

**Montana Department of Environmental Quality  
Air, Energy, & Mining Division  
Hard Rock Mining Bureau**

**DRAFT ENVIRONMENTAL ASSESSMENT**

**COMPANY NAME:** Glacier Stone Supply LLC

**PROJECT:** Glacier Stone Mine (Canyon Creek/Glacier Mountain Sites)

**PERMIT:** 00190

**LOCATION:** 48.128319° -114.687801°      **COUNTY:** Flathead

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

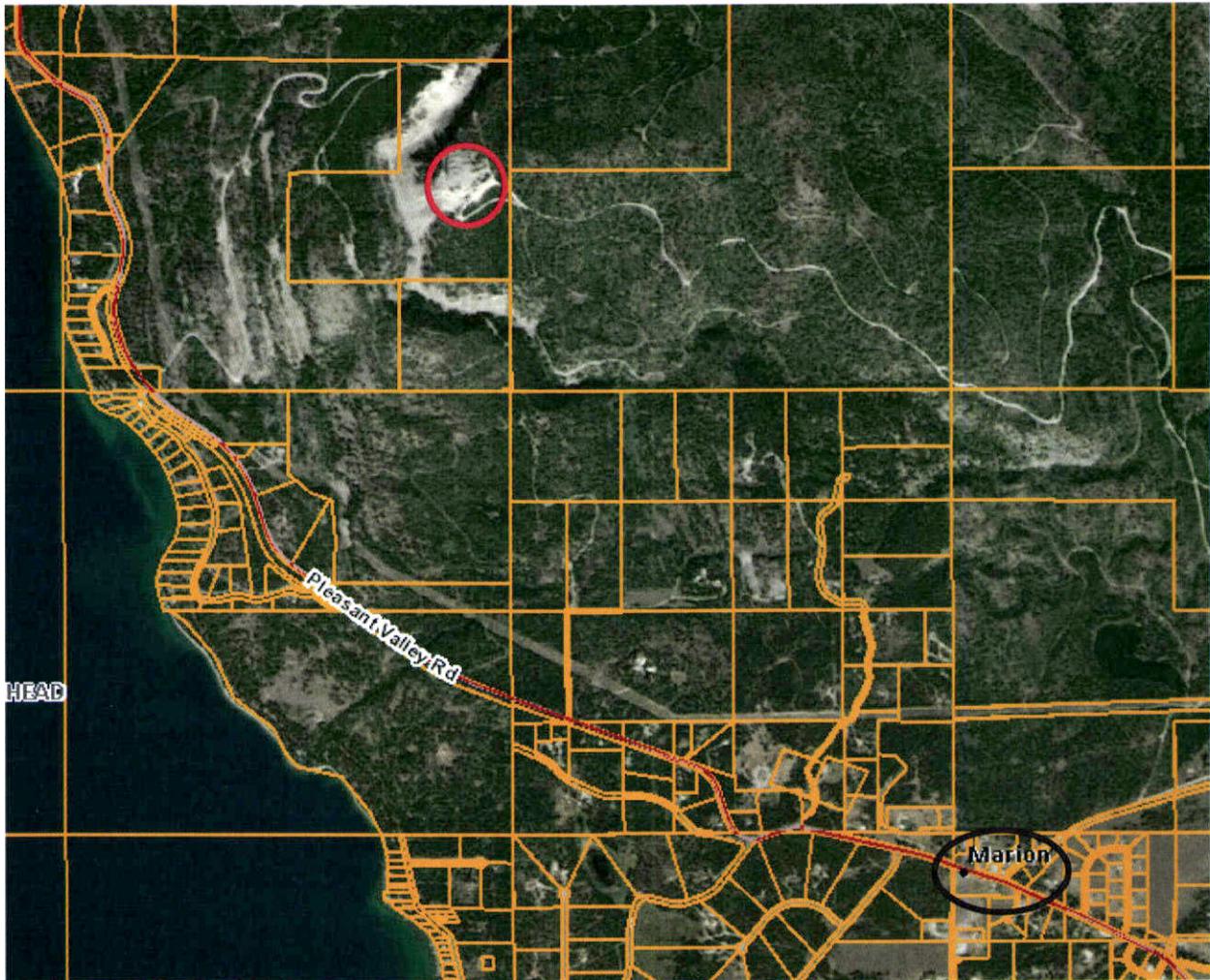
**TYPE AND PURPOSE OF PROPOSED ACTION:**

On April 27, 2017, Glacier Stone Supply, LLC (Glacier Stone) applied for an operating permit authorizing the mining of rock products on privately owned, leased property in Flathead County, Montana. The site is located about three miles northwest of Marion, MT. The mine would be within the N1/2 of the SE1/4 of Section 4, Township 27 North, Range 24 West and Government Lot 9. Glacier Stone is a supplier of architectural and landscape stone.

