

Moose Fire

Salmon-Challis National Forest
North Fork and Salmon-Cobalt Ranger Districts
And
BLM Idaho Falls District Office
Salmon Field Office

ID-SCF-022105
P4PVZ5



Updated: September 19, 2022

Approved by:

Incident Commander

Date

Salmon-Challis NF Agency Administrator

Date

Salmon BLM Agency Administrator

Date

Introduction

The following guidelines will be used by the Incident Management Team (IMT) and the Salmon-Challis National Forest (S-CNF) to assist in the completion of the repair associated with the Moose Fire suppression efforts, located on the North Fork and Salmon-Cobalt Ranger Districts of the S-CNF and BLM Salmon Field Office, Idaho Falls District. Resource Advisors from the S-CNF and BLM assigned to this incident have provided advice to the IMT, with emphasis on the Operations and Planning Sections, as suppression efforts progressed during the course of the incident.

This document includes criteria for fire suppression activities that are included in the terms and conditions of the Programmatic Fire Suppression Biological Assessments (BA), for both the Salmon-Challis National Forest on wildfire suppression activities under section 7 of the Endangered Species Act (2010 Biological Assessment/Biological Evaluation of the Effects to Threatened, Endangered, Proposed, and Sensitive Aquatic Species, Programmatic for Wildfire Suppression on the Salmon-Challis National Forest).

Repair guidelines are intended to mitigate the immediate and potential impacts of fire suppression, including but not limited to vectors for noxious weeds, access points for unauthorized (cross-country) motor vehicle travel, accelerated erosion, sedimentation of streams, and loss of native vegetation.

The 2022 Moose Suppression Repair Webmap will be used to track all suppression repair work.

Repair Responsibility

Suppression repair is the responsibility of the assigned IMT until such time as the fire is officially declared out as designated in the Delegation of Authority. Repair activities will commence as soon as crews, equipment, and other resources are considered available, and it is deemed safe by the Incident Operations Section. The IMT will ensure all repair activities are either completed prior to release, pass them on to the newly assigned IMT through the Transition Plan, or to the Forest or BLM, if repair activities are identified that would be more effectively accomplished by Agency personnel. Completion of fire suppression repair activities accomplished by Agency personnel will be charged to the P code until such time as the fire is officially declared out.

Repair guidelines will become a part of the IAPs as suppression efforts are phased out and the Forest identifies the necessary work to be done. The Forest Resource Advisors have provided input to this plan and have been visiting sites to determine site-specific needs.

Ground-disturbing activities are tracked, catalogued and identified through the daily IAPs, discussions with Operations and field reconnaissance. Field Maps is being used to track and catalogue ground disturbing activities and will be the tool used to track site specific repair of such activities. The map "2022 Moose suppression Repair Web Map" is accessible through the NIFC ArcGIS Online platform. Information includes but is not limited to, activities such as the locations of hand line built, dozer line constructed, drop points, ICP, fueling locations, pump

sites, spike camps and helibases. Motorized and mechanized intrusions in the Frank Church-River of No Return Wilderness are also to be tracked daily. Resource Advisors will monitor and inspect the repair efforts conducted by the Team. This document will be amended as needed based on fire and suppression actions. The Agency Administrator(s) must approve changes from the determined repair needs.

Repair standards and guidelines for individual fire suppression tactics are described for each tactic below, with additional detail provided in appendices. This will be maintained by the Situation Unit of the IMT and the READs. Detailed repair guidelines and tasks for both base camps and incident command posts are described in the associated land use agreements located in FireNET.

All repair activities will be conducted with the input of the appropriate READ and/or technical specialist. Unless otherwise agreed, specialized areas, such as riparian and wetland areas, trails, and archaeology sites, will have a READ and/or technical specialist present onsite or will be approved by READS while repair operations are being conducted.

Fire Suppression Repair Tactics

A. Handline Repair Standards. The IMT will be responsible for obliteration of all handlines by replacing topsoil, fine litter, and coarse woody debris. Repair standards include:

- Restore all cupped and trenched interior lines/hose lays by backfilling with displaced soil, duff, and larger organic matter. Water bars may still be needed for steeper segments. Refer to the Repair Map/Field Maps for general locations of handline.
- All handlines marked for repair will be repaired in their entirety. In addition, obliterate at least the first 200 feet of the handline or to the point that the handline is no longer visible from the point the fireline ties into an existing trail or road. Duff and topsoil soil layers removed during fire line construction should be replaced to contour for the entire length of the handline. Cut standing trees or utilize existing downed material to effectively stop access to fire line that has the potential to be used for new non-motorized and/or motorized use. If cut trees or downed material are not available on-site, consider bringing downed material in from elsewhere, if practical.
- If hand line construction activities disturb stream banks or wetlands, reconstruct the physical environment to prevent subsequent erosion and allow for vegetative recovery. Return stream banks to the surrounding grade and elevation.
- If adequate slash, sod, and topsoil are not available to repair handlines to as close to natural conditions as possible, then ensure that handlines have adequate drainage by construction of waterbars using the following guidelines:
 - On slopes greater than 10%, install water bars that slope in a manner (approximately 45 degrees to the fire line) to move flowing water off the line to the down slope side (see Table 1 for spacing). Always place a water bar at a slope change and re-evaluate spacing interval. Water bars can be made out of rock, logs, or drainage dips cut out of the parent soil material.

