitation, award, delivery, testing, and acceptance. It may be possible to be included on a consolidated purchase with other offices. BC-660 should be contacted to find out if a purchase is being planned that would meet necessary timeframes.

Purchase requisitions for seed must include the following:

Common name, scientific name, and variety name
Minimum percent purity and germination
Quantities required (in bulk pounds)
Where seed is to be delivered
When seed is to be delivered
Certified seed options or area from which seed is to be collected
Estimated cost and charge codes

Supply Contract for Equipment Rental Without Operator

Equipment rental without an operator is considered a supply contract. The purchase requisition must contain the following information at a minimum:

Type of equipment needed
Capacity of equipment
Number of units needed
Any special requirements (e.g., dual wheels, three-point hitch, etc.)
Units of payment (e.g., hours, day, months, miles, etc.)
Rental period
Repair and maintenance responsibility
Where delivery will be made
Where pickup will be made
Estimated cost per unit of payment and charge codes

APPENDIX B.
MODIFIED COST/RISK ANALYSIS

This cost/risk analysis form is designed to allow the comparison of the proposed action to no action (e.g., no rehabilitation treatments), and to alternatives. The total costs for the major rehabilitation actions are listed and the probability of successful implementation of selected treatments is estimated on page 1 of the form. Categories may be added in either of these tables if the listed entries are incomplete.

On page 2, the risks to natural resources and private property are qualitatively evaluated for the proposed action, no action, and alternatives. Instead of assigning a dollar value to the values at risk, a rating (none, low, medium, and high) of the potential for unacceptable impacts from each action is selected. These ratings are made by the IRT based upon literature, experience, and knowledge.

Page 3 summarizes the information contained on the previous two pages to determine if the risks to resources are high, if the probability of success is high enough to warrant implementation of proposed practices, and which proposed practices should be implemented. Again, the entire IRT needs to be involved in this decision.

A sample cost/risk analysis is provided to show how the form is used.

Modified Cost/Risk Analysis

Treatment	Cost
Revegetation	$_____
Protective fence	$_____
Fence maintenance	$_____
Soil/watershed structures	$_____
All other costs (administrative, clearances, etc.)	$_____
TOTAL	$_____

Probability of Rehabilitation Treatments Successfully Meeting EFR Objectives

Treatments	Units	NA	%
Revegetation (overall rating/acres))			
Drill seeding (acres)			
Aerial seeding (acres)			
Transplant seedlings (acres)			
Other			
Protective fence to exclude grazing (miles)			
Fence repair to exclude grazing (miles)			
Soil/watershed structures (overall rating/number)			
Retention dams/structures (number)			
Ripping, contour furrows, etc.			
Matting, watersheds cover, etc.			
Other - clean culverts (each)			

Risk of Resource Value Loss or Damage

Identify the risk [none, low, medium, high, or not applicable (NA)] of unacceptable impacts or loss of resources.

No Action - Treatments Not Implemented (check one)

Resource Value	None	Low	Medium	High	NA
Unacceptable loss of topsoil					
Weed invasion					
Unacceptable loss of vegetation diversity					
Unacceptable loss of vegetation structure					
Unacceptable disruption of ecological processes					
Off-site sediment damage to private property					
Off-site threats to human life					
Other - loss of access road due to plugged culverts					

Proposed Action - Treatments Successfully Implemented (check one)

Resource Value	None	Low	Medium	High	NA
Unacceptable loss of topsoil					
Weed invasion					
Unacceptable loss of vegetation diversity					
Unacceptable loss of vegetation structure					
Unacceptable disruption of ecological processes					
Off-site sediment damage to private property					
Off-site threats to human life					
Other - loss of access road					

Summary

The costs of the project and probability of success of the proposed treatments are compared with the risks to resource values if: (1) no action is taken, and (2) the proposed action is successfully implemented. Alternatives may be included in this analysis to assist in selecting the cost-effective treatments that will achieve the EFR objectives. Answer the following questions to determine which proposed EFR treatments should be selected and implemented:

1. Are the risks to natural resources and private property acceptable as a result of the fire if the following actions are taken?

Proposed Action	Yes □	No □	Rationale for answer:
No Action	Yes □	No □	Rationale for answer:
Alternative(s)	Yes □	No □	Rationale for answer:

2. Is the probability of success acceptable given the cost?

Proposed Action	Yes □	No □	Rationale for answer:
No Action	Yes □	No □	Rationale for answer:
Alternative(s)	Yes □	No □	Rationale for answer:

3. Which approach will most cost-effectively and successfully attain the EFR objectives and, therefore, is recommended for implementation from a cost/risk analysis standpoint?

