

Environmental Assessment

Makoshika State Park Rockslide Clean-Up



November 2021



MONTANA FWP



Environmental Assessment
MEPA, NEPA, MCA 23-1-110 CHECKLIST

PART I. PROPOSED ACTION DESCRIPTION

1. **Type of proposed state action:** Emergency clean-up of a rockslide onto the main road at Makoshika State Park. A contractor will be hired to remove approximately 3,700 cubic yards of debris and re-establish a drainage ditch on the opposite side of the road from the slide. Stabilizing the sliding material and clearing the road is important to park visitation as access to land and facilities is diminished by approximately 75% due to the slide. This loose slide material is a potential safety hazard to staff and visitors.

2. **Agency authority for the proposed action: Montana Fish, Wildlife & Parks**
Montana Fish, Wildlife and Parks through its Parks Division has the authority to develop outdoor recreational resources in the state per 23-2-101 Montana Code Annotated (MCA): *“for the purposes of conserving the scenic, historic, archaeological, scientific, and recreational resources of the state and providing their use and enjoyment, thereby contributing to the cultural, recreational and economic life of the people and their health.”*

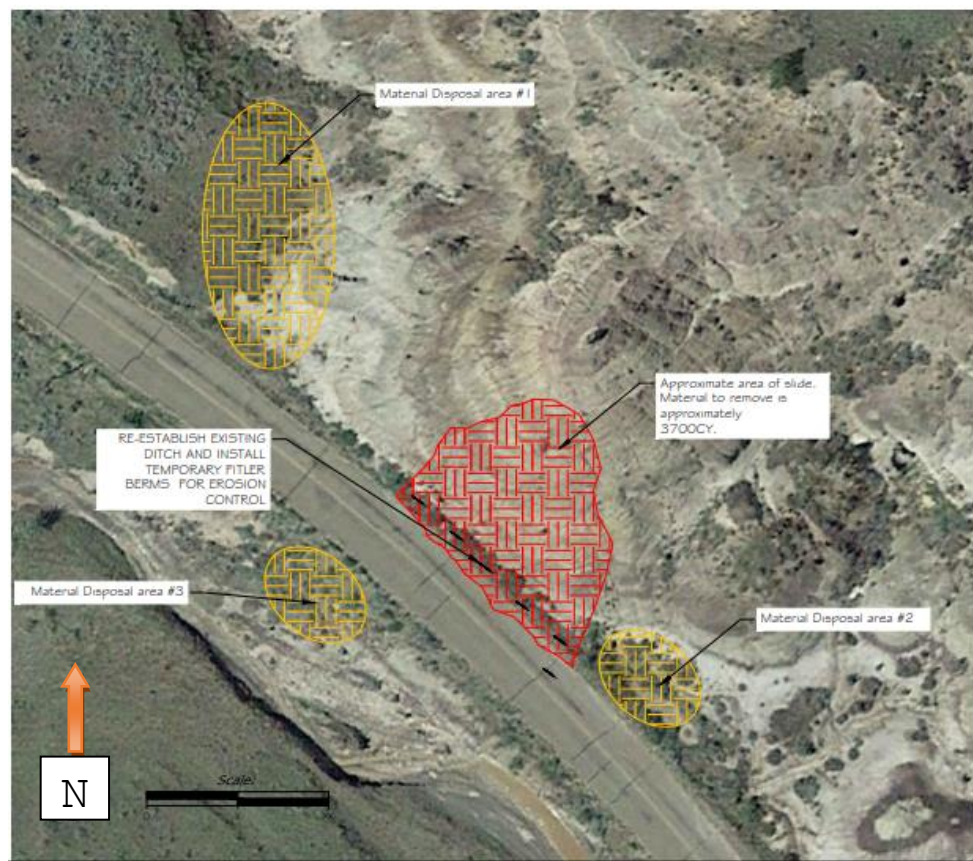
Statute 23-1-110 MCA and Administrative Rules of Montana (ARM) 12.2.433 guide public involvement and comment for the improvements at state parks, which this document provides. ARM 12.8.602 required the Department to consider the wishes of the public, the capacity of the site for the development, environmental impacts, long-range maintenance, protection of natural features and impacts on tourism as these elements relate to development or improvement to state parks. This document describes the proposed project in relation to this rule.

