CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	SML – Starin Beetle Salvage
Proposed Implementation Date:	Upon Approval
Proponent:	Sun Mountain Logging
Location:	S6 T5N R13W
County:	Deer Lodge

I. TYPE AND PURPOSE OF ACTION

Sun Mountain Logging, LLC has been hired to salvage mountain pine beetle infested and killed lodgepole pine from private land on Georgetown Lake. They would like to operate a feller-buncher inside the fifty foot Streamside Management Zone buffer to harvest beetle killed or infested lodgepole pine. Operation of a feller-buncher inside the 50 foot buffer would decrease slash generated near a cabin and provide a safer mechanism for tree removal near said cabin. For safety reasons around the cabin and near a boat dock (i.e dead trees falling), minimum retention standards would not be met.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:
Provide a brief chronology of the scoping and ongoing involvement for this project.

Sun Mountain Logging, Dennis Starin and the MT DNRC.

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

N/A

3. ALTERNATIVES CONSIDERED:

Alternative A –No Action. This alternative would not operate machinery inside the fifty foot buffer. Beetle-killed trees would be hand-felled to minimum retention standards or left standing. Hand-felling and skidding hand-felled trees have the potential to be more damaging to the residual stand and soil than the directional felling of a feller buncher. Retention trees would have the potential of falling onto the cabin and boat dock.

Alternative B – Action. This alternative would allow:
1) Feller-buncher operation inside the 50 foot SMZ buffer, but no closer than 25 feet, to the ordinary high water mark on slopes less than 15%.
2) Trees to be placed outside of the 50 foot SMZ buffer for skidding.
3) All trees other than lodgepole pine to be retained inside the 50 foot SMZ buffer.
4) Operation in a straight in and straight out manner.
5) Operations to only occur during frozen and snow covered ground conditions.

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 this area are Worock Gravelly Loam 8-15% slopes. They are described as "moderately suited" for timber harvest. Due to operating restrictions, no impacts are anticipated.

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.

No impacts to water quality are expected due to the gentle slope, mitigation measures and operating restrictions.

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.

N/A

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.

The understory vegetation is grass, the overstory is Douglas-fir, Engelmann spruce and lodgepole pine. Un-infested lodgepole pine and other species of trees will be retained and protected to the greatest extent possible. There are no anticipated impacts to vegetative communities due to operating restrictions. No unacceptable impacts are anticipated with the action alternative.

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.

The proximity of the AP site to houses, cabins, recreational sites and roads, in addition to the small size of the operating area, make it undesirable habitat for avian and terrestrial species. Aquatic habitat would be minimally impacted through the loss of some shading to the lake. Safety issues arising from dead trees in the area of recreationists warrant the removal of these trees to below minimum retention standards.
With the implementation of recommended operating procedures, no unacceptable impacts are anticipated.

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.

A query of the Montana Natural Heritage Program identifies the area as being possible habitat for gray wolf, Canada lynx, wolverine, fisher, Northern goshawk, great blue heron and Lewis's woodpecker. Due to the proximity of heavy recreational activities, cabin sites and roads, this area is not ideal habitat for these species. No sightings of any of the listed species of concern have been documented in the last ten to twenty years. None of the dated sightings occurred in the immediate area of Georgetown Lake. If a sighting of any of the listed species of concern occurs, operations would be halted until further assessment can take place. In addition, Georgetown Lake does not provide habitat for Westslope cutthroat or bull trout. With the implementation of recommended operating procedures, no unacceptable impacts are anticipated.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:
Identify and determine effects to historical, archaeological or paleontological resources.

None were identified.

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.

The aesthetics will be affected to the landowner and recreationists. The removal of beetle killed lodgepole pine would look unsightly in the short term, but would encourage regeneration. This regeneration would eventually soften and replace aesthetic quality damaged by mountain pine beetle infestation. In addition, the harvest will improve safety by removing the beetle killed trees.

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.

N/A

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.

N/A

IV. IMPACTS ON THE HUMAN POPULATION

- *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.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

The removal of beetle killed trees would improve safety to those that use the area for recreation. It would also reduce liability concerns for the landowner.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

N/A

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.

N/A

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.

N/A

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

N/A

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.

N/A

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 would impede recreational opportunities for the amount of time it takes to harvest the trees. After that period (~one day) the recreational potential would be the returned to normal.

