Environmental Assessment Checklist

Project Name: Olsen Structure Survivability Project
Proposed Implementation Date: December 2025
Proponent: KLM Logging and Dan Olsen
County: Granite
HRA #: N/A
Expiration Date: 11/01/2027 Authorization to conduct AP is valid for 2 years from the date of approval or for such period as may be specified by the Department. (77-5-307 and 302)(ARM 36.11.310)

Type and Purpose of Action

Description of Proposed Alternative Practice Action:

Dan Olsen is requesting an Alternative Practice (AP) for the Olsen Structure Survivability project (OSS), to allow for the safe removal of hazard fuels surrounding three structures on his USFS lease.

The project is located adjacent to Echo Lake about 3 miles Northeast of Georgetown Lake. OSS is located on a less than one acre parcel, (refer to Attachment's vicinity map A-**1** and project map A-**2**) within section:32 T6N R13W

Dan Olsen is requesting an Alternative Practice to Rule 4: (36.11.304), ***Equipment Operation in the SMZ*** and Rule 5: (36.11.305), ***Retention of Trees in the SMZ*** in the Streamside Management Zone (SMZ) of ~300 feet along Echo Lake (class 1 SMZ). This Alternative Practice would allow the aforementioned activities to occur in the SMZ under Rule 4 and 5, Montana guide to the Streamside Zone Law and Rules 2006 (ARM 36.11.300-313)

According to MCA 77-5-301 through 307, DNRC is authorized to administer and enforce the provisions of the SMZ Law. This Law was developed to protect the public interest of water quality and quantity within forested areas; provide for standards, oversights and penalties to ensure forest practices conserve the integrity of SMZ's; provide voluntary guidelines for wildlife management within SMZ's; and allow operators necessary flexibility to use practices appropriate to site-specific conditions in the SMZ. ARM 36.11.301 through 313 further specify the design of SMZ boundaries, allowable activities, and prohibitions within the SMZ, penalties and other related provisions.

According to MCA 77-5-304 and ARM 36.11.310, DNRC *may* approve alternative practices that are different from practices required by the SMZ Law only if such practices would be otherwise lawful and continue to conserve or not significantly diminish the integrity and function of the SMZ. This AP would allow for the 2 AP requests listed above.

Site specific mitigations are stated throughout this document and collected in **Attachment B**.

The MT-DNRC's implementation of the Streamside Management Zone (SMZ) law and rules protects and maintains the functions of a SMZ. The six functions of an SMZ, as identified in the SMZ law (77-5-301[1] MCA), are:

- Acts as an effective sediment filter to maintain water quality.
- Provides shade to regulate stream temperature.
- Supports diverse and productive aquatic and terrestrial riparian habitats.
- Protects the stream channel and banks.
- Provide large woody debris that is eventually recruited into a stream to maintain riffles, pools, and other elements of channel structure.
- Promotes floodplain stability.

Proposed activities include:

Rule	Action	Quantity	
	Proposed Alternative Practices		
1	Broadcast burning		acres
2	Operation of Equipment in SMZ	~300	feet
3	Tree Retention	~0.3	acres
4	Road construction		feet
5	Hazardous Materials		feet
6	Side Casting of Material		feet
7	Depositing Slash		feet
	Total Treatment Acres	**~0.3**	
Duration of Activities:	~ 1 month		
Implementation Period:	12/2025-04/2027		

Project Development

ALTERNATIVES CONSIDERED:

No-Action Alternative: Not approve Alternative practice. No equipment would be allowed within the SMZ. Trees would be hand felled and skidded by cable through the SMZ, left standing or removed in a non-commercial manner. In instances when trees are removed non-commercially, the DNRC has no jurisdiction over operations and excessive disturbance may occur.

Action-Alternative: Alternative Practice to **operate equipment inside the SMZ**, and **deviate from retention standards** would be granted, with additional mitigation measures outlined in **Attachment B**. The treatment would happen in the winter to minimize soil compaction and to help prevent soil disturbance. Decking of logs and creation/burning of slash piles would occur outside the SMZ.

Impacts on the Physical Environment

Evaluation of the impacts on the No-Action and Action Alternatives including **direct, secondary, and cumulative** impacts on the Physical Environment.

