

DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment

Permitting and Compliance Division
Water Protection Bureau

Name of Project: Montana Gold and Sapphires, Inc.

Type of Project: Suction dredge mining for gold and sapphires

Location of Project: Hauser Lake

City/Town: Helena

County: Lewis and Clark

Description of Project: Montana Gold and Sapphires, Inc. (MGS) proposes to use two suction dredges docked on the west side of Hauser Lake about one-half mile below Canyon Ferry Dam to mine for gold and sapphires in Hauser Lake. The 8-inch dredge is 16-feet wide and 30-feet long with a triple sluice box located on the rear deck. The pump capacity is 600 gallons per minute (gpm) [0.288 million gallons per day (mgd) based on an 8-hour work day]. Raw material (gravel, cobbles and rocks) and water are pumped from the river bottom into the head box. From the head box, raw material falls on to a 1/8-inch minus screen. Raw material flows over the 1/8-inch screen to the main sluice box and then to the dump area where it falls into the lake. Gravel less than 1/8-inch flows from the head box to two side sluice boxes, one on either side of the main sluice box. Gold and sapphires are separated out by gravity in the side sluice boxes. The 8-inch dredge can process a maximum of 8 cubic yards of raw material per hour.

The 16-inch dredge is 25-feet wide and 50 feet long with a double sluice box located on the rear deck. The 16-inch dredge will be used infrequently for removing one to four feet of overburden material, when necessary, before the 8-inch dredge is used for recovering gold and sapphires. The pump capacity is 4500 gpm (2.16 mgd based on an 8-hour work day). Raw material and water are pumped from the lake bottom into the head box that contains a 2-inch minus screen. Cobbles and rocks greater than 2-inches fall into the dump chute to the lake bottom. The 16-inch dredge returns over-sized material through a chute that extends three feet into the receiving water. Gravel and cobbles less than 2-inches flow, with water, from the head box into two side sluice boxes where gold and sapphires are separated out before the 2-inch material enters the dump chute and falls to the lake bottom. The 16-inch dredge can process up to 25 cubic yards of raw material per hour.

MGS has a lease agreement with Pennsylvania Power and Light (PPL) “for the purpose of operating a dredging operation on said lands that are situated beneath the waters of Hauser Lake”. This land includes “all of those lands lying below the surface of Hauser Lake which are owned by the Montana Power Company (now PPL) and which are within the boundary of Federal Energy Regulatory Commission Project Number 2188”. The lease agreement includes

approximately 2200 acres of land beneath Hauser Lake between Canyon Ferry Dam and Hauser Dam, excluding the main historic Missouri River channel, which is owned by the State of Montana.

The permittee plans to operate one dredge at a time for up to eight hours a day, six days a week, eight months of the year. The applicant does not plan to operate dredges during winter months or night time hours.

A 20-gallon gasoline tank is attached to the 8-inch suction dredge pump. A smaller fuel tank is attached to the air compressor. Fuel tanks are also present on the 16-inch dredge. Gasoline is transported by boat to the barge in 5-gallon plastic containers.