Glacier Stone has previously conducted rock mining operations at the site under Small Miner Exclusion Statement (SMES) 07-027 that was issued in 2015. SMES 07-027 covered an operation consisting of mining at two sites (Canyon Creek and Glacier Mountain) located in close proximity to each other. Glacier Stone is applying for an operating permit to cover the mining operations conducted at these sites because of the 5-acre limitation for mining operations conducted under SMESs. If issued, the operating permit would cover an operation including the Canyon Creek and Glacier Mountain sites due to the overlapping area of the two areas mined, landings and roadways.

Proposed Action

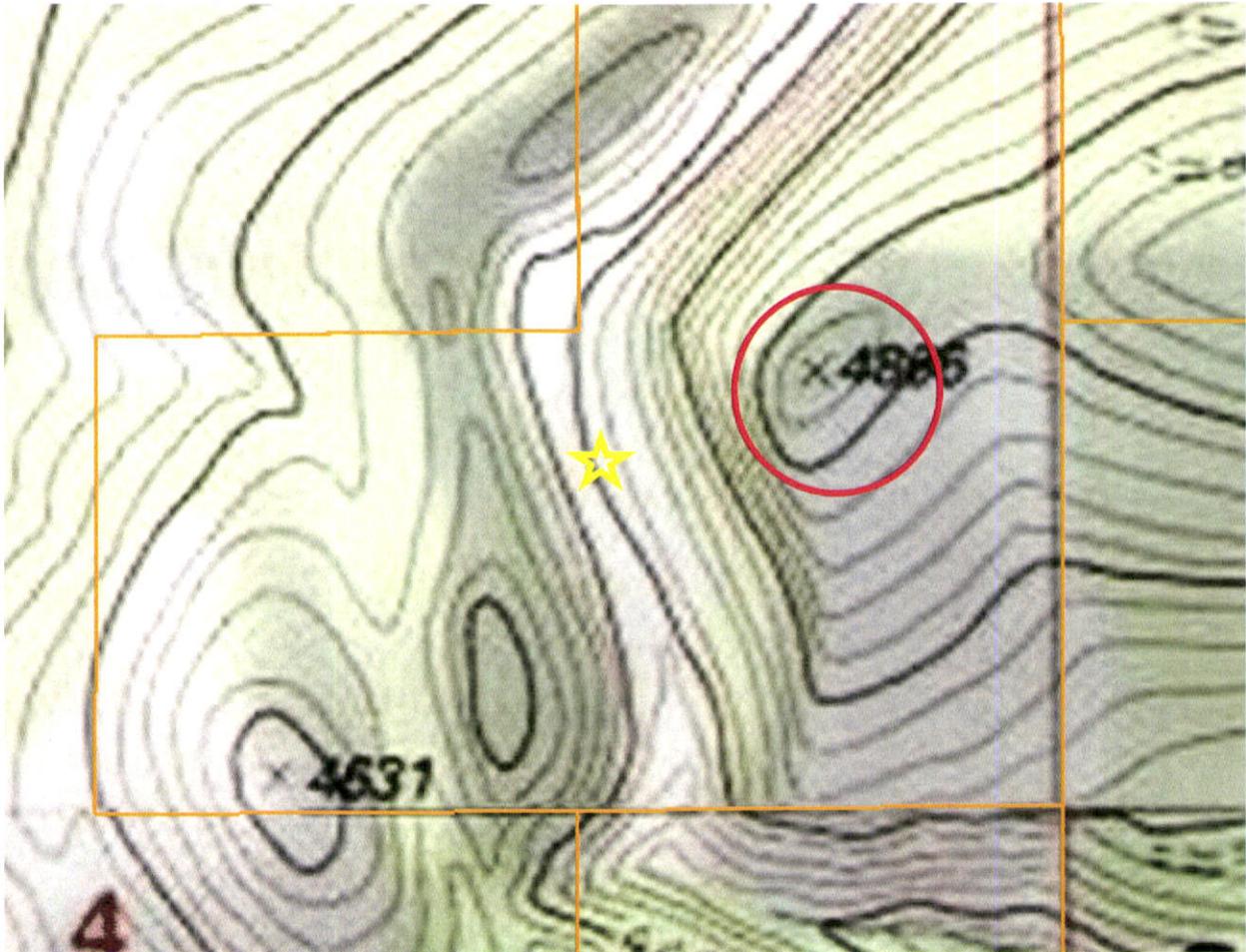
Glacier Stone proposed to expand their current existing mining activities at the Canyon Creek and Glacier Mountain sites that have been previously excluded from the permitting requirements of the Metal Mine Reclamation Act under SMES 07-027. Glacier Stone proposes to disturb a total of 8.2 acres at the Canyon Creek Site and 4.21 acres at the Glacier Mountain Site. The total permit area would total approximately 45 acres.



