

APPENDIX F

**KEMPER COUNTY IGCC PROJECT MISSISSIPPI
MUSEUM OF NATURAL SCIENCE DATA REQUEST
AND RESPONSE**

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**MISSISSIPPI
DEPARTMENT OF WILDLIFE, FISHERIES AND PARKS**

SAM POLLES, Ph.D.
Executive Director

July 18, 2008

Maya Scohier
Environmental Consulting & Technology, Inc.
3701 NW 98th Street
Gainesville, FL 32606

Re: Data Request from the Mississippi Museum of Natural Science
Threatened and Endangered Species Consultation
Lauderdale and Kemper Counties, Mississippi

6718

To Maya Scohier:

In response to your request for information dated July 1, 2008, we have searched our database for occurrences of state or federally listed species and species of special concern that occur within 2 miles of the site of the proposed project. Please see the table below for a list of these species/communities and find our comments and recommendations below.

SCIENTIFIC NAME	COMMON NAME	FED	STATE	STATE RANK
PROCAMBARUS LAGNIAPPE	LAGNIAPPE CRAYFISH			S1
ACCIPITER STRIATUS	SHARP-SHINNED HAWK			S1B
ANAS RUBRIPES	AMERICAN BLACK DUCK			S2N
EUPHAGUS CAROLINUS	RUSTY BLACKBIRD			S2N
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	LE	LE	S1
NYCTICORAX VIOLACEUS	YELLOW-CROWNED NIGHT HERON			S3B,S1N
AIMOPHILA AESTIVALIS	BACHMAN'S SPARROW			S3B
SEIURUS MOTACILLA	LOUISIANA WATERTHRUSH			S3B
ACCIPITER COOPERI	COOPER'S HAWK			S3B
GRAPTEMYS GIBBONSI	PASCAGOULA MAP TURTLE			S3

State Rank

S1 – Critically imperiled in Mississippi because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it vulnerable to extirpation.

S2 – Imperiled in Mississippi because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it vulnerable to extirpation.

State and Federal Status

LE Endangered – A species which is in danger of extinction throughout all or a significant portion of its range.

LT Threatened – A species likely to become endangered in the foreseeable future throughout all or a significant portion of its range.

PS – Partial Status. Species is listed in part of its range.

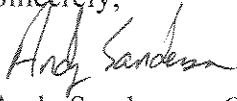
Comments and Recommendations:

- **Red-Cockaded Woodpecker (*Picoides borealis*); LE (Federal), LE (MS)**
If any red-cockaded woodpeckers, their cavities, or cavity starts are observed please contact Nick Winstead ((601) 354-7303, ext. 108) with MS Dept. Wildlife, Fisheries, & Parks. The red-cockaded woodpecker, a relatively small woodpecker about 20 cm (8 in.) in length, is listed as endangered by the U.S. Fish and Wildlife Service and by the state of Mississippi, where the species has been recorded primarily from the southern two-thirds of the state and only sporadically in the northern counties. *Picoides borealis* occur in southern pine forests where their preferred nesting habitat is open, park-like, mature pine woodlands with few or no hardwood trees present. Preferred feeding habitats are pine stands with trees 23 cm (9 in.) and greater in diameter. Red-cockaded woodpeckers excavate nesting and roosting cavities in living trees, primarily older, mature trees, and are the only species known to do so exclusively. Most cavities are between 6-15 m (20-50 ft.) above the ground and are usually located on the trunk below the level of the first live limb. The completed cavity is 15-25 cm (6-10 in.) deep and 7.5-12.5 cm (3-5 in.) wide. As long as a cavity is being used for roosting or nesting, the bark is chipped around it, the plate is continually enlarged, and the resin wells are worked to provide a flow of resin to deter predators. The red-cockaded woodpecker has become endangered because of its dependence upon mature pine forests with open understories. These forests were historically maintained by recurring wildfires, but are uncommon today (1) because modern forestry practices that emphasize the growth and cutting of young to middle-aged trees and (2) because fire has been excluded from many pine woodlands, thus depriving red-cockaded woodpeckers of suitable nesting habitat and encouraging the encroachment and growth of hardwood trees. Survival of this species is dependent on wise management of publicly owned lands because the economic value of timber precludes the maintenance of mature forests on most private lands. Mature pine trees should also be maintained along major highway corridors to provide habitat for displaced woodpeckers and to link isolated stands of suitable habitat.
- There have also been documented occurrences of the Bald Eagle, *Haliaeetus leucocephalus*, near this area. If any potential eagle nests are observed please visit the following website to determine what best management practices to utilize:
<http://www.fws.gov/southeast/es/baldeagle/index.html>, and for information regarding the life history of Bald Eagles, please visit the following website:
http://www.fws.gov/southeast/es/baldeagle/baea_nhstry_snstvt.html

