

Montana DEQ

# Draft Environmental Assessment

Amendment 001 to Hard Rock Operating Permit No. 00044 - Meadow Holdings, LLC - Yellow Dog Mine - Proposed Reclamation Plan and Operating Plan Revision



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**Montana Department of Environmental Quality  
Air, Energy, & Mining Division  
Mining Bureau  
DRAFT ENVIRONMENTAL ASSESSMENT**

**COMPANY NAME:** Meadow Holdings, LLC

**DRAFT EA DATE:** April 13, 2022

**PROJECT:** Yellow Dog Mine - Amendment 001 - Proposed Reclamation Plan and Operating Plan Revision

**OPERATING PERMIT NO. 00044**

**LOCATION:** 46.253, -113.609

**COUNTY:** Granite

**PROPERTY OWNERSHIP:** FEDERAL \_\_\_\_\_ STATE \_\_\_\_\_ PRIVATE  X

**COMPLIANCE WITH THE MONTANA ENVIRONMENTAL POLICY ACT**

The Montana Environmental Policy Act (MEPA) requires preparation of an environmental impact statement for major actions taken by the State of Montana that may significantly affect the quality of the human environment. This environmental assessment (EA) is being prepared to determine whether DEQ's approval of the permit amendment proposed by Meadows Holdings, LLC (Meadows Holding) is a major state action significantly affecting the quality of the human environment. The EA will examine the proposed action and alternatives to the proposed action and disclose potential impacts that may result from the proposed and alternative actions. DEQ will determine the significance of impacts and the need to prepare an environmental impact statement based on consideration of the criteria set forth in the Administrative Rules of Montana (ARM) 17.4.608.

**PROPOSED ACTION**

Meadow Holdings is applying for Amendment 001 to update the Reclamation Plan and Operating Plan for the Yellow Dog Mine (Hard Rock Mine Operating Permit No. 00044); to increase the permit boundary from 28.4 acres to 286 acres; and to permit the use of a pipeline to transport water from the Yellow Dog Mine settling pond to an adjacent property for the use by Potentate Mining, LLC, (Potentate Mining) to process sapphire ore. Potentate Mining's processing of sapphire ore on the adjacent property would be covered by a separate operating permit to be held by Potentate Mining (pending Operating Permit No. 00200).

Sapphires were mined from near-surface deposits at the site covered by Permit 00044 in the 1980s and 1990s, but mining ceased by 1999. Meadow Holdings took assignment of the inactive permit on August 4, 2020, and submitted the Amendment 001 application on August 21, 2020. DEQ issued four deficiency letters during the application review process (September 18, 2020 and December 29, 2020; March 10, 2021 and June 3, 2021). Meadow Holdings provided responses to each review and its fourth submittal was received on July 16, 2021. DEQ determined the revised amendment application complied with the substantive requirements of the Metal Mine Reclamation Act (MMRA). Pursuant to Section 82-4-337(1)(e), Montana Code Annotated (MCA). On November 3, 2021, DEQ issued a complete and compliant determination and a draft permit.

**PURPOSE AND NEED**

DEQ’s purpose and need in conducting this environmental review is to act on the Amendment 001 application submitted by Meadow Holdings to revise the Reclamation Plan and Operating Plan for Operating Permit No. 00044 in accordance with the MMRA.

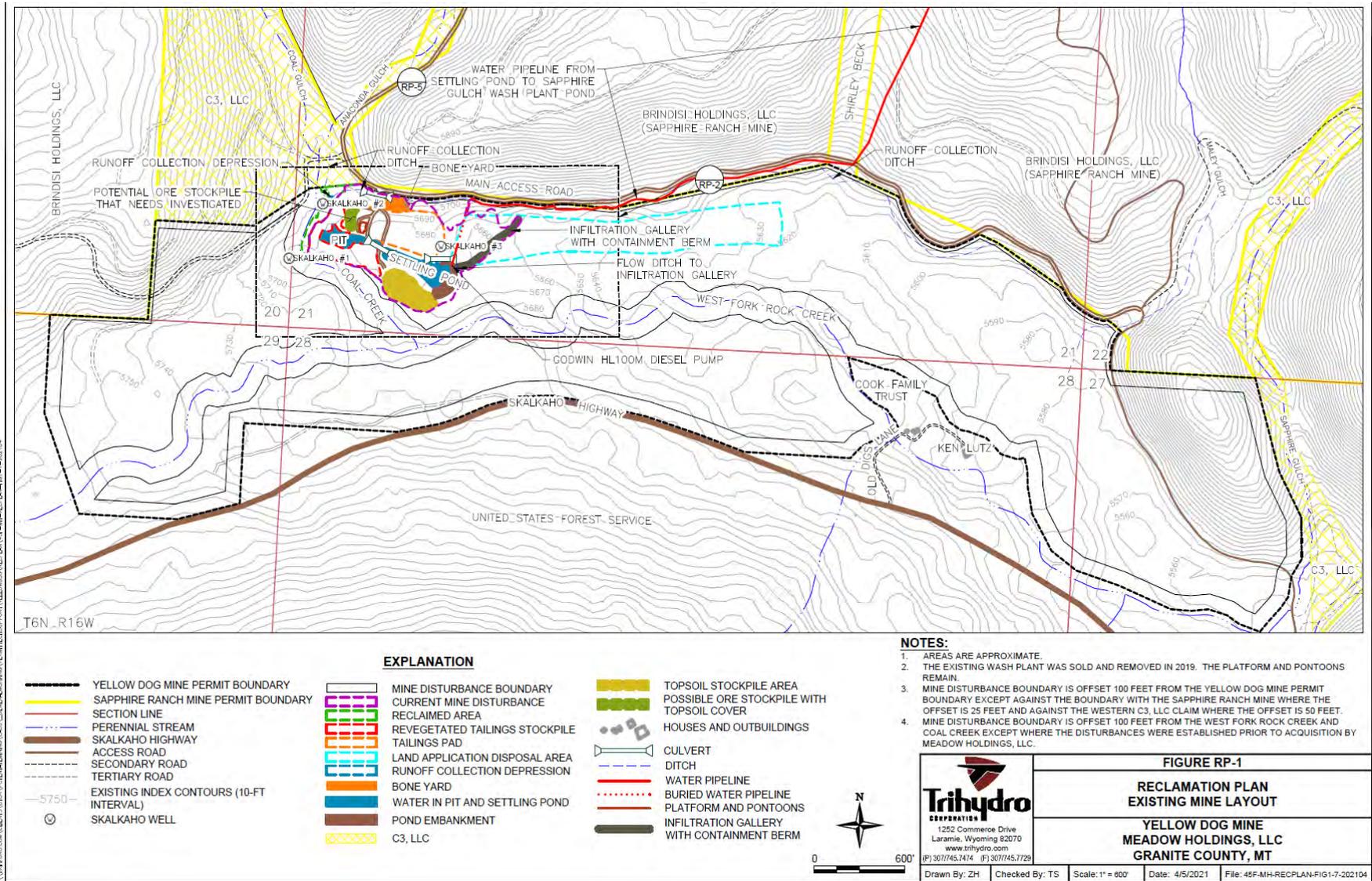
**Table 1: Summary of activities proposed in Amendment 001 to Operating Permit No. 00044.**

