

ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

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Reply to: 2320/5100

Date: March 25, 1997

To: Potential Wilderness Fire Resource Advisors

After the 1994 fire season a number of resource managers called us to express concern about the general lack of understanding of the Wilderness Fire Resource Advisor role and the lack of available materials for the person serving in that capacity. In response to those concerns the Carhart Center, with help from numerous fire and wilderness folks, put together the enclosed information that you can include in your Resource Advisor Toolkit. For a more extensive list of items that should go into a toolkit, see the enclosed "Resource Advisor Guide for Wildland Fire."

The following materials are enclosed:

- 1) "Resource Advisor Guide for Wildland Fire" - a publication of the National Wildfire Coordinating Group.
- 2) "Minimum Impact Suppression Tactics (MIST)" pocket guide - sample from either US Forest Service Northern Region or Pacific Northwest Region.
- 3) Three sample "Delegation of Authority" letters.
- 4) Briefing Paper on Wilderness Fire to be given to the Incident Commander along with the letter of delegation.
- 5) Minimum Impact Suppression Tactics Implementation Guide to be attached to Incident Action Plan, used as a handout to overhead teams, or simply as a reference.
- 6) Rehabilitation Guidelines to be used as a reference in developing the rehabilitation plan.
- 7) Two sets of 6 bulletin board posters on MIST - one colored set to be laminated and used, one set of originals from which to make additional copies. These posters are intended to be used in a fire camp, spike camp or staging area.

This "Toolkit" was distributed to all units in the USFS, NPS, USFWS, and BLM with Congressionally designated Wilderness, at the National, Regional, and local levels. Please feel free to make additional copies of any or all of the enclosed documents.

We are very grateful to all of those who contributed time or funding to this fire/wilderness partnership. I hope this meets the needs of those of you who will find yourself in the role of Wilderness Resource Advisor in the future. Please let us how we may be of further assistance.

CONNIE G. MYERS
Director



United States Department of the Interior
NATIONAL PARK SERVICE
Zion National Park
Springdale, Utah 84767



IN REPLY REFER TO:

ZION Y1421

July 17, 1996

Delegation of Authority

I hereby delegate full authority for the management of the Wildcat Prescribed Natural Fire, Zion National Park, to you, Tom Zimmerman, as Prescribed Natural Fire Manager. All activities in the management of this fire must be accomplished within the framework of agency policy and direction provided in the enclosed Interagency Burn Plan and discussed during the Agency Administrator's Briefing.

Your expertise in the management of wildland fires will assist Zion National Park in accomplishing stated land and resource management objectives. In order to carry out this responsibility, I want to ensure that you are aware of the following constraints and special concerns.

1. Ensure that firefighter safety is the highest priority. Once firefighters have been committed to an incident, regardless of their assignment, they become the highest concern and priority on that incident.
2. Provide for public safety; take appropriate measures, including evacuation and closures, and coordinate activities with Zion NP staff.
3. Develop contingency action plans to provide for protection of developments and private property in the vicinity of Blue Springs and Kolob Reservoirs.
4. Develop contingency measures to provide for protection of MIA Camp development on the south side of Kolob Creek and east of the 1988 Hiker wildfire.
5. Utilize available technology to verify and validate the Maximum Manageable Area (MMA) as defined in the Interagency Burn Plan.
6. Conduct all management activities in a cost efficient manner.
7. Maintain full coordination with all Zion NP cooperators and meet all pre-designated requirements of those cooperators such as reporting requirements, established ordering channels, etc.
8. Work with Park staff to establish and maintain a proactive information section, work closely with local media, and maintain public information capabilities at Lava Point.
9. Manage all new ignitions within the Wildcat PNF MMA.

UNITED STATES
DEPARTMENT OF
AGRICULTURE

FOREST
SERVICE

PAYETTE NF

REPLY TO: 5130 SUPPRESSION

AUGUST 10, 1990

SUBJECT: DELEGATION OF AUTHORITY - FCRONR WILDERNESS FIRE COMPLEX

TO: JIM KRUGMAN, INCIDENT COMMANDER

I AM HEREBY DELEGATING YOU AUTHORITY FOR FIRE MANAGEMENT ACTIVITIES ON THE FCRONR WILDERNESS FIRE COMPLEX LOCATED WITHIN THE KRASSEL DISTRICT, OF THE PAYETTE NATIONAL FOREST. THIS DELEGATION CARRIES WITH IT FULL RESPONSIBILITY FOR SELECTING AND IMPLEMENTING APPROPRIATE SUPPRESSION ACTION COMMENSURATE WITH THE VALUES AT RISK.

YOUR MAIN OBJECTIVES FOR THIS GROUP OF FIRES ARE AS FOLLOWS:

1. PRIORITY ONE IS SAFETY - SAFETY OF FIREFIGHTERS AND PROTECTION OF LIFE AND PROPERTY.
2. MINIMIZE WILDERNESS IMPACTS. SUPPRESSION ACTIONS NEED TO BE SENSITIVE TO WILDERNESS VALUES AND LIMIT LONG TERM IMPACTS.
3. COST EFFECTIVENESS - TAKE APPROPRIATE ACTION COMMENSURATE WITH VALUES AT RISK.
4. PUBLIC SENTIMENT - BE SENSITIVE TO THE NEED FOR PUBLIC INFORMATION AND CONCERN. BE SENSITIVE TO RECREATION USERS, LAND OWNERS, AND PRIVATE ENTERPRISE WITHIN THE WILDERNESS.

I EXPECT THE SUPPRESSION ACTION TO BE CONDUCTED IN ACCORDANCE WITH THESE OBJECTIVES WHICH WILL BE REVIEWED WITH YOU AND YOUR INCIDENT COMMAND TEAM. FIRE FIGHTING METHODS AND RESOURCES SHOULD BE EMPLOYED THAT ASSURE COMPLIANCE WITH THESE AND THE DISTRICT EFSA OBJECTIVES.

PATTI STIEGER, DISTRICT WILDERNESS-RECREATION ASSISTANT, WILL BE ASSIGNED AS YOUR RESOURCE ADVISOR. SHE WILL BE SUPPORTED BY ASSISTANTS AS THE NEED ARISES. ALL QUESTIONS CONCERNING RESOURCE IMPACTS RELATED TO SUPPRESSION STRATEGY AND TACTICS WILL BE HANDLED THROUGH THIS GROUP.

THE DISTRICT HAS AVAILABLE A "PAYETTE NATIONAL FOREST WILDERNESS WILDFIRE MANAGEMENT GUIDE" TO ASSIST YOU WITH YOUR EFFORTS.

PLEASE WORK THROUGH PAYETTE LOGISTICS AS YOUR NEEDS FOR RESOURCES ARISE.

I WILL MEET WITH YOU TOWARD THE END OF THE FIRE FOR A CLOSE OUT.

GOOD LUCK!!!

VETO J. LASALLE
FOREST SUPERVISOR

CC: BENEDICT
MONAHAN
ELLIOT

REPLY TO: 5130~Suppression

Date: August 19, 1994

SUBJECT: Delegation of Authority; Bitter-Nez Complex

TO: **** ***** Incident Commander

I am hereby delegating you authority for suppression activities on the attached list of fires within the Selway-Bitterroot Wilderness on the West Fork and Darby Ranger Districts. This delegation carries with it full responsibility for the management of the continuing suppression effort, and rehabilitation of the effects directly resulting from suppression activities within the area under your control.

I expect the suppression effort to be conducted in accordance with the EFSA and FSA objectives and direction which will be reviewed with you and your incident command team. Close coordination will be maintained with the Forest Public Affairs Officer and the West Fork Ranger District. Additionally, I expect you to maintain a close working relationship with local and County law enforcement agencies.

Other existing fires or new fires remain the responsibility of the Districts. New fires should continue to be reported to the West Fork Ranger District Dispatch office. The District will retain responsibility for completing the two hour decision tree for all new fires to determine the status of the fire; wildfire or prescribed natural fire. The West Fork Ranger District will coordinate with the Team on any requests for suppression assistance on new wildfires in the wilderness.

All available fire fighting methods and resources are authorized, however Minimum Impact Suppression Tactics should be used as much as possible to reduce the fire suppression impact on the Wilderness resource. Use of motorized equipment in the wilderness such as chainsaws, pumps and helicopters is authorized. Use of dozers within the wilderness requires the approval of the Regional Forester. All questions concerning resource impacts related to suppression strategies will be handled through Maria Cox, Resource Advisor.

Your main objectives for this fire are to:

1. Provide for firefighter safety and fight the fire aggressively.
2. Establish containment and control within the boundaries identified in the EFSA, and FSA.
3. Develop and implement a rehabilitation plan for the impacts of your suppression effort. Utilize general and specific guidelines provided by the District. Maria Cox is your contact at the District. She will serve as acting resource advisor for the District Ranger on this fire.

Briefing Paper

Fire Suppression in Wilderness

You are about to begin work on a fire in an area that has been designated by Congress as Wilderness. Natural processes, including fire, are essential in shaping, defining, and sustaining wilderness ecosystems.

The Wilderness Act defines Wilderness as an area "without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which...generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable...." The Agency's Administrator's Delegation of Authority and Escaped Fire Situation Analysis objectives you received have been framed with the intent of meeting this Act while providing for firefighter and public safety.

You will, perhaps, be developing strategies and implementing tactical and logistical operations under different circumstances. Take the appropriate time to plan strategies for fighting this fire that will have the least long-term impact to the resource. Implement actions that will leave the "imprint of man's work substantially unnoticeable."

Inside Wilderness, the impact of your actions may pose more of a threat to the wilderness resource than the fire.

Work with the local Wilderness Resource Advisor to determine the best ways of mitigating fire suppression actions on the landscape. Enlist their assistance in applying Minimum Impact Suppression Tactics (MIST) to camp areas and other work sites. They have the best on-the-ground knowledge of the area and can offer timely, accurate advice that will reduce short and long term impacts. Make sure your overhead and crews understand your expectations on how to minimize impacts as they go about their daily assignments and tasks.

Firefighter safety comes first. Implementing MIST does not mean firefighter safety is sacrificed in favor of resource protection. Use MIST to guide your tactical operations, use time as your ally.

Be particularly sensitive to those areas that will receive recreation use after the fire is out. For wilderness visitors, hiking through a new burn, experiencing first-hand, the rebirth of a forest, could truly add to their experience. Minimize the impacts of line-building, bucking and falling of trees, and the evidence fire suppression efforts along trails. With guidance from the Resource Advisor, carefully rehab these areas.

Minimizing impacts of our suppression actions takes education, thought, and care. We learn as we go. We do it for the American people who have entrusted in us the stewardship of these areas for future generations. We do it because it's the right thing to do for Wilderness.

Minimum Impact Suppression Tactics Implementation Guidelines

Establishing and Setting Up Camp

- Whenever possible, avoid establishing spike or coyote camps in Wilderness.
- If Wilderness camps are unavoidable, use existing campsites where available.
- If existing campsites are not available, use your local resource advisor to help identify the most resilient sites in rocky or sandy soils. Always select sites that are unlikely to be observed by Wilderness visitors. Avoid camping in wet meadows, along streams, or on lake shores.
- Consider impacts on both present and future visitors. An agency commitment to wilderness values will promote those values to the public.
- Layout camp components carefully from the start. Define cooking, sleeping, latrine, and water supplies.
- Limit travel ways within, to, and from camp.
- Minimize disturbance to land in preparing bedding and campfire sites. Do not clear vegetation, trench, or excavate a flat spot to create bedding sites.
- In small camp situations (1 crew), individuals should use the "cat-hole" method of disposing of human waste. Toilet sites should be located a minimum of 200 feet from water sources. Holes should be dug 6-8 inches deep.
- If a large number of firefighters are using a spike camp and the camp is being serviced by helicopter, fly in portable backcountry latrines, and fly out human waste as necessary. If the camp does not have air support, establish community latrines well away from water sources, rather than leaving it up to the individual.
- Place indoor-outdoor carpet, scrim, or other material on the ground to protect vegetation in the most heavily traveled areas of camp, i.e.: kitchen, campfire, and washing-up areas.
- Use stoves for cooking. If a campfire is built for warmth in the evening, build either a pit or mound fire. A fire shelter placed beneath the coals provides extra protection for the soil.
- If a large camp is employed, designate a common area for personnel to wash up. Provide fresh water, biodegradable soap, and a place for waste water.
- In small spike camps or coyote camps, carry water and bathe away from lakes and streams. Do not introduce soap, shampoo, or other personal grooming chemicals into waterways.
- Devise a plan for disposing of waste water from kitchen and washing areas.

