

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**Environmental Assessment**

**Water Protection Bureau**

**Name of Project:** Paleo Search, Inc.

**Location of Project:** Hauser Lake

**City/Town:** Helena

**County:** Lewis and Clark

**Type of Project:** Montana Pollutant Discharge Elimination System (MPDES) permit renewal for a major privately owned treatment works.

**Description of Project:**

The Water Protection Bureau is renewing an MPDES permit to regulate point source discharges of pollutants to state surface waters from two suction dredges operating on Hauser Lake.

The Montana Department of Environmental Quality (DEQ) received a renewal application from Paleo Search for renewal of the discharge permit MPDES No. MT0025020 on October 20, 2014. DEQ deemed the application complete in a letter to the permittee dated October 31, 2014, and proposed to renew the applicant's permit.

**Agency Action and Applicable Regulations:**

The proposed action is to renew the MPDES permit for a five-year cycle.

ARM Title 17, Chapter 30, Subchapter 2 – Water Quality Permit Application and Annual Fees.

ARM Title 17, Chapter 30, Subchapter 5 – Mixing Zones in Surface and Ground Water.

ARM Title 17, Chapter 30, Subchapter 6 – Surface Water Quality Standards.

ARM Title 17, Chapter 30, Subchapter 7 – Nondegradation of Water Quality.

ARM Title 17, Chapter 30, Subchapter 12 – MPDES Effluent Limitations and Standards, Standards of Performance, and Treatment Requirements

ARM Title 17, Chapter 30, Subchapter 13 – MPDES Permits

Montana Water Quality Act, MCA 75-5-101 *et. seq.*

**Summary of Issues:**

The permit will ensure compliance with the Montana Water Quality Act and protection of the beneficial uses of the receiving waters. The reissuance of this permit retains the previous limits for turbidity and oil and grease. The permit includes technology based effluent limitations in the form of best management practices to limit sediment and oil and grease pollution.

**Affected Environment & Impacts of the Proposed Project:**

Y = Impacts may occur.

N = Not present or No Impact will likely occur.

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	<p>[N] Suction dredging in Hauser Lake will typically involve removing one to four feet of gravel, cobbles and rocks (raw material) from the lake bottom with the 8-inch suction dredge. The majority of gold is recovered from bedrock and bedrock cracks. The majority of sapphires are recovered from the top two feet of raw material overlying bedrock. The 16-inch dredge will typically be used to remove more than four feet of overburden in a work area before the 8-inch dredge is used to recover gold and sapphires.</p> <p>The permittee will be required to obtain a 310 permit from the Lewis and Clark Conservation District (LCCD), as required under Montana’s Natural Streambed and Land Preservation Act. The former 310 permit held by the permittee for this facility required that “dredge work must take place using a grid pattern, allowing materials to re-distribute evenly along the stream bottom.”</p>
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	[N] No impact will likely occur. Existing effluent limitations will be retained in the renewed permit. These effluent limitations will protect designated and existing uses of the receiving water.
3. AIR QUALITY: Will pollutants or particulates be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N] Large engines power the suction dredges. Air pollutants from the engines that power the suction dredge are not expected to emit any more air pollutants than from a large-sized recreational boat engine.
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N] Suction dredging will take place on the lake bottom at depths from 15 to 50 feet (10 feet in area S-4) where little or no vegetation grows
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	[N] Effluent limitations will protect aquatic/wildlife uses. The permittee will be required to obtain a 310 permit from the Lewis and Clark Conservation District (LCCD), as required under Montana’s Natural Streambed and Land Preservation Act. The former 310 permit held by the permittee limited operations to no less than 15 feet of depth and further than 20 feet from shore, except for location S-4, where work was permitted within 10 feet of shore. The 310 permit also stated that “FWP will work with MGS to identify critical areas for spawning and swim-up fry. FWP will conduct site specific surveys to determine which specific areas should be avoided at certain times of year.”

