Draft – Bitterroot National Forest Project Implementation Plan

Introduction

The Decision Memo describes the effects of proposed activities discussed in the Piquett Creek project area. This Implementation Plan is integral to the analysis of effects associated with the Piquett Creek Project Decision Memo (DM).

The Implementation Plan documents the process for implementation of the activities. This is meant to be a 'living' document and may need to be adjusted as we learn more through the implementation of each activity. As activities are designed, the process may be refined, and new technology or expertise may be used.

This Implementation Plan was developed in conjunction with the Activity Cards in Appendix C (Decision-004) to provide a link from the DM to the project-specific work. The Activity Cards provide activity-specific design elements and best management practices and the Implementation Plan includes site conditions, mitigation measures, or other requirements for each type of activity to inform future data needs and field visits to develop treatment scenarios that are consistent with the NEPA analysis. This plan outlines the process each activity will follow during implementation to ensure the effects are within the scope of the analysis for the project, the activity is authorized with the DM, and that all resource-specific design elements and mitigation measures are incorporated into activity design. The Implementation Plan is an essential component of this project for accountability, tracking, decision-making, and documentation purposes. It must be considered alongside the effects analyses, activity cards, and the DM for the success of the project as a whole.

The Implementation Plan is designed to be consistent with the 1987 Bitterroot National Forest Management Plan (Forest Plan). The intent is that this Implementation Plan will be used over a 15-year timeframe and updated as needed. A revision to the Forest Plan would also necessitate a need to update this Implementation Plan.

The purpose of this document is to describe the implementation process for the Piquett Creek Project. The primary goals are to:

- demonstrate that effects of implementation are within the scope of activities and the range of effects described in the Decision Memo;
- conduct a transparent implementation process that keeps the public and Indian Tribes informed of and involved in activity location, timing, and design;
- continue the public participation and collaborative learning that occurred during the planning phase, encourage and support the continuation of collaborative efforts throughout implementation;
- ensure that the Forest continues to consult and collaborate with interested federally recognized Indian Tribal Governments;
- ensure implementation of activities is responsive to dynamic on-the-ground conditions, new scientific information, and public/Tribal input;

- ensure integrated engagement of interdisciplinary team members, field resource specialists, line officers, Indian Tribes and the public;
- focus on shared priorities and work to resolve concerns and solve problems related to selection and implementation of Piquett Creek project activities; and
- conduct monitoring activities, interpret and share results, adapt implementation practices to improve results and better meet project objectives.

Implementation Process

Activities that occur under the authority of the Decision Memo may take several months to several years to go through all steps of the implementation process. Therefore, at any given time there may be several planned activities in different steps of the process. Each year, public involvement will occur to discuss proposed activities and provide updates for ongoing or completed activities. This will include workshops and other public involvement techniques to be able to reach a wide audience.

Process Steps:

1. Determine Activity to be Implemented
2. Check Against Decision Memo and Activity Cards
3. Obtain Line Officer Approval and Place in Out-Year Plan
4. Conduct Fieldwork and Consultation (if needed)
5. Line Officer Approval to Implement
6. Prepare Contract Documents
7. Implement
8. Monitoring
9. Adaptive Management

Tribal Consultation

Federally recognized Tribal Governments have a unique government-to-government relationship with the United States Government. As such, consultation with Indian Tribes requires a continuous process throughout project initiation, planning, design and implementation. Forest Service guidance encourages staff not only to meet the requirements of federal law, but to seek partnership with Tribal Governments wherever possible.

In order to improve consultation and coordination with federally recognized Tribal Governments the implementation plan will include the following measures:

1. The Forest will host an annual workshop during the off-season (typically November to April) with all Tribes that have indicated an interest in consultation during the planning process.
    a. This will be a separate workshop from those including the public and may include one or more Tribes. It will be held after the Forest has held its public meeting workshop to ensure that all proposed refined activities are provided to the Tribe for consideration. The procedure of the workshop would mirror that of the public workshop.
    b. The meeting will cover both the planned activities based upon the Forest's public input and will include any refined activity requested by the Tribe. Similar to the public meeting

workshops, refined activities requested by the Tribe that fall within the scope of the project's analysis will be placed in Project's Out-year Plan as "draft."

c. At a minimum, the line officer responsible for implementation of the project will be present at the workshop.
d. Depending on the wishes of the Tribe, the meeting may include the Tribal Council, a representative from the council, or a delegated member of the Tribal Government.

2. In order to ensure that Tribes are given an opportunity to consult on potential impacts an activity may have on historic properties, all phased consultation inventory reports will be sent to each tribe that has indicated an interest in consultation during the implementation phase. The manner of consultation is further elaborated on in the section of this document covering heritage resources.
3. The Forest will encourage coordination and cooperation with Tribes through staff-to-staff interaction as long as such exchanges are acceptable to the Tribes. Any proposed activities that are derived from these interactions would go through the Tribal workshop process prior to implementation.

Step 1) Determine activity to be implemented

This implementation process starts when the Forest Service identifies an implementation area(s). An implementation area may align with the project area boundary or consist of a smaller area covered by the analysis document. Resource specialists will collaborate to determine treatment opportunities based on filtering processes and verified through field surveys. Field surveys will determine the existing vegetation and fuel conditions and identify a range of potential treatment activities necessary to move the area/unit towards the desired conditions. The fuels specialists and silviculturist will plan and prescribe the complete range of treatments that will meet the desired future conditions at both the stand and landscape scale.

During off season implementation workshops, the Forest Service, public and Tribes may present proposals for an activity authorized in the DM. It is the expectation that at these workshops an array of activities that meet the project purpose and need and were authorized under the signed decision will be presented. The public, Tribes and the Forest may help refine locations, treatment, design components, methods, mitigation measures, and integration opportunities through a collaborative process. Activities proposed must have been analyzed and effects must be within the thresholds disclosed.

At each workshop, the public and Tribes will have the opportunity to submit, review, or discuss the following:

- Report status of activities already planned or in process of being implemented and current Out-year Plan;
- New proposed out-year activities;
- Evaluation and feedback on potential need for change in implementation program;
- Review recent monitoring results (such as from the Forest Plan monitoring, the Forest's Implementation and Effectiveness Monitoring or implementation monitoring, step 9) that may relate to the activity and result in adaptations;

The public and Tribes would have the opportunity to:

- Provide input on types and locations of activities, review maps for proposed activities;
- Evaluate, discuss, and recommend the priority sequencing of activities, treatment activities and integration of activities for funding;

- Review updated maps of planned/in-process activities to provide feedback to Forest Service regarding prior-year management;

The Forest will notify interested and affected parties using multiple notification platforms, including (but not limited to) press releases, letters/emails, the project webpage, and Bitterroot NF social media platforms. Notification will also be sent to the project's mailing list. Meeting location will be determined by proximity to the project area.

