

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	South of Froid Sand Pit
Proposed Implementation Date:	Summer 2022
Proponent:	Asgard Resources, LLC
Location:	NW4, SW4, SE4 – Section 16 T30N R55E – 480 Acres (Project Area)
County:	Roosevelt County

I. TYPE AND PURPOSE OF ACTION

An aggregate take and remove application for the above referenced tract of land has been received by the Department, for the right to mine sand from the surface and subsurface. The purpose of this document is to assess, if approved, the environmental impacts the project would create. This document will analyze two alternatives. One alternative is the action alternative. If the action alternative is approved, the proponent will be allowed to mine the project area. Mining may only occur if the proponent secures both an aggregate take and remove permit from the DNRC and an approved opencut mining plan from Montana's DEQ. Each agency will also conduct a MEPA review. The no action alternative will result in the project not mined for sand.

II. PROJECT DEVELOPMENT

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

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

The Montana DNRC was approached several years ago by multiple companies regarding the potential of a sand mining operation near Froid, Montana. The Montana DNRC held an online auction for the right to obtain an aggregate take and remove permit in the spring of 2022. The proponent was the highest bidder and obtained the right to apply for the permit. This document analyzes the impacts of mining the project area and the effects it would have on the environment.

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

Montana DNRC, TLMD, MMB – Aggregate take and remove permit
Montana DEQ, Opencut Mining Bureau – DEQ rural opencut operating permit
Montana Dry Prairie Rural Water – Any necessary permits needed to obtain water to the site.

3. ALTERNATIVES CONSIDERED:

No Action Alternative: The proponent would not be authorized to mine the project area for sand.

Action Alternative: The proponent would be authorized to mine the project area for the sand resource present on the tract.

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.

Section 36 T30N-R55E has geology mostly comprised of one member. It is an eolian deposit described as: Translucent tan to brown, well-sorted, unconsolidated, moderately frosted quartz sand grains in deposits or active sand dunes which may include chert and other clast lithologies.

Soils in the tract include members that have high potential for restoration, low to medium risk for soil compatibility, moderate to severe soil displacement hazards and moderate to severe erosion hazards. This data is obtained from the USDA's web soil survey.

Observations by DNRC personnel during site visits, note that the soils are composed of fine sands in many areas of the tract. However, there are areas where no sand is present. Vegetation is mostly uniform across the varying soil types within the section.

No action alternative: The soils and geology in the area would not be affected by implementing this alternative.

Action alternative: An approved mining plan would ensure that any topsoil or organic soil present within the project area is stockpiled and saved for reclamation. It is not anticipated that the mining plan would affect any unusual geologic features.

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.

An unnamed ephemeral drainage is contained within the tract. Ephemeral drainages primarily only contain water during run-off periods or after large precipitation events. Ephemeral is defined as: "lasting for a very short time."

A search on the Montana Ground Water Information Center website found there are no water wells contained within Section 36.

No action alternative: the quality and quantity of groundwater or surface water would not be affected by implementing this alternative.

Action Alternative: The sand mining activity would require a water resource. If the action alternative is selected, the proponent plans to utilize the Dry Prairie Rural Water line. Water used for a wash plant would be recycled through a machine and series of small settling ponds. It may be stipulated in the permit that these ponds be lined to conserve water. There are no additional components of the wash plant other than the machine, water and aggregate. The utilization of this wash plant is expected to have negligible effects on the quality of the groundwater and surface water in the area.

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.

No action alternative: there would be no anticipated effects to the current air quality if this alternative was implemented.

Action alternative: If the action alternative were selected, air quality may be affected during the project. Airborne pollutants in the form of diesel exhaust will enter the air from heavy machinery used to mine and transport the sand. Additionally, high winds may carry fine particulate matter from exposed areas. The overall effects to the environment from the implementation of the action alternative are expected to be negligible.

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.

According to the most recent lease inspection conducted by Trust Lands staff, the vegetation on the tract consists of the following species: Western Wheatgrass, Green Needlegrass, Needle and thread, Blue Gramma, Crested Wheatgrass, Smooth Brome and Sandberg bluegrass. There are also small shrubs and some deciduous trees contained within the tract.

An inventory of the Montana Natural Heritage Program's Species of Concern point observations was conducted. There were no vegetative species of concern within a one-half mile radius of the project area's boundaries.

No action alternative: The vegetation in the project area would not be affected and would be dependent upon factors other than mining.

Action alternative: The proponent would strip the topsoil and vegetation from the project area and stockpile it for use during reclamation. The stockpiled material will be seeded for stabilization. Upon reclamation, the project would be reseeded with a native range mixture and returned to grazing ground.

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 project area contains habitat for several species. Some of these include deer, fox, coyote, predatory birds and upland game birds such as Pheasant and Sharp-Tailed Grouse. The habitat contained in the

project area is primarily composed of native range grasses. Some small shrubs are intermingled, and the SE quarter of the section contains some deciduous trees. It is not anticipated that mining will occur in the areas containing trees, as it does not contain the resource present in other areas of the tract.

