

March 8, 2019

RE: Notice of Availability of a Final Environmental Assessment and Decision Document for an Application for an Operating Permit from Glacier Stone Supply LLC, in Flathead County for Two Quarry Sites

Dear Reader:

Glacier Stine Supply LLC (Glacier) submitted an Operating Permit Application to the Department of Environmental Quality (DEQ) seeking authorization to operate two rock quarries on private property in Flathead County. The rock quarries are in close proximity to each other and are located in portions of Section 4, Township 27 North, Range 24 West and Government Lot 9 approximately three miles Northwest of Marion, MT.

Rock would be removed from the two sites using heavy equipment such as bulldozers, loaders, and backhoes. Generally, the rock would be quarried from rock outcrops and/or talus slopes. The quarry operations, however, may include possible drilling and blasting.

Access to the proposed quarry sites would be by way of public and private roads. Roads constructed to access the quarries would be reclaimed at closure or left for private access at the request of the property owner. The mine life is projected to be up to twenty-five years.

DEQ issued a draft environmental assessment on the application on June 12, 2018. Today, DEQ is issuing a final environmental assessment which includes responses to comments received on the draft environmental assessment. The operating permit application and final environmental assessment can be viewed at DEQ offices located at 1520 E. 6th Ave., in Helena, MT or on DEQ's website <http://deq.mt.gov/Public/ea/hardrock>

For information on the EA, contact me at the information below

Herb Rolfes
Operating Permit Section Supervisor
Hard Rock Mining Bureau
(406) 444-3841 or email at hrolfes@mt.gov

Sincerely,

A handwritten signature in blue ink that reads "Herb Rolfes". The signature is written in a cursive style.

Herb Rolfes
Operating Permit Section Supervisor
Hard Rock Mining Bureau
(406)444-3841 or email at hrolfes@mt.gov

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

FINAL ENVIRONMENTAL ASSESSMENT

COMPANY NAME: Glacier Stone Supply LLC

PROJECT: Glacier Stone Mine (Canyon Creek/Glacier Mountain Site)

PERMIT: 00190

LOCATION (lat, long): 48.128319, -114.687801

COUNTY: Flathead

PROPERTY OWNERSHIP: Private

TYPE AND PURPOSE OF PROPOSED ACTION:

On April 27, 2017, Glacier Stone Supply, LLC (Glacier Stone) applied for an operating permit to authorize the mining of rock products on privately owned, leased property in Flathead County, Montana (MT). The site is located about three miles northwest of Marion, MT (See Figure 1). The mine would be located within the N½ of the SE¼ 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 the disturbance area has grown beyond 5 acres--the size limitation for operating under a SMES. If issued, the operating permit would cover the Canyon Creek and Glacier Mountain sites, including landings and roadways. The option of applying for an operating permit was a corrective action identified in a December 27, 2016, Department of Environmental (DEQ) violation letter. The violation letter was issued by DEQ to Glacier Stone for operating two SMES sites within 1 mile of each other and for having disturbance between the two sites that exceeded the 5-acre SMES limitation.

Proposed Action

Glacier Stone proposed to obtain an operating permit for its current disturbance and expand its current mining activities at the Canyon Creek and Glacier Mountain sites that have been previously excluded from the operating permitting requirements of the Metal Mine Reclamation Act under SMES #07-027. The proposed disturbance area is 30 acres, not including the access road within the permit boundary. The access road encompasses 1.5 acres. The proposed 30 acres of mine disturbance is smaller than the 45 acres that are

proposed to be encompassed by the permit boundary. Only 13 acres would be disturbed at any one time due to concurrent reclamation (See Figure 2).

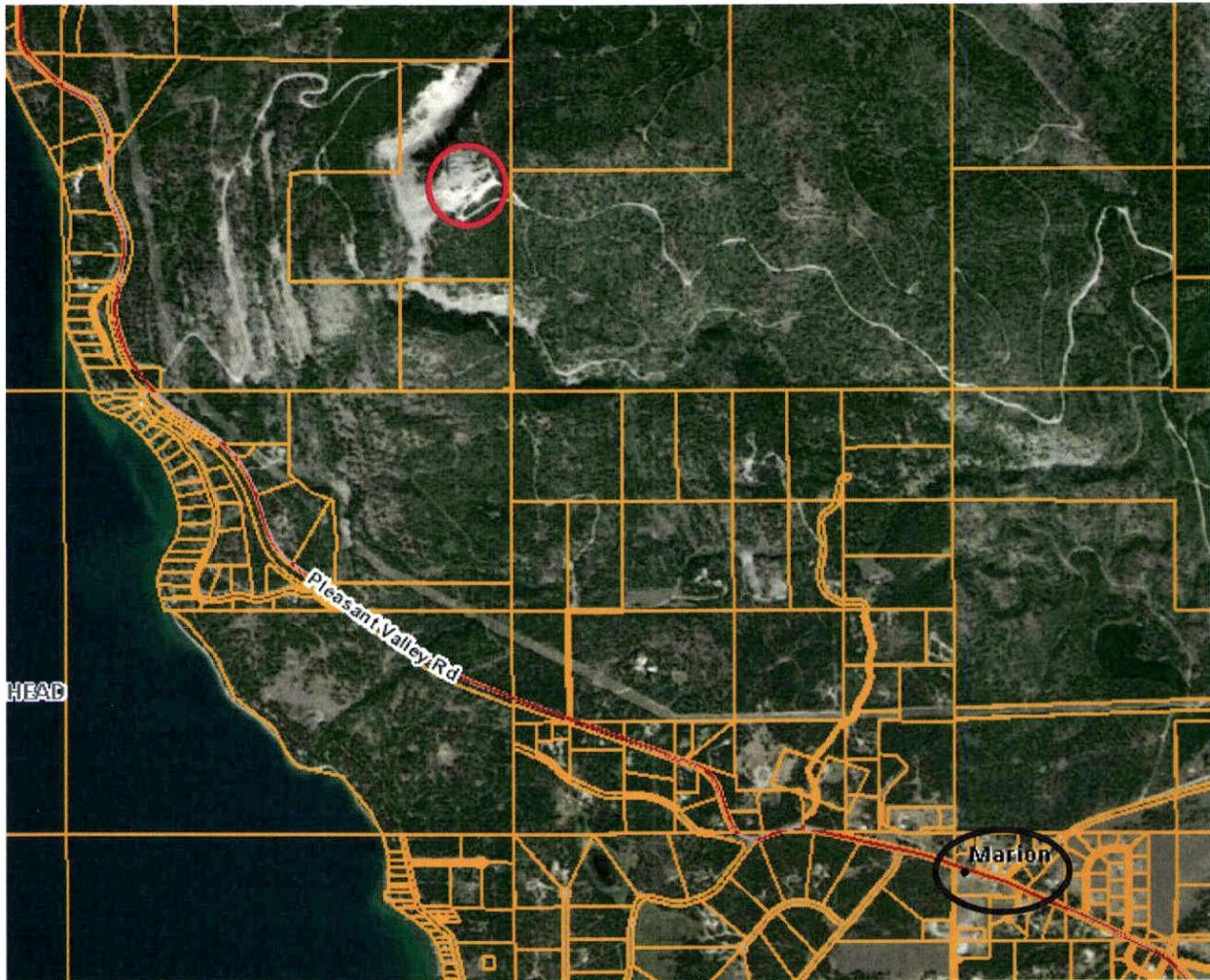


Figure 1. Quarry location (red circle) referenced to the town of Marion (black circle). Little Bitterroot Lake is at the left side of the image. Pleasant Valley Road is located between Little Bitterroot Lake and the Glacier Stone site location.

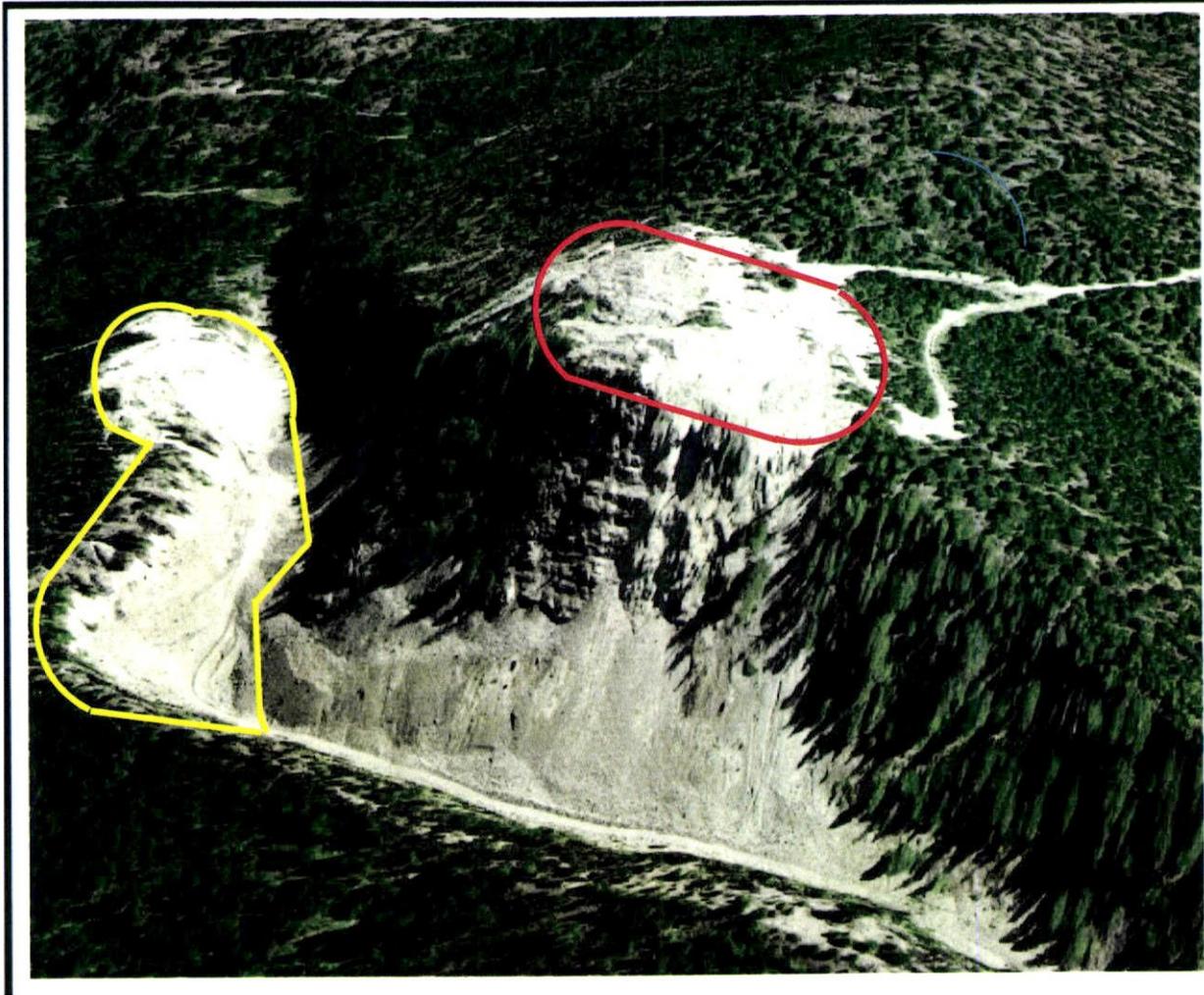


Figure 2. Area to be quarried at the Canyon Creek site with the proposed up to 50-foot top removal (enclosed in red). The Glacier Stone Mine is composed of the Canyon Creek site and the Glacier Mountain site. Glacier Mountain site is enclosed in yellow.

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 Canyon Creek Site would be lowered by up to fifty feet (See Figure 2). Depending on the product being produced, rock may be removed by various methods ranging from picking, 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, stockpiled 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 in Glacier Stone's Application.

The proposed mining activities would occur for up to 25 years. Operation hours would be from 6:30 a.m. to 4:00 p.m, Monday through Friday. No night or weekend operations are proposed. If blasting were used, it would be infrequent, averaging approximately once per year.

Soil 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 limitations and safety. Current and past mining of the rock outcrops have produced very little salvageable soil to date. Notwithstanding the general lack of salvageable soil material, Glacier Stone's proposed reclamation plan would require Glacier Stone to salvage all available, and safely accessible, soil material for reclamation.

Glacier Stone's proposed reclamation plan also requires the site to be reclaimed to a landscape dominated by rock rather than soil. Rock dominated habitats are abundant in the area due to the mountainous terrain, geology, and glaciation. The undisturbed native ground is gravelly loam with less than one to two inches (generally less than an inch) of slightly decomposed plant material. The reclamation of mining disturbance to a landscape dominated by rock under Glacier Stone's proposed reclamation plan would provide comparable utility and stability to that which existed prior to mining and to areas adjacent to the quarries, achieving the reclamation standard set forth in Section 82-4-336(9)(a), Montana Code Annotated (MCA).

Despite the limited salvageable soil, Glacier Stone has successfully reclaimed areas disturbed under SMES #07-027 to a condition that provides comparable utility and stability as adjacent areas, including the establishment of trees. 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 create open pits or highwalls, but would instead generally only disturb the ground from which rock had been removed. If rock faces are 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 growth media, 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 to ensure free draining surface water.

Overburden and waste rock, if present, would be graded to conform to natural topography, against the quarry highwall (if present) 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 (See Figure 3).

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.

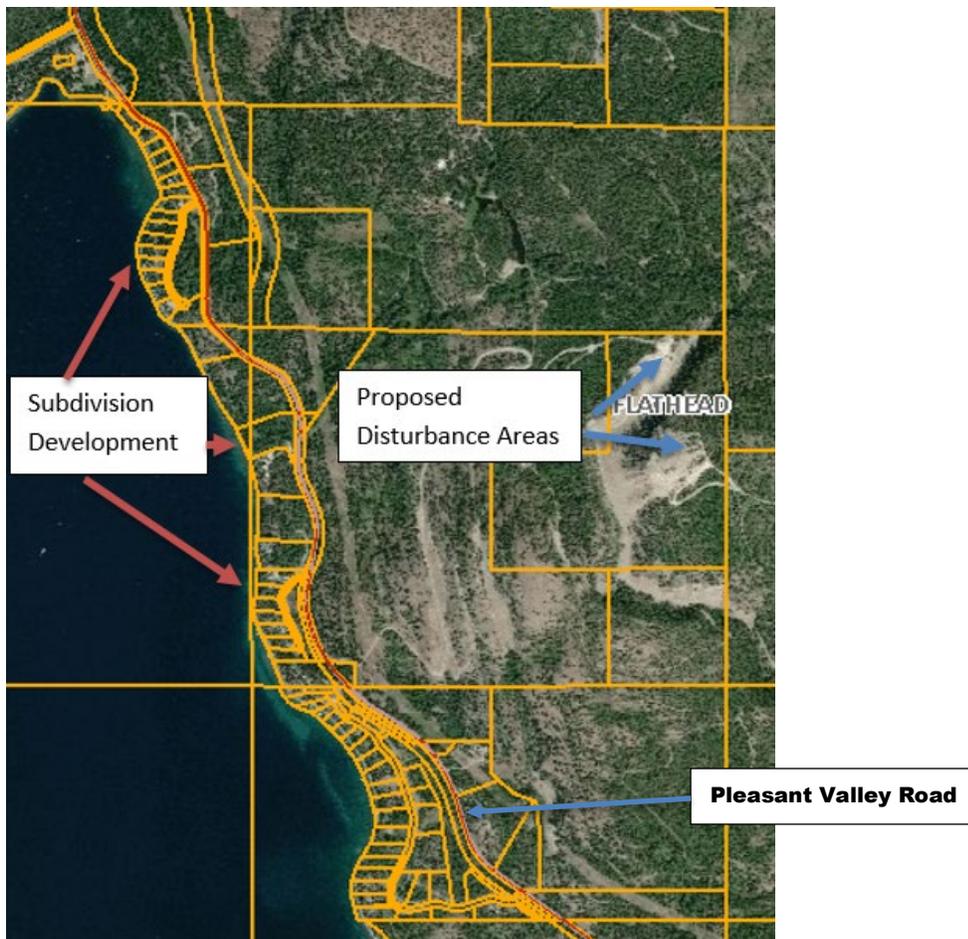


Figure 3. Location of proposed Disturbance Areas and Subdivisions.

SUMMARY OF POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS:

The following assessment has been prepared by 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 Belt Supergroup including the Burke Formation. These rock formations have been quarried at the site since 2005 under SMES #07-027 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 50 feet and flattened. The height of the feature is approximately 450 feet from the base of the west slope of the hill to the top of the hill where Canyon Creek quarry is located.

Generally, the materials to be quarried are rock outcrops and/or talus slopes. Thus, soil 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 would be available for reclamation of the site. The disturbed area would be reclaimed to a condition of comparable stability and utility, 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 a post-mine land use with comparable stability and utility. The reclamation of mining disturbance to a landscape dominated by rock under Glacier Stone's proposed reclamation plan would provide comparable utility and stability to that which existed prior to mining and to areas adjacent to the quarries, achieving the reclamation standard set forth in Section 82-4-336(9)(a), MCA.

Impacts are expected to be minor 1) due to the limited area to be disturbed, 2) due to the limited area to be disturbed at any one time, and 3) due to 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, the limited soil available to erode, 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 precipitation annually (USGS StreamStats, 2017). No baseline water quality and quantity measurements in the greater project area have been collected by DEQ. National Wetland Inventory delineated wetlands are not located within the proposed project perimeter (MTNHP, 2017).

Depth to water at the site was interpolated from the depth of the nearest well, which is located approximately ½ mile northwest of the proposed permit area. An estimate of the top elevation of the aquifer associated with this well, based on the elevation of the wellhead of about 4140 feet above mean sea level (amsl), is about 3960 feet amsl. The elevation of the permit area varies from 4400 - 4900 feet amsl. Therefore, the permit area ranges from 440 to 940 feet above the aquifer. The two proposed quarry sites are separated by a dry valley (elevation 4400', or about 100' lower than the northwest quarry and 400' lower than the southeast quarry) which shows no evidence of stream flow, springs, or seeps. Thus, Glacier Stone would not encounter groundwater during operations and would not impact groundwater.