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.

N/A

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

N/A

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

N/A

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:** Sean Steinebach	**Date:** 3/31/10
	Title: Service Forester	

V. FINDING

25. ALTERNATIVE SELECTED:

Alternative B – Action Alternative

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

No unacceptable impacts are anticipated

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

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

EA Checklist Approved By:	**Name: /S/ Fred Staedler** **Title: Anaconda Unit Manager**
Signature:	**Date**: 3/31/10

April 1, 2010

Ref: Starin Timber Salvage SMZ AP

Dear Mr. Anderson

This letter is in reference to a request made by Rex Anderson of Sun Mountain Logging to the Department of Natural Resource and Conservation for an Alternative Practice. This AP is located in Sections 6, T5N, R13W. After review of the Checklist Environmental Assessment prepared for this request, the Alternative Practice to allow operation of a feller-buncher inside a fifty foot Streamside Management Zone buffer and remove all lodgepole pine has been approved. Approval is subject to the following conditions:

1) Only the feller-buncher will enter the 50 foot buffer and will be done in a straight-in and straight-out manner.
2) Feller-buncher will operate no closer than 25 feet to the ordinary high water mark and only on slopes less than 15%.
3) Trees will be placed outside of 50 foot buffer for skidding.
4) All trees other than lodgepole pine will be retained inside the Streamside Management Zone.
5) Disturbed areas inside the SMZ will be grass seeded.
6) Operations will only occur during frozen and snow covered ground conditions.

Approved Alternative Practices, including any additional conditions required by DNRC, shall have the same force and authority as the standards contained in77-5-303, MCA, and shall be enforceable by DNRC under 77-5-305, MCA, to the same extent as such standards.

It is your responsibility to ensure that your operators understand that an Alternative Practice has been issued for their operations in this area, and that these conditions must be fully met to achieve compliance with the SMZ Law.

This approval is contingent upon your execution and return of the attached statement to the DNRC Anaconda Unit Office.

Thank you for your cooperation in this matter. Please call me if you have any questions.

Sincerely,

Sean Steinebach
Service Forester

cc: HRA file, Landowner, Applicant,
Unit Office, Land Office,
Service Forestry Bureau

April 1, 2010

ALTERNATIVE PRACTICE RESPONSIBILTY AFFIDAVIT

Sun Mountain Lumber – Starin Alternative Practice

In consideration of DNRC's approval of the alternative practice(s) in Section 6, T5N, R13W, I hereby certify that I, or by written contract the legal entity I represent, am responsible for the compliance with the Montana Streamside Management Zone Law. I understand that failure to implement any of the mitigation measures required by the DNRC will be considered a violation of the SMZ Law (77-5-301 et. Seq.), and may result in penalties assessed against me or the legal entity I represent.

_____

Signature of Responsible Party **Date**

Sun Mountain Lumber/ Starin Alternative Practice

0 95 190 380 570 760
Feet

Forestland Planting and Harvesting

This table can help forestland owners or managers plan the use of soils for wood crops. Interpretive ratings are given for the soils according to the limitations that affect planting and harvesting on forestland. The ratings are both verbal and numerical.

Rating class terms indicate the degree to which the soils are suited to a specified aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet.

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

Reference:
United States Department of Agriculture, Natural Resources Conservation Service, National forestry manual.