Summary of Activities Proposed in Amendment 001 to Operating Permit No. 00044	
General Overview	<p>The Yellow Dog Mine (Hard Rock Operating Permit No. 00044) has been inactive and partially reclaimed since 1999. Meadow Holdings purchased the property and took assignment of the permit from Skalkaho Grazing, Inc. in August 2020. As part of the permit transfer, DEQ required Meadow Holdings to post a reclamation bond for the existing permit and submit the application for Amendment 001 to update the Reclamation Plan to include interim reclamation tasks.</p> <p>In September 2020, Meadow Holdings conducted interim reclamation work prior to DEQ’s approval of Amendment 001. Meadow Holdings also installed a pump and pipeline system extending from the settling pond within the boundary of Operating Permit No. 00044 to the wash plant at the adjacent Sapphire Ranch Mine (Pending Operating Permit No. 00200). The disturbance associated with the pump and pipeline system was not authorized under existing Operating Permit No. 00044 and resulted in violations that DEQ described in a letter to Meadow Holdings dated September 29, 2020. The violation letter identified revision of the operating permit as the corrective action to address the violations. Therefore, installation and operation of the pump and pipeline system was incorporated into the Amendment 001 application (Response to the Third Deficiency Review of the Yellow Dog Mine Amendment 001, May 4, 2021).</p> <p>Amendment 001 seeks to place the Yellow Dog Mine in a state of “care and maintenance” while Meadow Holdings develops plans to either resume mining operations or begin final reclamation. If approved, Amendment 001 would provide the following changes to the existing permit: <b>1)</b> update the reclamation plan to include interim reclamation tasks intended to remedy Skalkaho Grazing’s failure to reclaim existing disturbances; <b>2)</b> expand the permit area from 28.4 acres to 286 acres to better align with the Meadow Holdings property boundary; and <b>3)</b> authorize the installation of the pump and pipeline system, and authorize the operation of the equipment to transfer pond water to the nearby Sapphire Ranch Mine (Potentate Mining - pending Operating Permit No. 00200). Meadow Holdings would need to request an additional permit modification and submit an updated reclamation bond before resuming mining activities at the Yellow Dog Mine beyond operation of the pump and pipeline system.</p>
Proposed Dimensions and Quantities of Disturbance in Amendment 001 to Operating Permit No. 00044	
Current Disturbance	<p>Meadow Holdings is currently permitted to:</p> <ul style="list-style-type: none"> <li>• Mine in the area known as the 1994 block. The current permit area is 28.4 acres; the current permitted disturbance area is 11 acres; and the total proposed disturbance for life of mine is 39.2 acres. Acreages are based on the August 1994 Operations Map by the former landowner and mine operator (Skalkaho Grazing Inc.).</li> <li>• Dispose of water through a land application disposal (LAD) area as approved in 1994. The LAD is located east of the 1994 block and encompasses 17.4 acres.</li> </ul>
Total new surface disturbance	<p>If Amendment 001 is approved, interim reclamation tasks would be conducted to reclaim the approximately 14 currently disturbed acres. The disturbance was determined based on aerial imagery and mapping. The permit area would increase from 28.4 acres to 286 acres and the permitted disturbance area would increase from 11 acres to 39.2 acres.</p>
Proposed Actions in Amendment 001 to Operating Permit No. 00044	
Duration and timing	<ul style="list-style-type: none"> <li>• Meadow Holdings commits to completing the interim reclamation tasks within two years of DEQ’s approval of Amendment 001.</li> <li>• Operation of the pump and pipeline system would occur for a period of approximately 40 years and is dependent on the water needs at the nearby Sapphire Ranch Mine.</li> </ul>
Equipment	<ul style="list-style-type: none"> <li>• The interim reclamation work at the Yellow Dog Mine would be completed using typical construction equipment (excavator, backhoe, dump truck, etc.)</li> <li>• The pipeline is constructed of high-density polyethylene (HDPE) and extends 1.8 miles from the Yellow Dog Mine settling pond to the lower wash plant pond at Sapphire Ranch Mine.</li> <li>• The two skid-mounted Godwin HL100M pumps are each powered by a built-in diesel engine.</li> </ul>

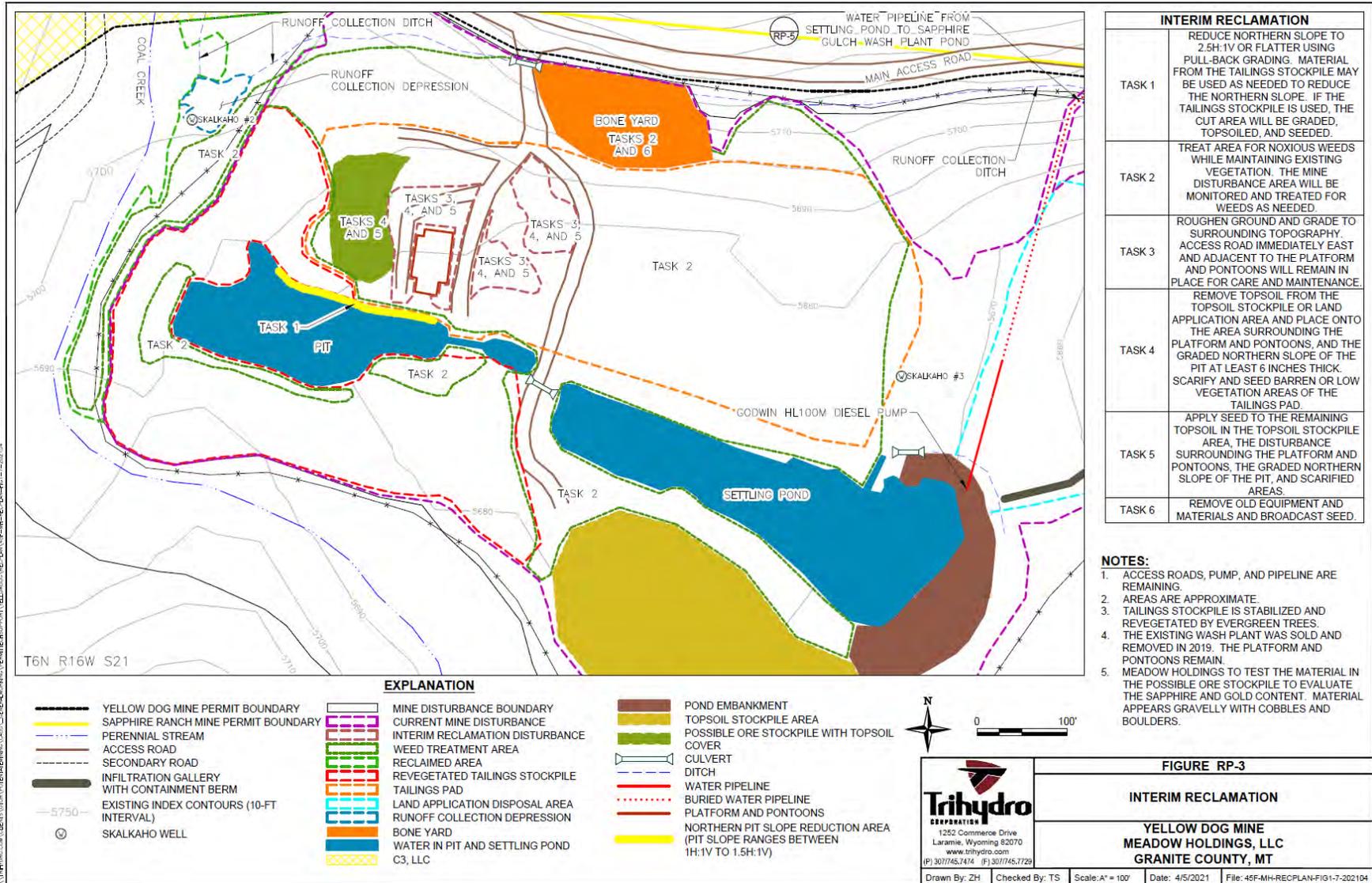
**Proposed Actions in Amendment 001 to Operating Permit No. 00044**