Direct Impacts:

Based on multiple site visits by DEQ inspectors, small amounts of sediment that had discharged outside the proposed permit boundary were present. There is no indication that runoff could reach Little Bitterroot Lake, due to existing sediment control (berms and sediment control structures) as well as the rocky nature of the native and reclaimed ground that allows for rapid infiltration of runoff and snowmelt. The nearest on-site disturbance from the lake is about one mile in a direct line. There would be no direct flow path from the Glacier Mountain site to Little Bitterroot lake as runoff would enter the deep ravine, a natural catchment basin, between the two sites where it would infiltrate. The flow path from the Canyon Creek site would take a circuitous route of about three miles, if flow were able to travel that far, to the lake. No impacts to surface water resources are expected.

DEQ concludes that sediment will not travel from the site to Little Bitterroot Lake because of various filters that exist along the potential flow path.

1. The flow path to the lake (2.95 miles) appears to promote settling of any transported sediment prior to reaching the lake.
2. There is porous gravel / coarse rock in the immediate area of the disturbance. Runoff from most areas within both quarry sites would drain into areas where the land surface is composed of coarse rock. A large natural catchment basin exists downgradient from both the Canyon Creek and the Glacier Mountain disturbance areas. Runoff entering this area would infiltrate into the subsurface and slowly drain away, providing for deposition of any transported sediment within this coarse rock filter area.
3. There is a sediment catchment in the flow path from the proposed disturbance area to the north of the Glacier Mountain site and several berms on the permit perimeter that stop the transport of sediment in a storm event. Only a small portion of the north quarry area is within the northern watershed. The majority of the north quarry would drain toward the coarse rock natural basin to the south.

4. There are wetlands, vegetation, roads and other man-made structures between the permit area and Little Bitterroot Lake.

Sediment from storm water runoff coming off the permit area may travel beyond the permit boundary, but the above filters (primarily vegetation and areas of coarse rock) would limit the transport from tens to hundreds of feet beyond the permit boundary.

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 ground water 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:

There would be no secondary impacts to water quality, quantity, and distribution that would be created by direct impacts analyzed above due to the distance to surface water and ground water.

3. AIR QUALITY

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

Direct Impacts:

DEQ reviewed the proposed activities at the quarry and has determined that the potential emissions from equipment used at the site are less than the applicable threshold for requiring a Montana Air Quality Permit (Administrative Rules of Montana [ARM] 17.8.743(1)(b)). However, Glacier Stone would still be subject to the following emission standards, which apply to both permitted and unpermitted facilities:

ARM 17.8.304(2) Visible Air Contaminants – No person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

ARM 17.8.308(1) Particulate Matter, Airborne – No person shall cause or authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control emissions of airborne particulate matter are taken. Such emissions of airborne particulate matter from any stationary source shall not exhibit an opacity of 20% or greater averaged over six consecutive minutes, except for emission of airborne particulate matter originating from any transfer ladle or operation engaged in the transfer of molten metal which was installed or operating prior to November 23, 1968.

ARM 17.8.308(2) Particulate Matter, Airborne - No person shall cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

To satisfy “reasonable precautions” provisions, Glacier Stone would employ a number of control measures to reduce emissions, as necessary, including but not limited to the application of chemical dust suppressant and/or water on haul roads and access roads and the prompt revegetation of disturbed areas.

Sampling and pre-monitoring is not required under the Clean Air Act of Montana or the corresponding administrative rules. An air quality permit is not required for the Glacier stone operations. Ambient air quality monitoring for such operations is typically not required by DEQ, even for sources that are required to obtain an air quality permit.

The quarried material is inert. The particulate matter potentially released during operation would be regulated as particulate matter – primarily as Particulate Matter with an aerodynamic diameter of 10 micrometers or less (PM₁₀). Potential emissions are expected to be less than the permit threshold requirement, and dust control is required to meet the reasonable precautions provisions. Therefore, because particulate would be emitted at levels below the permitting threshold and controlled, DEQ does not believe that particulate matter would be hazardous to nearby residents.

Concurrent reclamation would limit the potential for blowing dust from the operating area. The rock fragments left in the soils would also limit blowing dust.

Secondary Impacts:

Secondary impacts to air quality that could be created by the direct impacts analyzed above would be minimal due to the limited 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 support 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 prior to mining. The area would be revegetated as mining is completed. While the total proposed disturbance area is 30 acres, only 13 acres would be disturbed at any one time due to concurrent reclamation.

Secondary Impacts:

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

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 on threatened species. Four of the identified species have a habitat requirement for open water (e.g. fish). There is no open water or National Wetland Inventory delineated wetlands 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 pennant*) – 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 partly in an area previously disturbed. Impacts to habitat for species of concern would 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 an additional proposed disturbance of 17.5-acres. Please see Figure 3 showing the location of the subdivisions with respect to the proposed disturbance areas.

Lynx is the only threatened or endangered species identified in the project area. The proposed permit area is 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. In addition to not providing lynx desirable habitat because of the proximity to human activity, lynx are not known to depend on such rocky areas and are not obligate users of this habitat type. There is no boreal forest habitat within the permit boundary. The probability of any lynx occurring in the proposed permit area is considered very low. Any such occurrence would be a transient individual passing through the area.

The proposed permit area and adjacent areas do not provide habitat for Townsend's Big-eared bats, Little Brown Myotis, Bald Eagles, Fisher, Common Loons, or Great Blue Herons. The Montana Natural Heritage Program website was reviewed for the presence of T&E species within or near the proposed permit area.

Secondary Impacts:

Secondary Impacts are not expected due to the limited area of proposed 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 United States Forest Service. However, on January 11, 2018, the United States 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.



Figure 7. Canadian Lynx

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 and because of the other uses of the surrounding area. The proposed permit area is 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. In addition to not providing lynx desirable habitat because of the proximity to human activity, lynx are not known to depend on such rocky areas and are not obligate users of this habitat type. There is no boreal forest habitat within the permit boundary. The probability of any lynx occurring in the proposed permit area is considered very low. Any such occurrence would be a transient individual passing through the area.

The proposed permit area and adjacent areas do not provide habitat for Townsend's Big-eared bats, Little Brown Myotis, Bald Eagles, Fisher, Common Loons or Great Blue Herons.

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 there 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, and 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 is visible from populated and scenic areas. The upper elevation of the two sites would be lowered by up to 50 feet. While viewshed aesthetics would be impacted by the proposed operations, the visual disturbance would not dominate the landscape. Disturbance at the site would be a rocky outcrop during mining operations and would be a vegetated plateau post reclamation. The duration of mining activities in the operating permit application is up to 25 years. Glacier Stone has proposed that mining disturbance would be limited to a total of 13 acres at any one time and Glacier Stone currently reports 12.4 disturbed acres in their operating permit application. Three figures (Figures 4-6) from Google Maps 3D are provided below to show the view of the proposed permit area from the north and from the west across Little Bitterroot Lake. These figures show disturbance resulting from the SMES activities at the proposed permit area as well as other adjacent disturbance in the surrounding area (e.g. roads and buildings).



Figure 4. View of proposed permit area from the north.



Figure 5. View of proposed permit area from the northwest.



Figure 6. View of proposed permit area from the southwest.

Most construction equipment produces noise in a decibel range in the upper 70s to lower 80s at a distance of 50 feet (https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm). The decibel level drops off with distance at about 6 decibels with doubling of distance, and at ten times the distance drops the intensity by 20 decibels (<http://hyperphysics.phy-astr.gsu.edu/hbase/Acoustic/isprob2.html>). The EPA has determined that a 24-hour exposure of 70 decibels is the level of environmental noise which prevents measurable hearing loss over a lifetime (<https://archive.epa.gov/epa/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare.html>). This level would be reached at a distance of about 150 feet from the source. Levels of 45 decibels are associated with indoor activities and 55 decibels with certain outdoor areas where human activity takes place. At a distance of about 800 feet from the source this decibel level would be met.

Proposed Glacier Stone operations would consist of excavator and truck operation. The excavator and truck operation would generate noise levels of a typical small-scale construction operation. DEQ expects Glacier Stone's equipment to produce noise in a decibel range in the upper 70s to lower 80s at a distance of 50 feet. The decibel level drops off with distance at about 6 decibels with doubling of distance, and at ten times the distance drops the intensity by 20 decibels. The closest residence to the proposed permit area is approximately 2,900 feet away.

Glacier Stone plans to blast once every few years, if needed. The resulting noise would be greater than typical operations, but very limited in frequency. All operations would occur during daylight hours. The noise levels in the area would be essentially the same as the noise levels that have existed with ongoing operations under the SMES at this site since approximately 2005. Other mining appears to have occurred in this area as far back as 1994.

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

The long-term viewshed of residents and visitors would be modified because of lowering the hill 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 proposed disturbance area by up to 50 feet at the end of mine life. These disturbances would be more pronounced than what currently exists but mainly limited to the views from Little Bitterroot Lake. Impact to the viewshed would be offset by a hill directly behind (to the east) of the area of proposed mining. See Figures 4 through 6 that show the existing viewshed and disturbance created by the SMES.

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. DEQ does not predict that the quality of water at Little Bitterroot Lake will be impacted by Glacier Stone's proposed quarry operation.

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?

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 resources 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?

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.

Dust is not anticipated to be a problem. Generally, crushed aggregate projects include, as part of the project, dust control measures. If dust control is required, Glacier Stone may be required to use a water truck or dust suppressant to meet the reasonable precautions and/or opacity standard identified in the ARMs.

Concurrent reclamation would limit the potential for blowing dust from the operating area. The rock fragments left in the soils would also limit blowing dust. As previously indicated, the proposed operations as described in the application do not anticipate impacts to water or adjacent lands.

Reasonable safeguards have been taken to protect the human health and safety of people recreating on nearby property and use of shared access. There is shared access on the road that enters the northern portion of the Glacier Mountain quarry, but the shared access does not extend into the proposed permit boundary.

Because the quarries are to be reclaimed concurrently there should be no additional impacts to the public beyond what currently exists. There are no additional impacts to the public with approval of this amendment as the site is currently operated under a SMES.

Secondary Impacts:

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

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 not within the Kalispell city limits where there are some locally adopted environmental plans. These plans apply only in the Kalispell city limits. The area is outside the area covered by the Flathead County Growth Policy. 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.

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 area is about a mile from Little Bitterroot Lake. There is no wilderness areas nearby and there is no access to recreational areas from the site. 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 DIESTRIBUTION 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 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?

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 alternative.

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 operating 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 Resources and Conservation
- Montana Department of Environmental Quality
- Flathead County Weed Department
- Flathead County Planning & Zoning Office
- US Geological Society – Stream Stats
- Montana Natural Heritage Program
- Montana Cadastral Mapping Program
- US Department of Agriculture NRCS Soil Survey
- Montana Ground Water Information Center

DEQ staff also discussed the project with concerned citizens by telephone and in person.

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 operating permit 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 result in the disturbance of about 17 additional acres at the site. The applicant is proposing to continue quarrying decorative stone on an area that has been used by Glacier Stone for the same purpose since approximately 2005. The mine life is proposed to be up to 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 this 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 operating permit site does 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 controlled through best management practices under a Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity. 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 ground water ranges between 440 – 940 feet below ground surface and well below any disturbance to be made by Glacier Stone.

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 Flathead 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 the impacts that currently exist from mining under a SMES.

Unique, endangered, fragile, or limited environmental resources have been evaluated. There are no unique or endangered 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 resource is discovered, SHPO would be notified immediately and the site left further untouched until a proper evaluation is made.

There would be impacts to viewshed aesthetics as the mining disturbance would be visible from Little Bitterroot Lake, U.S. Highway 2, and along portions of Pleasant Valley Road (among other locations). The upper elevation of the Canyon Creek site would be reduced by up to 50 feet. While viewshed aesthetics would be impacted by the proposed operations, the visual disturbance would not dominate the landscape. Over time disturbances to the viewshed would be less noticeable as revegetation and weathering of rock surfaces occurs.

Demands on environmental resources of land, water, air, or energy would be minor. The impacts from the proposed action would be similar to the disturbance from current actions taking place under a SMES.

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

As discussed in this 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, amendment, or revision 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 Metal 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 that would 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 Policy Act.

Environmental Assessment Prepared By:

Betsy Hovda
Hard Rock Mining Bureau, DEQ

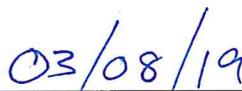
Environmental Assessment Reviewed By:

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

Approved By:



Dan Walsh, Bureau Chief
Hard Rock Mining Bureau, DEQ



Date

Comment Code	Document #01-Wilson	Response
	<div data-bbox="254 380 386 495" data-label="Text"> <p>John M. Morrison Frederick F. Sherwood David K. W. Wilson, Jr. Linda M. Deola Brian J. Miller kwilson@mswdlaw.com</p> </div> <div data-bbox="480 297 753 495" data-label="Text"> <p>M S W D MORRISON SHERWOOD WILSON DEOLA PLLP Attorneys at Law 401 North Last Chance Gulch P.O. Box 557, Helena, Montana 59624-0557 www.mswdlaw.com</p> </div> <div data-bbox="869 376 980 492" data-label="Text"> <p>Robert Farris-Olsen André Larose Scott Peterson Anne Sherwood (406) 442-3261 (406) 443-7294 FAX</p> </div> <div data-bbox="558 509 667 534" data-label="Text"> <p>August 2, 2018</p> </div> <div data-bbox="294 552 432 652" data-label="Text"> <p>Mr. Herb Rolfes Montana DEQ P.O. Box 200901 Helena, MT 59620 hrolfes@mt.gov</p> </div> <div data-bbox="342 669 642 691" data-label="Text"> <p>Re: <i>Glacier Stone Environmental Assessment</i></p> </div> <div data-bbox="294 709 417 732" data-label="Text"> <p>Dear Mr. Rolfes:</p> </div> <div data-bbox="294 747 909 852" data-label="Text"> <p>I am writing on behalf of Henry and Diane Belk. This letter constitutes our formal comments on the Glacier Stone Supply Environmental Assessment (EA). Thank you for the courtesy of the two-week extension, and for allowing me access to the files this past week. Elizabeth Erickson with Water and Environmental Technologies (WET) will be providing additional comments and exhibits on the Belk's behalf, by separate cover.</p> </div> <div data-bbox="294 865 930 1047" data-label="Text"> <p>The EA and proposed permit are deficient under the Montana Environmental Policy Act (MEPA) and the Metal Mine Reclamation Act (MMRA) in a number of regards, as discussed below. More broadly, my recent inspection of the Glacier Stone SMES file at DEQ shows that Glacier Stone is a company that has openly flaunted the small miner exclusion over the past decade, with at least three notices of violation because it exceeded the 5-acre limitation for small miners. The only reason that Glacier Stone is applying for the current permit is because it was in serial violation of the SMES; something that should certainly be noted and discussed in the EA. Given this history, DEQ needs to make a much more detailed analysis of the permit application.</p> </div> <div data-bbox="342 1062 915 1105" data-label="Section-Header"> <p>1. <u>Inadequate Disclosure of Impacts to Neighboring Private Property and Related Property Rights.</u></p> </div> <div data-bbox="294 1120 888 1183" data-label="Text"> <p>The Belks' property essentially surrounds the Glacier Stone property; as a consequence, they are on the front lines of any impacts from the mine. They also have property rights that are adversely affected by the actions of Glacier Stone.</p> </div>	

The ownership history is somewhat complicated, so by way of background, we provide the following information. In 2004 the Jarvis property on which the quarry is located was owned by Stoltz Lumber (SL). SL had a contract with Bill Gorton to quarry rock from approximately 1994 to 2004. Bill Gorton had a one-man shop. He took out about one truck and trailer load per week. Subsequently, SL gave the contract to Glacier Stone for quarrying.

In the fall of 2005 Mr. Jarvis purchased the SL quarry property of 120 acres and applied for the SMES. In 2006, the property known as the Trudeau property was purchased from Jim Syth, and an easement road from Pleasant Valley Road cut across this Trudeau property to the mine entrance on the Jarvis property. Glacier Stone mined both the Trudeau and Jarvis properties. In the summer of 2010, Mr. Trudeau signed his property back to Glacier Bank in a deed in lieu of foreclosure.

Around July 2011, Mr. Russell purchased the Trudeau property from Glacier Bank and contracted with Glacier Stone to continue mining the Trudeau/Russell property. Due to a disagreement, this contact ended after less than a year, and Mr. Russell continued to mine as a small, one-man mining operation much as Bill Gorton had done on the SL property. Glacier Bank foreclosed on the Trudeau/Russell property and Henry and Diane Belk purchased the Trudeau/Russell property in February 2016.

The location of the Belks' properties is best illustrated in Glacier Stone's Exhibit A "Glacier Stone Mine Permit and Land Ownership" map. The Belks have a reciprocal access easement on a road through the center of the mining property. Glacier Stone, in turn, has a reciprocal easement through what is now the Belk property to the immediate south of the Glacier Stone quarry that is the subject of its current permit application. That road is roughly shown by the dashed red line on Glacier Stone's Exhibit A. I have attached as Exhibit 1 a modified version of that map, showing the continuation of the actual road easement through the length of the mine property. Glacier Stone, however, has now blocked that access through its mining activities, and the Belks are considering their legal options. Needless to say, the presence of a private access easement through the middle of a mine raises numerous issues concerning safety, and the viability of the current mine plan. The draft EA should thoroughly evaluate the mine's impacts on the Belks' property and property rights.

Instead, the EA contains no discussion of the impacts to neighboring property owners, including the Belks, nor does it discuss the access easement that the Belks have through the mine site. Glacier Stone has routinely interfered with the Belks' access easement as well as trespassed on other neighboring property of the Belks. The Belks have had to initiate legal action in the past to address these actions. Has MSHA been contacted by DEQ about the presence of a private access easement through the middle of an active mine site?

