

# **BIOLOGICAL HABITAT ASSESSMENT**

**JIM WALTER RESOURCES**

**MINE NO. 4**

**REVISION R-39**

**Prepared For:**

**JIM WALTER RESOURCES**

**31 acres +/-**

**Section 9, Township 20 South, Range 8 West, Sections 16, & 21,  
Township 19 South, Range 8 West**

**ALL IN**

**TUSCALOOSA COUNTY ALABAMA**

**April 10<sup>th</sup>, 2013**

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# Executive Summary

McGehee Engineering Corporation performed a biological habitat assessment survey for habitat and the possible presence of the species federally listed as endangered, threatened, or of concern on April of 2013. The study was conducted on the proposed Jim Walter Resources – Mine No. 4 – Revision 39 project area. The proposed project area consists of approximately 31 acres located in Section 9, Township 20 South, Range 8 West, Sections 16, & 21, Township 19 South, Range 8 West, on the Burchfield Store, Lake Nicol, & Windham Springs, AL U.S.G.S. Quad, all in Tuscaloosa County.

The proposed project areas are previously disturbed. Area “B” is previously disturbed through mining operations. Areas “C” and “D” have been cleared of timber in many areas. There is a small vegetated area in area “C” along a drain that flows into the very headwater of Hurricane Creek outside the proposed project boundary.

The vegetation found is indicative of what you would expect to find in the above mentioned areas. Area “B” is sparsely vegetated to having no vegetation. The vegetation that is present includes 2 to 3 year growth Loblolly pines and Broom sedge. Area “C” is sparsely vegetated along an access road and adjacent hollow, but on the west side there are a few mature hardwood species. Most of area “D” is vegetated with thinned pines with an understory of many shrubs, herbs and some brambles and vines.

The biological habitat assessment survey focused in on seventeen T, E & C species listed in Tuscaloosa County, as can be found in Table 2.1 along with the Indiana Bat, Bald Eagle, Wood Stork and the Red Cockaded Woodpecker.

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# Chapter 1. Proposed Project Review

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## 1.1 Introduction

McGehee Engineering Corporation performed a biological habitat assessment survey for habitat and the possible presence of the species federally listed as endangered, threatened, or of concern on April of 2013. The study was conducted on the proposed Jim Walter Resources – Mine No. 4 – Revision 39 project area. The proposed project area consists of approximately 31 acres located in Section 9, Township 20 South, Range 8 West, Sections 16, & 21, Township 19 South, Range 8 West, all on the Burchfield Store, Lake Nicol, & Windham Springs, AL Quads all in Tuscaloosa County.

The proposed project areas are previously disturbed. Area “B” is previously mined. Areas “C” and “D” have been cleared of timber in many areas.

The vegetation found is indicative of what you would expect to find in the above mentioned areas. Area “B” is sparsely vegetated to having no vegetation. The vegetation that is present includes 2 to 3 year growth Loblolly pines and Broom sedge. Area “C” is sparsely vegetated along an access road and adjacent hollow, but on the west side there are a few mature hardwood species. Most of area “D” is vegetated with thinned pines with an understory of many shrubs, herbs and some brambles and vines.

The proposed Jim Walter Resources – Mine No. 4 – Revision 39 project areas are located to the directly west of Lock 17 Road.

## 1.2 Area "B" Project Location

Jim Walter Resources – Mine No. 4 – Revision 39 project consists of approximately 15 acres and is located in Section 9, Township 20 South, Range 8 West, as located in Tuscaloosa County, Alabama Lake Nicol, Alabama U.S.G.S Quadrangle. The proposed site location is shown below on the attached project area map Figure 1 and (Appendix "A").

