

CHECKLIST ENVIRONMENTAL ASSESSMENT

FOR THE

DUTCH GULCH TIMBER SALE

Prepared by Andy Miller
Eastern Land Office-DNRC
March, 2011

**Dutch Gulch Timber Sale
Formal Public Review Distribution List**

None

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CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Dutch Gulch Timber Sale
Proposed Implementation:	July 2011 – April 2014
Proponent:	Eastern Land Office of the Department of Natural Resources and Conservation
Location:	All or parts of sections 5,8,16 Township 8S Range 48E, Section 16 Township 6S Range 49E, in the Powder River drainage in Southeastern Montana.
County:	Powder River

I. TYPE AND PURPOSE OF ACTION

The Eastern Land Office (ELO) of the Montana Department of Natural Resources and Conservation (DNRC) is proposing a commercial timber harvest of ponderosa pine from a harvest area which includes approximately (500-600) acres of timber land with approximately 6,500-11,250 tons being considered for harvest. The purpose of the action is to reduce stocking levels, to reduce the risks of wild fire, and to generate revenue for the school trust while promoting appropriate cover types in the area. The proposed harvest area is located within all or parts of Sections 5,8, and 16 Township 8S Range 48E and Section 16 Township 6S Range 49E in the Powder River drainage in Southeastern Montana. (Attachment 2, Vicinity Map). DNRC proposes to remove trees from a range of size classes, while maintaining a healthy stand of ponderosa pine. Approximately 4-8 miles of existing road on both state and private land would be used as designated haul routes. Approximately 4-6 miles of temporary spur roads would be constructed to further accommodate log hauling. Temporary spur roads would be reclaimed through moving the berm back onto the road surface, mechanical surface scarification and surface broadcast seeding of native grass species. The silvicultural prescription is predicted to result in a healthy stand of ponderosa pine that could support periodic re-entry. An estimated \$6,500-\$11,250 in revenue to the school trust fund would be generated through the implementation of the Action Alternative.

The lands involved in this proposed project are held in trust by the State of Montana for the **[Common Schools and State Normal Schools]**. (*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 (*MCA 77-1-202*). The DNRC would manage lands involved in this project in accordance with the State Forest Land Management Plan (DNRC 1996) and the Administrative Rules for Forest Management (*ARM 36.11.401 through 456*) as well as other applicable state and federal laws.

II. PROJECT DEVELOPMENT

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

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

Letters were sent in March of 2010 to resource professionals and other interested parties in order to solicit comment on the proposed action. A public notice was placed in the Powder River Examiner and the Billings Gazette for two consecutive weeks. Comments were received from: Patrick Rennie, DNRC Archaeologist; Ag and Grazing Management Bureau, The Montana Natural Heritage Program; Francis Auld Confederated Salish and Kootenai Tribes of the Flathead Nation; and Jeff Schmalenberg, Soil Scientist DNRC.

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

Montana Department of Environmental Quality (DEQ)

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

Montana/Idaho Airshed Group

DNRC is a member of the Montana/Idaho Airshed Group, which regulates prescribed burning, including both slash and broadcast burning, related to forest management activities done by DNRC. 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 in Missoula, MT.

3. ALTERNATIVES CONSIDERED:

NO ACTION: Current grazing licenses and leases would continue without change. Increased fire hazard may occur as more ponderosa pine encroachment invades grassland areas and as stands become more heavily stocked and decadent.

TIMBER HARVEST ALTERNATIVE: This alternative would continue the current land use of grazing and would also incorporate a selective timber harvest of 6,500-11,250 tons of ponderosa pine from approximately 500-600 acres (Attachment 2, vicinity and project maps). The timber harvest would be an individual tree selection harvest attempting to reduce stocking levels to a more historic, pre-fire suppression stand density, while maintaining the stand size and age class structure. The harvest would attempt to emulate a low intensity high frequency or Non Lethal fire regime that would historically have been expected on this site. A target Basal Area per acre for these stands would range from 20-40sqft depending on existing stocking levels and stand structure. Stand retention would consist of trees of all size classes favoring trees with good form, crown, and vigor. The harvest activity would require the construction of approximately 4-6 miles of temporary spur roads and the use of approximately 4-8 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.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT
<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>

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.