For the annual Tribal workshop meeting, the Forest will notify the Tribal Government through a letter or e-mail requesting a mutually agreed upon meeting location and time.

Following the workshop, activities that are recommended to be moved forward into implementation by the responsible official will be placed on the Project Out-year Plan as "draft." Maps and the unit table of the proposed activities will be posted to the project website for additional review and feedback. The feedback period gives an opportunity for the public that may not be able to attend the workshops to provide their input on what, where and when activities are to be implemented before the activities are made final. Desired feedback and potential changes to the draft out-year plan should focus on how well the activities meet the purpose and need and move the areas towards the desired conditions. Activities are made final after the input from the feedback period has been considered by the responsible official and any changes that are determined to improve the project's ability to meet the desired conditions are incorporated (see step 4 below).

All meetings will be documented by a Forest Service representative by recording discussion points and decisions in meeting notes and placed in the implementation record.

Step 2) Check against Decision Memo and Activity Cards

The proposed activities must be checked to verify that they are within the range of activities analyzed under the project analysis. The Decision Memo documents the decision rationale and includes any constraints for activities.

The activity cards describe the activities analyzed in project analysis without identifying specific locations. Information about each activity includes what it accomplishes, how it is implemented, what constraints and resource-specific design elements, and when it would be implemented. Resource concerns are often reduced by design elements, which are presented in the activity cards, as well as consistency with the Forest Plan and Best Management Practices (BMP's). Resource concerns identified post-decision due to treatment location or changed conditions will be addressed through mitigations, see mitigation discussion in Step 4.

The Forest Service will document the activity card(s) that will be used for implementing the proposed activities recommended by the responsible official following the workshop and feedback period. This documentation will include a summary of each treatment area and how the proposed activities meet the constraints outlined in the activity cards. This documentation will be placed in the implementation record. A proposed activity must adhere to the activity cards in order to stay within the effects analyzed in the Piquett Creek Decision Memo. If all the components are not met, then the activity would not be considered or would be deferred until the next public workshop for design modifications.

The proposed activity will be added to the implementation checklist (Step 4) that contains the parameters of the Selected Alternative on what may be implemented per activity (acres, volume, road miles, etc.). This form will be used to track how much has been implemented to date and to verify that the limits are within the Selected Alternative.

Step 3) Obtain Line Officer approval and place in Out-year Plan

The Piquett Creek Project Out-year Plan will provide participants the opportunity to stay informed of activity implementation, priority listing, and on-the-ground activity design. The Out-year Plan will identify activities within a 3 to 5-year timeframe that will include the current status of already planned/in-process activities, new proposed activities, maps, follow-up treatments, and will identify timeframes for field surveys listed in the activity specific resource requirements and implementation checklist.

The updated Out-year Plan will be made available on the project website after a workshop to initiate a 30-day feedback period on proposed activities. A press release will be sent out to notify the public that the project Out-year Plan is available for review and feedback. The feedback period gives an opportunity for members of the public who may not be able to attend the workshops to provide their input on what, where and when activities are to be implemented before the activities are made final.

The responsible official reviews the proposal for an activity including a determination that the activity will meet all requirements under the Decision Memo, Forest Plan, and other applicable laws and regulations. Activities are made final after public input has been considered and any needed changes are incorporated. The Line Officer with the delegated authority (as outlined in Forest Service Handbook and Forest Service Manual) retains the authority to make final decisions related to location, extent, and types of activities planned and completed, consistent with the Decision Memo.

Step 4) Conduct fieldwork and consultations

Forest Service personnel will conduct background research, field surveys and GIS analysis of proposed implementation areas to confirm that activities can be implemented consistent with the Decision Memo and in conformance with other applicable laws, regulations and policies. Surveys confirm location specific conditions and determine if and how the activity can be implemented. Fieldwork and consultation results may refine activity design elements, identify the need for additional mitigation measures, and/or result in a modification of the activity location or timing.

In addition to meeting the requirements of the National Environmental Policy Act, several other laws and regulatory requirements must be met prior to project implementation. This includes consultation and compliance as required under the Clean Air Act, Clean Water Act, Endangered Species Act (ESA), National Forest Management Act (NFMA) and the National Historic Preservation Act (NHPA). Resource concerns under some of these laws (i.e. Fisheries, Wildlife, Botany, and Heritage) are location specific and may require additional mitigations prior to ground disturbing activities. For these resources, implementers will be required to stay informed of the location-specific design criteria and mitigation measures that will be utilized after consulting with all interested parties and required agencies.

All non-sensitive field notes, spatial data, and formal consultation documentation will be placed in the implementation record.

Instructions: It is the responsibility of the resource specialists to ensure that a) the necessary compliance and consultation actions have been completed, b) that compliance and/or consultation record is placed the project implementation record, and c) certify that the necessary compliance and consultation is complete for the specified implementation area. For many resources, additional surveys may be required prior to certifying completion of necessary compliance and consultation. In some instances, existing data can be used to allow for implementation.

Survey data will be used to refine treatment layout, to identify need for mitigations, to identify areas that should be avoided or seek to minimize effects (e.g. cultural sites, sensitive wildlife areas, etc.), and to

establish treatment-specific objectives and desired outcomes. Information derived from the surveys may also precipitate monitoring questions that should be considered by the interdisciplinary team or resource specialist.

Fire/Fuel Surveys

☐ Within areas/units proposed for a prescribed fire treatment, conduct necessary field surveys to gather the information required to prepare a site-specific prescribed fire burn plan that meets prescription objectives and the desired future conditions. Identify any pre-burn preparation activities that may be required.

☐ All units planned for prescribed fire within the upcoming year (pile or underburn) will be entered into the Montana/Idaho Airshed Group database prior to August 31st .https://mi.airshedgroup.org/. Required information consists of Latitude/Longitude, Location Description, Airshed, Unit Size, Elevation, Burn Category & Type, and Fuel Loading.

☐ Obtain current year, USDA Forest Service major open burning permit from the Montana Department of Environmental Quality. Approval for ignitions will be determined by the Montana/Idaho Airshed Group in coordination with Montana DEQ based on dispersion forecasts and potential impacts.

☐ Other surveys (specify):

Supporting Documentation	Date	Project File Doc Number

_____ _____

Name, Title (print and sign) Date

Fisheries Surveys

Instructions: Fisheries consultations with the United States Fish and Wildlife Service under Section 7 of the Endangered Species Act will be completed prior to signing the decision. After that, if any future activities are proposed for implementation that were not covered in the original Letter of Concurrence or Biological Opinion, then Section 7 consultation will have to be re-initiated and completed before those activities can occur.

