Environmental Assessment Checklist

Project Name: Castle Rock Salvage
Proposed Implementation Date: March, 2016
Proponent: Eastern Land Office, Montana DNRC
County: Powder River

Type and Purpose of Action

Description of Proposed Action:

The Eastern Land Office of the Montana Department of Natural Resources and Conservation (DNRC) is proposing the Castle Rock Salvage Timber Sale. The project is located 3 miles northwest of Stacy, Mt. (refer to Attachments vicinity map A-**1** and project map A-**2**) and includes the following sections:

Beneficiary	Legal Description	Total Acres	Treated Acres
Common Schools	**S16 T1SR47E**	**640**	**330**
Public Buildings			
MSU 2nd Grant			
MSU Morrill			
Eastern College-MSU/Western College-U of M			
Montana Tech			
University of Montana			
School for the Deaf and Blind			
Pine Hills School			
Veterans Home			
Public Land Trust			
Acquired Land			

Objectives of the project include:

- Generate revenue for the Common School Trust while promoting appropriate cover types.
- Salvage ponderosa pine trees killed from fires in 2012.

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	# Acres
Clearcut	
Seed Tree	
Shelterwood	

Action	Quantity
Selection	
Commercial Thinning	
Salvage	330
Total Treatment Acres	
Proposed Forest Improvement Treatment	# Acres
Pre-commercial Thinning	
Planting	
Proposed Road Activities	# Miles
New permanent road construction	
New temporary road construction	1-2
Road maintenance	2-3
Road reconstruction	
Road abandoned	
Road reclaimed	
Other Activities	

Duration of Activities:	1 year or less
Implementation Period:	March 2016-March 2017

The lands involved in this proposed project are held in trust by the State of Montana. (Enabling Act of February 22, 1889; 1972 Montana Constitution, Article X, Section 11). The Board of Land Commissioners and the DNRC are required by law to administer these trust lands to produce the largest measure of reasonable and legitimate return over the long run for the beneficiary institutions (Section 77-1-202, MCA).

The DNRC would manage lands involved in this project in accordance with:

- The State Forest Land Management Plan (DNRC 1996),
- Administrative Rules for Forest Management (ARM 36.11.401 through 471),
- All other applicable state and federal laws.

Project Development

SCOPING:

- DATE:
  - Started 1/22/2016 Ended 2/20/2016
- PUBLIC SCOPED:
  - The scoping notice was posted on the DNRC Website: http://dnrc.mt.gov/PublicInterest/Notices/Default.asp
  - Adjacent landowners, statewide scoping list, Powder River Examiner, Miles City Star, posted on DNRC website)
- AGENCIES SCOPED:

    - FWP, CSKT, Blackfeet tribe, Northern Cheyenne Tribe, Chippewa Cree Tribe, Fort Peck Assiniboine and Sioux Tribes, Crow Tribe, Fort Belknap Assiniboine and Gros Ventre Tribe, Montana School Boards Association, Montana Wood Products Association
- COMMENTS RECEIVED:
    - How many: 0
    - Concerns: 0
    - Results (how were concerns addressed): There were no comments received.

DNRC specialists were consulted, including: Patrick Rennie, Jeff Schmalenberg

Internal and external issues and concerns were incorporated into project planning and design and will be implemented in associated contracts.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED: *(Conservation Easements, Army Corps of Engineers, road use permits, etc.)*

- **Montana Department of Environmental Quality (DEQ)-** DNRC is classified as a major open burner by DEQ and is issued a permit from DEQ to conduct burning activities on state lands managed by DNRC. As a major open-burning permit holder, DNRC agrees to comply with the limitations and conditions of the permit.

- **Montana/Idaho Airshed Group-** DNRC is a member of the Montana/Idaho Airshed Group which was formed to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction (Montana/Idaho Airshed Group 2006). The Group determines the delineation of airsheds and impact zones throughout Idaho and Montana. Airsheds describe those geographical areas that have similar atmospheric conditions, while impact zones describe any area in Montana or Idaho that the Group deems smoke sensitive and/or having an existing air quality problem (Montana/Idaho Airshed Group 2006). As a member of the Airshed Group, DNRC agrees to burn only on days approved for good smoke dispersion as determined by the Smoke Management Unit.

ALTERNATIVES CONSIDERED:

No-Action Alternative: Current land use activities of grazing would continue without change. Increased fire hazard may occur as dead ponderosa pine fall becoming 1,000 hour fuels.