MEPA requires that agencies take a "hard look" at potential impacts of proposals. *Ravalli County Fish and Game v. DSL* (1995), 273 Mont. 371, 377, 903 P.2d 1362. "Implicit in the requirement that an agency take a hard look at the environmental consequences of its

<p>WIL-1</p>	<p>actions is the obligation to make an adequate compilation of relevant information, to analyze it reasonably, and to consider all pertinent data.” <i>Clark Fork Coalition v. Montana DEQ</i> (2008), 2009 MT 407, ¶ 47.</p>	<p>Comment Response WIL-1</p>	<p>DEQ is aware that a reciprocal easement agreement was signed by predecessors in interest to the Belks and Glacier Stone. Disputes regarding the existence and enforcement of easements held by property owners within the permit area and adjacent areas may be resolved in a civil action before a court. DEQ is not a court and does not have the authority to adjudicate competing claims regarding private property. As the commenter noted, the Belks are apparently considering their legal options and have initiated legal actions in the past regarding legal access.</p>
<p>WIL-2</p>	<p>Indeed, MEPA explicitly requires that environmental review take into account the impact to private property and private property rights. One of MEPA’s “purposes” is to “protect the right to use and enjoy private property free of undue government regulation.” § 71-1-102 (2), MCA. Environmental impact statements must evaluate “any regulatory impacts on private property rights, including whether alternatives that reduce, minimize, or eliminate the regulation of private property rights have been analyzed.” § 75-1-201 (1) (b) (iv) (D), MCA. Here, the EA completely fails to discuss in any way the impacts to the Belk’s property, or to their road easement.</p> <p>2. <u>Section by Section Evaluation of Environmental Impacts</u></p> <p>The following are comments tracking specific sections of the Draft EA.</p> <p><i>TYPE AND PURPOSE OF PROPOSED ACTIONS:</i></p>	<p>However, Section 82-4-336(10), Montana Code Annotated (MCA), requires a reclamation plan to provide sufficient measures to ensure public safety. From that standpoint, DEQ has considered whether the Belk’s have legal access and the use of which would present a safety risk due to Glacier Stone’s proposed quarry operation. DEQ has reviewed the reciprocal access agreement, Glacier Stone’s Exhibit A, and map provided by the commenter. Based on its review of these documents, DEQ does not believe that the Belk’s have road easement that goes “through the length of the mine property” or “through the mine site.” As indicated on the map attached to the reciprocal access agreement, the location of the easement owned by Belk’s is depicted on the Amended and Restated Reciprocal Easement Declaration dated August 30, 2007. As previously indicated, DEQ’s action on Glacier Stone’s application for an operating permit is not the proper forum to adjudicate the Belk’s asserted access easement because DEQ is not a court and has no authority to adjudicate private property claims.</p>	
<p>WIL-3</p>	<p>Page 4/18, 1st paragraph, first sentence: ...proposed 50-foot top removal. This permit is requested for 25 years. Why will it take 25 years to remove 50 vertical feet of what is currently about 1 acre on the top of the mountain?</p>	<p>Section 75-1-201(1)(b)(iv)(D), MCA, requires environmental reviews to include analysis of any regulatory impacts on private property rights, including whether alternatives that reduce, minimize, or eliminate the regulation of private property rights have been analyzed. In addition, that provision states that the analysis does not need to be prepared if the proposed action does not involve the regulation of private property.</p>	
<p>WIL-4</p>	<p>Page 4/18, 2nd paragraph, last sentence: One of the options for removing rock is blasting. Yet, the EA has no discussion of the level of noise or the impacts from blasting.</p>	<p>The private property being protected in this statutory provision is the private property rights of the applicant. DEQ conducts the private property assessment if it is proposing to deny an application for a permit or to place in the approval of the application a condition that has not been agreed to be the regulated person at the time of the publication of the EA or EIS. Property owned by surrounding landowners are not being regulated and, therefore, are not subject to the private property analysis set forth in Section 75-1-201(1)(b)(iv)(D), MCA.</p>	
<p>WIL-5</p>	<p>Page 5/18, last paragraph: This paragraph is not accurate. The site has not had “various quarrying operations.” Bill Gorton quarried the property from about 1994 as a one-man operation and took out probably 1 truck per week, when he was quarrying. Prior to the purchase by Jarvis of the Stoltz property, mining was very limited, any person viewing the Stoltz property would not know that mining was occurring on that property. Please reference the 2004 Google Earth photo submitted with the WET Comments.</p> <p><i>SECTION 1: Geology</i></p>	<p>Comment Response WIL-2</p>	<p>Proposed mining rates are a function of several factors which are beyond the scope of this EA.</p>
<p>WIL-6</p>	<p>Page 6/18, last paragraph, third sentence: “...limited amount of existing soil...” There is no existing soil because Glacier Stone has already removed the soil from their previous mining operations from 2005 after Jarvis purchased the property. In late 2010 or spring of 2011 the Belks met with DEQ representative Pat Platenburg and Glacier Bank representative Steve Cummings. Later in 2011, the Belks met with DEQ representative Amanda Miller. Both Pat Platenburg and Amanda Miller stated to the Belks on separate occasions that Glacier Stone should be mining under the operators permit and that it had violated the SMES parameters. As noted below, DEQ didn’t take formal action on this apparently ongoing violation until 2016.</p>	<p>Comment Response WIL-3</p>	<p>Glacier Stone is proposing to blast less than once a year at the site. The EA has been updated to address noise and to mention the frequency of blasting.</p>
	<p>Page 6/18, last paragraph, fourth sentence: “...much of the disturbed area will be reclaimed to that similar to what existed pre-mining...” The EA needs to me more specific about how much</p>	<p>Comment Response WIL-4</p>	<p>Comment WIL-4 acknowledges that quarrying has been occurring in the area since at least 1994. Another commenter, Water and Environmental Technologies, provided a series of aerial photographs which document a progression of rock product mining within and near the proposed operating permit application permit area. The 2004 aerial photograph documents at least 2 quarry sites within the field of view. More are apparent in the 2009 photograph. The EA has been updated.</p>
	<p>3</p>	<p>Comment Response WIL-5</p>	<p>See comment response to -WET-3 for a discussion on soils in the proposed permit area.</p> <p>DEQ took an enforcement action by issuing a violation letter that set forth corrective actions Glacier Stone could take to return to compliance. Glacier Stone’s application for an operating permit is a corrective action to the violation identified in 2016.</p>
		<p>Comment Response WIL-6</p>	<p>The MMRA does not require land to be reclaimed to its pre-mining condition. 82-4-336 (9)(a), MCA, requires that the reclamation plan “provide for the reclamation of all disturbed land to comparable utility and</p>

<p>WIL-7</p> <p>WIL-8</p> <p>WIL-9</p> <p>WIL-10</p>	<p>is "much of the disturbed area." Reclamation should be to the condition of the property at the time Glacier Stone began its operations. All the soil removal and creating of this eyesore has been done under Glacier Stone mining operations. See Google Earth photo progression from 2004 to 2017 submitted with the WET Comments.</p> <p><i>SECTION 2: Water Quality</i></p> <p>Page 7/18, first paragraph, second sentence: "No baseline water quality ...collected." The LBLA has had Water and Environmental Technologies collecting and analyzing water samples in Little Bitterroot Lake yearly for approximately the last 10 years. The failure of the EA to discuss potential impacts to Little Bitterroot Lake, or why there won't be impacts to Little Bitterroot Lake, is most egregious. See related documentation submitted by Water and Environmental Technologies on behalf of the Belks.</p> <p>Page 7/18, second paragraph, first and second sentence: "The closest groundwater...west. Depth...500 feet below ground surface." This statement is not accurate as it ignores the spring on the Belk's property in close proximity to the mine site. The Belks have a filed water right to that spring and the spring water is used for their residential purposes. Additionally, the Belks have recently drilled a well, but the water right to this was not submitted until July 19, 2018, long after this report was created. This well is also used for the Belk's residential purposes. A copy of the well log is attached to the WET comments. There is also a wetland area at the beginning of the Belk property where the Jarvis easement road begins (near Pleasant Valley Road). This wetland is directly below the mining area. This is not listed in this report.</p> <p><i>SECTION 3: Air Quality</i></p> <p>Page 7/18, direct impacts: The dust clouds that roll off the roads from mining operations are enormous. The Belks have video of this, which has been shared with DEQ's Amanda Miller previously. It's so bad that in 2006 when Syth sold the property to Trudeau (this is the property over which Jarvis/GS has the easement road to the quarry), there was a deed restriction put in that GS had to perform dust abatement when they were using the road. Glacier Stone does not adhere to this requirement unless forced to. Every summer (except this summer while they are trying to get the operators permit), the Belks have had to call and demand that they either water the road and keep it wet or put down road oil (which they have only done voluntarily this summer.) Glacier Stone is required to abate dust issues on the entire road up to Pleasant Valley Road. However, dust abatement was only done on the portion of the road immediately adjacent to the Belks' residence.</p> <p><i>SECTION 4: Vegetation Cover</i></p> <p>Page 8/18, first paragraph, last sentence: "Disturbed vegetation...native seed mix." The property should be reclaimed to the condition it was in when Glacier Stone began mining (see Google Earth photos submitted with the WET Comments). All possible efforts should be directed at effective weed abatement throughout mining efforts.</p> <p><i>SECTION 5: Terrestrial...Habitats</i></p> <p style="text-align: center;">4</p>	<p>stability as that of adjacent areas." DEQ has revised the EA to clarify that all land disturbed by Glacier Stone will be reclaimed to this standard. See response to comment WIL-21.</p> <p>Comment Response WIL-7 See response to comment WET-5. The EA has been updated.</p> <p>Comment Response WIL-8 See WET comment response discussing depth to groundwater, WET-5. The spring and wetland on the Belks property are about ½ mile from the quarry site, and do not appear to be directly downgradient. No impacts from sediment are likely. Given that the quarry is not proposed to require groundwater pumping and will remain above the water table, no hydrogeologic changes that might impact the spring or wetland are predicted.</p> <p>Comment Response WIL-9 See response to comment WET 6. Also see "Air Quality" section of EA.</p> <p>Comment Response WIL-10 See comment response to WIL-6 and WIL-21.</p>
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WIL-11	<p>Page 8/18, first paragraph, last sentence: "There is no open...delineated wetlands..." This section should discuss the wetland on the Belks' property, and impacts to it or why it will not be impacted.</p>	Comment Response WIL-11	See comment response WIL-8 and WET-5.
WIL-12	<p>Page 9/18, second paragraph: Bald Eagle. The boilerplate discussion of the presence or absence of Bald Eagles ignores the reality on the ground. It is not surprising that there may be no bald eagles on this site as the Belks watched Glacier Stone employees cut down the tree where Bald Eagles had a nest. This was reported to DEQ at the time of Pat Platenburg's inspection.</p>	Comment Response WIL-12	Comment Noted.
WIL-13	<p><i>SECTION 6: Unique, Endangered...Resources</i></p> <p>Page 9 and 10/18, paragraph 1: The boilerplate general language assuming that there will be no impacts to Canada Lynx once again ignores the reality on the ground. The Belks have captured a picture of a lynx on their game cameras. DEQ should require an on the ground survey before dismissing the potential impacts to Lynx.</p>	Comment Response WIL-13	See comment response WET-7.
WIL-14	<p><i>SECTION 8: Aesthetics</i></p> <p>Page 10/18, paragraph 1, second sentence: The proposed project could be visible...twilight if viewer were in an observation point that is unobstructed." This statement is absurd. You can see the mining operation from dawn to dusk from Highway 2, along parts of Pleasant Valley Road, entirely along the road on the west shore of the lake and from the entire lake when in a boat. This mine has become an enormous eyesore, and that will only grow as the mine expands.</p>	Comment Response WIL-14	DEQ acknowledges that viewshed aesthetics would be impacted by the proposed operations. DEQ has modified its analysis in light of this comment.
WIL-15	<p><i>SECTIONS 9 & 10: Demands on Environmental Resources and Other Impacts to the Environment.</i></p> <p>These sections completely ignore the close proximity of the mine to Little Bitterroot Lake, which is well known for its pristine water quality and aesthetic beauty. According to the Little Bitterroot Lake Neighborhood Plan, the lake's water "has exceptional clarity and quality and is generally classified as oligotrophic (pristine)." https://flathead.mt.gov/planning_zoning/documents/LittleBitterroot.pdf</p>	Comment Response WIL-15	DEQ acknowledges the high quality of water in Little Bitterroot Lake. DEQ does not predict that the quality of Little Bitterroot Lake will be impacted by Glacier Stone's proposed quarry operation. See comment response WET-5.
WIL-16	<p>To say that the mine will not have secondary impacts to these amenities is inaccurate.</p> <p><i>SECTION 11: Human Health and Safety</i></p> <p>Page 12/18, Direct Impact, second and third sentence: Most access roads are closed to the public...gate. Glacier Stone does not allow public access to the site." The majority of the access road to the Jarvis (Glacier Stone) property is across Belk property (Syth/Trudeau/Russell.) The Belks give permission to the neighbors (probably 9 households) to walk/bicycle/snowshoe/cross country ski on their property. It is not open to the public, but by permission only. The Belks also have an easement directly through the quarry. The human health and safety impacts of this share access needs to be evaluated.</p>	Comment Response WIL-16	DEQ does not believe that the Belks have an easement directly through the quarry. See comment response WIL-1.
	5		

WIL-17

Direct Impacts: "DEQ is not aware of any other locally adopted environmental plans and goals (beyond weed control)." This section should discuss the Flathead County Growth Policy. Part of the Flathead County Growth Policy is a Little Bitterroot Lake Neighborhood Plan. (https://flathead.mt.gov/planning_zoning/documents/LittleBitterroot.pdf)

The Growth Policy includes as goals: restriction of development on lands that pose an unreasonable risk to the public health, safety and welfare (Goal G. 10); the protection of scenic resources (Goal G.11); "mineral resource extraction that is safe, carefully planned, environmentally sound, and appropriately segregated from incomparable land uses" (Goal G. 12). The latter includes as "policies" the development of policies to mitigate the impacts of mineral resource extraction. . . . (including) road maintenance, dust abatement or vegetative buffers."

Additional goals include: protection of water quality in lakes, rivers, aquifers and streams from existing or potential pollution sources (G.36); preventing untreated stormwater from entering any surface water, including lakes (G.37); preservation of wetlands and riparian areas (G. 39); promotion of preservation of critical fish and wildlife habitat (G. 41); and protect the air quality of Flathead County (G. 43).

WIL-18

For DEQ to say that no locally adopted environmental plans and goals will be affected by (or in conflict with) this mine is inaccurate.

SECTION 19 & SECTION 20: Cultural Uniqueness and Diversity

WIL-19

The brief discussion in this section ignores the impact this mining operation has and will continue to have on the values that bring people to live in this rural area.

SECTION 21: Private Property Impacts

See discussion of impacts to the Belks' property and property rights, above.

WIL-20

3. Inadequate Evaluation of Reclamation Plan

Glacier Stone's "reclamation plan" encompasses a little over three pages of its application for an operating permit. (pp. 11-14) This plan is inadequate under the Metal Mine Reclamation Act (MMRA), and DEQ's failure to evaluate it in any way in the EA is a violation of MEPA.

Reclamation plans are controlled by § 82-4-336, MCA. A reclamation plan must provide that "reclamation activities, particularly those related to control of erosion, to the extent feasible, must be conducted simultaneously with the operation and in any case must be initiated promptly after completion or abandonment of the operation. . . ." § 82-4-336(2), MCA. However, the very generally worded reclamation "plan" submitted by Glacier Stone does not in any way address the timing of reclamation, and which sections will be reclaimed when.

Comment Response WIL-17

DEQ provided Code Compliance Officer for the Flathead County Planning and Zoning Office an electronic copy of the Draft EA. The Code Compliance Officer indicated that there were no County regulations or plans applicable to the quarrying activities to be conducted under the proposed permit (Personal communication of Betsy Hovda). Furthermore, DEQ has reviewed the Flathead County Growth Policy, including the Little Bitterroot Lake Neighborhood Plan that was adopted in February of 1996. The quarries operated by Glacier Stone are not located within the area encompassed by the Little Bitterroot Lake Neighborhood Zoning District. Figure WIL-1 below shows the location of the approximate proposed permit boundary in relation to the perimeter of the zoning district.

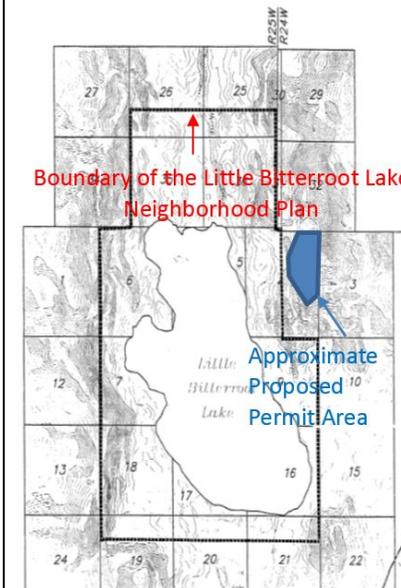


Figure WIL-1.

Comment Response WIL-18

Comment noted.

Comment Response WIL-19

Comment noted.

Comment Response WIL-20

In the proposed reclamation plan, Glacier Stone commits to seeding all soil stockpiles and road berms as they are constructed, to grading, re-soiling and seeding an area no longer needed for quarry related activities within one year of cessation of such activities in that area, and to completing final reclamation within two years of completing its quarry activities as required by 82-4-336(3), MCA.

WIL-21

The MMRA requires that all land disturbed other than rock walls and pit faces, the reclamation plan must “provide for the reclamation of all disturbed land to comparable utility and stability as adjacent areas.” § 82-4-336 (9), MCA. The reclamation “plan” merely states that “the area would be reclaimed to rock habitat.” What does “rock habitat” mean in this context, given that much of the mined area was not bare exposed rock. Indeed, as the Google Earth photos, attached to the WET report, show, the top of the hill that Glacier Stone is now in the process of tearing off was forested. How will this area be reclaimed? DEQ’s analysis doesn’t address this, and Glacier Stone doesn’t say.