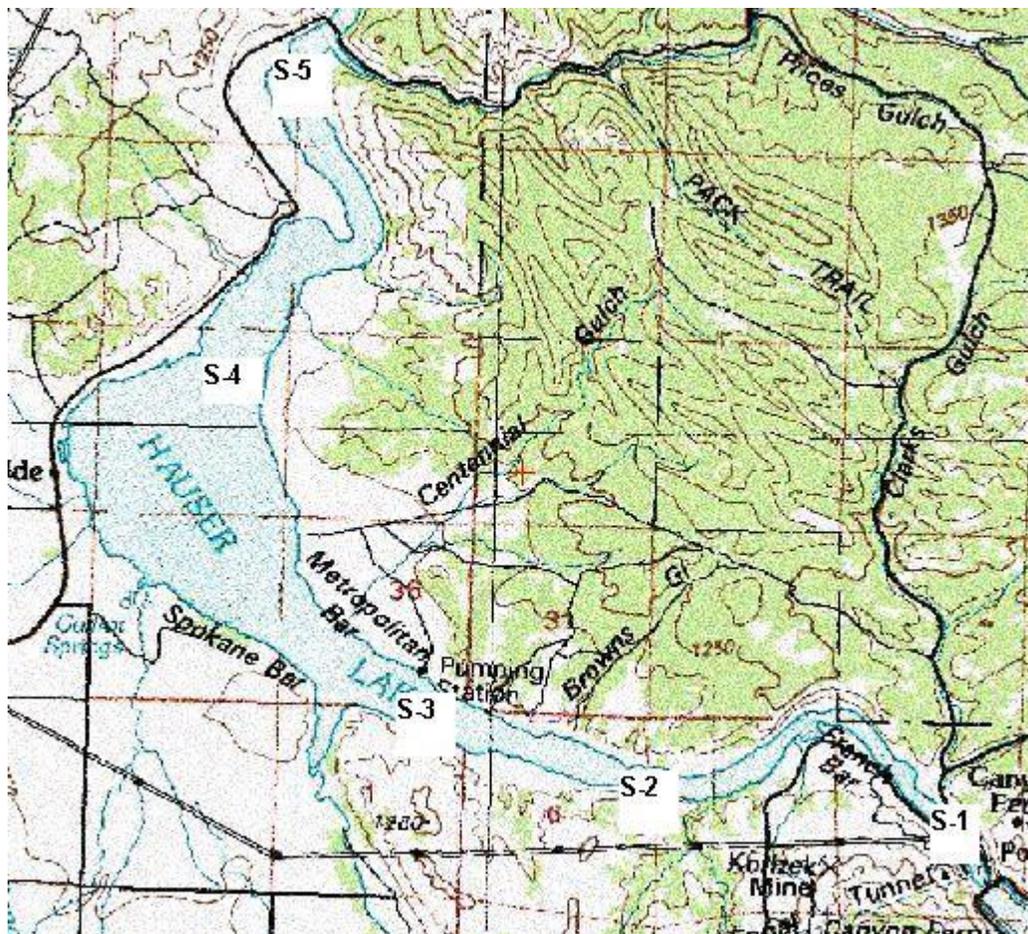
No sanitary wastes will be discharged from the barges. Workers will use toilets at FWP fishing access sites.

Five work sites in Table 1, which numbers correspond to the sites marked on Figure 1, are proposed for suction dredging in Hauser Lake during this five-year permit cycle:

Table 1. Proposed Suction Dredging Locations

Number	Location	Dimensions (feet)	Size (acres)	Approximate Water Depth (feet)
S-1	Lower French Bar - 20 feet from the bank on the west side of Hauser Lake across from Riverside Campground	150 x 1,800	6	16-18
S-2	Mosquito Bar - 20 feet from the bank on the west side of Hauser Lake upstream from Brown's Gulch	150 x 2,500	9	16-30
S-3	Spokane Creek Bay - 20 feet from the bank on the west side of Hauser Lake 600 feet upstream from Spokane Creek Bay	150 x 2,250	8	16-23
S-4	Metropolitan Bar – 10 to 20 feet from the bank on the east side of Hauser Lake from Devil's Elbow upstream to Metropolitan Bar	800 x 6,500	119	10-20
S-5	Mouth of Trout Creek - 35 feet from the bank on the east side of Hauser Lake outside of Trout Creek Bay	125 x 650	2	30-50

Figure 1
Proposed Approximate Suction Dredging Locations



Agency Action and Applicable Regulations: The Department of Environmental Quality (DEQ) proposes to reissue a Montana Pollutant Discharge Elimination System (MPDES) permit for the project.

Discharges to surface waters classified B-1 (Hauser Lake) are subject to the specific water quality standards of ARM 17.30.623 (March 2006), Department Circular DEQ-7 (February 2006), as well as the general provision of ARM 17.30.635 through 637. In addition to these standards, dischargers are also subject to ARM 17.30 Subchapter 5 (Mixing Zones, November 2004) and Subchapter 7 (Nondegradation of Water Quality, June 2004).

During previous years, the permittee received three US Army Corps of Engineers permits (Section 10 Rivers and Harbors Act) for suction dredging in Hauser Lake. MGS applied to the COE in 2008 to renew the Section 10 permit.