- Store food properly so that it is not accessible to wildlife. Consider hanging food in trees at least 15 feet off the ground and 5 feet from the trunk of the tree, or store food in sealable containers. Store food away from the campsite (300 feet is ideal) to reduce the risk of human and bear conflicts.
- Do not let garbage and food scraps accumulate in camp. All garbage and food scraps need to be removed from the camp on a regular basis if the camp is being served by a helicopter, or properly stored if frequent removal is not possible.
- Resource advisors should work with cache personnel during the off-season to ensure that tents are cleaned of any noxious weed seeds prior to being sent to a wilderness fire.

Personal Camp Conduct

- Minimize disturbance to land in preparing bedding and campfire sites. Do not clear vegetation, trench, or excavate a flat spot to create bedding sites.
- Use established latrines where provided. If latrines are not available use the "cat-hole" method of disposing of human waste. Toilet sites should be located a minimum of 200 feet from water sources. Holes should be dug 6-8 inches deep.
- If a campfire is built for warmth in the evening, build either a pit or mound fire. A fire shelter placed beneath the coals provides extra protection for the soil.
- Use dead and down firewood. Use small diameter wood that burns down more cleanly. Don't burn plastics or aluminum - pack it out with the rest of the camp garbage.
- If a designated personal washing area is not provided, carry water and bathe away from lakes and streams. Do not introduce soap, shampoo, or other personal grooming chemicals into waterways.
- Do not use nails in trees.
- Constantly evaluate the impacts that will occur, both short and long term.

Helispot Construction

- Wherever possible, locate helibases in weed free areas, to prevent the transport of noxious weeds into wilderness.
- When planning for helispots, determine the primary function of each helispot, i.e.: crew shuttle, logistical support, or both.
- If a helispot is only needed for logistical support to deliver and retrieve supplies or gear, consider using a long line remote hook in lieu of constructing a helispot.
- If a helispot is needed for crew shuttle, consider the minimum size helicopter that could do the job, if you have an option, and still meet suppression objectives.

- In aerial fuels, brush, trees, and snags:
 - Minimize cutting of trees and snags.
 - Live trees should not be cut unless it is determined they will cause fire spread across the fireline or seriously endanger workers. If tree cutting occurs, cut the stumps flush with the ground and camouflage the cut surface with soil or brush.
 - Scrape around tree bases near fireline if hot and likely to cause fire spread.
 - Identify hazard trees with either an observer, flagging, and/or glow-sticks.
- When using indirect attack:
 - Do not fall snags outside the constructed fireline, unless they are an obvious safety hazard to crews working in the vicinity.
 - On the intended burn-out side of the line, fall only those snags that would reach the fireline should they burn and fall over. Consider alternative means to falling, i.e.: fireline explosives or bucket drops.
 - Review consideration listed above for aerial fuels, brush, trees and snags.

Mop-up Phase

- Use gravity socks in streams and/or a combination of water blivits and fold-a-tanks to minimize impacts to streams.
- Do not bring in any non-native materials to be used for sediment traps in streams. Use of non-native materials creates a risk that noxious weeds will be introduced to the area.
- Place absorbent cloth under pumps to avoid spilling fuel on the ground.
- Personnel should avoid using rehabilitated firelines as travel corridors whenever possible because of potential soil compaction and possible detrimental impacts to rehab work, i.e.. water bars.
- Consider using infrared detection devices along perimeter (aerial or hand-held).
- Align saw cuts to minimize visual impacts from more heavily traveled corridors. Slope cut away from line of sight when possible.
- In light fuels:
 - Cold-trail areas adjacent to unburned fuels.
 - Do minimal spading; restrict spading to hot areas near fireline only.
 - Use extensive cold-trailing to detect hot areas.
- Medium to heavy fuels:
 - Cold-trail charred logs near fireline; do minimal scraping or tool scarring.
 - Minimize bucking of logs to check for hot spots or extinguish fire; preferably roll the logs and extinguish the fire.
 - return logs to original position after checking or when the ground is cool.
 - Refrain from making bonepiles; burned and partially burned fuels that were moved should be arranged in natural position as much as possible after they are cold.
 - Consider allowing larger logs near the fireline to burn out, instead of bucking them into manageable lengths. Use a lever or pry bar to move large logs.

Fire Rehabilitation

Rehabilitation is a critical need. This need arises primarily because of the impacts associated with fire suppression and the logistics that support it. The process of constructing control lines, transport of personnel and materials, providing food and shelter for personnel, and other suppression activities has a significant impact on sensitive resources regardless of the mitigating measures used. Therefore, rehabilitation must be undertaken in a timely, professional manner.

During implementation, the resource advisor should be available for expert advice and support of personnel doing this work as well as quality control.

Rehabilitation Guidelines

- Pick up and remove all flagging, garbage, litter, and equipment. Dispose of trash appropriately.
- Clean fire pit of unburned materials and fill it back in.
- Discourage use of newly established trails created during the suppression effort by covering with brush, limbs, small diameter poles, and rotten logs in a naturally appearing arrangement.
- Replace dug-out soil and/or duff and obliterate any berms created during the suppression effort.
- Scatter some vegetative debris over the line, evaluating the amount and arrangement so it blends in with the surrounding natural landscape.
- If impacted trails have developed on slopes greater than six percent, construct waterbars according to the following waterbar spacing:

Trail Percent Grade	Maximum Spacing Ft.
6-9	400
10-15	200
15-25	100
25+	50

RESOURCE ADVISOR'S COURSE

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LESSON: Incident Chronology

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OBJECTIVES:

With this presentation course participants will be able to:

1. Understand the objectives of resource protection.
2. Understand the objectives of the assessment of fire suppression impacts and fire effects to critical cultural and natural resources.
3. Understand the Resource Advisor's chronological role before, during, and after an incident.

I. OBJECTIVES of RESOURCE PROTECTION

The objectives of resource protection are to prevent damages from the suppression effort before they occur. Prevention of damages as a result of fire effects may not always be possible, however, the prompt mitigation of adverse effects of critical cultural and natural resources should be implemented before further damage occurs. The objectives are:

- A. To prescribe post-fire mitigation measures necessary to protect human life and property.

This includes measures to protect life and property both within Agency boundaries and downstream beyond Agency boundaries. Treatments may include watershed stabilization measures and notification of potential risks of flood and debris flows to downstream neighbors and recreational users.

- B. To promptly mitigate the adverse effects of fire and/or its suppression on soil, water, and critically threatened cultural and natural resources.

A survey includes an inventory of the fire suppression impacts including: handlines, dozerlines, safety zones, helispots, drop points, spike camps, incident base camps, etc. and damage to resources as a result of suppression actions, e.g., buildings, fencing, etc. The assessment of fire suppression impacts is coordinated with the Incident Commander, Operations Chief, and Plans Chief. The Resource Advisor then provides

rehabilitation specifications for the daily shift plan when the suppression forces are ready to begin rehabilitation activities. The Resource Advisor provides on-line assistance to Division Supervisors and Crew Bosses for the implementation of the rehabilitation specifications.

A survey also includes an assessment of the effects of fire to critically threatened cultural and natural resources. A critically threatened cultural resource may be a National Register property or site. The cultural resource must have been documented prior to a fire in order to qualify for emergency fire rehabilitation funding. A critical natural resource would be an endangered species that was previously documented within the fire area.

- C. To promptly mitigate the adverse impacts to the infrastructure which would affect the health or safety of visitors and/or employees.

An example of this would be hazard tree mitigation, guard rail replacement, culvert replacement, some trail repair, utility line installation, etc.

- D. Resource protection is an emergency function and should be treated as such by the Incident Commander and Agency Administrator.

Therefore, resource protection should be considered at the inception of suppression actions by conducting proactive planning that protects critical resources through Minimum Impact Suppression Tactic (MIST), contacting BAER Teams early in the fire, and implementing treatment strategies prior to the first damaging rain storms.

II. INCIDENT OBJECTIVES

The incident objectives of the Resource Advisor on a fire include:

- A. To assess fire suppression impacts;
- B. To assess fire effects to critical cultural and natural resources; and
- C. To produce a BAER Plan within 3 days of control of the fire.

III. INCIDENT CHRONOLOGY

- 1. Accepting an Assignment

A Resource Advisor/DOI BAER Team is requested through normal dispatch procedures as identified in the National Mobilization Guide. However, once requested, dispatch will contact the appropriate Team Leader. The Team Leader will then contact the requesting Agency Administrator to determine the fire status, resources at risk, and the capability of agency support. If the Team Leader feels that the incident warrants a BAER Team then he/she will contact dispatch to accept the assignment and identify the team members to be called-out.

2. Mobilize the BAER Team

The Team Leader is responsible for assembling the preselected BAER team. Mobilization should be done within hours, not days - the BAER process is an emergency operation and must be treated as such by all involved with the mobilization effort.

Team members will arrive fully prepared for the field, and meet all NWCG and NIFQS standards for arduous fireline duty. Team members will arrive with all personal, safety and professional gear needed for the duration of a 21-day assignment. Each team member will be provided with specific dispatch and travel guidelines during the preseason planning meeting.

3. Team Orientation

As soon as the Resource Advisor/BAER team is mobilized in one location (i.e., fire camp, agency headquarters, etc.), the Team Leader should ensure that an initial orientation to the fire and operations, is conducted. Again there is no time to waste - the orientation should occur within hours after the team arrives. The orientation is conducted by the Agency Administrator or his/her representative, FMO, RA, IC, etc., or delegated to an individual(s) who can provide, at a minimum, the following information:

- a. Describe the status and potential of the fire.
- b. Describe the environmental setting, identifying critical cultural and natural resources, facilities, etc. affected by the fire and fire suppression activities.
- c. Explain management goals for the area (from Resource Management Plans, General Management Plan, etc., and other agency direction).
- d. Discuss safety.
- e. When and where to conduct the survey during the on-going incident.

- f. Agency resources available to the Resource Advisor/BAER team: (see HO-5-III-BAER)
 - work/meeting space
 - resource advisors, staff specialists
 - hardware - computers, fax, phones, copy machine, etc.
 - radios, cell phones
 - administrative support - contracting, purchasing, payment, etc.

4. ICS Coordination During the Incident

This is the first field task for the Resource Advisor/BAER Team Leader. The Resource Advisor/Team Leader will contact and maintain communication with the IC at the Incident Command Post. The principal contact is with the Plans Section Chief, Operations Section Chief, and the Incident Commander. Purposes of the initial coordination include checking fire status, determining incident rehabilitation responsibilities, arranging for helicopter flights, and determining safe timing and location for conducting the survey.

5. Coordination with the Agency Administrator During the Incident

It is essential for a successful survey that the Resource Advisor/Team Leader have access to the Agency Administrator and/or his/her representative on a daily basis if necessary. Each day the Resource Advisor/BAER Team conducts a debriefing of observations and findings as a result of survey activities and consultations. To produce a BAER Plan that meets Agency objectives it is critical that Agency representatives attend the briefings to discuss the findings and to assist in the formulation of treatments that will both be successful and acceptable to the Agency.