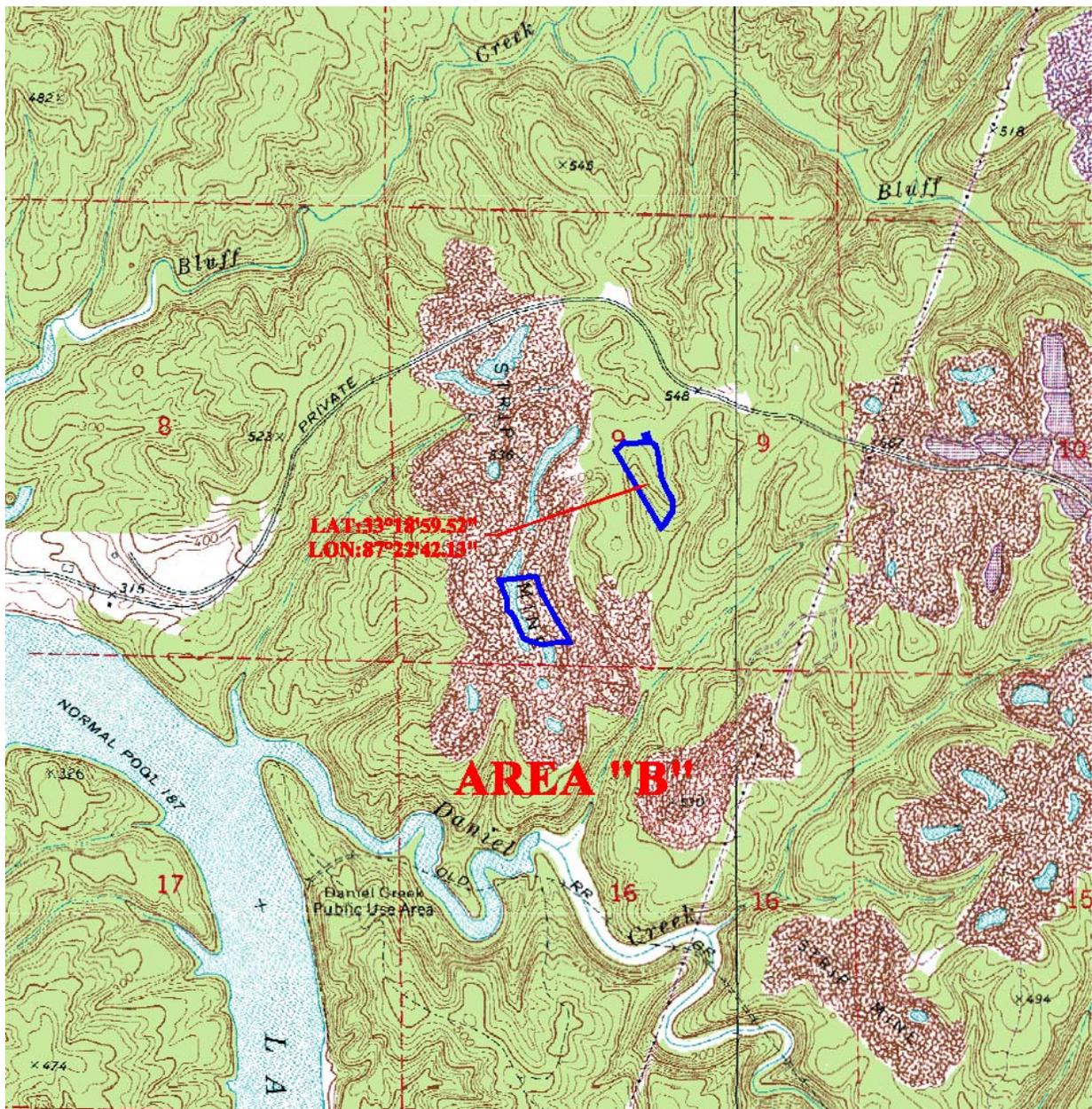


Figure 1. Project Area Map. (not to scale)

### 1.3 Area "C" Project Location

Jim Walter Resources –Mine No. 4 – Revision 39 project consists of approximately 12 acres and is located in Section 16, Township 19 South, Range 8 West, as located in Tuscaloosa County, Alabama on the Windham Springs, Alabama U.S.G.S Quadrangle. The proposed site location is shown below on the attached project area map Figure 1 and (Appendix "A").