Table 1. Fireline slope and waterbar spacing for slopes exceeding 6%.

Fireline Slope (%)	6-10	10-20	20-30	30-40	40-50	50-60	60+
Waterbar Spacing (feet)	200	160	110	80	60	45	30

- Pick up all flagging, litter, and trash and pack out for proper disposal.
- Low cut stumps (8" or lower).
- Install "No Motorized Access" signs, if necessary
- Within the Wild and Scenic River corridor the primary objective is to protect the outstanding and remarkable values associated with scenery and recreation:
 - Flush cut stumps (generally less than 6" or as low as possible for larger diameter trees.)
 - Camouflage stumps with soil.
 - Ensure slash is lopped and scattered to a depth less than 12" and that slashed is removed from the foreground.
 - Shape, blend, and orient vegetation treatment units in a manner that is natural appearing, following contours and desired or existing vegetation patterns to blend with landscape characteristics.
 - Work with READs in completing activities that may have the potential to negatively affect the above values or access to the river or river road.

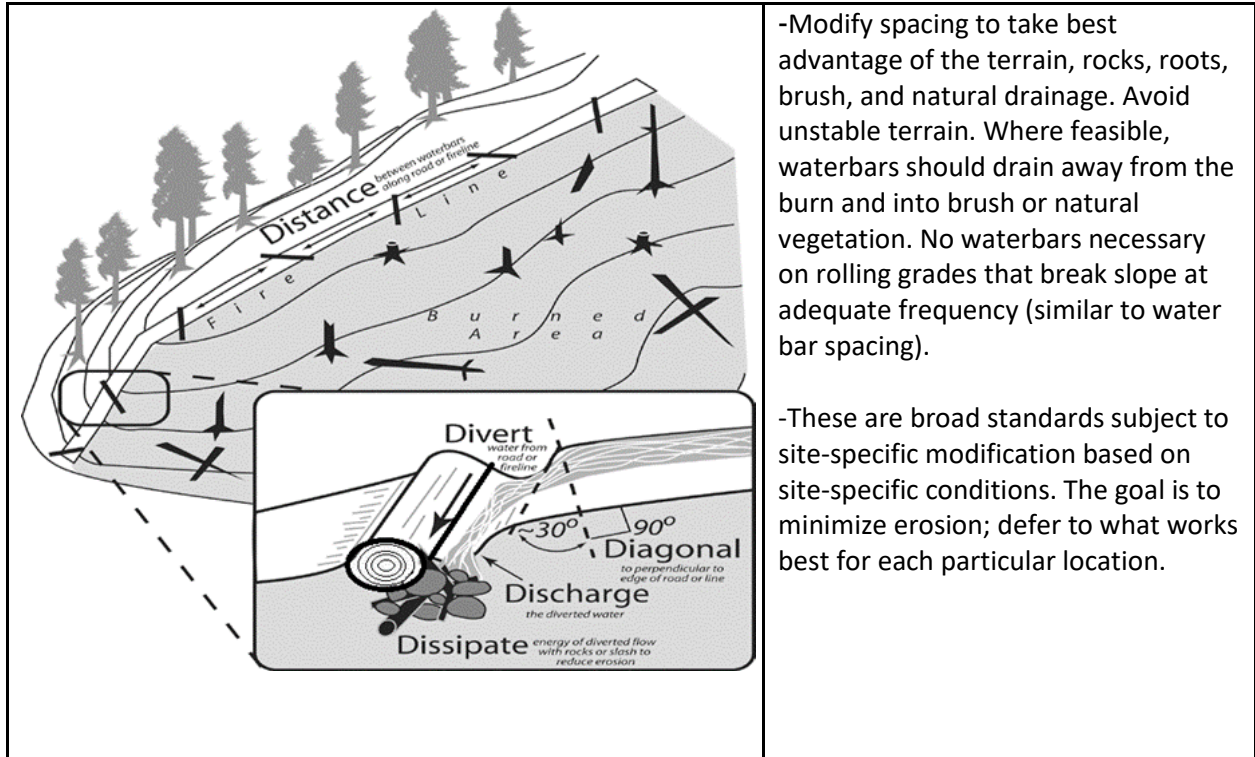
A. Mechanical Fireline (dozer, feller-buncher, skidder). Depending on the type, condition, and location of each segment of line, a determination will need to be made whether it is more efficient to utilize hand crews or equipment to accomplish the following tasks:

