CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Montague State
Proposed Implementation Date:	April 2016
Proponent:	Chouteau County Robert Pasha, Chouteau County Commissioner
Location:	Section 5 & 8 – T22N-R10E (MSU Morrill Trust)
County:	Chouteau

I. TYPE AND PURPOSE OF ACTION

The proponent has applied to the Department of Natural Resources and Conservation (DNRC) for a gravel permit from the section of State Trust Land noted in the title. The project is located in T22N-R10E, Sections 5 & 8. The site is located specifically in SW¼SE¼, SE¼SW¼ of Section 5 and NE¼NW¼, NW¼NE¼ of Section 8. See attached map. The current pit size is approximately 1.5 acres; the proposed pit expansion would be permitted for 12.6 acres. The total volume of material estimated to be remaining in the pit at this time is 85,000 cubic yards. The volume of material removed from this pit during the 2-year gravel permit (2016-2017) would be 6,000 cubic yards. Chouteau County Road Department would use this gravel pit intermittently for road construction projects in the local area. The proponent would be using a small volume of gravel from this pit annually, which would allow for approximately 30 years of mining at this site. Chouteau County will apply to DNRC for renewed gravel permits as needed.

II. PROJECT DEVELOPMENT

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

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

Robert Pasha, Chouteau County Commissioner, Chouteau County Road Department

State of Montana Department of Environmental Quality (DEQ): Opencut Mining Permit #2656

State of Montana Department of Natural Resources and Conservation (DNRC): Surface and Mineral Owner. Minerals Management Bureau staff; Petroleum Engineer, Trevor Taylor, and Mineral Resource Specialist, Heidi Crum, along with Northeastern Land Office staff Lewistown Unit Manager, Barny Smith and Land Use Specialist Bill Creamer met on site with Robert Pasha, Chouteau County Commissioner, and Ben Cartwright, Chouteau County Road Department, on March 8, 2016.

Chouteau County Weed District: Weed Management Plan

DNRC Agriculture Surface Lessee and adjacent landowners

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

State of Montana DEQ – Opencut Mining Permit #2656

3. ALTERNATIVES CONSIDERED:

No Action Alternative: The proposed gravel permit and expansion would not be granted. Current non-motorized recreational would continue.

Action Alternative: The gravel permit would be granted to Chouteau County to take and remove gravel from trust land.

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.

This section consists of glacial deposits over the Upper Cretaceous Eagle Formation. The glacial deposits contain clay, silt and sand with many different sizes of aggregates from pebbles to boulders. This site contains rolling hills and plateaus with drainages sloping away from the uplands. This gravel pit is located in one of the drainages that is sloping away from farmland. The pit is located directly off Montague Road, no other access road will need to be constructed for this pit.

The existing gravel pit site and proposed expansion area contain soils that are clay loams, which can have 8-25% slopes. According to the Natural Resources Conservation Service Web Soil Survey these soils have a moderate erosion hazard potential, high restoration potential, and good traffic ability ratings. With the potential for soil erosion, the proponent will plan to divert, intercept, convey, slow or retain runoff or sediment if needed during precipitation events. Best Management Practices (BMP's) the proponent will use includes ditches, berms, grading, insloping, and applying more gravel to the pit floor to decrease the amount of excessive soil erosion.

The existing gravel pit has highwalls that the proponent agrees to mitigate over time. Every two years, the highwalls will be sloped back more. The pit floor is small in size, which does not leave the proponent much space to use equipment, stockpile topsoil and reject fines, backfill, and reclaim previously mined areas. The proposed expansion would allow the proponent to reclaim smaller areas of this pit as needed.

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.

This gravel pit site is not located close to any water sources. It is approximately 2 miles to the east of White Lake, 2.5 miles to the west of Shonkin Lake, and 1 mile north of an intermittent stream that runs between the two lakes. Montana Ground Water Information Center website does not have any wells that are documented in Section 5 or any of the surrounding sections.