VEGETATION:

The stand around the structures is composed mostly of subalpine fir, lodgepole pine, and Engelmann spruce. The lodgepole pine within the stand exhibits pitch tubes and pockets of mortality -likely mountain pine beetle infestation. There is heavy fuel loading above the cabin and to the east due to past insect outbreaks, and other causes of tree mortality.

No-Action Alternative: Equipment would not be allowed to enter the SMZ, trees would be hand-felled and cable skidded out of the SMZ, left standing, or removed in a non-commercial manner. Depending on the number of trees cable skidded out of the SMZ impacts to ground vegetation could range from none to high. Trees skidded by cable would likely not have a leading edge suspended above the ground, possibly leading to loss of ground vegetation and exposing soils to potential colonization my various species of weeds such as: knapweed, thistle, mullein, hounds tongue, etc.

Action-Alternative: Alternative Practice to operate equipment inside the SMZ and deviate from retention standards would be granted, with additional mitigation measures outlined in **Attachment B**. Standing trees and snags would largely be removed with clumps of trees and open spaced leave trees retained. Sub-merchantable trees would be removed from under the drip line of overstory trees, and otherwise spaced out to reduce fire hazard. A more open canopy would lead to more sunlight reaching the forest floor which would be expected to result in an increase in understory vegetation such as shrubs, forbs, grasses. An increase in tree regeneration would also be expected.

Effects of Action-Alternative: Proposed action would be expected to result in moderate to high and prolonged (length of time for trees to regenerate and close canopy again) effects.

Comments: The purpose of this AP is to remove trees and other vegetation to prevent or slow fire spread through the area. In hope that with the right preparation and treatment the structures on and around this parcel may survive wildfire. The moderate to high prolonged effects are in line with the objectives of the proposed action.

Vegetation Mitigations:

- Operations will be conducted in the winter when the ground is frozen/sufficient snow cover to reduce ground and understory (grasses/forbs/shrubs) vegetation disturbances.
- Identified leave tree clumps and 10 tree minimum retention requirements in the East SMZ segment (100 feet) of project area.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions:

Soil is an Evaro gravely ashy loam that consists of very deep, somewhat excessively drained soils that formed in colluvium derived mainly from argillite and quartzite. These soils have a large component of volcanic ash in the surface layer. Evaro soils are on commonly found on hill and mountains.

No-Action Alternative: Equipment would not be allowed to enter the SMZ, Trees would be hand-felled and skidded via cable through the SMZ, left standing or removed in a non-commercial manner. Trees skidded by cable out of the SMZ would likely not have a leading edge suspended above the ground depending on the number of trees being skidded impacts on the soil could range from none too high and prolonged.

Action-Alternative: Alternative Practice to **operate equipment inside the SMZ**, and **deviate from retention standards** would be granted. The Proposed activities within the SMZ are located on gentle tractor ground ~26% slope. This gentle slope is consistent across the whole 300ft of the SMZ. A feller buncher and skidding equipment would be allowed to enter the SMZ within **25 feet** of the ordinary high-water mark (OHWM). With skidding being perpendicular to the OHWM on a designated skid trail (identified during field review 12/15/2025) beyond 25 feet from the OHWM. With required mitigation measures none to low temporary impacts would be expected.

https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

https://casoilresource.lawr.ucdavis.edu/gmap/

Soil Mitigations:

- Activities would be restricted to frozen/snow-covered ground conditions.
- No equipment operation closer than 25 feet from Ordinary High-Water Mark.
- Minimize skidding and follow designated skid trail location identified during field review on 12/15/2025.
- To the extent practicable avoid turning equipment in the SMZ.
- Grass seed any disturbed soils.
- Implement applicable forestry BMPs.

WATER QUALITY AND QUANTITY:

Water Quality and Quantity Existing Conditions:

Proposed treatment of 300 lineal feet is along Echo Lake, which is classified as a class 1 stream.

No-Action Alternative: Equipment would not be allowed to enter the SMZ, Trees would be hand-felled and skidded via cable through the SMZ, left standing or removed in a non-commercial manner. Trees skidded by cable out of the SMZ would likely not have a leading edge suspended above the ground depending on the number of trees being skidded impacts on the soil could range from none too high and prolonged.

No functions of the SMZ would be impacted.

