

# Appendix A

## Monitoring

### Introduction

The following monitoring matrix describes monitoring associated with the Mid Swan Salvage Blowdown Project and summarizes the purpose, methods, and expected results and uses of the proposed monitoring activities. The Forest Service is currently seeking opportunities for multi-party monitoring of post treatment conditions.

**TABLE A- 1.**  
**SUMMARY OF MONITORING ACTIVITIES**

WHAT	WHERE	WHEN / DURATION	WHY	WHO	EXPECTED RESULTS AND USE
<b>WILDLIFE</b>					
Monitor snag and down woody retention	Salvage Units 2, 5, 13, and 18	During and post sale	To determine if design criteria for old growth associated species are adequate.	Wildlife Biologist, Timber Sale Administrator	Determine if snag and down woody design criteria are adequate for old growth units.
Monitor potential post sale use of temporary roads and skid trails	Salvage units 3, 8, 16, 18, and 19; also old growth units 2, 5, 13, and 18	Post Sale	To determine if roads and skid trails are left in an adequate condition and to see if they are receiving post sale use.	Wildlife Biologist	Determine if temporary road and skid road closure expectations are correct.
<b>FOREST ROADS</b>					
Monitor and oversee temporary road construction	Temporary roads	Throughout duration of project implementation.	Insure road construction activities comply with contract specifications.	Contracting Officer, Forest Service Representative, and Timber Sale Administrator	Routinely determine compliance with contract specifications.
Monitor and oversee condition of permanent roads	Permanent roads	Throughout duration of project implementation.	Insure activities are not negatively affecting road condition and adjoining resources.	Contracting Officer, Forest Service Representative, and Timber Sale Administrator	Routinely determine road integrity and BMP compliance.

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SUMMARY OF MONITORING ACTIVITIES**

WHAT	WHERE	WHEN / DURATION	WHY	WHO	EXPECTED RESULTS AND USE
<b>SOIL QUALITY</b>					
Extent of effects	Unit 13 and four other salvage harvest units selected at random from the chosen alternative.	Upon completion of all activities.	Determine if soil quality standards are met or exceeded. If monitoring indicates soil quality standards are exceeded, additional units with similar treatments would be monitored.	Forest Soil Scientist or his designated Representative	Results will be used to modify future Design Criteria and disturbance prediction values.
<b>WATER RESOURCE</b>					
Clear drainage features through notes to the Sale Administrator	Throughout activity area	Continually	Prevent sediment transport.	Sale Administrator	No negative effects on the water resource.
<b>FOREST VEGETATION</b>					
Develop NEPA to Implementation crosswalk	SLRD	Prior to contract development	Insure layout complies with NEPA decision.	Presale Forester	Assure layout complies with NEPA decision.
Review contract prior to advertisement	SLRD	Prior to contract advertisement	Insure contract complies with NEPA decision.	TMO, Presale Forester, IDT members, Line Officer, Contracting Officer, TSA, ER	Assure project implementation complies with the NEPA decision.
Monitor and oversee vegetation treatments	All treatment units	Throughout project implementation	Insure treatment activities comply with contract specifications.	CO, FSR, TSA, HI, and Silviculturist	Assure compliance with contract specifications.
Conduct post treatment surveys to monitor changes in fuel loadings and insect and disease conditions and to determine in the silvicultural prescription was met	All treatment units	Immediately following treatment and periodically thereafter as specified in the silvicultural prescription	Determine how well objectives were met and gather data needed to assess possible follow-up treatments.	Silviculturist, culturist, or designated representative	Determine the effectiveness of treatments, the need to conduct follow-up treatments, and to make future treatment decisions.
Conduct reforestation surveys to determine regeneration success and needs	All regeneration units	First, third, and fifth year after harvest	Determine regeneration success and needs.	Silviculturist, culturist, or designated representative	Assure adequate stocking of desired species occurs.

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WHAT	WHERE	WHEN / DURATION	WHY	WHO	EXPECTED RESULTS AND USE
<b>NOXIOUS WEEDS</b>					
Survey and monitor for noxious weeds	Project area where ground disturbance and project associated activities have occurred, including slash piles, exposed soil from excavator tracks and skid trails, roads, and temporary roads.	After all activities are complete for at least 3 years	To determine the presence and/or spread of noxious weeds and needed containment or eradication measures, and to future direct treatment activities	Forest Botanist, Botany Crew, Noxious Weed Specialist, or Weed Crew	
<b>FISHERIES</b>					
Continue monitoring bull trout redds and juvenile abundances	Lion Creek	Annually	Evaluate population trend over the analysis period	Montana FWP personnel (preferred), otherwise District Fisheries Biologist	Validate NEPA analysis

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