Statute 23-1-127 Montana Code Annotated (MCA) addresses the need and priority to properly maintain existing park infrastructure. Specifically:
“implementation of the good neighbor policy requires that priority is to be given to maintenance of existing facilities [and] upkeep of established trails, roads, parking areas, boat docks, and similar facilities existing in state parks and fishing access sites.”

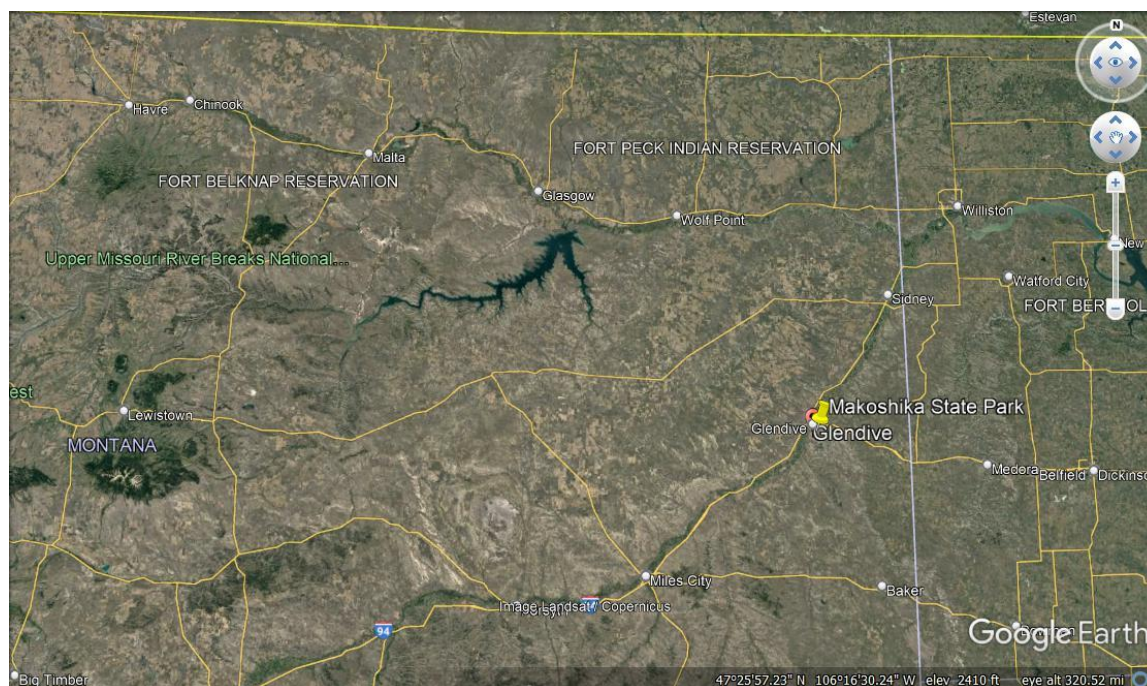
3. **Anticipated Schedule:**
Estimated Commencement Date: 12/6/2021
Estimated Completion Date: 05/01/22
Current Status of Project Design (% complete): 0%

4. **Location affected by proposed action (county, range, and township – included map):** S12 T 15N R55E; Latitude 47° 4'20.23" N, Longitude 104°41'21.23" W.
Map is attached with information.