The groundwater is estimated by the proponent to be very deep at this site, with a few springs in drainages and coulees in the surrounding area. Mining will be into the hillsides, the bottom of the pit will be the deepest part of this site. Groundwater is deeper than the pit floor and should not be affected.

There is potential for surface water runoff at this site with rainfall, snowmelt or other heavy precipitation events. The proponent has plans to divert, intercept, convey, slow and retain runoff or sediment when needed during these events. Best Management Practices (BMP's) the proponent will use for these events include ditches, berms, grading, insloping, and applying more gravel to the pit floor.

No cement mixing or asphalt mixing is proposed for this site. All fuel, oil and waste would be kept out of the pit area. Any spills would be excavated and removed immediately. Based on the project design and protection measures, it is unlikely there would be any measurable effects to surface or groundwater by the existing pit and the proposed expansion. There is low risk of direct, indirect or cumulative impacts.

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.

An increase in airborne pollutants and particulates would occur from machinery during proposed mining activities. Minor impacts to air quality would be expected. However, mining activities would not be constant during the 30 year expected life of the proposed gravel pit. The proponent would use this pit as needed for road construction in the local area. This pit is seldom used; the proponent uses other pits in the county depending on the proximity to the job site.

Mining will be intermittent and equipment would not be on-site continuously. A grizzly and screen, along with excavating and hauling equipment would be moved on and off-site as needed.

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 proposed gravel pit expansion site is composed of mixedgrass prairie and with agricultural lands surrounding the site to the west, north and east. More mixedgrass prairie is located to the south of the pit across Montague Road. Existing species on the site include bluebunch wheatgrass, green needlegrass, yucca and western yarrow. The current pit is approximately 1.5 acres, and additional ground disturbance to expand the pit would take place on approximately 11.1 acres of mixedgrass prairie. The planned expansion area would destroy the plant communities during gravel mining

operations. The proponent would be responsible for monitoring and controlling weed populations during the life of the DNRC issued gravel permit and for a period of 3 years after the permit expires.

The site would be reclaimed all at one time when the pit is no longer in use. The site would be returned to a natural contour, at no less than 3:1 slope. Soil would be appropriately prepped for seed bed and the proponent plans to drill the following seed mix, which will be a total of 12.0 pounds of pure live seed per acre.

Slender Wheatgrass	2.5 pounds/acre
Western wheatgrass	3.0 pounds/acre
Thickspike wheatgrass	2.0 pounds/acre
Bluebunch wheatgrass	2.0 pounds/acre
Green needlegrass	1.5 pounds/acre
White prairie clover	1.0 pounds/acre

If this seed mix would be broadcasted, the rate would be doubled.

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.

A variety of big game, small mammals, reptiles, raptors, upland game birds and songbirds use this area and activities from the proposed project could temporarily disrupt wildlife movement and patterns. However, proposed activities are close to existing, open roads, agricultural activities, and other human developments. As such, the area likely doesn't receive extensive use by many of the wildlife species more sensitive to human disturbance. A minor amount of grassland would be removed with the proposed activities, but considerable amounts of these habitats would persist on the DNRC-managed parcel and surrounding areas into the future. Big game winter range attributes would not be appreciably altered; no changes in thermal cover and minor changes in available forage for wintering big game would be 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 search was conducted using the Montana Natural Heritage Program database to identify point observations of species of concern in the section of the proposed activity. The project area is approximately 0.25 miles from a documented Black-tailed Prairie Dog colony. Black-tailed prairie dogs live in colonies typically on flat, open grasslands with low, relatively sparse vegetation. They can disperse 1.5 miles or more from their colony, thus the project area could experience dispersing black-tailed prairie dogs. However, they generally inhabit relatively level sites (<5%); the slopes at this gravel pit site are generally 8-25%. Most black-tailed prairie dog colonies are close to livestock watering sites, dry lakes, and areas where cattle congregate, which are not present in the area of the proposed expansion. Operations at this gravel pit would have minimal effects on Black-tailed Prairie Dogs given the habitats present, slopes in the project area, and the proposed intermittent development of the site.