Location and Analysis Area	<ul style="list-style-type: none"> <li>The proposed project would be on private land about 15 miles west of Philipsburg in Granite County, Montana.</li> <li>The area being analyzed for this environmental review includes the immediate project area (<b>Figure 1</b>) as well as immediate downstream water sources and neighboring lands surrounding the analysis area as reasonably appropriate for the impacts being considered. The interim reclamation area is shown on <b>Figure 2</b>, and the pipeline alignment is shown on <b>Figure 3</b>.</li> </ul>
Personnel Onsite	The interim reclamation of 14 acres would be completed by less than ten workers over the course of two field seasons.
Structures	<ul style="list-style-type: none"> <li>The wash plant platform and pontoons left by the previous operator remain at the site (as shown in cover photo). These would remain on-site as historical artifacts unless Meadow Holdings develops other plans for the equipment.</li> <li>Two ponds were excavated at the Yellow Dog Mine by the previous operator in the 1980s: <b>1</b>) the dredge pit and <b>2</b>) the settling pond (<b>Figure 1</b>). These ponds are fed by groundwater. Water trickles into the northwest end of the dredge pit. Water in the pit flows into the settling pond, which in turn discharges to the infiltration gallery located in the meadow to the east.</li> </ul>
Project Water Source	<ul style="list-style-type: none"> <li>Meadow Holdings has two surface water rights with places of use located within the proposed permit boundary: Statement of Claim water right (76E 116587) for 1.5 CFS on the West Fork of Rock Creek with a priority date of July 22, 1901, and Statement of Claim water right (76E 133065) for 16 CFS on the West Fork of Rock Creek with a priority date of August 27, 1902. The beneficial use of these water rights is mining.</li> <li>Water for interim reclamation tasks and dust control would be obtained from the Yellow Dog Mine settling pond which is fed by groundwater.</li> <li>The pipeline system is 1.8 miles long and ascends 560 feet in elevation from the Yellow Dog Mine settling pond to the lower wash plant pond at Sapphire Ranch Mine (<b>Figure 3</b>). It is constructed of high pressure, PE4710 high density polyethylene (HDPE) pipe. A skid-mounted Godwin HL100M diesel pump located on the settling pond's northeastern embankment pumps water through a 12-inch diameter section of the pipeline to another Godwin HL 100M diesel pump located within the Sapphire Ranch Mine permit area. The second pump discharges through an 8-inch diameter section of the pipeline to the lower wash plant pond. Approximately 320 feet of the pipeline segment located within Yellow Dog Mine Operating Permit No. 00044 is buried at a depth of approximately four to five feet. The pipeline system can transport up to 450 gallons per minute (gpm).</li> </ul>
Air Quality	<ul style="list-style-type: none"> <li>When conditions require, a water truck would be used for dust suppression.</li> <li>Existing exhaust controls on motorized equipment would be maintained.</li> <li>Potentate Mining owns and would operate the pump and pipeline system to transfer water to the lower wash plant pond at its Sapphire Ranch Mine (Pending Operating Permit No. 00200). Potentate supplied a notification to DEQ adding the diesel engine that power the pumps to Montana Air Quality Permit No. 5248-00.</li> </ul>
Water Quality	Meadow Holdings has committed to prepare a Stormwater Pollution Prevention Plan for the site if mining operations are resumed under a future revision (Trihydro, December 4, 2020).
Erosion Control and Sediment Transport	<ul style="list-style-type: none"> <li>Best management practices (BMPs) including but not limited to, berms, sediment basins, geo-fabric, straw wattles, hay bales, and silt fence would be used. The BMPs would minimize stormwater erosion of the interim reclamation area while vegetation is being established and filter sediment from stormwater before it reaches a stream.</li> <li>Existing timber debris and overland grasses in the buffer zones along Coal Creek and the West Fork of Rock Creek would assist with filtering sediment from transported stormwater.</li> <li>Seeding would be performed as part of the interim reclamation tasks.</li> </ul>
Solid Waste	<ul style="list-style-type: none"> <li>The interim reclamation tasks include removing old materials and equipment from the "bone yard" for salvage or disposal at a solid waste facility.</li> <li>Any other trash or refuse generated during the interim reclamation work would be bagged and promptly removed for disposal at a solid waste facility.</li> </ul>
Cultural Resources	<ul style="list-style-type: none"> <li>A Class 1 Cultural Resource Inventory was completed for Pending Operating Permit No. 00200 (Sapphire Ranch Mine). The inventory included the 286-acre Yellow Dog Mine permit area proposed by Amendment 001. On March 2, 2020, the Montana State Historic Preservation Office (SHPO) concurred with the inventory's finding that cultural resources would not be expected to be impacted by the proposed project.</li> <li>If archeological resources are encountered during interim reclamation, activities would be halted and the DEQ Mining Bureau and SHPO would be contacted within 5 days of discovery.</li> </ul>
Hazardous Substances	The following hazardous substances would be located at the project site: fuel, motor oil, hydraulic oil, gear oil, lubricating grease, antifreeze (ethylene glycol and propylene glycol), power steering fluid, brake fluid, and propane.
Reclamation Plans	Meadow Holdings would complete the interim reclamation tasks within two years of DEQ's approval of Amendment 001. This work would reclaim 14 acres of existing disturbances left by the prior operator (Skalkaho Grazing, Inc.). Interim tasks include reducing the dredge pit's northern slope, removing materials and equipment from the bone yard, spreading topsoil, applying seed, and controlling weeds. <b>Figure 2</b> identifies the interim reclamation areas.

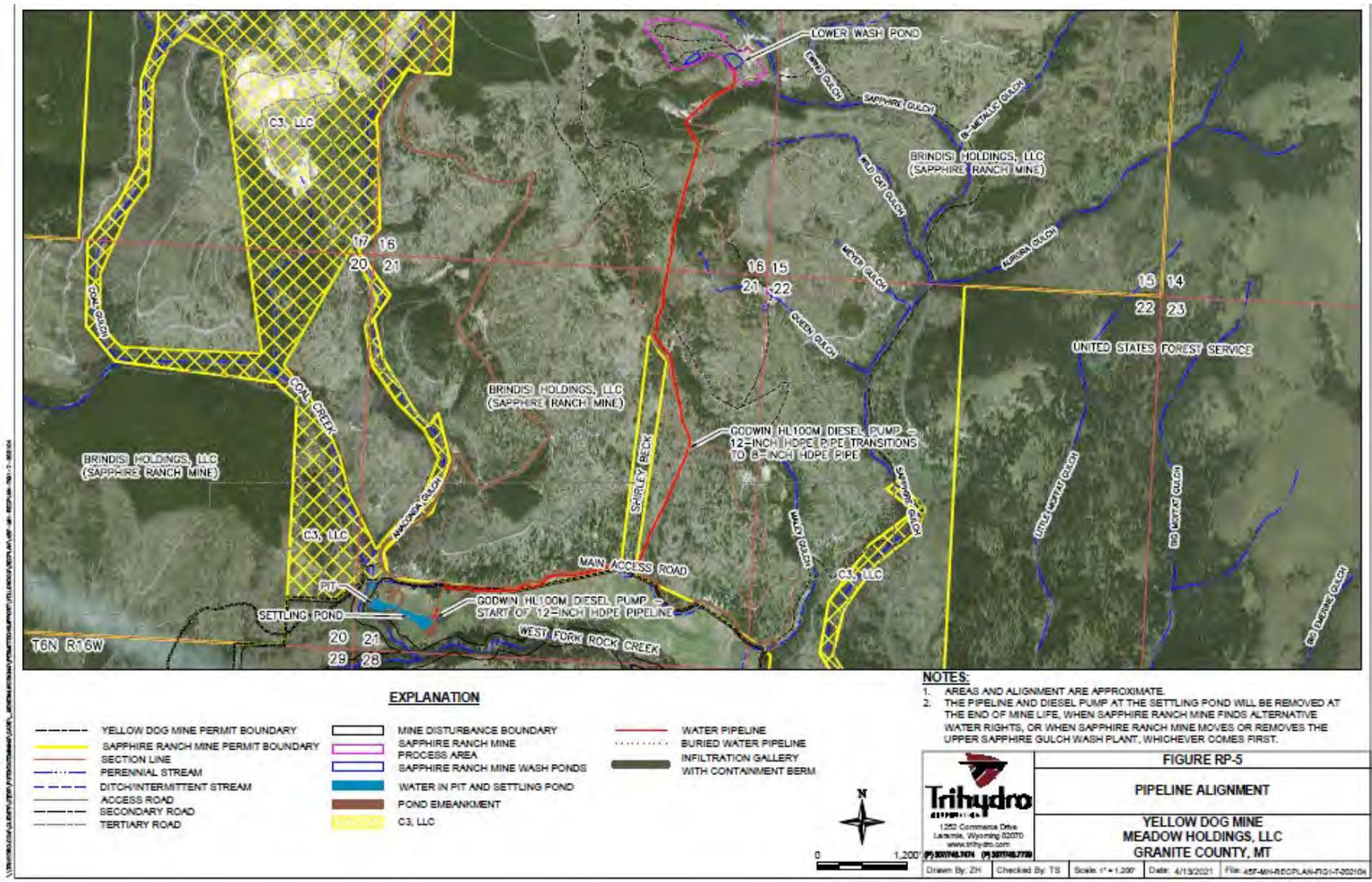
**Figure 1: Project Area Map - Meadow Holdings - Yellow Dog Mine - Amendment 001 to Operating Permit No. 00044**



**Figure 2: Interim Reclamation Map - Meadow Holdings - Yellow Dog Mine - Amendment 001 to Operating Permit No. 00044**



**Figure 3: Pipeline Alignment Map - Meadow Holdings - Yellow Dog Mine - Amendment 001 to Operating Permit No. 00044**



## **SUMMARY OF POTENTIAL PHYSICAL AND BIOLOGICAL IMPACTS:**

The impact analysis will identify and analyze direct and secondary impacts of the proposed operation. Direct impacts occur at the same time and place as the action that causes the impact. Secondary impacts are a further impact to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action (ARM 17.4.603(18)). Where impacts would occur, the impacts analysis will estimate the duration and intensity of the impact.

The duration is quantified as follows:

- Short-term: Short-term impacts are defined as those impacts that would not last longer than the life of the project, including final reclamation.
- Long-term: Long-term impacts are impacts that would remain or occur following project completion.

The intensity of the impacts is measured using the following:

- No impact: There would be no change from current conditions.
- Negligible: An adverse or beneficial effect would occur but would be at the lowest levels of detection.
- Minor: The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- Moderate: The effect would be easily identifiable and would change the function or integrity of the resource.
- Major: The effect would alter the resource.

### **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?*

The permitted area is located entirely on private land within the historic Rock Creek Mine District about 15 miles west of Phillipsburg in Granite County, Montana. The mine district and the project area have extensive historic and modern mining and logging disturbance.

Mapping by the Natural Resources Conservation Service (NRCS) indicates historic mine dump material underlies the 14 acres proposed for interim reclamation. The dump material extends westward across the area where the adjacent section of Coal Creek is located (**Figure 2**). Other soil types within the proposed permit boundary include: **a)** Bata-Lowder-Elve families, complex, moderately steep young moraines; **b)** Finn-Lowder-Dunkleber families, complex, stream terraces and flood plains; **c)** Elve family-Cryofluvents-Water complex, rolling stream terraces and flood plains; and **d)** Whitevow-Windhamm-Repp families, complex, high relief mountain slopes, and ridges.