WIL-22

The MMRA contains specific provisions for reclamation of open pits and rock faces. § 82-4-336 (9) (b), MCA. While the applicant notes that “quarries will be reclaimed by scaling back highwalls”, and that “rock highwalls would be reclaimed as rock faces blending in with surrounding topography”. The application contains no discussion of the extent of such “reclamation” over the mined area, and how it intends to meet the requirements of § 82-4-336 (9) (b), MCA. DEQ’s failure to evaluate the reclamation plan’s compliance with the MMRA is a violation of MEPA. Moreover, its failure to even evaluate backfilling as an option is a violation of § 82-4-336 (9) (c), MCA, as with no such evaluation, it is impossible for DEQ to determine whether “backfilling is appropriate under the site-specific circumstances and conditions in order to achieve the standards described in subsection 9 (b).” Obviously, if there is no backfilling, then the mine will leave a permanent eyesore on the landscape.

4. No Disclosure of Past Enforcement or Inspection Issues

WIL-23

DEQ’s files show that Glacier Stone has been a bad neighbor to surrounding landowners, and serially in violation of its SMES. The most recent violation, issued on December 27, 2016 by DEQ, indicated that Glacier Stone had violated the SMES by mining more than ten acres at once – twice the disturbed area allowed under the exemption. Even after being informed of this violation in the summer of 2016, Glacier Stone took no action to rectify its violation, prompting the December 27th letter. And even this letter of violation did not result in Glacier Stone’s applying for an operating permit until six months later— June 13, 2017. Meanwhile, and presumably up to the present time, Glacier Stone has been operating in perpetual violation of the law. How DEQ can interpret this long period of non-compliance as *not* being in violation of the “bad actor” provision (§ 82-4-335 (9), MCA) is puzzling.

Moreover, neither the application nor the EA demonstrate if or that Glacier Stone has or will fully reclaim the areas under its SMES prior to moving forward with the operating permit – or even whether these areas will be reclaimed under the proposed reclamation plan under consideration here.

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Comment Response WIL-21

The reclamation plan does not merely state that the area would be reclaimed to rock habitat. A description of Glacier Stone’s proposed operation is set forth on page 8 of its application. It states that a rock or stone collection site would be worked by laborers 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, and stockpile or pallet them for removal.

Reclamation would consist primarily of smoothing disrupted ground surfaces, re-applying any topsoil that had been salvaged and stockpiled, and seeding sites where rock had been removed. The proposed reclamation plan states that Glacier Stone would bring in organic material where needed to augment growth media. These reclamation activities have been used in areas north of the Canyon Creek quarry as shown in Figure WIL-2 and WIL-3 and were taken in August 2018.

Glacier Stone has successfully reclaimed areas that it disturbed under SMES #07-027 as depicted in the photos below. Little soil was salvaged in the areas shown. Rather, rock was collected from the ground surfaces or from below thin soil layers. The soil and fines material left in place have been sufficient to re-establish vegetation. Pine trees ranging from 6-inches to 4-feet tall are growing in areas that were previously disturbed at this property and subsequently reclaimed to rocky habitat. There are areas at the proposed mine site where reclamation to rocky habitat was completed in 2013 and a diverse population of vegetation, including pine trees, has become established. The photos were taken in 2018. Of course, Glacier Stone will be required to salvage all available soil where possible. Slopes in the area are very steep and rocky and may prevent salvaging of all soil materials due to equipment limitations and safety concerns. The salvaged soil would be re-spread and seeded at reclamation. Thus, it is expected that the areas that were forested prior to rock being collected and quarried would eventually be reforested post-reclamation.



Figure WIL-2.



Figure WIL-3.

Comment Response WIL-22

The proposed quarry operation is not expected to create open pits or highwalls. However, the proposed reclamation plan addresses reclamation of highwalls, in the unlikely event that they are created.

Quarries would be reclaimed by scaling back 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 to ensure natural, free draining of surface water to prevent any pit/quarry ponds/lakes. The course nature of the rock would also help to prevent any pit/quarry ponds/lakes.

WIL-24

5. EIS Necessary

Based on the paucity of the information in the EA, DEQ cannot conclude as it preliminarily has that this mine permit does not justify an environmental impact statements (EIS). Indeed, an EIS is required because:

- The mine covers an area of over 40-acres, will have a life of 25-years, and will leave permanent scars on the landscape. (Satisfying A.R.M. 17.4.608 (1)(a) (“severity, duration, geographic extent, and frequency of occurrence.”))
- The EA does not demonstrate that impacts to Little Bitterroot Lake will not occur, satisfying A.R.M. 17.4.608 (1)(b) (“probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance . . . that the impact will not occur.”)
- The EA does not adequately evaluate a wide array of environmental resources, as outlined above, but evidence we have provided demonstrates potential impacts to these resources, satisfying A.R.M. 17.4.608 (1)(d & e).
- Finally, as noted above and in WET’s report, the permit potentially conflicts with both local and Federal laws and requirements, satisfying A.R.M. 17.4.608 (g).

In summary, the EA fails to fully evaluate the potentially significant impacts from the issuance of an operating permit to Glacier Stone. The final EA should determine that an EIS is required and DEQ should fully evaluate the impacts that this mine will have on the neighboring property owners and on the pristine resources of Little Bitterroot Lake and its surroundings.

Sincerely,

David K. W. Wilson, Jr.

Cc: Henry and Diane Belk
Bruce A. Fredrickson
Elizabeth Erickson, WET

Other areas disturbed but not quarried would also be revegetated. Overburden and waste rock, if present, would be graded to conform to natural topography, against the high wall to match and blend with existing topography. Coarse rock would not be revegetated but would remain as a rubble or scree feature. Soil or overburden that could support vegetation, or rock that could be covered with salvaged soil, would be revegetated. Any quarry that is below the level of the adjacent ground would be sloped to conform to the surrounding or adjacent topography to ensure free draining quarry floors during final site reclamation.

The proposed reclamation plan satisfies the reclamation requirements set forth in 82-4-336(9)(b), MCA. It provides for the scaling back of highwalls and stabilization of upslope scree or loose rock for stability and safety. It further provides for the grading of cut slopes and highwalls in unconsolidated material and the grading of overburden and waste rock against the highwall to mitigate post reclamation visual contrasts between reclamation lands and adjacent lands. In addition, revegetation of the quarry floor and other areas disturbed, but not quarried, would reduce post-reclamation visual contrasts in addition to providing wildlife habitat. Any remaining highwall or rubble or scree feature left remaining would provide comparable habitat as currently existing rocky outcrops and talus slopes. The quarry floor would be graded to provide a free draining topography to avoid the creation of a quarry pond. It is not anticipated that the proposed quarry operation will create an open pit of any significant size. The use of any backfill, in addition to the grading of overburden and waste rock against the highwall provided in the proposed reclamation plan, is not necessary to achieve the reclamation standards set forth in 82-4-336(9)(c), MCA.

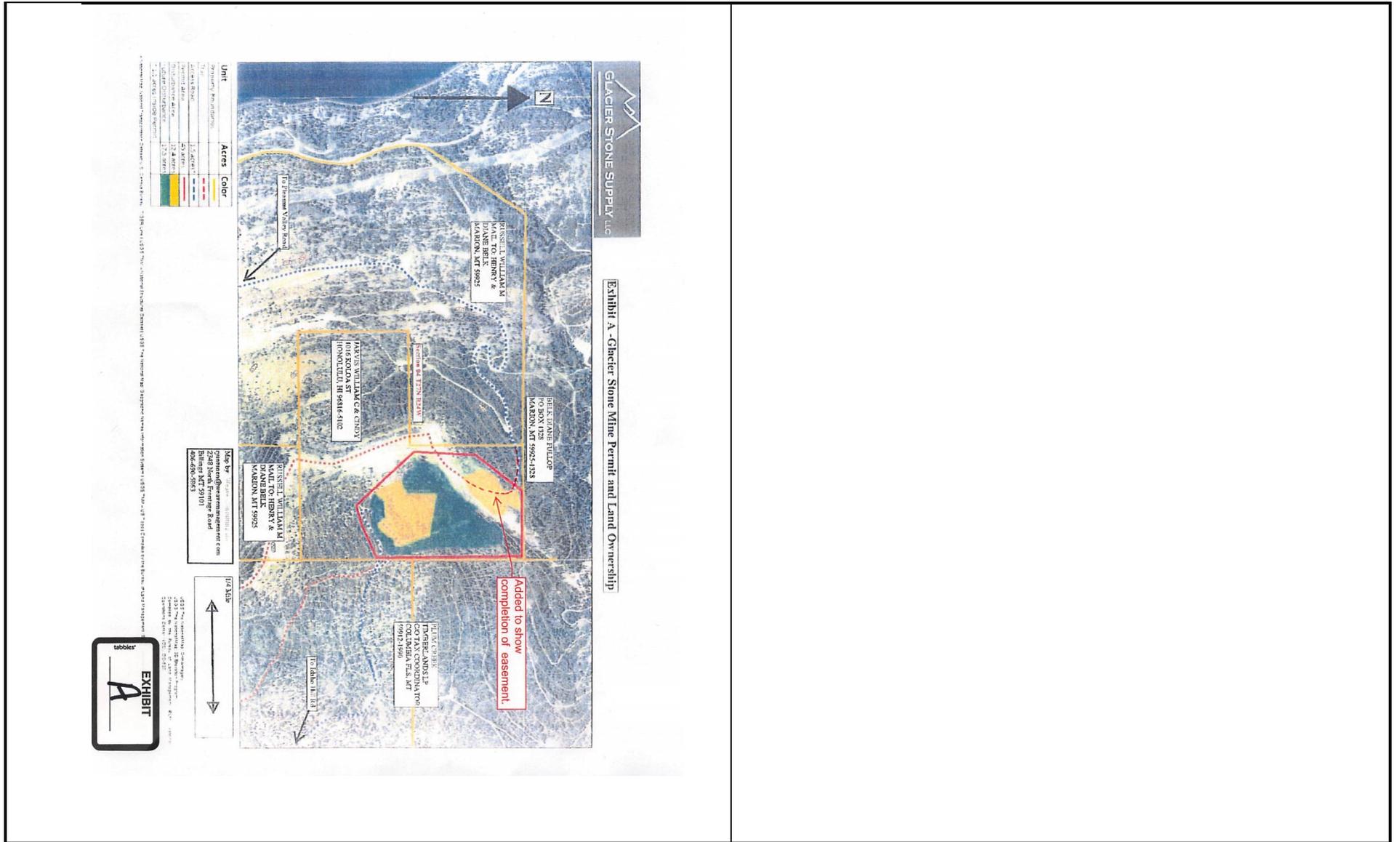
Comment Response WIL-23

Under 82-4-335(9), MCA, DEQ may not issue an operating permit to a person if 1) that person’s failure, or the failure of any firm or business association of which that person was a principal or controlling member, to comply with the Metal Mine Reclamation Act (MMRA) or its operating permit has resulted in receipt of bond proceeds by DEQ or completion of reclamation by its surety or DEQ; 2) that person has not paid a penalty; 3) that person has failed to post a reclamation bond; or 4) that person has failed to comply with an abatement order issued by DEQ. Glacier Stone has not committed any of the failures that are subject to the “bad actor” provision of 82-4-335(9), MCA.

In order to get an operating permit, Glacier Stone would be required to post a performance reclamation bond for all disturbed acreage within the operating permit boundary. Once the SMES area is included in the operating permit, Glacier Stone will be required to reclaim the SMES areas, at closure, in accordance with its approved reclamation plan. The reclamation plan must satisfy the reclamation standards set forth in 82-4-336, MCA.

Comment Response WIL-24

While the permit area would cover 40-acres, Glacier Stone’s proposed quarry activity would disturb 30 acres over the 25-year life of the quarries. Because of concurrent reclamation, Glacier Stone would be permitted to have 13 acres disturbed and unreclaimed at any one time. Visual impacts would last significantly beyond the 25-year life of the mine due to the length of time it will take to produce mature trees. DEQ does not predict impacts to Little Bitterroot Lake. See response to comment WET-5. The proposed quarry operation does not conflict with local laws or formal plans. See response to WIL-17. DEQ has considered impacts to the other environmental resources in the context of the criteria set forth in ARM 17.4.608 and as determined that preparation of an EIS is not required.



Comment Code	Document #02-WET	Response
<p>WET-1</p> <p>WET-2</p> <p>WET-3</p>	<div style="text-align: center;">  </div> <p>August 3, 2018</p> <p>Mr. Herb Rolfes MDEQ PO Box 200901 Helena, MT 59620 hrolfes@mt.gov</p> <p>Subject: Glacier Stone Environmental Assessment Review</p> <p>Dear Mr. Rolfes:</p> <p>On behalf of Henry and Diane Belk, Water & Environmental Technologies (WET) is submitting the following comments on the June 12, 2018 Draft Environmental Assessment (EA) for the application for an operating permit from Glacier Stone Supply LLC. Based on our review, the EA makes a number of assertions and draws conclusions based on these assertions, with seemingly no back-up, either from literature sources, site visits, or data. The lack of a technical basis results in an EA that lacks formal credibility. In addition, the EA does not contain any provisions that will ensure the mine is reclaimed properly following the mining period. Specific comments on specific sections of the EA follow.</p> <ol style="list-style-type: none"> June 12, 2018 DEQ Cover Letter: <ul style="list-style-type: none"> Legal Description Lists the Range for the mine property as 34 East. This should be Range 34 West. Direction from Marion is listed a southeast, this should be northwest. Under Proposed Action, the EA notes Glacier Stone proposes to disturb a total of 8.2 acres. However, the current disturbed area is larger than 8.2 acres when considering both sites and the permit would grant ~45 acres. What is the purpose of granting the additional acreage, and would this lead to additional mining without a separate EA or public involvement in the future? The EA needs to better explain the discrepancy between these two figures. Page 5 of 18, paragraph #3, Reclamation: The preceding paragraph notes there is limited salvageable soil / overburden on the site. This suggests complete reclamation is likely not achievable with existing soil deposits on the site. The Glacier Stone operating permit, reclamation plan, Section 3b, states, "If available, stockpiled topsoil would be respread at a depth sufficient to cover the majority of the area." DEQ should mandate that Glacier Stone revise its reclamation plan as part of issuing this permit, and require that it specify at a minimum a) planned reclamation methods, and b) <p>480 East Park Street · Butte, Montana 59701 · (406) 782-5220 · waterenvtech.com · info@waterenvtech.com</p>	<p>Comment Response WET-1 Comment noted.</p> <p>Comment Response WET-2 There are two existing Glacier Stone quarries within the proposed disturbance area. Glacier Stone has disturbed 4.21 acres at the Glacier Mountain quarry, which is on the northwestern side of the proposed permit area. Glacier Stone has disturbed 8.2 acres at the Canyon Ridge quarry, which is on the eastern side of the proposed permit area. (See Exhibit B- Glacier Stone Mine Area and Stormwater from the Plan of Operations application). Thus, the total existing disturbance is 12.41 acres. The proposed disturbance area is 30 acres, not including the access road within the permit boundary, which is 1.5 acres. The proposed 30 acres of disturbance is smaller than the 45 acres that would be encompassed by the permit boundary. However, only 13 acres would be disturbed at any one time due to concurrent reclamation</p> <p>If Glacier Stone wishes to disturb more acreage, it would be required to apply for an amendment or revision to its operating permit. DEQ would conduct another environmental review on a permit amendment application.</p> <p>DEQ is aware that Glacier Stone disturbed more than five acres under SMES #07-027, exceeding the five-acre disturbance limit applicable to small miner exclusion statements. DEQ issued a violation letter for the violation and continues to pursue corrective action to address the violation. If Glacier Stone exceeds the 30 acres of permitted disturbance (plus 1.5 acres of access road) without first obtaining an amendment or revision increasing the permitted area of disturbance, DEQ will issue a violation letter and may take additional enforcement action.</p> <p>Comment Response WET-3 Generally, the materials to be quarried are existing rock outcrops and/or talus slopes. Three photographs of existing undisturbed ground showing the lack of soil materials are included in Appendix E of Glacier Stone's application. In addition, Glacier Stone submitted a report entitled "Custom Soil Resource Report for Flathead County Area and Part of Lincoln County, Montana, and Flathead National Forest Area, Montana – Glacier Stone Soil Survey" (May 2017) documenting the naturally occurring limited soil resources. The report delineated the following map units within the proposed disturbance area:</p> <p>35F Courville-Stevie-Winfall complex, 30 to 50 percent slopes (0-1 inches of slightly decomposed plant material underlain by gravelly loam with some silt and ash)</p> <p>211G Combest-Sharrott-Rock outcrop complex, 40 to 85 percent slopes (0-2 inches slightly decomposed plant material)</p> <p>223F Pleasant Valley-Winfall, dry-Rock outcrop complex, 30 to 50 percent slopes (0-1 inches of slightly decomposed plant material)</p> <p>633F Rockhill-Rock outcrop-Pleasant valley complex, 15 to 50 percent slopes (0-1 inches slightly decomposed plant material)</p> <p>As indicated, the soil profiles of these map units have mostly 0-1 inches of slightly decomposed plant material underlain by gravelly loam and some silt and ash. As a consequence, the past mining of the rock outcrops and talus slopes have produced very little salvageable soil to date. Notwithstanding the general lack of salvageable soil material, Glacier Stone's proposed reclamation plan would require Glacier Stone to salvage all available soil material for reclamation, although some soil material may not be safely salvaged due to equipment limitations for equipment operating on steep slopes and rock terrain.</p> <p>Glacier Stone's proposed reclamation plan requires the site to be reclaimed to rock habitat (a landscape dominated by rock rather than soil). Rock dominated habitats are abundant in the area due to the mountainous terrain, geology, and glaciation. The undisturbed native ground is gravelly loam with less than one to two inches (generally less than an inch) of slightly decomposed plant material. The reclamation of mining disturbance to rock habitat under Glacier Stone's proposed reclamation plan would provide comparable utility and stability to that which existed prior to mining and to areas adjacent to the quarries, achieving the</p>

provisions mandating Glacier Stone acquire borrow from other areas in order to properly reclaim the site in the event insufficient soil is available from the mining operation.