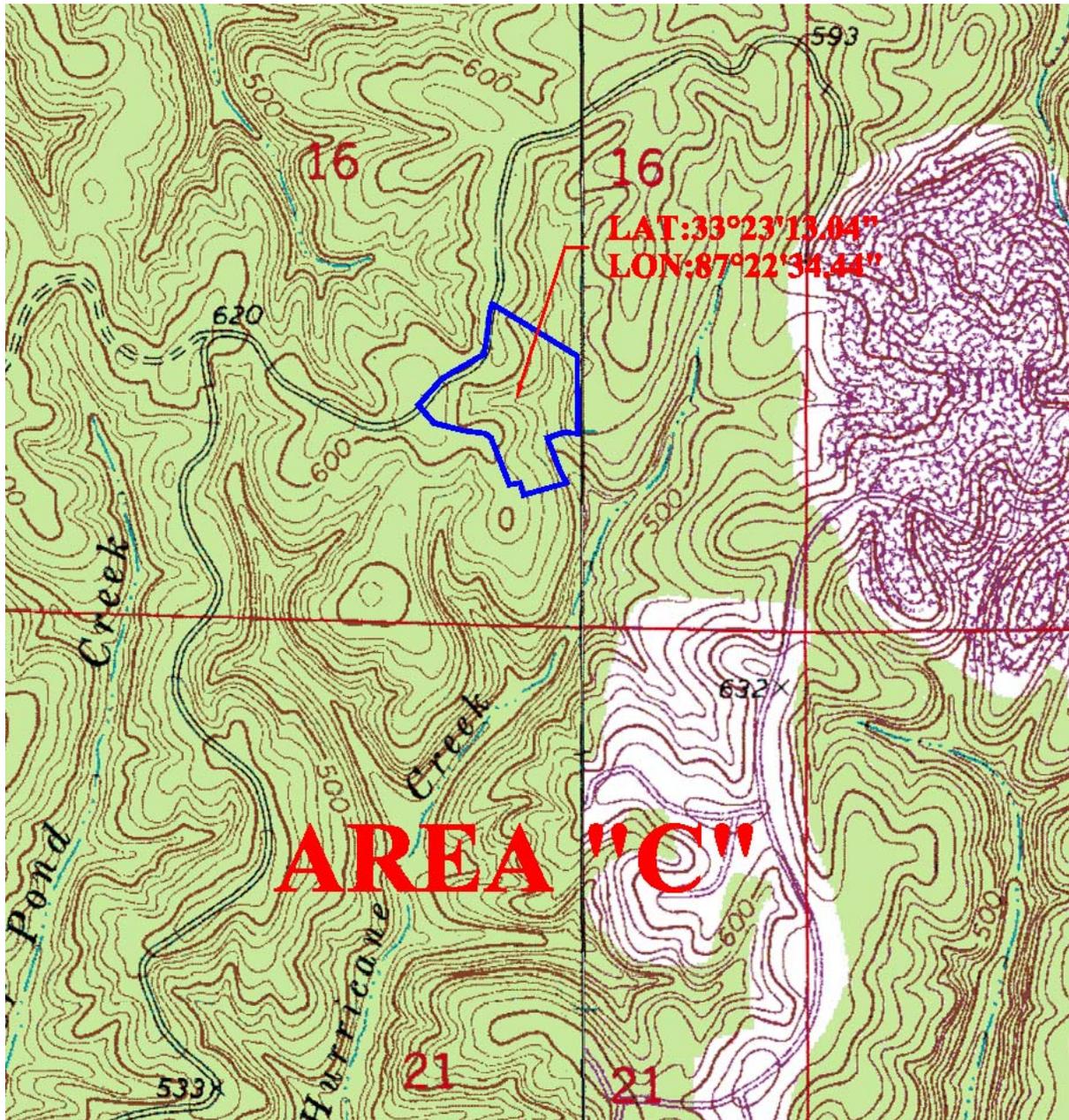


Figure 2. Project Area Map. (not to scale)

## 1.4 Area "D" Project Location

Jim Walter Resources – Mine No. 4 – Revision 39 project consists of approximately 4 acres and is located in Section 21, Township 19 South, Range 8 West, as located in Tuscaloosa County, Alabama on the Burchfield Store, Alabama U.S.G.S Quadrangle. The proposed site location is shown below on the attached project area map Figure 1 and (Appendix "A").

