

## CHECKLIST ENVIRONMENTAL ASSESSMENT

<b>Project Name:</b>	Fish Creek SMZ Alternative Practice
<b>Proposed Implementation Date:</b>	December 01, 2020 through March 31, 2021
<b>Proponent:</b>	Mike Schaedel, (The Nature Conservancy, Western Montana Forester)
<b>Location:</b>	Sections 27 and 28, Township 14 North Range 14 West
<b>County:</b>	Missoula

### I. TYPE AND PURPOSE OF ACTION

Mike Schaedel has applied for a Streamside Management Zone (SMZ) Alternative Practice for approximately 1,500 feet along the east side of Fish Creek (Class 1 SMZ) on property owned by the Potter Exemption Trust and co-managed by The Nature Conservancy. The applicant seeks an Alternative Practice to cut additional trees within the SMZ and to operate equipment inside of the SMZ.

The purpose for this proposed alternative practice is to mitigate a Douglas-fir bark beetle outbreak that has effected approximately 30 acres of private property. The goal is to remove most of the Douglas-fir trees infested with live Douglas-fir beetles. The majority of the infested trees are located in the SMZ associated with Fish Creek and an Alternative Practice is requested to allow the removal of these trees to prevent additional tree mortality.

### II. PROJECT DEVELOPMENT

#### 1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

*Provide a brief chronology of the scoping and ongoing involvement for this project.*

DNRC was scoped internally.

#### 2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

None.

#### 3. ALTERNATIVES CONSIDERED:

**Scope of Analysis and Definition of Project Area:** The following document describes conditions within and nearby Fish Creek along land owned by the Potter Exemption Trust. The project area is defined as those portions of the Fish Creek SMZ on which the applicant has requested an Alternative Practice. Potential effects analyzed under the action and no action alternatives are limited this project area. Ongoing forest operations exclusive of the Alternative Practice request are considered part of base line conditions.

**No Action Alternative:** Timber harvest would likely occur and meet all SMZ rules. Most beetle-infested trees within the outside 30 feet of the SMZ boundary would likely be harvested. Some infested trees, especially near the stream channel, would be left because of location and lean towards the channel. Infested trees would allow beetle populations to continue to infest and kill healthy trees both inside and outside of the SMZ.

**Action Alternative:** Under this alternative, an Alternative Practice to remove additional trees in the medium and large size class would be granted. To assist in tree removal, equipment operation in the SMZ would be allowed under specific circumstances. The primary purpose of this Alternative Practice is to remove active brood trees to decrease the chance of additional trees becoming infested with Douglas-fir beetles.

The following mitigations would be a part of the Alternative Practice:

- Equipment may operate to within 15 feet of the ordinary high water mark at intervals of no less than 50 feet, perpendicular to the stream channel.
- Harvest shall be done during dry or frozen soil conditions or with enough snow cover to minimize soil damage.
- Healthy trees in the medium and large size class that are not occupied by beetles will be retained.
- SMZ understory shrubs and herbaceous plants would be retained to the extent practicable.
- No material may be cast into the stream channel. If branches or materials do enter the stream channel, they will be required to be removed immediately.

### III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES* potentially impacted are listed on the form, followed by common issues that would be considered.
- Explain *POTENTIAL IMPACTS AND MITIGATIONS* following each resource heading.
- Enter "NONE" if no impacts are identified or the resource is not present.

#### 4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

*Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.*

Soils in the project area are gravelly loams on slopes ranging from approximately 5 – 30 percent. Generally, these soils are resistant to compaction. They have a varying rutting hazard ranging from slight to severe. Under either alternative, operations would only take place under dry or winter conditions. Under the action alternative any disturbed areas inside of the SMZ would be grass seeded and installation of erosion control measures such as slash-filter windrows would be required. Considering the operation restrictions and mitigation measures, minimal direct, indirect or cumulative impacts would be expected under either alternative.