Action-Alternative: Alternative Practice to **operate equipment inside the SMZ**, and **deviate from retention standards** would be granted. Some vegetation contributing to shading of the lake would be removed. Immediately following harvest operations, the ability of the SMZ to act as an effective sediment filter is not expected to be impacted due to frozen/snow covered ground requirements. A flush of new vegetation (grasses/forbs) following operations would be expected following harvest and opening of the upper canopy, increasing the ability of the SMZ to act as an effective sediment filter. These effects would be expected to be moderate to high and prolonged.

Proposed project area is small compared to the area of the lake any effects on lake temperature are expected to be none to minor and prolonged.

Water Quality Mitigations:

- Activities would be restricted to frozen/snow-covered ground conditions.
- Operate equipment no closer than 25 feet from Ordinary High-Water Mark.
- Retain clumps of trees identified during field review 12/15/2025.
- Retain minimum of 10 trees in the East SMZ segment (100 feet) of project area.
- Grass seed any disturbed soils.
- Do not create or burn slash piles within the SMZ.

AIR QUALITY:

No-Action Alternative: Air quality would not be affected.

Action-Alternative: Alternative Practice to **operate equipment inside the SMZ**, and **deviate from retention standards** would be granted. Slash created from timber harvest would likely be burned. With low volume of slash to be burned air quality effects would be expected to be minimal with minor temporary impacts while slash piles are burning.

Impacts on the Human Population

Evaluation of the impacts on the proposed action including **direct, secondary, and cumulative** impacts on the Human Population.

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Health and Human Safety	**x**				**x**				**x**					
Industrial, Commercial and Agricultural Activities and Production	**x**				**x**				**x**					
Quantity and Distribution of Employment		**x**				**x**				**x**				**1**
Local Tax Base and Tax Revenues	**x**				**x**				**x**					
Demand for Government Services	**x**				**x**				**x**					
Access To and Quality of Recreational and Wilderness Activities	**x**				**x**				**x**					
Density and Distribution of population and housing	**x**				**x**				**x**					
Social Structures and Mores	**x**				**x**				**x**					
Cultural Uniqueness and Diversity	**x**				**x**				**x**					

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Action														
Health and Human Safety			**x**				**x**				**x**			**2**
Industrial, Commercial and Agricultural Activities and Production	**x**				**x**				**x**					
Quantity and Distribution of Employment		**x**				**x**				**x**				**1**
Local Tax Base and Tax Revenues		**x**				**x**				**x**				**1**
Demand for Government Services	**x**				**x**				**x**					
Access To and Quality of Recreational and Wilderness Activities	**x**								**x**					
Density and Distribution of population and housing	**x**								**x**					
Social Structures and Mores	**x**								**x**					
Cultural Uniqueness and Diversity	**x**								**x**					

Comments: 1. Action alternative would result in a small amount of work for the contractor, small amount of wood going to local mills, and small amount of tax revenue from those activities.
2. Proposed action would likely result in an increase human safety due to reduced fire hazard in the project area.

References:

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at the following link: http://websoilsurvey.sc.egov.usda.gov/. Accessed 10/28/2025.

Does the proposed action involve potential risks or adverse effects that are uncertain but extremely harmful if they were to occur?

None.

Does the proposed action have impacts that are individually minor, but cumulatively significant or potentially significant?

None.

Environmental Assessment Checklist Prepared By:

Name: Kyle Carpenter
Title: MT DNRC Clearwater Unit Service Forester
Date: 12/17/25

Finding

Alternative Selected
Action Alternative selected.

Significance of Potential Impacts
The potential impacts will be minimal or nonexistent as long as Attachment B is followed.

Need for Further Environmental Analysis

[ ]	EIS	[ ]	More Detailed EA	[X]	No Further Analysis

Environmental Assessment Checklist Approved By:

Name: Craig Hansen
Title: Unit Manager
Date: 1/07/2026
Signature: /s/ *Craig Hansen*

