CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	LHC, Inc. Tarkio Gravel Testing
Proposed Implementation Date:	Winter 2022/2023
Proponent:	LHC, Inc
Location:	T15N-R25W-Sec 35 (Common Schools Trust) All - North of I-90
County:	Mineral

I. TYPE AND PURPOSE OF ACTION

LHC, Inc. henceforth referred to as the proponent, has applied for a gravel test permit on Trust Lands on the above-referenced tract in Mineral County. This project would utilize a backhoe to dig holes to a depth of approximately 12 feet. Testing and documenting would be performed by employees of Trust Lands and LHC, Inc.

If approved, the proponent would be issued a test permit to determine the gravel resource contained within the above-referenced tract. Gravel and dirt would be excavated from the ground and sub-surface. Topsoil would be saved, and the disturbance created would be reclaimed immediately upon completion of documenting the test pit.

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 proponent has submitted a permit to test for aggregate to the DNRC to explore gravel resources. The Missoula Unit Manager, Amy Helena, has been notified.
Andrea Stanley, Hydrologist/Soil Scientist, and Garrett Schairer, Wildlife Biologist at the Missoula Unit have been scoped for comments regarding this tract.

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

None known

3. ALTERNATIVES CONSIDERED:

No Action Alternative – No Action

Action Alternative – Allow the proponent to conduct the test hole survey on State Trust Land and issue a gravel testing permit.

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.

Site geology consists of glacial flood deposits of gravel and boulders that overlie the Belt Supergroup formation. The project area includes five soil types.

- Krause gravely loam, 8 to 15% slopes, 96.1% of project area
- Nemote-Rock outcrop complex, 35 to 90 percent slope, 1.8% of project area
- Nemore-Tamely association, 1.6% of project area
- Combest and Kadyguld families, high stream terraces and escarpments, 0.3% of project area
- McCaffery family and Typic Haplustepts, dissected hills and alluvial fans, 0.3% of project area

These five soils exhibit the following properties:

Shallow excavations – These ratings are the properties that influence the ease of digging and resistance to sloughing. Nemote-Rock outcrop complex and Nemote-Tamely association exhibit very limited rating of shallow excavations. The remaining exhibit somewhat limited rating to shallow excavations.

K factor – Nemote-Rock outcrop complex and Nemote-Tamely association exhibit a low rating for soil-to-sheet and rill erosion from water. The remaining three soils are not rated for K factor.

Soil compactibility risk – Krause gravelly loam, McCafferty family and Typic Haplustepts, Combest and Kadygulch families exhibit a medium compactibility risk, while the remaining two exhibit a low compactibility risk.

Wind erodibility group – Soils found in the project area exhibit a low risk to wind erosion.

Soil restoration potential – All soils exhibit a high potential rating for soil restoration.

Soil rutting hazard – McCaffery family and Typic Haplustepts soil exhibits a severe soil rutting hazard, and the remaining soils exhibit a slight to moderate soil rutting hazard rating.

Testing would be conducted in areas with mild topography and under mostly dry or frozen conditions. This should mitigate the risk of displacing, compacting, or otherwise impacting the soils beyond the direct areas of testing. The test pits will be reclaimed immediately upon digging.

Care would be taken to preserve the soil when digging the test holes by separating the soil from the underlying material. The soils are susceptible to weed infestation once replaced and will be monitored thereafter.

No Action Alternative – The current geology and soils in the project area would remain undisturbed, as they currently exist.

Action Alternative – The proponent would be granted a permit to test for gravel. Any disturbances for gravel testing in the area would be filled in and have topsoil replaced before moving on to the next test site.

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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 southwest quarter section of 35 is approximately 500 feet north of the Clark Fork river. The river is at an elevation of 2775' ASL. The project area ranges in elevation from 3120'- 3600' ASL, on south-facing dry rangeland north of Interstate 90, opposite of where the Clark Fork River flows.

A search of the Montana Ground Water Information Center website found there are no water wells within a half-mile radius of the project area.

No Action Alternative – No impact

Action Alternative – The proponent would be granted a permit to test for gravel. Groundwater is not expected to be encountered during testing. There would be no anticipated impacts on the quality or quantity of the surface water or groundwater by implementing the action alternative.

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 – No impact

Action Alternative – Some dust particulates from traveling to the test sites and digging the test pits may affect air quality temporarily during gravel testing operations. There are no anticipated long-term effects on air quality.

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 testing area within section 35 is covered by Conifer-dominated forest and woodland, comprising of Douglas-fir, grand fir, and Ponderosa pine with Montane Grassland system below. Montane Grassland system comprises of perennial bunch grasses and forbs, dominated by Rough Fescue.