6. Conduct the Assessment

There are two types of fire damages that need to be assessed:

- a. Fire suppression impacts - an inventory is conducted of all suppression impacts and mapped for rehabilitation ideally by the suppression forces before demobilization. Fire suppression impacts inventoried include: line construction (also burned-over lines), incident support sites, and incident base. The Resource Advisor/BAER Team will supply to the daily shift plans the rehabilitation specifications which will meet agency objectives.

- b. Fire effects to critical cultural and natural resources and facilities relating to visitor/employee health and safety.

The survey must be conducted in a thorough and efficient manner. The Burned Area Rehabilitation Plan and Accomplishment Report must be submitted to the Agency Administrator within three days of fire control.

The Resource Advisor/BAER Team Leader is responsible for conducting the survey at two levels:

- * Reconnaissance - this is a burned area survey, often by helicopter, to determine severity of damages, resources at risk and to help further orient the team.
- * On-the-ground - this follows the reconnaissance survey, to gather detailed information about fire suppression related impacts and fire effects to cultural and natural resources, facilities and downstream values at risk.

The Resource Advisor must decide which rehabilitation needs constitute an "emergency" and can be funded via Emergency Fire Rehabilitation funding and which "recovery" (reconstruction/restoration) items can be proposed for agency operating funds. Rehabilitation needs associated with the restoration of safe visitor use conditions always constitutes an emergency situation.

7. Prescribe Treatment

The Resource Advisor/BAER Team Leader is responsible for ensuring that appropriate treatments are prescribed once a rehabilitation need is defined. Appropriate treatments are those which will successfully mitigate the emergency, are cost-effective, meet management goals, and can be implemented before further irreversible damage occurs.

It is a real advantage to the Resource Advisor/BAER Team when the affected management unit or agency has a reference library or source of preplanned treatments and strategies. The agency resource specialist is responsible for supplying the Resource Advisor/BAER Team Leader with any such information. In the absence of preplanned strategies, even file information related to past treatments or efforts within the burned area will likely be of assistance. Whenever possible, the Resource Advisor/Team Leader should build a data base of preplanned Regional strategies. (see HO-6-III-BAER)

Treatments in wilderness are of particular concern to the Resource Advisor. While surveys may be conducted in wilderness, treatments must be done only "...if necessary to prevent the unnatural loss of the wilderness resource." Treatment strategies used in wilderness may be dependant upon the suppression strategies used during the fire.

8. Prepare the Burned Area Report

The responsibility of preparing the Burned Area Emergency Rehabilitation Plan and Accomplishment Report belongs to the Resource Advisor/BAER Team Leader. Support by the affected agency staff may assist with the preparation of the BAER Plan. The BAER Plan describes the incident, defines the emergency and treatments, and requests funds for mitigating the emergency.

During the survey it is helpful if the Resource Advisor/Team Leader contacts the Regional FMO, NIFC, and the agency approval authority to keep these offices informed of proposed treatments/strategies. This can help facilitate the processing of the BAER Plan when submitted for approval.

9. Presentation to the Agency Administrator, Staff, and Affected Parties

This responsibility belongs to the Resource Advisor/Team Leader. Survey team members may assist the Resource Advisor/Team Leader in the presentation, as well as the affected park staff. The presentation will likely be done as soon as the survey is conducted and before the plan is completed/submitted for approval. The presentation is often made to the Incident Management Team, the Agency Administrator and staff (resources, FMO, FIO) with a responsibility for implementation and/or oversight of the proposed treatments.

The presentation should be professionally prepared and presented. The Resource Advisor/Team Leader and team members should be well organized, present clear data, and make reference to maps and graphics whenever possible. A visual display is important. (see HO-7-III-BAER)

The Team Leader must remember at this point that the objective of the BAER process is to outline the specific rehabilitation needs (both short- and long-term) and prescribe treatments. The Resource Advisor/Team Leader must articulate very specifically which treatments can be funded through the fire suppression account, emergency fire rehabilitation funds, and which treatments must be funded and/or implemented through agency operating or other funds (see HO-8-III-BAER). He/she must also describe which

activities can be accomplished by the fire crews and equipment on hand (assigned to the fire) and the priorities for this work.

10. Submit BAER Plan for Review and Approval

Following the presentation of the findings and recommendations by the Resource Advisor/BAER Team the final BAER Plan will be submitted to the Agency Administrator within three days of control of the fire. Since agency staff assisted in the preparation of the plan review by agency staff should be done quickly but no later than seven days from the time received. Once reviewed and approved by the Agency Administrator the BAER Plan is then submitted to the appropriate BAER program coordinator for funding approval. Each agency has determined the level of funding approval authority. The Resource Advisor/BAER Team Leader will assist the Agency Administrator with the approval process.

11. Organize/File Documentation

The Resource Advisor/BAER Team Leader must see that the written narrative, graphics, maps and photographic information is produced during the survey process. This information must be left with the Agency Administrator once the survey team is released.

12. Release Resource Advisor/BAER Team

After the presentation of the Resource Advisor/BAER Team findings to the Agency Administrator, the survey team can be demobilized and released (if they are not requested to revise any work) or can remain on site to implement and supervise specific and/or all portions of the plan. Releasing the team is the responsibility of the Resource Advisor/BAER Team Leader, working with the affected management unit and the demobilization unit assigned to the fire.

13. Maintain Documentation

The Resource Advisor/Team Leader is responsible for information management; that is, ensuring the transmittal of the final BAER Plan to the Agency Administrator. The Resource Advisor/Team Leader may assist the Agency Administrator with requesting approval of the plan. It is important to keep good records. They may serve as a baseline for monitoring and for developing preplanned treatment strategies for future assignments.

14. Coordination with Procurement and Resource Management

It is essential that the Resource Advisor/BAER Team Leader coordinate proposed/approved rehabilitation purchases with the procurement and contracting unit of the agency or that assigned to the fire. Treatments cannot be implemented without this support. It is helpful if the Team Leader has a team member who is knowledgeable in procurement/contracting procedures.

Before implementing treatments, the Resource Advisor/BAER Team Leader must ensure that the treatments are compatible with agency management goals and policies and the plan has been approved. Coordination with the agency resource management division is essential. If the Resource Advisor/BAER team demobilized before some or all of the plan is implemented, implementation is delegated by the Agency Administrator to an appropriate resources specialist.

15. Amend Implementation Treatments

The Resource Advisor/BAER Team Leader (or Implementation Leader) may have to adjust treatments as they are being implemented or applied in the field. If, for example, some materials are unavailable to construct a treatment, other materials may need to be identified or another treatment may have to be designed. This may require a revision of the BAER Plan.

16. Expenditure Accounting

The Resource Advisor/BAER Team Leader must ensure that the correct accounting procedures are followed and that expenditures are fully documented. Only approved charges may be made to the Emergency Fire Rehabilitation (EFR) account.

17. Prepare Interim and Final BAER Plan and Accomplishment Report

The agency Resource Specialist (Advisor) or rehabilitation project leader is responsible for preparing any interim and final BAER Plans. There may be more than one interim report needed. The final BAER Plan must be submitted to the agency's approval authority within 60 days after all treatments have been installed. The Resource Advisor/BAER Team Leader may assist in this phase of the operation and should ensure that the Agency Administrator is aware of the need to resubmit a final BAER Plan.

18. Post-treatment Analysis

This is an important but often overlooked part of the rehabilitation process. The Resource Advisor/BAER Team Leader is responsible for proposing a post-project analysis to the Agency Administrator. A post-project analysis can involve a critique of operations (how well did the survey and implementation go?) and/or an evaluation of treatment effectiveness. In both cases, the objective should be to improve planning operations and treatments.

19. Maintenance and Monitoring

Maintenance of treatments is essential until such time that they are considered successful. The Agency Administrator is responsible for performing maintenance to the treatments. The BAER Plan will recommend establishing a monitoring and maintenance plan. Maintenance of treatments can be funded by EFR funding for up to three years post-fire.

Project monitoring, e.g., determining the presence of previously documented threatened and endangered species, can be approved for EFR funding on a year-by-year basis for up to two years post-fire. However, monitoring should not be limited to observations and data collection within areas recently burned. Treatments installed during previous years should be monitored for treatment effectiveness and long-term resource recovery.

APPENDIX IV - CONSIDERATIONS FOR DEVELOPMENT OF TREATMENT SPECIFICATIONS AND ASSESSMENTS

A. WATERSHED RESOURCE ASSESSMENT:

- 1. Mandatory Consultation Requirements (baseline data sources):** The Watershed Specialist (Soil Scientist, Hydrologist and/or Geologist) is responsible for initiating consultation and evaluation of soil and watershed resources impacted by wildland fire and suppression actions. As a minimum, the following sources may be consulted in obtaining baseline information for developing resource issues, field inventory priorities and rehabilitation recommendations:
 - a. Local resource professionals and organizations with management responsibilities including:** agency soil scientist, hydrologist, geologist, botanist, resource specialist, Natural Resource Conservation Service (NRCS), United States Geological Survey (USGS), representatives from area universities, water resource professionals from public utility commissions.
- 2. References:** Home unit management plans, integrated resource management plans, water resource management plans, research projects, soil surveys and vegetation inventories, NRCS reports, USGS reports, theses.
- 3. Maps and air photos:** topographic, soils, geology, watershed (generate), isohyetal, rainfall, geologic hazards, infrastructure (roads, trails, culverts, bridges), vegetation, jurisdictions, road map, resource management maps, fire progression and suppression information from operational period plans and fire progression maps.
- 4. Data Requirements:** Following cursory aerial reconnaissance and the identification of watershed issues at risk, field surveys will be conducted by the Watershed Specialist to identify, evaluate, map and gather data on the following:
 - a. intensity of burn in watersheds**
 - b. increase in soil erosion hazard**
 - c. loss of effective soil cover**
 - d. creation of new sediment sources**
 - e. potential loss of water control**
 - f. stream channel stability and ability to absorb increased runoff and sediment**
 - g. fire suppression damage to the watershed.**
 - h. values at risk**
 - i. material needs and price quotations to determine costs of treatment specifications**

Data collection should include: burn intensity by acres and percent of watershed, fire effects on the water resource, suppression effects on the water resource, fire effects on site productivity, and fire effects on infrastructure.