Action Alternative: This alternative would continue the current land use of grazing and would also incorporate a salvage harvest of 6,000-7,000 tons of ponderosa pine from approximately 300-400 acres (Attachment A). The salvage harvest would be an individual tree selection attempting to reduce fuel levels. The salvage would reduce the current and future fuel load on this site. The remaining stand would consist of live green trees that were not burned and or damaged in the fire. Live green trees when available, exhibiting good form, crown, and vigor will be retained. The salvage activity may require the construction of approximately 1-2 miles of temporary spur roads and the use of approximately 2-3 miles of existing road on both state and

private land as designated haul routes. All temporary spur roads would be closed and reclaimed upon completion of the sale.

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:

Vegetation Existing Conditions: The project area consists of mixed grass and a large amount of fire killed Ponderosa Pine. Ponderosa Pine generally occurs along the upland areas and in the swale and draw features associated with the uplands. The long-term plan for this stand is to decrease fuel levels, and to leave what live well formed trees are available.

Vegetation	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Noxious Weeds	**X**				**X**				**X**				**n/a**	
Rare Plants	**X**				**X**				**X**				**n/a**	
Vegetative community	**X**				**X**				**X**				**n/a**	
Old Growth	**X**				**X**				**X**				**n/a**	
Action														
Noxious Weeds	**X**				**X**					**X**			**Y**	**1**
Rare Plants	**X**				**X**				**X**				**n/a**	
Vegetative community		**X**				**X**				**X**			**Y**	**1**
Old Growth	**x**				**X**				**X**				**n/a**	

Comments: 1.The lessee actively manages weeds on both the deeded neighboring land and this lease. None were observed on this lease.

Vegetation Mitigations: To prevent introduction of new weeds, off-road equipment would be cleaned and inspected prior to entry into salvage areas.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions: Geology of the area is Fort Union Formation, siltstones, sandstones, clay shale and scoria (porcellinite) which are exposed on ridges. Soils on forest sites are shallow to moderate deep sandy to clayey in texture with moderate to high erosion risk. Soils disturbance would occur on new temporary roads and to a lesser extent in the skid trail locations.

Soil Disturbance and Productivity	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Physical Disturbance (Compaction and Displacement)	**X**				**X**				**X**				**n/a**	
Erosion	**X**				**X**				**X**				**n/a**	
Nutrient Cycling	**X**				**X**				**X**				**n/a**	
Slope Stability	**X**				**X**				**X**				**n/a**	
Soil Productivity	**X**				**X**				**X**				**n/a**	
Action														
Physical Disturbance (Compaction and Displacement)		**X**				**X**				**X**			**Y**	**1**
Erosion	**X**				**X**				**X**				**n/a**	
Nutrient Cycling		**X**				**X**					**X**		**Y**	**1**
Slope Stability	**X**				**X**				**X**				**n/a**	
Soil Productivity		**X**				**X**					**X**		**Y**	**1**

Comments: 1.Exposing the bare mineral soil to the live green trees will increase regeneration.

Soil Mitigations: Impacts from skidding activities would be mitigated mostly by the scattered nature of the timber, dispersing the skidding activity over a large area. Planned ground skidding operations should have to low risk of direct, in-direct and cumulative impacts based on the implementing BMP's and mitigation measures. Mitigations include temporary use roads, season of use restrictions, general skid trail planning for selected draw crossing and avoiding steep slopes, protecting isolated wetlands and prompt re-vegetation of roads and landings to protect soil resources.

WATER QUALITY AND QUANTITY:

No perennial, Class I stream are present within any of the watersheds analysis areas. Class III stream segments are present along the entire reach of all tributary drainages but are discontinuous in nature.

Water Quality and Quantity Existing Conditions: The area is characterized by low precipitation and tributary streams that flow in spring, but are dry most of the year. All class III stream segments located within harvest unit boundaries would be marked as exclusion or restriction zones on the ground where needed.

Water Quality &	Impact	Can	Comment

Quantity	Direct				Secondary				Cumulative				Impact Be Mitigated?	Number
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Water Quality	**X**				**X**				**X**				**n/a**	
Water Quantity	**X**				**X**				**X**				**n/a**	
Action														
Water Quality	**X**				**X**				**X**				**n/a**	
Water Quantity	**X**				**X**				**X**				**n/a**	

Comments: Due to the low precipitation, the lack of perennial streams, temporary road construction and closure of the temporary roads will take place after use, and the scattered nature of the salvage, there would be a low risk of direct or indirect impacts to water quality, and cumulative impacts are not likely.