**IMPACTS ON THE PHYSICAL ENVIRONMENT**

<p>6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?</p>	<p>[N] No impact will likely occur.</p> <p>Spiny softshell and snapping turtles are two species of concern which may be found in or along the receiving water. The suction dredging operating will be operating in water of depths from 10-50 feet, and will not disturb shoreline habitat. Compliance with all pertinent aquatic life standards was demonstrated during the development of this permit.</p> <p>Additional species of concern include Townsend's big eared bat, black tailed prairie dog, golden eagle, greater sage grouse, and the greater short-horned lizard. No other threatened or endangered species reside within the Township and Range of the facility.</p> <p>The divide bladderpod is an identified plant species of concern in the vicinity of Hauser Lake. The suction dredging will occur in open water and will not affect habitat of this species.</p>
<p>7. SAGE GROUSE EXECUTIVE ORDER: Is the project proposed in core, general or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program (Program) at: <a href="http://dnrc.mt.gov/divisions/cardd/sage-grouse?">http://dnrc.mt.gov/divisions/cardd/sage-grouse?</a> If yes, did the applicant attach documentation from the Program showing compliance with Executive Order 12-2015 and the Program's recommendations? If so, attach the documentation to the EA and address the Program's recommendations in the permit. If project is in core, general or connectivity habitat and the applicant did not document consultation with the Program, refer the applicant to the Sage Grouse Habitat Conservation Program.</p>	<p>[N] DEQ has verified the facility is not within core, general, or connectivity sage grouse habitat.</p>
<p>8. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p>[N] Based upon prior consultations with the Cultural Records manager at the Montana Historical Society, as long as the project does not disturb the shoreline or any previously undisturbed land around the lake, the record manager believes there is low likelihood that cultural properties will be impacted at this site.</p> <p>Suction dredging will not occur at shoreline areas. The suction dredge operator leases about six acres of land on the west side of the Missouri River below Canyon Ferry Dam. This area is used as a staging, storage and resting area in support of the dredging operation.</p> <p>A review of the national register of historic places indicates that no registered historic sites are located in the vicinity of the staging area.</p>
<p>9. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?</p>	<p>[N] The two dredges will be docked about 1/2 mile below Canyon Ferry Dam. Both dredges are visible by boaters, fisherman and others recreating in Hauser Lake. The engines powering the suction dredges are not expected to produce any more noise than a large powerboat on the water.</p>

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
10. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed)	[N] No impact will likely occur.
11. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	<p>[N] The Department of Natural Resources and Conservation (DNRC) has stated if suction dredges operate on the historic Missouri River channel in Hauser Lake, which is owned by the State of Montana, a metalliferous permit from that state agency would be required. DNRC will address the metalliferous permit.</p> <p>Phillips 66 owns and operates a 6-inch refined petroleum pipeline which crosses Hauser Lake at the Eldorado Bar on the east side and the Danas Bar on the west side Hauser Lake. This location is approximately 1.5 miles upstream from where Prickly Pear Creek enters Hauser Lake (Latitude 46.7274, Longitude 111.8663). The pipeline crossing has signs on both river banks. The pipeline sits on the river bed and is operated at approximately 1800 pounds per square inch (psi). The pipeline has been in operation since 1960.</p> <p>The proposed project does not include the area of Hauser Lake where the pipeline crosses the lake.</p>

<b>IMPACTS ON THE HUMAN ENVIRONMENT</b>	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
12. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N] Buoys will be used to identify the location of anchor lines. The diver operating the suction dredge intake hose is usually working on the lake bottom directly in front of the dredge and should be protected from recreational boaters, skiers and fishermen.
13. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N] The project is a commercial venture that may increase the amount of gold and sapphires introduced into the local and regional economy.
14. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N] No impact will likely occur.
15. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N] State taxes may be collected on the recovered minerals if the project is successful.
16. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N] No impact will likely occur.
17. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] The Bureau of Land Management (BLM) owns and manages a significant portion of the land surrounding Hauser Lake. Management of this area is assessed under BLM's Headwater Resource Area Resource Management Plan, published in 1984. The plan makes no mention of this activity or any related activities within Hauser Lake.

<b>IMPACTS ON THE HUMAN ENVIRONMENT</b>	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
18. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N] Hauser Lake is heavily used by boaters, water skiers, fisherman and others for recreation in the summer. Much of the land on the east side of the lake between Canyon Ferry Dam and Hauser Dam is Bureau of Land Management (BLM) and Helena National Forest land and open to the public. Most of the land on the west side of the lake is privately owned. However, there is a boat launching area, a campground and a day use area on the west side of the lake near the York Bridge; these areas are managed by BLM and all three areas have boat ramps.  The discharge of effluent from the suction dredges will not affect recreational areas or opportunities within Hauser Lake.
19. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N] No impact will likely occur.
20. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N] No impact will likely occur.
21. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N] No impact will likely occur.
22. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N] Not present.
23(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[N] Not present.
23(b). PRIVATE PROPERTY IMPACTS: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? If not, no further analysis is required.	[N] Not present.
23(c). PRIVATE PROPERTY IMPACTS: If the answer to 21(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives. The agency must disclose the potential costs of identified restrictions.	[N] Not present.

24. Description of and Impacts of other Alternatives Considered: None

25. Summary of Magnitude and Significance of Potential Impacts: None

26. Cumulative Effects: None

27. Preferred Action Alternative and Rationale:

The preferred action is to reissue the MPDES permit. This action is preferred because the permit program provides the regulatory mechanism for protecting water quality by enforcing the terms of the MPDES permit.

**Recommendation for Further Environmental Analysis:**

EIS     More Detailed EA     No Further Analysis

Rationale for Recommendation: An EIS is not required under the Montana Environmental Policy Act (MEPA) because the project lacks significant adverse effects to the human and physical environment.

28. Public Involvement:

A 30-day public comment period will be held.

29. Persons and agencies consulted in the preparation of this analysis: None

**EA Checklist Prepared By:**

Derek Fleming

**Approved By:**

---

Jon Kenning, Chief  
Water Protection Bureau

---

Date