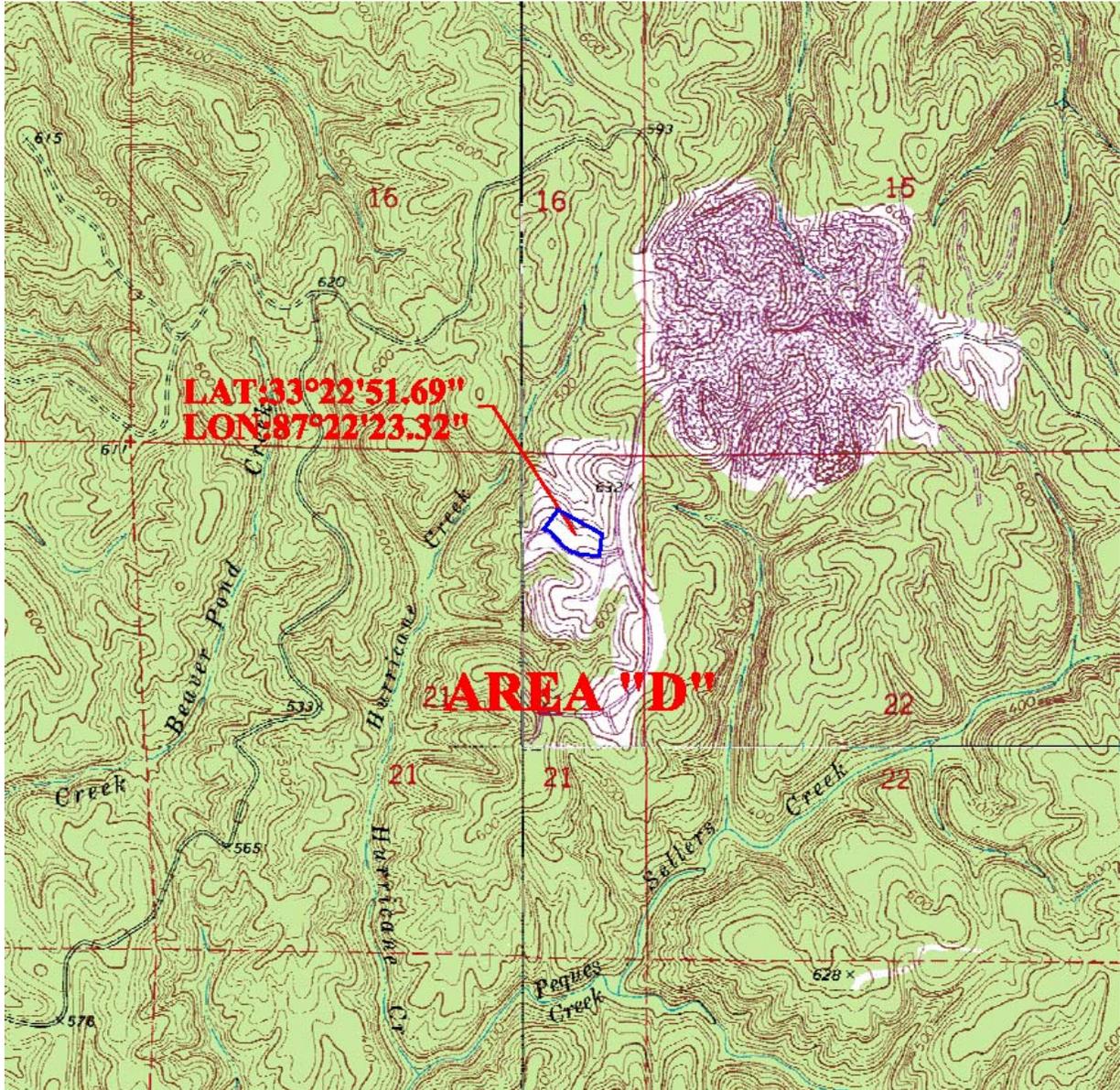


Figure 3. Project Area Map. (not to scale)

# Chapter 2. Threatened & Endangered Species List

## 2.1 Species Identification

The U.S. Fish and Wildlife Service (USFWS) threatened, endangered, and candidate species list for Tuscaloosa County was reviewed by a qualified biologist in order to determine species potentially occurring in the project vicinity (Table 2.1). In addition, the Alabama Natural Heritage Section Database that contains numerous records of sensitive species in Alabama was queried to provide a list of special status species and habitats that may have been documented as occurring within the project area and/or the project vicinity.

Table 2.1. List of Threatened, Endangered and Candidate Species for Tuscaloosa County.

<b>Common Name</b> <i>Scientific Name</i>	<b>Status</b>	<b>General Habitat</b>
<b>Bald eagle</b> <i>Haliaeetus leucocephalus</i>	BGEPA	Large open bodies of water where adequate food exist and human disturbance is limited
<b>Wood stork</b> <i>Mycteria americana</i>	E	Freshwater and estuarine wetlands, primarily nesting in cypress or mangrove swamps. Narrow tidal creeks or flooded tidal pools where fish become concentrated
<b>Red-cockaded woodpecker</b> <i>Picoides borealis</i>	E	Open, mature and old growth pine ecosystems with minimal hardwood overstory and midstory
<b>Mitchell's Satyr Butterfly</b> <i>Neonympha mitchellii mitchellii</i>	E	Fens-- low acid, mainly groundwater fed peat wetlands with highly diversified plant and animal life, including grasses, sedges, rushes and wildflowers
<b>Gray Bat</b> <i>Myotis grisescens</i>	E	Live in caves year-round; Winter hibernation in deep vertical caves, Summer roost in caves along rivers
<b>Indiana Bat</b> <i>Myotis sodalis</i>	E	Lives in a variety of habitats including floodplain and riparian zones for roosting with upland area nearby and caves and sometimes mines for hibernating and mating
<b>Fine-lined pocketbook mussel</b> <i>Hamiota (=Lampsilis) altilis</i>	T	Large rivers to small creek habitats swift flowing riffles and gravel-cobble substrates
<b>Ovate clubshell mussel</b> <i>Pleurobema perovatum</i>	E	Sand and gravel bottom free flowing streams and rivers with good water quality and stable stream channels
<b>Orange-nacre mucket mussel</b> <i>Hamiota (=Lampsilis) perovalis</i>	T	Large rivers to small creek habitats swift flowing riffles and gravel-cobble substrates
<b>Southern clubshell</b> <i>Pleurobema decisum</i>	E	Sand and gravel bottom free flowing streams and rivers with good water quality and stable stream channels
<b>Alabama moccasinshell</b> <i>Medionidus acutissimus</i>	T	Small to mid-sized streams with sandy-gravel and gravel substrates with moderate flow
<b>Triangular kidneyshell mussel</b> <i>Ptychobranthus greenii</i>	E	Sand and gravel bottom free drainage courses and rivers with good water quality and stable stream channels
<b>Alabama Heelsplitter</b> <i>Potamilus inflatus</i>	T	Sand and gravel bottom, moderate to low current, free flowing streams and rivers with good water quality