An inventory of the Montana Natural Heritage Program's Species of Concern database was conducted for the project area. The search yielded one vegetative species of concern, Small-flowered Pennycress, being a native species.
The search yielded several noxious weeds observed in the project area; Common St. John's-wort, Sulphur Cinquefoil, Dalmatian Toadflax, Spotted Knapweed, Common Hound's-tongue, and Leafy Spurge.

No Action Alternative – No impact

Action Alternative – Vegetation communities would be affected by this project. The use of excavation equipment would temporarily damage some areas of the plant community. This would occur from the vegetation being compacted and excavated by equipment. Damage to the plant community should be lessened at this time of year since most species should be dormant. Per the stipulations of the permit, the proponent would be responsible for the management and mitigation of invasive weeds at the testing sites. The proponent will also be responsible for reseeding the affected areas with a native range mixture as suggested by the Missoula Unit office. No trees would be cut if the action alternative is selected.

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 proposed project area serves as deer and elk winter range. Year-round use by deer, elk, and moose is likely. No changes in hiding cover, thermal cover, and snow intercept would be anticipated. Some disturbance to wintering big game could occur with any activities that may occur during the winter period.

No Action Alternative – No impact

Action Alternative – The proponent would be granted a permit to test for gravel and impacts to habitats and wildlife are expected to be negligible. The action alternative would create small disturbances within a short time frame. These actions are not expected to have long term impacts on wildlife or their habitat.

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.

No Action Alternative – No impact

Action Alternative – The proponent would be granted a permit to test for gravel. This activity may create a temporary disruption to the species of concern listed.

Threatened and Endangered Species: Potential habitats for Canada lynx and Yellow-Billed Cuckoos do not exist in the vicinity of the proposed activity, thus no direct, indirect, or cumulative effects to Canada lynx or Yellow-Billed Cuckoos would be anticipated. The proposed project area is outside of any grizzly bear recovery zone or "occupied habitat" area as mapped by grizzly bear researchers and managers to address increased sightings and encounters of grizzly bears in habitats outside of recovery zones (Wittinger 2002). Proximity to human residences, Highway 90, and other human developments likely limits habitat quality in the project area; extensive use of the project area by grizzly bears is not likely. Thus, negligible direct, indirect, or cumulative effect to grizzly bears would be anticipated.

Literature Cited:

Wittinger, W.T. 2002. Grizzly bear distribution outside of recovery zones. Unpublished memorandum on file at USDA Forest Service, Region 1. Missoula, Montana. 2pp.

Sensitive Species: Potential flammulated owl habitats are present in the project area. Proposed activities would not appreciably alter flammulated owl habitats but could disturb nesting flammulated owls if activities were to occur during the nesting season. Thus, a low risk of adverse direct, indirect, or cumulative effects to flammulated owls would be anticipated with the proposed activities. The project area is in the home range associated with the Fish Creek bald eagle territory. Little or no disturbance to nesting bald eagles would be anticipated given the distance from the nest, nest location, presence of Highway 90, and other forms of human disturbance in the vicinity. No changes to available bald eagle habitats would be anticipated. Thus, a low risk of adverse direct, indirect, or cumulative effects to bald eagles would be anticipated with the proposed activities. Other potential sensitive species in the vicinity include fringed myotis, hoary bat, pileated woodpecker, and northern goshawk. Negligible changes to existing vegetation would occur, thus no changes in available habitats would occur. Some limited, short-duration disturbance to individuals of any of these species could occur if they are in the vicinity but given the proximity to Highway 90 and several other forms of human disturbance, the potential for affecting these species would be limited. Habitats for other sensitive species are either not present or would not be affected by the proposed activities. Overall, negligible direct, indirect, or cumulative effects to any of the other potential sensitive species would be anticipated.

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10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search results revealed that no cultural or paleontological resources have been identified in the APE, but it should be noted that Class III level inventory work has not been conducted there to date.

Because the topographic setting and geology suggest a low to moderate likelihood of the presence of cultural or paleontologic resources, proposed geologic sampling will have No Effect to Antiquities. No additional archaeological investigative work will be conducted in response to this proposed development. 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.

No Action Alternative – No impact

Action Alternative – The proponent would be granted a permit to test for gravel. Resources can be avoided in gravel exploration and assessment work, the proposed project will result in *No Effect* on *Antiquities* as defined under the Montana State Antiquities Act.

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.