- 5. Specific Products:** After completing data acquisition and field assessments, the Watershed Specialist will prepare a written analysis report to include:

Major issues for rehabilitation considerations (Values at risk)

- (1) threats to human life and property
- (2) loss of water control
- (3) loss of on-site productivity

(a) Written documentation of Observations

- Background information describing geology, soils, hydrology, precipitation and historical land uses (such as roads, trails, and stream crossings {bridges, fords, culverts}) of the fire area.
- Survey Methodology and Interpretations:
- Survey methods and evaluation criteria for fire and suppression effects on watersheds
- Total acreage summary of burn intensities (high, moderate and low)
- Description of fire effects on watersheds
- Description of threats to values at risk on a watershed-by-watershed basis
- Describe erosion control needs
- Prognosis for watershed recovery

(b) Recommendations

- Management
- Areas to be treated (potential flood and sediment sources)
- Public safety and access issue recommendations
- Restoration of natural surface runoff behavior by reconstruction, repair and/or replacement of abandoned roads and improving drainage along trails and retained roads
- Mitigation
- Summary of recommended erosion control structures
- Identification of cooperating partners for implementation of mitigation measures
- Monitoring
- Identify appropriate monitoring needs, e.g. water quality, stream gaging (consult with USGS), debris flows (consult with USGS)
- Home unit management needs to be accountable for adherence to treatment specifications
- Home unit management needs to conduct effectiveness monitoring of treatments

(c) List of people consulted

(d) List of literature reviewed

(e) Maps

- Watersheds (base map with the following theme overlays):
- Burn intensity mosaic (showing land ownership/jurisdiction)
- Hydrological infrastructure (roads, trails, culverts, bridges)
- Watershed treatment areas (potential flood and sediment source areas)
- Emergency areas (areas of potential threats to human life and proper)

(f) Tables and Graphs

- Precipitation by month graph

- Precipitation Intensity, Duration and Frequency table
- Table of burn intensities by watershed showing total area of watershed in acres, area of watershed that burned in acres, percent of entire watershed burned at various intensity, valley gradient in feet per mile, and percent slope of valley
- Table of structural treatments by watershed
- Summary table of treatment costs (Part E Summary activities)

(g) Treatment Specifications

- Consult previous BAER Plans for treatment specifications
- Provide detailed cost estimates for all prescribed rehabilitation measures supported by:
 - Estimates obtained from 2-3 independent contractual sources
 - Documented cost figures for similar project work obtained from local agency sources
 - Estimates supported by cost guides from independent sources or other federal agencies (e.g., NRCS)
 - Estimates based upon government wage rates and material costs (extra documentation required)

B. RANGE:

1. **Mandatory Consultation Requirements (baseline data sources):** The Vegetation Specialist is responsible for initiating consultation and evaluation of range resources impacted by wildland fire and suppression actions. As a minimum, the following sources may be consulted in obtaining baseline information for developing resource issues, field inventory priorities and rehabilitation recommendations:
 - a. **Local resource professionals and organizations with management responsibilities including:** agency range conservationist, botanist, resource specialist; ranchers and lessees; native plant society members, Natural Resource Conservation Service (NRCS), representatives from area universities.
 - b. **Resource Management Plans:** applicable legislation and agency mandates, integrated (general) resource management plans, allotment management plans, soil surveys and vegetation inventories (range inventories), lease or permit documents, aerial photographs, GIS data layers, range improvement plans, research projects.
 - c. **Literature:** federal legislation and policy direction publications, historical documents including management plans, study plots, leases; published text describing plant communities and habitat types, past management practices and individual plant species.
2. **Data Requirements:** Following cursory aerial reconnaissance and the identification of range resources at risk, field inventories will be conducted by the Vegetation Specialist to identify, map and gather data on fire related impacts to:
 - a. Acreage Burned and Plant Communities Impacted
 - b. Vegetative resources resulting from suppression actions
 - c. Soil resources

- d. Structural damages to fences, gates, watering and handling facilities - Document fire suppression versus fire effect impacts
- e. Public access routes and public safety issues
- f. Forage (AUM) losses - Appraise value of losses
- g. Livestock mortality losses

Data collection should include: where are values at risk located (map); how were these resources damaged (suppression VS. wildland fire); what was damaged (soils, structures, forage resources), how much has been damaged (acres, miles of fence, AUM's etc.).

3. **Management Considerations:** The Vegetation Specialist is required to evaluate values at risk and make rehabilitation and management recommendations within the assessment report. Management considerations include:
 - a. Revegetation and soil stabilization needs - Locations, acreage, site potentials, seed mix compatible with future management objectives, reseeding recommendations (rates application methods, mulching fertilizer needs);
 - b. Public safety and access rehabilitation needs (structural repairs);
 - c. Range improvement repairs;
 - d. Pasture deferment and vegetation recovery periods;
 - e. Repair prioritization and cost determinations supported by specifications, material needs and price quotations

4. **Specific Products:** After completing data acquisition and field inventories, the Vegetation Specialist will prepare a written analysis report to include:
 - a. **Major issues for rehabilitation considerations**

 - b. **Written documentation of observations**
 - (1) Background information describing fire area, burn intensity acreage, impacted plant communities, historical land uses
 - (2) Reconnaissance Methodology and Results:
 - (a) Survey methods and areas inventoried
 - (b) Description of impacts to vegetative resources
 - (c) Description of range improvements impacted
 - (d) Structural repair and replacement needs
 - (e) Structural reconstruction needs
 - (1) Impacts to other vegetation (Noxious weed impacts)

 - c. **Recommendations**
 - (1) Management
 - (a) Pasture deferments
 - (b) Structural improvement repair and prioritization
 - (c) Public safety and access recommendations
 - (2) Monitoring of vegetative resources
 - (a) Noxious weed encroachment within disturbed areas
 - (b) Rehabilitation and revegetation of disturbed soil areas
 - (c) Control of non-native plant invasions
 - (d) Natural regeneration recovery on disturbed sites

d. Consultations**e. Literature Reviewed****f. Maps**

- (1) Impacted rangelands with mitigation areas identified
- (2) Structural range improvement damages

g. Treatment Specifications

- (1) Describe in detail rehabilitation needs and site locations (e.g. 2.5 miles boundary fence replacement between O-M Ranch and wilderness area)
- (2) Fully justify rehabilitation needs and support cost estimates in narrative writeup sections;
- (3) Design specifications- Detailed instructions and design plans for construction of rehabilitation structures and revegetation projects
 - (a) Obtain and provide design specifications from local agency technical guides, NRCS technical guides, agency handbooks, textbooks (i.e. fence post spacing, wire heights, wire specifications (12 gauge, 4-barbed wire), stretch post spacing, seeding rates, seed mixture)
 - (b) Implementation standards- Document specific implementation standards for rehabilitation:
 - seed application guidelines- Apply Sept 30-Oct 15
 - fertilization guidelines- 200 lbs/ac of 10-20-10 on areas x, y z only
 - areas excluded from treatment-maintain 300 foot buffer on all Class 1 stream channels

h. Cost Estimates: Provide detailed cost estimates for all prescribed rehabilitation measures supported by:

- (1) Estimates obtained from 2-3 independent contractual sources
- (2) Documented cost figures for similar project work obtained from local agency sources
- (3) Estimates supported by cost guides from independent sources or other federal agencies (NRCS)
- (4) Estimates based upon government wage rates and material costs (extra documentation required).

C. VEGETATION

1. Mandatory Consultation Requirements (baseline data sources): The Vegetation Specialist is responsible for initiating consultation and evaluation of vegetation resources and Threatened, Endangered, Sensitive and Proposed plant species impacted by wildland fire and suppression actions. As a minimum, the following sources may be consulted in obtaining baseline information for developing resource issues, field inventory priorities and rehabilitation recommendations:

- a. Local resource professionals and organizations with management responsibilities including:** agency botanist, resource specialist, range conservationist; native plant society members, Natural Resource Conservation

Service (NRCS), representatives from area universities.

- b. **Resource Management Plans:** applicable legislation and agency mandates integrated (general) resource management plans, enabling legislation for agency establishment, allotment management plans, TESP species protection and recovery plans, soil surveys and vegetation inventories (range/forest inventories), lease or permit documents, aerial photographs, GIS data layers, range improvement plans, research projects.
 - c. **Literature:** TESP species identification and research bulletins, applicable federal regulations, policy manuals: historical documents including management plans, study plots, leases; published text describing individual plant species, community structure, habitat requirements, and past management practices.
2. **Data Requirements:** Following cursory aerial reconnaissance and the identification of vegetation resources at risk, field inventories will be conducted by the Vegetation Specialist to identify, map and gather data on fire related impacts to:
- a. Acreage Burned and Plant Communities Impacted
 - b. Critical TESP habitat and species-document fire suppression versus fire effect impacts
 - c. Vegetative resources resulting from suppression actions
 - d. Soil resources and natural vegetative cover
 - e. Vegetative losses

Data collection should include: where are values at risk located (map); how were these resources damaged (suppression VS. wildland fire); what was damaged (soils, structures, vegetative resources), how much has been damaged (acres critical habitat.).

3. **Management Considerations:** The Vegetation Specialist is required to evaluate values at risk and make rehabilitation and management recommendations within the assessment report. Management considerations include:
- a. TESP species habitat protection/rehabilitation
 - b. Revegetation and soil stabilization needs - Locations, acreage, site potentials, seed mix compatible with future management objectives, reseeding recommendations (rates application methods, mulching fertilizer needs);
 - c. Noxious weed/non-native species populations and potential expansion or encroachment into disturbed areas;
 - d. Monitoring of plant communities and natural regeneration processes;
 - e. Ecosystem health, climatic factors, and anticipated vegetation recovery periods;
 - f. Rehabilitation needs supported by specifications, material needs and price quotations
4. **Specific Products:** After completing field inventories and data acquisition, the Vegetation Specialist will prepare a written analysis report to include:
- a. Major issues for rehabilitation considerations
 - b. Written documentation of Observations
 - (1) Background information describing fire area, burn intensity acreage, impacted plant communities, TESP species within fire area, historical land uses

- (2) **Reconnaissance Methodology and Results:**
 - (a) Survey methods and areas inventoried
 - (b) Description of impacts to vegetative resources
 - (c) Description of TESP species and their associated habitats
- c. **Recommendations**
 - Management
 - (a) Predicted long term impacts to individual species and their habitats
 - (b) Rehabilitation needs and prioritizations
 - (c) Monitoring of TESP species and their associated habitats
 - (d) Noxious weed/non-native plant encroachment into disturbed areas
 - (e) Rehabilitation and revegetation of disturbed soil areas
 - (f) Control of non-native plant invasions
 - (g) Monitoring of natural regeneration and recovery on disturbed sites
- d. **Consultations**
- e. **Literature Reviewed**
- f. **Maps**
 - (1) Plant Community/Vegetation Map;
 - (2) Known populations of noxious weeds/non-native plant species impacted by fire suppression efforts and fire effects;
 - (3) TESP species habitat locations.
- g. **Treatment Specifications**
 - (1) Describe in detail rehabilitation needs and site locations (e.g. revegetate 3 miles of dozer line with seed mix #3 along Hadley ridge);
 - (2) Fully justify rehabilitation needs and support cost estimates in narrative writeup sections;
 - (3) Design specifications- Detailed instructions and design plans for construction of rehabilitation structures, revegetation projects, and TESP species monitoring
 - (a) Obtain and provide design specifications from local agency technical guides, NRCS technical guides, agency handbooks, textbooks (i.e. seeding rates, seed mixtures, fertilization requirements, monitoring protocols)
 - (b) Implementation standards- Document specific implementation standards for rehabilitation:
For example:
 - seed application guidelines- Apply Sept 30-Oct 15
 - fertilization guidelines- 200 lbs/ac of 10-20-10 on areas x, y z only
 - areas excluded from treatment-maintain 300 foot buffer on all Class 1 stream channels
- h.. **Cost Estimates: Provide detailed cost estimates for all prescribed rehabilitation measures supported by:**
 - (1) Estimates obtained from 2-3 independent contractual sources

- (2) Documented cost figures for similar project work obtained from local agency sources
- (3) Estimates supported by cost guides from independent sources or other federal agencies (NRCS)
- (4) Estimates based upon government wage rates and material costs (extra documentation required).

