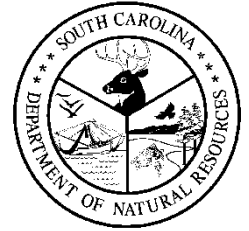


South Carolina Department of Natural Resources



PO Box 167
Columbia, SC 29202
(803) 734-3766
daniel@dnr.sc.gov

Robert H. Boyles, Jr
Director

Lorianne Riggan
Director, Office of
Environmental Programs

March 21, 2022

Ms. Sarah Harris
S.C. Department of Health and Environmental Control
Bureau of Land and Waste Management
Division of Mining and Solid Waste Management
2600 Bull Street
Columbia, SC 29201

Electronic submission

RE: Mine Permit Application I-000424
Hanson Aggregates Southeast, LLC, Anderson Quarry Modification, Anderson County, SC

Dear Ms. Harris,

Personnel with the South Carolina Department of Natural Resources (SCDNR) have reviewed the proposed project, evaluated its impact on natural resources and offer the following comments.

Hanson Aggregates Southeast, LLC has applied to DHEC to modify a permit to mine granite at a site located at Elrod Road in Anderson County, approximately 4 miles southwest of Anderson, South Carolina (34.437681, -82.630223). The purpose of this modification is to add acreage for overburden storage and expand the pit. A modified reclamation schedule to restore the site to a pond and grassland has been submitted with the application.

Readily available scientific literature indicates that the ability of vegetated buffers to trap suspended sediments are positively correlated with width and negatively correlated with slope (Wenger 1999). A literature review performed by Castelle et al (1994), found that buffers must be 30 meters (100 ft) wide to maintain the health of the biota in nearby streams, but that this width would need to be increased for steeper slopes. Peterjohn and Correll (1984) found that for a 5% slope, only ninety percent of the suspended sediment was trapped in the first 19 meters (62 ft), and that the entire 60-meter (164 ft) buffer trapped only 94% of the sediment. The SCDNR recommends that onsite and offsite aquatic resources be protected by vegetated buffers at least 100 feet wide wherever practicable.

According to the Reclamation Plan, the applicant proposes a seed selection that includes *Sericea Lespedeza* (*Lespedeza cuneata*), Bermuda grass, and Bahiagrass. Native to eastern Asia, *Sericea Lespedeza* is considered a noxious, invasive plant pest, earning a "severe threat" designation by the South Carolina Exotic Pest Plant Council. A study of a reclaimed mine in Virginia found that northern bobwhite (*Colinus virginianus*) populations were limited due to poor habitat quality resulting from the

monoculture plantings of *Sericea Lespedeza* and turf grasses (Stauffer 2011). At a former surface mine site in Kentucky (now Peabody Wildlife Management Area), a 2015 study demonstrated that areas dominated by *Sericea Lespedeza* were not preferred habitat for bobwhite (Unger et al.), as it is not a preferred food for bobwhite (Ellis 1961), nor does it contain enough nutritional value to support a bobwhite population (Newlon et al. 1964). Due to its invasive nature and lack of benefit to wildlife, the SCDNR recommends against planting *Sericea Lespedeza*. Additionally, Bermuda grass, Bahiagrass, and other non-native turf grasses, once established, will likely outcompete native vegetation and may create difficulties in establishing native vegetative habitat. Instead of planting *Sericea Lespedeza* and non-native turf grasses, the SCDNR prefers and recommends the use of native warm season grasses and/or other native forbs for stabilization that are beneficial for wildlife and pollinators. Native warm season grass species suggestions include: Indiangrass (*Sorghastrum nutans*), big bluestem (*Andropogon gerardii*) and little bluestem (*Schizachyrium scoparium*). A list of beneficial pollinator plant species, such as milkweed (*Asclepias spp.*), for the southeast may be found at www.xerces.org/pollinators-southeast-region/ or by visiting <http://www.pollinator.org/guides>. Additional South Carolina native pollinator plant species that may be applicable for use at the site during reclamation can be found in Appendix A of the Technical Guidance for the Development of Wildlife and Pollinator Habitat at Solar Farms at <https://www.dnr.sc.gov/solar/assets/pdf/solarHabitatGuide.pdf>.

According to SCDNR data, there are currently no records of threatened and endangered species or species of conservation concern within one mile of the proposed site. Please keep in mind that information regarding the presence of species is derived from existing databases, and SCDNR does not assume that it is complete. Areas not yet inventoried by SCDNR biologists may contain significant species or communities.

The SCDNR recommends that the following best management practices for mining be applied during the preparation, excavation, extraction, and reclamation phases of this project to ensure that offsite impacts are minimized.

- Prior to beginning any land disturbing activity, appropriate erosion control measures, such as silt fences, silt barriers or other devices, must be placed between the disturbed area and any nearby waterways and maintained in a functioning capacity until the area is permanently stabilized.
- All necessary measures must be taken to prevent oil, tar, trash and other pollutants from entering the adjacent offsite areas.
- The project must be in compliance with any applicable local floodplain, erosion and sediment control and/or storm water ordinances.
- Land disturbance should be kept to a minimum and accomplished in phases, when possible. Disturbed areas should be exposed only for the period of time required to extract the resource and vegetation should be re-established promptly.
- Land clearing should not begin until sediment basins and other conservation practices have been established. Clearing should be limited to the areas to be immediately mined.
- The number of overburden piles should be kept to a minimum and runoff should be diverted into sediment basins until vegetation can be established. Overburden piles should not be placed in drainage-ways or floodways.
- Upon completion, all disturbed areas must be permanently stabilized with vegetative cover (preferable), or other erosion control methods as appropriate. The SCDNR prefers and recommends the use of native warm season grasses and/or other native forbs that would be beneficial for wildlife and pollinators for stabilization.
- At the time of reclamation of the mine site to a pond, the SCDNR recommends that you consult with the Natural Resources Conservation Service and Clemson Extension if the ultimate goal for the pond is to provide recreational fishing opportunities. Incorporate as much shoreline

variation with the use of peninsulas and islands in reclamation to provide ideal shoreline habitat for wildlife and aquatic vegetation. Care should be taken to create littoral zone habitat near shorelines, approximately 3 feet or less, and the deeper portions of the pond should ideally be no more than 8 to 15 feet for recreational fishing. For your reference, the SCDNR Guidelines for Private Recreational Ponds can be found online at www.dnr.sc.gov/environmental/docs/private-ponds.pdf.

The SCDNR offers no objections to this modification provided that the above recommendations and BMPs are incorporated into project plans. Thank you for the opportunity to review this project and provide comments. Should you have any questions or need more information, please do not hesitate to contact me by email at DanielT@dnr.sc.gov or by phone at 803.734.3766.

Sincerely,



Tom Daniel
Office of Environmental Programs

References

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