Project Area in Makoshika State Park



Makoshika State Park Location



5. Project size -- estimate the number of acres that would be directly affected that are currently:

	<u>Acres</u>		<u>Acres</u>
(a) Developed:		(d) Floodplain	<u>0</u>
Residential	<u>0</u>		
Industrial	<u>0</u>	(e) Productive:	
(existing shop area)		Irrigated cropland	<u>0</u>
(b) Open Space/	<u>0.218</u>	Dry cropland	<u>0</u>
Woodlands/Recreation		Forestry	<u>0</u>
(c) Wetlands/Riparian	<u>0</u>	Rangeland	<u>0</u>
Areas		Other	<u>0</u>

6. Permits, Funding & Overlapping Jurisdiction.

(a) **Permits:** Montana Fish, Wildlife, and Parks will be responsible for all required permits for this project.

(b) **Funding:** Montana Fish, Wildlife, and Parks: \$32,973

7. Narrative summary of the proposed action:

Makoshika State Park was designated a state park in 1953 and is Montana's largest state park with a total of 11,501 acres. In the first three quarters of 2021, Makoshika State Park received more than 128,000 visitors. The park has many amenities including a campground, visitor center, 11 designated trails, pavilion, archery area, 200-seat amphitheater, and a PDGA disc golf course. The state park is known for paleontology resources as nine species of dinosaur fossils have been found in the park. The park visitor center has a lab where fossils are studied and curated. Museum of the Rockies paleontologists frequent the park to work in the lab and provide public paleontological interpretation. In 2017 Makoshika State Park was voted by the public as USA Today's number one attraction in the state of Montana.

Because of the geologic composition of the park, rockslides after heavy precipitation are common. Recently, an early snowstorm caused a section of rock to collapse onto the main road that runs through the park. Stabilizing the sliding material and clearing the road is important to visitation at Makoshika State Park as park access is diminished by nearly 75%. This loose material also puts visitors and staff at risk of injury when they are near the slide area. An emergency clean-up of this area will include material removal and the re-establishment of a drainage ditch to reroute future precipitation.

Proposed Action: An excavation crew will remove all rock material that is on the road and the rock material above the road that presents an imminent danger for additional slide occurrence (approximately 3,700 cubic yards total). The action will also re-establish a drainage ditch to reroute future precipitation.

Need for the Action: The rockslide presents a significant safety concern for visitors and staff, as well as restrict access to nearly 75% of the park land.

Objectives for the Action(s): The objective for this project is to re-establish a safe park environment and clean up all materials from the rock slide, reroute future precipitation to help prevent future slide risk, and reopen the road for access to the park land and amenities above the switchbacks. The project will also protect the existing road infrastructure within the park.

8. Description and analysis of reasonable alternatives:

Alternative A: No Action

If no action is taken, safe access to park land and facilities past the Cains Coulee campground will not exist. The existing slide will remain active and will remain a safety hazard. The road could be damaged by the slide activity.

Alternative B: Proposed Action

The project will allow the road to be reopened for travel into the rest of the park and remove a significant safety risk to visitors and staff. The re-establishment of a drainage ditch will reduce risk of a future rockslide in this area and protect the road.

Alternative C: Clearing Materials without a Drainage Ditch

Clearing the road of all materials will allow access to the rest of the park and remove a significant safety risk to visitors and staff. Without a re-established drainage ditch, this area will be at a higher risk of sliding again.

9. **Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:**
Montana Fish, Wildlife and Parks will complete the project utilizing a contractor and consultant.

PART II. ENVIRONMENTAL REVIEW CHECKLIST

Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. <u>LAND RESOURCES</u> Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Soil instability or changes in geologic substructure?				X		1A
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?		X				
c. Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?		X				
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?				X		1E

1A. Soil stability in the area of the slide will be increased temporarily as the work to remove the existing slide material is conducted. Once the work is complete, the risk of further soil instability is expected to return to baseline conditions given the soil composition of the park.

1E. The re-establishment of a drainage ditch will decrease the risk of a landslide happening again in this area.