D. WILDLIFE

1. **Mandatory Consultation Requirements (baseline data sources):** The Wildlife Specialist is responsible for evaluation of effects (direct, indirect and cumulative) to Threatened, Endangered, Sensitive, and Proposed and agency listed species (TESP) from the wildfire, suppression actions and proposed rehabilitation. Species may include mammals, birds, fish, reptiles, amphibians and invertebrates. As a minimum, the following sources may be utilized to obtain baseline information for developing resource issues, field inventory priorities, assess effects and develop emergency rehabilitation recommendations:
 - a. **Local resource professionals and organizations with management responsibilities including:** Agency biologists and resource specialists, USFWS, NMFS, State, County, Tribal, private scientific groups, research stations, representatives from area universities, other BAER team resource specialists.
 - b. **Resource Management Plans:** Legislation for agency establishment and management direction, integrated (general) resource management plans, species recovery plans, Critical Habitat maps, vegetation inventories, Agency species management plans, current project NEPA documents, GIS data layers, wildlife habitat management plans, aerial photos, research projects.
 - c. **Literature:** Federal legislation and policy direction, historical documents, Federal Registers, scientific publications, published text describing fauna, plant communities, habitat types and past management practices.
2. **Data Requirements:** Following cursory aerial reconnaissance and the identification of potential wildlife resources at risk, field inventories will be conducted by the Wildlife Specialist to identify, map, collect data and photograph fire related impacts to TESP species, including:
 - a. Comprehensive inventory of habitat to determine which species may be affected
 - b. Habitat affected, by species and to what extent
 - c. Species specific special habitat locations (nests, aeries, critical riparian, etc.)
 - d. Locations of animal mortality and cause (if possible)
 - e. Structural damage to wildlife habitat improvements

Data collection should include: Location of values at risk (map), cause of effects to the

resource (suppression or fire), what was affected (type and quality of habitat, habitat components, structures), extent to which habitat is affected (by burn intensity), how much has been affected (acres by habitat type and intensity, miles of riparian, nest locations, etc.).

3. **Management Considerations:** The Wildlife Specialist is required to evaluate species at risk to develop emergency rehabilitation and management recommendations. Management considerations may include:
 - a. Federally listed TESP species affected by the fire and suppression actions
 - b. Agency requirements for Section 7 Consultation with USFWS and/or NMFS
 - c. Habitat improvement repairs
 - d. Prescriptions for emergency rehabilitation, mortality surveys or fire effects monitoring
3. **Specific Products:** After completing field reconnaissance and data collection, the Wildlife Specialist will prepare a written analysis to include:
 - a. **Major issues for rehabilitation considerations**
 - b. **Written documentation of Observations**
 - (1) Background information describing fire area, burn intensity acreage, impacted plant communities, historical land uses, TESP species in area
 - (2) Reconnaissance methodology and results:
 - (3) Survey methods and areas inventoried
 - (4) Description of direct, indirect and cumulative effects on wildlife resources
 - (5) Biological assessment for affected TESP species
 - (6) Assessment of effects on other agency listed species
 - (7) State or other lands habitat assessment (only if requested)
 - (8) Description of affected habitat improvement structures
 - (a) Structural repair and replacement needs
 - (b) Structural reconstruction needs
 - (9) TESP species list
 - c. **Recommendations**
 - (1) Management
 - (a) Consultation requirements
 - (b) Emergency rehabilitation requirements
 - (c) Discussion of effects of recommended rehabilitation work to TESP species
 - (2) Monitoring of wildlife resources
 - (a) Mortality surveys
 - (b) Post fire effects monitoring
 - (c) Additional data collection required for Section 7 Consultation
 - (d) Prescribed habitat recovery prescriptions
 - d. **Consultations**

- e. **Literature Reviewed**
- f. **Maps**
 - (1) Habitat by species, quality and intensity of effects
 - (2) Structural habitat improvements
 - (3) Locations of rehabilitation prescriptions
- g. **Treatment Specifications**
 - (1) Describe in detail rehabilitation needs and site locations (e.g. 30 acres of critical willow flycatcher habitat to be replanted with willows within the oak creek drainage, see map)
 - (2) Within Section II-B-3 of analysis report describe in detail rehabilitation elements. This section must be detailed enough to justify rehabilitation needs and support cost estimates.
 - (3) Design specifications: Detailed instructions and design plans for construction of rehabilitation structures, revegetation projects, mortality survey protocols and post-fire effects monitoring protocols.
 - (a) Obtain and provide design specifications from local agency technical guides, NRCS technical guides, agency handbooks, textbooks (e.g. specific species of willow, 01 stock, planted with one foot spacing in the spring of 1996, no irrigation required, no herbicide application required).
 - (b) Implementation standards- Document specific implementation standards for rehabilitation. These usually include mortality or fire effects monitoring protocols, description of the structure to be replaced (2,000 gallon, fiberglass big game guzzler with passive drinker system):
 - (c) Describe in detail, by division, specifications for other resource rehabilitation work to provide for the needs of TESP species.
Example: 4.5 miles of dozer line in Divisions A and B will be rehabilitated using excavators. A knowledgeable person must walk in front of the equipment to check for desert tortoise burrows. If a burrow is found, map the location (report to BAER Operations Specialist) and avoid further impacts to burrow.
- h. **Cost Estimates:** Provide detailed cost estimates for all prescribed rehabilitation measures supported by:
 - (1) Estimates obtained from 2-3 independent contractual sources
 - (2) Documented cost figures for similar project work obtained from local agency sources
 - (3) Estimates supported by cost guides from independent sources or other federal agencies (USFS)
 - (4) Estimates based upon government wage rates and material costs (extra documentation required).
- i. **Section 7 Consultation Documentation:** Detailed record of consultation to date, including contacts, phone numbers, addresses, what was said, how information was acted upon, follow up items, recommendations to the agency for consultation continuation, additional data collection and analysis needed, statement of agency compliance.

E FOREST RESOURCES:

- 1. Mandatory Consultation Requirements (baseline data sources).** The Forester is responsible for initiating consultation and evaluation of forest resources impacted by wildland fire and suppression actions. As a minimum, the following sources may be consulted in obtaining baseline information for developing resource issues, field inventory priorities and rehabilitation recommendations:
 - a. Local resource professionals and organizations with management responsibilities including:** agency foresters, botanists, resource specialists, Native Plant Society members, Natural Resource Conservation Service (NRCS), and researchers.
 - b. Resource Management Plans:** integrated resource management plans, forest management plans, soil surveys, vegetation inventories, aerial photographs, spectral imagery, and geographic information system database, research projects.
 - c. Literature:** historical documents including management plans, study plots, published text describing plant community and habitat types, and documentation of past management practices.
- 2. Data Requirements:** Following cursory aerial reconnaissance and the identification of forest resources affected, field inventories will be conducted by the Forester to identify, map and gather data on fire related impacts related to:
 - a. Acreage burned and forest areas impacted by fire and suppression activities.**
 - b. Mapped locations of damaged trees which may pose a threat to public safety or improvements.** Individual hazard trees will be evaluated according to the National Park Service hazard tree rating system.
 - c. Quantities and mapped locations of salvageable timber.**
 - d. Mapped locations of visually undesirable concentrations of fire-related slash.**
- 3. Management Considerations:** The Forester is required to evaluate values at risk and make rehabilitation and management recommendations within the assessment report. The extent to which these considerations are addressed will be determined by the size and complexity of the incident, agency policy and objectives, and the agency's ability to provide in-house expertise. Management considerations may include:
 - a. Alternative methods for mitigating tree hazards, including consideration for visual effects, slash treatment, public safety and effects on other resources.** Determine costs of recommended treatments, as well as equipment and labor sources.
 - b. Alternative methods, costs and impacts of salvage operations.**
 - c. General appraisal of value of salvage timber.**
 - d. In areas of high tree mortality, assess anticipated vegetative response of shrubs and trees.** Develop prescriptions for artificial regeneration as determined necessary to meet agency direction. Assess the effects of any proposed slope stabilization

- seeding on anticipated natural or artificial regeneration.
 - e. Make observations of pre-fire forest health (tree condition, disease levels), and predict post-fire trends.
 - f. Assess the fire's effects on populations of undesirable shrubs and trees, particularly exotic species. Develop alternative methods of controlling their spread if provided in agency direction. Determine costs of recommended treatments.
 - g. Specify methods for contour falling to stabilize slopes where determined necessary. Identify costs and sources of labor and equipment.
4. **Specific Products:** After completing data acquisition and field inventories, the Forester will prepare a written analysis report to include:
- A. Major issues for rehabilitation considerations**
 - B. Documentation of Observations**
 - (1) Background information describing the fire area, burn intensity acreage, impacted forested areas
 - (2) Reconnaissance Methodology and Results:
 - (3) Survey methods and areas inventoried
 - (a) Description of impacts to forest resources including anticipated vegetation response
 - (b) Public use areas threatened by hazard trees (roads, trails, camp grounds, picnic areas, etc.)
 - (c) Improvements threatened by hazard trees (structures, utilities, fences, etc.)
 - (d) Location and quantities of salvageable timber.
 - (e) Locations of areas which may require artificial regeneration
 - C. Recommendations**
 - (1) Management
 - (a) Recommendations for hazard tree removal, including designation of hazard trees (if approved by responsible official)
 - (b) Designation of timber to be salvaged (if approved by responsible official)
 - (c) Recommendations for slash treatment to mitigate visual effects
 - (d) Prescriptions for any necessary artificial regeneration
 - (e) Contour falling specifications
 - (2) Monitoring of Forest Resources
 - (a) Delayed tree mortality
 - (b) Post-fire buildup of populations of damaging forest insects
 - (c) Natural regeneration of trees and shrubs in intensely burned areas
 - (d) Survival success in artificially regenerated areas
 - (e) Potential spread of undesirable and exotic shrubs and trees
 - (f) Effectiveness of contour falling treatments
 - D. Consultations**
 - E. Literature Reviewed**
 - F. Maps**

- (1) Affected Forest Resources and Mitigation Measures
- (2) Hazard Trees
- (3) Salvage Areas

G. Treatment Specifications

- (1) Describe in detail rehabilitation needs and site locations (e.g. on section A of the coyote trail 85 trees between 6 and 12 inches diameter breast height will be felled and lopped)
- (2) Describe methods of accomplishing specified treatments. This section must be detailed enough to justify rehabilitation needs and support cost estimates (e.g. 20 cubic inch containerized ponderosa pine seedlings will be planted at 8 by 8 foot spacing with a 36 inch by 36 inch black fabric mulch placed around each tree, each secured to the soil with 8 inch wire staples).
- (3) Provide detailed cost estimates for all prescribed rehabilitation measures supported by:
 - (a) Estimates obtained from 2-3 independent contractual sources
 - (b) Documented cost figures for similar project work obtained from local agency sources
 - (c) Estimates based upon government wage rates and material costs

F. CULTURAL RESOURCES

1. **Mandatory Consultation Requirements (baseline data sources):** The Cultural Resource Specialist is responsible for initiating consultation and evaluation of cultural resources impacted by wildland fire and suppression actions. Minimally, the following sources may be consulted in obtaining baseline information for developing resource issues, field inventory priorities and rehabilitation recommendations:
 - a. **Individuals and organizations with management responsibilities, knowledge or concerns pertaining to the incident area including:** agency Section 106 coordinators, cultural resource specialists; Native American representatives; State Historic Preservation Office Personnel and scholars, representatives from area universities.
 - b. **Cultural Resource Management:** Guidance, statutory, regulatory and policy authorities governing cultural resource management, historic property's overviews and assessments, historic context studies, and List of Classified Structures (LCS).
 - c. **Documented Sources:** Cultural resource site and survey files; historical maps and documents; archeological, ethnographic and historic studies; aerial photographs; and GIS data layers, research projects.
2. **Data Requirements:** Following aerial reconnaissance and the identification of known cultural resources at risk, field survey will be conducted by the cultural resource specialist to identify, locate and document data on fire related impacts to:
 - a. **Determine Area of Potential Effect (APE)**

- b. Identify historic properties within the APE
- c. Cultural resources impacted
- d. Assess effects to cultural resources resulting from suppression actions
- e. Assess effects resulting from rehabilitation actions and identify mitigative actions
- f. Assess effects resulting from actual and potential soil movements and identify protective and mitigative actions.

Data collection should include: geographical location of cultural resources, description of cultural resources (historic structures, cultural landscapes, archeological sites, and traditional cultural properties); Pre and post fire condition of historic structures (roof, wall, foundation, outbuildings, fences, etc.), landscape elements (vegetation, roads, topography, objects, etc.), sites elements (surface disturbances, subsurface disturbances, exposures, etc.) and sources of cultural resource damage (suppression vs. wildland fire).