On May 27, 2009 the Lewis and Clark County Conservation District (LCCD) approved the 310 permit (number LC-40-08) for MGS. The 310 permit is a Montana Natural Streambed and Land Preservation Act permit issued by the local conservation district for any activity that physically alters or modifies the bed or immediate banks of a perennial-flowing stream. Several recommendations are attached to the 310 permit approval to protect the fishery in Hauser Lake:

1. Permit term is limited to one year to allow review of impacts of survey activities. Monthly reports of mining activities, including mining dates and locations, would expedite evaluation of the effects of mining activities to the aquatic environment. The LCCD Board has the option to extend this permit for a term of one additional year at the conclusion of the permitted time.
2. Work should only take place in areas labeled S-1 through S-5 detailed on maps provided to Montana DEQ in MPDES permit MT-0025020 (detailed maps of work area were not provided with 310 application). Detailed information of each work area is outlined in letter to Corps of Engineers dated March 26, 2009. No mining should take place outside of these defined work areas.
3. Dredge work must take place using a grid pattern, allowing materials to re-distribute evenly along the stream bottom
4. No work shall take place in water depths less than 15 feet or within 20 feet of the existing shoreline. MGS will be allowed to work within 10 feet of the existing shoreline only at area S-4.
5. 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 the year.
6. Use of the 8 inch dredge only is approved at this time based on recommendations by FWP. Due to the larger volume of materials moved by the 16-inch dredge (25 cubic yards per hour) and the lack of operator control directly on the streambed, we feel that activities with this unit could have far more detrimental effects to fish habitat and water quality than the 8-inch dredge. It is also unknown at this time how the effluent from the 16-inch dredge varies from that of the 8-inch dredge. We feel that use of the 16-inch dredge requires separate review from the 8-inch dredge and a separate demonstration of the 16-inch dredge should be required prior to permitting.

In addition, the Conservation District's approval letter requested MGS to consider the following recommendation from the Department of Fish, Wildlife and Parks (FWP) in regards to safety concerns and water quality fisheries concerns:

Work activities need to be scheduled at times that would not interfere with recreational uses of the lake. FWP recommends no mining take place on weekends or holidays. Additional time restrictions may need to be put in place if recreational conflicts occur. Potential for recreational conflicts are greatest at area S-4 (on the east shore between Devil's Elbow and Metropolitan Bar)

which is near three high-use boat ramps. In 2007, Hauser Reservoir accounted for 47,696 angler days and generated over three million dollars in angling related expenses—this does not account for expenditures related to other recreational activities (e.g., pleasure boaters, jet skis).

Turbidity and water chemistry samples should be collected at each work site. Although turbidity and water chemistry at the demonstration site were near background levels, FWP is concerned that work at other sites could potentially produce more turbidity or mobilize heavy metals in the sediments. A fish consumption advisory is already in place in Hauser Reservoir due to elevated mercury levels in fish. Water quality concerns should be addressed directly with FWP

Summary of Issues: Suction dredging may reintroduce total recoverable metals, pesticides and PCBs contained in the sediment into the water column. Water quality monitoring in this MPDES permit will collect the necessary information to determine if pollutant levels are increased as the result of suction dredging.

Fish habitat should be protected by the operating conditions in the LCCD 310 permit.

Affected Environment & Impacts of the Proposed Project:

Y = Impacts may occur (explain under Potential Impacts). Include frequency, duration (long or short term), magnitude, and context for any significant impacts identified. Reference other permit analyses when appropriate (ex: statement of basis). Address significant impacts related to substantive issues and concerns. Identify reasonable feasible mitigation measures (before and after) where significant impacts cannot be avoided and note any irreversible or irretrievable impacts. Include background information on affected environment if necessary to discussion.

N = Not present or No Impact will likely occur. Use negative declarations where appropriate (wetlands, T&E, Cultural Resources).

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
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 LCCD 310 permit requires that “dredge work must take place using a grid pattern, allowing materials to re-distribute evenly along the stream bottom.</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT

<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?</p>	<p>[N] The surface area of Hauser Lake is 3,800 acres, with a mean depth of 26 feet and a maximum depth of 70 feet. The average water retention time in the lake is 8 days (Upper Missouri River Reservoir Fisheries Management Plan 2000-2009, FWP Fisheries Division, January 2000).</p> <p>The Missouri River at Hauser Lake is classified as B-1 according to Montana Water Use Classifications [ARM 17.30.610(1)(a)]. B-1 waters are to be maintained suitable for drinking, culinary and food processing purposes, after conventional treatment; bathing, swimming, and recreation, growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers; and agricultural and industrial water supply.</p> <p>Hauser Lake is on the 2006 303(d) list of impaired streams as partially impaired for aquatic life and cold water fishery. The probable sources of impairment are agriculture, silviculture activities, natural sources, unknown sources, highway/road/bridge runoff and impacts from hydrostructure flow regulation/modification. The probable causes of impairment are DDT, endosulfan, endrin aldehyde, mercury and dissolved oxygen.</p> <p>The primary pollutant from the suction dredge is turbidity. The water quality standard for turbidity in Hauser Lake is a maximum allowable increase of five (5) nephelometric turbidity units (NTUs) above naturally occurring turbidity (background in Hauser Lake).</p> <p>The following potential pollutants from the suction dredge operation are evaluated in the MPDES permit:</p> <p>Turbidity – Except for the samples taken during the demonstration on October 8, 2008, there are no previous turbidity data from the discharge. The previous permit contained the following effluent limit for turbidity: “At any point in the receiving stream 500 feet downstream (mixing zone length) of the dredge discharge point, the maximum allowable increase in turbidity over the natural receiving stream turbidity (measured 10 feet upstream of the discharge point) shall be five (5) NTUs”. This limit will remain in the renewal permit.</p> <p>Oil and Grease - The previous permit included a narrative statement concerning oil and grease: “The discharge shall contain no visible floating solids, foam, oil or grease. This permit will include a maximum daily limit of 10 mg/L of oil and grease [ARM 17.30.637(1)(b)]. In addition, a visible oil (or gasoline) film at any outfall is prohibited. Daily visible monitoring for an oil film will be</p>
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IMPACTS ON THE PHYSICAL ENVIRONMENT

required, and if an oil film is observed, a sample will be required to be collected and analyzed for oil and grease”.

A Best Management Plan is required to be written to control potential spillage of gasoline and oil and grease from storage containers, motors and other equipment on the barge or helper boat.

Sediment/Suspended sediment - There are no previous suspended sediment data from the discharge. The following sediment standard applies to B-1 water: No increases are allowed above naturally occurring concentrations of sediment or suspended sediment (except as permitted in 75-5-318, MCA), settleable solids, oil, or floating solids, which will or are likely to create a nuisance or render the waters harmful, detrimental, or injurious to public health, recreation, safety, welfare, livestock, wild animals, birds, fish, or other wildlife.

The proposed discharge will not add or increase the amount of sediment in Hauser Lake, therefore, the discharge complies with ARM 17.30.623(2)(f).

For purposes of this permit, TSS will be used to measure suspended sediment that may remain in the water column as the result of suction dredging. No effluent limit for suspended sediment will be included in this permit. TSS will be monitored to determine if a TSS limit will be necessary to control suspended sediment in the next permit.

Proposed work sites in Table 1 are away from littoral areas and in water 10-50 feet deep, which should be outside most fish spawning and rearing areas. There is no historical evidence that suspended sediment produced by the suction dredges in Hauser Lake rendered the waters harmful; however, suspended sediment may drift downstream and cause detrimental effects to benthic invertebrates and fish spawning habitat. If suspended sediment is produced from the suction dredging operation in deeper waters, it would likely settle in deeper water away from critical fish habitat. Operating restrictions in the LCCD 310 permit should protect critical fish habitat.

Metals – There are no metals effluent data (except from the demonstration sample). The previous permit did not contain effluent limits for metals. Sufficient metals data are not available to determine if there is a reasonable potential for metals that may be present in the sediment to be reintroduced into the water column above background metals concentrations present in the lake and exceed water quality standards for metals. Monitoring for metals will be included in this permit.

IMPACTS ON THE PHYSICAL ENVIRONMENT

Whole Effluent Toxicity (WET) – ARM 17.30.637(1)(d) requires that state water be free from substances attributable to discharges that create conditions that are harmful or toxic to human, animal, plant or aquatic life. In addition, acute water quality standards for aquatic life may not be exceeded in any portion of a mixing zone unless the Department specifically finds that allowing minimal initial dilution will not threaten or impair existing beneficial uses [ARM 17.30.507(1)(b)].

Hauser Lake is on the 2006 303(d) list as impaired for three organochlorine pesticides (in addition to mercury and dissolved oxygen). In addition, processing sediment in the suction dredge operation may increase metals concentrations in the receiving water. Potential organochlorine pesticides, PCBs and total recoverable metals reintroduced from the sediment into the water column may create conditions that are harmful or toxic to human, animal, plant or aquatic life. In order to ensure that the suction dredging operation does not create toxic conditions in Hauser Lake, WET testing is required.