Geology of the area is Fort Union Formation, siltstones, sandstones, clay shale and scoria (porcellinite) which are exposed on ridges. There are several badland bluffs in the area that have natural high rates of erosion, but no unusual geologic features occur on the state tracts and slope stability is not expected to be affected by this project. 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. 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. Please refer to Attachment 1, Soils, Hydrology, and Fisheries Report for additional detail.

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.

The project area encompasses 5 tributary drainages to the Powder River. No perennial, Class I streams 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. 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. Due to the low precipitation, the lack of perennial streams, temporary road construction, closure and seeding of the temporary roads after use, and the selective nature of the harvest, there would be a low risk of direct or

indirect impacts to water quality, and cumulative impacts are not likely. BMPs and site specific mitigations, to control erosion and protect water quality would be implemented. Planned harvest 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. Please refer to Attachment 1, Soils, Hydrology, and Fisheries Report for additional detail.

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.

The project is located in Montana Airshed 10 which encompasses all of 14 counties in southeastern Montana including Powder River County. Under the action alternative, particulate would be released into the atmosphere when the Slash piles are burned. DNRC would make all attempts to utilize logging slash to minimize the amount of burning needed. 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 daylight hours. Burning within the project area would be short in duration and would be conducted when conditions favored good to excellent ventilation and smoke dispersion as determined by the Montana Department of Environmental Quality and the Montana/Idaho Airshed Group. DNRC would burn only on approved days. Direct, indirect, and cumulative effects to air quality are expected to be minimal

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 project area Sections 5,8,16 Twn 8 S Rng 48 E, and Section 16 Twn 6 S Rng 49E consists of mixed grass and Ponderosa Pine types with smaller amounts of Rocky Mountain Juniper interspersed throughout. The Ponderosa Pine generally occurs along the upland areas and in the swale and draw features associated with the uplands. A forest inventory conducted in the proposed harvest area indicates it consists of mostly multi-aged stands of Ponderosa Pine with an average stocking level of 172 TPA, 5 inches DBH and greater with approximately 114 sqft of basal area per acre. In the pre-harvest inventory work, tree ages were sampled by boring trees of all size classes. Tree ages ranged from very young trees of 25-30 years to trees that were 200 years old. Old trees are generally scattered throughout, typically being found in stringers along draws and in small clumps on ridges and hillsides. There are no stands within the project area that meet DNRC's adopted old growth definitions from Green et al. (1992)(ARM 36.11.403). A representation of old age trees would be retained in all harvest units where they occur. The silvicultural prescription calls for Individual Tree Selection harvest of trees from all size classes in an attempt to emulate a low intensity high frequency or Non-Lethal fire regime that would have historically occurred on this site prior to intensive fire suppression efforts that the stand has evolved in. The prescription calls for lowering stocking levels to 20-40 square feet of basal area per acre, removing approximately 65-70% of the basal area, depending on current stocking levels while maintaining the stands size and age structure by leaving trees from all size and age classes. The long-term plan for this stand is to maintain the multi-aged structure while maintaining the decreased stocking levels through periodic re-entry. Noxious weeds were limited to spot infestations of Canada thistle and leafy spurge. To prevent introduction of new weeds, off-road equipment would be cleaned and inspected prior to entry into harvest areas. Please refer to Attachment 1, Soils, Hydrology, and Fisheries Report for additional detail about weed management. Due to the selective nature of the proposed harvest and contract mitigation measures, implementation of the action alternative would not change forest cover types and age classes, or their distribution in the project area; however, stocking levels would be reduced in harvested stands in accordance with project objectives. Because of this, the action alternative is not expected to result in appreciable direct, indirect, or cumulative effects on vegetation communities in the project area or landscape.

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.

These sections contain potential habitat for a wide variety of wildlife species. The primary species that inhabit the area are mule deer, whitetail deer, elk, Merriams turkey, toads, cottontail rabbits, raptors, migratory prairie birds and others. The timber harvest operations should produce only minor environmental impacts to wildlife species because of the operational season of use and the layout/location of the harvest units. The operating season (June 15 – April 1) should not interfere with fawning, or nesting activities. The harvest plans call for selective harvest of commercial size ponderosa pine. This should result in a very healthy remaining stand of ponderosa pine. Consequently, reduction of canopy cover would not be extensive in any one locale. All existing snags that do not pose a safety risk would be left in place as potential nesting and rest sites. Edge effect within the proposed timber sale should be increased due to the irregular harvest unit boundary layout. Elk, Mule deer and to a lesser extent, whitetail deer may be temporarily displaced during harvest activities but their inherent mobility coupled with surrounding un-harvested areas should provide adequate security and biological needs during the displacement period. No harvest activities are proposed adjacent to any known fish-bearing streams (Attachment 1, Soils, Hydrology, and Fisheries Report). The Montana Natural Heritage Program was contacted. Due to the selective nature of this harvest, the selective nature of harvest on surrounding ownership, and the surrounding large un-harvested areas, direct, indirect, and cumulative impacts on terrestrial, avian, and aquatic habitats as a result of the proposed action are expected to be minimal.