Fisheries staff will complete all surveys required by law, regulation or policy within the implementation area. The list below is not exhaustive, nor does it apply to every treatment. The fisheries biologist will determine which surveys need to be conducted. While completing ground reconnaissance, look for opportunities to achieve multiple resource management objectives.

☐ Riparian Habitat Conservation Area (RHCA) boundaries are correctly delineated, flagged, and avoided (this will be done in coordination with the project Hydrologist).

☐ Roadside erosion control structures (e.g. straw bale check dams / filter fabric fencing) are correctly located and installed as specified in the project design elements.

☐ Applicable State (State of Montana 124 permit) and Federal (U.S. Army Corps of Engineers 404 permit) permits are obtained for activities affecting culverts and stream channels.

☐ Hazard trees within RHCAs that are proposed for felling and retention on site are identified, field checked, and flagged.

☐ Consultation for bull trout and bull trout critical habitat has been completed with the U.S. Fish and Wildlife Service.

☐ Other surveys (specify):

Supporting Documentation	Date	Project File Doc Number

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_____ _____

Name, Title (print and sign) Date

Heritage

Instructions: Under the National Historic Preservation Act (NHPA), consultation with all interested parties is required prior to implementation. This includes Indian Tribes and Tribal Government, the applicable State Historic Preservation Officer, a Tribal Historic Preservation Officer, and interested members of the public. Implementation activities will seek to minimize or avoid adverse effects to

historic properties wherever possible. Some activities may have little or no potential to adversely affect historic properties and may proceed after the heritage program manager has reviewed the proposed activity and the responsible line officer approves.

If the proposed activity causes the Heritage Program Manager to reach a finding of adverse effect to historic properties, a separate agreement document (Memorandum of Agreement or Programmatic Agreement) will be required as outlined under 36 CFR 800. That document will outline mitigations to be completed by the agency and those mitigations will be completed no later than five years after completion of the implementation area's activities.

Provisions under the U.S. Forest Service Region One Programmatic Agreement outline the process to be followed if newly discovered heritage resources are encountered during implementation. Referred to as "post-review discoveries" under NHPA and "inadvertent discoveries" under the Native American Graves and Repatriation Act (NAGPRA). Those same procedures will apply to this project. Activities located within 50 meters of a newly discovered heritage resource will cease until a heritage resource specialist completes the review process.

Consultation required under the NHPA will be completed prior to conducting any activity within the implementation area. The heritage program specialist will utilize all applicable, existing Programmatic Agreements during the consultation process. Consultation may require the heritage program specialist to conduct background literature research, field inventory (or survey), or oral history interviews to meet the "good faith effort" requirement to identify historic properties within the implementation area. If historic properties are identified within the Area of Potential Effect (APE), mitigation measures may result in modification of treatment unit boundaries, activity timing, or intensity of activity type.

☐ Consultation with the Idaho or Montana SHPO was completed through measures outlined in the Region One Programmatic Agreement, or

☐ Consultation with the Idaho or Montana SHPO was completed through measures outlined in the National Historic Preservation Act Phasing Programmatic Agreement.

Additionally,

☐ Consultation has been completed with all Tribes who have expressed an interested in historic properties within the project APE and

☐ Any changes to the scale, nature or extent of proposed activities will be provided to the Heritage Program Manager for review prior to implementation and may require re-initiation of the consultation process.

☐ All mitigation measures (if necessary) identified in a MOA/PA will be completed within five years of completion of activities within the implementation area.

Supporting Documentation	Date	Project File Doc Number

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The above list provides supporting documentation that the agency has met its Section 106 responsibilities under the NHPA prior to implementation. Documents included could include inventory reports or other project review documentation; efforts to obtain public input and comments on heritage resources; SHPO consultation documentation (letters, emails, etc.); Tribal government consultation documentation (letters, emails, etc); and any agreement documents (Memoranda of Agreement or Programmatic Agreements) that were completed in order to mitigate adverse effects to historic properties. Sensitive information, including site location information may be withheld from the public record in order to protect historic properties, as allowed under federal law.

_____ _____

Name, Title (print and sign) Date

Hydrology

Instructions:

☐ Create map products of RHCA buffers and sensitive soils (if needed) for use in the timber sale contract package.

☐ Treatment areas adhere to the BNF ECA Threshold Method in the project record. Field reconnaissance, stream surveys and subsequent analysis will occur at varying levels as outlined below based on the ECA Threshold within the treatment area watersheds.

ECA Threshold (ECAT)	Pre-Implementation Practices
Low	**Definition:** Where the post-project cumulative ECA is between 0 and 13%, watersheds are classified as Low (Green). The risk of channel instability from project related water yield increases is low. **Actions:** Proposed project activities are subject to the standard range of design elements contained in Appendix B. No further ECA analysis or stream surveys are needed for the implementation of the project in these watersheds.
Moderate	**Definition:** Where the post-project cumulative ECA is between 13 and 18%, there is a Moderate (Yellow) risk of channel instability from project related water yield increases. **Actions:** Should stable channel conditions be found during initial field reconnaissance no further ECA analysis or stream surveys are needed for the implementation of the project in these watersheds. Should persisting channel instability from past management activities or recent catastrophic fire (potential for debris flows/gully formation) be found during initial field reconnaissance, stream surveys and subsequent sediment entrainment analysis will follow guidance outlined in the BNF ECA Threshold Method (Neesvig, 2020). From the initial ocular walkthrough survey stream channels will be categorized into two broad categories: W1 - Those with channel substrate having median particle sizes (d_{50}) less than 256 mm (Cobble / Gravel/ Sand/Silt).

ECA Threshold (ECAT)	Pre-Implementation Practices
	W2 - Those with channel substrate having median particle sizes (d_{50}) 256 mm or greater (Small Boulder / Large Boulder / Bedrock) or channels with abundant in-stream large wood at or above reference levels. If determined to be a W1 stream, establish a representative response reach that is below all anticipated upstream effects and follow guidance outlined in the BNF ECA Threshold Method (Neesvig, 2020). W2 streams are considered inherently stable and will not be analyzed further. Should W1 response reaches be deemed unstable after analysis, proposed project activities may need to be modified (i.e. less percentage of treatment on high energy slopes (mid to high elevation north slopes)) or potential restoration opportunities such as in-stream large wood placement/riparian revegetation to facilitate more channel roughness and added bank stability. Proposed project activities are subject to the standard range of design elements contained in Appendix B.
High	**Definition:** Where the post-project cumulative ECA is greater than 18%, proposals are at high (Red) risk of raising ECA above the 20% threshold, increases in water yield are likely to be measurable, and depending on the dominant substrate size could lead to added channel instability. **Actions:** Stream surveys and subsequent sediment entrainment analysis will be completed and follow guidance outlined in the BNF ECA Threshold Method (Neesvig, 2020) and may be required within these project watersheds depending on dominant channel substrate. From the initial ocular walkthrough survey stream channels will be categorized into two broad categories: W1 - Those with channel substrate having median particle sizes (d_{50}) less than 256 mm (Cobble / Gravel/ Sand/Silt). W2 - Those with channel substrate having median particle sizes (d_{50}) 256 mm or greater (Small Boulder / Large Boulder / Bedrock) or channels with abundant in-stream large wood at or above reference levels. If determined to be a W1 stream, establish a representative response reach that is below all anticipated upstream effects and follow guidance outlined in the BNF ECA Threshold Method (Neesvig, 2020). W2 streams are considered inherently stable and will not be analyzed further. Should response reach thresholds be approached or exceeded, a reduction of commercial harvest in these areas may also be considered as well as exploration of potential restoration opportunities such as in-stream large wood placement/riparian revegetation to facilitate more channel roughness and added bank stability. Design elements in addition to the standard range of design elements contained in Appendix B may be warranted.