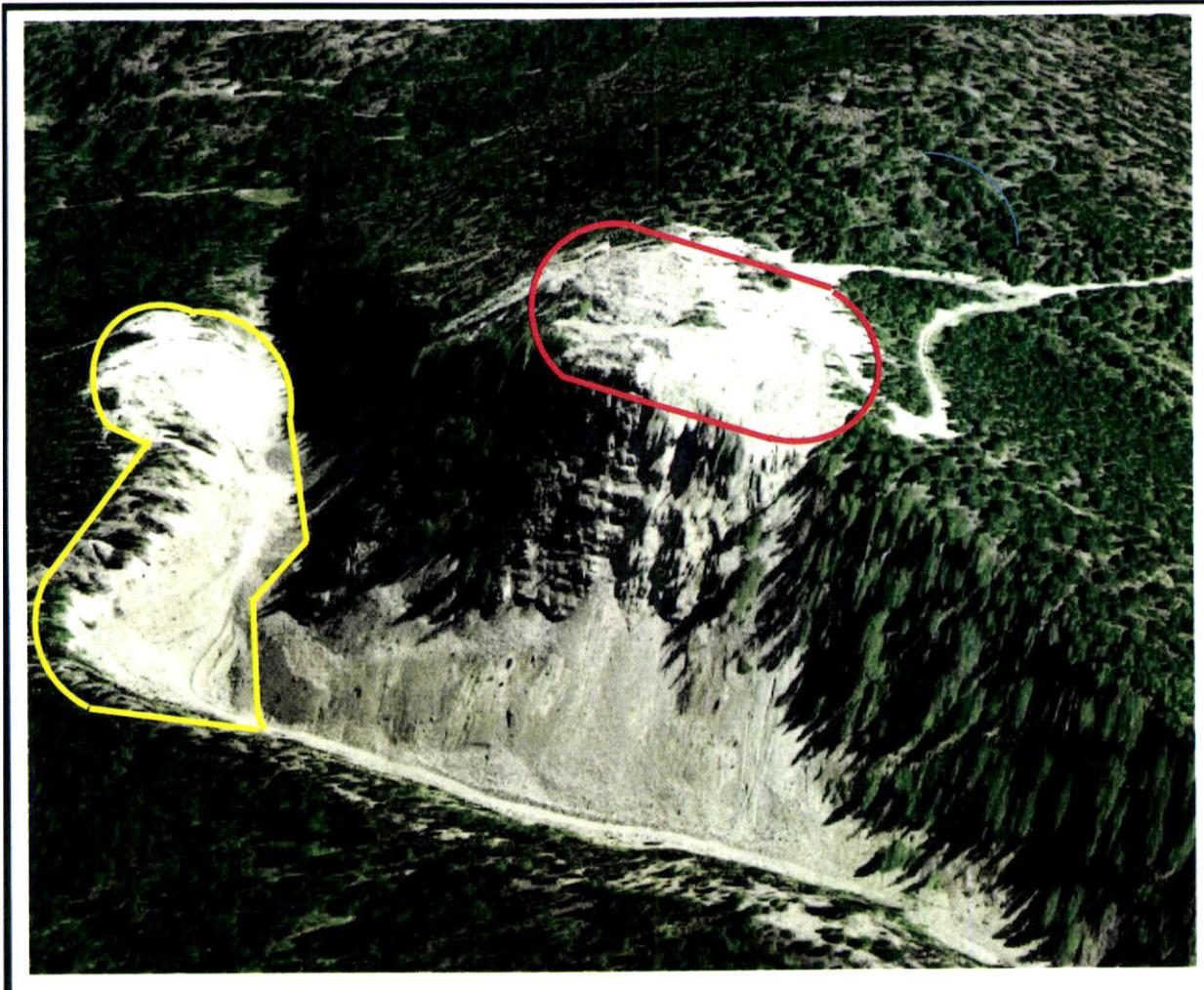
Quarry location (red circle) referenced to the town of Marion (black circle).



Site as referenced to the Little Bitterroot Lake (red circle)



Topographic map of the area. Elevation between the top and base (yellow star) of the Canyon Creek site is approximately 450 feet.



Area to be quarried at the Canyon Creek site with the proposed up to 50-foot top removal circled in red. The Glacier Stone Mine is composed of the Canyon Creek site and the Glacier Mountain site. The Glacier Mountain site is circled in yellow.

The quarry sites would be expanded by removing vegetation, stripping and stockpiling available soil for future reclamation use, and removing overburden or waste rock to access the desired rock materials. Generally, the materials to be quarried are rock outcrops and talus slopes. The upper elevation of the two sites would be lowered by up to fifty feet. Depending on the product being produced, rock may be removed by various methods from handpicking, drilling and blasting followed by excavation and hauling, ripping with a bulldozer or excavator followed by removal, or drilling and sawing with diamond saws and splitting blocks followed by removal.

