



SPAULDING ENVIRONMENTAL

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DSM Design Group, LLC
ATTN: J. Rich Weaver
1400 Viking Drive
P.O. Box 690
Jasper, AL 35502-0690

Dear Mr. Weaver:

This letter is my report of findings from a study to determine if any habitat is available for Threatened and Endangered Species on +/- 1505 acres (in 5 sections) of a proposed new surface coal mine, at Old Union #2 Mine, The site is located west Ashbank; 4 sites are along CR-37 and the fifth site between CR-70 & CR- 21 in Winston County and the southern portion of the 5th site in Walker County, Alabama. The area is drained by Browns Creek and is within the Warrior Basin District of the Cumberland Plateau physiographic region.

As requested I conducted a habitat survey on July 18 & 19 and August 1 & 2, 2009 for the White Fringeless Orchid (*Platanthera integrilabia*), Kral's Water-plantain (*Sagittaria secundifolia*), Alabama Streak-sorus Fern (*Thelypteris pilosa* var. *alabamensis*), Red-cockaded Woodpecker (*Picoides borealis*), Bachman's Warbler (*Vermivora bachmanii*), Alabama Map Turtle (*Graptemys pulchra*), Flattened Musk Turtle (*Sternotherus depressus*), Green Salamander (*Aneides aeneus*), Black Warrior Waterdog (*Necturus alabamensis*), Rush Darter (*Etheostoma phytophilum*), Coosa Moccasinshell (*Medionidus parvulus*), Dark Pigtoe (*Pleurobema furvum*), Ovate Clubshell (*Pleurobema perovatum*), Triangular Kidneyshell (*Ptychobranchus greenii*), Alabama Moccasinshell (*Medionidus acutissimus*), Finelined Pocketbook (*Hamiota altilis*), and Orangenacre Mucket (*Lampsilis perovalis*).

Threatened and Endangered Species Habitat

No suitable habitat was present for any protected species and none of the above taxa were observed at the proposed site; therefore, no impacts are to be expected from the project.

White fringeless orchid is found in red maple-blackgum seeps and along sandy, damp stream margins; or on seepy, vegetated slopes. Its typical habitat is a seasonally wet, sandy, springhead swamp dominated by red maple and swamp blackgum. No potential habitat for this orchid was located in the study area.

Kral's water-plantain is an aquatic herb that is found shallow rapids or pools up to a meter in depth. This plant is known only to occur in streams that flow across flat sandstone slabs with full sun. The tributaries were dry and did not provide suitable habitat for this threatened species.

Alabama streak-sorus fern requires shaded, moist ledges of sandstone bluffs. This type of habitat was not present in the areas surveyed. All known occurrences of this fern are along the West Fork of the Sipsey River in Winston County and are confined to the Pottsville sandstone.

The red-cockaded woodpecker requires pine trees, often longleaf pine (*Pinus palustris*), that are generally 80 years old. They require mature trees because of the need for sufficient heartwood for a cavity free of sap. Trees will usually be infected with a red heart fungus that allows for easier excavation of the roosting chamber. All the pines seen in the area were not old enough to support a population. No active or inactive cavity trees were observed.

Bachman's Warbler has been regarded as a bird of virgin bottomland forests and swamp forests, and as a second-growth species. It is found in mostly in low deciduous woodlands and swamps. But it is also adapted to swampy canebreaks or bamboo thickets. None of these habitats for this warbler exist on site.

The Green Salamander lives mostly in moist crevices of cliff faces, rock outcrops and in shaded, mesic hardwood forests. None of these types of niches were observed in the study area and no suitable habitat was present for these salamanders.

There was no habitat for any of the listed aquatic species of animals. All the listed mussels, Black Warrior Waterdog, Rush Darter and turtles that are known to occur in Winston and Walker counties require moving water of creeks, streams or rivers, which were not present at the site.

Habitat Description

Much of the site was a young mixed hardwood/pine forest with a very sparse ground cover due to dense growth. Common canopy trees occurring in various combinations include chestnut black oak (*Quercus velutina*), scarlet oak (*Quercus coccinea*), post oak (*Quercus stellata*), southern red oak (*Quercus falcata*), water oak (*Quercus nigra*), mockernut hickory (*Carya tomentosa*), sweetgum (*Liquidambar styraciflua*), loblolly pine (*Pinus taeda*), and Virginia pine (*Pinus virginiana*).