Water Quality & Quantity Mitigations: BMPs and site specific mitigations, to control erosion and protect water quality would be implemented. Planned salvage operations and temporary roads present low risk of direct, in-direct and cumulative impacts based on the implementing BMP's and mitigation measures. Mitigations include temporary use roads, season of use restrictions, protecting isolated wetlands and prompt re-vegetation of roads and landings to protect soil resources.

WILDLIFE:

No-Action: No changes in habitat attributes for any wildlife species would be affected under this alternative.

Action Alternative: Under the action alternative, snags and coarse woody debris would be reduced on 330 acres, which would reduce the presence of important cavity nesting habitat for some species. At least one large snag >21 inches dbh and one recruitment tree >21 inches dbh would be retained following salvage activities. Approximately 5 tons of coarse woody debris per acre would be retained post-harvest. If >21 inch snags and snag recruitment trees are not available, the largest sizes available would be retained in their place.

Action Alternative Sensitive Species (see Wildlife table below):

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Sensitive Species														
Bald eagle *(Haliaeetus leucocephalus)* Habitat: Late-successional forest within 1 mile of open water	**X**				**X**				**X**					
Black-tailed prairie dog (*Cynomys*	**X**				**X**				**X**					

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
ludoviscianus) Habitat: grasslands, short-grass prairie, sagebrush semi-desert														
Mountain plover (*Charadrius montanus*) Habitat: short-grass prairie & prairie dog towns	**X**				**X**				**X**					
Peregrine falcon *(Falco peregrinus)* Habitat: Cliff features near open foraging areas and/or wetlands	**x**				**X**				**x**					
Greater Sage grouse (*Centrocercus urophasianus*) Habitat: sagebrush semi-desert	**X**				**X**				**X**					**1.**
Townsend's big-eared bat *(Plecotus townsendii)* Habitat: Caves, caverns, old mines	**X**				**X**				**X**					
Spotted Bat (*Euderma maculatum*) Habitat: rock outcrops, cliffs, caves, old mines	**X**				**X**				**X**					
Big Game Species														
Elk		**X**			**X**				**X**					**2.**
Whitetail		**X**			**X**				**X**					**2.**
Mule Deer		**X**			**X**				**X**					**2.**
Other														

Comments:
1. A portion of the haul route would intersect with "general habitat" for sage grouse as defined by the Montana Sage Grouse Habitat Conservation Program. The road use activity associated with log hauling would occur across an existing road through neighboring private land, thus no additional mitigations were required. Minimal impacts to sage grouse would be anticipated by the proposed activities.

2. Elk or deer could be present in the project area. Motorized disturbance associated with the proposed activities could displace big game species, resulting in minor negative effects.

AIR QUALITY:

Air Quality	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Smoke	**X**				**X**				**X**					
Dust	**X**				**X**				**X**					
Action														
Smoke		**X**				**X**				**X**			**Y**	**1**
Dust		**X**				**X**				**X**			**Y**	**1**

Comments: 1.Particulate would be released into the atmosphere when the Slash piles are burned. Dust would be kicked up in dry conditions.

Air Quality Mitigations: Slash would only be ignited when ambient air conditions are suitable and air dispersal flows are adequate to lift the smoke into the winds aloft for rapid and thorough dispersal. Environmental conditions required prior to ignition must include adequate snow cover on the ground surface with a long-term forecast of continued low temperatures during the daylight hours. Due the lack of dwellings any dust that would be kicked up would not interfere with anyone's day to day actions. There would likely be no cumulative impacts on air quality as a result of the proposed action.

ARCHAEOLOGICAL SITES / AESTHETICS / DEMANDS ON ENVIRONMENTAL RESOURCES:

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														
Historical or Archaeological Sites	**X**				**X**				**X**				**n/a**	
Aesthetics	**X**				**X**				**X**				**n/a**	
Demands on Environmental Resources of Land, Water, or Energy	**X**				**X**				**X**				**n/a**	
Action														
Historical or Archaeological Sites	**X**				**X**				**X**				**n/a**	**1**
Aesthetics			**X**				**X**				**X**		**Y**	**2**
Demands on Environmental	**X**				**X**				**X**				**n/a**	

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		
Resources of Land, Water, or Energy														

Comments
1. The tribes were scoped but none identified a specific cultural resource concern. A Class III intensity level cultural and paleontological resources inventory was conducted of the area of potential effect on state land. Despite a detailed examination, no cultural or fossil resources were identified and no additional archaeological or paleontological investigative work is recommended. The proposed project will have No Effect to Antiquities as defined under the Montana State Antiquities Act. A formal report of findings has been prepared and is on file with the DNRC and the Montana State Historic Preservation Officer.