<b>Warrior pigtoe mussel</b> <i>Pluerobema rubellum</i>	<i>E</i>	Sand and gravel bottom free flowing streams and rivers with good water quality and stable stream channels; Presumed extinct
<b>Upland combshell mussel</b> <i>Epioblasma metastrata</i>	<i>E</i>	Stable gravel and sand riffles of high water quality streams
<b>Dark pigtoe mussel</b> <i>Pluerobema furvum</i>	<i>E</i>	Sand/gravel/cobble shoals and rapids in small rivers and large streams; usually highly oxygenated water with moderate flow
<b>Flattened musk turtle</b> <i>Sternotherus depressus</i>	<i>T</i>	Free-flowing creek or small river with pools about 1 m deep or more, with rocks, abundant mollusks, low silt load and deposits, moderate temperature rock-bottomed to sandy substrate
<b>Black Warrior waterdog</b> <i>Necturus alabamensis</i>	<i>C</i>	Streams with deep pools 1 to 4 meters with reduced sedimentation and large leaf packs supporting mayfly and caddis fly larvae
<b>White Fringeless orchid</b> <i>Platanthera integrilabia</i>	<i>C</i>	Wet, flat, boggy areas at the head of streams or seepage slopes. The species is often found in association with Sphagnum species in acidic muck or sand, and in partially, but not fully shaded areas
<b>Mohr's Barbara's buttons</b> <i>Marshallia mohrii</i>	<i>T</i>	Moist sandy clay soils, along shale bed streams, road side right-of-ways, seasonally wet low swales around natural springs and seeps
<b>Georgia Aster</b> <i>Symphotrichum georgianum</i>	<i>C</i>	Upland prairie grassland communities to thinned oak pine woodlands. Most remaining populations survive adjacent to roads, utility rights of way, and other openings
<b>Harperella</b> <i>Ptilimnium nodosum</i>	<i>E</i>	Rocky or gravel shoals and margins of clear, swift-flowing stream sections; and edges of intermittent pineland ponds in the coastal plain

Key to codes on list:

- **E** – Endangered
- **T** - Threatened
- **BGEPA** - Bald & Golden Eagle
- **C** - Candidate Species
- **(P)** - Possible Occurrence

# Chapter 3. Methodology

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## 3.1 Methodology

The subject property was surveyed by McGehee Engineering Corp. (MEC) for the occurrence and potential for occurrence for species protected or listed by the U.S. Fish and Wildlife Service (USFWS), based on known habitat preferences and geographical distribution. The principal surveyor for this site was Biologist Wes Lamon of McGehee Engineering Corp.

The study site was surveyed by completely traversing the site in a zigzag pattern at approximately 20 meters intervals. Survey conditions are described in Table 3.1. Prior to performing the field reconnaissance, MEC performed a review of aerial photographs of the project site and a pedestrian survey was conducted by MEC biologist to identify vegetation communities and land uses, perform general habitat assessment for plants and animals; assess the potential for nesting or roosting activity by birds and/or bats within the general study area. Focused surveys for sensitive aquatic species were not performed; however, the potential for habitat for these species was assessed during the survey.

### Table 3.1.1 Survey Conditions

**Date: February 14<sup>th</sup>, 2013**

Temperature (°F)	Wind (MPH)	Sky Cover %
55°	0-3	20%

As part of the field reconnaissance, MEC also conducted a delineation of potentially jurisdictional wetlands and waters of the U.S. as it relates to Section 404 of the Clean Water Act in accordance to the 1987 “*Corps of Engineers Wetlands Delineation Manual*”: Wetlands Research Program Technical Report Y-87-1.

Additional Data sources other than mentioned within the report include the following:

USGS Quadrangle Map	Burchfield Store, AL Quad Revised 1983, Lake Nicol AL Quad Revised 1974, and Windham Springs, AL Quad Revised 1974
National Wetlands Inventory Map	Burchfield Store, AL NWI Quad developed 1981, Lake Nicol, AL NWI Quad developed 1982, and Windham Springs, AL NWI Quad developed 1981
SCS Soil Survey	Tuscaloosa County NRCS Web Survey
Aerial Photos	10-03-2010
Plant Database	United States Department of Agriculture / Natural Resources Conservation Services Web Database
FEMA Flood Map	Federal Emergency Mgt. DFIRM Database FIRMettes 01127C0118D Tuscaloosa County

# Chapter 4. Environmental Setting

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## 4.1 General Habitat Description

The proposed Jim Walter Resources – Mine No. 4 – Revision 39 project areas are located to the directly west of Lock 17 Road. The project is situated in a mining area. The project site of approximately 31 acres mostly consists of the following vegetation species:

### Tree Stratum

American Beech (*Fagus grandifolia*)  
Chestnut Oak (*Quercus prinus*)  
Loblolly Pine (*Pinus taeda*)  
Red Maple (*Acer rubrum*)  
Sweetgum (*Liquidambar styraciflua*)  
Virginia Pine (*Pinus virginiana*)  
White Oak (*Quercus alba*)

### Sapling Stratum

American Beech (*Fagus grandifolia*)  
Chestnut Oak (*Quercus prinus*)  
Loblolly Pine (*Pinus taeda*)  
Red Maple (*Acer rubrum*)  
Sweetgum (*Liquidambar styraciflua*)  
Virginia Pine (*Pinus virginiana*)  
White Oak (*Quercus alba*)