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.

There are no known threatened and endangered species in this general area. There are no documented studies suggesting the existence of T&E species in this area. There are no limited environmental resources within this area. The Natural Heritage Program was also contacted and their search found several occurrences of sensitive animal species within their analysis area but no occurrence within the project boundary they have no records of any T&E species. The small size and selective nature of the sale and the existing surrounding habitat would create no cumulative impacts as a result of the proposed activity.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

The DNRC archaeologist conducted a Class III intensity level cultural and paleontological resources inventory of the state parcels involved in the proposed Dutch Gulch Timber Sale. Despite a detailed examination of these parcels of land, no cultural or fossil resources were identified and no additional archaeological or paleontological investigative work is recommended. The proposed timber sale will have *No Effect* to *Antiquities* as defined under the Montana State Antiquities Act. A formal report of findings will be prepared and submitted to the Montana State Historic Preservation Officer by July of 2010.

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 proposed harvest would produce temporary visual impacts. This effect would be mitigated 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, direct, indirect, and cumulative impacts are anticipated to be minimal as a result of the proposed activity.

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.

The project would not use resources that are limited in the area. The selective harvest on adjacent ownership and vast un-harvested areas would have no direct, indirect, or cumulative effects on limited resources.

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.

These sections are leased for livestock grazing and are classified grazing tracts. The lessee were contacted by letter requesting comments and concerns. All lessee comments and concerns have been documented and have been incorporated in the project design. No direct, indirect, or cumulative impacts are likely to occur as there are no other current private, state or federal actions occurring. No other state actions are under MEPA scoping that pertain to this analysis area.

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.

Human health would not be impacted by the proposed timber sale or associated activity. 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. There are no unusual safety considerations associated with the proposed timber sale. The general public or local residents should not face increased health or long term safety hazards because of the proposed timber sale.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

The sections involved with the proposed timber sale are classified grazing land. The primary grazing period or season of use is late May through late summer. The current amount of available livestock forage would temporarily be reduced. Over a short period of time the disturbed and re-seeded sites would recover and forage levels should return to their present levels or beyond.

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.

People are currently employed in the wood products industry in the region. Due to the relatively small size of the timber sale program, there would be no measurable direct, indirect, or cumulative impact from this proposed action on employment.

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.

People are currently paying taxes from the wood products industry in the region. Due to the relatively small size of the timber sale program, there would be no measurable direct, indirect, or cumulative impact from this proposed action on tax revenues.

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

There would be no measurable cumulative impacts related to demand for government services due to the relatively small size of the timber sale program, the short-term impacts to traffic, the small possibility of a few people temporarily relocating to the area, and the lack of other timber sales in the adjacent area.

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.

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.

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.

None of the tracts in this proposal are legally accessible by county road.

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.

There would be no measurable direct, indirect, or cumulative impacts related to population and housing due to relatively small size of the timber sale program, and the fact that people are already employed in this occupation in the region

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

No impacts would be expected with either alternative.

23. CULTURAL UNIQUENESS AND DIVERSITY:

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

No impacts would be expected with 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.

The proposed economic return to the trust for this sale would be approximately \$6,500-11,250, which was calculated by taking the estimated 6,500-11,250 tons multiplied by the estimated minimum bid rate. The estimated minimum bid rate was estimated by using comparable sales analysis.

Costs, revenues, and estimates of return are estimates intended for relative comparison of alternatives. They are not to be used as absolute estimates of return.