*Direct Impacts:*

No unusual geologic features are present, and no fragile, erosive, or unstable soils are present. The operation could result in erosion of some disturbed soil in the interim reclamation area. However, the erosion potential is minor because of the use of BMPs including, but not limited to berms, sediment basins, geo-fabric, straw wattles, hay bales, and silt fence. The BMPs would minimize stormwater erosion of the interim reclamation areas while vegetation is being established and filter sediment from stormwater. The reclamation work would include application of an approved seed mix.

Surface soil disturbance could allow for the establishment of weeds. Weed control is a condition of the operating permit and Meadow Holdings would be required to control the spread of noxious weeds. If noxious weeds are observed, the weeds would either be treated or physically removed (pulled and bagged) to prevent further spread of the undesirable species. Prompt replacement of topsoil and slash debris would facilitate the growth environment of native seeded and planted species. The Weed Management plan was reviewed and approved by the Granite County weed coordinator on October 19, 2020.

The interim reclamation tasks would reclaim 14 previously disturbed acres. Due to the commitment to use BMPs in disturbed areas, impacts to the geology, soil quality, stability and moisture would be minor.

#### *Secondary Impacts:*

There are no expected secondary impacts to the geology. Soil quality, stability and moisture are not expected to have secondary impacts due to the BMPs proposed by the applicant.

## **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?*

### **Surface Water**

The project area is located on a meadow bounded by mountain slopes to the north, and the West Fork of Rock Creek on the south (**Figure 1**). The area receives an average of 23.25 inches of precipitation annually (StreamStats, 2021). The Montana Natural Heritage Program (MTNHP) identifies 64 acres of wetlands in the project area that are classified in order from most to least prevalent: **a**) palustrine emergent, **b**) riverine upper perennial, **c**) palustrine scrub-shrub, and **d**) palustrine aquatic bed. Wetlands are not located in the area proposed for interim reclamation (**Figure 2**).

The interim reclamation area is adjacent to Coal Creek, which is a tributary to the West Fork of Rock Creek. (**Figure 1**). The existing disturbance area to be reclaimed by the interim work is separated from Coal Creek by a ridge of previously reclaimed land more than 25 feet wide (**Figure 2**). Coal Creek flows southward around the interim reclamation area and enters the West Fork of Rock Creek as it flows eastward through the proposed permit area. The Coal Creek and West Fork stream corridors are vegetated and excluded from disturbance by a 100-foot setback. The West Fork joins Rock Creek about four miles downstream from the project. BMPs including berms, sediment basins, geo-fabric, straw wattles, hay bales, and silt fence would be used to limit erosion and sediment transport during the interim reclamation work.

#### *Direct Impacts:*

Precipitation and water applied to the ground during the interim reclamation work would infiltrate into the permeable alluvium underlying the site. Surface water that may leave the interim reclamation area could carry sediment from disturbed soils, but impacts to surface water from the interim work would be minor due to the use of BMPs, the setbacks along Coal Creek and the West Fork, and the avoidance of wetlands.

### *Secondary Impacts:*

No secondary impacts to surface water quality, quantity and distribution are expected.

### **Groundwater**

A search of the Groundwater Information Center (GWIC) indicates the nearest drinking water well is located approximately 0.7 miles east of the settling pond and south of the West Fork of Rock Creek. No impacts to this well are expected due to the distance from the interim reclamation work.

The dredge pit and settling pond at the Yellow Dog Mine were installed by the previous mine operator in the 1980s to support mining under Operating Permit No. 00044 (**Figures 1 and 2**). These ponds are fed by groundwater which trickles into the northwest end of the dredge pit. Water in the pit flows into the settling pond, which in turn discharges into the infiltration gallery located farther east in the meadow.

The dredge pit and settling pond typically contain water year-round. The persistence of the ponds and occurrence of wetlands in the project area likely reflect the abundant mountain precipitation (23.25 inches per year) and the permeable alluvium underlying the meadow (**Figure 1**). Precipitation onto the mountain slopes north of the project area infiltrates into the subsurface and flows downhill. When the water reaches the base of the mountain it passes laterally into the groundwater system in the alluvium beneath the meadow. Precipitation falling directly onto the meadow also recharges the underlying groundwater system which apparently sub-irrigates the vegetation growing in the meadow. The water elevation in the dredge pit and settling pond is lower than the water elevation in the adjacent sections of Coal Creek and the West Fork of Rock Creek, indicating that groundwater beneath the interim reclamation area does not contribute flow to the creeks.

Water needed for the interim reclamation and dust control would be sourced from the settling pond. In addition, operation of the pump and pipeline system would transfer water from the Yellow Dog Mine settling pond to the lower wash plant pond at the nearby Sapphire Ranch Mine (Pending Operating Permit No. 00200). The system is operated manually and would be used on an as-needed basis from June through October. When needed, pumping may occur five to eight hours per week for three to four times per month. Operating the system seasonally would move six to 13 acre-feet of water per year about 560 feet up the mountainside where it would be recycled through Sapphire Ranch Mine wash plant to process ore. As water escapes from the wash process by infiltration, it would flow back downslope and re-enter the groundwater system in the alluvium beneath the meadow.

To monitor water drawdown and recovery, Meadow Holdings would install a water level gauge in the Yellow Dog settling pond. Prior to pumping, the water level in the settling pond and depth to water in the adjacent groundwater well, Skalkaho #3, would be recorded along with the date and time. The time that pumping starts, and stops, would also be recorded. Meadow Holdings would then record the water levels once pumping stops, and periodically throughout the workday to monitor the settling pond recovery and the Skalkaho #3 groundwater level. If the pond water level takes additional time to recover, monitoring would continue to evaluate the length of time that the settling pond and Skalkaho #3 take to recover. Meadow Holdings would notify the DEQ Mining Bureau by email five working days before the initial transfer of water so DEQ personnel can observe the pumping and recovery. Meadow Holding would also provide a summary of the pump and pipeline operations and monitoring conducted during water transfer activities in the Annual Report (AR) for Operating Permit No. 00044.

*Direct Impacts:*

Minor direct impacts to groundwater levels are expected to occur in the vicinity of the Yellow Dog Mine settling pond when the pump and pipeline system is operated. The removal of water from the settling pond would cause groundwater in the surrounding alluvium to flow to the pond, temporarily lowering the groundwater level in the alluvium. Once pumping ceases, the groundwater level would recover as groundwater continues to flow in toward the pond from the surrounding expanse of saturated alluvium beneath the meadow. Monitoring water levels during and after operation of the pump and pipeline system would document any drawdown and recovery in the settling pond and monitoring well Skalkaho #3.

The extent of drawdown that would occur in the settling pond and surrounding alluvium due to pumping has not yet been documented. However, due to the limited amount of pumping (five to eight hours per week for three to four times per month), the abundance of water at the site and the transmissive nature of the alluvium, recovery of the pond and groundwater levels after pumping would be expected to take hours, rather than days. In late summer during dry years, the depth of water in the settling pond may become too low for the pump intake to work effectively. At such time, operation of the pump and pipeline system would need to be suspended until enough precipitation is received to recharge the groundwater system in the alluvium beneath the meadow and raise the water level in the settling pond.

*Secondary Impacts:*

No secondary impacts to groundwater quality, quantity and distribution are expected.

### **3. AIR QUALITY**

*Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?*

The DEQ Air Quality Bureau issued Montana Air Quality Permit 5248-00 to Potentate Mining on August 29, 2020. The permit includes the Yellow Dog Mine and the nearby Sapphire Ranch Mine (Pending Operating Permit No. 00200). Permitted equipment includes aggregate screens, material handling equipment, and diesel-engine powered electric generators and light plants. In accordance with the permit, the engines would be operated with good combustion practices to provide the maximum air pollution control for which they were designed (ARM 17.8.752). Original equipment manufacturer exhaust controls on permitted equipment would be maintained. Meadow Holdings would use a water truck at the Yellow Dog Mine when conditions require dust suppression to maintain airborne particulate matter at less than 20% opacity (ARM 17.8.752). Potentate Mining owns and would operate the pump and pipeline system transferring water from the Yellow Dog Mine to Potentate's nearby Sapphire Ranch Mine. On July 17, 2021, Potentate supplied a notification to DEQ adding the diesel engines that power the pumps to Montana Air Quality Permit No. 5248-00. The DEQ Air Quality Bureau accepted the notification on September 21, 2021.

*Direct Impacts:*

Dust particulates could be produced or become airborne during interim reclamation activities. Mechanized equipment would produce some exhaust fumes. Dust could also be produced while driving

at the site. The operator would be required to maintain compliance with Montana’s law regarding the need to take reasonable precautions to control airborne particulate matter by maintaining the pollution controls on power equipment and applying water to roads and stockpiles when needed to control airborne dust. As a result of the relatively minor airborne emissions that would be generated from this project, impacts to air quality would be minor.