2. <u>AIR</u> Will the proposed action result in:	IMPACT *					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Emission of air pollutants or deterioration of ambient air quality?			X			2A
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				

2A. Air quality may have a temporary and minor impact by the release of particulate material into the air when the slide material is moved to the depositional areas and by the operation of diesel-powered excavation equipment in completing that task.

3. <u>WATER</u> Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen, or turbidity?		X				
b. Changes in drainage patterns or the rate and amount of surface runoff?			X			3B
c. Alteration of the course or magnitude of floodwater or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				

3B. A drainage ditch will be re-established after the slide material is removed. The proposed action is expected to improve runoff conditions during precipitation events and help prevent future safety hazards.

4. <u>VEGETATION</u> Will the proposed action result in?	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Changes in the diversity, productivity, or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?		X				
b. Alteration of a plant community?			X			4B
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?		X				
f. For P-R/D-J, will the project affect wetlands, or prime and unique farmland?		X				

4B. Limited vegetation will be covered with slide material in depositional areas 1 through 3 as listed on the project map (page 3) resulting in a minor alteration of the plant community.

5. <u>FISH/WILDLIFE</u> Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Deterioration of critical fish or wildlife habitat?		X				
b. Changes in the diversity or abundance of game animals or bird species?		X				
c. Changes in the diversity or abundance of nongame species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				

B. HUMAN ENVIRONMENT

6. <u>NOISE/ELECTRICAL EFFECTS</u> Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Increases in existing noise levels?			X			6A
b. Exposure of people to sever or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				

6A. Removal of the slide material will be accomplished with construction equipment (excavator, backhoe, etc.) that will cause a minor and temporary increase in noise levels at the project site.

7. <u>LAND USE</u> Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				

8. <u>RISK/HEALTH HAZARDS</u> Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Affect an existing emergency response or emergency evacuation plan, or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				

9. <u>COMMUNITY IMPACT</u> Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				

10. <u>PUBLIC SERVICES/TAXES/UTILITIES</u> Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?			X			10B
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased use of any energy source?		X				
e. Define projected revenue sources		X				
f. Define projected maintenance costs.		X				

10B. When the projected is completed all areas of Makoshika State Park will be accessible, potentially increasing visitation and spending at the park and in the surrounding communities. That activity may result in a minor increase to local revenue.

11. <u>AESTHETICS/RECREATION</u> Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		X				
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report.)			X			11C

11C. Clearing the road allows access to existing recreational opportunities within the park.

12. <u>CULTURAL/HISTORICAL RESOURCES</u> Will the proposed action result in:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Destruction or alteration of any site, structure, or object of prehistoric historic, or paleontological importance?	X					
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				

12a. No known cultural or paleontological resources have been impacted by the slide, and cleanup will occur with a cultural resource monitor on-site to watch for artifacts or archaeological features. This monitoring and related reporting will occur in consultation with the State Historic Preservation Office and the relevant Tribal Historic Preservation Offices, in keeping with the Montana Antiquities Act and related ARMs.

SIGNIFICANCE CRITERIA

13. <u>SUMMARY EVALUATION OF SIGNIFICANCE</u> Will the proposed action, considered as a whole:	IMPACT					
	Unknown	None	Minor	Potentially Significant	Can Impact Be Mitigated	Comment Index
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		X				
b. Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				

PART III. NARRATIVE EVALUATION AND COMMENT

Makoshika State Park is an important paleo and archeological site for the state of Montana and the United States. The state park is an important part of Montana tourism. Out of the 56 Montana State Parks, Makoshika State Park was listed number seven in visitation in the first three quarters of 2021 with over 128,000 visitors enjoying the park. Clearing the road of all rock debris will allow visitors and staff access to park land and facilities beyond Cains Coulee campground. A re-established drainage ditch will mitigate effects of future precipitation. Based on this analysis, an Environmental Assessment is the appropriate level of analysis and an Environmental Impact Statement is not required.

PART IV. EA PREPARATION

- 1. Based on the significance criteria evaluated in this EA, is an EIS required? (YES/NO)? No**

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.

