

Applicant: <u>Shannon, LLC</u>
Mine Name: <u>Shannon Mine</u>
Permit Number: <u>P-3859, Revision R-17</u>

Part II - Environmental Resources Information

A. Fish, Wildlife and Related Environmental Values

1. Describe the measures to be taken, using the best technology currently available to minimize disturbances and adverse impacts to fish and wildlife and achieve enhancement of this resource where practicable within the proposed permit area. [780.18(b), 816.97(a)]

Sediment ponds will be used to prevent suspended solids and metals from entering nearby watersheds. Other siltation controls such as filter dams and silt fences will be used on occasion when necessary. The area will be promptly reclaimed with diverse species to provide a natural habitat for wildlife closely resembling the premining land use.

2. Describe in detail the measures to be taken to restore or enhance, or steps to be taken to avoid disturbance of habitats or unusually high value for fish and wildlife located within the proposed permit area. [780.18(b), 816.97(d)(2)]

There are no unusually high value habitats within the proposed permit area.

All area added as a result of this application was considered during the investigations of the original permit application. See Attachment II.-A.-2.

3. Are there any wetland areas such as streams, lakes, marshes, etc. located in or adjacent to the proposed permit area which will be disturbed by the mining activities? [780.18(b), 816.97(d)(3 & 4)] () Yes. (X) No.

If yes, briefly describe the feature(s), it's location and the extent of the proposed disturbance. Describe in detail measures to be taken to restore the area.

Comments from the [U.S. Army Corps of Engineers](#) are attached.

Applicant: <u>Shannon, LLC</u>
Mine Name: <u>Shannon Mine</u>
Permit Number: <u>P-3859, Revision R-17</u>

Addendum to the Reclamation Plan
Enhancement and Protection of Fish and Wildlife

(1) Areas of Special Concern

(a) Wetlands:

1. List any wetlands, ponds, lakes, streams, rivers, etc. that have been identified by the Department of Conservation and Natural Resources (DCNR) or U.S. Fish and Wildlife Service (USFWS) as area of special concern.

No wetlands, ponds, lakes, streams, rivers, etc. have been identified by the Department of Conservation and Natural Resources (DCNR) or U.S. Fish and Wildlife Service (USFWS) as area of special concern.

2. Identify and direct or indirect impacts which could occur as a result of the proposed mine.

If mining and reclamation operations are successfully completed, there should be no direct impacts on areas of special concern.

Indirect impacts as a result of this mining operation, will be limited to the temporary changes in the quantity of water entering the receiving streams during the construction of diversions and sediment basins, sediment load during the construction of incidental areas such as diversions, sediment basins, haulroads, etc. and the temporary destruction of small insignificant and undetected water holding depressions during mining operations.

3. List the measures to be taken to avoid, protect, or minimize impacts.

All required buffer zones or setbacks, as set forth in the regulations, will be honored to avoid, protect, and minimize impacts of areas of special concern. Sediment basins will be utilized to maintain water quality standards entering the receiving stream. Diversion ditches will be constructed to control and direct all disturbed runoff through approved sediment basins. Hay dams, silt fences and rock check dams will be used to control minimal offsite drainage, such as haulroads, out slopes of sediment basins, etc., not entering sediment basins. Disturbed areas will be regraded and revegetated in a timely manner, as outlined in Part IV of the permit, to provide fish and wildlife habitat closely resembling premining conditions, where applicable.

Applicant: Shannon, LLC
Mine Name: Shannon Mine
Permit Number: P-3859, Revision R-17

4. If direct or indirect impacts are unavoidable, describe in detail the measures to be used to restore the area to pre-disturbance conditions and to enhance it.

The temporary destruction of small, insignificant, and undected water holding depressions during mining operations will be restored during the reclamation process by regrading the mined area in such a manner as to create numerous small water holding depressions approximately 1/4 acres in size of maximum depth of 2 feet to enhance the area for fish and wildlife.

When approved by the landowner, sediment basins will be left as permanent water impoundments to provide watering for wildlife and fish habitat.

5. Is any disturbance of wetland areas proposed which requires approval of the U.S. Army Corps of Engineers?
() Yes (XX) No

Comments from the [U.S. Army Corps of Engineers](#) are attached.

If Yes, provide necessary written approval.

(b) Endangered/Threatened Species and Critical Habitats:

1. Identify any endangered or threatened plant or animal species or their critical habitat which will be directly or indirectly impacted by the proposed mining operation.

No endangered to threatened plant or animal species or their critical habitat exists within the proposed permit area which will be directly or indirectly impacted by the proposed mining operation.

2. Describe the potential impact on any endangered or threatened plant or animal species or their critical habitat within the proposed permit or adjacent areas.