*Secondary Impacts:*

No secondary impacts to air quality are expected.

**4. VEGETATION COVER, QUANTITY AND QUALITY**

*Will vegetative communities be significantly impacted? Are any rare plants or cover types present?*

Land cover in the project area varies, but generally includes Lodgepole pine-dominated forest and woodland (MTNHP, 2021). Subalpine spruce, Douglas-fir, and Aspen are also present. A search of the MTNHP identified potential habitat for 25 vascular plant species of concern (SOC), two of which are also US Forest Service (USFS) sensitive or candidate species. Missoula Phlox, a USFS sensitive species, was recorded near the project area in 2015. Whitebark Pine has been observed in the area and is a candidate for federal listing under the Endangered Species Act. Both the Missoula Phlox and Whitebark Pine have habitat ranges in most of western Montana. The quantity of disturbed habitat for these plants is minimal due to the vast habitat documented in western Montana and the relatively small size of this project.

Eighteen noxious or invasive plants have been identified in the greater project area.

*Direct Impacts:*

Land disturbance at the site may result in propagation of noxious weeds. Any surface disturbances would be reclaimed and seeded with an appropriate seed mix. If Amendment 001 is approved, weed control would be required during interim and final reclamation. The project area would be subject to the noxious weed management plan as described in “Section 2.10.3 Weed Control” of the updated reclamation plan proposed in Amendment 001. The weed management plan was reviewed and approved by the Granite County weed coordinator on September 14, 2021.

Based on concurrent reclamation plans and a commitment to control weeds, impacts to vegetative cover, quantity or quality as the result of this project would be minor.

*Secondary Impacts:*

No secondary impacts to vegetation cover, quantity and quality are expected.

**5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS**

*Is there substantial use of the area by important wildlife, birds or fish?*

Common wildlife such as elk, mule deer, moose, black bears, and mountain lions may utilize the project area and may be temporarily displaced while machinery and equipment are operating. The West Fork of Rock Creek contains fish including West Slope Cutthroat Trout and Bull Trout (MTNHP 2021). The

proposed interim reclamation area and adjacent section of the Coal Creek drainage (**Figure 2**) were disturbed by historic mining and are mapped as “mine dump” (NRCS). This part of the drainage was apparently choked with alluvium during the historic mining. As a result, the Coal Creek water passes through this historically disturbed area as shallow overland flow; as flow within discontinuous channel segments; and as subsurface flow passing through the alluvium that separates channel segments. Coal Creek probably lacks fish because they are unable to move upstream of the historical disturbance area.

The Yellow Dog Mine settling pond and dredge pit are fed by groundwater and do not contain fish. Prior to operating the pump and pipeline system, Meadow Holdings would observe the immediate settling pond area for the presence of nesting migratory birds. If migratory birds are observed in the vicinity of the suction line, pumping would not be started until the birds move away from the suction line intake. The intake consists of a floating tee constructed of 12-inch diameter, DR17 HDPE. The six-foot long “tee” end of the intake floats at the surface of the settling pond while the longer 20-foot portion of the intake extends down into the water column. Approximately 26, two-inch diameter inlet holes spaced six inches apart allow water to enter the submerged line at a range of depths above the settling pond bottom. A six-inch diameter rubber suction hose connects the floating tee to the pump on the settling pond embankment. Because the holes in the submerged portion of the intake are well below the water surface, water would be drawn into the suction line at depth, so any migratory birds on the water surface would not be affected by the pumping.

#### *Direct Impacts:*

Impacts to terrestrial and avian life and habitats would potentially include temporary displacement of animals, although habitat found within the project area is common throughout the larger ecosystem. Any displaced animals could find other suitable habitat nearby and return to the project area shortly after the project conclusion. Although some elk and other wildlife habitat may be impacted until the project disturbance is reclaimed, ample non-developed land exists in the area for the temporarily displaced animals.

BMPs including berms, sediment basins, geo-fabric, straw wattles, hay bales, and silt fence would be used to minimize stormwater erosion of the interim reclamation areas while vegetation is being established. Based on the use of BMPs to minimize soil erosion and sediment transport, impacts to avian, amphibious, and aquatic life and habitat would be minor. Erosion and transport of sediment to the West Fork of Rock Creek and Coal Creek would be mitigated by the BMPs and the 100-foot creek setbacks. Existing timber debris and overland grasses would also assist with filtering sediment from transported stormwater. Impacts to migratory birds on the settling pond are not anticipated due to observation of the pond area before pumping begins, and the floating tee intake ensuring the pond surface is not disturbed by pumping.

#### *Secondary Impacts:*

No secondary impacts are expected to terrestrial, avian, and aquatic life and habitats.

## **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?*

A search of the MTNHP identified potential habitat for 83 mammal, reptile, invertebrate, bird, and amphibian SOC, potential SOC, sensitive, or threatened species. Habitat for these species is common and not unique to the project area.

The following SOC are likely to occur in or near the project area: Wolverine, Fisher, West Slope Cutthroat Trout, and Bull Trout. Bull Trout are classified as threatened by both the United States Bureau of Land Management (BLM) and the United States Forest Service (USFS). Wolverine are classified as sensitive by BLM, and Westslope Cutthroat Trout and Fisher are classified as sensitive by both USFS and BLM. Three vegetative SOCs have been observed adjacent to, but outside the proposed permit boundary; Missoula Phlox, Keeled Bladderpod, and Whitebark Pine.

There are several wetlands located within the project area associated with Coal Creek and West Fork of Rock Creek, although none are proposed to be disturbed by the interim reclamation work.

### *Direct Impacts:*

The project is in a remote area surrounded by thousands of acres of undeveloped mountain land that is managed by the Beaverhead-Deerlodge National Forest. While potential habitat for threatened and endangered species may exist in the project area, similar habitat exists in the surrounding national forest. The proposed project is seasonal, with activities planned from May through October depending on weather conditions. The impacts to SOCs would be minor due to the seasonal nature of the proposed activities and the abundance of similar habitat nearby.

Impacts to unique, endangered, fragile, or limited environmental resources would potentially include temporary displacement of birds or mammals. Habitat within the project area is common throughout the larger ecosystem and any animals displaced could find other nearby suitable habitat and return to the project area after the project conclusion.

Before operating the pump and pipeline system, Meadow Holdings would observe the settling pond area for the presence of nesting migratory birds. If migratory birds are observed in the vicinity of the suction line, pumping would not be started until the birds move away from the suction line intake. The design of the floating tee intake would ensure the water surface is not disturbed during pumping. As a result of these measures, any impacts to birds would be minor.

Impacts to Bull Trout and West Slope Cutthroat Trout are not anticipated because the transport of sediment from the project site to the West Fork of Rock Creek and Coal Creek would be mitigated by BMPs and setbacks. Existing timber debris and overland grasses would also assist with filtering sediment from transported stormwater.

### *Secondary Impacts:*

No secondary impacts to unique, endangered, fragile, or limited environmental are expected.

## **7. HISTORICAL AND ARCHAEOLOGICAL SITES**

*Are any historical, archaeological or paleontological resources present?*

The project is located on private land. A Class 1 Cultural Resource Inventory that included the proposed Yellow Dog Mine permit area was included in Potentate Mining's application for the nearby Sapphire Ranch Mine (Pending Operating Permit No. 00200). On March 2, 2020, the Montana State Historic Preservation Office (SHPO) concurred with the inventory's finding that cultural resources would not be expected to be impacted by the Yellow Dog Mine project. If archeological resources are encountered during the interim reclamation work, activities would be halted and the DEQ Mining Bureau and SHPO would be contacted within 5 days of discovery.

*Direct Impacts:*

The proposed work would occur on private land that is not known to contain historical or archaeological sites. If resources are encountered, site work would be halted and the find reported to the DEQ Mining Bureau and SHPO. As a result, impacts to cultural resources at the site would be minor.

*Secondary Impacts:*

No secondary impacts to historical and archaeological sites are expected.

## **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?*

The proposed permit area is on private land separated from the public to the south by the West Fork of Rock Creek. There is no public access from the north or west without trespassing. Access from the east is fenced and gated and has signage warning against entry. The nearest year-round residence is approximately 0.7 miles east of the settling pond and south of the West Fork of Rock Creek. Interim reclamation work would be required to be completed within two years of DEQ's approval of Amendment 001.

*Direct Impacts:*

People may be able to see the proposed project from public lands that provide a view unobstructed by topography or vegetation. Noise may be heard by receptors located where sound related to the project has not been fully diminished by distance or topography. Original equipment manufacturer exhaust controls would be maintained to reduce noise. On July 17, 2021, Potentate Mining supplied a notification to DEQ adding the diesel engine that power the pumps to Montana Air Quality Permit No. 5248-00. The DEQ Air Quality Bureau concurred with the notification on September 21, 2021.