☐ All RHCAs delineated, flagged, and avoided (this will be done in coordination with Fisheries Biologist).

☐ Ensure that necessary BMP's have been designed and will be applied on haul routes before hauling commences.

☐ With silviculturist review proposed changes to crown cover from proposed vegetation management activities and relate to equivalent clearcut area (ECA) coefficients. Use these coefficients to calculated proposed ECA to ensure that when combined with existing conditions ECA thresholds are not exceeded.

☐ Review proposed temp road construction plans and tracked line machine trails to ensure they do not enter RHCA's.

☐ Other surveys (specify):

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_____ _____

Name, Title (print and sign) Date

Invasive Plant Surveys

Instructions: Based on survey of invasive weeds in the treatment area, prioritize weed infestations for treatment in high-risk sites, including treatment operating areas and along access routes. Control weeds as necessary prior to treatment implementation. Modify treatment as needed to reduce expansion of invasive weeds.

☐ Pre-treatment invasive plant species surveys: Within high risk areas for invasive plant species, complete inventories to identify invasive plant populations.

☐ Haul routes and populations of Priority 1A, 1B and 2A invaders identified for treatment.

☐ Proposed activities avoid populations of Priority 1A, 1B or 2A weeds.

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_____ _____

Name, Title (print and sign) Date

Land Survey

Instructions: Prior to commencing any ground- or vegetation-disturbing activities, evidence of the PLSS (Public Land Survey System) will be marked for protection. The Forest Land Surveyor shall be consulted to assist with providing data, searching for and evaluating evidence, and locating and protecting monuments of the PLSS from destruction.

☐ Forest Engineer contacted and survey has been completed.

☐ If proposed treatment is within 300 feet of wilderness, locate boundaries.

☐ Other surveys (specify):

Supporting Documentation	Date	Project File Doc Number

Forest Engineer signature that identified surveys have been completed: _____

Recreation

Instructions: The Recreation Specialist will work with the team and the proposed treatments to inventory the recreation attributes that may be affected by treatments. The type of treatment and the location can affect recreation activities and the quality of the recreation experience in the near term and over the long term. Evaluate how the treatment will affect the recreation facilities and settings in the area. Use the design elements to ensure that the recreation opportunities are managed appropriately for the period of treatment implementation and for the long-term. Design implementation to minimize the impact on recreation users to the extent feasible, including having good communication with partners and the public about the impacts of the activities.

Developed Recreation Sites

☐ Identify priority developed recreation sites for treatment (including hazard tree removal) and any other developed sites affected by treatment activities.

Dispersed Recreation Sites

☐ Identify dispersed recreation sites that need to be treated or those that need to have a higher degree of clean-up than other general forest areas.

Trails

☐ Identify the location of any National Forest System Trail (NFST) to be impacted by treatment activities.

Recreation Rental Facilities

☐ Identify recreation rental facilities and the reservation season that might be impacted by treatment activities

☐ Identify designated National Scenic, Historic or Recreation Trails including existing routes and areas where potential re-routes may be implemented.

☐ Identify managed snow trails.

Recreation Special Uses

☐ Identify the location of any authorized recreation special uses that would be impacted by treatment activities. Identify the types of uses that would be affected.

Unique Special Areas

☐ Identify the location of any unique area within the treatment area, such as disabled hunting areas, rock collecting areas, etc.

Partnerships/Volunteers

☐ Identify any scheduled project work by partners or volunteer groups in areas that may be impacted by treatment activities.

Public Health and Safety

☐ Identify any closures that may need to be in place for the safety of the public.

☐ Other surveys (specify):

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_____ _____

Name, Title (print and sign) Date

Scenic Resource Surveys

Instructions: Evaluate and select the applicable design elements for visual resources such that the treatment area's identified visual quality objectives are achieved consistent with the Forest Plan.

☐ Identify valued scenic resources

☐ Identify sensitivity level of scenery

☐ * Identify treatment area's visual quality objectives, per Forest Plan guidance in accordance with each activities design elements in Appendix C (Decision-004).

☐ Other surveys (specify):

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_____ _____

Name, Title (print and sign) Date

Sensitive Plant Surveys

Instructions: Surveys will be conducted following laws, regulations, and policies for rare plant species (refer to the NEPA document and the Biological Evaluation for a list of all of the laws, regulations and policies). The Forest Botanist will determine which areas will be surveyed following the Region One Botany Survey and Analysis Protocol.

Habitat Type	Species Potentially Present

☐ A Pre-field review will be used to determine if surveys are required based on the type and intensity of proposed management actions, and whether at-risk plants are known to occur in the analysis area or are suspected to occur based on the presence of suitable habitat. If the pre-field review determines direct or indirect effects from proposed activities are possible, and plants are known or suspected to occur, conduct a risk analysis and plan field surveys where needed.

☐ If a rare plant or a forest species of interest is found, the area may be flagged and avoided (buffered) based on the current condition, the proposed activity, and the species of plant.

☐ If a buffer is necessary around a plant species, the buffer specifications will be documented, mapped, and sent to the proper individuals in order to notify them of the existence of the buffered locations.

☐ Other surveys (specify):

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_____ _____

Name, Title (print and sign) Date

Silviculture Surveys

The stand diagnosis, exams and insect and disease surveys will be used to determine the existing conditions within each proposed treatment area and cross the project area. Existing conditions shall be compared to the desired condition (example found in the Treatment Diagnosis Crosswalk (Appendix A, Decision-002) to determine the departure from desired conditions and to develop a range of treatment options. Once a treatment alternative has been chosen, silvicultural prescriptions will be prepared, reviewed and signed by a certified Silviculturist.

