

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Patterson Prairie SMZ Alternative Practice
Proposed Implementation Date:	Winter 2019
Proponent:	Dyrk Krueger
Location:	Section 23 Township 14 North Range 10 West
County:	Powell

I. TYPE AND PURPOSE OF ACTION

Dyrk Krueger has applied for a Streamside Management Zone (SMZ) Alternative Practice on 1,400 feet of an unnamed Class 2 SMZ. The purpose of the Alternative Practice is to allow equipment access for fuels reduction and forest health improvement within specific portions of the SMZ.

The application involves the following specific requests:

- Equipment operation within the SMZ to facilitate tree removal in up to 30 locations.
- Removal of submerchantable material within the SMZ.

II. PROJECT DEVELOPMENT

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

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

This project is located on private property. No public scoping or other involvement is needed.

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

None.

3. ALTERNATIVES CONSIDERED:

No Action Alternative: Timber harvest would likely occur and meet all SMZ rules. Timber harvest outside the SMZ would follow the spacing requirements of the NRCS Fuels Grant that the contractor is working under. No SMZ harvest would occur and the stand would remain overstocked.

Action Alternative: Under this alternative, an Alternative Practice would be granted. The Alternative Practice would allow the proponent to operate within the SMZ and, if needed, remove submerchantable material to facilitate timber harvest operations. Mitigations would be a part of the Alternative Practice, they are outlined within the WATER QUALITY, QUANTITY AND DISTRIBUTION portion of this analysis.

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.

The proposed Alternative Practice area is located within a flat section of a perennial spring. The soils in this area are very stable and there are mixed rocks and granitic found in the soil horizons. Soil disturbance would be minimized in the areas of activity through limiting use to dry, frozen, or snowy conditions. It is unlikely there would be further impacts to geology, soil quality, stability and moisture under either alternative.

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

This stretch of Class 2 SMZ consists of a single narrow stream channel that averages less than one foot in width. Water flow typically occurs during spring runoff, and it is fed by a perennial spring and may flow water year-round. This creek does not deliver to any other body of water, as its flow diminishes subsurface. Grasses and light brush are scattered throughout the channel and SMZ. There are scattered pockets of submerchantable trees and regeneration growing within the SMZ. There is evidence of an old that crosses the SMZ just upstream of the project area. The creek channel does not reappear below the project area.

Potential Environmental Effects

No Action Alternative: The SMZ law would be followed for this commercial timber harvest operation. Because of the low number of merchantable trees in the SMZ, little-to-no timber harvest would occur.

Action Alternative: Under the action alternative an Alternative Practice would be granted to allow equipment operation to occur in approximately fourteen segments of the SMZ to minimize impacts to the SMZ and facilitate fuels and forest health treatment.

- The ability of the SMZ to act as an effective sediment filter shall be maintained by retaining all present vegetative cover within 15 feet of the channel.
- The ability of the SMZ to provide shade is maintained by the retaining submerchantable trees and shrubs to the extent possible. Submerchantable trees may be thinned to a spacing of no more than 10 feet between crowns.
- Full protection of the stream channel and banks is maintained by not allowing equipment operation within 15 feet of the stream channel. No trees shall be felled into or across the SMZ channel.
- Large woody debris and existing fallen material found within the stream channel would remain intact and in place.

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 expected to be the same under either alternative.

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.

No Action: No harvest would occur within the SMZ. Forest health would continue to decline, and blowdown or broken trees would continue to fall into the SMZ and channel.

Action Alternative: Harvest of timber within the SMZ would occur. Forest health would be expected to increase as more sound and desirable trees would be left. Existing ground cover, including shrubs and submerchantable trees, would be retained to the extent possible, and any exposed soil would be required to be immediately grass seeded. The roots of any submerchantable trees or shrubs shall remain in place and undisturbed. Overstory tree retention would follow SMZ law requirements. Trees shall be placed outside of the SMZ prior to skidding operations.

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.

No Action: The SMZ law would followed and no impacts to fish, wildlife or birds would be expected.

Action Alternative: The SMZ law would be followed for overstory tree retention, shrubs and submerchantable timber would be retained to the extent possible.