Attachment A - Maps

A-1: Project Vicinity Map

Olsen Survivability Project VICINITY

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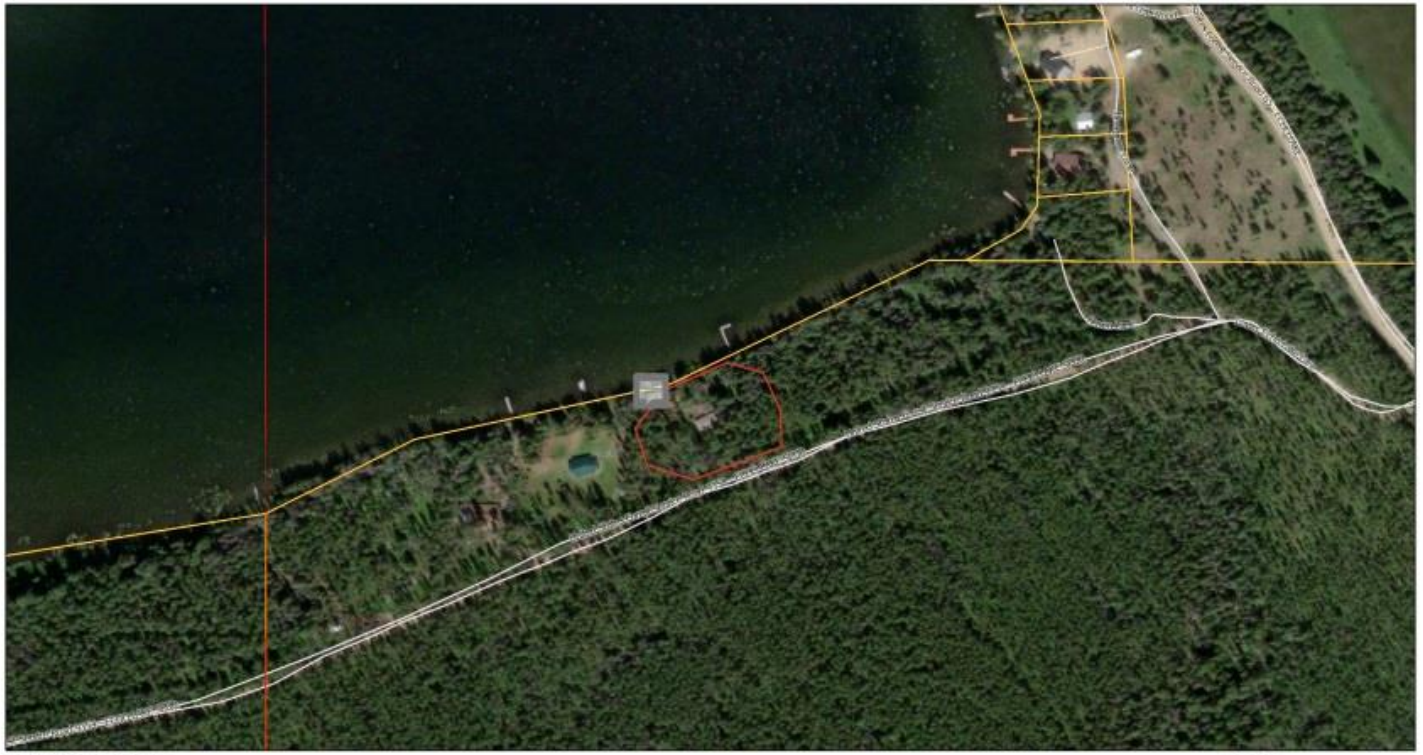
Olsen AP application Map