Aesthetic impacts from the interim reclamation work and operation of the pump and pipeline system would not be excessive to receptors in the area. While the project area would be visible from public lands, these public lands are remote and not accessed by public roads or trails. Thus, impacts to aesthetics would be minor.

*Secondary Impacts:*

No secondary impacts to area aesthetics are expected as a result of the proposed work.

**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?*

During interim reclamation work, water for dust control would be obtained from the Yellow Dog Mine settling pond. Operation of the pump and pipeline system would transfer water from the Yellow Dog Mine settling pond to the lower wash plant pond at the nearby Sapphire Ranch Mine.

Meadow Holdings has two surface water rights with places of use located within the proposed permit boundary: Statement of Claim water right (76E 116587) for 1.5 CFS on the West Fork of Rock Creek with a priority date of July 22, 1901, and Statement of Claim water right (76E 133065) for 16 CFS on the West Fork of Rock Creek with a priority date of August 27, 1902. The beneficial use of these water rights is mining. The water would be used to process ore and would be recycled to minimize the total amount needed.

All energy needs for operation of the pump and pipeline would be met by the two skid-mounted Godwin HL100M pumps powered by built-in diesel engines.

No other local resources of land, water, air, or energy would be used as part of this project.

*Direct Impacts:*

Any impacts on the demand on environmental resources of land, water, air, or energy would be minor.

*Secondary Impacts:*

No secondary impacts to environmental resources of land, water, air, or energy are expected.

**10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES**

*Are there other activities nearby that will affect the project?*

DEQ searched the following websites and databases for nearby activities that may affect the project:

- Montana Department of Natural Resource and Conservation (DNRC);
- Montana Department of Transportation;
- Granite County;
- United States Department of Interior, Bureau of Land Management (BLM); and,
- United States Forest Service (USFS).

DEQ's search did not identify other projects.

*Direct Impacts:*

Since there are no other projects nearby that would affect the proposed project, impacts on other environmental resources are not anticipated.

*Secondary Impacts:*

No secondary impacts to other environmental resources are expected as a result of the proposed work.

**11. HUMAN HEALTH AND SAFETY**

*Will this project add to health and safety risks in the area?*

The applicant would be required to adhere to all applicable state and federal safety laws. Industrial work such as the work proposed by the applicant is inherently dangerous. The Mine Safety and Health Administration (MSHA) has developed rules and guidelines to reduce the risks associated with this type of labor. Few, if any, members of the public would be expected in the project area during the interim reclamation work.

*Direct Impacts:*

Impacts to human health and safety as a result of this project would be minor.

*Secondary Impacts:*

No secondary impacts to human health and safety are expected as a result of the proposed work.

**12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION**

*Will the project add to or alter these activities?*

*Direct Impacts:*

As noted in the cumulative impacts analysis below, this project would not add to the impacts of mining in the greater project area. Impacts on the industrial, commercial, and agricultural activities and production in the area would be minor.

*Secondary Impacts:*

No secondary impacts to industrial, commercial, and agricultural activities and production are expected as a result of the proposed work.

### **13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT**

*Will the project create, move or eliminate jobs? If so, estimated number.*

#### *Direct Impacts:*

Significant positive or negative impacts on quantity and distribution of employment would not likely result from the interim reclamation work. Reclamation employees would be employed on a seasonal basis and are expected to be composed of individuals already living in Granite County. No lasting positive or negative impacts to employment are expected from this project.

#### *Secondary Impacts:*

No secondary impacts to quantity and distribution of employment are expected as a result of the proposed work.

### **14. LOCAL AND STATE TAX BASE AND TAX REVENUES**

*Will the project create or eliminate tax revenue?*

The sale of sapphires creates local jobs, providing tax revenue to the state and/or the federal government.

#### *Direct Impacts:*

Some positive, yet limited, benefit to the local and state economy could result from this project. However, since fewer than 10 seasonal workers would conduct the interim reclamation work, minimal tax revenue from income or expenses are expected from this project. The impact to local and state tax base and tax revenue would be minor.

#### *Secondary Impacts:*

Minor beneficial secondary impacts to local and state tax base and tax revenues would be expected as a result of the proposed work.

### **15. DEMAND FOR GOVERNMENT SERVICES**

*Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?*

Montana Highway 38 (MT-38)/Skalkaho Road (a paved State of Montana-maintained roadway) would be used to access the private land associated with the project. MT-38/Skalkaho Road continues west past the main entrance to the project area over Skalkaho Pass and into the Hamilton Valley. MT-38/Skalkaho Road is gated and closed for the winter months about one-half mile past the access road. Fire protection would be provided by the Philipsburg Volunteer Fire Department, located about 15 miles directly to the east of the project area. USFS lands surround the private land associated with the project area and emergency response may also include the USFS. The Granite County Sheriff's Department and USFS may provide limited law enforcement presence to the surrounding area. Emergency Medical Services would be based in Missoula, Philipsburg, or Drummond, Montana, and located at least 20 miles from the project area.

The proposed interim reclamation work would employ 10 full-time and/or part-time employees on a seasonal basis. The annual average daily traffic information shows relatively low traffic load levels of 20 vehicles per day along Skalkaho Road. This traffic count is expected to be higher during the summer months due to recreational opportunities in the area and the opening of MT-38/Skalkaho Road over Skalkaho Pass.

*Direct Impacts:*

The proposed reclamation work would be located on private land. Impacts on the demand for government services would be minor because fewer than ten seasonal workers would conduct the interim reclamation work. All operations would be subject to local, seasonal restrictions as they apply.

*Secondary Impacts:*

No secondary impacts to the demand for government are expected as a result of the proposed work.

**16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS**

*Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?*

The proposed interim reclamation work would occur entirely on private land. The project area would be subject to the weed control measures proposed in the reclamation plan amendment and approved by the Granite County extension agent on September 14, 2021.

*Direct Impacts:*

DEQ is not aware of any other locally adopted environmental plans or goals that would impact this proposed project or the project area. Impacts from or to locally adopted environmental plans and goals would not be expected as a result of this project.

*Secondary Impacts:*

No secondary impacts to the locally adopted environmental plans and goals are expected as a result of the proposed work.

**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?*

The proposed interim reclamation work would occur entirely on private land, with no access to public recreational opportunities. There are no designated wilderness or recreational areas in the vicinity of the project area.

*Direct Impacts:*

Based on the location of the proposed interim reclamation work, impacts to the access or quality of recreational and wilderness activities as a result of this project would be negligible.

*Secondary Impacts:*

No secondary impacts to access and quality of recreational and wilderness activities are expected as a result of the proposed work.

**18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING**

*Will the project add to the population and require additional housing?*

Granite County had a population of 3,079 at the 2010 census. The proposed project area is remote, with the nearest residential house located 0.7 miles east of the Yellow Dog settling pond. As noted above in “Section 13. Quantity and Distribution of Employment,” the proposed project would not be expected to add to or decrease the local population or employment. The proposed project would employ fewer than 10 seasonal workers to conduct the interim reclamation work.

*Direct Impacts:*

Due to the seasonal nature of the proposed project and the proposed number of employees, no impact to population density and housing are expected from this project.

*Secondary Impacts:*

No secondary impacts to density and distribution of population and housing are expected as a result of the proposed work.

**19. SOCIAL STRUCTURES AND MORES**

*Is some disruption of native or traditional lifestyles or communities possible?*

*Direct Impacts:*

The proposed interim reclamation work would occur entirely on private land. Due to the low population density nearby and history of sapphire mining in this area, no impacts or disruption of native or traditional lifestyles are expected.

*Secondary Impacts:*

No secondary impacts to social structures and mores are not expected as a result of the proposed work.

**20. CULTURAL UNIQUENESS AND DIVERSITY**

*Will the action cause a shift in some unique quality of the area?*

*Direct Impacts:*

The proposed project is located in a historic mining district, in an area with existing legacy mining disturbance. Due to the history of sapphire mining in this area, no impacts to cultural uniqueness and diversity are expected from this project.

*Secondary Impacts:*

No secondary impacts to cultural uniqueness and diversity are expected as a result of the proposed work.

**21. 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. Does the proposed regulatory action restrict the use of the regulated person's private property? If not, no further analysis is required. 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 proposed project would take place on private land owned by the applicant. DEQ's approval of Amendment 001 to Operating Permit No. 00044 with conditions would affect the applicant's real property. DEQ has determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements under the Metal Mine Reclamation Act and demonstrate compliance with those requirements or have been agreed to by the applicant. Therefore, DEQ's approval of Amendment 001 to Operating Permit No. 00044 would not have private property-taking or damaging implications.

Montana's Private Property Assessment Act, Section 2-10-101, et seq., MCA, establishes an orderly and consistent internal management process for state agencies to evaluate their proposed actions under the "Takings Clauses" of the United States and Montana Constitutions, as those clauses are interpreted and applied by the United States and Montana Supreme Courts.