The WET test determines the adverse toxic effects of effluent at specific concentrations using *Ceriodaphnia dubia* (water flea) and *Pimephales promelas* (fathead minnow). The permittee will be required to monitor toxicity in the effluent. To determine if the proposed suction dredging operation causes short-term (acute) or long-term (chronic) toxicity, quarterly acute and chronic WET testing of the effluent will be conducted on two species in accordance with EPA Region VIII WET control program (EPA, August 1997). No mixing zone for WET is allowed at Outfall 001 or Outfall 002 in this permit.

The permittee must provide additional information for the Department to evaluate and determine if potential organochlorine pesticides, PCBs and total recoverable metals that may be reintroduced into the water column as the result of suction dredging will exceed water quality standards and create conditions that are harmful or toxic to human, animal, plant or aquatic life. Additional data must be provided for each proposed dredge site listed in Table 1 (S-1, S-2, S-3, S-4 and S-5). Samples must be collected and analyzed during the first week the dredge operates in each of the proposed sites listed in Table 1.

One total recoverable metals (and hardness as CaCO₃), PCBs and organochlorine pesticides sample of the raw material (from the lake bottom) from each dredge site in Table 1 of the Fact Sheet (FS) must be collected and analyzed for the total recoverable metals in Table 2 of the FS and organochlorine pesticides and PCBs in Table 4 of the FS. One upstream sample of the receiving water must be collected (on the

IMPACTS ON THE PHYSICAL ENVIRONMENT

	<p>same day the raw material sample from the lake bottom is collected) and analyzed for total recoverable metals (and hardness as CaCO₃) from each site in Table 1 of the FS using the monitoring method described in Section VI.A of the FS. The difference in analytical results between the total recoverable metals from the raw material and the upstream sample will be used by the Department to determine if total recoverable metals, already present in the water column, or if organochlorine pesticides and PCBs that may be present in the raw material, are reintroduced to the water column during suction dredging. Copies of analytical results must be provided to the Water Protection Bureau as soon as they are available.</p>
<p>3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p>[N] Large engines power the suction dredge. 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 motor or engine.</p>
<p>4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?</p>	<p>[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.</p>
<p>5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?</p>	<p>[N] FWP manages Hauser Reservoir (and Holter and Canyon Ferry Reservoirs) as a high quality, cost-effective, multi-species fishery. Multi-species is defined as an attempt to maintain a high quality fishery with a mix of existing species present (Rainbow trout, Walleye, Yellow perch, Burbot, Brown trout, Kokanee salmon, Whitefish and Smallmouth bass) (Upper Missouri River Reservoir Fisheries Management Plan 2000-2009, FWP, Fisheries Division, January 2000). The FWP and the Pat Barnes Missouri River Chapter of Trout Unlimited expressed concerns about suction dredge activity impacting the fishery in Hauser Lake. FWP and Trout Unlimited are concerned that operations could disrupt aquatic habitat and damage fish spawning habit and fish nursery areas. FWP and Trout Unlimited are also concerned about conflicts between the suction dredge operation and fisherman, boaters and others using the lake for recreation. These issues are addressed and controlled in the LCCD 310 permit.</p> <p>The Natural Resource Information System report states that bald eagles, the Townsend's Big-eared Bat, gray wolves and wolverines have been observed in the area (the gray wolf and wolverine were observed only twice since 1908) but these species should not be</p>

IMPACTS ON THE PHYSICAL ENVIRONMENT	
	impacted by suction dredging because the project will occur on the water.
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>[N] The bald eagle is a threatened species. The gray wolf is an endangered species. The wolverine is a sensitive species. These species should not be impacted because the suction dredge project will take place in the water.</p> <p>There may be wetlands associated with small tributaries, such as Spokane Creek and Trout Creek, but the project will not operate in tributaries.</p>
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	[N] The Department contacted the Cultural Records manager at the Montana Historical Society about historical and archeological sites at the project area. 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. 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.
8. 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?	[N] The two dredges are docked about ½ mile below Canyon Ferry Dam. The 16-inch dredge is anchored off shore about 30 feet. The 8-inch dredge is tied to a dock along shore. Both barges are visible by boaters, fisherman and others using the Missouri River. The engines powering the suction dredges are not expected to produce any more noise than a large powerboat on the water.
9. 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]
10. IMPACTS ON OTHER	[N] The Department of Natural Resources and Conservation (DNRC) has stated if suction dredges operate on the historic Missouri River