No endangered or threatened plant or animal species or their critical habitat exists within the proposed permit or adjacent areas which will be directly or indirectly impacted by the proposed mining operation.

Applicant: <u>Shannon, LLC</u>
Mine Name: <u>Shannon Mine</u>
Permit Number: <u>P-3859, Revision R-17</u>

3. Describe in detail the measures which will be taken to prevent any adverse impact on any endangered or threatened plant or animal species or adjacent area.

No endangered or threatened plant or animal species or their critical habitat exists within the proposed permit or adjacent areas which will be directly or indirectly impacted by the proposed mining operation.

(c) Other Areas of Special Concern:

1. Identify the area of special concern:

No other areas of special concern were listed by the USFWS, the DCNR, or the Alabama Heritage Data Base.

2. Describe the potential impact on any other areas of special concern.

No other areas of special concern were listed by the USFWS, the DCNR, or the Alabama Heritage Data Base.

3. Describe in detail the measures which will be taken to prevent any adverse impact on any other areas of special concern or any endangered or threatened plant or animal species or their critical habitat within the proposed permit or adjacent areas.

No endangered or threatened plant or animal species or their critical habitat exists within the proposed permit or adjacent areas which will be directly or indirectly impacted by the proposed mining operation.

No other areas of special concern were listed by the USFWS, the DCNR, or the Alabama Heritage Data Base.

Applicant: <u>Shannon, LLC</u>
Mine Name: <u>Shannon Mine</u>
Permit Number: <u>P-3859, Revision R-17</u>

(2) General Provision for Enhancement and Protection of Fish and Wildlife

- (a) Describe those measures which will be taken during the active mining phase of the operation to minimize or prevent impacts to fish and wildlife.

All required buffer zones or setbacks, as set forth in the regulations, will be honored to avoid, prevent and minimize impacts of areas of special concern. Sediment basins will be utilized to maintain water quality standards entering the receiving stream(s). Diversion ditches will be constructed to control and direct all disturbed drainage through approved sediment basins. Hay dams, silt fences and rock check dams will be used to control minimal offsite drainage, such as haulroads, out slopes of sediment basins, etc., not entering the sedimentation basins. Disturbed areas will be regraded and revegetated in a timely manner, as outlined in Part IV of this application, to provide fish and wildlife habitat closely resembling premining conditions, where applicable.

- (b) Describe the measures to be implemented during the reclamation process to enhance fish and wildlife.

1. During reclamation of the permit area, the disturbed area may be regraded in such a manner as to create small water holding depressions approximately 1/4 acre in size of maximum depth of 2 feet to enhance the area for fish and wildlife.
2. All sediment basins, if approved by the AMC and the land owners, will be left as permanent water impoundments to provide watering for wildlife and fish habitat.
3. Various herbaceous species including, but not limited to, Kobe Lespedeza, Vetch, Sericea Lespedeza Millet, and Ryegrass may be planted in scattered and random locations to provide food and cover for wildlife that closely resemble pre-mining condition. These plants will be added in addition to the vegetation proposed in Part IV of this permit application.
4. As determined by the post mining land use of the permit area, all reclaimed areas greater than fifty (50) acres may be broken up by vegetation types to provide maximum variation of vegetation. The proposed post mining landuse for the permit area consists of undeveloped or no current landuse, pasture and agricultural. In this instance, areas

Applicant: Shannon, LLC
Mine Name: Shannon Mine
Permit Number: P-3859, Revision R-17

along drainage courses, areas along the permit boundary, and areas around the proposed water holding depressions to be left in the regrading process may be planted with trees and shrubs, such as willow, loblolly pine, autumn olive, sawtooth oak, etc., to increase diversity of food and cover for wildlife.

Applicant: Shannon, LLC
Mine Name: Shannon Mine
Permit Number: P-3859, Revision R-17

If a stream channel diversion is proposed, describe in detail (including maps, diagrams or cross-sections, if necessary) how the provisions of 816.44(d) will be met. Include a copy of all other necessary State or Federal approvals.

None Proposed.

4. Is fish and wildlife habitat to be primary or secondary post-mining landuse? [780.18(b)(5)] () Yes (X) No.

If yes, describe in detail the post-mining measures to be taken to attain this land use including the target specie(s) of wildlife, plant species to be used and a map delineating the proposed arrangement of plant groupings and water sources on the permit area following reclamation.

5. If the pre-mining land use is fish and wildlife habitat and the proposed post-mining land use is cropland, describe the post-mining provisions to be made for wildlife. Attach a map showing the location of trees, hedges, or fence rows to be used to diversify habitat types, if appropriate. [780.18(b)(5)]

Not applicable.