Associated canopy and subcanopy trees are black gum (*Nyssa sylvatica*), red maple (*Acer rubrum*), sourwood (*Oxydendrum arboreum*), persimmon (*Diospyros virginiana*), black cherry (*Prunus serotina*), red bud (*Cercis canadensis*), sassafras (*Sassafras albidum*), winged elm (*Ulmus alata*), and flowering dogwood (*Cornus florida*).

Shrubs and vines that are often encountered include oak-leaf hydrangea (*Hydrangea quercifolia*), bigleaf snowbell (*Styrax grandifolia*), Chinese privet (*Ligustrum sinense*), winged sumac (*Rhus copallinum*), little-hip hawthorn (*Crataegus spathulata*), southern dewberry (*Rubus trivialis*), muscadine grape (*Vitis rotundifolia*), southern dewberry (*Rubus trivialis*), Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), greenbriers (*Smilax* spp.) and the exotic Japanese honeysuckle (*Lonicera japonica*).

Some areas were dominated by a young pine forest with a few scattered hardwoods a very sparse ground cover due to dense growth. Loblolly pine (*Pinus taeda*) was the dominant canopy tree. Other trees common in the understory were Virginia pine (*Pinus virginiana*), southern red oak (*Quercus falcata*), water oak (*Quercus nigra*), and sweetgum (*Liquidambar styraciflua*). The exotic Japanese honeysuckle (*Lonicera japonica*) was the dominant ground cover.

Some of the sites have been previously mined and these areas are almost barren. Portions of the site consisted of old fields and cleared areas. The vegetation was primarily herbaceous with seedlings and saplings of various trees from the surrounding forest. The common vegetation included broomsedge (*Andropogon virginicus*), bracted plantain (*Plantago aristata*), bushclovers (*Lespedeza* spp.), Johnson grass (*Sorghum halapense*), daisy fleabanes (*Erigeron* spp.), asters (*Aster* spp.), plumgrass (*Erianthus alopecuroides*), bahia grass (*Paspalum notatum*), panic grasses (*Dichanthelium* spp.), goldenrod (*Solidago altissima*), crossvine (*Bignonia capreolata*), greenbriers (*Smilax* spp.), highbush blackberry (*Rubus argutus*), ragweed (*Ambrosia artemisiifolia*), poor-joe (*Diodia teres*), Japanese honeysuckle (*Lonicera japonica*), downy oatgrass (*Danthonia sericea*), black-eyed-Susan (*Rudbeckia hirta*), smooth sumac (*Rhus glabra*), winged sumac (*Rhus copallinum*), bracken fern (*Pteridium aquilinum*), wild potato vine (*Ipomoea pandurata*), climbing dogbane (*Trachelospermum difforme*), horse-nettle (*Solanum tuberosum*), butterfly-pea (*Clitoria mariana*), golden-aster (*Pityopsis graminifolia*), and cinquefoil (*Potentilla simplex*).

Additional Studies And Mitigation Recommendations

Based on literature review and a field survey of the project site, **no** additional studies are required to be in compliance with state and federal endangered species laws associated with project impacts to Threatened & Endangered species.

It is recommended that appropriate Best Management Practices (BMPs) be applied to minimize siltation and in-stream disturbance to sediments. The guidelines and procedures in the following publication, “Best Management Practices for Erosion and Sediment Control” (Roberts 1995. Eastern Federal Lands Highway Design, Federal Highway Administration Report No. FHWA-FLP-94-005, 21400) can help to mitigate impacts to all aquatic habitat and water quality in the project area.

If you have any questions please feel free to give me a call.

Sincerely,

Daniel D. Spaulding

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Environmental Consultant

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Attachments

SITE RECONNAISSANCE PHOTOGRAPHS



Photograph 1- *Pine Forest*



Photograph 2- *Mixed Upland Forest*



Photograph 3- *Old Field/Disturbed area*