3. **Management Considerations:** The Cultural Resource Specialist is required to assess the effects of wildland fire suppression and make rehabilitation and management recommendations within the assessment report. Management considerations include:
 - a. Public safety avoidance of additional cultural resource damage repairs);
 - b. Local agency/Tribal organizational capabilities and commitment to post suppression follow-up;
 - c. Reasonable and appropriate costs of cultural resource recommendations.

4. **Specific Products:** After completing, consultation, data acquisition, and field surveys, the cultural resource specialist will prepare a written analysis report to include:
 - a. **Major issues for rehabilitation considerations**

 - b. **Written documentation of Observations**
 - (1) Background information describing historic overview
 - (2) Survey Methodology:
 - Survey methods and areas inventoried
 - (3) Survey Results
 - (a) Description of cultural resources
 - (b) Description of effects to cultural resources by wildland fire, fire suppression activity and proposed fire rehabilitation.

 - c. **Recommendations**
 - (1) Management
 - (a) Impact and mitigation associated with suppression and rehabilitation actions.
 - (b) Impact and mitigation associated with actual and potential soil movement
 - (c) NHPA consultations requirements
 - (2) Monitoring

- (a) Erosion of cultural resources within disturbed areas
- (b) Rehabilitation activities for disturbed cultural resources
- (c) Law enforcement presence
- (3) Rehabilitation
 - (a) Historic structures
 - (b) Cultural landscape
 - (c) Archeological sites
 - (d) Traditional cultural properties
- (4) Individual site assessments
 - (a) Designation
 - (b) Location
 - (c) Description
 - (d) Condition
 - (e) Threats
 - (f) Recommendations

d. Consultations

e. Literature Reviewed

f. Maps

- (1) Cultural resource site location
- (2) Cultural resource prior and present coverage

g. Treatment Specifications

- (1) Description of work
- (2) Labor, material, and other costs
- (3) Relevant specifications
- (4) Implementation standards

h. Cost Estimates: Provide detailed cost estimates for all prescribed rehabilitation measures supported by:

- (1) Estimates obtained from 2-3 independent contractual sources
- (2) Documented cost figures for similar project work obtained from local agency sources
- (3) Estimates supported by cost guides from independent sources or other federal agencies (NRCS)
- (4) Estimates based upon government wage rates and material costs (extra documentation required).

G. INFRASTRUCTURE/SAFETY (including recreation)

- 1. **Mandatory Consultation Requirements (baseline data sources):** The Facilities Specialist is responsible for initiating consultation and evaluation of structural developments which support visitor use, public safety, routine operations and other structures not identified by other BAER team disciplines. These structures will have been damaged or destroyed by either the fire itself, fire suppression activities or "wear and tear" due to large fire operations (people impacts to facilities and grounds).

As a minimum, the following sources may be consulted in obtaining baseline information for developing facilities issues, determining repair or replacement costs and cost apportionment.

- a. **Local agency facilities and maintenance staff members:** buildings and grounds foreman, trails foreman, campground maintenance personnel, roads foreman, recreation specialists, interpretive specialists, private land owners, local utility companies and road departments.
 - b. **Resource Management Plans:** facilities information contained in park, resource area or reservation management plans, aerial photographs, research projects.
 - c. **Literature:** blueprints, existing, pre-fire photographs, post-fire photographs, sketches, specifications sheets and cost estimation documents prepared as a result of the incident.
2. **Data Requirements:** Following on-site inspection of damaged facilities the Facilities Specialist and designated agency personnel should collect or prepare materials and cost estimates in the following priority:
- a. Public safety concerns
 - b. Utilities restoration
 - c. Resource protection
 - d. Normal operations resumption
 - e. Follow-up restoration

Data collection should include: where the facilities damages (fire effects vs. suppression vs. wear and tear); what was damaged (restrooms, boundary fences, road signs, bridges, utility poles, picnic tables, etc.) and how much has been damaged (feet of fence, number of utility poles, square feet of space, etc.).

3. **Management Considerations:** The Facilities Specialist is required to document the damage sustained, determine repair or replacement cost estimates and make management recommendations within the assessment report. Management considerations include:
- a. Immediate repair or replacement to provide for public safety (road sign replacement, elimination of hazards, road closures, cautionary sign emplacement)
 - b. Restoration of electric, telephone and/or water service
 - c. Hazardous material removal needs
 - d. Resource protection (not identified by other disciplines)

- e. Recreation facilities impacted
- 4. **Specific Products:** After data collection is completed, the Facilities Specialist will prepare a written analysis report to include:
 - a. Major issues for restoration considerations
 - b. **Written documentation of Observations**
 - (1) Distinguish fire effects damage from suppression damage and rehabilitation needs of fire camp
 - (2) identification of facilities needing repair only
 - (3) Identification of facilities needing full replacement
 - (4) List of contacts for utility companies
 - c. **Recommendations**
 - Management
 - Prioritization of work
 - d. **Consultations**
 - e. **Literature reviewed**
 - f. **Maps**
 - (1) Identify each location within the fire perimeter
 - (2) Repair/Replacement/Rehabilitation Specifications
 - (3) Distinguish between facilities to be repaired from those requiring total replacement
 - g. **Treatments Specifications:** Prepare a detailed materials list and cost estimate for each facility. Use agency design specification, if available
 - h. **Cost Estimates:** Provide detailed cost estimates for all identified work supported by:
 - (1) Estimates obtained from 2-3 independent contractual sources
 - (2) Documented cost figures for similar project work obtained from local agency sources
 - (3) Estimates supported by cost guides from independent sources or other federal agencies (USFS, NRCS, BLM, BIA)
 - (4) Estimates based upon government wage rates and material costs (extra documentation required)

H. ENVIRONMENTAL COMPLIANCE DOCUMENTATION:

1. **Existing Management Plan Review:** It is the responsibility of the BAER Team Environmental Planner, in consultation with local agency representatives, to review all actions proposed in the BAER plan to determine if they are consistent with management

actions approved in existing management/NEPA documents (e.g. general management plans, natural resource management plans, wilderness management plans, fire management plans, etc.). The BAER Team Environmental Planner will than document which existing management/NEPA documents cover, for the purposes of NEPA, actions proposed in the BAER plan.

2. **NEPA Compliance Review:** If an action has not previously been approved under an existing management plan the BAER Team Environmental Planner must review the Departmental and agency "Categorical Exclusions" to NEPA to determine if the action(s) can be categorically excluded from further NEPA documentation. The Environmental Planner will document all applicable DOI and agency specific categorical exclusions which relate to actions proposed in the BAER plan.
3. **NEPA Documentation and Recommendation:** The Environmental Planner must also complete and sign the *Environmental Documentation Categorical Exclusion (CX) Documentation and Decision Checklist* (see page 68). The Checklist must include a recommendation as to whether additional NEPA documentation is required. The local land manager (e.g. Area Manager, Superintendent, etc.) must sign the Checklist either concurring or not concurring with the Environmental Planner recommendation. If additional NEPA documentation is required it is the responsibility of the local agency staff to complete the document.

I. OPERATIONS

1. **Mandatory Consultation Requirements:** The Operations Specialist is responsible for preparing a complexity analysis enabling other BAER team members to effectively assess fire and suppression impacts. After the complexity analysis has been shared with the BAER team members, the Operations Specialist works with resource advisors and incident operations personnel to minimize suppression damage to resources in the fire area. As a minimum, the following sources may be consulted in obtaining information necessary for specific fire line rehabilitation actions and general information to facilitate BAER Team operations.
 - a. **Operations section:** Division Supervisors, Strike Team Leaders, Crew and Dozer Bosses, and Line Scouts.
 - b. **Planning section:** Situation Unit Leader, BAER team members, Resource Advisors, and incident documentation (i.e., incident action plans, incident maps).
 - c. **Local or Unit Intelligence:** Agency personnel, agency documents, local government officials, local residents, Thomas Bros road maps, and literature from cooperating associations.
 - d. **Personal Observations:** Observe suppression impacts from fire lines, promontory viewpoints, and aerial reconnaissance.

2. **Data Requirements:** The following information is necessary to produce a complexity analysis:
 - a. Perimeter location, length of fire line, and fire size.
 - b. Location and quantity of fire line in excess of 30% slope.
 - c. Line construction tactics/secondary suppression impacts (i.e., dozer, hand line, safety zones, drop points, spike camps, landing zones).
 - d. Safety information for BAER team (i.e., active fire zones, known hazards).
 - e. Transportation routes.
 - f. Sensitive resources reported by suppression personnel.
 - e. Intelligence as requested by BAER team members (i.e., exposed cultural sites, wildlife mortality, tree hazards, etc.)
3. **Management Considerations:**
 - a. Plan an appropriate resource advisor presence given fire size and complexity.
 - b. Evaluate whether suppression tactics are compatible with resource values at risk.
4. **Specific Products:** After completing data collection the Operations Specialist will ensure the following responsibilities are completed:
 - a. **Assignments:** Determine operational assignments for Resource Advisors.
 - b. **Maps:** Review and update documentation map.
 - c. **Resource Protection:** Provide information to Division Supervisors to minimize suppression related resource damage.
 - d. **Short-term: Rehabilitation:** Implement short term rehabilitation prescriptions.
 - e. **Unit Logs:** Maintain unit log.

SAMPLE

Form 1

ENVIRONMENTAL DOCUMENTATION
CATEGORICAL EXCLUSION (CX) DOCUMENTATION AND DECISION

Project Description and Location: Rehabilitation of fire and fire suppression impacts _____

Checklist: BASED ON 516 DM 2, APP. 2, IF ANY OF THE FOLLOWING EXCEPTIONS APPLIES, THE PROJECT CANNOT BE CATEGORICALLY EXCLUDED AND AN ENVIRONMENTAL ASSESSMENT IS REQUIRED.

- (YES) (NO)
- Adversely affect public health and safety
 - Adversely affect historic or cultural resources, wilderness, wild and scenic rivers, aquifers, prime farmlands, wetlands, floodplain, ecologically critical areas, or natural landmarks.
 - Have highly controversial environmental effects.
 - Have highly uncertain environmental effects or involve unique or unknown environmental risks.
 - Establish a precedent resulting in significant environmental effects.
 - Relate to other actions with individually insignificant but cumulatively significant environmental effects.
 - Adversely affect properties listed or eligible for listing in the National Register of Historic Places.
 - Affect a species listed or proposed to be listed as Threatened or Endangered. (if any doubt exists include initials of T&E Specialist) SEE WILDLIFE ASSESSMENT FOR DETAILS ON ESA, SECTION 7 CONSULTATION COMPLETED.
 - Threaten to violate any laws or requirements imposed for the protection of the environment such as Executive Order 11988 (Floodplain Management) or Executive Order 11990 (Protection of Wetlands).

THE NATIONAL HISTORIC PRESERVATION ACT:

Ground Disturbance:

- None
- Ground Disturbance did occur and an archeologist survey, required under section 110 of the NHPA has been performed. A report has been prepared by the resident archeologist. A clearance memo is: attached incorporated into the attached XXX form:
 - Restoration of dozer ground disturbance
 - Management of historic vegetation impacted by the fire
 - Repair functional historic fence line

An XXX Form:

- Is required because the project affects a site that is eligible or on the national register. The XXX form is attached.
- Is not required because the project has no potential to affect cultural resources (initial of cultural resource specialist)

OTHER REQUIREMENTS:

(YES) (NO)

- Does the project have potential to affect any American Indian uses? If so, consultation is needed. Pacific West Area Office, should be consulted if this is an issue.
 - Consultation with representatives of Miwok
 - Consultation with NPS, Area Office, Chief of Historic Preservation
 - Consultation with NPS, Area Office, Chief Archeologist
- Are any toxic chemicals, including pesticides or treated wood, proposed for use? If so, Pacific West Area Office IPM Coordinator, should be contacted.