6. If the post-mining land use is to be residential, commercial or industrial, describe the post-mining provisions to be made for wildlife such as greenbelts, trees, or hedgerows composed of plant species useful for wildlife. [780.18(b)(5)]

Not applicable.

7. If any exceptions to Section 816.117(c)(1-3) are proposed, describe in detail the proposed practice including target species of wildlife, plant species to be used, planting rate and/or stocking density, planting pattern with appropriate map and anticipated results of the proposed practice.

None proposed.

Applicant: <u>Shannon, LLC</u>
Mine Name: <u>Shannon Mine</u>
Permit Number: <u>P-3859, Revision R-17</u>

B. Cultural, Historical and Archaeological Resources

1. Describe and identify any cultural or historical resources located in or adjacent to the proposed permit area which are listed on the National Register of Historic Places. Delineate the location of the resources on the permit map. Describe in detail the measures to be taken to minimize or prevent adverse impacts on the resource(s). (779.12, 780.14, 780.31)

See attached [Phase I Cultural Resource Assessment](#).

See attached [Alabama Historical Commission concurrence](#).

2. Describe and identify any known significant archaeological sites located in or adjacent to the proposed permit area. The description shall be based on all available information including, but not limited to, data of State and local archaeological agencies. Delineate the site(s) on the permit map. (779.12, 780.14)

See attached [Phase I Cultural Resource Assessment](#).

See attached [Alabama Historical Commission concurrence](#).

C. Threatened and Endangered Species

Identify any threatened or endangered species of plants or animals or critical habitats of such species located in or adjacent to the proposed permit area. Delineate the location of the specie(s) or habitat(s) on the permit map. (780.14)

All the area added by this application was considered during the investigations of the original permit application.

See attached comments from the [Fish and Wildlife Service](#).

See attached comments from the [Alabama Department of Conservation and Natural Resources](#).

See attached comments from the [State Lands Division, National Heritage Section](#).

Applicant: Shannon, LLC
Mine Name: Shannon Mine
Permit Number: P-3859, Revision R-17

I. Land Use Information

1. Describe in detail the land use(s) existing at the time of the application. Give the number of acres and describe sufficiently so the areas can be identified on a map. If necessary, include a map showing land use units. (779.22)

64 acres undeveloped, no current land use

2. Give the applicable land use classification under local law, if any. (779.22)

Not Applicable

3. Is any of the area prime farmland? (779.27,785.17)

() Yes (XXX) No

If yes, submit the information required in Section 785.17.

If no, show or state how the determination was made.

See [Attachment II-I-3, Soils Map](#).

4. Has the land use of any area on the proposed permit area changed within the last 5 years? (779.22)

() Yes (XXX) No

If yes, identify those areas and describe their historic use.

5. Has any area within the proposed permit been previously mined?(779.22) (XXX) Yes () No

If yes, complete the following:

- a) Describe the area or shown on a map.

See [Permit Map 1 of 2 and Permit Map 2 of 2](#)

- b) Was the area reclaimed? () Yes (XXX) No

If yes, under what Law? () 1969 (X) 1975
(X) Interim Law

Applicant: <u>Shannon, LLC</u>
Mine Name: <u>Shannon Mine</u>
Permit Number: <u>P-3859, Revision R-17</u>

- c) Describe the land use of the area prior to any mining, or if this cannot be determined, describe the land use(s) of surrounding unmined land. (779.22)

The historic landuse of the previously mined areas was undeveloped, no current land use.

6. Describe in detail, land uses of areas adjacent to the proposed permit area. (779.22)

Areas adjacent to the permit area are both residential and undeveloped, no current land use.

7. Discuss the capability of the lands within the permit area to support a variety of land uses other than the current use. (779.22)

See [Attachment II-I-3, Soils Map.](#)

<u>MAP SYMBOL</u>	<u>SOIL NAME</u>	<u>CORN</u>	<u>SOYBEANS</u>	<u>TALL FESCUE</u>
14	Dumps	----	----	----
29	Montevallo- Nauvoo association, steep	----	----	----
35	Palmerdale Complex, steep	----	----	----

Bu: Bushel
 ----: Not Rated
 * : Animal-Unit -Month

8. Give the premining productivity of the proposed permit area based on actual yield data or estimates based on data from similar sites. (If estimates, give sources of data used.) (779.22)

<u>Map Symbol</u>	<u>Soil Type</u>	<u>Site Index</u>	<u>Species</u>
14	Dumps	0	Loblolly Pine
29	Montevallo-Nauvoo association, steep	70	Loblolly Pine
35	Montevallo-Nauvoo association, steep	80	Loblolly Pine