A rock or stone collection site would be worked with hand bars and other hand tools, or with loaders, backhoes or other similar equipment that would lift rock and stones from the ground surfaces, or from under thin soil layers. The rock materials would be sorted, stock piled and placed on pallets for removal. The rock products would be loaded onto trucks and shipped to Glacier Stone's Kalispell plant operation using existing roads. The access roads are depicted on [Exhibit A to Glacier Stone's Application].

The proposed mining activities would occur for 25 years. Operation hours would be from 6:30 a.m. to 4:00 p.m. Monday through Friday. No night operations are proposed.

Soil development is expected to be shallow or non-existent over much of the proposed site. Where salvageable amounts of soil are encountered, soils would be salvaged and stockpiled. Slopes in the area are very steep and rocky and may prevent salvaging of all soil resources due to equipment and safety. Current and past mining of the rock outcrops have produced very little salvageable soil to date. Future disturbance at the Canyon Creek Site may produce salvageable soil resources.

Reclamation of the rock collection sites would consist primarily of smoothing disrupted ground surfaces, replacing any soil material that had been removed and stockpiled and seeding sites where rock has been removed.

The type of rock collection proposed by Glacier Stone would not generally cause continuous areas of disturbed soil nor create open pits or highwalls, but would only disturb the ground from which rock had been removed. If rock faces area created, Glacier Stone at closure would scale back the highwalls if necessary for stability and safety. Rock highwalls would be reclaimed as rock faces blending in with the surrounding topography. If quarrying results in upslope raveling of scree or loose rock, that destabilized slope would be revegetated or otherwise stabilized. The quarry floor would be graded, covered with soil material and revegetated. All cut slopes and/or highwalls in unconsolidated materials within the proposed permitted site would be graded/sloped to conform to the surrounding or adjacent topography and ensure free draining surface water.

Overburden and waste rock, if present, would be graded to conform to natural topography, against the quarry highwall to match and blend with existing topography. Coarse rock would not be revegetated but would remain as a rubble or scree feature.

Access roads would remain for future access by request of the landowner. Quarry roads would be recontoured and reclaimed upon mining completion.

#### Analysis Area:

The area being analyzed as part of this environmental review includes Sections 35 and 36, Township 28 North, Range 25 West; Sections 32 and 33, Township 28 North, Range 24 West; Sections 03, 04, 05, 08, 09, and 10, Township 27 North, Range 24 West and areas adjacent thereto that may be impacted by the proposed operation.

The proposed disturbance area is a ridge less than a mile to the east of Little Bitterroot Lake. Little Bitterroot Lake has medium density subdivisions with parcels averaging between one and two acres between the eastern shoreline and Pleasant Valley Road. East of Pleasant Valley Road the subdivisions are low density with parcels ranging from 20 acres to several hundred acres.

The proposed site has been logged in the past and has had various quarrying operations as well as limited livestock grazing. Most recently the site has been quarried by Glacier Stone Inc. under SMES #07-027.



**Map view of quarry location**

**View of quarry from the north**

**SUMMARY OF POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS:**

The following has been prepared by the Department of Environmental Quality (DEQ).

**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 project site contains formations of the Belt Supergroup including the Burke Formation and the Claggett Shale Formation. These rock formations have been quarried at this site since 2005 and the resulting slopes are stable. Glacier Stone has performed reclamation on part of the disturbance created under SMES 07-027 and that reclamation is stable.

Rock quarried under this plan would consist of various rock types and mineralogy. The rock may be found at or near the surface, such as talus, or in-place such as bedded metasediments, sandstone, schist, shale, limestone, basalt, rhyolite, marble, etc.

*Direct Impacts:*

No fragile or unstable geologic features are present at the land surface. Surface disturbance and rock extraction from the quarry would modify the topography at the project site. The ridge on which the Canyon Creek quarry is located would be lowered in elevation by up to fifty feet and flattened. The height of the feature is approximately 450 feet from the base to the top.

Generally, the materials to be quarried are rock outcrops and or talus slopes. Thus, soil development is expected to be shallow or non-existent over much of the proposed site. Glacier Stone would be required to salvage all available soil material that can be safely salvaged, to stockpile the salvaged soil material, and to use the stockpiled soil material in reclaiming the site. However, the limited amount of existing soil limits the amount of soil that will be available for reclamation of the site. However, much of the disturbed area will be reclaimed to that similar to what existed pre-mining, blending with the rock outcrops and talus slopes that are widely distributed in the area. Thus, the limited soil availability should not impair reclamation of the disturbed site to the post-mine land use of rock habitat.

Impacts are expected to be minor due to the limited area to be disturbed at any one time and concurrent reclamation.

*Secondary Impacts:*

The disturbance would increase the potential for erosion until vegetation is reestablished which would be a minor impact due to the limited area of disturbance, and concurrent reclamation.