WET-4

4. Page 6 of 18, Section 1. Geology and Soil Quality, Stability and Moisture

- Please define and provide additional detail documenting that reclamation completed under SMES 07027 by Glacier Stone is "stable". In general, more detail on reclamation to date under the SMES is needed.
- Direct Impacts, paragraph #1 notes no fragile or unstable geologic features are present at the land surface. Is this based on visual observation, literature research, or other lines of evidence?
- Are there unstable subsurface features that could result in a high wall failure or other structural failures in surface features once competent rock is removed from the proposed mining area?
- In keeping with Comment #3 above, Paragraph #2 notes limited soil resources are present at the site, but then goes on to say there's probably enough to reclaim the site post-mining. These statements contradict one another. The quantity of topsoil / overburden has not been defined, but likely is not sufficient to reclaim the site. Additional work is needed to determine the quantities of soil that will be required to perform reclamation, and a formal reclamation plan is needed to ensure an un-reclaimed site does not result post-mining due to a lack of available cover soil.

WET-5

5. Page 7 of 18, Water Quality, Quantity, and Distribution

The following statement in the EA is found in the first paragraph of this section, "No baseline water quality and quantity measurements in the greater project area have been collected".

Baseline sampling is necessary at this site to support the EA and issuance of a permit as the following questions require definitive answers:

- What is the depth to water within the permitted acreage of the mine?
- Is there potential for metals contained in the rock, to be released to surface water during snow melt and rain events?
- Could surface water releases affect area water resources?
- Is there potential for metals to be released to ground water and subsequent migration in the fractured bedrock system in and around the mine?
- What specific best management practices (BMPs) / storm water controls will be implemented as part of the agreement noted in the EA, to ensure the mine does not degrade water resources?
- Is there a formal / written plan that defines how water encountered at the mine will be managed?

WET has been collecting baseline data on nearby Little Bitterroot Lake for 18 years. A summary of the water quality data in Little Bitterroot Lake from our 2017 *Water Quality Monitoring at Little Bitterroot Lake 1999-2017 Summary Report*, follows:

reclamation standard set forth in Section 82-4-336(9)(a), Montana Code Annotated (MCA). See Comment Response WIL-21. An operator need not reclaim disturbed areas to a better condition or different use than that which existed prior to mining. Administrative Rules of Montana (ARM) 17.24.115.

Despite the limited salvageable soil, Glacier Stone has successfully reclaimed areas disturbed under SMES #07-027 to a condition that provides comparable utility and stability as adjacent areas, including the establishment of trees. See Comment Response WIL-21.

Although there are minimal soil resources, gravel and loam are available in the disturbance area to serve as growth media. Glacier Stone has committed to add organic matter, as necessary, to enhance the establishment of vegetation.

Comment Response WET-4

The areas mined by Glacier Stone under SMES #07-027 are proposed to be included in the area covered by the operating permit. Thus, the areas disturbed under SMES #07-027 would be subject to the operating permit reclamation requirements. Glacier Stone has conducted some concurrent reclamation north of the Canyon Creek Quarry under SMES #07-027. The road in this area was ripped and seeded. See comment response WIL-21 for photos of revegetated SMES disturbance areas.

The description of geologic features in the draft EA is based on field observations by DEQ staff as well as literature research. In regard to the stability of any highwalls that remain post-mining, see Comment response WIL-22.

There are no unstable subsurface features or highwalls in the proposed areas of disturbance.

With regards to the limited soil resources, see Comment Response WET-3

Comment Response WET-5

Depth to water at the site was interpolated from the depth to water in well (GWIC Id 284835), which is located approximately 1/2 mile northwest of the proposed permit area. An estimate of the top elevation of the aquifer associated with this well, based on the elevation of the wellhead of about 4140 feet above mean sea level (amsl), is about 3960 feet amsl. (the well log indicates dry bedrock until a depth of 180 feet). The elevation of the permit area varies from 4400 - 4900 feet amsl. Therefore, the permit area is 440 to 940 feet above the aquifer at the well location. The two proposed quarry sites are separated by a dry valley (elevation 4400', or about 100' lower than the northwest quarry and 400' lower than the southeast quarry). The dry valley shows no evidence of stream flow, springs, or seeps. The valley bottom elevation represents the maximum probable elevation of the groundwater table near the quarry sites, with the minimum elevation being represented by the depth at which groundwater was encountered in the well. Thus, Glacier Stone is not expected to encounter groundwater during operations.

The comment letter included a second well log for a new well (GWIC Id 296102, drilled January 2018) located near the first well. This well log shows that saturated clay and gravel were encountered in the upper 22' of the borehole, indicating a localized shallow perched water table near this well. The log then notes the presence of a water-bearing fracture at a depth of 84-85' below surface. No further water is noted on the well log until another fracture was encountered at a depth of 300 to 301'. Water bearing fractures were again encountered between 368' and 400'. The well was screened between 340' and 380'. Referencing this well log rather than the one cited in the draft EA, bedrock groundwater may occur at depths below 84' (elevation 4056') near the well. This does not change the conclusions from the draft EA, as the quarries would still be located 350' to 850' above the groundwater table. See Figure WET-1 for relative location of well GWIC ID 296102 with respect to the proposed permit area for Glacier Stone. The ephemeral drainage depicted in Figure WET-1 would intercept groundwater flow between the proposed disturbance area and well GWIC 296102.

Glacier Stone EA Review

Water quality in Little Bitterroot Lake was very good in 2017, with low concentrations of nutrients and chlorophyll-a. Total nutrient concentrations (nitrogen and phosphorus) have generally been decreasing since the inception of the monitoring program in 1999. The highest concentrations of total nitrogen have typically occurred at Herrig Creek Bay and the lake outlet, while the highest concentrations of total phosphorus have occurred at the lake center. The highest concentrations of both nutrients were exhibited in 2011, which was a high precipitation year during which excess nutrients may have been flushed into Little Bitterroot Lake from the surrounding watershed. Past sampling events indicate that lake water quality is strongly influenced by ground water with less input from Herrig Creek and other intermittent streams.

The trophic state index for Little Bitterroot Lake suggests eutrophic conditions exist due to elevated concentrations of total nitrogen, but measurements of total phosphorus and chlorophyll-a indicate oligotrophic conditions with low biological productivity and very good water quality. Little Bitterroot Lake has typically been phosphorus-limited, meaning it has an inadequate amount of phosphorus compared to the amount of nitrogen needed to support algae growth. Based on this observation, Little Bitterroot Lake is more likely to experience algae blooms with the addition of phosphorus since concentrations of nitrogen are already relatively elevated. However, nutrient concentrations can vary significantly, and efforts to reduce inputs of both phosphorus and nitrogen should be encouraged to help maintain the water quality of Little Bitterroot Lake and limit algae growth.

Overall, Little Bitterroot Lake has shown excellent water quality throughout its monitoring history. Nutrient and chlorophyll-a concentrations are low, algae blooms are rare, and field data indicate suitable ranges of temperature, dissolved oxygen and pH to support a viable fishery. Little Bitterroot Lake also displays excellent water quality when compared to other regional lakes. 41 lakes are presently monitored annually through the Northwest Montana Lakes Volunteer Monitoring Network (NWMTLVMN), including 10 lakes classified as large lakes with surface areas greater than 500 acres (WLI, 2018). Among the large lakes monitored through NWMTLVMN, Little Bitterroot Lakes is the 5th lowest in nitrogen concentration, and 2nd lowest in phosphorus and chlorophyll-a concentrations. These results are consistent with our monitoring program, which indicate that Little Bitterroot Lake is phosphorus limited and has a trophic status of oligotrophic.

This summary illustrates the pristine water quality in this lake and the fact that it is predominantly fed by area ground water. The monitoring program is financially supported by area property owners who voluntarily began monitoring of this lake almost two decades ago. This indicates area residents' appreciation of the uniqueness of Little Bitterroot Lake and the fragility of its water resources. If mining on this property is permitted, we recommend the mining operation assume future monitoring costs for this lake with the addition of probable constituents of concern from the mining operation to the monitoring program.

3 | Page



Figure WET-1

The geology at the site is composed of clean quartzite and shows no evidence of visible sulfides, iron staining, or other effects of chemical weathering for potential acid generation or release of metals. Thus, a potential for metals to be released to surface water or ground water is not predicted.

Based on multiple site visits by DEQ inspectors, small amounts of sediment that had discharged outside the proposed permit boundary were present. Because Glacier Stone is quarrying rock at the two sites, its mining operations are essentially creating large depressions in porous material, preventing most of the storm runoff that would transport sediment from leaving the quarry area. Moreover, the perimeter of the site was walked (where accessible) by DEQ inspectors and was otherwise observed by DEQ staff on several occasions. The existing sediment control (berms and sediment control structures) and the rocky nature of the native and reclaimed ground allows for rapid infiltration of runoff and snowmelt both within the permit boundary and just outside the permit boundary.

Moreover, DEQ does not predict that sediment will travel from the site to Little Bitterroot Lake because of various filters that exist along the flow path. A large natural catchment basin exists downgradient from both the Canyon Creek and Glacier Mountain disturbance areas. The catchment basin is clearly shown as the area devoid of vegetation that exists between the two quarry sites depicted on Figure WET-2. This catchment basin is composed of porous gravel/coarse rock. Any runoff carrying sediment from the two quarry sites would infiltrate into the subsurface and slowly drain away, providing for deposition of any transported sediment with this coarse rock filter.

Only a small portion of the north quarry areas is within a watershed to the north. There is also a catchment basin in this flow path. Several berms located within the permit area will stop the transport of sediment in a storm event. DEQ considered a potential northern flow path, but dismissed it as very unlikely as a contaminant transport of sediment because of these filters. The majority of the north quarry will drain toward the coarse rock basin at the head of the longer southern flow path. As discussed above, it is predicted that any flow of water carrying sediment from the north quarry would infiltrate in the coarse rock, depositing any sediment into the subsurface.

Even if flow were to escape the catchment basins, which it is not expected to do, the flow would not reach Little Bitterroot Lake. The distance between the nearest disturbance that would be caused by the quarry operations and the lake is approximately one mile in a direct line. Runoff would have to take a circuitous route to reach Little Bitterroot Lake. The flow path from the proposed disturbance area would be about three miles long. This flow path is depicted on Figure WET-2. This pathway is also porous and vegetated, promoting the settling of any transported sediment prior to reaching Little Bitterroot Lake.

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

The well log for GWIC ID 284835 is attached. Contrary to the 500 foot depth to water cited in the EA, ground water was encountered at 180 feet and the static water level in the well is listed as 38 feet below ground surface. In addition, the Belk's have drilled a new well (log is attached - GWIC # 296102) on their property adjacent to the mine operation. Saturated sediments were encountered during drilling in the 1 to 22 foot interval with additional water present as noted in the 84 to 85 foot interval. Static water in this well is at 6 feet, indicating much shallower ground water in this area. Although no springs may exist within the permit boundary, a spring does exist on the adjacent Belk property. This spring has a long history of providing potable water at this site.

The EA goes on to state "There would be minimal risk of degradation to surface or ground water resulting from this project because of the distance to surface water and to the water table." It is difficult to make this statement as the aquifer beneath the site is much shallower than indicated and impacts from surface infiltration would be difficult to predict and impossible to detect with no baseline sampling. We recommend baseline sampling of all area wells and springs before permitting further mining activity to ensure impacts to groundwater resources have not been occurring and will not occur in the future.

WET-6

6. Page 7 of 8, Section 3 Air Quality

The statements in this section noting, "minimal particulate will be produced or become airborne during operations..." is not supported by data or any scientific literature, it is likely false. The operations plan summarized on page 4 of 18 of the EA states: "the quarry sites would be expanded by removing vegetation, stripping and stockpiling available soil, and removing overburden and waste rock.....Depending on the product being produced, rock may be removed by methods [ranging] from handpicking, drilling and blasting, followed by excavation and hauling, ripping with a bulldozer or excavator followed by removal." All of these activities have the potential to impact air quality:

- Other than the use of hand tools to quarry rock, the remaining activities will include the use of heavy equipment and/or explosives.
- Each of these activities will generate dust that will require at a minimum, a dust management plan.
- Particulates are likely to become airborne and be deposited in the wind stream around the mine.
- Has DEQ or Glacier Stone, LLC collected samples to determine the composition of the material that will be quarried?
- Would released particulates be considered hazardous to nearby residents, mine personnel, or other users of the area public lands?
- The final statement in this section recognizes dust will be generated on haul roads and during mining, and notes dust suppression measures should be taken. Has a formal / written dust suppression plan been submitted for DEQ approval as part of the permitting process? None is mentioned in the EA.

Glacier Stone Surface Water Flow Paths
Figure WET-2



Figure WET-2

Finally, Glacier Stone will be required to obtain coverage under the Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity. Glacier Stone has already implemented many of the best management practices that may be required under the Multi-Sector Permit for Storm Water Discharges Associated with Industrial Activity. The berms that it has constructed along the hauls and around the main operations area as required by the Mine Safety and Health Administration (MSHA) also function as berms for water control. In addition, Glacier Stone has already constructed roadside ditches with turnouts to decrease the volume of water along the roadway and to minimize the sediment discharged.

Based on the above, DEQ predicts that sediment from storm water running off the permit area may travel beyond the boundary. However, the filters discussed above (primarily coarse, porous ground and vegetation) would limit the transport to tens or hundreds of feet beyond the permit boundary and would not reach Little Bitterroot Lake.

In addition, the DEQ Water Protection Bureau has notified Glacier Stone that they are required to apply for permit coverage under the Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (MSGP) at the Canyon Creek Quarry: MTUS002002.

In a December 11, 2018, letter to DEQ's Water Protection Bureau, Glacier Stone, Inc. committed in writing to the following:

1. Implement/maintain additional BMP's to minimize discharge of sediment and non-sediment pollutants from the site.
2. Submit a Notice of Intent (NOI) package to the DEQ to obtain coverage under the MSGP.
3. Complete NOI-SWI form.
4. Submit a Storm Water Pollution Prevention Plan (SWPPP).
5. Submit all related permitting fees and/or expenses.
6. Identify/document all pollutant sources at the Canyon Creek Quarry.

Comment Response WET-6

WET-7

7. Page 9 of 18, Unique, Endangered, or Limited Environmental Resources

While the U.S. Fish & Wildlife Service (USFWS) has recommended Canadian Lynx should be delisted from the Threatened and Endangered (T&E) Species list, as yet they have not been delisted. There are also several other T&E or sensitive species listed in the Montana Heritage Foundation Report for the project area, not listed in the report including: Townsend's Big-eared Bat, Little Brown Myotis, Bald Eagle, Fisher, Common Loon, and Great Blue Heron.

- The statement that the proposed activity would not impact any threatened or endangered species is not supported in the EA.
- Has an independent review of potential impacts on T&E species been completed by DEQ or Glacier Stone, LLC? Can it be made available?
- Have the appropriate consultations with the USFWS been completed as part of this permitting process? They are not evident in this EA.

WET-8

8. Page 10 of 18, Aesthetics

The aesthetics of the site are noted in the EA as being "visible from Little Bitterroot Lake" and "other neighboring residents and visitors may be able to see the disturbance during the life of the mine and during reclamation." Attached **Sheets 1 through 5** clearly indicate the magnitude of the disturbance to date. The EA states the "The upper elevation of the two sites would be lowered by up to fifty feet", presumably also expanding the footprint of the operation to the permit boundaries.

The EA does not answer its own question with regard to noise in this section - Will there be excessive noise or light?" In fact, there is no mention of noise and no answer to this question in the EA.

- The operations plan summary says there are no night operations planned, so light should not be an issue at present.
- However, the operation of heavy equipment and blasting will certainly create sustained and periodic acute noise in the valley.
- What will these impacts be?
- Baseline noise monitoring should be conducted in this area to ensure noise is not going to be disruptive to the community and/or wildlife in the area.

WET-9

9. Section 11, Human Health and Safety

No specific analysis of impacts to human health and safety relating to potential environmental impacts has been provided in the EA. Dust / particulate will be generated as part of the mining operation, yet no air monitoring of prior mining completed by Glacier Stone is provided in the EA and no other supporting analysis is provided other than the comment that mine access roads will have limited access.

DEQ reviewed the proposed activities at the quarry and has determined that the potential emissions from the equipment are less than the applicable threshold for requiring a Montana Air Quality Permit (ARM 17.8.743(1)(b)). However, Glacier Stone would still be subject to the following emission standards which apply to both permitted and unpermitted facilities:

- **ARM 17.8.304(2) Visible Air Contaminants** - No person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
- **ARM 17.8.308(1) Particulate Matter, Airborne** - No person shall cause or authorize the production, handling, transportation, or storage of any material unless reasonable precautions to control emissions of airborne particulate matter are taken. Such emissions of airborne particulate matter from any stationary source shall not exhibit an opacity of 20% or greater averaged over six consecutive minutes, except for emission of airborne particulate matter originating from any transfer ladle or operation engaged in the transfer of molten metal which was installed or operating prior to November 23, 1968.
- **ARM 17.8.308(2) Particulate Matter, Airborne** - No person shall cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

To satisfy "reasonable precautions" provisions, Glacier Stone would employ a number of control measures to reduce emissions, as necessary, including but not limited to, the application of chemical dust suppressant and/or water on haul roads and access roads and the prompt revegetation of disturbed areas.

Sampling and pre-monitoring is not required under the Clean Air Act of Montana or the corresponding administrative rules. An air quality permit is not required for the Glacier stone operations. Ambient air quality monitoring for such operations is typically not required by DEQ, even for sources that are required to obtain an air quality permit.

The quarried material is inert. The particulate matter potentially released during operation would be regulated as particulate matter – primarily as Particulate Matter with an aerodynamic diameter of 10 micrometers or less (PM₁₀). Potential emissions are expected to be less than the permit threshold requirement, and dust control is required to meet the reasonable precautions provisions. Therefore, because particulate would be emitted at levels below the permitting threshold and controlled, DEQ does not believe that particulate matter would be hazardous to nearby residents.

Concurrent reclamation would limit the potential for blowing dust from the operating area. The rock fragments left in the soils would also limit blowing dust.

Comment Response WET-7

See Sections 5 and 6 of the Final Environmental Assessment. Canadian Lynx is the only threatened or endangered species identified in the project area. As indicated in the Draft EA, the proposed permit area is 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. In addition to not providing lynx desirable habitat because of the proximity to human activity, lynx are not known to depend on rock habitats and are not obligate users of this habitat type. There is no boreal forest habitat within the permit boundary. The probability of any lynx occurring in the proposed permit area is considered very low. Any such occurrence would be a transient individual passing through the area. No lynx habitat would be disturbed in the proposed operations, so no further consultations was necessary for this EA.