☐ Conduct stand diagnosis for each proposed treatment unit. (This may include R1 Common Stand Exam or R1 Walk-through Exam)

☐ Conduct insect and disease survey. (This may include Aerial Detection Survey, Forest Health and Protection site visit, and/or Stand Diagnosis)

☐ Conduct old growth exams where appropriate to meet Forest Plan Standards. (This may include R1 Common Stand Exam, R1 Walk-through Exams, or old growth specific criterion)

☐ Prepare a Silvicultural prescription and marking guides for all vegetation management activities. Prescription must be reviewed and signed by a certified Silviculturist. (Completed for all treatment units within the chosen alternative)

Supporting Documentation	Date	Project File Doc Number

Standard inclusions above (if documentation is attached) or in this space (if only a few lines need to be written about it) could include: confirmation that the activity fits within the range of effects analyzed in the project analysis and why; if adjustments or mitigations were applied to the original proposal due to this resource; surveys or other form of data collection (or reasoning why not needed); contacts made with

the public pertaining to this resource for this activity; compliance with laws and regulations; approved prescriptions; if there will be regeneration needs or intermediate treatments for the stand(s) associated with the activity; and any other required documentation.

_____ _____

Name, Title (print and sign) Date

Soil Surveys

☐ Sensitive soil types, i.e. severe erosion hazard rating, slopes greater than 40 percent, landslide prone areas identified and avoided.

☐ Treatment areas overlaid with Soil Risk Evaluation Framework map products located in the project record. Field reconnaissance will occur at varying levels as outlined below based on the mapped soil risk category within the treatment area boundaries.

Soil Risk Category (SRC)	Pre-Implementation Practices
A,B	**Actions:** Proposed project activities are subject to the standard range of design elements contained in Appendix C. ***Pre-project DSD or CWD soil surveys in units are only needed if the layout crew or other resource special survey identifies:** • **past disturbance (such as excavated skid trails, tree stumps or persistent fire consumed CWD, high severity fire effects) covers greater than 15% of the unit; and/or** • **recent (< 10 years) high severity fire covers greater than 15% of the unit; and/or** • **lack of CWD.**
C, D	**Actions:** Soil inventory of persisting detrimental soil disturbance may be required within these project areas. Proposed project activities are subject to the standard range of design elements contained in Appendix C. Should persisting DSD from past management activities be found during field reconnaissance, proposed project activities may need to be modified to avoid adverse soil resource effects. **Pre-project DSD and CWD soil surveys are needed once unit boundaries are established if the following proposed treatments/conditions are met:** • **ground-based yarding is proposed on slopes < 40%; or** • **mechanized clipping is proposed on slopes >40%; and/or** • **temporary road construction.** Combined with: • **past vegetation management that has occurred within the last 35 years; and/or** • **recent (< 10 years) high severity fire covers greater than 15% of the unit; and/or** • **lack of CWD.** ***If the layout crew or other resource specialist survey does not identify lack of CWD and/or evidence of past management (such as excavated skid trails, tree stumps or persistent fire consumed CWD, high severity fire effects), no soil inventory in units is needed.**
E, F	**Actions:** Soil inventory of persisting detrimental soil disturbance will be required within these project areas. Avoidance of commercial harvest or prescribed burning in these areas may also be considered as well as exploration of potential restoration opportunities. Design elements in addition to the standard range of design elements contained in Appendix C may be warranted. **Pre-project DSD and CWD soil surveys are needed once unit boundaries are established if the following treatments are proposed:** • **ground-based yarding on slopes < 40%; or** • **mechanized clipping on slopes >40% is proposed; or**

Soil Risk Category (SRC)	Pre-Implementation Practices
	• **unit-wide prescribed fire operations; and/or** • **temporary road construction.** **Should pre-project soil inventory identify units approaching 15% DSD and/or CWD limitations, soil mitigations and/or a soil restoration plan will be developed and implemented with proposed vegetation/fuels treatments to ensure long-term soil productivity is maintained.**

*****Timber layout crew and other resource specialist surveys will provide valuable insight to general unit conditions and help guide the need for soil inventory of disturbance and CWD surveys in these Soil Risk Categories. These observations will be documented for each unit and included as supporting documentation.

Coarse Woody Debris requirements by Fire Group

Fire Group	Coarse Woody Debris (CWD) (Tons/acre)
Warm, Dry Ponderosa Pine and Douglas-fir (FG-2 & 4)	5-10
Cool, Dry or Moist Douglas-fir (FG-5, 6)	10-20
Cool Sites Usually Dominated by Lodgepole Pine (FG-7) Dry, Lower Subalpine (FG-7) Moist, Lower Subalpine (FG-9)	8-24

Supporting Documentation	Date	Project File Doc Number

Standard inclusions above (if documentation is attached) or in this space (if only a few lines need to be written about it) could include: confirmation that the activity fits within the range of effects analyzed in the project analysis and why; if adjustments or mitigations were applied to the original proposal due to this resource; surveys or other form of data collection (or reasoning why not needed); contacts made with the public pertaining to this resource for this activity; compliance with laws and regulations; if there are steep slopes, highly erosive soils, landslides, wetlands, or alluvial fans located in the project area; and any other required documentation.

_____ _____

Name, Title (print and sign) Date

Timber Surveys

Coordinate with specialists to modify cutting unit boundaries.

Complete Residual Value appraisal.

Supporting Documentation	Date	Project File Doc Number

Standard inclusions above (if documentation is attached) or in this space (if only a few lines need to be written about it) could include: confirmation that the activity fits within the range of effects analyzed in the project analysis and why; if adjustments or mitigations were applied to the original proposal due to this resource; surveys or other form of data collection (reasoning why not needed); contacts made with the public pertaining to this resource for this activity; compliance with laws and regulations; documentation associated with completion of Gates 1, 2, and 3 if applicable; economics analyses, marking guidelines, cruising data, and layout information; recording of stands designated for small sale strategy if applicable; and any other required documentation.

_____ _____

Name, Title (print and sign) Date

Transportation Planning Surveys

Instructions: Apply the appropriate design elements for transportation systems and haul routes in order to keep effects to existing routes and effects from new routes within the bounds disclosed within the project analysis that supports the Decision Memo for this project.

☐ Existing road to be used in the sale – Road log

☐ Final Road Design

Supporting Documentation	Date	Project File Doc Number

Standard inclusions above (if documentation is attached) or in this space (if only a few lines need to be written about it) could include: confirmation that the activity fits within the range of effects analyzed in the project analysis and why; if adjustments or mitigations were applied to the original proposal due to this resource; surveys or other form of data collection (reasoning why not needed); contacts made with the public pertaining to this resource for this activity; compliance with laws and regulations; Travel Analysis or Access & Travel Management documentation; road activity information associated with the activity; if roads will be added to or removed from the Forest Transportation System; if revisions will be needed for the Motor Vehicle Use Maps; easement or surfacing agreements; applicable Schedule A maintenance agreements, and any other required documentation. Document road storage and decommissioning requirements in compliance with immediate needs for storage or decommissioning.