## **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?*

The project area receives approximately 21.82 inches of rain annually (USGS StreamStats, 2017). No baseline water quality and quantity measurements in the greater project area have been collected. National Wetland Inventory delineated wetlands are not located within the proposed project perimeter (MTNHP, 2017).

The closest groundwater well (GWIC ID 284835) is located 0.35 miles away, to the west (GWIC, 2017). Depth to water in this well in this well is about 500 feet below ground surface. There are no surface water bodies, seeps, or springs within the proposed permit boundary.

*Direct Impacts:*

The applicant would be bound to all applicable state and federal rules regarding water quality and quantity. The applicant has additionally agreed to the condition of using appropriate best management practices (BMPs) throughout the project site to reduce the risk of erosion and sediment transport to surface waters. There would be minimal risk of degradation to surface or groundwater resulting from this project because of the distance to surface water and the water table. There would be some modifications to storm water run-off patterns due to changes in topography and storm water control BMPs.

*Secondary Impacts:*

Secondary impacts to water quality, quantity, and distribution that would be created by direct impacts analyzed above would be minimal due to the distance to surface water and groundwater.

## **3. AIR QUALITY:**

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

*Direct Impacts:*

Minimal particulate would be produced or become airborne during operations due to the breaking up and movement of rock product. Some exhaust fumes would be produced by the loaders, backhoes and light truck vehicles. Dust could be produced while driving on/off site, but should be minimal as road dust would be managed through application of BMPs such as watering or application of dust suppressant to road surfaces. The operator would be expected to maintain compliance with Montana's law regarding the need to take reasonable precautions to control

airborne particulate matter according to the Annotated Rules of Montana (ARM) 17.8.308.

*Secondary Impacts:*

Secondary impacts to air quality that could be created by the direct impacts analyzed above would be minimal due to the extent of the proposed work.

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

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

Approximately 66% of the proposed project site is forested (USGS StreamStats, 2017). A May 23, 2017, search of the Montana Natural Heritage Program database identified two vegetative species of special concern or occurrence within the project area. *Acorus americanus* (Sweetflag) is found in shallow water. The proposed project area has no standing water and would not impact this species. *Silene spaldingii* is found in open mesic grasslands. The proposed project area is a dry, steeply sloped, rocky hill with xeric soils and would not impact this species. Disturbed vegetation would be reclaimed after mining ceases with a DEQ approved native seed mix.

*Direct Impacts:*

Vegetation cover on the permitted disturbance area would be removed followed by revegetation as mining progresses.

*Secondary Impacts:*

Land disturbance at the site may result in propagation of noxious weeds. If an operating permit is granted, weed control during and preceding activities would be a requirement. Weed control would be included in the reclamation bond calculation.

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

*Is there substantial use of the area by important wildlife, birds or fish? Any wetlands? Species of special concern?*

A May 23, 2017, search of the Montana Natural Heritage Program database identified occurrences for nine species of concern, including one threatened species. Four of the identified species have habitat requirements for open water (e.g. fish). There is no open water or National Wetland Inventory delineated wetlands are located within the proposed project boundary.

The proposed project area is primarily Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest with some Rocky Mountain Mesic Montane Mixed Conifer Forest and Rocky Mountain Lower Montane, Foothill, and Valley Grassland.

Terrestrial species of concern that have been identified near the study area are discussed below. Townsend's Big-eared Bat (*Corynorhinus townsendii*) – Townsend's big-eared bats are widely distributed in western North America and are commonly identified in forested habitat. These mammals use caves and abandoned mines as maternity roosts. Eighty-seven percent of Montana is considered breeding range for this species. Therefore, impacts to this species should be minimal.

Little Brown Myotis (*Myotis lucifugus*) - Little Brown Myotis is the most common bat species in Montana. These bats are residents year-round and are found in a variety of habitats across a large elevation gradient. They commonly forage over water. Known maternity roosts in Montana are primarily buildings. Therefore, impacts to this species should be minimal.

Bald Eagle (*Haliaeetus leucocephalus*) - The Bald Eagle is primarily a species of riparian and lacustrine habitats (forested areas along rivers and lakes), especially during the breeding season. This bird is a resident species in the forested, mountainous areas of the state. Important year-round habitat includes wetlands, major water bodies, spring spawning streams, ungulate winter ranges and open water areas. Therefore, impacts to this species should be minimal due to habitat constraints and existing disturbances that have taken place.

Fisher (*Pekania pennanti*) – Fishers occur primarily in dense coniferous or mixed forests, including early successional forests with dense overhead cover. Optimal conditions for Fishers are forest tracts of 245 acres or more, interconnected with other large areas of suitable habitat. Fishers are managed in Montana as a furbearer with a limited harvest of seven animals. Therefore, impacts to this species should be minimal due to habitat constraints and existing disturbances that have taken place.