The Final EA discusses habitat requirements and availability for Townsend's Big-eared bats, Little Brown Myotis, Bald Eagles, and Fisher. Common Loons or Great Blue Herons require open water for their habitat. There is no open water in the proposed permit boundary.

The Montana Natural Heritage Program website was reviewed for the presence of T&E species within or near the proposed permit area.

The USFWS was not consulted, nor was it required to be consulted, on the EA for this proposed operating permit.

- Samples should be acquired from the waste rock and quarry rock at the site, to determine which metals might be released as dust / particulate to the airshed.
- Dust monitoring and / or modeling should be completed to determine if wind patterns might carry metals-laden dust to residential areas in Marion or nearby residences.

WET-10**10. Page 13 of 18, Section 16, Locally Adopted Environmental Plans and Goals**

This section notes the need for compliance with the Flathead County Weed Control District Management Plan, but no others.

- Flathead County requires a storm water permit for all disturbances where more than five cubic yards of material will be stockpiled, or the disturbance will exceed 1,000 square feet. <https://www.kalispell.com/273/Stormwater-Management-Permits>
- Flathead County also issues conditional use permits for Sand and Gravel mining. The county may recognize rock quarrying as a similar activity and may require a conditional use permit for the operations described in the EA (see Chapter 9, Flathead County Growth Control Policy, Sand and Gravel Resources http://flathead.mt.gov/planning_zoning/documents/17-Chapter9SandandGravelResources.pdf).
- Flathead County requires permits for construction / demolition activities under Rule 502 for any disturbance exceeding 4,000 square feet (<http://flatheadhealth.org/wp-content/uploads/2015/05/AIRQUAL.pdf>).
- Glacier Stone, LLC should apply for and receive approval or a waiver for these permits as deemed applicable by Flathead County, before the mine permit is considered by DEQ.

In summary, the EA provided is inadequate to evaluate the impacts from the issuance of an operating permit for Glacier Stone LLC to expand their mining operation at this site.

Sincerely,



Elizabeth Erickson
Principal Hydrogeologist
Water & Environmental Technologies
Moonlight Professional Building
480 East Park Street
Butte, MT 59701
(406) 782-5220

Comment Response WET-8

Section 8 of the Final Environmental Assessment indicates that noise impacts would be minimal due to limited scope of the proposed project.

Most construction equipment produces noise in a decibel range in the upper 70s to lower 80s at a distance of 50 feet (https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09_cfm). The decibel level drops off with distance at about 6 decibels with doubling of distance, and at ten times the distance drops the intensity by 20 decibels (<http://hyperphysics.phy-astr.gsu.edu/hbase/Acoustic/isprob2.html>). The EPA has determined that a 24-hour exposure of 70 decibels is the level of environmental noise which prevents measurable hearing loss over a lifetime (<https://archive.epa.gov/epa/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare.html>). This level would be reached at a distance of about 150 feet from the source. Levels of 45 decibels are associated with indoor activities and 55 decibels with certain outdoor areas where human activity takes place. At a distance of about 800 feet from the source this decibel would be met.

Proposed Glacier Stone operations would consist of excavator and truck operation. The excavator and truck operation would generate noise levels of a typical small-scale construction operation. DEQ expects Glacier Stone's equipment to produce noise in a decibel range in the upper 70s to lower 80s at a distance of 50 feet. The decibel level drops off with distance at about 6 decibels with doubling of distance, and at ten times the distance drops the intensity by 20 decibels. The closest residence to the proposed permit area is approximately 2,900 feet away.

Glacier Stone plans to blast once every few years, if needed. The resulting noise would be greater than typical operations, but very limited in frequency. All operations would occur during daylight hours. The noise levels in the area would be essentially the same as the noise levels that have existed with ongoing operations under the SMES at this site.

Visual impacts resulting from the proposed action are discussed in the Final EA Section 8.

Comment Response WET-9

See comment response WET-6 for air quality. Dust is not anticipated to be a problem. Generally, crushed aggregate projects include, as part of the project, dust control measures. If dust control is required, Glacier Stone would be required to use a water truck or dust suppressant or other reasonable precautions to meet the reasonable precautions and/or opacity standard.

Concurrent reclamation would limit the potential for blowing dust from the operating area. The rock fragments left in the soils would also limit blowing dust. As previously indicated, the proposed operations as described in the application do not anticipate impacts to water or adjacent lands.

Comment Response WET-10

Flathead County does not require its own storm water permits.

<https://kalispell.com/273/Stormwater-Management-Permits> discusses requirements for projects within the Kalispell City limits. This project is not within the Kalispell City limits; therefore the information contained at <https://kalispell.com/273/Stormwater-Management-Permits> does not specifically apply to Glacier Stone's operation. See also response to comment WIL-17.

The proposed operating permit is not a sand and gravel mining project.

The proposed operating permit is not for a construction/demolition activity.

Flathead County was provided with a copy of the draft EA for this operating permit application and did not provide any comments.

See response to comment WET-5 for storm water.

Glacier Stone EA Review

Attachments:
GWIC 284835 Well Log
GWIC 296102 Well Log
Aerial Imagery Over Time (Sheets 1 through 5)

Glacier Stone EA Review

Attachments

8/1/2018 Montana's Ground-Water Information Center (GWIC) | Site Report | V.11.2018

MONTANA WELL LOG REPORT

Other Options
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This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

Site Name: DAVIDSON, ANDREW & JODY ANN
GWIC Id: 284835

Section 1: Well Owner(s)
 1) DAVIDSON, ANDREW & JODY ANN (MAIL)
 150 CHAPALA PT SE
 CALGARY AB T2X OB3 [10/17/2015]
 2) DAVIDSON, ANDREW & JODY ANN (WELL)
 90 KELLY COURT
 MARION MT 59925 [10/17/2015]

Section 2: Location

Township	Range	Section	Quarter Sections
27N	24W	4	

County: FLATHEAD
 Geocode: 07-3830-04-4-02-15-0000

Latitude	Longitude	Geomethod	Datum
48.130498	-114.69655	TRS-SEC	NAD83

Ground Surface Altitude: _____ Ground Surface Method: _____ Datum: _____ Date: _____

Section 3: Proposed Use of Water
 DOMESTIC (1)

Section 4: Type of Work
 Drilling Method: ROTARY
 Status: NEW WELL

Section 5: Well Completion Date
 Date well completed: Saturday, October 17, 2015

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	46	7.5
46	540	6

Casing

From	To	Diameter	Well Thickness	Pressure Rating	Joint	Type
2	46	6	0.25		WELDED	A53B STEEL
20	540	4		160.0	WELDED	PVC-SCHED 120

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
300	500	4	200	1/4"	DRILLED HOLES
500	540	4	80	1/4"	DRILLED HOLES

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	0	BENTONITE	Y

Section 7: Well Test Data

Total Depth: 540
 Static Water Level: 38
 Water Temperature: _____

Air Test *
 20 gpm with drill stem set at 400 feet for 1 hours.
 Time of recovery 6 hours.
 Recovery water level 38 feet.
 Pumping water level _ feet.

* During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

Section 8: Remarks

Section 9: Well Log Geologic Source
 Unassigned

From	To	Description
0	32	CLAY, GRAVEL
32	180	GRAY ROCK, DRY
180	300	GRAY ROCK, SEEPS
300	420	GRAY ROCK, 6 GPM
420	505	GRAY ROCK, 5 GPM
505	540	GRAY ROCK, 9 GPM TOTAL OF ALL WATER 20 GPM

Driller Certification
 All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: JAMES CHAMBERS
 Company: CHAMBERS DRILLING COMPANY
 License No: WWC-362
 Date Completed: 10/17/2015

8/2/2018

Montana's Ground-Water Information Center (GWIC) | Site Report | V.11.2018

MONTANA WELL LOG REPORT

Other Options

This well log reports the activities of a licensed Montana well driller, serves as the official record of work done within the borehole and casing, and describes the amount of water encountered. This report is compiled electronically from the contents of the Ground Water Information Center (GWIC) database for this site. Acquiring water rights is the well owner's responsibility and is NOT accomplished by the filing of this report.

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[Plot this site in Google Maps](#)

Site Name: BELK, HENRY & DIANE
GWIC id: 296102

Section 7: Well Test Data

Total Depth: 400
Static Water Level: 6
Water Temperature:

Air Test *

35 gpm with drill stem set at 380 feet for 2 hours.
Time of recovery 0.28 hours
Recovery water level 6 feet.
Pumping water level _ feet.

* During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

Section 1: Well Owner(s)

1) BELK, HENRY & DIANE (MAIL)
P.O. BOX 1328
MARION MT 59925-1328 [01/02/2018]
2) BELK, HENRY & DIANE (WELL)
1550 PLEASANT VALLEY ROAD
MARION MT 59925-1328 [01/02/2018]

Section 2: Location

Township	Range	Section	Quarter Sections
27N	24W	4	SE¼ NE¼ NW¼
County			Geocode

FLATHEAD

Latitude	Longitude	Geomethod	Datum
48.136024	-114.697904	TRS-SEC	NAD83
Ground Surface Altitude	Ground Surface Method	Datum	Date

Addition	Block	Lot

Section 3: Proposed Use of Water

DOMESTIC (1)
FIRE PROTECTION (2)

Section 4: Type of Work

Drilling Method: ROTARY
Status: NEW WELL

Section 5: Well Completion Date

Date well completed: Tuesday, January 02, 2018

Section 6: Well Construction Details

Borehole dimensions

From	To	Diameter
0	84	8
84	400	5.9

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	84	6.6	0.25	540.0	WELDED	A53B STEEL
80	400	4	0.25	540.0	SPLINE	PVC-SCHED 80

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
340	380	4	6440	0.020	FACTORY SLOTTED

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	30	BENTONITE	Y

Section 8: Remarks

Section 9: Well Log

Geologic Source

Unassigned

From	To	Description
0	1	TOP SOIL
1	22	SATURATED TAN CLAY AND GRAVELS
22	39	TAN CLAY
39	68	DECOMPOSED BROWN ROCK
68	84	HARD BLUE ROCK
84	85	HARD BLUE ROCK WITH HEAVILY FRACTURED BROWN SEAM AND WATER
85	300	HARD BLUE/ISH GRAY WITH SOME SMALL BROWN SEAMS
300	301	HEAVILY FRACTURED HARD GRAY AND BLUE ROCK WITH WATER
301	368	HARD BLUE
368	400	LIGHTLY FRACTURED HARD BLUE AND WATER

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

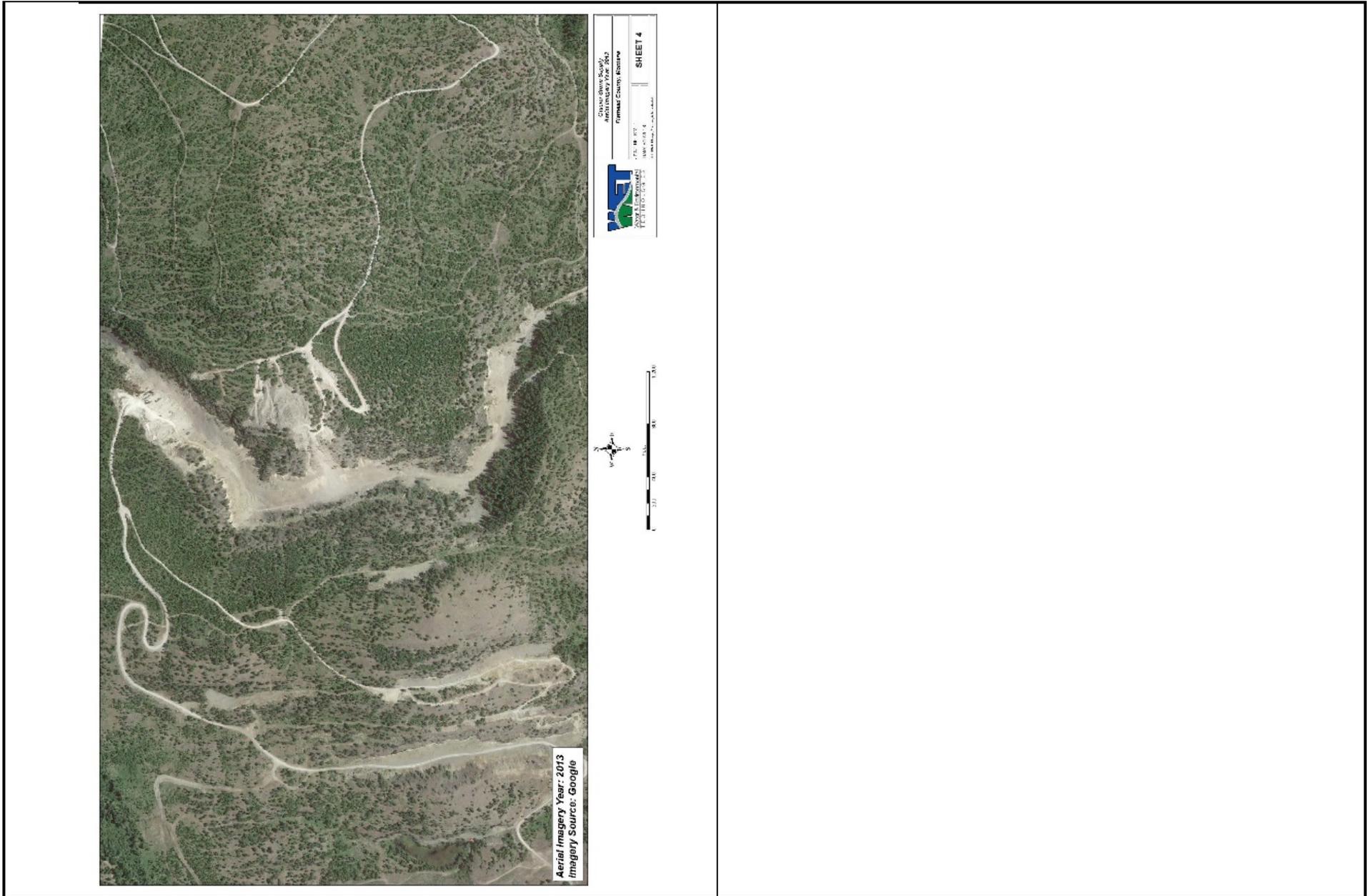
Name: LYLE SMITH
Company: OH WELL DRILLING & PUMP
License No: WWC-637
Date Completed: 1/2/2018

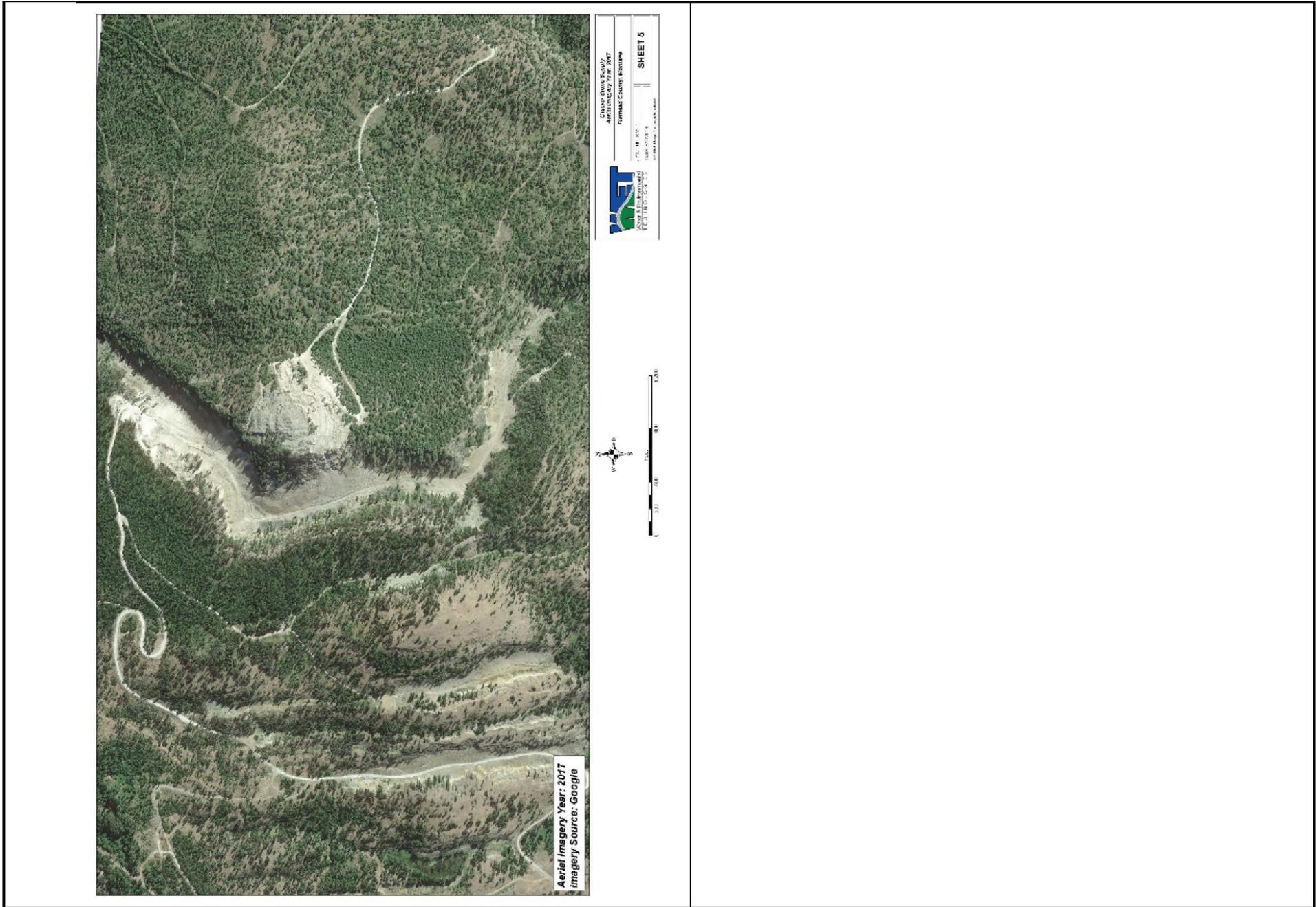
<http://mbmgwic.mtech.edu/sqlserver/v11/reports/SiteSummary.asp?gwicid=296102&agency=mbmg&session=940689&reqby=P&>

1/1









Comment Code	Document #03-Little Bitterroot Lake Association	Response
	<p>Herb Rolfes Operating Permit Section Supervisor Hard Rock Mining Bureau Department of Environmental Quality P.O. Box 2000901 Helena, Mt. 59620-0901 (406) 444-3841 hrolfes@mt.gov CC: Betsy Hovda CC: Dan Walsh</p> <p>27 June 2018</p>  <p>Dear Mr. Rolfes,</p> <p>We can ALL agree that Little Bitterroot Lake is one of the MOST beautiful, clean and pristine lakes in the United States...</p> <p>Overview</p> <p>This letter and attached petition express broad, united and immediate community concerns with regard to problems and possible omissions in the Department of Environmental Quality (DEQ) Draft Environmental Assessment for an Application for an Operating Permit 00190 from Glacier Stone Supply LLC. Permit 00190 is for Two Quarry Sites in close proximity to Little Bitterroot Lake in Marion, Montana.</p> <p>The Little Bitterroot Lake Association (LBLE) and the entire Community are stewards of our lake. The LBLE mission statement demands we fully review ALL actions that may impact our lake and ensure it is protected from damage. We are a non-profit organization, dedicated to the proper care and stewardship of Little Bitterroot Lake.</p>	

We appreciate the mission of the Department of Environmental Quality, and understand you are also charged with protecting our environment (and our lake) "as guaranteed by our State Constitution."