### Shrub Stratum

American Beautyberry (*Callicarpa americana*)  
American Beech (*Fagus grandifolia*)  
Chestnut Oak (*Quercus prinus*)  
Loblolly Pine (*Pinus taeda*)  
Red Maple (*Acer rubrum*)  
Sweetgum (*Liquidambar styraciflua*)  
Virginia Pine (*Pinus virginiana*)  
White Oak (*Quercus alba*)

### Woody Vine Stratum

Japanese Honeysuckle (*Lonicera japonica*)  
Muscadine (*Vitis rotundifolia*)

## **Herbaceous Stratum**

American Beech (*Fagus grandifolia*)  
Bluestem Broom Sedge (*Andropogon virginicus*)  
Canadian Goldenrod (*Solidago altissima*)  
Chestnut Oak (*Quercus prinus*)  
Christmas fern (*Polystichum acrostichoides*)  
Indian Grass (*Sorghastrum nutans*)  
Korean Lespedeza (*Lespedeza stipulaca*)  
Loblolly Pine (*Pinus taeda*)  
Meadow Fescue (*Festuca pratensis*)  
Red Maple (*Acer rubrum*)  
Tall Fescue (*Festuca arundinacea*)  
Virginia Pine (*Pinus virginiana*)  
White Oak (*Quercus alba*)

The proposed project area “B” is a previously mined, heavily disturbed upland area currently used as a through way for mine machinery. It is lacking vegetation. The proposed project area “C” is disturbed through silvaculture on the western side. The western portion is vegetated with upland grasses and young hardwood tree species and 2 to 3 year planted Loblolly pines. The proposed project area “D” is an upland area disturbed heavily through silvaculture. Some Loblolly pines have been left standing in an area used for parking equipment. The area is vegetated with these pines along with the above mentioned hardwoods and upland herbs and grasses.

The primary soil groups within the project area Montevallo-Nauvoo Association with steep slopes and Smithdale-Pikeville association with hilly slopes, both with well drained soils with the former not being hydric and the latter being partially hydric. It also has Palmerdale very shaly loam, 6 to 45 percent slopes that are somewhat excessively drained and not hydric. The soil identified in the field matched the USDA Soil data profile and in areas “B” & “C” therefore a more detailed description of these soils as well as the soil maps can be found in Appendix C.

# Chapter 5. Habitat Study Results

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## 5.1 Terrestrial and Terrestrial Habitat Species

- a. **Bald eagle** (*Haliaeetus leucocephalus*) - There was no potential nesting habitat for the Bald Eagles. There are no large open bodies of water with large trees suitable for nesting habitat.
- b. **Red-cockaded woodpecker** (*Picoides borealis*) -- There were no isolated mature pines of the age and required size that would harbor the Red-cockaded woodpecker on or adjacent to the project site.
- c. **Wood stork** (*Mycteria americana*) - There was no potential nesting habitat for the Wood stork. There were no large trees near open water on or near this site.
- d. **Indiana Bat** (*Myotis sodalis*) – No habitat exists in the proposed project area. There are no perennial drains in the proposed project for summer roosts. Also, there are no limestone caves with stable temperatures were identified in the project review area or immediately adjacent.
- e. **Gray Bat** (*Myotis grisescens*) – Habitat for this species does not exist. There are no caves on or adjacent to this project site.
- f. **Mitchell’s Satyr Butterfly** (*Neonympha mitchellii mitchellii*) –There are no fens-- low acid, mainly groundwater fed, highly diversified peat wetlands.
- g. **Harperella** (*Ptilimnium nodosum*) – The only drain located in area “C” does not have sufficient flow to sustain this species.
- h. **White fringeless orchid** (*Platanthera integrilabia*) – No habitat exists on the proposed boundary. There are no flat boggy areas on this site.
- i. **Mohr’s Barbara’s buttons** (*Marshallia mohrii*) - No habitat exists in on the proposed project area. There are no seeps in the proposed area.
- j. **Georgia aster** (*Symphotrichum georgianum*) – No habitat exists within boundary. There are no open prairie locations on the project site. Roadside rights of ways and grassy parking areas are the possible habitat, but they are highly disturbed and were extensively explored. Therefore, this habitat can be excluded.

## 5.1.1 Summary

No habitat was found for any of the above listed species within or adjacent to the revision R-39 boundary. No evidence was found or observed for the presence or possible presence of these listed species.