*Direct Impacts:*

The proposed activities are in an area previously disturbed. Impacts to habitat for species of concern will be minimal because previous mining activities, logging, and subdivisions for homes have already altered the vegetation and land surface. The project would be limited to a 17.5 acres parcel. **Please see attached map showing the location of the subdivisions.**

*Secondary Impacts:*

Secondary impacts are not expected due to the limited area of disturbance and existing disturbances that have taken place in the area.

## **6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:**

*Are any federally listed threatened or endangered species or identified habitat present?*

A May 23, 2017, search of the Montana Natural Heritage Program database identified one federally listed threatened or endangered species or habitat within the greater proposed project area.

Canada Lynx (*Lynx canadensis*) – The Canada Lynx is listed as a threatened animal by the USFS. However, on January 11, 2018, the U.S. Fish and Wildlife service announced the completion of a scientific review of the Canada lynx in the contiguous United States. The review concludes that the Canada lynx may no longer warrant protection under the Endangered Species Act and should be considered for delisting due to recovery.



The Canada lynx is a North American boreal and subalpine forest carnivore whose populations are strongly tied to its primary prey, the snowshoe hare. The southern margins of both their ranges extend into the northwest part of Montana and are dependent on dense vegetation and deep snow.

*Direct Impacts:*

The proposed activities would not impact any threatened or endangered species because of the limited scope of the project.

*Secondary Impacts:*

There would be no secondary impacts to threatened or endangered species due to the limited scope of the project and existing disturbances that have taken place in the area.

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

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

The Montana Historical Society determined on January 18, 2017, that, based on the ground disturbance in the area, (mining, logging, road, construction), a cultural resource inventory is unwarranted.

*Direct Impacts:*

The proposed mining activities are similar to activities conducted at the site under the SMES submitted to the Hard Rock Mining Bureau in 2005. No historical or archaeological sites have been identified in the proposed permit area. Therefore, no impact to historical and archaeological sites would occur.

*Secondary Impacts:*

There are no secondary impacts to historical and archaeological sites that would be created due to the existing disturbances and lack of identifiable sites.

## **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 project area consists of two sites one of which (Canyon Creek) is a prominent topographic feature and that would be visible from populated and scenic areas. The proposed project could be visible due to lighting at twilight if a viewer were in an observation point that is unobstructed. The upper elevation of the two sites would be lowered by up to fifty feet with only the Canyon Creek sites upper elevation visible from beyond the proposed permit boundary. Currently disturbance resulting from the SMES at the Canyon Creek site is visible from Little Bitterroot Lake.

*Direct Impacts:*

Modifications to topography, lighting, and noise impacts from mining operations would be minimal because of the limited proposed permit area and operating hours. Impacts to visual resources would be minimal due to the existing SMES disturbances and restricted viewshed of the sites.

The Canyon Creek quarry disturbance would be visible from Little Bitterroot Lake, located directly west of the proposed site. Other neighboring residents and visitors may be able to see the disturbance during the life of the mine and during reclamation.

The long-term viewshed of residents and visitors would be modified because of lowering the ridge on which the Canyon Creek quarry is located. There are hills in higher elevation to the east which would limit the viewshed of the site. Continued mining under the proposed operating permit would create additional disturbances and lower the elevation of the hill by approximately 50 feet at the end of mine life. These disturbances would be more pronounced than what currently exists but mainly limited to views from Little Bitterroot Lake. Impacts to the viewshed would be offset by a hill directly behind (to the east) of the area of proposed mining.

*Secondary Impacts:*

Further impacts to area aesthetics would be minimal due to the limited scope of the project.

**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?*

The proposed project would not use any limited resources in the area.

*Direct Impacts:*

DEQ searched several active mapping applications, including its interactive map and the DNRC public geographic information system. This search did not find any nearby commercial activities or projects demanding the use of the limited environmental resources of land, water, air, or energy that would be impacted by the proposed project.

*Secondary Impacts:*

No secondary impacts to environmental resources of land, water, air, or energy would result due to the limited scope of this project.

**10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:**

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

No other environmental resources were identified near the project.

*Direct Impacts:*

No impacts on other environmental resources are likely to occur due to the limited scope of this

project.

*Secondary Impacts:*

No secondary impacts to other environmental resource would result due to the limited scope of this project.

**11. HUMAN HEALTH AND SAFETY:**

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

The proposed project would not add to health and safety risks in the area.

*Direct Impacts:*

Impacts to human health and safety are not likely to occur due to the limited scope of this project. Most access roads are closed off to the public by a road closure gate. Glacier Stone does not allow public access to the sites.

*Secondary Impacts:*

No secondary impacts to human health and safety would result due to the limited scope of this project.

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

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

*Direct Impacts:*

Adverse impacts would not be expected on the Industrial, Commercial, and Agricultural Activities and Production in the area due to the limited scope of this project. DEQ searched for other projects occurring or under concurrent consideration near the proposed project and none were found.