- Map the locations of all mechanical firelines, if not already mapped in Field Maps.
- Waterbars will be constructed during fire line construction or immediately upon completion of fire line. Waterbars are to be in place and functional, prior to the next precipitation event.
- Waterbars should be constructed to direct water away from the fire line, by angling waterbars 30 to 45 to the fire line. A waterbar height of 18 inches is generally adequate. The waterbar is more durable if the soil mound is packed with the dozer track or excavator bucket; however, this may not be possible in "powder" dry soil conditions. Considerable work goes into the construction of a waterbar; therefore, thought should go into selecting its location. Most importantly, waterbars should be located where they will function effectively. The outlet end of the waterbar needs to be open and of adequate length to allow free flow of water away from the dozer line. Waterbars should be spaced according to the guidelines in Table 1. The spacing of waterbars may be modified when used in combination with other erosion mitigation such as slash and log placement.
- All dozer line cuts and fills will be pulled back to the natural contour. All berms, dozer piles, and windrows should be broken up and pulled back onto and adjacent to the line. Slash, snags, and downed trees will be placed on the line to prevent erosion, provide micro-sites for revegetation, and prevent motorized intrusion.
- All firelines marked for repair will be repaired in their entirety. In addition, completely obliterate at least the first 200 feet of the fireline or to the point that the fireline is no longer visible from the point that the fireline ties into an existing trail or road. One or a combination of treatments, such as placement of large diameter slash and/or rocks,

construction of soil berms, or re-contouring, may achieve this. When rocks or slash are used, some of the material should be large enough in size such that it cannot be moved by hand. In sage-steppe areas where slash is not available, the first 100 to 200 feet of the fireline may be mechanically closed with heavy equipment. This will deter "re-opening" of the fireline and use of it as a vehicle access point by the public. To assure there will be no vehicle use, the line should be blocked for a distance beyond the access point. Cut standing trees or utilize existing downed material or construct berms to effectively stop access to fireline that has the potential to be used for non-motorized and/or motorized use.

- Constructed areas used for purposes such as porta-tank sites, will be repaired in a similar manner to dozer lines; cuts and fills will be pulled back to the natural contour. All berms, dozer piles, and windrows should be broken up and pulled back onto the constructed area.
- To facilitate reestablishment of native vegetation, redistribute topsoil and slash over dozer lines and constructed safety zones.
- Seeding of mechanically constructed line may be necessary in areas that, for example, lack sufficient soil or existing vegetation or are on steep slopes. The seed mix and application rates will be developed by on a site-by-site basis and based on identified need.
- Slash generated during line construction and/or safety zone construction will be scattered onto dozer line or disturbed areas unless otherwise directed. The effectiveness of slash as an erosion control is greatest when it is contact with the soil. Lopping and/or trampling the slash can best achieve this. Due to the arid nature of the region, slash should be applied at a rate of 3-5 tons/acre. Steep slopes and streamside areas can be slashed at higher rates.
- During line construction, all efforts should have been made to avoid disturbance of natural stream banks. However, if stream banks were disturbed, a READ should be notified of the location and extent of disturbance. This act will likely require initiation of emergency consultation by the Forest as described as a term and condition of the BA. Any disturbed streambanks should be reconstructed to natural bank-full height and armored with rock and/or log structures, transplanted vegetation "plugs", etc. If the banks of any perennial or intermittent streams were disturbed, the READ will develop a site-specific stabilization plan and will oversee implementation.
- Approaches to stream crossing should be treated with slash and organic litter to achieve a minimum 80% ground cover. The actual distance will be prescribed by the READ but will generally range from 100 to 200 feet each side of the crossing, depending on site conditions. The ground coverage can be supplemented with erosion control matting or slash windrows, if deemed necessary, to achieve the guideline.
- Small woody debris less than 3 inches in diameter placed in stream channel from suppression activities will be removed and scattered above the high-water mark. Large woody debris greater than 3 inches in diameter will be cleared only to the extent needed, to allow free passage of high stream flows.
- Relieve soil compaction in areas where deemed necessary by a READ. Rip soil 8-12 inches using an excavator or dozer fitted with ripping tool.
- Install "No Motorized Access" signs, if necessary, in areas where constructed fireline may allow access into areas not open to motorized travel.
- Replace signs damaged by equipment while constructing mechanical fireline.
- Pick-up all flagging, litter, and trash and pack out for proper disposal.

Waterbar Standards: The 5-D Fireline Waterbars



-Modify spacing to take best advantage of the terrain, rocks, roots, brush, and natural drainage. Avoid unstable terrain. Where feasible, waterbars should drain away from the burn and into brush or natural vegetation. No waterbars necessary on rolling grades that break slope at adequate frequency (similar to water bar spacing).

-These are broad standards subject to site-specific modification based on site-specific conditions. The goal is to minimize erosion; defer to what works best for each particular location.

Distance – Waterbars must break up the distance or length that the water can run unimpeded on the fireline. This will reduce the erosive power of local runoff.

Diagonal – Don't bully the flow, lead it. Waterbars built diagonally to the fireline lead the water off. A simple rule is to add 5 to the slope and build a waterbar at that many degrees from perpendicular.