Mountain plovers and burrowing owls are both sensitive species that are frequently considered near-obligates to black-tailed prairie dogs. Potential habitat exists in the vicinity for both mountain plovers and burrowing owls. Mountain plovers generally use heavily-grazed short-grass prairies and prairie dog towns. Burrowing owls are also found in fairly open grasslands and rely on abandoned burrows dug by ground squirrels, prairie dogs, and badgers. Similarly to black-tailed prairie dogs, the proposed activities would be expected to have minimal effects on mountain plovers and burrowing owls given the habitats present, proposed intermittent nature of the development, and availability of other habitats in the vicinity.

This section is not located within the Greater Sage Grouse general habitat or core habitat area boundaries defined by the Executive Order for the Implementation of the Montana Sage Grouse Conservation Strategy.

No other species of concern are documented within a 4 mile radius of the gravel pit.

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

DNRC Archaeologist, Patrick Rennie was consulted regarding the nature of the proposed action and the potential to impact historical and archaeological resources; there are no cultural resource concerns with the proposed project.

A field evaluation was also conducted by DNRC Petroleum Engineer Trevor Taylor, Mineral Resource Specialist Heidi Crum, Land Use Specialist Bill Creamer and Lewistown Unit Manager Barny Smith on March 8, 2016. No identifiable historical or archaeological items were found to be at, or near the location of the proposed gravel pit.

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 pit site is located directly off Montague Road and approximately 5 miles to the southwest of State Highway 80. Highway 80 is a direct route between Fort Benton and Geraldine. Aesthetics may be impacted as the pit is visible from the traffic that utilizes Montague Road.

Gravel pit excavation could occur at any time and some noise is expected during the operation.

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 proposed project would have an impact on the land (approximately 12.6 acres), would use an insignificant amount of water for gravel excavation as there would be no dewatering on-site, and would temporarily affect the air quality due to airborne dust particles resulting from vehicles traveling to and from the gravel pit. No cumulative effects to environmental resources have been identified as a result of mining for gravel.

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.

No other environmental documents were found that pertain to Sections 5 & 8 in T22N-R10E.

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.

Highwalls in excess of 20' were identified on the site and can be a safety hazard. Proper warning signs shall be placed a minimum of 6' from the upper edge of the each highwall face until the slopes of the highwall faces are brought to a 3:1 slope or the angle of repose of the highwall material. No other human and health safety risks were identified as a result of the proposed project other than the typical occupational hazards that coincide with mining operations.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:
Identify how the project would add to or alter these activities.

The proposed project is not expected to alter current or future industrial, commercial, and agricultural activities and production.

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.

The proposed project would not create, move, or eliminate jobs.

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.

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.

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.

No known zoning or management plans exist for this area.

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.

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.

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

None.

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

None.

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 proponent has provided $25 for a gravel permit and would pay $1.00 per cubic yard in royalties.

The existing agriculture lease on the State Section listed above provides approximately $12,531 in annual revenue from Sections 5 & 8 that goes to MSU Morrill trust.

EA Checklist Prepared By:	**Name:**	Heidi Crum	**Date:**	3/18/16
	Title:	Mineral Resource Specialist		

V. FINDING

25. ALTERNATIVE SELECTED:

After reviewing the Environmental Assessment, I have selected the Action Alternative, to issue a Gravel Permit. I believe this alternative can be implemented in a manner that is consistent with the long-term sustainable natural resource management of the area and generate revenue for the common school trust.