Based on an evaluation of impacts to the physical and human environment under MEPA, this environmental review revealed no significant negative impacts from the proposed action; therefore an EIS is not necessary and an environmental assessment is the appropriate level of analysis in determining the significance of impacts.

- 2. Person(s) responsible for preparing the EA:**

Alexis Shannon, Montana State Parks AmeriCorps Member

Brian Burky, Region 7 Park Manager, Montana Fish Wildlife and Parks

- 3. List of agencies or offices consulted during preparation of the EA:**

Montana Fish, Wildlife and Parks

Montana Fish, Wildlife and Parks Design and Construction Bureau

Montana Fish, Wildlife and Parks Heritage Resources Program

APPENDIX A
23-1-110 MCA
PROJECT QUALIFICATION CHECKLIST

Date:

Person Reviewing:

Project Location: **Makoshika State Park**

Description of Proposed Work:

The following checklist is intended to be a guide for determining whether a proposed development or improvement is of enough significance to fall under 23-1-110 rules. (Please check ☐ all that apply and comment as necessary.)

- ☐ A. New roadway or trail built over undisturbed land?
Comments:
- ☐ B. New building construction (buildings <100 sf and vault latrines exempt)?
Comments:
- ☒ C. Any excavation of 20 c.y. or greater?
Comments: *removing approximately 3700 c.y. of loose rock from the road*
- ☐ D. New parking lots built over undisturbed land or expansion of existing lot that increases parking capacity by 25% or more?
Comments:
- ☐ E. Any new shoreline alteration that exceeds a doublewide boat ramp or handicapped fishing station?
Comments:
- ☐ F. Any new construction into lakes, reservoirs, or streams?
Comments:
- ☐ G. Any new construction in an area with National Registry quality cultural artifacts (as determined by State Historical Preservation Office)?
Comments:
- ☐ H. Any new above ground utility lines?
Comments:
- ☐ I. Any increase or decrease in campsites of 25% or more of an existing number of campsites?
Comments:
- ☐ J. Proposed project significantly changes the existing features or use pattern, including effects of a series of individual projects?
Comments:

If any of the above are checked, 23-1-110 MCA rules apply to this proposed work and should be documented on the MEPA/HB495 CHECKLIST. Refer to MEPA/HB495 Cross Reference Summary for further assistance.

Appendix B
Tourism Report
MONTANA ENVIRONMENTAL POLICY ACT (MEPA)/HB652 (Bond Bill)

The Montana Department of Fish, Wildlife and Parks has initiated the review process as mandated by HB652 (Bond Bill) and the Montana Environmental Policy Act in its consideration of the project described below. As part of the review process, input and comments have been solicited Helena, MT 59601

Project Name: Makoshika State Rockslide Clean-Up

Project Location: Makoshika State Park, Dawson County.

Project Description: Approximately 3700 c.y. of rock has slid into the main road at Makoshika State Park after a heavy snowfall. The rock material will be cleared from the road and a drainage ditch will be re-established on the opposite side of the road to help mitigate effects of heavy precipitation in the future.

1. Would this site development project have an impact on the tourism economy?
NO **YES** If YES, briefly describe:

Clearing the road of debris will create a safer environment for staff and visitors and will provide access to the portion of the park beyond the slide. Currently only about 25% of the park is accessible due to the slide. This action will help protect the park road from damage.

Over 125,000 annual visitors come to Makoshika State Park to experience incredible badlands scenery and recreational opportunities. It is important that visitors are provided a safe way to access the entirety of the park and that the park roads are protected from damage.

Does this impending improvement alter the quality or quantity of recreation/tourism opportunities and settings?

NO **YES** If YES, briefly describe:

Yes, as described, the project has the potential to improve quality and quantity of tourism and recreational opportunities at Makoshika State Park. The project will also improve visitor safety and protect the park infrastructure.

Signature



Date: 12/13/21