*Secondary Impacts:*

No secondary impacts to industrial, commercial, and agricultural activities and production would result due to the limited scope of the project.

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

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

*Direct Impacts:*

Currently Glacier Stone employs between 40 to 100 people. This is not expected to increase.

*Secondary Impacts:*

No secondary impacts to quantity and distribution of employment would be created due to the limited scope of the project.

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

*Will the project create or eliminate tax revenue?*

*Direct Impacts:*

Some positive, yet limited, impacts to the local and state tax base and tax revenues could result from this project with continued employment of 40 to 100 people.

*Secondary Impacts:*

No secondary impacts to local and state tax base and tax revenues would be created due to the limited scope of the project.

**15. DEMAND FOR GOVERNMENT SERVICES:**

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

*Direct Impacts:*

Impacts expected on the demand for government services would be minimal due to the limited scope of the project. The existing demands are not expected to increase.

*Secondary Impacts:*

No secondary impacts to the demand for government services would occur due to the limited scope of the project.

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

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

*Direct Impacts:*

The entirety of the project would be located on private land. The project is subject to the Flathead County Weed Control District Weed Management Plan. DEQ is not aware of any other locally adopted environmental plans and goals that impact this proposed project or the project area. Some increase in noxious weeds would result from this project.

*Secondary Impacts:*

No secondary impacts to locally adopted environmental plans and goals that could be stimulated or induced by the direct impacts analyzed above would occur due to the limited scope of the project.

**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?*

*Direct Impacts:*

The project would be located on private land and at the end of the access road. The proposed operating permit boundary is not near, nor does it access, recreational or wilderness areas. There would be no impact to recreational potential on the proposed permit area.

*Secondary Impacts:*

Recreators on Little Bitterroot Lake may notice activity and noise from the proposed project due to running of heavy equipment and vehicle traffic. Secondary impacts to access and quality of

recreational activities would be minimal due to the limited scope of the project and the distance of almost one mile between the Little Bitterroot Lake and the proposed project area.

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

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

*Direct Impacts:*

No impact to population density and housing in the area surrounding the proposed quarries would be expected due to the limited scope of this project. No additional employment is expected beyond what currently exists.

*Secondary Impacts:*

No secondary impacts to population density and housing in the area surrounding the proposed quarries would be expected due to the limited scope of the project.

**19. SOCIAL STRUCTURES AND MORES:**

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

*Direct Impacts:*

No disruption of native or traditional lifestyles would be expected due to the limited scope of the project.

*Secondary Impacts:*

No secondary impacts to native or traditional lifestyles or communities that would be expected due to the limited scope of the project.

**20. CULTURAL UNIQUENESS AND DIVERSITY:**

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

The proposed project area is approximately three miles northwest of the town of Marion, MT. The Marion zip code has an approximate population of 1,500 and a 75% population growth between 2010 and 2016. Homes are clustered near the town of Marion and the shoreline of Little Bitterroot Lake.

*Direct Impacts:*

No impacts to cultural uniqueness and diversity would be expected due to the limited scope of the project.

*Secondary Impacts:*

No secondary impacts to cultural uniqueness and diversity would be expected due to the limited extent of the proposed project.

**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 is located on private land owned by the applicant. DEQ's issuance of an operating permit with conditions would affect the applicant's real property. DEQ has determined, however, that the permit conditions are reasonably necessary to ensure compliance with applicable requirements under the Metal Mine Reclamation Act and to demonstrate compliance with those requirements, or have been agreed to by the applicant. Therefore, DEQ's issuance of the operating permit with conditions would not have private property taking or damaging implications.

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

Due to the nature of the proposed mining activities, no further direct or secondary impacts would be anticipated from this project.

### **ALTERNATIVES CONSIDERED:**

In addition to the proposed action, DEQ also considered the "no action" alternative. The "no action" alternative would deny the issuance of the operating permit to the applicant. The applicant would lack the authority to mine rock product on property they own, and would therefore not be able to continue operations started under SMES #07-027 unless able to reduce their operations to less than or equal to five acres of disturbance. Any potential impacts that would be authorized under the operating permit would not occur. However, DEQ does not consider the "no action" alternative to be appropriate because the applicant has demonstrated compliance with all applicable rules and regulations as required for permit issuance. The no action alternative forms the baseline from which the impacts of the proposed action can be measured.

### **PUBLIC INVOLVEMENT:**

Scoping for this proposed action consisted of internal and external efforts to identify substantive issues and/or concerns related to the proposed project. Internal scoping consisted of a site visit and review of this environmental assessment by other DEQ staff. External efforts included queries to the following websites/databases/personnel:

- Montana State Historic Preservation Office
- Montana Department of Natural Resource and Conservation
- Montana Department of Environmental Quality
- Flathead County Weed Department
- US Geological Society – Stream Stats
- Montana Natural Heritage Program
- Montana Cadastral Mapping Program
- USDA NRCS Soil Survey
- Montana Groundwater Information Center

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

The proposed project would be fully within private land. No other governmental agencies are

involved with the operating permit application; however, all state and federal rules must be adhered to, which may include other state and federal agency jurisdiction.