_____ _____

Name, Title (print and sign) Date

Wildlife Surveys

Instructions: Wildlife consultations with the United States Fish and Wildlife Service under Section 7 of the Endangered Species Act will be completed prior to signing the decision. After that, if any future activities are proposed for implementation that were not covered in the original Letter of Concurrence or Biological Opinion, then Section 7 consultation will have to be re-initiated and completed before those activities can occur.

Complete surveys required by law, regulation or policy. The list below is not exhaustive, nor does it apply to every treatment. The wildlife biologist will determine which surveys need to be conducted. While completing ground reconnaissance, look for opportunities to achieve multiple resource management objectives.

☐ Field verification surveys of GIS mapped lynx habitat by horizontal cover surveys, if needed (Canada lynx).

☐ Field verification surveys of known or mapped yellow-billed Cuckoo riparian habitat.

☐ Field verification surveys documenting presence of known American peregrine falcon and bald eagle nest sites.

☐ Flammulated owl surveys for mapped owl habitat or known nest sites.

☐ Field verification assessment surveys of mapped Fisher and Pine Marten habitat.

☐ If needed, coordinate with Montana FWP to identify areas important to various wildlife species (elk calving areas, security areas, etc.) for avoidance and/or application of special management considerations. Typically, special management considerations would be in the form of design elements.

☐ Document nest sites for MIS and Sensitive primary and secondary cavity nesters, if needed.

☐ Conduct photo-point monitoring of prescribed burn areas by establishing pre-treatment photo points, and repeating the photos post-treatment, if partnership project funding is used.

☐ Consultation for Canada lynx, grizzly bears, and yellow-billed Cuckoo completed with U.S. Fish and Wildlife Service.

☐ Other surveys (specify):

Supporting Documentation	Date	Project File Doc Number

Standard inclusions above (if documentation is attached) or in this space (if only a few lines need to be written about it) could include: confirmation that the activity fits within the range of effects analyzed in the project analysis and why; if adjustments or mitigations were applied to the original proposal due to this resource; surveys or other form of data collection (or reasoning why not needed); contacts made with the public pertaining to this resource for this activity; compliance with laws and regulations; Biological Assessment, Biological Evaluations, and other records of T&E/Rare/Sensitive species; consultation with State and Federal Agencies; if there are any timing restrictions for the activity; and any other required documentation.

_____ _____

Name, Title (print and sign) Date

Instructions for the Activity Implementation Checklist

An implementation checklist packet will be prepared using templates on the following pages. These templates are activity checklists that would be used to verify that all implementation process steps have been followed and documented. The instructions below refer to this template.

1. Ensure Steps 1 through 5 of the Implementation Process up to this point have been completed.

2. Keep the implementation record current with all documentation related to implementation. Include a record number in all file names for indexing and long-term record keeping and include the record number on the following pages to show all pertinent files are a part of that record and can be easily obtained.
3. "Activity Information" page: This section is general activity information. For relatively simple activities, all information may be presented here, including map images. For more complex activities, include summary or general information and reference detailed activity information, such as maps, activity cards, or other relevant documents.
4. "Process Checklist" page: This section should document all the steps leading up to implementation of the activity and show that the Forest Service has followed the process within this implementation plan. Example: process-related records are listed in the template, but the list for any given activity should include all records disclosing the Forest Service's process leading up to implementation.

5. The remainder of the template pages are dedicated to resource documentation and rationale for approval of the activities. All documentation referred to should be a part of the implementation record. If separate documentation is not necessary due to the scale or complexity, the space on that template page may be used to disclose any necessary information.

Activity Information

Project:	Piquett Creek Project	District:	West Fork Ranger District
Contact Person and Title:	David Fox, District Fuels Specialist		
Legal Description or Location:	Piquett Creek Drainage T1N, R21W, Sections 1-3, 9-12 & 15		
Project File Location:	Piquett Creek Project File, GIS Project File		

List all maps and general activity documents	Date	Project File Doc Name
Draft Implementation Plan	5-4-20	IMP-001

Available Treatment Acres from Proposed Action							
Regeneration Treatments:		Intermediate Treatments:		Non Commercial Treatments:	3,000	Prescribed Fire Treatments:	3,000
Project Treatment Acres							
Regeneration Treatments:		Intermediate Treatments:		Non Commercial Treatments:		Prescribed Fire Treatments:	
Treatment Type:	Treatment Acres:	Treatment Type:	Treatment Acres:	Treatment Type:	Treatment Acres:	Treatment Type:	Treatment Acres:

Temp Road Mileage Available	**Project Temp Road Mileage**

This section is general activity information. For relatively simple activities, all information may be presented here, including map images. For more complex activities, the summary for the activity or

general information and referenced detailed activity information, such as maps, activity cards, or other relevant or required documents would be presented here.

Process Checklist

Step	Document	Date	Project File Doc Number
1			
2			
3			
4			
5			
6			
7			
8			
9			

Refer to all documentation that shows the implementation process was followed. Attached documents that would be listed above could include:

- Applicable Workshop Meeting Notes;
- Out-year Plan(s);
- Comments received and summary of comments;
- Letters sent or email communications with the public;
- Government-to-government consultation documentation with local tribes (including meeting notes, letters sent, etc.);
- Notifications printed in newspaper of record; and
- Any letters or memos associated with the activity that authorizes it or that the Line Officer has signed off on.

A process summary can occur in this space if needed to explain any of the above.

Decision Implementation Tracking Form

This form will be used to track actions for which there are limits specified in the Decision Memo. Limits may be for the amount of an activity that can occur, either in total, within a timeframe (such as annually), or if there is a maximum within a geographical area. The limit may also be related to an effect caused by implementation, if it requires tracking from one activity to the next to ensure that limit is not exceeded in the life of the Piquett Creek Project.

Activity and Maximum Allowable		**Regeneration Harvest Even-aged**	**Regeneration Harvest-Uneven-Aged**	**Intermediate Harvest**	**Non-Commercial Treatment**	**Prescribed Fire**	**Temp Road Construction**
Activity Name	**Year**	**Acres**	**Acres**	**Acres**	**Acres**	**Acres**	**Miles**
Total Remaining:							

Area-specific Limitations (units, sites, drainage, etc)	**Type of Limitation (avoidance, timing, duration, etc)**	**Applicable Activities**

Note that all pertinent activities or trackable measures within the Selected Alternative will be added to the form to be tracked throughout the life of the project.