Section 2-10-104, MCA required Montana's Attorney General to develop guidelines, including a checklist, to assist state agencies in identifying and evaluating proposed agency actions that may result in the taking or damaging of private property. In turn, Section 2-10-105(1) and (2), MCA set out a process for each State Agency to evaluate whether a State action may result in an unconstitutional taking of private property. Those provisions direct that:

- (1) Each state agency shall assign a qualified person or persons in the state agency the duty and authority to ensure that the state agency complies with this part. Each state agency action with taking or damaging implications must be submitted to that person or persons for review and completion of an impact assessment. The state agency may not take the action unless the review and impact assessment have been completed, except that the action with taking or damaging implications may be taken before the review and impact assessment are completed if necessary to avoid an immediate threat to public health or safety.
- (2) Using the attorney general's guidelines and checklist, the person shall prepare a taking or damaging impact assessment for each state agency action with taking or damaging implications that includes an analysis of at least the following:
  - (a) the likelihood that a state or federal court would hold that the action is a taking or damaging;
  - (b) alternatives to the action that would fulfill the agency's statutory obligations and at the

same time reduce the risk for a taking or damaging; and

(c) the estimated cost of any financial compensation by the state agency to one or more persons that might be caused by the action and the source for payment of the compensation.

DEQ has utilized the Montana Attorney General's Checklist and analytical Flowchart revised in January, 2011 to evaluate the legal impact to property rights resulting from the proposed project (**Attachment 1**). These flowchart questions have been applied by DEQ to the proposed project area, which takes place on private real property owned by the Permittee, Meadow Holdings, as follows:

1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights? Answer: Yes.
2. Does the action result in either a permanent or indefinite physical occupation of private property? Answer: No.
3. Does the action deprive the owner of all economically beneficial use of the property? Answer: No.
4. Does the action require a property owner to dedicate a portion of property or to grant an easement? Answer: No.
5. Does the action deny a fundamental attribute of ownership? Answer: No.
6. Does the action have a severe impact on the value of the property? Answer: No.
7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? Answer: No.

Given the results from the legal flowchart questions, DEQ has determined that the permit conditions are reasonably necessary to ensure and demonstrate compliance with applicable requirements of the Metal Mine Reclamation Act, Section 82-4-301, et seq., MCA, and have been sought by the Applicant and private property Owner. Therefore, no taking or damaging of private property rights will occur as a result of DEQ's approval of the Permit Application by the private property Owner, Meadow Holdings.

## **22. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES**

Due to the nature of the proposed interim reclamation work and the limited duration of the project, no further direct or secondary impacts are anticipated from this project.

### **ALTERNATIVES CONSIDERED**

In addition to the proposed action, DEQ also considered a no action alternative. Under the no action alternative DEQ would deny the approval of Amendment 001 to Operating Permit No. 00044. The applicant would lack the authority to complete interim reclamation of 14 previously disturbed acres and operate the pump and pipeline system on private land. Any potential impacts that would be authorized under the permit would not occur. The no action alternative forms the baseline from which the impacts of the proposed action can be measured.

In addition to the proposed action alternative and the no action alternative, DEQ would usually consider an additional action alternative that incorporates mitigation measures identified by DEQ during preparation of the draft EA. However, in this instance DEQ engaged in a lengthy and in-depth analysis of the proposed update to the Meadow Holdings operating permit prior to the initiation of the environmental review for the permit amendment application. DEQ issued four deficiency letters to Meadow Holdings prior to determining its permit amendment application to be complete and compliant.

Mitigation measures that DEQ identified during the complete and compliance review were incorporated into the proposed action alternative.

### **PREFERRED ALTERNATIVE**

ARM 17.4.617(9) requires DEQ to identify in a draft environmental assessment the agency's preferred alternative, if any, and the reasons for the preference. DEQ identifies the proposed action as the preferred alternative. Approval of the proposed action will facilitate Meadow Holdings' reclamation of disturbance caused by the former operator and would not result in any additional significant environmental impacts.

### **PUBLIC INVOLVEMENT**

Public involvement for this proposed action consisted of internal and external efforts to identify substantive issues and/or concerns related to the proposed project. Notice of the application for Amendment 001 to Operating Permit 00044 was published on May 19, 2021. Public involvement included a public comment period which ended on June 18, 2021. No comments were received.

Internal review of the environmental assessment document was completed by DEQ staff. The internal review included queries to the following websites/ databases/ personnel:

- Montana State Historic Preservation Office
- Montana Department of Natural Resource and Conservation (DNRC)
- Montana Department of Environmental Quality (DEQ)
- Montana Department of Transportation
- Granite County
- US Geological Society – Stream Stats
- Montana Natural Heritage Program
- Montana Cadastral Mapping Program
- Montana Groundwater Information Center
- Montana Bureau of Mines and Geology
- United States Forest Service (USFS)

### **RESPONSE TO PUBLIC COMMENTS**

No comments have been received on the notice of the permit application or on the Draft EA.

### **OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION**

The proposed project would be fully located on private land. All applicable state and federal rules must be adhered to, which, at some level, may also include other state, federal, or tribal agency jurisdiction.

### **CUMULATIVE IMPACTS**

Cumulative impacts are the collective impacts on the human environment within the borders of Montana of the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location and generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures.

This environmental review analyzes the proposed project submitted by the applicant. Impacts from the project would be temporary, would be reclaimed at the conclusion of the project, and would not contribute to the long-term cumulative effects of mining in the area. DEQ identified other mining or exploration projects in the area.

DEQ-regulated projects located near the proposed project site include:

- Two Small Miner Exclusion Statement (SMES) hard rock mining operations are located within two miles of the proposed project site.
- Two hard rock mining Exploration License projects are located within two miles of the proposed project site. One of these includes exploration drilling within the proposed Yellow Dog Mine permit boundary.
- Two proposed hard rock mining Operating Permits are located adjacent to the proposed project site.

No other DNRC, BLM, or USFS regulated projects were identified in the project vicinity.

DEQ considered all impacts related to this project and secondary impacts that may result. Cumulative impacts related to this project would be minor.

## **NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS**

When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the seven significance criteria set forth in ARM 17.4.608, which are as follows:

1. The severity, duration, geographic extent, and frequency of the occurrence of the impact;
2. The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;
3. Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts;
4. The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
5. The importance to the state and to society of each environmental resource or value that would be affected;
6. Any precedent that would be set as a result of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions; and
7. Potential conflict with local, state, or federal laws, requirements, or formal plans.

## SUMMARY

The severity, duration, geographic extent, and frequency of the occurrence of the impacts associated with proposed Amendment 001 would be limited. The applicant is proposing to reclaim 14 acres disturbed by the previous operator; expand the permit boundary to 286 acres to better match the Meadow Holdings property boundary; and authorize the installation and operation of the pump and pipeline system.

Meadow Holdings commits to completing the interim reclamation tasks within two years of DEQ's approval of Amendment 001. Operation of the pump and pipeline system would occur for a period of approximately 40 years and is dependent on the water needs at the nearby Sapphire Ranch Mine.

DEQ has not identified any significant impacts associated with the proposed activities for any environmental resource. Approval of Amendment 001 to Operating Permit No. 00044 does not set any precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions. If the applicant submits another license or an operating permit application, DEQ is not committed to issuing those authorizations. DEQ would conduct an environmental review for any subsequent authorizations sought by the applicant that require environmental review. DEQ would make a permitting decision based on the criteria set forth in the Metal Mine Reclamation Act.

Approval of Amendment 001 to Operating Permit No. 00044 does not set a precedent for DEQ's review of other applications for operating permits, including the level of environmental review. The level of environmental review decision is made based on a case-specific consideration of the criteria set forth in ARM 17.4.608.

Finally, DEQ does not believe the activities proposed by the applicant have any growth-inducing or growth-inhibiting aspects or conflict with any local, state, or federal laws, requirements, or formal plans.

Based on a consideration of the criteria set forth in ARM 17.4.608, the proposed activities are not predicted to significantly impact the quality of the human environment. Therefore, preparation of an environmental assessment is determined to be the appropriate level of environmental review under MEPA.