However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

2. The proposed salvage would produce temporary visual impacts.

Mitigations: Over time as the disturbed sites recover and the Slash piles are burned. The surrounding region is lightly populated which would result in the temporary visual impact distributed over a limited population size. For these reasons, along with the scattered nature of the timber and grasslands no cumulative impacts are anticipated as a result of the proposed activity.

OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

- This section is leased for livestock grazing and is classified as a grazing tract. The lessee was contacted requesting comments and concerns. No concerns were received from the lessee. Surrounding deeded land is being salvaged as well, but with the large areas of un-harvested timber no cumulative impacts are likely. No other state actions are under MEPA scoping that pertain to this analysis area.

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														

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		
Health and Human Safety	X				X				X				n/a	
Industrial, Commercial and Agricultural Activities and Production	X				X				X				n/a	
Quantity and Distribution of Employment	X				X				X				n/a	
Local Tax Base and Tax Revenues	X				X				X				n/a	
Demand for Government Services	X				X				X				n/a	
Access To and Quality of Recreational and Wilderness Activities	X				X				X				n/a	
Density and Distribution of population and housing	X				X				X				n/a	
Social Structures and Mores	X				X				X				n/a	
Cultural Uniqueness and Diversity	X				X				X				n/a	
Action														
Health and Human Safety		X				X				X			1	
Industrial, Commercial and Agricultural Activities and Production		X				X				X			2	
Quantity and Distribution of Employment	X				X				X					
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					

Comments:
1. Safety considerations and temporary risks would increase for the professional contractors working within the sale area, and possibly for public vehicle traffic on the highway and the county road while log trucks are hauling
2. People are currently employed in the wood products industry in the region.

Mitigations: There are no unusual safety considerations associated with the salvage sale. The general public or local residents should not face increased health or long term safety hazards because of the sale. Timber sale and log truck entering signs will be placed at appropriate locations.

Locally Adopted Environmental Plans and Goals:

- On June 17, 1996, the Land Board approved the State Forest Land Management Plan (SFLMP). The SFLMP provides the philosophy adopted by DNRC through programmatic review (DNRC, 1996). The DNRC will manage the lands in this project according to this philosophy, which states:

Our premise is that the best way to produce long-term income for the trust is to manage intensively for healthy and biological diverse forests. Our understanding is that a diverse forest is a stable forest that will produce the most reliable and highest long-term revenue stream… In the foreseeable future, timber management will continue to be our primary source of revenue and our primary tool for achieving biodiversity objectives.

On March 13, 2003, the DNRC adopted Administrative Rules for Forest Management (Rules) (Administrative Rules of Montana [ARM] 36.11.401 through 450). The Rules provide DNRC personnel with consistent policy, direction, and guidance for the management of forested trust lands. Together, the SFLMP and Rules define the programmatic framework for this project.

Other Appropriate Social and Economic Circumstances:

Costs, revenues and estimates of return are estimates intended for relative comparison of alternatives. They are not intended to be used as absolute estimates of return. The estimated stumpage is based on comparable sales analysis. This method compares recent sales to find a market value for stumpage. These sales have similar species, quality, average diameter, product mix, terrain, date of sale, distance from mills, road building and logging systems, terms of sale, or anything that could affect a buyer's willingness to pay.

No Action: The No Action alternative would not generate any return to the trust at this time.

Action: The timber harvest would generate additional revenue for the Common School Trust. The estimated return to the trust for the proposed harvest is $12,000 based on an estimated harvest of 1MMBF (6,000 tons) and an overall stumpage value of $2.00 per ton. Costs, revenues, and estimates of return are estimates intended for relative comparison of alternatives, they are not intended to be used as absolute estimates of return.

References

DNRC 1996. State forest land management plan: final environmental impact statement (and appendixes). Montana Department of Natural Resources and Conservation, Forest Management Bureau, Missoula, Montana.

Does the proposed action involve potential risks or adverse effects that are uncertain but extremely harmful if they were to occur?
No impacts would be expected with either alternative.