IMPACTS ON THE PHYSICAL ENVIRONMENT

<p>ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?</p>	<p>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>Conocophillips 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. Future MPDES applications may include this area.</p>
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IMPACTS ON THE HUMAN ENVIRONMENT

RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?</p>	<p>[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.</p>
<p>12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?</p>	<p>[N] The project is a commercial venture that may increase the amount of gold and sapphires introduced into the local and regional economy.</p>
<p>13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.</p>	<p>[N] The operator may hire one or two assistants to help with the operation.</p>
<p>14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?</p>	<p>[N] State taxes may be collected on the recovered minerals if the project is successful.</p>

IMPACTS ON THE HUMAN ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N]
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N] The LCCD has placed all of the recommendations listed above in the Agency Action and Applicable Regulations section of this document into the 310 permit to protect the fishery habitat in Hauser Lake.
17. 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?	<p>[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.</p> <p>To avoid potential conflicts between the suction dredge operation and people recreating on the lake, the LCCD 310 permit requests that MGS consider the following recommendation from FWP: Work activities need to be scheduled at times that would not interfere with recreational uses of the lake. FWP recommends no mining take place on weekends or holidays. Additional time restrictions may need to be put in place if recreational conflicts occur. Potential for recreational conflicts are greatest at area S-4 near three high-use boat ramps (see Figure 1 in the FS).</p>
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N]

IMPACTS ON THE HUMAN ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N]
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N]
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N]
22(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]
22(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]

IMPACTS ON THE HUMAN ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
22(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.	[]

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

24. Summary of Magnitude and Significance of Potential Impacts: The MPDES permit will collect the necessary data to evaluate if the operation will reintroduce metals, organochlorine pesticides and PCBs in the sediment to the water column.

Fish habitat should be protected by the operating conditions listed in the LCCD 310 permit.

25. Cumulative Effects: To determine if total recoverable metals, already present in the water column, or if organochlorine pesticides and PCBs that may be present in the raw material, are reintroduced to the water column during suction dredging and will exceed water quality standards and create conditions that are harmful or toxic to human, animal, plant or aquatic life, MGS must provide additional information. Additional data must be provided for each proposed dredge site listed in Table 1 of the FS (S-1, S-2, S-3, S-4 and S-5). Samples must be collected and analyzed during the first week the dredge operates in each of the proposed sites listed in Table 1 of the FS.

One total recoverable metals (and hardness as CaCO₃), PCBs and organochlorine pesticides sample of the raw material (collected from the lake bottom) from each dredge site in Table 1 of the FS must be collected and analyzed for the total recoverable metals in Table 2 of the FS and organochlorine pesticides and PCBs in Table 4 of the FS. One upstream sample of the receiving water must be collected (on the same day the raw material sample from the lake bottom is collected) and analyzed for total recoverable metals (and hardness as CaCO₃) from each site in Table 1 of the FS using the monitoring method described in Section VI.A of the FS.

26. Preferred Action Alternative and Rationale: The preferred action is to issue the MPDES permit because the permit provides the regulatory mechanism for protecting water quality by enforcing the Montana Water Quality Act and rules.

Recommendation for Further Environmental Analysis:

EIS More Detailed EA No Further Analysis

Rationale for Recommendation:

27. Public Involvement: The Department will hold a 30-day public comment period.
28. Persons and agencies consulted in the preparation of this analysis:

Eric Roberts, Helena Area Fisheries Biologist, FWP
Jim Darling, Fisheries Habitat Protection Bureau Chief, FWP
Monte Mason, Minerals Management Bureau Chief, Department of Natural Resources & Conservation (DNRC)
Teresa Kinley, Hydrogeologist, DNRC
John Wilson, Trout Unlimited
Brent Esmoil, United States Fish and Wildlife Service
Dave Williams, BLM
Chris Evans, Lewis and Clark County Conservation District
Deb Blank, Corp of Engineer

EA Checklist Prepared By: John Wadhams
May 2009

Approved By:

Jenny Chambers, Chief
Water Protection Bureau

Date