Report—Forestland Planting and Harvesting

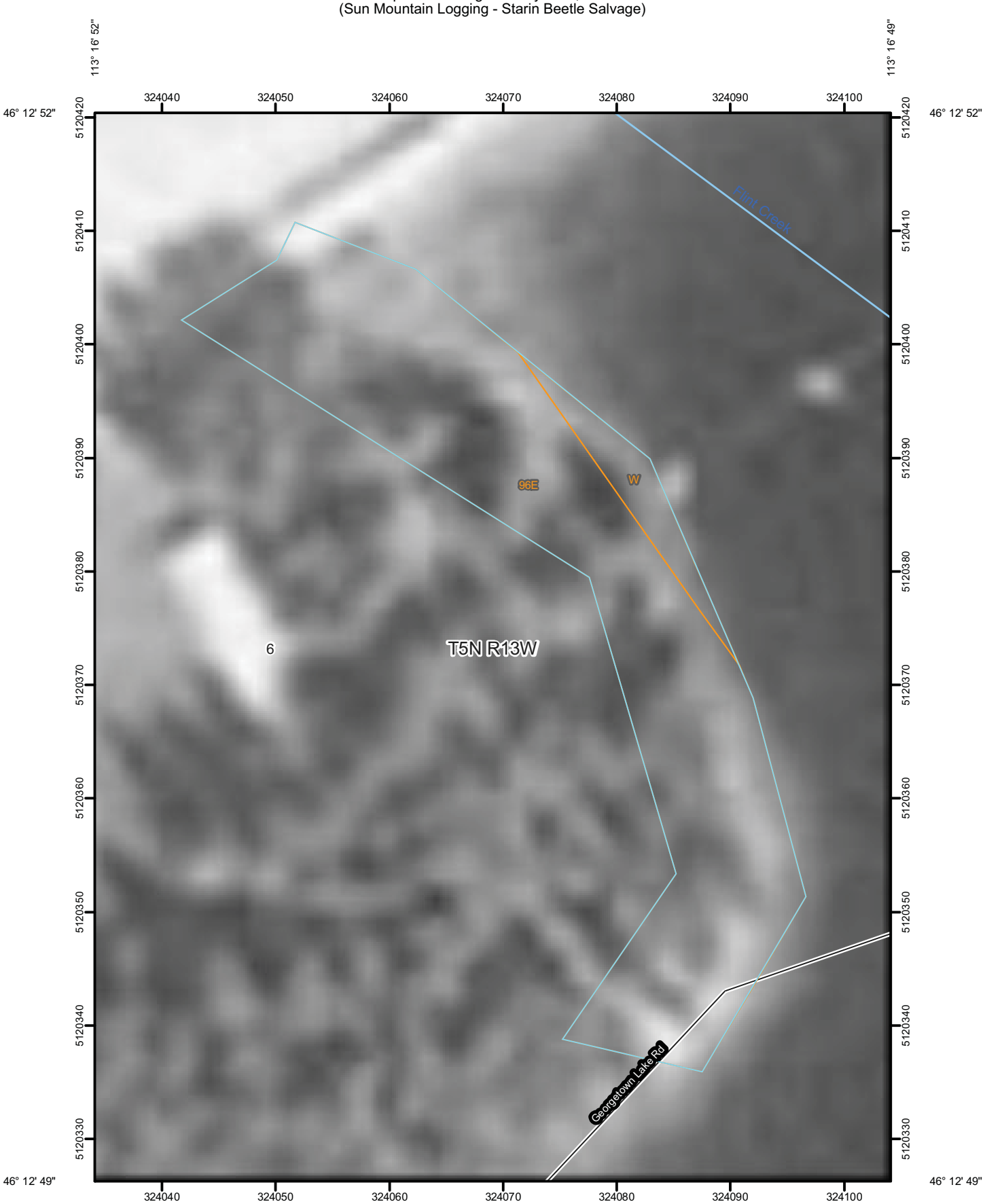
[Onsite investigation may be needed to validate the interpretations in this table and to confirm the identity of the soil on a given site. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. The table shows only the top five limitations for any given soil. The soil may have additional limitations]

Forestland Planting and Harvesting– Deer Lodge County Area, Montana							
Map symbol and soil name	Pct. of map unit	Suitability for hand planting		Suitability for mechanical planting		Suitability for use of harvesting equipment	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
96E—Worock gravelly loam, 15 to 35 percent slopes							
Worock	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
W—Water							
Water	100	Not rated		Not rated		Not rated	

Data Source Information

Soil Survey Area: Deer Lodge County Area, Montana
Survey Area Data: Version 10, Feb 1, 2010

Soil Map—Deer Lodge County Area, Montana
(Sun Mountain Logging - Starin Beetle Salvage)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Units

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Gully

Short Steep Slope

Other

Political Features

Cities

PLSS Township and Range

PLSS Section

Water Features

Oceans

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

MAP INFORMATION

Map Scale: 1:449 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:24,000.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 12N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Deer Lodge County Area, Montana
Survey Area Data: Version 10, Feb 1, 2010

Date(s) aerial images were photographed: 8/1/1995

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Deer Lodge County Area, Montana (MT616)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
96E	Worock gravelly loam, 15 to 35 percent slopes	0.2	93.6%
W	Water	0.0	6.4%
Totals for Area of Interest		**0.3**	**100.0%**