### **CUMULATIVE EFFECTS:**

This environmental review is considering the proposed project submitted by the applicant. The cumulative impacts from this decorative rock excavation project include disturbance that was created under the SMES 07-027 and potential disturbance under the proposed application.

DEQ searched, but did not find information regarding any other federal, state, or private projects within the recent past or proposed for the near future that would add to the cumulative effects of impacts related to this project.

### **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 significance criteria set forth in the 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 because of an impact of the proposed action that would commit DEQ 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.

The severity, duration, geographic extent and frequency of the occurrence of the impacts associated with the proposed mining activities would be limited. The proposed action would disturb about 8 acres at the Canyon Creek site and about 4 acres at the Glacier Mountain site. The applicant is proposing to continue quarrying decorative stone on an area that has been used for the same purpose since 2005. The mine life is proposed to be 25 years. The land proposed to be disturbed does not contain unique, endangered, fragile, or limited environmental resources. The surface disturbance would be reclaimed within two years of completion of the mining activities.

The applicant is proposing to quarry rock outcrops and talus slopes using mechanized equipment. Impacts to local topography and the viewshed of nearby residents and visitors would be altered.

As discussed in the Environmental Assessment, DEQ has not identified any significant impacts associated with the proposed mining activities for any environmental resource. DEQ does not believe that the proposed mining activities by the applicant would have any growth-inducing or growth-inhibiting aspects, or contribution to cumulative impacts.

The proposed sites do not contain unique or fragile resources. There would be minor impacts to geology through removal of rock product, although limited in area. The site would be reclaimed to provide comparable utility and stability of adjacent undisturbed areas.

Minor impacts to soil would occur through soil salvage which would disrupt the soil horizon. Where possible soil would be salvaged and replaced during reclamation, then seeded with a DEQ approved seed mix.

Water resource impacts would be minor as storm water would be routed around disturbed areas. No water would be used on site except for dust control. There is no surface water to be impacted at the site. Groundwater would not be impacted as the depth to groundwater is about 500 feet.

Impacts to air quality would be minor due to the limited area of operation and use of water for dust control.

Impacts to vegetation would be minor due to concurrent reclamation with a DEQ approved seed mix. Weed control would take place and meet County standards.

There would be minor impacts to terrestrial, avian and aquatic life and habitats. These impacts would be reduced through concurrent reclamation to comparable utility and stability as adjacent undisturbed land. Impacts during mining would be similar to what currently exists while mining under a SMES.

Unique, endangered, fragile or limited environmental resources have been evaluated. There are no unique or endangered or fragile resources in the project area.

SHPO has determined that based on ground disturbance that currently exists there is no need for a cultural resource inventory. If a site is discovered SHPO would be notified immediately and the site left undisturbed until a proper evaluation is made.

There would be minor impacts to aesthetics as the modification of portions of the landscape would be visible from some locations. This is an unavoidable impact of mining. The upper elevation of the Canyon Creek site would be reduced by up to 50 feet. Over time disturbances to the viewshed would be less noticeable as revegetation and weathering of the rock surfaces occurs.

Demands on environmental resources of land, water, air or energy would be minor. The proposed action would be similar to what currently is taking place under a SMES.

Impacts to human health and safety would be minor as access roads would be closed to the public and the site is on private land. The public is not allowed on the mine site.

As discussed in the Environmental Assessment, DEQ has not identified any long-term or significant impacts associated with the proposed activities on any environmental resource.

Issuance of an operating permit to the applicant 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 operating permit or amendment application to conduct additional mining, 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 Metals Mine Reclamation Act. Issuance of the operating permit to the applicant 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 that the proposed mining activities by the applicant would have any growth-inducing or growth-inhibiting aspects 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 operation is not predicted to significantly impact the quality of the human environment. Therefore, preparation of an environmental assessment is the appropriate level of environmental review under the Montana Environmental Protection Act.

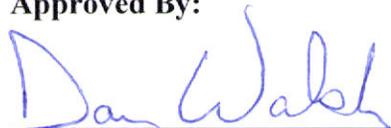
**Environmental Assessment Prepared By:**

Betsy Hovda  
Hard Rock Mining Bureau, DEQ

**Environmental Assessment Reviewed by:**

Herb Rolfes  
Operating Permit Section Supervisor  
Hard Rock Mining Bureau, DEQ

**Approved By:**



Signature  
Dan Walsh, Bureau Chief  
Hard Rock Mining Bureau, DEQ



Date