No action alternative: The habitat would remain unchanged and no impact to the environment would be anticipated.

Action alternative: The project area would be stripped of topsoil and mined for the underlying sand resource. This would temporarily displace animals that live in the native range habitat. However, native range is abundant in adjacent lands and could be utilized by animals that are temporarily displaced. The project area would be returned to native rangeland upon reclamation and any animals that were temporarily displaced could return to the project area.

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 point observation database to identify species of concern in the project area. There was only one observation of a species of concern identified within a mile radius of the proposed project site over the past ten years. The species is Sharp-Tailed Grouse. This species was also observed by Trust Lands personal during a site visit in 2021. The MNHP reasons for rank are described as such:

“Populations west of the Continental Divide are extirpated and have a conservation status rank of SX. Populations east of the Continental Divide have a state rank of S4 and are not a Species of Concern.”

The project area is east of the continental divide and in an area where the species is not considered a species of concern.

No Action Alternative: The habitat for sharp-tail grouse would remain unchanged and no impact to the environment would be anticipated.

Action Alternative: The project area would be stripped of topsoil and mined for the underlying sand resource. This would temporarily displace sharp-tail grouse that live in the project area. However, native range is abundant in adjacent lands and could be utilized by sharp-tail grouse that are temporarily displaced. The project area would be returned to native rangeland upon reclamation and any sharp-tail grouse that were temporarily displaced could return to the project area.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

A Class III 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.

No action alternative: No effects would occur to historical, archaeological or paleontological resources in the project area.

Action alternative: There would be no anticipated effects to historical, archaeological or paleontological resources. A provision within the DNRC's take and remove permit state, that if any of these resources are encountered during mining activities, the operator shall cease action and inform the local office of their findings.

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 project area is not located on a prominent topographic feature. However, it is adjacent to Montana Highway 16.

No action alternative: There would be no significant alteration to the aesthetics in the area by implementing this alternative.

Action alternative: Mining activities would be visible from parts of Montana Highway 16. There would be increases in noise from truck traffic and mining equipment. There would also be a temporary visual ground disturbance and equipment would be visible.

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.

No action alternative: The implementation of this alternative would have no affect on the demands of environmental resources.

Action alternative: The implementation of this alternative would have some effect on environmental resources. Although sand is abundant in the vicinity of the project area, it is a relatively limited resource and does not occur naturally in many places throughout the state of Montana. The action alternative would remove the sand from its current location and utilize it in industrial uses. The action alternative would also require the use of water. The proponent plans to utilize the Dry Prairie Rural water line for their needs. The water from this source is abundant, and there is no present concern about the usage.

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.

The only current project on the tract is a grazing lease. The grazing lessee has been contacted by the NELO staff and was informed of what a perspective project might entail. There is also an oil and gas lease on this tract. However, no wells currently exist on the tract. The lease is held by the production of the Triplett 1 well which is located approximately 1500 feet from the south line of section 36. No plans have been submitted by the oil and gas lessee to drill further wells on the tract.

No action alternative: There would be no effects to the current activities on the tract.

Action alternative: The grazing lessee would be impacted if this alternative were selected. Topsoil and vegetation would be removed from the leased area. However, any ground that is disturbed will be calculated into a surface damage agreement form and the lessee will receive funds for actual damages to their lease from the proponent. To mitigate the impact felt by the surface lessee, a stipulation would be entered into the aggregate take and remove permit, that limits the proponent to a maximum disturbance at one time, and that the active mining area be fenced. Once the maximum acreage is reached the proponent would be instructed to reclaim behind themselves. The action alternative is not expected to hinder or prohibit the future development of oil and gas on the tract.

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.

No action alternative: There would be no human health or safety risks from the implementation of this alternative

Action alternative: No human and health safety risks would occur because of the implementation of this alternative, other than the typical occupational hazards that coincide with sand mining operations.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

No action alternative: No industrial, commercial, or agricultural activities would be affected resulting from the implementation of this alternative.

Action alternative: The action alternative would create a source of sand that could service the local economy. Commercial and industrial projects present in the area could utilize the resource for a variety of needs.

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.

No action alternative: The implementation of this alternative would not create, move or eliminate jobs in the project area's vicinity.

Action alternative: The action alternative would bring a new company to Montana that has not previously worked in the state. Although there is potential for locals to gain employment from this alternative, the proponent may utilize resources from their current operations in North Dakota.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

No action alternative: The implementation of this alternative would not create or eliminate tax revenue.

Action alternative: There would be marginal gains in the local tax revenue resulting from the implementation of this alternative.

18. DEMAND FOR GOVERNMENT SERVICES:

Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services.