I have reviewed the proposal in accordance with the nine criteria and have determined that the proposal would not involve any significant environmental effects. Therefore it is categorically excluded from further environmental (NEPA) review. BAER Team Archeologist has completed the necessary coordination to insure compliance with the National Historic Preservation Act and other requirements.

BAER Team, Environmental Protection Specialist

Date

- I concur and it is my decision to approve the project.
- I do not concur because:

Superintendent

Date

RESOURCE ADVISOR PRE-INCIDENT PLANNING

- **Pre-season planning- Considerations for Development of Treatment Specifications and Assessments**
- **Assemble References, Aids, Materials to assist in resource evaluations**
 - **Names and Phone #'s of resource contacts:**
 - Resource Advisors
 - BAER Team Members
 - Professional and Scholastic Advisors
 - Administrative Payment Teams
 - Agency/Departmental Financial Contacts
 - **Resource References**
 - Species lists and reference books (plant, animal, T&E, etc.)
 - Specifications (Seeding, Fencing, Erosion Control Treatments)
 - Monitoring protocols
 - Wage Grade and GS Pay scales
 - Mapping Aides (dot grids, aerial photo conversion charts, land and slope indicator templates)
 - Vendor telephone numbers, catalogs, etc.
 - Special Agency regulations (Categorical exclusion list, noxious weed policy, wilderness policy, etc.
 - **Office supplies**
 - Pens, pencils, eraser, stapler, 3"x 5" cards, labels
 - Colored felt pens (high-lighters) for map work
 - Paper clips, paper punch, file folder(s)
 - Calculator
 - Personal Computer (PC)
 - Notebook or note pad
 - Extension chord

- **Personal Gear**

- Personal Protective Equipment (fire clothes, leather boots, hard hat complete with chin strap, goggles, gloves, ear protection, fire shelter, line pack, water bottles, first aid kit, belt weather kit)
- Binoculars
- Compass
- Clinometer
- Camera
- Radio
- Fireline handbook
- Personal medical gear (medication, saline solution, etc.)
- Specialized tools of your trade (brush, spade, vegetation hoop, scale, etc.)

It is imperative that you assemble all of your gear prior to the incident! Especially your PPE.

WILDLAND FIRE and RESOURCE PROTECTION

Resource Advisor Checklist Planning for Resource Protection

Pre-incident Planning:

- Roles/responsibilities identified:
 - Resource Advisors, BAER Team Leader/member, technical specialists
- Cultural and natural resources identified, mapped into GIS
- Delegation of Authority (examples) prepared with rehabilitation requirement
- Information needs identified & compiled into GIS (basic resource inventories)
- Agency planning documents available
- Preplan treatment strategies and locate equipment/material suppliers
- Compile resource contact list (BAER/emergency coordinators, technical specialists, other agency contacts, neighbors, Tribal Councils, etc.)
- Prepare cooperative agreements
- Allow staff time and budget for pre-incident planning
-
-
-
-
-

Incident Planning

- Identify resources at risk
- Determine level of complexity to conduct BAER survey (accomplished by staff, call for assistance)
- Identify BAER Team make-up
- Mobilize BAER Team
- Conduct orientation to fire, resources at risk, Incident Management Team, resources available to the BAER Team
- Involve media and public as appropriate
- Resource Advisor/BAER Team and ICS coordination during the incident
- Resource Advisor/BAER Team coordination with the Agency Administrator during the incident
- Identify Resource Advisor Implementation Leader to work with the BAER Team
- Conduct resource assessment (assign staff specialists to assist BAER Team)
- Conduct suppression impact inventory
- Implement suppression rehabilitation treatments
- Prepare contract specifications
- Coordinate contracts, purchases, rentals with Finance
- Attend BAER Team daily debriefings of survey findings

- Prescribe BAER treatments
- Prepare the Burned Area Emergency rehabilitation Plan
- Initiate compliance consultation (SHPO, USFWS, etc.)
- Prepare documentation for compliance requirements (NEPA, NHPA)
- Presentation of the BAER Plan (survey, assessments, treatment recommendations, budget, maps, compliance, maps, and supporting documents)
- Submit BAER Plan for review and approval
- Organize/file BAER documentation
-
-
-
-
-

BAER Treatment Implementation

- Involve media and public in progress
- Conduct transition from BAER survey to treatment implementation
- Release BAER Team
- Amend implementation treatments
- Financial documentation and accountability
- Prepare interim BAER Plan and Accomplishment Report
- Conduct performance evaluation of survey and implementation
- Conduct maintenance and monitoring of treatments
- Publish/distribute rehabilitation treatment successes/failures
- Compile rehabilitation documentation and finalize files
- Prepare final BAER Plan and Accomplishment Report
-
-
-
-

OBJECTIVE:

Upon completion of this lesson, participants will be able to discuss National Park Service procedures for screening BAER requests for approval.

NARRATIVE:

1. INTRODUCTION

- A. BAER is an emergency process that is not subject to normal program funding limitations. In order to protect the integrity of this discretionary funding authority, projects must be screened by higher authority than the unit initiating the BAER projects.
- B. BAER plans may be prepared by national BAER teams assigned to an incident, or by ad hoc interdisciplinary teams staffed by specialists from the local unit or cooperating agencies.
- C. Regardless of who prepares the plan, it must be presented in the format specified in the *DOI Burned Area Emergency Rehabilitation Plan and Accomplishment Report*. Using this standard format makes it much easier for reviewers to read and understand the plan and identify items that need more information or fail to meet justification criteria.
- D. All plan components must be clearly and succinctly explained, and those that are unusually expensive or which are likely to be controversial and fall beyond the normal scope of BAER activities must be justified with extended remarks.

2. APPROVAL LEVELS AND TIMELINES

A. Single-Agency Plan Approval

- 1. In 1997, ALL BAER plans must be submitted to the national BAER program manager for approval. This procedure is designed to ensure uniform application of interim BAER policies until the new DOI policy is in place.

I-c-2-1

2. Once the new policy is in place, it is anticipated that single-agency NPS BAER plans up to \$250,000 will be approved by regional offices, and plans over \$250,000 will be approved at the Washington level. The \$250,000 limit includes all anticipated work for up to two growing seasons following the fire.
3. Although the initial BAER plan should contain an estimate of all anticipated work for the life of the project, approvals are usually restricted to annual work plans. The BAER work should be projected by fiscal year, as specified in the plan format. Revised estimates should be prepared for subsequent fiscal years after the results of the first year have been evaluated. BAER monitoring will be approved for no longer than three years following initial plan approval. Mitigation treatments may be maintained for up to three years following initial plan approval.
4. Plans must be submitted by the BAER team to the Agency Administrator within three days after the fire is controlled. Plans must be approved or rejected by the Agency Administrator within one week of receipt, and within two weeks of receipt by the Regional/Washington office.
5. Revised plans may be submitted at any time, and must follow the same approval process as the initial plan. Approved revisions will still be constrained by the two-growing season time limit.

B. Multi-Agency Plan Approval

1. For multi-agency BAER projects, the NPS encourages designation of a lead agency, and preparation of a joint plan.
2. If separate plans are prepared, the NPS will follow normal approval procedures.
3. If a joint plan is prepared, each agency must approve the plan at the state/regional/agency level or higher. The approval level depends on agency requirements. For example, a joint plan costing \$200,000 for a USFS Region 5 Forest and \$200,000 for an NPS Western Region Park would be approved by the FS regional office and the NPS national office.
4. Joint multi-agency BAER plans must be submitted to the state/regional/agency or higher level within 10 days after the fire is controlled. Extensions can be negotiated with approval authorities. Approval/rejection must be within seven days of receipt by approval authority.

2. APPROVAL SCREENING CRITERIA

- A. Is the action necessary to mitigate an emergency condition?
- B. Is the emergency condition a result of a planned or unplanned ignition that has failed to meet management objectives? i.e. a "wildfire" or an "escaped" prescribed fire that was suppressed.

- C. Do the treatments address:
1. Threats to life and property on or off-site
 - (a). Floods
 - (b). Debris flows
 - (c). Landslides
 - (d). Hazard trees
 - (e). Road hazards and other imminent health and safety threats
 2. Loss of soil productivity
 - (a). Soil erosion beyond a normal acceptable range, or that would accelerate other unnatural impacts or threaten critical resources
 - (b). Loss of soil structure necessary for revegetation and implementation of other rehab actions
 3. Loss of water control and deterioration of water quality
 - (a). Sediment load beyond a natural or acceptable range
 - (b). Creation of gullies and channels that threaten other critical resources or that fall beyond the natural process
 4. Threats to critical natural and cultural resources
 - (a). Unnatural or unacceptable disruption of natural biotic communities and ecosystem structure and function
 - (b). Unacceptable impacts to sensitive species
 - (c). Unacceptable impacts to historic properties, cultural landscapes, archeological sites, and traditional cultural properties
- D. Can the watershed treatments be implemented before the first damaging rainfall event?
- E. Can non-watershed treatments (closures, eradication of non-native invasive species, structure stabilization, etc) be implemented before critical resources will be impacted?
- F. Are the treatments likely to be effective, and are the costs commensurate with the risks of critical resource damage?
- G. Does the BAER plan contain adequate administrative and operational controls to ensure that the work can be organized and accomplished within designated timeframes, and that the results will be documented, evaluated and available for adaptive feedback?
1. BAER funds may be approved for the following types of monitoring :
 - (a). To assess whether designated treatments were implemented as specified in the plan
 - (b). To assess whether designated treatments worked as expected

3. REJECTION CRITERIA

A. Common situations that lead to rejection of BAER plans or plan components

1. Proposal involves research on fire effects rather than a plan to mitigate impacts based on best available knowledge. Increasing our knowledge of fire effects on cultural and natural resources is a worthwhile goal, but is not an emergency and thus falls outside the scope of BAER funding.
2. Proposal involves lengthy resource damage assessments and inventories. A quick damage assessment may be needed to determine the scope and priority of treatments, however such an assessment must not become an end in itself and preclude implementation of emergency treatments before the first resource-damaging event occurs.
3. Proposal involves restoration of facilities, cultural properties and sites, or biotic components of an ecosystem that are not of an emergency nature. BAER funds cannot be used to rebuild or replace structures damaged by fire but posing no imminent threat to human health and safety or to natural and cultural resources. The fact that a facility or ecosystem treatment is specified in a land management plan does not make it an emergency.
4. Proposal recommends purchase of capital equipment without adequate determination that it is not more cost effective to lease, rent or borrow such equipment. The criteria used to determine that purchase is the most cost-effective option must be thoroughly documented in the plan.
5. Proposed work extends for more than two growing seasons following the fire. Approval to extend work beyond this time is limited to rare and exceptional circumstances. The two growing season rule is designed to ensure that mitigation is performed in a timely manner. Generally, post-fire conditions are largely stabilized after two growing seasons, for better or worse, whether or not impacts mitigation measures were accomplished.
6. The plan was prepared and submitted without regard for the normal timeframes. Preparation or submission of a plan weeks or months after a fire is controlled cast doubt on the emergency nature of the situation, and the ability of unit staff to properly assess and implement mitigation measures.