EA Checklist Prepared By:	Name: Andy Miller	Date: March 2, 2011
	Title: Forester	

V. FINDING

25. ALTERNATIVE SELECTED:

The timber harvest alternative is the selected Alternative.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

The proposed harvest of approximately 6,500-11,250 Tons of commercial size ponderosa pine on the State section within approximately 500-600 acres would not result in nor cause significant environmental impacts. The predicted environmental impacts would be adequately mitigated through the proposed timber sale plan, harvest prescription, operating period, unit boundaries, road layout and contract stipulations. For these reasons, an environmental assessment checklist is the appropriate level of analysis for the proposed action. The general public was officially notified of the proposed timber sale by published public notice and appropriate comments and concerns were incorporated into the proposed timber sale. The lessees of record were contacted and their comments and or concerns were also incorporated into the proposed timber sale. Agency specialists were contacted and appropriate comments and concerns were incorporated into the proposed timber sale. The sale meets the intent, standards, and guidance of the SFLMP and administrative rules. The proposed harvest would satisfy the trust fiduciary mandate and treat the natural resources to increase long term production.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

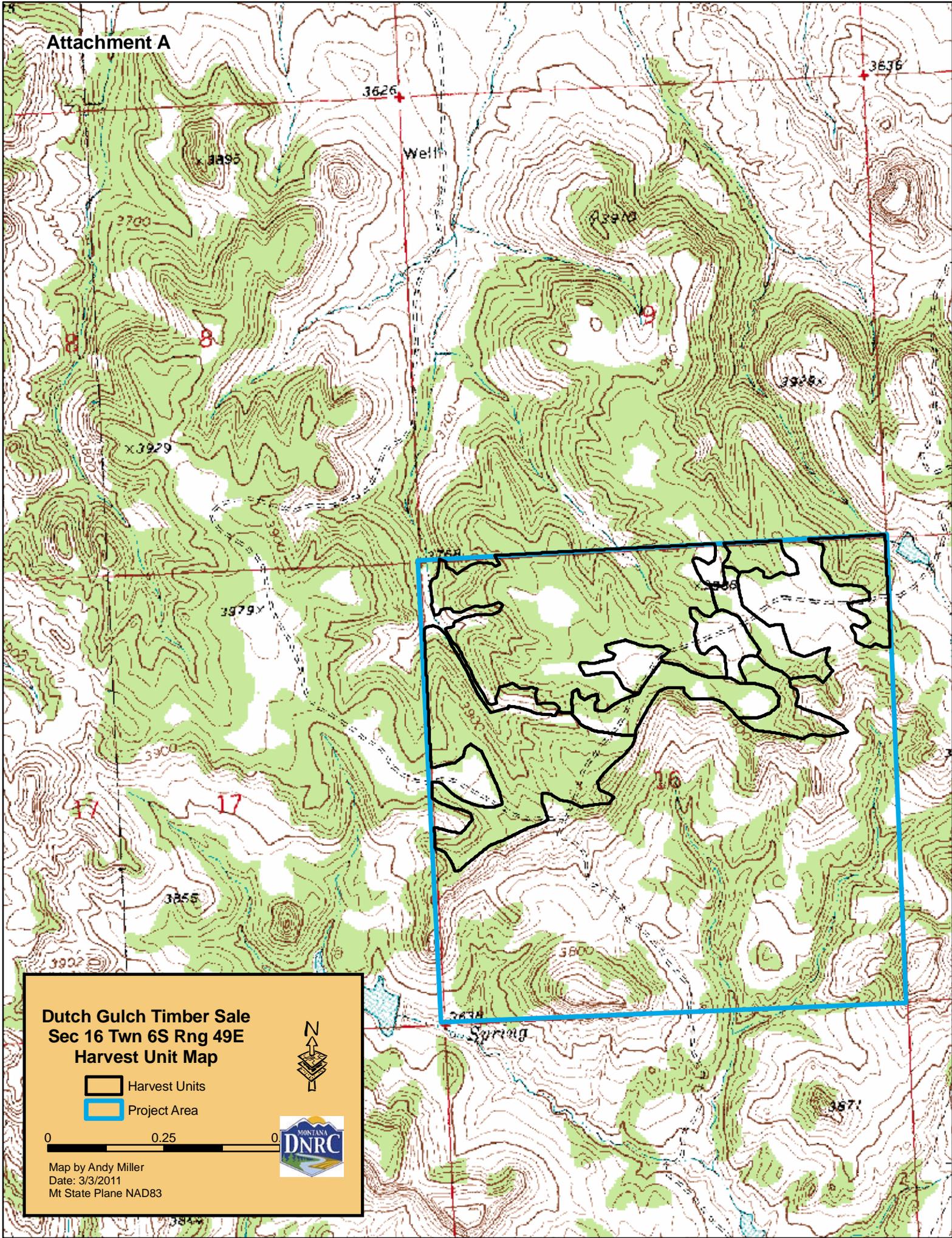
EIS

More Detailed EA

No Further Analysis

EA Checklist Approved By:	Name:
	Title:
Signature: /s/ Chris Pileski	Date: 4/14/11