Tarkio is located approximately 1,075' from the western border of section 35 and I-90 passes through the south half of the section. Gravel testing operations may be visible from Interstate I-90. The disturbances would be temporary and should not disrupt any motorists traveling on Interstate 90.

No Action Alternative – No impact

Action Alternative – The proponent would be granted a permit to test for gravel. Minimal disturbance may occur during testing operations. However, there are no long-term effects on aesthetics anticipated.

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 – No impact

Action Alternative – The action alternative is not expected to utilize or affect 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.

None known

No Action Alternative – No Impact

Action Alternative – The action alternative would have negligible impacts. The action alternative is not expected to affect any future activities 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 – No impact

Action Alternative – Typical safety risks for laborers working with mechanized equipment would be present, but the potential risk would be minimal with proper safety efforts.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

No Action Alternative – No impact

Action Alternative – The project is not expected to impede existing or future industrial, commercial or agricultural activities on section 35.

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 – No impact

Action Alternative – This project would have no effect on creating, moving, or eliminating 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.

No Action Alternative – No impact

Action Alternative – Negligible impacts expected

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 – No impact

Action Alternative – Negligible impacts expected

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.

There are no known zoning or management plans overlying the project area.

No Action Alternative – No Impact

Action Alternative – Negligible impacts expected

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.

This tract has public access available.

No Action Alternative – No Impact

Action Alternative – Impacts to outdoor recreation would occur during testing operations. Noise and visual effects will occur for species in the area that sportsman may be targeting. The length of this project is not expected to permanently disrupt wildlife species. This site is not designated as a wilderness 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 – No impact

Action Alternative – No impacts expected

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

No Action Alternative – No impact

Action Alternative – No impacts expected

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

No Action Alternative – No impact

Action Alternative – No impacts expected

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 – No impact

Action Alternative – This project will provide the trust with the potential for future development of aggregate resources and royalty income. The permit fee for the action alternative is $25.00.

Future development of projects is not expected to be hindered by the requested action. The project is not expected to significantly impede the existing surface of section 35.

EA Checklist Prepared By:	**Name:** Thomas Palin **Title:** Mineral Resource Specialist	**Date:** December 15, 2022

V. FINDING

25. ALTERNATIVE SELECTED:

By constructing this Environmental Assessment, the Department has identified impacts on the environment based on two potential alternatives. The Department has selected the action alternative and will issue LHC, Inc. a gravel testing permit. The Department believes 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:

The granting of the requested aggregate test permit pits on this tract of State Trust Lands is not expected to result in, nor cause significant negative environmental impacts. The proposed action satisfies the Trust's fiduciary mandate and ensures the long-term productivity of the land. An environmental assessment is the appropriate level of analysis for the proposed action.
I conclude that all identified potential impacts will be mitigated by utilizing permit requirements, including the stipulations listed below.

1. The permit holder shall be in compliance with all applicable state and federal laws, rules, and regulations, including but not limited to those concerning safety, environmental protection, reclamation, drone flight requirements for photography and topographic mapping over the site, and sage grouse requirements.

2. Topsoil/sod will be stockpiled separately from subsoil for reclamation. The licensee shall fill holes with subsoil before covering them with topsoil and sod. All holes must be filled and reclaimed immediately prior to moving on to the next hole.

3. Geologic, geochemical/geophysical information (including but not limited to detailed sample site locations, areas disturbed by gravel pit testing, and sample results for each corresponding sample site) if collected for the tract will be provided to Minerals Management Bureau, TLMD MT-DNRC with a report on exploration activities. The lessee shall also concurrently provide GPS, GIS, or other data, detailed maps, and/or aerial photos associated with the associated permit to MMB. The licensee should advise the department if they consider this information confidential.

4. Testing will be limited to north of I-90 contained within section 35.

5. LHC, Inc. agrees to avoid and not disturb historic buildings, foundations, or other cultural features on this tract.

6. Testing will be limited to occurring only under dry or frozen conditions, in order to prevent unnecessary impacts on soils.

7. The permit holder agrees to avoid and not disturb historic buildings, foundations, or other cultural features on this tract.

8. The proponent will seed disturbances with a Missoula Unit approved seed mix.

9. Any damages to fences incurred from testing will be repaired by the proponent.

10. The proponent shall be prohibited from carrying firearms while on duty.

11. Food, garbage, and other attractants will be stored in a bear-resistant manner.

12. Motorized public access will be restricted at all times on restricted roads that are opened with project activities.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

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

EA Checklist Approved By:	**Name:** Amy Helena **Title:** Missoula Unit Manager	
Signature:		**Date:** 12/15/2022

LHC, Inc. Tarkio Gravel Testing