Environmental Assessment

**Prepared By:**

Betsy Hovda

Reclamation Specialist

Hard Rock Section

Mining Bureau

Chris Cronin

Reclamation Specialist

Hard Rock Section

Mining Bureau

**Environmental Assessment Reviewed by:**

Millie Olsen, Reclamation Specialist  
Hard Rock Section  
Mining Bureau

Eric Dahlgren, Supervisor  
Hard Rock Section  
Mining Bureau

**Approved by:**



**April 12, 2022**

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Signature  
Eric Dahlgren  
Supervisor  
Hard Rock Section  
Mining Bureau

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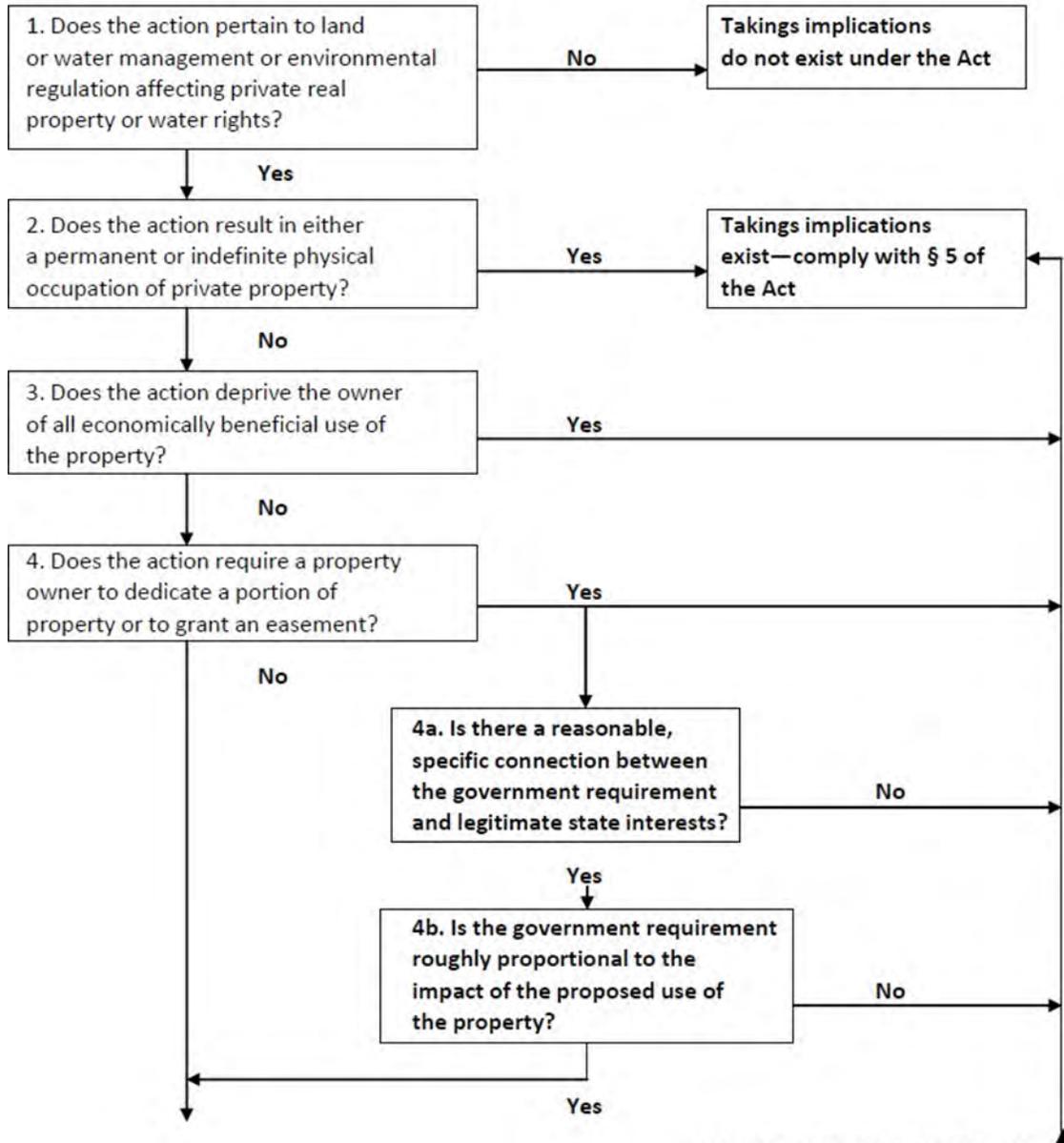
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# ATTACHMENT 1

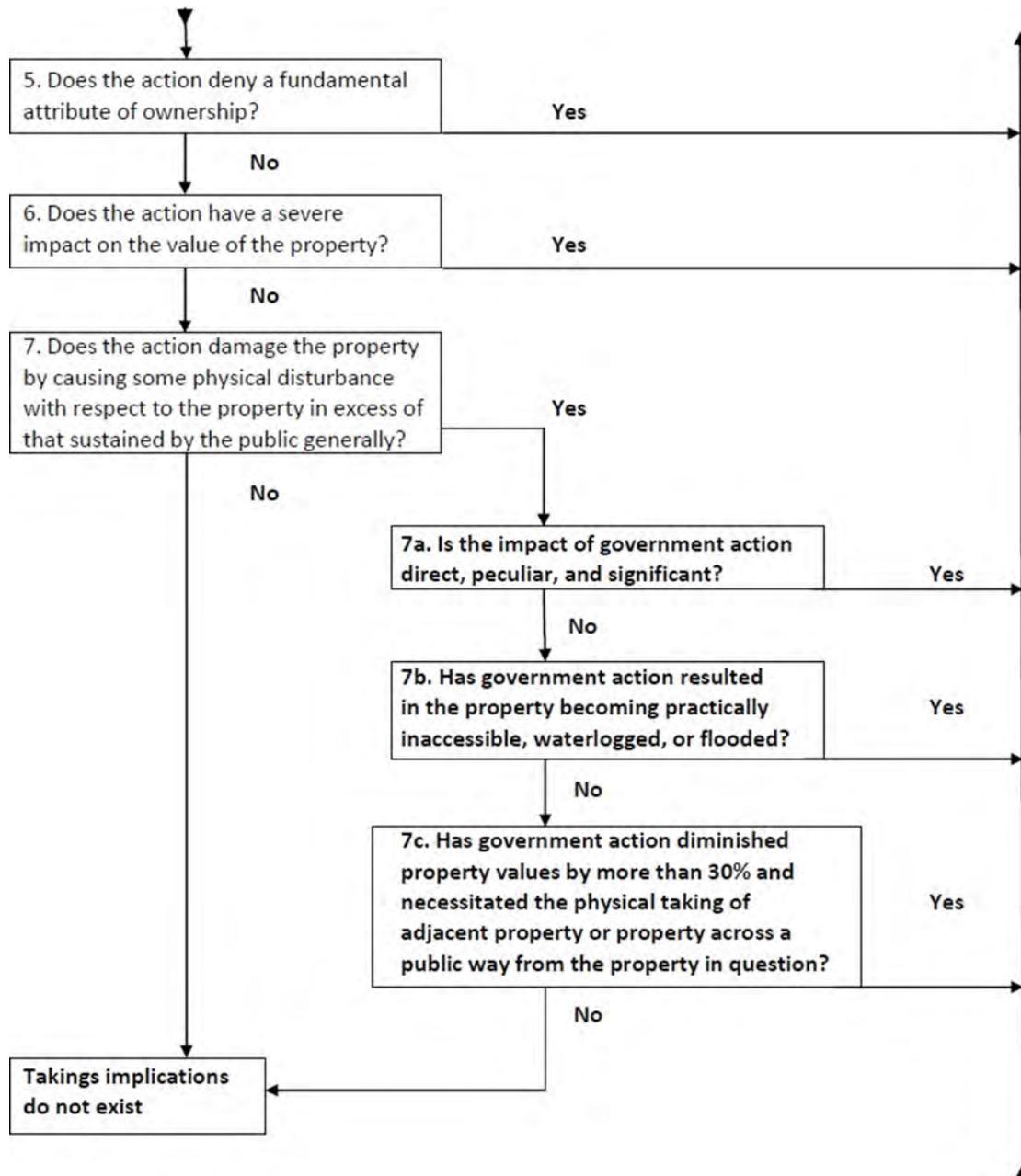
## Montana Department of Justice PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST FLOWCHART (January 2011)

Does the proposed agency action have takings implications under the Private Property Assessment Act?

**START HERE:**



CHECKLIST FLOWCHART January 2011



**Montana Department of Justice  
PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST**

Does the proposed agency action have takings implications under the private property assessment act?

<b>YES</b>	<b>NO</b>	
_____	_____	1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
_____	_____	2. Does the action result in either a permanent or indefinite physical occupation of private property?
_____	_____	3. Does the action deprive the owner of all economically beneficial use of the property?
_____	_____	4. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If the answer is <b>NO</b> , skip questions 4a and 4b and continue with question 5.]
_____	_____	4a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
_____	_____	4b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
_____	_____	5. Does the action deny a fundamental attribute of ownership?
_____	_____	6. Does the action have a severe impact on the value of the property?
_____	_____	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? [If the answer is <b>NO</b> , do not answer questions 7a-7c.]

- \_\_\_\_\_      \_\_\_\_\_      7a. Is the impact of government action direct, peculiar, and significant?
- \_\_\_\_\_      \_\_\_\_\_      7b. Has government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
- \_\_\_\_\_      \_\_\_\_\_      7c. Has government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if **YES** is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 5, 6, 7a, 7b, 7c; or if **NO** is checked in response to questions 4a or 4b.

If taking or damaging implications exist, the agency must comply with Section 5 of the Private Property Assessment Act, Mont. Code Ann. § 2-10-105, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.