No action alternative: There would be no effects to traffic patterns from the implementation of this alternative.

Action alternative: Implementing the action alternative would create an increase in heavy truck traffic in the project area. The primary truck traffic would be leaving the project area heading south and returning coming north. Visibility on highway 16 is good in both directions from the project. To mitigate the additional hazards created by trucks entering and exiting the site, it will be stipulated that the proponent construct truck entering signs on highway 16 on each respective side of the access road.

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 action alternative: Zoning plans would not be applicable to the no action alternative.

Action alternative: No known zoning or environmental plans exist in the project area. As part of the DEQ opencut permitting process, the proponent must consult the respective county for zoning regulations. If the action alternative is selected and the project area does have zoning regulations, the proponent may be expected to follow the county's regulations.

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.

No action alternative: This alternative would have no impact to access for recreational or wilderness activity.

Action alternative: If the action alternative is selected the mining area will be fenced and the public will not be able to access the disturbed area. However, the remainder of the tract would remain open for public use and recreation. There is no wilderness designations in the area.

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.

No action alternative: There would be no anticipated effects to the distribution of housing or populations in the area.

Action alternative: Any employees that may come from out of town to work on the project would need housing. This could be in the form of a rental, hotel, or a more permanent solution. It is not anticipated to significantly strain the housing market in he area.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

No action alternative: There would be no disruption to native communities or traditional lifestyles.

Action alternative: There would be no anticipated disruption to native communities or traditional lifestyles resulting from the implementation of this alternative.

23. CULTURAL UNIQUENESS AND DIVERSITY:

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

No action alternative: There would be no effect to any unique quality of the area.

Action alternative: The action alternative is not anticipated to affect any unique qualities in the area.

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.

No action alternative: The no action alternative would gain revenue from rental payments from both the surface lessee and oil and gas lessee.

Action alternative: The action alternative would create a decreased revenue from the surface lease. However, the amount of revenue created from the alternative would far exceed the revenue lost from a portion of the surface lease. The action alternative would allow the proponent to mine sand from the project area at a rate of \$4.25 per ton to the trust. The Department has structured the respective take and remove aggregate permit as such to obtain a minimum royalty of \$150,000 per year. The permit would remain in effect until all disturbed ground is graded, covered, and reseeded. From preliminary data, the Department estimates the project area contains approximately 500,000 – 1,000,000 tons of sand. Rental payments and royalties from the oil and gas lessee will not be affected by implementing the action alternative.

EA Checklist Prepared By:	Name: Zackary Winfield	Date: 6/21/2022
	Title: Petroleum Engineer	

V. FINDING

25. ALTERNATIVE SELECTED:

After reviewing the Environmental Assessment, the Department has selected the Action Alternative. The proponent will be given the right to mine the project area for the sand resource present. I believe this alternative is consistent with the management goals of the division.


26. SIGNIFICANCE OF POTENTIAL IMPACTS:

I conclude all identified potential impacts will be mitigated by utilizing the stipulations listed below and no significant, sustained impacts will occur resulting from implementing the selected alternative.

1. All topsoil will be retained and left on-site for reclamation. Stockpiled topsoil will be seeded to maintain stability during mining operations.
2. Seed mixtures for reclamation must be pre-approved by the Northeast Land Office
3. The pit will be sprayed for noxious and invasive weeds annually. Record of spraying will be submitted to the DNRC's Glasgow Unit Office. The permittee will also work with and take into consideration, recommendations from the county weed coordinator.
4. The DNRC aggregate permit will remain active until final reclamation has been approved by the DEQ and the DNRC. The payment structure may change if the permittee is no longer actively mining.
5. The site will be kept free of debris and garbage. Only equipment that is actively being used is permitted on the site. No campers, or other forms of lodging either temporary or permanent are allowed the tract.
6. The total disturbance must remain under 50 acres at one time. If the threshold is met, the permittee must reclaim ground to mine new ground at a 1:1 rate. Graded ground with topsoil replaced and seed planted will be considered ground that is in reclamation and may be considered in the total acreage calculation. This will be at the discretion of the department.
7. If the permittee exceeds 50 acres at one time, they will be charged \$1,000 per week for every acre disturbed over the threshold. This will be monitored via UAV.
8. The proponent will be limited to the operating hours of 6 AM – 9 PM
9. The active mining area will be fenced to avoid conflict with grazing animals.
10. The proponent will line their wash plant pits with an impermeable liner to conserve water.
11. The proponent will have a fire extinguisher on site at all times of active operations. Any fire will be reported immediately to the Glasgow Unit office.
12. The proponent will construct trucks entering signs one-quarter mile from the primary access route. They will be constructed on highway 16 both north and south of the primary access.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS
 More Detailed EA
 No Further Analysis

EA Checklist Approved By:	Name: Trevor Taylor Title: MMB Bureau Chief
Signature:	 Date: 6/21/2022