Attachment A



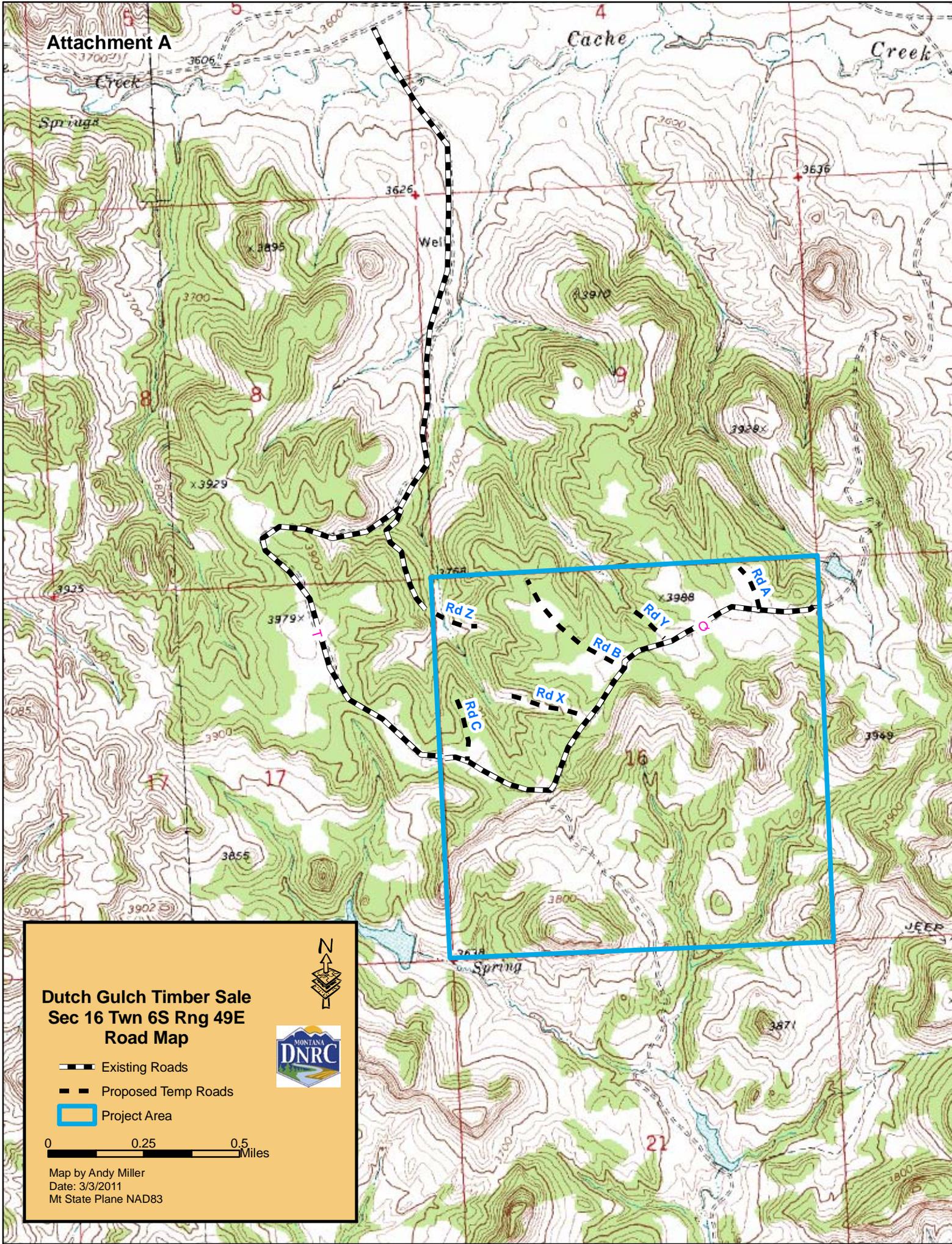
Dutch Gulch Timber Sale
Sec 16 Twn 6S Rng 49E
Harvest Unit Map