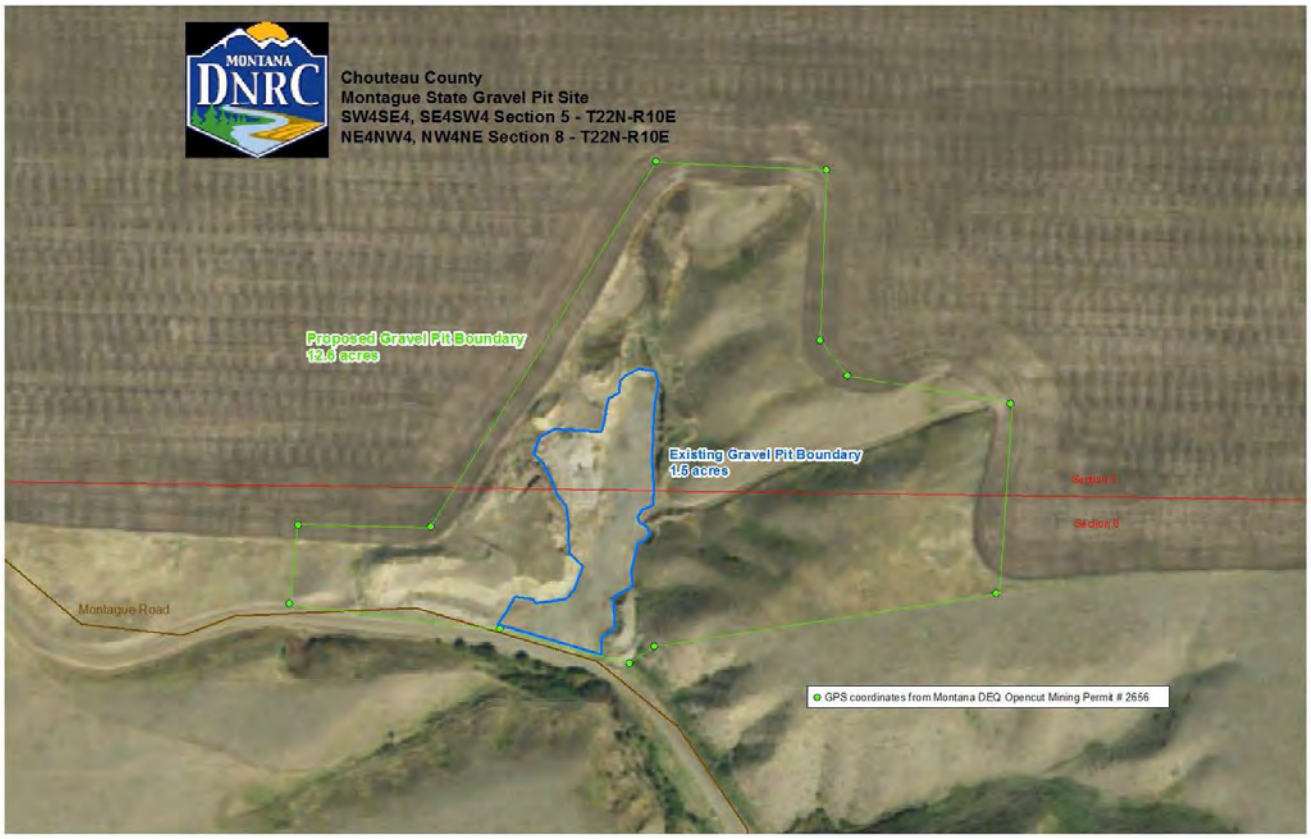
26. SIGNIFICANCE OF POTENTIAL IMPACTS:

I conclude all identified potential impacts and no significant impacts will occur as a result of implementing the selected alternative.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

	EIS		More Detailed EA	X	No Further Analysis

EA Checklist Approved By:	**Name:** Trevor Taylor **Title:** Petroleum Engineer	
Signature: /s/ Trevor Taylor		**Date**: 3/23/16


MONTANA
DNRC
Chouteau County
Montague State Gravel Pit Site
SW4SE4, SE4SW4 Section 5 - T22N-R10E
NE4NW4, NW4NE Section 8 - T22N-R10E
Proposed Gravel Pit Boundary
12.6 acres
Existing Gravel Pit Boundary
1.5 acres
Section 5
Section 8
Montague Road
GPS coordinates from Montana DEQ Opencut Mining Permit # 2656