## 5.2 Aquatic and Aquatic Habitat Species

- a. Black Warrior waterdog** (*Necturus alabamensis*) – The only drain located in area “C” does not have sufficient flow to sustain this species and does not have deep sustain this species.
- b. Fine-lined pocketbook mussel** (*Hamiota (=Lampsilis) altilis*) – The only drain on this site located in Area “C” are ephemeral to intermittent and would not sustain this species. There were no shelled invertebrates seen adjacent to or outside the project boundary.
- c. Flattened musk turtle** (*Sternotherus depressus*) – The only drain on this site located in Area “C” are ephemeral to intermittent and would not sustain this species.
- d. Ovate clubshell mussel** (*Pleurobema perovatum*) – The only drain on this site located in Area “C” are ephemeral to intermittent and would not sustain this species. There were no shelled invertebrates seen adjacent to or outside the project boundary.
- e. Southern clubshell mussel** (*Pleurobema decisum*) – The only drain on this site located in Area “C” are ephemeral to intermittent and would not sustain this species. There were no shelled invertebrates seen adjacent to or outside the project boundary.
- f. Orange-nacre mucket mussel** (*Hamiota (=Lampsilis) perovalis*) -- The only drain on this site located in Area “C” are ephemeral to intermittent and would not sustain this species. There were no shelled invertebrates seen adjacent to or outside the project boundary. Also this species is not known below Smith Lake.
- g. Alabama moccasinshell mussel** (*Medionidus acutissimus*) -- The only drain on this site located in Area “C” are ephemeral to intermittent and would not sustain this species. There were no shelled invertebrates seen adjacent to or outside the project boundary.
- h. Alabama Heelsplitter mussel** (*Potamilus inflatus*) -- The only drain on this site located in Area “C” are ephemeral to intermittent and would not sustain this species. There were no shelled invertebrates seen adjacent to or outside the project boundary.

- i. Warrior pigtoe mussel (*Pleurobema rubellum*)** -- The only drain on this site located in Area “C” are ephemeral to intermittent and would not sustain this species. There were no shelled invertebrates seen adjacent to or outside the project boundary.
- j. Dark pigtoe mussel (*Pleurobema perovatum*)** -- The only drain on this site located in Area “C” are ephemeral to intermittent and would not sustain this species. There were no shelled invertebrates seen adjacent to or outside the project boundary.
- k. Triangular kidneyshell mussel (*Ptychobranhus greenii*)** – The only drain on this site located in Area “C” are ephemeral to intermittent and would not sustain this species. There were no shelled invertebrates seen adjacent to or outside the project.
- l. Upland combshell mussel (*Epioblasma metastriata*)** -- The only drain on this site located in Area “C” are ephemeral to intermittent and would not sustain this species. There were no shelled invertebrates seen adjacent to or outside the project.

### 5.2.1 Summary

There was no habitat found for the above listed, threatened and endangered species. No evidence was found or observed for the presence or possible presence of these listed species.

## 5.3 Wetlands and Streams

### 5.3.1 Wetlands

The project areas were evaluated according to the 1987 “*Corps of Engineers Wetlands Delineation Manual*” and no wetlands were identified on the project site.

### 5.3.2 Streams

The project area was evaluated for jurisdictional waters with a potential intermittent drain at best that would drain through point 12 to 14 and out of the boundary to a point on Hurricane Creek. Streams are identified using the North Carolina Method of Intermittent and Perennial Streams.

## Chapter 6. References

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- Brinson, M.M. 1993. *A Hydrogeomorphic Classification for Wetlands*. Technical Report WRPDE-4. US Army Engineers Waterways Experiment Station, Vicksburg, MS.
- Cowardin, L.M., V. Carter, F.C. Golet and E.T. Laroe. 1979. *Classification of Wetlands and Deep Water Habitats of the United States*. U.S. Fish and Wildlife Service. FWS/OBS 79/31.
- Environmental Laboratory 1987. *“Corps of Engineers Wetlands Delineation Manual”*: Wetlands Research Program Technical Report Y-87-1 (Online Edition) 1987. U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.
- Haag, Wendell R. 2004. *Alabama Wildlife. Volume 2. Imperiled aquatic mollusks and fishes*. The University of Alabama Press, Tuscaloosa, Alabama.
- “National List of Plant Species That Occur In Wetlands: Southeast (Region 2): U.S. Department of the Interior – Fish & Wildlife Service Biological Report 88(26.2) May 1988
- U.S. Fish and Wildlife Service, 1980. *Habitat Evaluation Procedures*. Division Ecological Services: Washington, D.C.
- U.S. Fish and Wildlife Services. April 2012. *Endangered Species List – List of Species by County for Tuscaloosa County Alabama*.

## Chapter 7. Signatures of Preparers

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Prepared by:

Reviewed by:

**Wes Lamon**  
*Biologist*

**L. Stephen Blankenship**  
*Environmental Manager /  
Wetland Specialist*

# Appendix A — Project Area Map

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# **Appendix B — Photographic Log**

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McGehee Engineering		Photographic Log	
<b>Client Name:</b> <i>Jim Walter Resources, Inc.</i>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140272</i>		
<b>Point No.</b>	<i>007</i>		
<b>Description:</b>  This is a view of point 7.			
<b>Dominant Vegetation:</b>			
<ul style="list-style-type: none"> <li>No vegetation present</li> </ul>			

McGehee Engineering		Photographic Log	
<b>Client Name:</b> <i>Jim Walter Resources, Inc.</i>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140333</i>		
<b>Point No.</b>	<i>007</i>		
<b>Description:</b>  This is a view of the existing roadbed at point 7 looking out of the boundary.			
<b>Dominant Vegetation:</b>			
Same as above.			