-  Harvest Units
-  Project Area



Map by Andy Miller
Date: 3/3/2011
Mt State Plane NAD83

Attachment A



**Dutch Gulch Timber Sale
Sec 16 Twn 6S Rng 49E
Road Map**

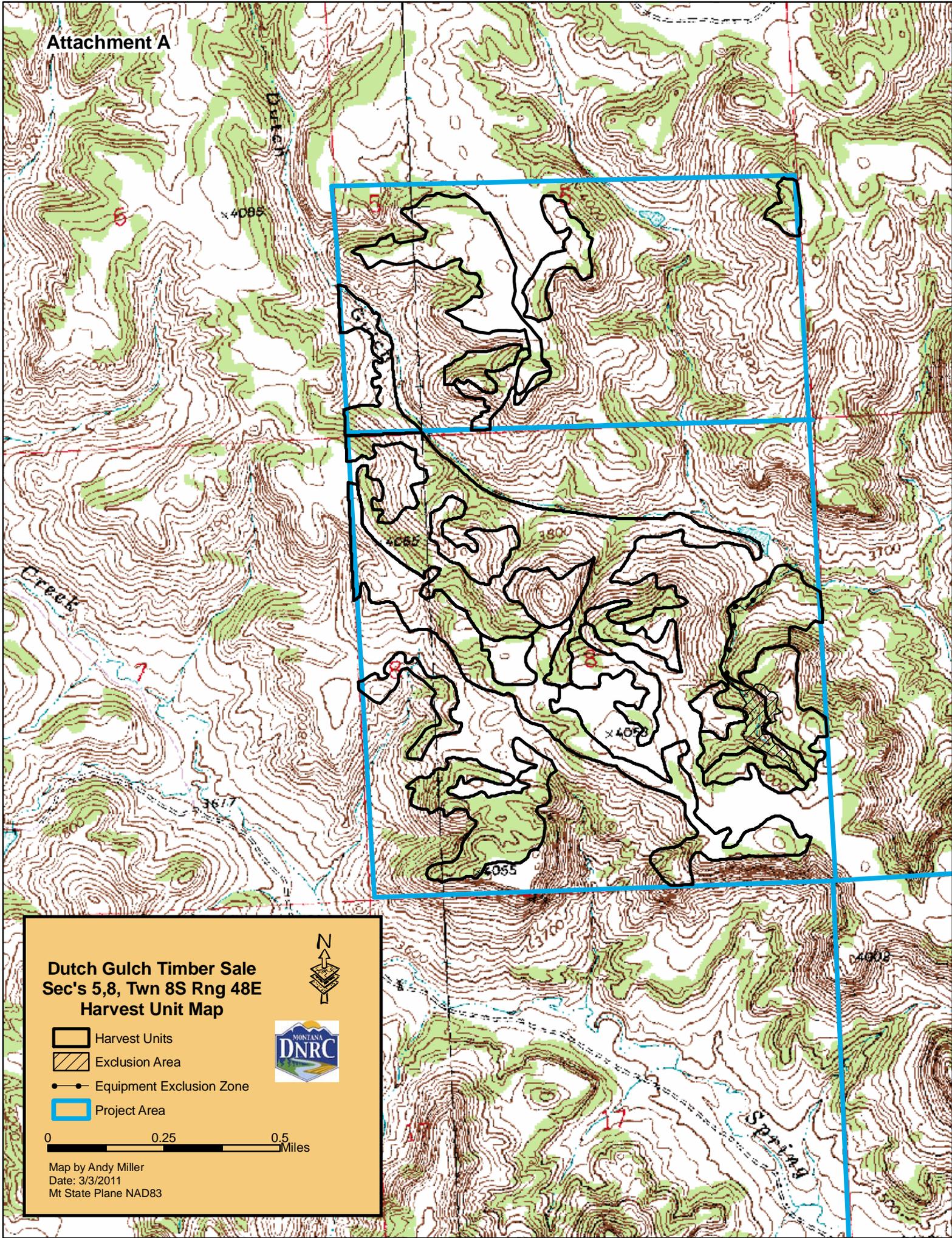


-  Existing Roads