Mitigation Measures

The following mitigation measures identified for the Piquett Creek project are informed by pre-implementation surveys and consultation. The interdisciplinary team was made aware of the proposed mitigations and they were reviewed by the different resource specialists to ensure that mitigations for one resource did not create unintentional impacts to another resource, as well as to ensure the proposed mitigation was feasible (see table below). If specialists did not find that application of the mitigation changed the anticipated effects for their resource, no further documentation was needed. If the mitigation would change anticipated effects, it is stated below what that difference is and why.

The Responsible Official has reviewed and approved the mitigations, along with any associated monitoring needs as described. These mitigations will be included as part of implementation of the proposed action.

In addition to listing the Mitigation Measure, the table below also specifies what issue/concern or cause of effects the measure responds to, anticipated effectiveness of the mitigation, and where the mitigation is applicable (by unit, sale area, habitat/resource condition etc.).

Mitigation measures are identified when it is evident that proposed actions will have unintended or greater effects than anticipated to the applicable resource – or because the analysis indicates a particular standard/guideline or law/regulation will not be met. When proposing mitigations, **specialists should indicate whether the mitigation is necessary to reach a "No Extraordinary Circumstances" determination or is necessary for land management plan/law/regulation compliance.** Mitigation measures differ from design elements in that they are identified during or post-effects analysis (reactive), while design elements are identified prior to effects analysis (proactive). However, they can both serve the purposes of ensuring law/regulation/policy compliance, reducing/eliminating effects or responding to issues/concerns and both are approved by the Line Officer.

The **Responds To** column should describe the law/regulation or land management plan standard or guideline, the issue/concern or level of effects that are prompting the need for the mitigation. This will help the responsible official and interdisciplinary team members better understand the need and how it might be accommodated.

Anticipated Effectiveness describes how successful the mitigation measure should be in preventing or lessening effects to the applicable resource, habitat component or feature/condition of concern. This effectiveness should be evaluated with monitoring post-implementation but should be supported by professional experience or best available science when being proposed.

The **Applicable Area/Activity** column specifies where the mitigation measure needs to be applied within the project area. Because mitigation measures are responding to more focused issues/concerns or effects, they are typically less applicable to the entire project and more applicable to certain areas or units, features or conditions, or types of activities being implemented.

Table 1: Mitigation Measures & Associated Monitoring by Resource Area

Mitigation Measure	Responds To (Issue/Concern, Cause of Effects)	Anticipated Effectiveness	Applicable Area/Activity
Botany			
Heritage Resources			
Fire & Fuels			
Invasive Plants			
Transportation			
Recreation & Scenic Resources			
Soil, Water & Fisheries			
Vegetation Management			
Wildlife			

Table 2: Mitigation Measure Review by Resource Specialists

Mitigation Measure	Determination	Further Explanation (if needed)
Botany	Choose an item.	
Heritage Resources	Choose an item.	
Fire & Fuels	Choose an item.	
Invasive Plants	Choose an item.	
Transportation	Choose an item.	
Recreation & Scenic Resources	Choose an item.	
Soil, Water & Fisheries	Choose an item.	
Vegetation Management	Choose an item.	
Wildlife	Choose an item.	

The mitigation measures and associated monitoring in the above table have been approved by the Line Officer/Responsible Official and took into consideration impacts of the mitigations on other resource areas, as described by pertinent resource specialists.

District Ranger approval to proceed to Step 6

The District Ranger must verify that all resource specialists have completed the compliance and consultation actions required and have signed their respective checklist. By signing below, the District Ranger is confirming all necessary steps have been completed and project implementation may proceed to Step 6.

Signature Date

District Ranger Name

West Fork Ranger District

Bitterroot National Forest

Step 5) Line Officer approval to implement

The Line Officer reviews the checklists (and associated documents) from Step 4 above to determine that the activity has met all requirements in the Decision Memo, Forest Plan, and other applicable laws and regulations. Once a Line Officer has determined that the activity has met all requirements they will approve and sign the checklist. The signed checklist will be placed in the implementation record. Final unit boundaries will be marked. For commercial sales, units will be cruised prior to advertisement.

Step 6) Prepare contracts and other implementation documents, as needed

Forest Service resource specialists will review or prepare all contract documents prior to bids being solicited to implement the activity. This will include the contract, agreements, burn plans, activity cards, activity maps, bid packages or other implementation instruments as required. See the Activity-specific Resource Requirements section for appropriate measures and provisions that will be incorporated to ensure that effects are as planned. All required associated documentation will be placed in the implementation record.

Step 7) Implement the activity, document implementation, and associated monitoring, etc

The implementation record will include any inspection reports, photographs of the implementation, photographs of the completed activity, and so on. It is especially important to document the effectiveness of mitigations that were developed under Step 4. The Forest Plan will be followed for any necessary monitoring, and results will be included in the implementation record. Documentation during this step is especially critical for informing the next phase of implementation, or the next project, where changes to activity cards or design elements are needed to address effectiveness in minimizing or avoiding resource impacts.

Step 8) Monitoring

Project monitoring will take place during and following implementation and will serve three purposes: 1) to ensure compliance with project design elements listed in the Activity Cards, 2) to inform the adaptive management process when changes need to be made to design elements or mitigations to achieve intended protections, and 3) to inform design element development for future projects and provide support for element effectiveness. Resource-specific monitoring requirements listed within this section

are meant to be specific to the Piquett Creek project and will be complimentary to any Forest Plan monitoring requirements. Resource specialists will document their monitoring results in a summary format that can be included as part of the project record.

Instructions: This section describes treatment-specific monitoring that may be needed. Any additional monitoring is at the discretion of the Line Officer.

Fisheries

A. RHCA boundaries on timber sale and prescribed burn units will be walked following the completion of implementation to measure and document compliance and effectiveness of the design elements.

B. Haul roads will be periodically monitored during the active haul period to measure and document compliance and effectiveness of the design elements.

C. Erosion control sediment trap structures will be monitored during and after hauling operations are completed to measure and document their effectiveness.

D. Road maintenance activities (e.g. grading, dust abatement) will be monitored to document compliance with the 2015 Road-Related Activities Biological Opinion.

E. Sediment transects will be established in Piquett Creek at locations that are close to their near-stream road segments. The transects will be monitored at the following intervals: (1) before hauling commences; (2) at least once during the active hauling period, and (3) once during the first summer after all of the hauling has been completed.

F. Any monitoring and reporting requirements not listed above that are specified by the U.S. Fish and Wildlife Service in their Letter of Concurrence or Biological Opinion will also be completed.

Heritage Resources

A. All Historic Properties located within the implementation area's APE will be monitored within five years of completion of the implementation plan's activities.

Air Quality

A. During prescribed fire implementation, monitor smoke dispersion and impacts to sensitive receptors to ensure compliance with requirements of the USDA Forest Service major open burning permit issued by the Montana Department of Environmental Quality.