Divert – Waterbars must handle all of the flow for as long as it's needed.

Discharge – Water should be diverted to flow off the line. A good waterbar should have an open outlet

Dissipate – Good waterbars should dissipate the flow just below the outlet to exhaust its eroding power and encourage infiltration.

Slash Applied at proper rate. Allow for some bare patches of ground where native plants can re-establish



B. Fuel Breaks and Decked Trees. Fuel reduction activities and the development of fuel breaks occurred in numerous locations primarily along roads and ridges adjacent to the Ridge Road (Forest System Road #60020), Deep Creek Road (Forest System Road 60101), and the Leesburg Powerline. Some of these areas are adjacent to existing timber sales. Close coordination with Salmon-Challis NF Resource Advisors should occur to minimize damage to timber assets. Specific locations, activities, and tasks for repair needs associated with fuels reduction activities are described in this plan as Appendix A. The incident management team is responsible for repair activities. General guidelines for fuel breaks are as follows:

- Low cut stumps (<8 inches).
- Lop and scatter slash. In some instances, slash may be piled to be burned in the future.
- Scatter wood chips no greater than a depth of 4 inches.
- Ensure that green trees and snags adjacent to roads, trails, and powerlines that were cut as part of suppression activities are placed in log landings, as deemed necessary by the READ or Operations.
- Remove all flagging, trash, and litter.

C. Helispots

- Low cut all stumps (<8”).
- Replace large woody debris and slash to camouflage site from air traffic.
- Remove all flagging, trash, and litter.

D. ICP and Base Camp. The ICP, base camp, and ground support are located on private property. Repair standards are identified in their respective Land Use Agreements.

a. The BLM wareyard was used by ground support and the following should be implemented as needed:

- Remove equipment, flagging, trash, and litter.
- Consider the need for revegetation and weed treatment.

E. Helibase. The primary helibase for the incident was at the Salmon Airbase.

- Remove all flagging, trash, and litter.

Mobile Retardant Base. The Mobile Retardant Base was located at the Morgan Bar Campground.

- Treat the disturbed area using herbicide to prevent the spread of non-native plants.
- Seeding may be necessary to re-establish vegetation in the area disturbed by the Mobile Retardant Base. The seed mix, application rate, and implementation method will be developed by a READ based on the identified need.
- Remove all flagging, trash, and litter.

F. Trails. For trails used by suppression forces for access during suppression activities, and/or used as “check-lines,” a Forest trails specialist will direct all major work to repair trails impacted by suppression efforts.

Repair activities may include the following:

- Low cut stumps (<8”). In wilderness or the Wild and Scenic River Corridor, flush cut stumps (<4”-5”).
- Utilize boulders, large limbs, branches, logs, and slash at trail junctions and pinch points in order to discourage illegal motorized vehicle traffic.
- Scatter slash on the sides of the trail so that remaining trail width is commensurate with use(s) designated in the Forest’s Travel Plan (50 inches for ATV trails, 24-30 inches for single-track trails). Utilize slash with a preference for “green” limbs and branches, if available, so that needles will fall and provide effective soil cover and organic matter.
- Position logs and rock as to provide for safe travel by motorcycle, stock, mountain bike and foot traffic.
- Install “No Motorized Access” signs, if necessary, in areas where constructed fireline may allow access into areas not open to motorized travel.
- Seeding of trail perimeters may be necessary in areas that, for example, lack sufficient soil or existing vegetation or are on steep slopes. The seed mix and application rates will be developed by on a site-by-site basis and based on identified need.

G. Roads and Roadways

- Effectively close and/or obliterate vehicle/equipment routes opened for fire suppression operations that are not designated for motorized use on the Forest or BLM’s Travel Plans.
- Return roads to the standard present prior to suppression activities. If the road was closed to use by a physical barrier, the road and access should be re-closed with a physical barrier (refer to the section on controlling access to dozer lines for possible treatments). It is acceptable to leave a road in an improved condition, if the improvements were made to

facilitate suppression activities, if the road will continue to meet road management and maintenance objectives, and if the road meets requirements of the applicable Forest Travel Management Plan.

- Re-install road drainage features, such as waterbars and drivable dips where they existed.
- Constructed pullouts and turnarounds will be repaired in a similar manner to dozer lines; cuts and fills will be pulled back to the natural contour. All berms, dozer piles, and windrows should be broken up and pulled back onto the constructed area.
- Major travel roads that were used to access suppression actions will be graded. Routes are identified in Field Maps.

H. Access Routes.

- Effectively close and/or obliterate vehicle/equipment routes created by fire suppression equipment.
- Relieve soil compaction in areas where deemed necessary by a READ. Rip soil 8-12 inches using an excavator or dozer fitted with ripping tool.
- Seeding may be necessary in areas that, for example, lack sufficient soil or existing vegetation or are on steep slopes. The seed mix and application rates will be developed by on a site-by-site basis and based on identified need.
- Install “No Motorized Access” signs, if necessary, in areas where constructed fireline may allow access into areas not open to motorized travel.
- Pick up all flagging, litter, and trash and pack out for proper disposal.