Does the proposed action have impacts that are individually minor, but cumulatively significant or potentially significant?
No impacts would be expected with either alternative.

Environmental Assessment Checklist Prepared By:

Name: Andy Miller
Title: Forester
Date: January 22, 2016

Finding

Alternative Selected

The salvage alternative is the selected Alternative.

Significance of Potential Impacts

Low

Need for Further Environmental Analysis

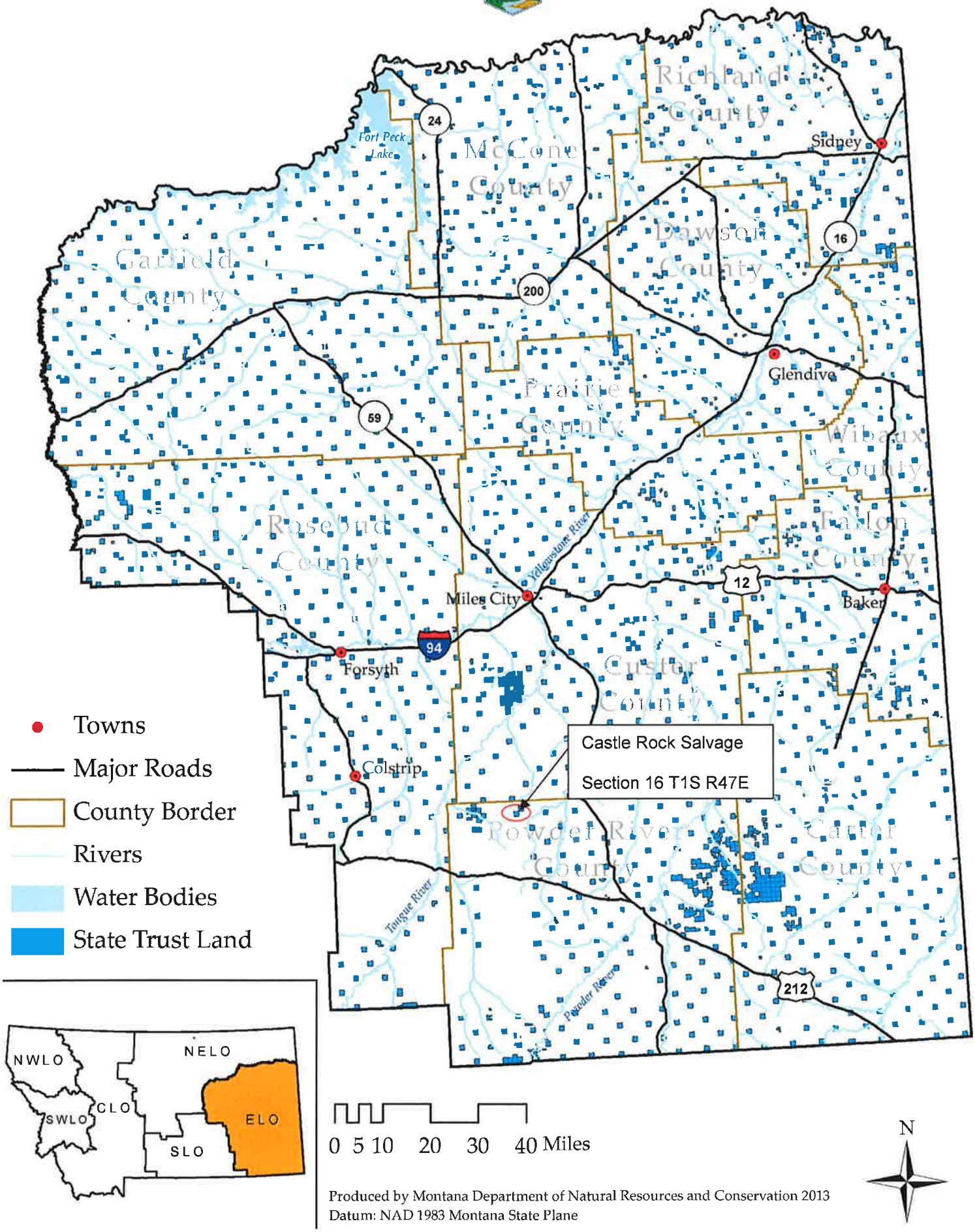
	EIS		More Detailed EA	X	No Further Analysis

Environmental Assessment Checklist Approved By:

Name: Chris Pileski
Title: Area Manager
Date: 2/17/2016
Signature: Chris Pileski

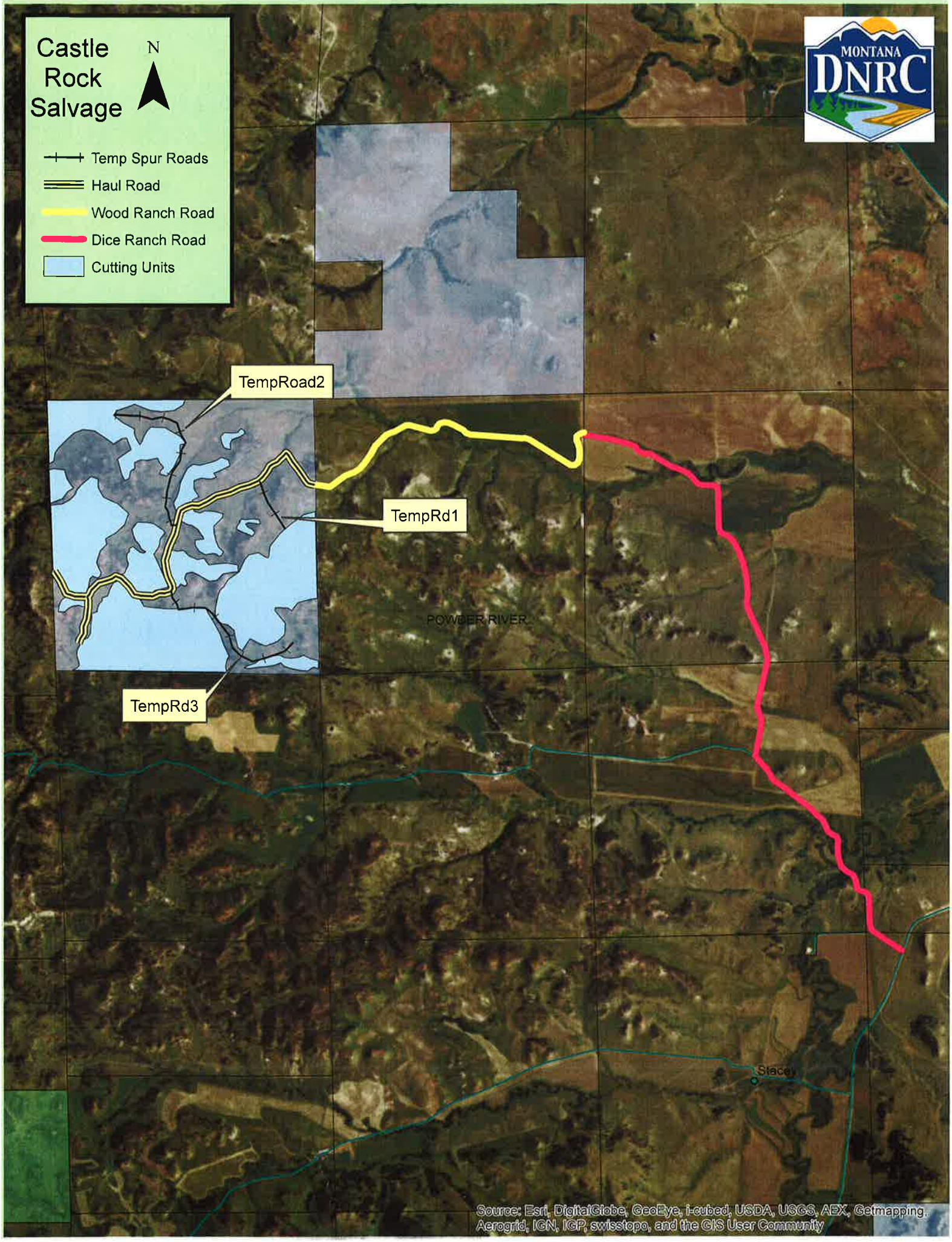
Attachment A- Maps

Castle Rock Salvage VICINITY MAP
EASTERN LAND OFFICE



Produced by Montana Department of Natural Resources and Conservation 2013
Datum: NAD 1983 Montana State Plane

A-2: Timber Sale Harvest Units


Castle Rock Salvage
N
Temp Spur Roads
Haul Road
Wood Ranch Road
Dice Ranch Road
Cutting Units
MONTANA DNRC
TempRoad2
TempRd1
TempRd3
POWDER RIVER
Stacey
Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community