Fire and Fuels

A. As needed, pre/post treatment monitoring may be conducted to document existing and post treatment conditions. Data may be used to determine if desired future conditions have been met, identify additional treatment needs or to refine/modify future treatments.

B. During activities implemented with stand improvement or fuels reduction service contracts, quality control (contractor) and quality assurance (government) will be conducted to ensure prescriptions and activity specifications are met.

C. During prescribed fire implementation, monitoring of onsite weather (current/forecast), fire behavior, fuel moistures and smoke dispersion will be conducted and documented.

D. All wildfires which start in or burn into a fuel treatment that has been completed within the last ten years must have a fuel treatment effectiveness assessment conducted and results entered into the Fuel Treatment Effectiveness Monitoring (FTEM) database. All fuel treatment effectiveness assessments must be entered into the FTEM database within 90 days of control of the fire.

E. Post treatment monitor changes to vegetation and fuel conditions within completed units to determine when to reapply prescribed fire in order to maintain desired conditions and treatment effectiveness.

Invasive Plants

A. Post-treatment invasive plant species:

- Inspect and document all limited term ground-disturbing operations in infested areas following completion of the treatment.
- For ongoing treatments, continue to monitor until reasonable certainty is obtained that no new infestations have occurred. Provide for follow-up treatments based on inspection results.

Soils

A. Timber sale and prescribed burn units will be surveyed post project in accordance with the soil post implementation monitoring table below.

Soil Monitoring Plan

Soil Risk Category (SRC)	Post-Implementation Monitoring
A, B, C, D	***No post-project DSD or CWD soil surveys are needed in these areas unless wanted for long-term Forest Plan Monitoring or SREF model calibration.**
E, F	***Post-project DSD and/or CWD effectiveness monitoring is needed in at least 10% of all ground-based harvest and burn units that overlay these SRC areas within the project area (2018 Forest Plan Monitoring Report Recommendation).**

Water

A. Monitor application of BMP's on roads to ensure completed as planned and effective.

B. Monitor and review road maintenance activities in RHCA's to ensure BMP standards to protect water quality are adhered to. (Examples: dip locations, no berms along road edge, ditch conditions, no side cast and need for straw bales)

C. Review site conditions after slash piles are burned. Seed and fertilize as necessary to improve vegetation recovery and reduce weed being established.

D. Review road maintenance to document compliance with the 2015 Road-Related Activities Biological Opinion.

E. Designated response reaches will be surveyed post project in accordance with the ECA Threshold Method monitoring table below.

Watershed Monitoring Plan

ECA Threshold (ECAT)	Post-Implementation Monitoring
Low	*No post-project replicate stream surveys (trend analysis) are needed in these areas unless wanted for long-term Forest Plan Monitoring or ECAT validation.
Moderate	*Post-project replicate stream surveys (trend analysis) may be justified depending on the existing condition. Should project activities increase ECAs in watersheds with pre-existing unstable response reaches that were found to have thresholds being approached or surpassed, replicate stream surveys after one entire average runoff cycle (subsequent to the completion of all management activities) in response reaches previously surveyed through the BNF ECA Threshold Method (Neesvig, 2020).
High	*Post-project replicate stream surveys (trend analysis) may be justified depending on the existing condition. Should project activities increase ECAs in watersheds with pre-existing unstable response reaches that were found to have thresholds being approached or surpassed, replicate stream surveys after one entire average runoff cycle (subsequent to the completion of all management activities) in response reaches previously surveyed through the BNF ECA Threshold Method (Neesvig, 2020). These monumented reaches could be monitored through subsequent years depending on the stability of the stream, or because of inadequate monitoring conditions related to a below average water year.

Review vegetation recovery on stored or decommissioned roads. Reseed where necessary. Where culverts on live streams were removed review channel conditions one year following removal to determine effectiveness, vegetation recovery or need for additional seeding, and potential for adaptive management on similar projects in the future. Continue to monitor at stream crossings to validate sufficient vegetation recovery. Report findings in bi-annual forest plan monitoring report and annually in WIT.

Transportation

A. Road work included in timber sales will be monitored during implementation of the project by the Forest's Engineering Representative (ER) with assistance from Project Inspector (PI). Field inspection forms will be utilized to document progression of the work, this information will be forwarded to the Timber Sale Contracting Officer (CO) Timber Sale Administrator (TSA), District Ranger, Forest Engineer (FE), and the Forest Service Representative (FSR).

B. Road conditions during timber sale activities will be monitored by forest personnel on site actively working on the implementation of the project, including the ER, PI and potentially the TSA. Once again, the field inspection forms will be used to document project work and road conditions during implementation of the timber sale. The forms will be forwarded to the Contracting Officer, District Ranger, Forest Engineer, Timber sale administrator, and Forest Service Representative.

C. Monitoring of vegetation recovery on stored roads, will be accomplished by the BNF watershed staff. Barren areas will be reseed where necessary. Where culverts on live streams were removed review channel conditions one year following removal to determine effectiveness, vegetation recovery or need for additional seeding, and potential for adaptive management on similar projects in the future. Continue to monitor at stream crossings to validate sufficient vegetation recovery. Report findings in bi-annual forest plan monitoring report and annually in WIT.

D. Open system roads are monitored by field going personnel, as well as random deferred maintenance surveys. Issues on roads are usually documented through emails or phone messages to engineering staff. Accomplishments by force account crews are compiled on an annual basis. Deferred maintenance surveys are documented in NRM.

Silviculture

A. Complete reforestation stocking surveys in artificial and natural regeneration treatments to determine stocking density, distribution, species composition and health of regeneration as required by National Forest Management Act (NFMA).

B. Preform a walk-through exam to monitor the effectiveness of the treatment, ensure objectives were met and identify any follow-up treatment needs.

Rare Plants

A. Pre and post implementation monitoring on rare plant populations to ensure that all protection measures were met.

B. Pre and post management implementation monitoring on rare plants to document the response from the management action.

C. Pre and post management implementation monitoring in rare plant habitat and populations for invasive plant species presence, expansion, or reduction within those areas.

Native Plant Revegetation

A. Monitoring post implementation for native plant revegetation seeding success on treatment areas (ex: temporary roads, skid trails and landings). Monitoring would be conducted using qualitative and quantitative methods following the Region One Native Plant Materials Revegetation Monitoring Guide.

Wildlife

A. Post-completion verification of any area specifically prohibited from treatment from the Northern Rockies Lynx Management Direction (NRLMD).

B. Documentation of any reported grizzly bear/human interactions with contractors or other project personnel during implementation.

C. Any monitoring and reporting requirements that are specified by the U.S. Fish and Wildlife Service in their Letter of Concurrence or Biological Opinion.