**Commented [BK1]:** This was more accurate in Shoupy versus Fish.

#### 5. WATER QUALITY, QUANTITY AND DISTRIBUTION:

*Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.*

*Is it possible that implementing this alternative practice would impact the integrity of the SMZ and these specific functions?*

- Ability to act as an effective sediment filter.
- Ability to provide shade to regulate stream temperature.
- Protection of stream channel and banks.
- Ability to provide large woody debris for eventual recruitment into the stream to maintain riffles, pools, and other elements of channel stability.

#### **Existing Condition**

The project area consists of a gradual, meandering stream with banks ranging from 2 to 5 feet in width and 50-foot SMZ slopes ranging from 0-20 percent. Medium and large trees, consisting mostly of Douglas-fir and some ponderosa pine, are scattered throughout the SMZ. Brush is mostly concentrated within 10 feet of the channel, providing most of the shade to the water surface. Some fallen trees can be found in and near the channel.

Above the project area, Fish Creek is contained by an irrigation reservoir. Below the project area, the creek continues on to flow into the Blackfoot River.

#### **Potential Environmental Effects**

**No Action Alternative:** The SMZ law would be followed during commercial activities therefore it is unlikely there would be impacts to water quality, quantity, distribution or to the functionality of the SMZ during commercial activities. Additional down woody debris would be likely to accumulate as a result of dying trees.

**Action Alternative:**

Under the action alternative an Alternative Practice would be granted to allow the harvest of additional medium and large Douglas-fir in the SMZ (Montana SMZ law requires leaving more than 50 percent per species/per size class in a given 100-foot stretch) and enter the SMZ to facilitate felling operations in a controlled fashion. The equipment operator would be required to follow mitigation measures outlined in this document.

-The ability of the SMZ to act as an effective sediment filter would be maintained as no additional ground disturbance would be expected within 15 feet of the SMZ beyond the no-action alternative.

-The ability of the SMZ to provide shade would be maintained by leaving all brush, submerchantable, and healthy medium to large trees.

-Stream channel and bank integrity would be protected by keeping equipment a minimum of 15 feet away.

-The potential recruitment of large woody debris would be maintained as existing snags and healthy trees would be retained.

-The ability of the SMZ to promote floodplain stability would not be impacted.

**Commented [BK2]:** Down debris doesn't provide a shade component, it's the standing vegetation.

**6. AIR QUALITY:**

*What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.*

Slash created from the project would need to be disposed of in accordance with all applicable laws. Impacts would be the same under either alternative and would be expected to be minor.

**7. VEGETATION COVER, QUANTITY AND QUALITY:**

*What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.*

**Existing Condition**

The SMZ is a medium-stocked forest with older ages and medium to large size classes. Douglas-fir and ponderosa pine are the tree species present with low lying brush and grass species in the understory. A small slope separates the SMZ from the rest of the adjacent forest approximately 75 feet from the channel for most of the project area. The surrounding forest has been thinned out a year ago and has active beetle infestations in approximately 20 percent of the stand.

A portion of the Douglas-fir trees in the SMZ were affected by a storm in 2018 that broke tops and stems from healthy trees. Douglas-fir beetles have been attracted to feed on the broken trees. Beetles have continued to infest healthy trees and are occupying more than half of the mature trees in some segments.

**Potential Environmental Effects**

**No Action:** Harvest would follow the SMZ law. A portion of beetle-infested trees could be harvested, but the beetle attacks would likely persist in the trees that are left.

**Action Alternative:** Harvest of beetle-infested Douglas-fir trees would occur within the SMZ. Harvest of more than 50% of the large and medium class Douglas-fir trees would be allowed in up to fifteen (15) 100-foot stretches of the SMZ. Healthy Douglas-fir and all other species would be left. To facilitate felling operations and to minimize skidding disturbance to the SMZ, machinery would enter the SMZ at perpendicular paths to the

**Commented [BK3]:** Include the entire alternative practice length in case more tree removal is necessary.

stream channel at no less than 50 feet apart. Machinery would be allowed to within 15 feet of the stream channel. Work shall be done under dry or frozen conditions.