And we believe that those who own and manage Glacier Stone Supply LLC will whole heartily agree that proper protection of our Lake and its Watershed is good business.

Background

We understand that Glacier Stone Supply LLC has applied for a Major Mining Operation as described in an Operating Permit Application (00190) to the Department of Environmental Quality (DEQ). We support, appreciate and wish no harm on Glacier Stone Supply LLC or any of our local businesses.

It is our understanding that the Glacier Stone Supply LLC request as covered under the DEQ Operating Permit will dramatically expand two rock quarries, one of which is within a mile of Little Bitterroot Lake.

Details and Concerns

The approval of this application will significantly change their current operation.

With reference to Glacier Stone Supply's June 13, 2017 submission to you and your DEQ assessment, this new request for mining will cover up to 45 acres (a significant increase from the current 5 acre limit), 50 feet maybe cut off the top of the mountain, and extend operations for 25 years. Their request for increased activity will make this work so large that it will be covered under the Major Mining Act.

Presentations made by Glacier Stone Supply and conclusions made in the DEQ Assessment regarding the impact to our area and Little Bitterroot Lake Watershed appear to be incomplete and in some cases inaccurate. The DEQ Assessment states, "There would be minimal risk of degradation to surface or groundwater resulting from this project *because of the distance to surface water...*" "The proposed disturbance area is a ridge *less than a mile* east of Little Bitterroot Lake."

The DEQ Assessment on page 7 explains that there is no problem because of the distance from the site to the lake. This logic is appears erroneous.

According to the widely used and acclaimed Montana Lake Book "A watershed can extend for miles" and "Lake Protection MUST extend to the entire Watershed."

The facts are that neither Glacier Stone Supply's application nor the DEQ Assessment appears to incorporate significant or accurate consideration of the Little Bitterroot Lake Watershed.

Known to those of us who live near the site, there are seasonal streams/creeks that run from the site to our lake. One is quite voluminous. Because of its heavy flow it is one of the first to open up the ice from shore.

The DEQ should be concerned and study this water flow and others, yet it has been reported that none of the DEQ principle assessment authors have made a physical inspection of the site. We invite you to come to our lake and see our concerns for yourself.

Petition

The DEQ Assessment, as it stands runs counter to acceptable guidance on protecting our Lake and its Watershed as set forth by the State of Montana. Based on the above facts the Board of Directors of the Little Bitterroot Association issued the attached petition.

On Friday night June 22nd we began gathering signatures for the petition. In just a few days we collected well over 70 signatures. There is immediate and broad based concern in our community.

Request

We believe that there are numerous questions and possibly serious problems with this expansion of operations. Due diligence demands that we pause and evaluate the circumstances of this change in order to ensure that our lake is safe. We all must be confident that we are doing the right thing.

<p>To that end, we request a more complete impact study of the Site, the Watershed, and a competent review of the effect on Little Bitterroot Lake Water Quality.</p> <p>To ensure Glacier Stone's Mine is and remains safe please add the following to your final Report:</p> <p>LBL-1</p> <p>1) A full and complete analysis and review of the Mine and the associated Little Bitterroot Lake Watershed. The Watershed review will identify all possible contamination concerns by the Mine for our Lake. Glacier Stone will fund the analysis. The study will include seasonal conditions, such as rapid spring runoff. LBLA will manage and report the analysis.</p> <p>LBL-2</p> <p>2) Each year Glacier Stone will fund lake water analysis in order to determine if there is any contamination from the Mines. LBLA will manage and report the analysis.</p> <p>LBL-3</p> <p>3) A Bond will be held by the DEQ from Glacier Stone Supply in order to ensure remediation if contamination should such occur.</p> <p>This is one of the cleanest most beautiful lakes in the United States. It deserves our protection. Thank you for your help in ensuring that our children can enjoy this treasure for years to come...</p> <p style="text-align: center;">Follow-up</p> <p>At your earliest convenience we request a meeting to follow-up with additional details and concerns.</p> <p style="text-align: center;"> LBLA Board of Directors P.O. Box 1003 Marion, Mt. 59925 </p>	<p>Comment Response LBL-1</p> <p>A watershed assessment for Little Bitterroot Lake is beyond the scope of this environmental assessment. The Environmental Assessment analyzed the proposed operating permit activities and disclosed the impacts to surrounding environment.</p> <p>Comment Response LBL-2</p> <p>Requirements for future water lake sampling and analysis is beyond the scope of the Montana Metal Mine Reclamation Act (MMRA).</p> <p>Comment Response LBL-3</p> <p>The MMRA requires DEQ to hold a bond sufficient for reclamation of disturbance permitted in accordance with the approved reclamation plan. Bonds must be based on reasonable foreseeable impacts.</p>
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Board Member Contact

Dan Handlin

CaptainDanNWA@centurytel.net

406 854 -9444

CC'd

Senator District 007

Jennifer Fielder

PO Box 2558

Thompson Falls, Mt. 59873-2558

Sen.Jennifer.Fielder@mt.gov

Representative District 013

Bob Brown

PO Box 1907

Thompson Falls, Mt 59873-1907

(406) 827-9894 p

(406) 242-0141 s

Rep.Bob.Brown@mt.gov

Comment Code	Document #03-Little Bitterroot Lake Association	Response
<p>LBL-4</p>	<p style="text-align: center;">ADDENDUM No. 1 to Little Bitterroot Lake Association Letter dated 27 June 2018</p> <p style="text-align: center;">Reference to Glacier Stone Supply Permit 00190</p> <p style="text-align: center;">And the Associated Draft Environmental Assessment</p> <p>Dear Mr. Rolfes,</p> <p>Below is our first Addendum to your Draft Environmental Assessment for an Application (Operating Permit 00190) for Glacier Stone Supply LLC.</p> <p>We are submitting this “initial” additional set of questions and concerns in our continuing effort to ensure that our Lake and its Watershed are protected. We remain very concerned with numerous portions of your Assessment. With this submission we ask for a six month delay of your comment period. The reason is quite simple; we need more time to study and respond to the impact of this major mining proposal and its effect on our community and lake. The current cutoff date is just too short and does not allow the community enough time to properly respond.</p> <p>Questions:</p> <p>1) Page 7 section 2 - Direct Impacts, states that no baseline water quality or quantity data in the greater project area have been collected. This section further states that there will be minimal impact to surface water in the area due to the distance to surface water (appx. 1 mile to the lake).</p> <p>This statement is not supported by estimates of storm water run-off volumes, flow rates, frequencies, and consideration for larger than average storm events, drainage characteristics or evaluation of particulate size or transport distance of sediment produced in the project disturbance area.</p> <p><i>Will the DEQ require that the applicant collect this information to quantify the impact of surface water run-off on the downstream drainage and Little Bitterroot Lake?</i></p>	<p>Comment Response LBL-4</p> <p>The MMRA does not require the applicant to collect storm water run-off volumes, flow rates, frequencies, and consideration for larger than average storm events, drainage characteristics, or evaluation of particulate size, or transport distance of sediment produced in the project disturbance area for an operating permit application. No off-site hydrologic impacts are anticipated. See comment response to WET-5.</p>
<p>LBL-5</p>	<p>2) Page 7 section 2 - Direct Impacts, states that there would be some modifications to storm water run-off patterns due to changes in topography.</p> <p><i>Has the applicant or the DEQ assessed the nature and extent of these changes?</i></p> <p><i>Is there potential that a larger storm water catchment area will be produced and hence higher volume storm water flows may occur with potential for greater erosion and generation of sediment which may increase total suspended solids discharged into Little Bitterroot Lake?</i></p>	<p>Comment Response LBL-5</p> <p>The changes mentioned in the draft EA are considered to be minor and not affect the watershed. There would not be a change in the water catchment area for Little Bitterroot Lake as a result of proposed mining activities. See comment response to WET-5.</p>

<p>LBL-6</p>	<p>3) Page 7 section 3 - Direct Impacts, states that road dust should be minimal due to the use of road watering or dust suppressant. A study conducted by the U.S. EPA indicates that the use of some dust suppressants may increase Total Suspended Solids in surface water run-off.</p> <p><i>Will the applicant specify whether water or suppressants will be used and if suppressants will be used, what type of suppressant will be used?</i></p> <p>EPA dust suppressant study source: https://www3.epa.gov/region9/air/dust/DustSuppressants-sept2008.pdf</p>	<p>Comment Response LBL-6</p> <p>The MMRA does not require the use of dust suppressant for road maintenance. The applicant would apply dust suppressant as needed. See comment response WET-6</p> <p>The final EA notes under Air Quality that Glacier Stone would employ a number of control measures to reduce emissions, as necessary, including but not limited to the application of chemical dust suppressant and/or water on haul roads and access roads and the prompt revegetation of disturbed areas.</p>
<p>LBL-7</p>	<p>4) Page 11 section 9, states that the proposed project will not use any limited resources in the area.</p> <p><i>Where will water for the project be sourced?</i></p>	<p>Comment Response LBL-7</p> <p>Water for the project will be hauled in from off-site.</p>
<p>LBL-8</p>	<p>5) Page 17 paragraph 6, states that there would be minor impacts to terrestrial, avian and aquatic life and habitats.</p> <p><i>What are the expected impacts to aquatic life and is the statement referring to Little Bitterroot Lake aquatic life or some other area?</i></p> <p><i>Has the DEQ quantified these impacts and if not, will they request that the applicant quantify any impacts?</i></p>	<p>Comment Response LBL-8</p> <p>There are no expected impacts to any aquatic life from mining activities.</p>
<p>LBL-9</p>	<p>6) Based upon Google Earth imagery, there is a small pond which appears to be a historic wetland which may now host a small dam on the west end.</p> <p><i>As the distance to this possible wetland is less than 0.5 miles from the Glacier Mountain site, has the applicant or the DEQ assessed possible storm water run-off impacts on the area?</i></p>	<p>Comment Response LBL-9</p> <p>There are no expected run-off impacts to any wetlands from mining activities. See comment response WET-5</p>
<p>LBL-10</p>	<p>7) The EA states that reclamation will be carried out but indicates that there is minimal soil present to be stockpiled for use in reestablishing plant life. Vegetation is present in most application areas (as per the EA up to 66% of the proposed project site is forested) and it is possible that any disturbance of this thin soil layer and associated vegetation will eliminate near term potential for soils and plant life to be reestablished. This will in turn increase the potential for mobilization of sediment during storm water run-off events which may in turn produce higher total suspended solids discharging to the lake.</p>	<p>Comment Response LBL-10</p> <p>See comment response WET-3</p>

<p><i>Will the DEQ require that the applicant limit soil disturbance and further source native soil to provide cover and allow for the reestablishment of vegetation during continuous progressive reclamation to limit sediment mobilization?</i></p> <p>LBL-11</p> <p><i>Has the applicant or the DEQ quantified the impacts of soil disturbance and plant removal in the project area on sediment mobilization?</i></p> <p>8) ARM 17.4.608 states that when determining whether the preparation of an environmental impact statement is needed, the DEQ is required to consider the importance to the state or to society of each environmental resource or value which would be affected. Little Bitterroot Lake is of great value to local residents (the residents of Marion and the lake area came to reside in the area largely due to the presence of the lake) as well as fisherman, boaters and other recreationists. The potential impacts on surface water quality and aquatic life appear to have not been quantified (no baseline studies, no consideration of changes to storm water run-off volumes, flow paths, sediment transport, total suspended solids reaching the lake and no surface water management plan completed among others).</p> <p>LBL-12</p> <p><i>Will you complete a surface water management plan that includes baseline studies that evaluates changes to storm water run-off volumes, flow paths, and sediment transport, in order to determine possible total suspended solids contamination?</i></p> <p>LBL-13</p> <p><i>Will you prepare and Environmental Impact Statement based on our community and environmental concerns?</i></p> <p>Sincerely, The Little Bitterroot Lake Association BOD</p> <p>Dan Handlin LBLA BOD Member CaptainDanNWA@centurytel.net 406 854-9444</p>	<p>Comment Response LBL-11</p> <p>See comment responses WET-3 and WET-5</p> <p>Comment Response LBL-12</p> <p>A surface water management plan is beyond the scope of this EA as off-site hydrologic impacts are not anticipated. Storm water run-off from the proposed mine site would be regulated by DEQ's Water Protection Bureau. See comment response WET-5</p> <p>Comment Response LBL-13</p> <p>The environmental review of the proposed operating permit application did not indicate that the impacts would rise to a level of significance which would require that an EIS. The significance determination in the Draft EA remains the same.</p>
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ADDENDUM No. 2 to Little Bitterroot Lake Association Letter dated 27 June 2018

Reference to Glacier Stone Supply Permit 00190

And the Associated Draft Environmental Assessment

Dear Mr. Rolfes,

Below is our second Addendum to your Draft Environmental Assessment for an Application (Operating Permit 00190) for Glacier Stone Supply LLC.

We are submitting this additional set of questions in our continuing effort to ensure that our Lake and its Watershed are protected. We remain very concerned with numerous portions of your Assessment. Our focus in Addendum No.2 is on Glacier Stone's Operating Plan. We believe it is insufficient.

Questions:

LBL-14

- 1) It appears that there are at least two primary water flows from the mining area. Both flow into our lake. Does Glacier Stone have a detailed Storm Water Pollution Plan? If not, would you please ensure that it does?

LBL-15

- 2) Air quality at the mining site and on the roads associated with the site is a problem. We have eyewitness accounts of major dust clouds over the roads and along the ridge from the mine to Idaho Hill Road. We ask that you involve DEQ Air Quality Regulators in an analysis of this problem. Individuals who have visited the site also observe very problematic air quality issues. Perhaps in your inspections you have noted this too? We do not believe there is an adequate plan in place by Glacier Stone to deal with Air Quality and we ask you to make this part of your analysis. Please ensure that Glacier Stone has a specific dust mitigation plan and the permit ensures continued monitoring. Our observations are of a much smaller operation than is planned by this expanded permit. Please take that into account.

Comment Response LBL-14

See comment response WET-5.

Comment Response LBL-15

Reasonable precautions have been taken to protect the human health and safety of people recreating on nearby property and use of shared access. See comment response WET-6.

LBL-16	<p>3) Glacier Stone is working within earshot of our shoreline which is solid with homes. We ask you to include in your permit noise mitigation strategies for their expanded operation. Specific and limited daylight and weekday operations should be written in to their permit. We are now living with their noise and it is a problem.</p>	<p>Comment Response LBL-16 See comment response WET-6.</p>
LBL-17	<p>4) There are wetlands in close proximity and below some of the permitted site. We have witnessed them ourselves. Material that is not wholly contained within the site will likely contaminate the wetlands and watershed. No analysis of these known wetlands has been accomplished. We request the DEQ to study the wetlands and watershed. We request that Glacier Stone be held accountable for this current and increasing problem. We ask for a sediment settlement plan and program to ensure places are built to accept the sediment from the site and mitigate it.</p>	<p>Comment Response LBL-17 No off-site hydrologic impacts are anticipated. See comment response WET-5.</p>
LBL-18	<p>5) It appears that blasting will be a part of this new operation. The residual effects of blasting on our environment have not been adequately evaluated by this EA. We request restrictions on blasting for the peace and serenity of our community and a plan to mitigate the adverse effects on our environment.</p>	<p>Comment Response LBL-18 Blasting would occur less than once a year at the proposed mine site.</p>
LBL-19	<p>6) Because Glacier Stone exceeded their current 5 acre limit, we are concerned that they may again exceed the permitted acreage of this EA. In order to ensure there is no confusion on what is permitted for mining, we request that the DEQ clearly delineate the allowed acreage and provide specific boundary lines and total acreage allowed to be mined on a map. We request that Glacier Stone include in their plan specific agreement not to exceed the permitted area as mapped. We request the DEQ explain the ramifications if Glacier Stone violates the aforementioned boundaries.</p>	<p>Comment Response LBL-19 Exhibit B of the application shows the permit and disturbance boundaries.</p>
LBL-20	<p>7) Because Glacier Stone has gone bankrupt, been violated for mining a larger area than allowed, has adversely changed the look and environment of our watershed, and has not engaged the community in a positive way - we believe that their way of doing business could pose future challenges to us individually, our community and the environment. Our request is that this permit be very specific to the responsibilities required of Glacier Stone. A significant bond amount and more than yearly inspections by DEQ are requested. We have read their operating plan and find it weak. Should you grant an operating permit please ensure that it provides more detailed instructions and plans to protect us individually, our community and the watershed.</p>	<p>Comment Response LBL-20 Violations of permit conditions would be addressed in accordance with DEQ's enforcement policies and guidelines. Bond requirements are addressed above. See comment response to LBL-3. The site would be inspected at a minimum of once per year.</p>
LBL-21	<p>8) We do not believe adequate reclamation is delineated in this EA. We request that the ENTIRE mining operation be reclaimed not just the future area of disturbance. We request an adequate bond for compliance be required in the permit.</p>	<p>Comment Response LBL-21 See comment response LBL-3.</p>

WIL-22

9) Page 14 – 15 section 19 Social Structures, 20 Cultural Uniqueness and Diversity, 22 Other Appropriate Social and Economic Circumstances - These sections of the Operating Permit Evaluation are important. This EA does not properly consider them. Most of us came to Marion and heavily invested in the area, because it was quiet, peaceful and beautiful. There is now a community built with a valuable tax base and an appreciation for the areas special serenity. We have a culture, economic circumstances, and social structures built on that peaceful serenity. A MAJOR MINE in our backyard changes ALL that and this EA gives NO consideration of our culture and investment. This EA's statement that there are, "no direct or secondary impacts"... "from this project" is wrong. Please reassess how you view our community and the negative change imposed on us by your permit. Reconsider these sections and their direct impact on us. That is what is required by the permitting process.