DOI Burned Area Emergency Rehabilitation Team

Team Leader Call-Out Criteria

Fire Status:

Fire Name:
Fire Number:
Location:
Fire Start:
Size:
Potential Fire Behavior:
Fuel Type(s):
Estimated Control:
Fire Overhead Team Type:
 Incident Commander:
 Plans Section Chief:
 Operations Section Chief:
 Logistics Section Chief:
 Finance Section Chief:

Resources at Risk:

Watershed(s):
Wilderness:
T&E Species:
Cultural:
Infrastructure:
Urban Interface:
Forest:
Vegetation:
Range:
Jurisdiction:

Agency Support:

Capability of Producing Own BAER Plan:
Need Help of Only One-Two Specialists:
Resource Advisors:
Objectives of Rehabilitation:
Capability of Implementing BAER Plan:
Support & Logistics:
 Work/Meeting Space:
 Sleeping Facility:
 Administrative Support:
 GIS/GPS:
 Copier:
 Computers/Printer:
 Agency Contact:
 Telephone #:
 Fax #:

RESOURCE ADVISOR COURSE

ENVIRONMENTAL CONSIDERATIONS

I. Defining Major Issues

- ☞ It is important to focus in on major management and resource issues for analysis purposes
- ☞ Determine major issues.
 - Utilize local information sources
 - Federal, State law
 - Local Management Plans
 - Input from Line Officer, local administrators, landowners, concerned/affected public
- ☞ Clearly define issues into succinct statements. Tie statement into the protection of life, property, and/or critical natural resources

“Two federal Candidate species, one proposed Endangered and one Category 1 species occur within the Verbenia Fire area.”

“Potential impacts to these species from wildfire and suppression activities”

II. **MIST- MINIMUM IMPACT SUPPRESSION TECHNIQUES**

III. **CONDUCTING THE ASSESSMENT**

- ☞ **Objectives:**
 - Assess on-the-ground conditions
 - Identify and define the emergency
 - Geographically locate the existing emergency, and prescribe MIST or rehabilitation treatments
 - Assist the local Resource Management Specialist, Wildland Fire Incident Management Team in recommending both long and short-term treatment strategies.

III. Conducting the Assessment cont.

☞ **Aerial Reconnaissance Phase**

- Post-burn aerial photography
- Fixed-wing and helicopter flights
- High elevation observation points (mountain peaks/lookouts)
- GPS Technology

☞ **Delineate Burn Intensity and Homogeneous Areas**

- Identify areas prone to post-fire erosion, flood, mass instability, downstream values at risk, fire suppression impacts, areas to investigate further, ground access and travel routes

☞ **On-the-Ground Observation**

☞ **Survey Considerations**

- Map selection
- Time Constraints/Prioritizing Workload
- Record Keeping/Documentation
- Human life and property
- Watershed Conditions
- Rangeland, T&E Species, Cultural/Archaeological Resources
- SAFETY, SAFETY, SAFETY!!!!**

IV. TREATMENT RECOMMENDATIONS

☞ **Proven VS. Experimental Treatment Specifications**

“Only proven and documented treatment measures will be funded with EFR and fire suppression dollars.”

☞ **Cost Effectiveness**

☞ **Treatment Feasibility**

☞ **Protection of Treatments (Monitoring)**

V. COMPLIANCE REQUIREMENTS

☞ **All actions proposed should be consistent with management actions approved in existing management/NEPA documents**

☞ **NEPA Compliance Review (Categorical Exclusions)**

☞ **NEPA Documentation and Recommendation**

RESOURCE ADVISOR COURSE IMPLEMENTATION OF TREATMENTS

- ✓ **Begin implementation as soon as possible.**
- ✓ **Ensure rehabilitation is implemented in a timely manner.**
- ✓ **Utilize suppression forces as much as possible to complete rehabilitation prior to demobilization.**
- ✓ **Monitor rehabilitation efforts to ensure they are completed in accordance with agency specifications and guidelines.**
- ✓ **Be flexible. Don't be afraid to stop ineffective treatment measures.**
- ✓ **Ensure contracts are in place and funds are obligated prior to deadlines.**
- ✓ **Monitor effectiveness of treatments.**
- ✓ **Monitor fire area for additional rehabilitation needs. File supplemental funding requests as needed.**
- ✓ **Maintain rehabilitation structures to ensure longevity and functionality.**
- ✓ **Document all rehabilitation measures and effectiveness of each. Photographs are an excellent documentation tool.**
- ✓ **Document all expenditures, delays in rehabilitation implementation, successes and failures of treatments.**
- ✓ **File annual reports in a timely fashion.**

**TABLE 1
PARTIAL CHECKLIST OF TREATMENTS AND APPROPRIATE APPROVED FUNDING SOURCE**

TREATMENT	SUPPRESSION	EFR	AGENCY
Reseeding	X	X	X
Landscape Repair	X		X
Mulch and Soil Netting	X	X	
Check Dams (Straw Bale, Log Sill, Rock, Silt Dams, Contour Tree Felling, Silt Fence)		X	
Water Course Stabilization (debris racks, culvert protection, etc.)		X	
Fence Replacement/Repair	X	X	X
Trail Repairs/Stabilization	X	X	X
Fireline Removal (dozerline, handline, trenchline, foot trail)	X		
T&E Species Documentation		X	
T&E ESA Section 7 Consultation		X	
T&E Species Monitoring		X	
T&E Species Protection		X	
Cultural Resources Damage Assessment		X	
Cultural Resource Compliance (Section 106, ARPA, etc.)		X	
Cultural Resource Stabilization		X	X
Historic Structure Assessment		X	
Historic Structure Compliance (Section 106)		X	
Historic Structure Stabilization		X	X
Non-Historic Structure Assessment		X	
Facility Replacement/Stabilization		X	X
Slash Debris Mitigation	X	X	
Hazard Tree (felling, chipping, blasting)	X	X	
Road, Bridge & Structure Safety	X	X	X
Non-native Plant & Animal Control & Monitoring		X	X
Helispot, Safety Zones & Drop Pts.	X		
Road, Trail and Safety Signs	X	X	X
Resource Protection & Public Safety Patrol	X	X	X
Dust Abatement	X	X	
Sanitation	X		
Fire Rehabilitation Treatment Monitoring		X	X
Hazardous Materials Remediation		X	X

APPENDIX I - CHECK LIST OF POTENTIAL BAER SPECIFICATIONS

Watershed Treatments	Natural Resource Treatments
W-1a Hand Reseeding	N-1a T&E Plant Monitoring
W-1b Aerial Reseeding	N-1b T&E Plant Protection
W-2a Straw Mulch	N-1c T&E Wildlife Monitoring
W-2b Wood Chip Mulch	N-1d T&E Wildlife Protection
W-3 Soil Netting	N-2a Weed Monitoring
W-4a Straw Bale Check Dam	N-2b Weed Control
W-4b Log Sill Dam	
W-4c Rock Check Dam	Infrastructure Safety Treatments
W-5 Stream Channel Stabilization	S-1 Fence Repair
W-6a Contour Tree Felling	S-2a Trail Condition Monitoring
W-6b Silt Fence	S-2b Trail Stabilization
W-7a Debris Rack	S-3 Road, Trail and Safety Signs
W-7b Culvert Protection	S-4 Resource Protection & Public
W-8a Hand/Trench Line Rehab.	S-5 Facility Replacement
W-8b Dozer line Rehab. On Trail	S-6 Facility Construction/Structural
W-8c Dozer line Rehab. On Road	S-7 Slash Mitigation
W-8d Dozer line Rehab. Wilderness	S-8 Tree Hazard Mitigation
W-8e Helispot/Drop Point Rehab.	S-9 Landscaping
W-8f Safety Zone Rehab.	
Cultural Resource Treatments	Other Treatments/Costs
C-1a Archeological Damage Assessment	O-1 Sanitation
C-1b Archeological Compliance	O-2 Fire Related Monitoring
C-1c Archeological Rehab./Protection	O-3 Administration
C-3a Historic Structure Assessment	
C-3b Historic Structure Stabilization	
C-3c Historic Structure Rehab.	
C-4a Cultural Landscape Assessment	
C-4b Cultural Landscape Stabilization	
C-4c Cultural Landscape Rehab.	

RESOURCE ADVISOR'S COURSE

SCENARIO EXERCISE

PART A

BACKGROUND

The date is May 15. For the past two weeks the weather has been uncharacteristically warm following a very wet spring and above average growing conditions. Fire danger is rated moderate to high with warnings being posted at trailheads and information centers regarding fire and smoking restrictions.

Early this morning, an annual preparedness meeting was held between the fire management staff, the Superintendent, and agency resource advisors.

Group Assignment

As an agency resource advisor, identify the items that should be in place at the start of the season and what actions you would take to assure that they are in place.

Agency Related Items:

Personal Related Items:

RESOURCE ADVISOR'S COURSE

SCENARIO EXERCISE

PART B

Background

On August 4 at approximately 1433 hours about 1.5 miles north of Interstate 10 at San Geronio Pass, a private individual attempted to jump start his tractor using normal house current electricity. A spark from the battery started a small grass fire which spreads quickly north towards public lands managed by the BLM. The fire gains momentum as it is driven by high winds and burns 6,200 acres within the first operational period.

A Type I overhead team is dispatched to the fire. By the end of the second operational period, 15,500 acres have burned. The fire is now burning on BLM, US Forest Service, Tribal, and Private lands.

By the end of the fourth day the fire has spread to 21,419 acres. To date the following lands have been impacted by fire and suppression efforts:

BLM- Wilderness	12,028 acres
BLM-non-wilderness	4,475 acres
Total BLM	16,503 acres
USFS-Wilderness	613 acres
Tribal	50 acres
Private lands- Wilderness	1,659 acres
Private lands- non-wilderness	2,594 acres
TOTAL	21,419 acres

Resources Impacted

Cultural:	Cox Ranch; Stills Landing; Rock House
Watershed:	Dip Ponds, Whitewater drainage
Soils:	5.2 miles of dozer line; 8.9 miles of handline and trails
Vegetation:	San Bernardino mountain Gilia
Range:	4.6 miles of range fence; 1,000 feet of range water pipe
Wildlife/Fish:	Desert tortoise; Least bell's vireo; Southwestern willow flycatcher
Forest:	Douglas-fir; Arizona juniper; alligator juniper; Pinyon pine
Recreation:	13.1 miles of the Pacific Crest Trail; Trail and boundary signs

Group Assignment

- 1) As a resource advisor, list out ISSUES for each of the resources at risk that you will need to incorporate into daily shift plans, and rehabilitation plans.
- 2) List out jurisdictional considerations and potential contacts that will need to be made in making resource related decisions:
- 3) What federal and state laws might be applicable in this scenario? What laws will impact suppression tactics (S), rehabilitation efforts (R)? Will waivers (W) be required?

RESOURCE ADVISOR'S COURSE

SCENARIO EXERCISE

PART C

Background

The fire has been contained @ 1800 hours on August 12. You have been reassigned from a Resource Advisor to the Incident Command Team to a Resource Advisor to the Rehabilitation Team.

Your children are sick with chicken pox. The price of gold has dropped \$4 an ounce since the incident started. Sonny Bono has decided to run for President and the balloon payment on your mortgage is due in 1 week.

Group Assignment

- 1) What materials, documents, baseline data, guidelines might you need to begin to conduct assessment work on the fire?**

- 2) What other sources of information or personnel could you utilize to assist you in assessing suppression impacts and fire effects on critical resources?**

- 3) How would you document suppression vs. fire effects impacts?**

RESOURCE ADVISOR'S COURSE

SCENARIO EXERCISE

PART D

Background

The fire has been officially decontaminated on August 13 due to concerns about the northwestern corner of the fire. Fire continues to burn in steep Douglas-fir timber and high winds are expected throughout the night.

You have been given instructions by the Agency Administrator to have a completed rehabilitation plan completed within 3 days of control. Control is scheduled for August 14 at 1800 hours.

Group Assignment

- 1) What concerns might you have about this assignment? What could you do to ensure effects have been properly analyzed and considered?
- 2) What basic parts are needed in your rehabilitation assessment?
- 3) Using the resources at risk listing in exercise B, what rehab treatments would you prescribe for treatment first and why?
- 4) How would you ensure that rehabilitation treatments are implemented prior to the first damaging storm?