I. Structural Protection

- Remove foil wrap and staples from buildings and other structures.
- Remove signs and flagging.
- Remove pumps, plumbing, and associated materials or coordinate the removal of such items left to protect structures with District.
- Pull soil material and duff/slash back over constructed handline. Restore all cupped and trenched interior lines by filling in the trenches with the displaced soil.
- Remove any trees dropped on or very near historic structures during fuel reductions during suppression activities.

J. Cultural Sites. There are numerous sites in the area that have not been formally recorded. National Historic Register Eligibility status for known sites was checked and determinations for fire operations were based on this information. Previously known cultural sites that lie within the area of potential effect will be visited and monitored for changes by the Forest. The Forest will update site records as necessary. The Idaho State Historic Preservation Office (SHPO) was informed of the incident and a post incident review will be conducted. The SHPO will be informed of the findings.

Repair guidelines include:

- Remove foil wrap and staples from buildings and other structures.
- Remove signs and flagging.
- Remove pumps, plumbing, and other materials or coordinate the removal of such items left to protect structures with District.

- Pull soil material and duff/slash back over the handline surrounding cultural sites. Restore all cupped and trenched interior lines by filling in the trenches with the displaced soil.
- Incident ARCHs will monitor recommended repair activities occurring within site boundaries.

It will be the responsibility of the Forest or Zone Archaeologist to notify and consult with appropriate entities.

K. Outhouses

All outhouses used on the incident will be pumped and cleaned as soon as suppression needs are complete.

L. Spike Camps, Fueling Sites, Drop Points, Pumpkin & Water Tank sites, and Staging Areas

- See Field Maps for sites used as spike camps, fueling sites, drop points and staging areas. These sites will be assessed by a READ for specific repair needs.
- Scatter campfire rocks, firewood, backcountry furniture, and charcoal from fire rings if present. Cover fire rings with organics to blend with surrounding cover.
- If soil or vegetation was disturbed for sleeping areas, tent sites or other camp operations, organic material should be replaced, and the site left in a natural looking condition.
- If pit toilets were used, they should be backfilled with soil. Slash and other forest litter should be scattered over the site to resemble natural conditions.
- Drop Points, pumpkin/water tank sites and staging areas should be returned to their pre-fire condition. All trash, equipment, flagging, and signs should be removed. If any dozer work occurred at these sites, pull back berms and scatter slash (if any was created) back over the site. If specific questions arise regarding these sites, contact one of the READs.
- Seeding may be necessary in areas, for example, that lack sufficient soil or existing vegetation. The seed mix and application rates will be developed by on a site-by-site basis and based on identified need.
- Block vehicle access to these repair sites and post closure signs if needed.
- All trash, flagging and other related litter shall be removed with proper disposal.

M. Portable Pump/Drafting sites

- Remove all equipment, fuels, and materials as soon as practicable after conversion to dry-mop techniques.
- Remove any soil contaminated by minor fuel spills or leaks. Contain in plastic sacks and remove for proper disposal.
- All efforts should be made to avoid disturbance of natural stream banks and channels. If streambanks were disturbed for drafting or portable pump placement, the area should be returned to as natural condition as possible. Re-contour and camouflage pump “pads” by replacing excavated material in the cut bank and scattering local organic material. Minimize the potential for future erosion and sediment delivery to streams by restoring the surface of re-contoured pump pads to natural grade and consider the use of brush filters between the pad and stream channel. Refer to Field Maps repair notes for site specific instruction.

- Backfill, cover, and grade any drainage ditches or cupped trenches constructed for drafting operations.
- Remove all soil, rock, and plastic dams that were used for water diversions or impoundments. Plastic and other foreign materials will be removed from the Forest for proper disposal.
- All small woody debris, less than 3 inches in diameter, placed in stream channels from suppression activity will be removed and placed in a secure location above the high-water mark. Large woody debris, greater than 3 inches in diameter, will be cleared only to the extent needed to allow free passage of high stream flows.

N. Suppression activities within active mine sites

- Repairs to ground disturbing activities within active mine sites need to be discussed and approved specifically by the Salmon-Challis National Forest and mine personnel. The repair standards will match the reclamation standards in the mine approval document.

APPENDIX A – Fuel Break Repair Plan for the Moose Fire
Salmon-Challis National Forest
Fuel Removal Plan for the Moose Fire

ID-SCF-022105

Last updated 08/26/2022

Introduction

- This document is intended to guide removal of the heavy fuels along fuel breaks constructed on the Mine Powerline, Ridge Road, 300 Road, and Deep Creek Road, and the ridge between Diamond Staging and the Stormy Road (Diamond Line). This plan is specific to areas in which heavy equipment was utilized to construct fuel breaks resulting in the creation of decked timber. This plan is a living document and will be modified as needed, due to changes in fire behavior, IMT priorities, equipment availability, timing, and removal opportunities.