-  Proposed Temp Roads
-  Project Area



Map by Andy Miller
Date: 3/3/2011
Mt State Plane NAD83

Attachment A



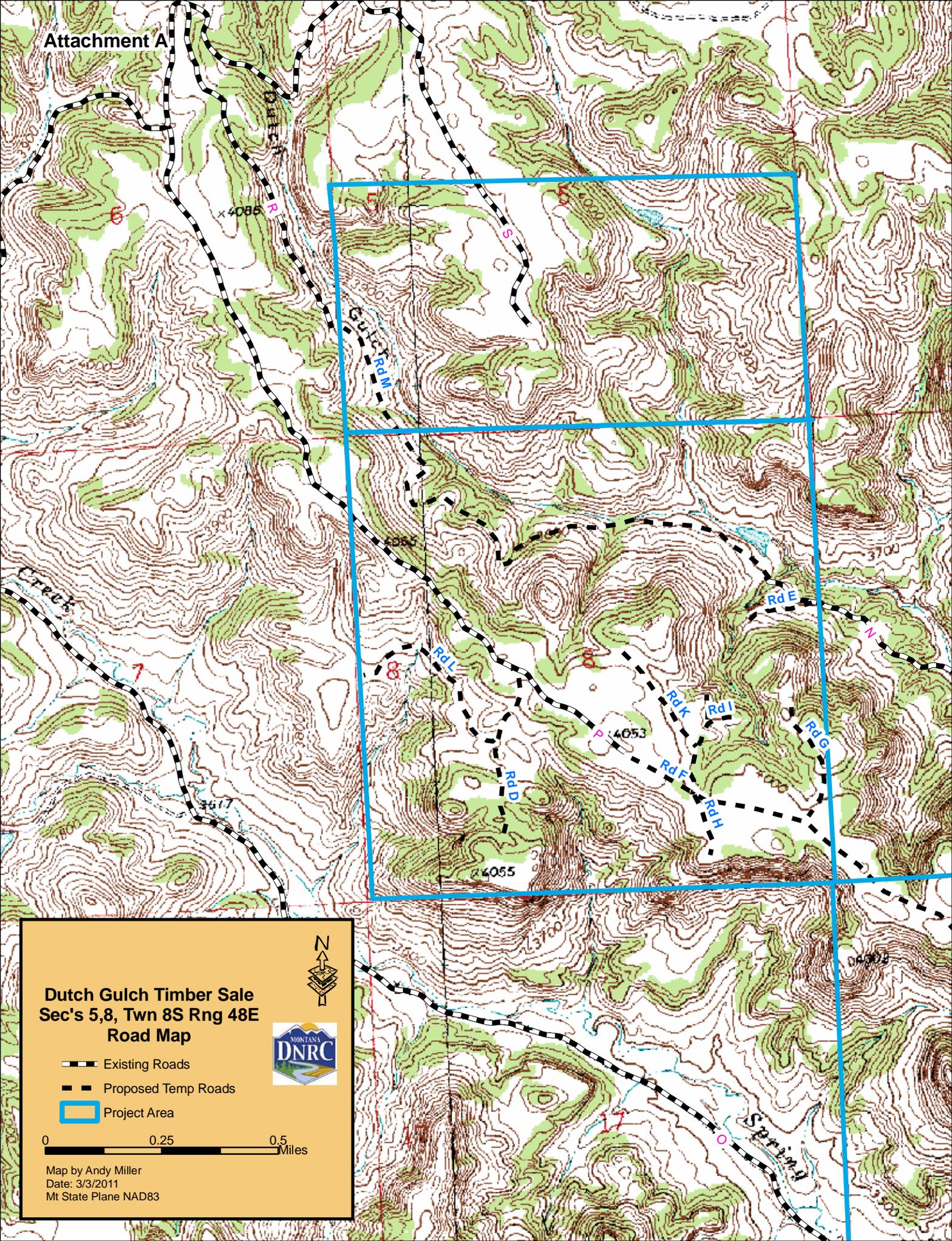
**Dutch Gulch Timber Sale
Sec's 5,8, Twn 8S Rng 48E
Harvest Unit Map**