Proposed Action □ No Action □ Alternatives □

Comments:

Sample Modified Cost/Risk Analysis

Treatment	Cost
Revegetation	$90,000
Protective fence	$25,000
Soil/watershed structures	$10,000
All other costs (administrative, clearances, etc.)	$13,000
TOTAL	$138,000

Probability of Rehabilitation Treatments Successfully Meeting EFR Objectives

Treatments	Units	NA	%
Revegetation (overall rating/acres)	900		80
Drill seeding (acres)	900		90
Aerial seeding (acres)	900		70
Transplant seedlings (acres)		X	
Other		X	
Protective fence to exclude grazing (miles)	8		90
Fence repair to exclude grazing (miles)			
Soil/watershed structures (overall rating/number)	5 check dams		
Retention dams/structures (number)		X	
Ripping, contour furrows, etc.		X	
Matting, watersheds cover, etc.		X	
Other - clean culverts (each)	2		70

Risk of Resource Value Loss or Damage

Identify the risk [none, low, medium, high, or not applicable (NA)] of unacceptable impacts or loss of resources.

No Action - Treatments Not Implemented (check one)

Resource Value	None	Low	Medium	High	NA
Unacceptable loss of topsoil			X		
Weed invasion				X	
Unacceptable loss of vegetation diversity				X	
Unacceptable loss of vegetation structure				X	
Unacceptable disruption of ecological processes			X		
Off-site sediment damage to private property	X				
Off-site threats to human life	X				
Other - loss of access road due to plugged culverts			X		

Proposed Action - Treatments Successfully Implemented (check one)

Resource Value	None	Low	Medium	High	NA
Unacceptable loss of topsoil		X			
Weed invasion		X			
Unacceptable loss of vegetation diversity		X			
Unacceptable loss of vegetation structure		X			
Unacceptable disruption of ecological processes		X			
Off-site sediment damage to private property	X				
Off-site threats to human life	X				
Other - loss of access road		X			

Summary

The costs of the project and probability of success of the proposed treatments are compared with the risks to resource values if: (1) no action is taken, and (2) the proposed action is successfully implemented. Alternatives may be included in this analysis to assist in selecting the cost-effective treatments that will achieve the EFR objectives. Answer the following questions to determine which proposed EFR treatments should be selected and implemented:

1. Are the risks to natural resources and private property acceptable as a result of the fire if the following actions are taken?

Proposed Action Yes ☒ No ☐ Rationale for answer: Major weed invasion (cheatgrass and knapweed) will be greatly reduced with successful seeding. Wind erosion will be reduced to acceptable level. Probability of future fires will be reduced and seeding will provide diversity (grass/forb/shrub seed mixture for wildlife) to meet rangeland health standards in land use plan. Seeding and fencing costs are satisfactory considering seed mixture, topography, and distance for contractor to travel to work.

No Action Yes ☐ No ☒ Rationale for answer: Items discussed in Proposed Action above will not be met if no rehabilitation treatments are applied. Without seeding and protection from grazing, the burned area will become a fire-prone cheatgrass monoculture with knapweed infestations. Land use plan objectives for wildlife and rangeland health will not be met and soil erosion will increase.

Alternative(s) Yes ☐ No ☐ Rationale for answer: NA, no alternatives other than No Action considered in EA.

2. Is the probability of success acceptable given the cost?

Proposed Action Yes ☒ No ☐ Rationale for answer: Past experience indicates that a seeding on the types of soils in the treatment area will be successful given normal climatic conditions and exclusion of grazing for two to three growing seasons.

No Action Yes ☐ No ☒ Rationale for answer: Fires on these soil types with the prefire understory dominated by cheatgrass will become cheatgrass monocultures if a seeding is not established.

Alternative(s) Yes ☐ No ☐ Rationale for answer: NA, no alternatives considered in Environmental Assessment.

3. Which approach will most cost-effectively and successfully attain the EFR objectives and therefore, is recommended for implementation from a cost/risk analysis standpoint?

Proposed Action ☒ No Action ☐ Alternative(s) ☐

Comments: None

APPENDIX C.
ACRONYMS USED IN THIS HANDBOOK

BAER	Burned Area Emergency Rehabilitation
BC	BLM National Business Center
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
EA	Environmental Assessment
EFR	Emergency Fire Rehabilitation
EFRP	Emergency Fire Rehabilitation Plan
EIS	Environmental Impact Statement
FEIS	Fire Effects Information System
FONSI	Finding of No Significant Impact
FRP	Fire Rehabilitation Plan
FSH	Forest Service Handbook
FY	Fiscal Year
GPS	Global Positioning System
GTR	General Technical Report
ICS	Incident Command System
IRT	Interdisciplinary Rehabilitation Team
MFP	Management Framework Plan
MOU	Memorandum of Understanding
NARSC	National Applied Resource Sciences Center
NEPA	National Environmental Policy Act
NFES	National Fire Education System
NFR	Normal Fire Rehabilitation
NFRP	Normal Fire Rehabilitation Plan
NIFC	National Interagency Fire Center
NRCS	Natural Resources Conservation Service
NWCG	National Wildfire Coordinating Group
RIPS	Rangeland Improvement Project System
RMP	Resource Management Plan
RS	BLM National Applied Resource Sciences Center
T&E	Threatened and Endangered
USDA	United States Department of Agriculture
USGS	United States Geologic Survey
WFSA	Wildland Fire Situation Analysis
WO	Washington Office
WSA	Wilderness Study Area