Goals

- The overall goal of this plan is to remove heavy fuel loads created during construction of fuel breaks, minimizing additional ground disturbance, and allow for productive use of the timber that was cut. The anticipated uses include: (1) commercial processing into a variety of forest products such as sawtimber, post/poles and firewood; (2) stream restoration; and (3) permitted personal-use forest product gathering (i.e. fuelwood, post/poles).

General Instructions

- The following applies to all **deck locations**:
 - All decked timber shall remain unprocessed and remain on site, unless otherwise noted in the Site-Specific Instructions section of this plan
 - All decked timber will be disposed of through a combination of timber sale contracts, personal use permits, and free use permits, as determined by the Salmon-Challis
 - After decks have been disposed, any remaining slash will be piled and burned
 - After pile burning, an excavator will be used to pull in and mix debris ring left from burned piles. Break up hydrophobic soil layers and redistribute top soil and slash. Consider an option to seed.
 - Any dozer line constructed around decks for protection will be repaired after all salvage activities are complete
 - Any slash not associated with decked timber shall be disposed of in accordance to the Moose Fire Suppression Repair Plan
 - Any conflicts that may arise between the Fuel Break Repair Plan and the Moose Fire Suppression repair plan will be mitigated with the IMT and local Salmon-Challis Timber Program staff
- The following applies to all pile locations:
 - Reasonably compact and free of soil to facilitate burning (excavator with thumb and bucket is best)
 - Less than 50 feet long
 - Greater than 5 feet in height
 - At least 20 feet from residual timber
 - At least 100 feet from power line poles
 - Material greater than 4" dbh will be lopped to less than 12'

- Outside RHCA
- After pile burning, an excavator will be used to pull in and mix debris ring left from burned piles. Break up hydrophobic soil layers and redistribute top soil and slash. Consider an option to seed

Site Specific Instructions

- In addition to general specifications previously identified, the following site-specific instructions apply to their respective areas. Salmon-Challis Timber Staff will be available to coordinate with the IMT and READs.

Mine Powerline – Mechanical Line Between DP 53 and DP 61

- The Mine Powerline is critical infrastructure supplying power to the Beartrack, Blackbird (CERCLA) and Idaho Cobalt mines. Decked timber and windrowed material will be removed from the powerline right-of-way. Due to hydrological and critical Bull trout habitat in Napias Creek and Sharkey Creek, most of the decked timber will be skidded to the clearing adjacent to DP 53. Not all decked material will be removed. See attached Powerline Fuels Removal Map for specific instructions.
- Due to the proximity of operations directly adjacent to the powerline, consult with Idaho Power to determine if the line needs to be deenergized and coordinate with the Beartrack, Blackbird (CERCLA) and Idaho Cobalt mines.
- Portions of the powerline corridor exceed +20% slope, and adverse (uphill) skid distances exceed 3,000 feet, limiting the efficient use of rubber tired skidders. In order to remove decked timber efficiently, and to reduce soil impacts, log forwarders will be utilized.
- Decked timber along the powerline corridor will be processed to a length adequate to safely haul logs in the forwarder's bunk. Slash from processed material will remain at deck locations and burned. Any remaining slash will be chipped to chipping specifications per the Moose Fire Suppression Repair Plan. A dangle head processor will be used to process logs due to the proximity of overhead powerlines.
- Smaller diameter material that was windrowed instead of decked will be chipped to specifications per the Moose Fire Suppression Repair Plan.
- Decks identified to remain on the Mine Powerline Fuels Removal map will be piled for burning. An excavator with thumb will be used to move decks away from residual timber and piled for burning.
- Salmon-Challis Timber program employees will be onsite during forwarding operations to help coordinate efforts and provide guidance to the IMT.

General specifications for the Mine Powerline are as follows:

- Equipment needs:
 - 4) Log Forwarders
 - 2) Dangle Head Processors or Harvesters
- Process decked material (logs and tops) to 16 – 18 foot lengths, or as deemed adequate by forwarder operator
- Forward processed logs to landing area as identified on the Mine Powerline Fuels Removal Map
- Slash from processed material will be left on site, slash piles shall be built to the following specs:
 - Reasonably compact and free of soil to facilitate burning
 - Less than 50 feet long
 - Greater than 5 feet in height
 - At least 20 feet from residual timber

- At least 100 feet from power line poles
- Material greater than 4" dbh will be lopped to less than 12'
- Move decked material off the powerline to locations along the mechanical line for burning, as identified on the Mine Powerline Fuels Removal Map
- Chip windrowed material as identified on the Mine Powerline Fuels Removal Map

300 Road – Mechanical Line Between DP 60 and Hornet Creek

- In general, decked material along the 300 Road from DP 60 to Hornet Creek will remain on site and disposed of through timber sale contracts, personal use permits, or free use permits, as deemed by the Salmon-Challis.
- Decked material adjacent to Allen Creek and Moose Creek may be utilized as material sources for suppression repair work in those Riparian Habitat Conservation Areas (RHCA) as deemed necessary by Resource Advisors. If decked material is to be used in suppression repair, Salmon-Challis Timber staff will be notified and coordinate with READs.
- Slash generated from deck disposal will be machine piled and burned. After pile burning, an excavator will be used to pull in and mix debris ring left from burned piles.