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.

No impacts to unique, endangered, fragile or limited environmental resources would be expected under either alternative.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

If the proposed action alternative is selected no impacts beyond those expected under the no action alternative would likely occur.

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.

If the proposed action alternative is selected no impacts beyond those expected under the no action alternative would likely occur.

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.

If the proposed action alternative is selected no impacts beyond those expected under the no action alternative would likely occur.

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.

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

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

None.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

None.

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 keep current jobs active for the duration of the project. If the action alternative were selected the jobs could last a couple of weeks longer.

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.

No change in local and state tax base and tax revenues would be expected under either alternative.

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

No change in government services would be expected under either alternative.

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.

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 proposed action alternative and the no action alternative would have the same impacts to access and quality of recreational and wilderness activities.

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.

The project has no direct implications for density and distribution of population and housing.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

No measurable impacts related to social structures and mores would be expected under either alternative.

23. CULTURAL UNIQUENESS AND DIVERSITY:

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

No measurable impacts related to cultural uniqueness and diversity would be expected under either alternative.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Estimate the return to the trust. 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.

N/A

EA Checklist Prepared By:	Name: Brad French	Date: December 31, 2018
	Title: Clearwater 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 the objective to allow access for fuels mitigation and forest health improvement within SMZ and the removal of submerchantable material.

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 terrestrial, avian and aquatic life and habitats; soil; vegetation; and water quality, quantity, and distribution.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS

More Detailed EA

No Further Analysis

EA Checklist Approved By:	Name: Kristen S. Baker-Dickinson	
	Title: Clearwater Unit Manager	
Signature:	<i>/s/ K. Baker-Dickinson</i>	Date: 12/31/2018

DS-97
Rev. 11/01

STATE OF MONTANA
Department of Natural Resources and Conservation
APPLICATION FOR SMZ ALTERNATIVE PRACTICE

Alternative Practice ID Number _____ Application Date: 12-12-2018
(AP-Unit-Number-Year)

Landowner: Parade Neidergs
Address: _____ Phone Number 406-544-2740
Contractor: Enhanced Forest Management
Address: 330 Joseph Drive Corvallis MT 59848 Phone Number 406-369-9966

Person Legally Responsible for Compliance With SMZ Law: Dyrk Krueger
Hazard Reduction Agreement (HRA) Number: 348-46967

Site-Specific Alternative Practice Requested: To use Feller-buncher to remove desired trees from SMZ to help meet the requirements of the NRCS grant that is partially funding this project.

Other Alternatives Considered and Justification for proposed Alternative Practice:

The purpose of this project is to promote forest health. The best quality best health trees are being left throughout the project to accomplish this. By using a feller buncher in the SMZ I feel I can remove the lesser quality (including ~~some~~ trees with insect and disease issues) trees and better protect the remaining trees from damage, as opposed to hand felling and limbing the trees but which I feel would cause more residual stand damage and potential soil disturbance.

Planned Mitigation Measures:

Enter SMZ approximately every 35 feet on a perpendicular path toward stream with the tracks of the machine coming as close as 15 feet to the O/W/M. Cut trees will be carried with feller buncher outside SMZ and placed in bunches. This will be done on frozen or dry ground.

Starting Date: 12-17-2018 Completion Date: 2-28-2019

Legal Description: _____ Section 23 Township 4N Range 10W County Powell
Lineal Extent Along Stream: 1400' total 700' each side SMZ Width: 50'

Stream Class (circle one): One Two Three
Wetlands Present X Yes No

Include a topographic map showing the logging unit boundaries, alternative practice site, streams, wetlands, and existing and/or proposed roads. Also include a plan-view map of the alternative practice site, including location and distance to stream, SMZ boundary, location of mitigation measures, and extent of activity requiring an alternative practice.

Approved alternative practices, including any additional conditions approved by DNRC, shall have the same force and authority as the standards contained in 77-6-303, MCA, and shall be enforceable by DNRC under 77-6-305, MCA, to the same extent as such standards.

cc: Applicant, Unit Office, Land Office, Service Forestry Bureau, Land Office