McGehee Engineering		Photographic Log	
<b>Client Name:</b> <i>Jim Walter Resources, Inc.</i>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140258</i>		
<b>Point No.</b>	<i>008</i>		
<b>Description:</b>  This is an upland area view of the vegetation at point 8.			
<b>Dominant Vegetation:</b>			
<ul style="list-style-type: none"> <li>• Pinus taeda</li> <li>• Andropogon virginicus</li> </ul>			

McGehee Engineering		Photographic Log	
<b>Client Name:</b> <i>Jim Walter Resources, Inc.</i>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140283</i>		
<b>Point No.</b>	<i>008</i>		
<b>Description:</b>  This is a view of the existing roadbed at point 8.			
<b>Dominant Vegetation:</b>			
Same as above.			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140284</i>		
<b>Point No.</b>	<i>009</i>		
<b>Description:</b>			
<p>This is an upland area view of the vegetation at point 9.</p>			
<b>Dominant Vegetation:</b>			
<ul style="list-style-type: none"> <li>• Pinus taeda</li> <li>• Andropogon virginicus</li> </ul>			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140287</i>		
<b>Point No.</b>	<i>009</i>		
<b>Description:</b>			
<p>This is a view of the vegetation alongside of the existing roadbed at point 9.</p>			
<b>Dominant Vegetation:</b>			
<p>Same as above.</p>			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140245</i>		
<b>Point No.</b>	<i>010</i>		
<b>Description:</b>			
<p>This is a view alongside an existing roadbed at point 10.</p>			
<b>Dominant Vegetation:</b>			
<ul style="list-style-type: none"> <li>• Pinus taeda</li> <li>• Andropogon virginicus</li> </ul>			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140251</i>		
<b>Point No.</b>	<i>010</i>		
<b>Description:</b>			
<p>Same as above.</p>			
<b>Dominant Vegetation:</b>			
<p>Same as above.</p>			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140309</i>		
<b>Point No.</b>	<i>011</i>		
<b>Description:</b>			
<p>This is a view of the vegetation alongside of the existing roadbed at point 11.</p>			
<b>Dominant Vegetation:</b>			
<ul style="list-style-type: none"> <li>• Pinus taeda</li> <li>• P. virginiana</li> <li>• Quercus alba</li> <li>• Q. prinus</li> </ul>			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140306</i>		
<b>Point No.</b>	<i>011</i>		
<b>Description:</b>			
<p>This is an upland area view of the vegetation at point 11.</p>			
<b>Dominant Vegetation:</b>			
<p>Same as above.</p>			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140325</i>		
<b>Point No.</b>	<i>012</i>		
<b>Description:</b>			
<p>This is a view of the vegetation at point 12.</p>			
<b>Dominant Vegetation:</b>			
<ul style="list-style-type: none"> <li>• <i>Fagus grandifolia</i></li> <li>• <i>Acer rubrum</i></li> <li>• <i>Quercus alba</i></li> <li>• <i>Q. prinus</i></li> <li>• <i>Liquidambar styraciflua</i></li> </ul>			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140298</i>		
<b>Point No.</b>	<i>012</i>		
<b>Description:</b>			
<p>Same as above.</p>			
<b>Dominant Vegetation:</b>			
<p>Same as above.</p>			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140302</i>		
<b>Point No.</b>	<i>013</i>		
<b>Description:</b>			
<p>This is a view of the vegetation alongside of the existing roadbed at point 13.</p>			
<b>Dominant Vegetation:</b>			
<ul style="list-style-type: none"> <li>• Pinus taeda</li> <li>• Andropogon virginicus</li> <li>• Festuca pratensis</li> <li>• Andropogon virginicus</li> <li>• Quercus alba</li> <li>• Q. prinus</li> </ul>			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140298</i>		
<b>Point No.</b>	<i>013</i>		
<b>Description:</b>			
<p>This is a view of the vegetation alongside of the existing roadbed at point 13.</p>			
<b>Dominant Vegetation:</b>			
<p>Same as above.</p>			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140302</i>		
<b>Point No.</b>	<i>014</i>		
<b>Description:</b>			
<p>This is a view of the vegetation at point 13.</p>			
<b>Dominant Vegetation:</b>			
<ul style="list-style-type: none"> <li>• Fagus grandifolia</li> <li>• Acer rubrum</li> <li>• Quercus alba</li> <li>• Q. prinus</li> <li>• Liquidambar styraciflua</li> </ul>			

<b>McGehee Engineering</b>		<b>Photographic Log</b>	
<b>Client Name:</b>		<b>Site Location:</b>	<i>Mine #4 – Revision R-40</i>
<i>Jim Walter Resources, Inc.</i>			
<b>Date:</b>	<i>02-14-13</i>		
<b>Photo No.</b>	<i>P2140298</i>		
<b>Point No.</b>	<i>014</i>		
<b>Description:</b>			
<p>Same as above.</p>			
<b>Dominant Vegetation:</b>			
<p>Same as above.</p>			

# **Appendix C — Photo Log Point Location Map**

# Appendix D — Soil Map

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