Ridge Road – Mechanical Line Between DP 50 and DP 53

- The section of the Ridge Road from DP 50 to DP 51 is included in the Stormy Deck Salvage Timber Sale. This timber sale is currently under contract. Any repair work adjacent to contracted decks will be coordinated with the Salmon-Challis Timber Sale Administrator and Contracting Officer. Refer to attached Ridge Road Fuels Removal Map for specific Stormy Deck Salvage Timber Sale deck locations.
- For the section of the Ridge Road from DP 51 to DP 53, follow general instructions in this plan.

Diamond Line – Mechanical Line Between Diamond Staging and DP 49

- Approximately five decks need to be relocated on the Diamond Line. The decks, identified on the Diamond Line Fuel Removal Map, will be relocated to adjacent to the deck located on the 022 Road. Material from these decks will be whole tree skidded to the 022 road. The General Instructions in this plan applies to the remaining decks on the Diamond Line. The following instructions apply to the Diamond Line:
- Relocate decks identified on the Diamond Line Fuel Removal Map prior to dozer line rehab
- Use rubber tire skidder to whole tree skid decks to new location
- Do not process decks
- An excavator with thumb may be required to dismantle deck in order to skid, consult skidder operator
- Consult with Salmon-Challis Timber Staff if additional landing space is needed to accommodate deck relocation

Deep Creek Road – ¼ Mile West of the Moccasin and Deep Creek Road Junctions

- Two decks are located along the Deep Creek Road, approximately ¼ - ½ mile west of the Moccasin and Deep Creek Road junction. Due to the distance away from the main fire, the Salmon-Challis may advertise these two decks in early fall. Salmon-Challis Timber Staff will coordinate with the IMT to determine an appropriate advertisement date, so as to not interfere with Moose Fire suppression and repair operations.

DRAFT APPENDIX B
Archaeology/Heritage Strategy for Repair and
Transition to Management by the Salmon-Challis National Forest

Heritage Resources Moose Fire Suppression Repair Strategy

Purpose/Need

There are numerous cultural sites on the Salmon-Challis National Forest and within the Moose Fire area. Cultural resources are an irreplaceable resource that can inform us about past ways of life, landscape use, forest management history. Cultural resources can directly be impacted by fire and indirectly through fire suppression activities. During fire operations and fire suppression activities strategies (handline, structure wrapping, flagging, etc.) were implemented for the protection of cultural resources in fire area. Fire suppression repairs are necessary to avoid any impact to sites and site integrity.

Heritage and Archeological Resources are non-renewable. Once they are damaged, they are lost forever. For purposes of this incident, archaeological and heritage resource sites can be grouped into three categories relative to their National Register of Historic Places (NRHP) eligibility status: 1) eligibility for listing unevaluated, 2) eligible for listing, and 3) not eligible for listing. Unevaluated resources are regarded as potentially eligible until a formal determination of eligibility is made, and are therefore treated as eligible resource (with undefined values). Resources already determined eligible for listing are considered historically and/or culturally significant and have a specific set of values already identified and defined. Resources evaluated as non-eligible for NRHP listing have been determined to lack NRHP qualifying characteristics, association with a historically significant thematic context, or lack integrity to such an extent that the NRHP values (if present) cannot be effectively conveyed to an interpreter. Therefore, unevaluated resources and those determined eligible are a top management priority while ineligible resources are regarded as lower priority. **Note: resources evaluated as non-eligible may still be regarded as culturally significant to Tribal and other groups, and therefore the Forest may still have some legal responsibility or interest in management regardless of NRHP eligibility status.

Objectives

1. Identify sites that are in need of, or may benefit from, suppression repair actions.
2. Document site protection measures applied during the suppression effort Assess damage to sites from suppression actions, including use of or lack of effective protection measures, or other impacts associated with the wildfire.
3. Evaluate the potential effect of proposed suppression repair activities to cultural resources and when necessary develop alternate repair activities to protect sites
4. Coordinate recommendations with Resource Advisor (READ) group related to suppression repair, and track implementation of repair work.
5. Identify needs or opportunities (if any) for Forest Agency Administrators to consider amending the suppression repair plan.
6. Incorporate results of assessments to better inform present and future resource management actions (including BAER).