LBL-23

10) Glacier Stone denied having covered the rock face with dust/silt/debris to the DEQ. The pictures below clearly show otherwise. And so we ask again, how will this and other practices be mitigated so as to ensure they do no harm to the watershed and our lake?



Comment Response WIL-22

Comment noted. DEQ reviewed the section and maintains that no significant impacts are anticipated.

Comment Response WIL-23

No off-site hydrologic impacts are anticipated. See comment response WET-5. The applicant has agreed to cease pushing waste rock over the edge of the cliff pictured. Personal communication with Glacier Stone dated July 27, 2018.





ADDENDUM No. 3 to Little Bitterroot Lake Association Letter dated 27 June 2018

Reference to Glacier Stone Supply Permit 00190

And the Associated Draft Environmental Assessment

Dear Mr. Rolfes,

Below is our third Addendum to your Draft Environmental Assessment for an Application (Operating Permit 00190) for Glacier Stone Supply LLC.

We are submitting this additional set of Google Historical Photos in our continuing effort to ensure that our Lake and its Watershed are protected. Our focus in Addendum No.3 is to provide an historical visual view of Glacier Stone's impact on our Environment and Watershed.







Sincerely,

Little Bitterroot Lake Association

Submitted on behalf of the LBLA BOD Dan Handlin

Comment Code	Document #04-Art Vail	Response
	<p>-----Original Message----- From: Art Vail [mailto:ahviii@gmail.com] Sent: Wednesday, July 18, 2018 8:38 PM To: Rolfes, Herb <HRolfes@mt.gov> Subject: Glacier Stone application to expand quarry in Marion, MT</p> <p>Glacier Stone has been operating the quarry that they wish to expand for many years under the small miner's exclusion. This is a joke and a dereliction of duty on your part. If one reads the requirements under this exclusion there is no way they have been in compliance.</p> <p>The whole hilltop has been trashed, they have dumped waste material over the cliff destroying the aesthetics from the lake, have possibly caused sedimentation into the lake, have caused air (dust) and noise pollution and have done no reclamation.</p> <p>Before they are permitted to expand they should be required to reclaim every acre previously quarried, and should be required to post a bond adequate to ensure performance for the expansion.</p> <p>They are bad neighbors who don't care about anyone else and need to be held to the strictest degree of compliance with mining regulations.</p> <p>Sincerely, Art Vail 1100 North Bitterroot Rd Marion, MT 59925</p> <p>July 18, 2018</p>	<p>See comment response WET-5, WET-8, WIL-14, and WIL-23.</p>

Comment Code	Document #05-Shotnick	Response
	<p>From: Lauren Shotnik [mailto:shotnik@earthlink.net] Sent: Thursday, August 02, 2018 12:57 PM To: Rolfes, Herb <HRolfes@mt.gov> Cc: feedback@ios.doi.gov Subject: Please do not sign Glacier Stone permit</p> <p>Herb, You now have the pictures, petition signatures, and seen the huge scar on the hill top shown clearly on the comparison photos. Our community has worked very hard to be able to live and retire on Bitterroot Lake. If you sign that permit, all our hard work and significant investment will be damaged by impure water and land scars. This will severely impact our property values. It is very quite here on the lake. We hear Loons calling every morning and night. All that will change with a large mine operation going on for the next 25 years. The approval of this mine will dramatically impact environmental resources of land, water and air of Bitterroot Lake. It already has, just look at the pictures. Please add me to the correspondence mailing and emails.</p> <p>Please don't sign this permit and sleep good tonight.</p> <p>Thank you,</p> <p>Lauren and Craig Shotnik 1110 N. Bitterroot Road Marion, Montana 59925</p> <p>406-854-2440 shotnik@earthlink.net</p> <p>cc: Ryan Zinke</p>	<p>See comment response to WET-5 and WET-8.</p>

SAVE OUR LAKE PETITION

BACKGROUND

Little Bitterroot Lake is one of the MOST pristine lakes in the United States.

The Little Bitterroot Lake Association (LBLA) and the entire Community are stewards of this lake. The LBLA mission statement demands we fully review ALL actions that may impact our lake and ensure it is protected from damage.

This petition is concerned with problems and omissions in the Department of Environmental Quality (DEQ) Draft Environmental Assessment for an Application for an Operating Permit (00190) from Glacier Stone Supply LLC. in Flathead County for Two Quarry Sites.

We understand that Glacier Stone Supply LLC has applied for a Major Mining Operation as described in an Operating Permit Application (00190) to the Department of Environmental Quality (DEQ). We support, appreciate and wish no harm on Glacier Stone Supply LLC or any of our local businesses.

The Glacier Stone Supply LLC request as covered under the DEQ Operating Permit will dramatically expand two rock quarries, one of which is within a mile of Little Bitterroot Lake.

This application will significantly change their current operation.

Their mining will cover up to 45 acres (up from the current 5 acre limit), 50 feet will be cut off the top of the mountain, and operations will extend for 25 years. Their request for increased activity will make this work so large that it will be covered under the Major Mining Act.

Conclusions made in the DEQ Assessment regarding the impact to our area and Little Bitterroot Lake Watershed appears to be inaccurate and incomplete.

The DEQ Assessment states, "The proposed disturbance area is a ridge *less than a mile* east of Little Bitterroot Lake." "There would be minimal risk of degradation to surface or groundwater resulting from this project *because of the distance to surface water...*"

According to the widely used and acclaimed Montana Lake Book "A watershed can extend for miles" and "Lake Protection MUST extend to the entire watershed."

The DEQ Assessment (page 7) explains that there is no problem because of the distance from the site to the lake. This logic is clearly erroneous.

The facts are that the DEQ Assessment incorporates no significant or accurate consideration of the Little Bitterroot Lake Watershed. Known to those of us who live near the site, there are seasonal streams/creeks that run from the site to our lake. One is known to be quite voluminous. Because of its heavy flow it is one of the first to open up the ice from the shore.

The DEQ should be concerned about this water flow. Unfortunately, it has been reported that none of the DEQ principle assessment authors have even made a physical inspection of the site.

The DEQ Assessment runs counter to acceptable guidance on protecting our Lake and its Watershed as set forth by the State of Montana.

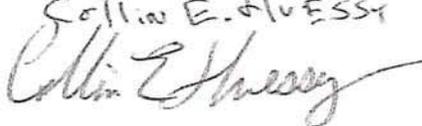
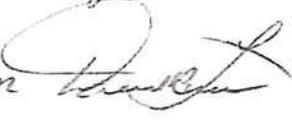
We request a more complete impact study of the site, the watershed, and a competent review of the effect on Little Bitterroot Lake Water Quality. This is one of the cleanest most beautiful lakes in the United States. It deserves our protection.

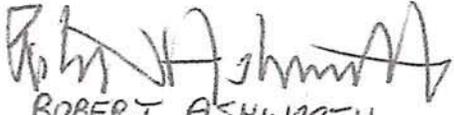
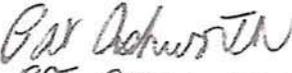
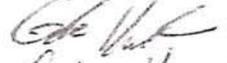
(Additional considerations include Air Quality, Traffic Safety, Property Values, Bald Eagle Population and the Canadian Lynx.)

PETITION STATEMENT

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We the undersigned believe the Major Mining Operation as described in the DEQ Draft Environmental Assessment for an Application for an Operating Permit (00190) does not FULLY address the possible negative impact to our Community and our LAKE's ecology. We ask that the application NOT be approved until a full and accurate analysis of its environmental impact is completed.

	NAME	SIGNATURE	RESIDENCE	DATE	EMAIL (opt)
1	Collin E. HUESY		11425 Hwy 2 West	6/22/18	
2	S. Gardner		435 Lodgepole Dr. Marlow	6-22-18	
3	Tyler Aygar		435 Lodgepole Dr. Marlow MT	6/22/18	
4	DAVID LARSON		1256 Bythwood Lane, Marlow	6/22/18	
5	Pa. Day		110 LOCKE BAY DRE, MARLOW	5992	
6	SUSAN LOREN		705 7th St W	6/23/18	

	SIGNATURE NAME	ADDRESS	DATE	EMAIL (OPTIONAL)
7	 Steve Lorch		P.O. Box 135, Kalispell MT 59903	
8			P.O. Box 1028 MARION MT 59925	
9	 ROBERT ASHWORTH		175 ^{BOORMAN} Boorman Ln Kalispell 59907	
10	 PAT ASHWORTH		175 BOORMAN LN. KALISPELL	
11	 Gabe Knudsen		620 Eckelberg Drive, 59912	6/23/18
12			1288 Indian Crk Trl.	
13			1200 INDIAN CRK TR.	
14	Paula Robertson		1055 Indian Creek Trail - Kela,	
15	TERRY McGIN	940 N BITTERROOT RD	MARION, MT	
16	Floyd Jones	1055 N Bitterroot Rd		
17	Chris Saucier	940 n Bitterroot Rd		
18		925 Griz Ln,		

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Ruth Shaggs

4853 Ashley Lake Rd Kila MT
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PETITION STATEMENT

We the undersigned believe the Major Mining Operation as described in the DEQ Draft Environmental Assessment for an Application for an Operating Permit (00190) does not FULLY address the possible negative impact to our Community and our LAKE's ecology. We ask that the application NOT be approved until a full and accurate analysis of its environmental impact is completed.

	NAME	SIGNATURE	RESIDENCE	DATE	EMAIL (opt)
	Bruce Applin,	<i>Bruce Applin</i>	2477 Pleasant Valley Rd Marion	6/23/18	
1	Dean Hazuka	<i>Dean A. Hazuka</i>	190 Id. Hill Rd.	6/23/18	
2	Valerie Kao	<i>Valerie Kao</i>	570 Lodgepole Dr.	6-23-18	
3	Kim Williams	<i>Kim Williams</i>	55 OLD CREEK RD	6.23.18	
4	Orville Mcully	<i>Orville Mcully</i>	740 Pleasant Valley	6-23-18	
5	Teresa A Hickey	<i>Teresa A Hickey</i>	410 EVERNIA ST #418	6-23-18	
6	Bob Cramer	<i>Bob Cramer</i>	230 Gopher Lane MARION MT		

7 Nancy E. Krause Nancy Krause 80 Bitterroot Cv. 6/23/18

8 Spencer Hale 1307 Marion Hubbert Spur, 59925

9 Glanville Harley 450 Dakota Hill Rd. 59925

9 Wanda L. Bissell 450 Dakota Hill Rd 59925
WANDA L. BISSELL

10 Leslie D'Arezzo P.O. Box 584 Trego MT 59934
LESLIE D'AREZZO

11 Arthur H. Van III 1100 N. BITTERROOT RD
MARION, MT 59925

12 Rita Van 1100 N. Bitterroot Rd, MARION, MT 59925

13 Kathy Sauvier 990 N. Bitterroot Rd. Marion, MT 5992

14 Richard Edwards 1042 Kelsey Rd, Marion, MT 59925

15 Daniel W. Noland 80 BITTERROOT CV. MARION, MT 59925 6/25/18
DANIEL W. NOLAND

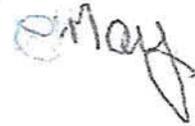
16 Lily M. Brower Lily M. Brower 350 Pleasant Valley Rd
marion, mt 59925 6-25-18

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PETITION STATEMENT

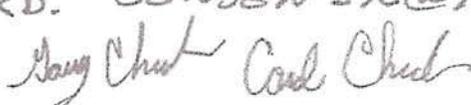
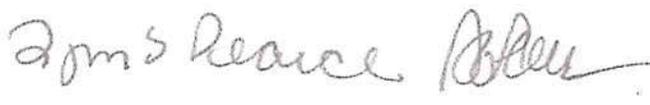
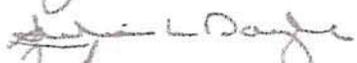
We the undersigned believe the Major Mining Operation as described in the DEQ Draft Environmental Assessment for an Application for an Operating Permit (00190) does not FULLY address the possible negative impact to our Community and our LAKE's ecology. We ask that the application NOT be approved until a full and accurate analysis of its environmental impact is completed.

	NAME	SIGNATURE	RESIDENCE	DATE	EMAIL (opt)
1	GARY P. JACKSON		305 LODGEPOLE DR. MARION, MT 59925	6/29/18	
2	Pam JACKSON		305 LODGEPOLE DR. MARION, MT 59925	6/29/18	
3	DARCY GROSS		505 LODGEPOLE DRIVE MARION, MT, 59925		
4	Charlotte May		275 LODGEPOLE DRIVE MARION, MT 59925		
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(Additional considerations include Air Quality, Traffic Safety, Property Values, Bald Eagle Population and the Canadian Lynx.)

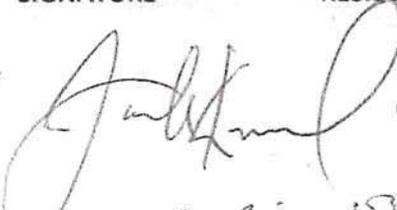
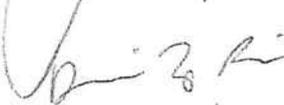
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	NAME	SIGNATURE
RESIDENCE	DATE	EMAIL (opt)
1	JERRY JENSEN 920 N. BITTERROOT RD.	 JENSEN JR@HOTMAIL.COM
2	GARRY + CAROL CHURCH 1043 PLEASANT VALLEY RD	
3	DICK LIENRSCH 1150 N. BITTERROOT RD	
4	Neeses Seenesch 1150 N. BITTERROOT RD	
5		
6	Lynn + Bob Pearce 1180 N Bitterroot rd	
7		
8	Audrey K. Knight 1015 N Bitterroot Rd	 aknight49@gmail.com
9	Gary & Sweeney JR 1015 N Bitterroot Rd	
10	Julie L. Dwyer 1020 N. Bitterroot	6/27/18 
11	F. Jerome Doyle F. Jerome Doyle	6/27/18 
12	Douglas Hill 71 Locke Bay	6/27/18 
13	Robbie Tompkins 79 Locke Bay	6-28/18 
14		

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	NAME	SIGNATURE	RESIDENCE	DATE	EMAIL (opt)
1	Jack Kriesel		1270 Pleasant Valley Rd	6/26/18	netzach54@gmail.com
2	Diane Belk		1530 Pleasant Valley Rd, Maran	6/24/18	belkhd@gmail.com
3	Henry Belk		"	6/26/18	"
4	Jodee Napier		1130 N. Bitterroot Rd	6/26/18	
5	Theresa Napier		1130 N. Bitterroot Rd	6/26/18	
6	Kelly Littlebeck		155 Pleasant Valley Rd Maran	6/26/18	

7 ~~John C Shelton~~
8 John C Shelton
9 Jean C Shelton

155 Pleasant Valley Rd Marion 626-18

PO Box 2967 Arizon City AZ 6-24

PO Box 2967 Arizon City AZ 6-26

10 Randy Ober

PO Box 1133 Marion, MT 59925

11 HERBERT ENGEL
Herbert Engel

P.O. BOX 1111 MARION MT 59925
950 PLEASANT VALLEY RD

12 PAULA ENGEL
Paula Engel

P.O. BOX 1111 MARION MT 59925
950 PLEASANT VALLEY RD

13 Mervin Kriesel Mervin Kriesel

1270 Pleasant Valley 6/27/18
Marion, MT 59925

14 Brenda Profet

PO Box 7608
Kalispell, MT 59904 6-28-18

15 Ron Profet

P.O. Box 7608
Kalispell, MT 59904 6-28-18

16 [Signature]

115 W. KROBY BZN 59715 6-28-18

17 [Signature]

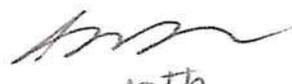
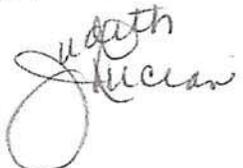
140 VILLAGE CROSSING WAY, 313
BOZEMAN, MT 59715 6/28/18

18 [Signature]

3134 Summer View LN
Bozeman MT 59715 6-28-18

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	NAME	SIGNATURE	RESIDENCE	DATE	EMAIL (opt)
1	Jonine Presson		9618 US HWY 210 MARION, MT	06/28/18	
2	Gary Presson		9618 US HWY 210 MARION, MT	06/28/18	
3	Judith Lucian		10 NELSON LANE MARION MT	06/28/18	
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Return to Dan Handlin 80 Bitterroot Cove Ct. Marion, Mt. 59925

(Additional considerations include Air Quality, Traffic Safety, Property Values, Bald Eagle Population and the Canadian Lynx.)

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	NAME	SIGNATURE
RESIDENCE	DATE	EMAIL (opt)
1	<i>David Engel</i>	<i>6/25/18 david.engel@cox.net</i>
2	<i>Henry Engel</i>	<i>6-25-18 hengeld@cox.net</i>
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	NAME	SIGNATURE	RESIDENCE	DATE	EMAIL (opt)
1	CRAIG SLOTWIK		1110 N BITTERROOT RD, MASON, MT	6/28/2018	
2	Lauren Shitnik		1110 N. Bitterroot Rd MASON, MT	6-28-2018	
3					
4					
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6					