10/15/2025, 1:24:06 PM

1:2,757

0 130 260 520 ft

0 37.5 75 150 m

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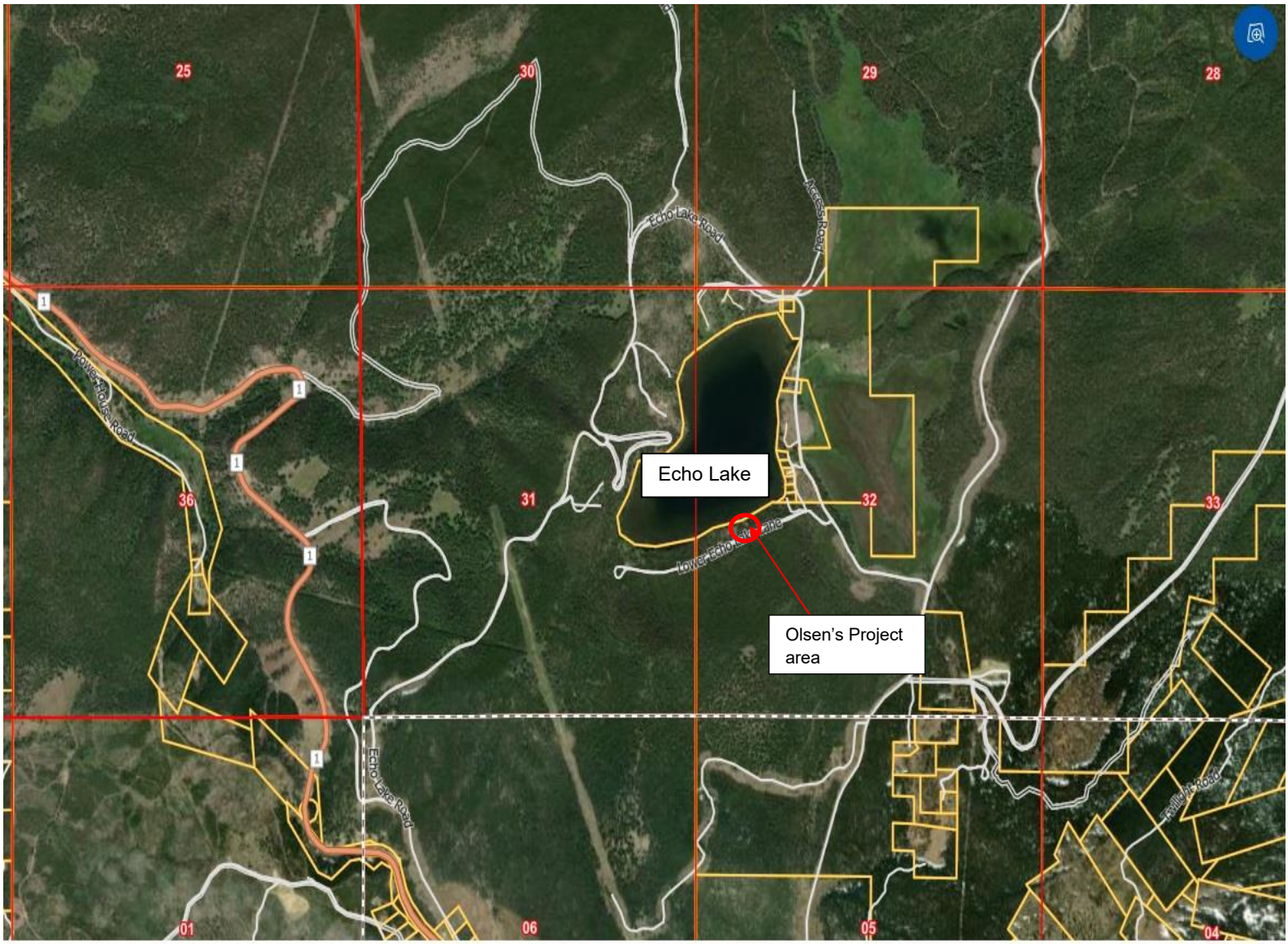
A-2: Alternative Practice Project Map



Attachment B
Proposed Site Practices and Mitigations

In addition to applicable Forestry Best Management practices the following mitigations would be required.

Vegetation Mitigations:

- Operations will be conducted in the winter when the ground is frozen/sufficient snow cover to reduce ground and understory (grasses/forbs/shrubs) vegetation disturbances.
- Identified leave tree clumps and 10 tree minimum retention requirements in the East SMZ segment (100 feet) of project area.
  Tress to be left were marked with yellow/red polka dot ribbon during field review 12/15/2025.(See photos on next page)

Soil Mitigations:

- Activities would be restricted to frozen/snow-covered ground conditions.
- No equipment operation closer than 25 feet from Ordinary High-Water Mark.
- Minimize skidding within SMZ and follow designated skid trail location identified during field review on 12/15/2025.
- To the extent practicable avoid turning equipment in the SMZ.
- Grass seed any disturbed soils.

Water Quality Mitigations:

- Activities would be restricted to frozen/snow-covered ground conditions.
- Operate equipment no closer than 25 feet from Ordinary High-Water Mark.
- Retain clumps of trees identified during field review 12/15/2025. (See Photos)
- Retain minimum of 10 trees in the East SMZ segment -segment 3 (100 feet) of project area.
- Do not create or burn slash piles within the SMZ.
- Grass seed any disturbed soils.

If all mitigation measures are followed this project should have no long-term significant impacts or cumulative effects to the stream drainages.

West end of project area (Segment1), retain flagged snag and spruce

Clump 2, retain flagged (yellow/red polka dot) spruce.

Edge of opening looking towards Segment 3