Approach

Site Assessments

- Perform intensive complete survey in areas of ground disturbance that did not receive survey during the suppression effort or do not have acceptable levels of previously adequate survey. Prioritize from most intensive to least intensive ground disturbance and include areas of control line construction, spike camps, safety zones, drop points, equipment staging, hazard tree removal (including log decks, skid routes, etc.), and so forth.
- Conduct preliminary site recordation on newly discovered sites.
- Conduct site visits and perform condition/damage assessments. Gather field data and record results of assessment on monitoring forms (see SCNF Fire Site Monitoring Form)
 - Visit previously known or newly discovered sites that had suppression activities, incident infrastructure, or had protection measures (including avoidance).
 - Visit any previously known or new sites within 0.25 mile of a sites that had suppression activities occur. Repair Recommendations
 - Visit sites that had no action recommendations during suppression to confirm no suppressive action occurred within site (lowest priority). Example: aerial application of retardant, gel, or water drops, etc.

- Recommendations for suppression repair actions need to be consistent with those identified in the repair plan. If ARCH determines a resource-based need for action/inaction that is not consistent with those identified in the repair plan, then coordinate with both READ group and Agency Administrator.
- Incident ARCHs will monitor recommended repair activities occurring within site boundaries at locations of special archaeological concern.
- Document any new resource discoveries made during suppression and suppression repair activities.
- Consider recommending against any repair activities that involve additional ground disturbance within site boundaries.
- In the following circumstance an archaeologist will be present to monitor suppression repair activities:
 - Removal of structure wrap and staples from buildings, structures, and decking.
- Removal of sprinklers from historic structures. All materials installed within and/or surrounding sites associated with protection or suppression will be removed. This includes flagging, hose lays, pumps, sprinklers, portable reservoirs, structures wrap (and staples), etc.
- Full rehab of any handlines surrounding structures or cultural sites.
 - Pull soil material and duff/slash back over handline. Restore all cupped and trenched interior lines by filling in the trenches with the displaced soil.

- Sites that have been identified as being directly impacted by fire (burned over, spalling, etc.) should be documented with an update and assessment of the damage. This information will be used to notify the Idaho State Historic Preservation Office (SHPO).

- Consider recommending that vegetation/fuels reduced/removed from within, or surrounding sites be piled or chipped off-site, or if needed, piled/chipped at locations recommended by incident ARCHs within sites. Lop and scatter and other methods of surficial camouflage may be beneficial when applied within sites to obscure artifacts and features that are now more exposed due to the burn event or suppression actions.
- Coordinate recommendations for repair activities with READ group and Division as needed to ensure heritage resources are considered during repair activities. Produce repair maps and/or other documents as needed to assist with implementation of recommendations.
- Record recommendations and implementation status in master site spreadsheet (MasterSiteTableUpdated 2022_08_03). This spreadsheet is located in the External SCNF Heritage Moose Fire folder, a Forest Service Box folder that is owned and managed by the Salmon-Challis National Forest North Zone Heritage Team; Jason Coates, Acting Forest Archaeologist, Dane Silva, North Zone Archaeologist, Liz Dolinar, Archaeologist and Michelle Platt, Archaeologist). This folder contains sensitive information and access will only be granted to ARCHs assigned to the incident..
- Resolve any conflicting recommendations between heritage and other resource areas with the Lead READ and/or Agency Administrator.

Data/Information Management

- All field data collected during suppression and suppression repair activities will be stored in the External SCNF Heritage Moose Fire folder.
 - Previously recorded sites that were visited or assessed during suppression/suppression repair activities, along with newly recorded sites will be housed in the external box folder: Moose ARCHs 22_Site Information and Assessments Folder.
 - There are specific folders for previously recorded sites, new sites, and a photo cache for all photos.
 - Any GIS data (shapefiles) recorded in the field will be stored in the New_ARCH_GIS Folder
- ARCH Field Notes/Daily logs should be kept in the ARCH Field Notes Folder Sensitive resource information will not be provided or broadcast to other READs or incident personnel unless there is an express need to do so for them to complete their assignments. Any sensitive information distributed by heritage personnel to other incident personnel will be reclaimed by heritage personnel.
- Sensitive resource information will only be stored on heritage group devices and removed at the end of the incident or ARCHs assignment. Resource information will not be stored in incident information systems.

Gather, organize, and manage results of site assessments with the intention of applying that information to an upcoming BAER assessment. Provide results of assessments to BAER ARCH to reduce redundancy and duplicative efforts.

Transition to Forest Data Management

- Local archaeologists on the Salmon-Challis National Forest will incorporate results of surveys, assessments, and data collection into permanent heritage repositories (site records folders, GIS etc.). This information will be stored on the External SCNF Heritage Moose Fire folder.

- Identify sites at risk of increased erosion and/or looting/vandalism and develop mitigation recommendations and funding proposals to address these needs through BAER.
- Consider all repair and BAER recommendations through the lens of future fire management (e.g. whether rehabilitation of a control line is necessary to safeguard resources presently, or whether no rehabilitation may support future projects or fire suppression actions).
- Individual's contributions and recommendations, tracking, and data management to be completed by individual incident ARCHs prior to demobilizing from the incident, or incident conclusion, or conclusion of BAER assessment, whichever comes first.

Contact Information

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