-  Harvest Units
-  Exclusion Area
-  Equipment Exclusion Zone
-  Project Area



Map by Andy Miller
Date: 3/3/2011
Mt State Plane NAD83



**Dutch Gulch Timber Sale
Sec's 5,8, Twn 8S Rng 48E
Road Map**

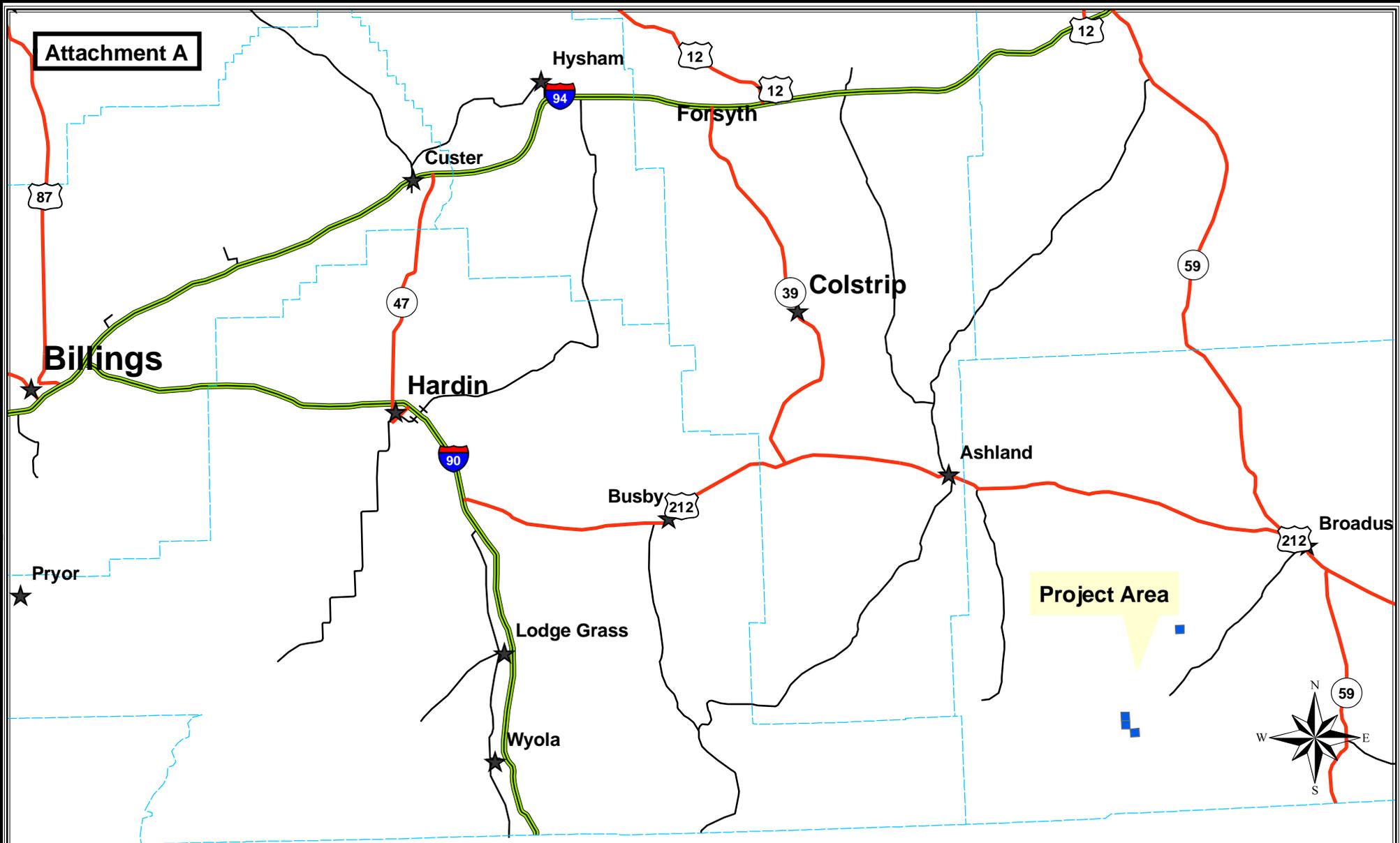


- Existing Roads
- Proposed Temp Roads
- Project Area

0 0.25 0.5 Miles

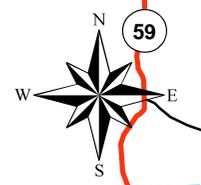
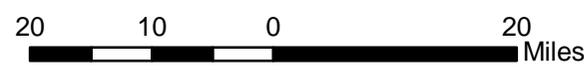
Map by Andy Miller
Date: 3/3/2011
Mt State Plane NAD83

Attachment A



Legend

★ Cities and Towns	Interstate Highway	County Boundary
State Highway	Project Area	
U.S. Route		
Secondary Highway		



Map created 02/04/2009
DNRC/ELO/CP

**Attachment A
Dutch Gulch Timber Sale
Vicinity Map**

 Project Area



Map created 3/3/2011
by DNRC/ ELO/Andy Miller

 Miles
0 0.5 1 2