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**8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:**

*Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.*

**Terrestrial and Avian Life and Habitats:**

The area is well used by numerous terrestrial and avian species including grizzly bears. On field visits no nests or dens of any animals were discovered. Considering that under the no action alternative the infested trees would likely die and fall over, the action alternative effects to terrestrial and avian species would be expected to be minor under either alternative.

**Aquatic life and habitats:**

Already downed or dead trees and snags not associated with the Douglas-fir beetle infestation would be left in-place under either alternative. Shade is being supported by this debris and there will be a stand of trees to be used as down woody recruits. Only minor impacts to aquatic life and habitat would be expected under either alternative.

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**9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:**

*Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.*

Grizzly bears are known to use the project area. Effects would not likely differ substantially under either alternative.

There are isolated and adjacent wetlands in the project area. Within these wetlands, no deviation from standard forestry BMP's or the SMZ law is requested under either alternative. Effects to wetlands would be expected to be minor under either alternative.

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**10. HISTORICAL AND ARCHAEOLOGICAL SITES:**

*Identify and determine effects to historical, archaeological or paleontological resources.*

No cultural resources have been identified within the project area. No impacts would be expected under either alternative.

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**11. AESTHETICS:**

*Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.*

Impacts to aesthetics would be the same under either alternative and would be perceived differently by different people. However, the treatment would be similar to other treatments that have recently taken place nearby and would be considered minimal to moderate by most people.

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**12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:**

*Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.*

None.

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**13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:**

*List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.*

None.

<b>IV. IMPACTS ON THE HUMAN POPULATION</b>
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| <ul style="list-style-type: none"><li>• <i>RESOURCES</i> potentially impacted are listed on the form, followed by common issues that would be considered.</li><li>• Explain <i>POTENTIAL IMPACTS AND MITIGATIONS</i> following each resource heading.</li><li>• Enter "NONE" if no impacts are identified or the resource is not present.</li></ul> |
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**14. HUMAN HEALTH AND SAFETY:**

*Identify any health and safety risks posed by the project.*

None.

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**15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:**

*Identify how the project would add to or alter these activities.*

None.

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**16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:**

*Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.*

Under either alternative the project would be expected to provide approximately 2 or fewer short term jobs.

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**17. LOCAL AND STATE TAX BASE AND TAX REVENUES:**

*Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.*

None.

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**18. DEMAND FOR GOVERNMENT SERVICES:**

*Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services*

None.

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**19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:**

*List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.*

None.

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**20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:**

*Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.*

The project area is private property and public use is controlled by the landowner. No effects would be expected under either alternative.

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**21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:**

*Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.*

None.

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**22. SOCIAL STRUCTURES AND MORES:**

*Identify potential disruption of native or traditional lifestyles or communities.*

None.

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**23. CULTURAL UNIQUENESS AND DIVERSITY:**

*How would the action affect any unique quality of the area?*

None.

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**24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:**

*Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.*

None.

<b>EA Checklist Prepared By:</b>	<b>Name:</b> Brad French	<b>Date:</b> 9/03/2020
	<b>Title:</b> Service Forester	

**V. FINDING**

**25. ALTERNATIVE SELECTED:**

Following a review of the document as well as the corresponding Department policies and rules, the Action Alternative has been selected because it meets the intent of the project objectives outlined in Section I – Type and Purpose of Action. This includes but is not limited to removing more than half the Douglas-fir trees per size class and equipment operation inside of the SMZ.

**26. SIGNIFICANCE OF POTENTIAL IMPACTS**

I find that the Action Alternative will not have significant impacts for the following reasons:

- The Action Alternative is in compliance with the existing laws, rules, policies, and standards applicable to this type of proposed action.
- Appropriate mitigations have been proposed to minimize potential impacts to resources such as vegetation, soil, and water quality.

**27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:**

EIS       More Detailed EA       No Further Analysis

<b>EA Checklist Approved By:</b>	<b>Name:</b> Kristen Baker-Dickinson <b>Title:</b> Unit Manager, Clearwater
<b>Signature:</b> /s/ <i>K. Baker-Dickinson</i>	<b>Date:</b> 9/28/2020

Attachment A-1 Project Map