- Portions of this project site are located in both priority and suitable habitat (see attached map) for the federally threatened and state endangered Gopher Tortoise (*Gopherus polyphemus*). Although it is unlikely that you would come across any gopher tortoises in this location, we recommend that surveys be done for two other species of special concern that may occur on gopher tortoise priority and suitable soils. These species are the Oldfield Mouse, *Peromyscus polionotus*, and the Florida Harvester Ant, *Pogonomyrmex badius*. The oldfield mouse has burrows that look like small gopher tortoise burrows, with conspicuous sand aprons. The harvester ants create beds that are broad, flat, and generally ringed with bits of charcoal, gravel, and plant detritus. Both species will be in open, very sandy spots, with ample herbaceous vegetation nearby. For information regarding these species, or if either species is discovered during the course of this project please contact Mr. Scott Peyton or Mr. Tom Mann, respectively, at 601-354-7303.
- Please be advised that the proposed pipeline route crosses through a Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) Wildlife Management Area, Okatibbee WMA, in Lauderdale County. We recommend that you contact the appropriate MDWFP personnel about this proposed pipeline and how it may impact their Wildlife Management Area.
- The proposed pipeline route crosses several rivers and streams that are important habitat for many of the rare aquatic species. We strongly recommend that the following rivers/streams be directionally drilled to prevent or minimize negative impacts to their water quality and instream habitat conditions: Yazoo Creek, Pawticfaw Creek, Chickasawhay Creek, Blackwater Creek, Okatibbee Creek, Buckatunna Creek, Baker Creek, and any tributary of these that is 10 feet wide or greater at the water's surface and at the point of construction. We also strongly recommend that adequate measures are taken to mitigate any negative impacts to streams that result from this project. We also recommend that best management practices are implemented and monitored for compliance, specifically measures that will prevent ANY suspended silt and contaminants from leaving the site in stormwater run-off as this may negatively affect water quality and habitat conditions within nearby streams and waterbodies.
- In addition, portions of this project site are underlain by hydric soils and may be designated wetlands. If this project is approved, we ask that serious consideration be given to the cumulative impacts of wetland disturbance and elimination.

Please feel free to contact us if we can provide any additional information, resources, or assistance that will help minimize negative impacts to the species and/or communities identified in this review. We are happy to work with you to ensure that our state's precious natural heritage is conserved and preserved for future Mississippians.

Sincerely,



Andy Sanderson, Conservation Resources Biologist
Mississippi Natural Heritage Program
(601) 354-6367, ext. 117

The Mississippi Natural Heritage Program (MNHP) has compiled a database that is the most complete source of information about Mississippi's rare, threatened, and endangered plants, animals, and ecological communities. The quantity and quality of data collected by MNHP are dependent on the research and observations of many individuals and organizations. In many cases, this information is not the result of comprehensive or site-specific field surveys; most natural areas in Mississippi have not been thoroughly surveyed and new occurrences of plant and animal species are often discovered. Heritage reports summarize the existing information known to the MNHP at the time of the request and cannot always be considered a definitive statement on the presence, absence or condition of biological elements on a particular site.

From: Maya Scohier [mscohier@ectinc.com]
Sent: Thursday, October 09, 2008 4:54 PM
To: 'Jim Poppleton'; 'Jeff Meling'; 'Phil Simpson'
Subject: FW: General T&E Eval for Pipeline
Attachments: USGS_MMNS.pdf; Buffer_of_TLs_merge_2.zip; List_Project_topos.xls; Response to Data Request.PDF

Below is my data request to Mississippi Museum of Natural Science (MMNS) with the first three attachments. The fourth attachment is the response from MMNS. Please use this letter response for the entire project and disregard the first letter response we have received earlier, because it did not cover all of the linear corridors.

September 29, 2008

Mississippi Natural Heritage Program
Mississippi Museum of Natural Science
Department of Wildlife, Fisheries and Parks
2148 Riverside Drive
Jackson, MS 39202

Subject: Data Request from the Mississippi Museum of Natural Science

Dear Mr. Philip Sanderson:

Environmental Consulting and Technology, Inc. is submitting a Data Request to the Mississippi Museum of Natural Science (MMNS). The information obtained from MMNS will be used to avoid the listed plant and animal species if found in the study area.

Attached for your convenience are the pdf and the shape files for the study area boundary. The older routes, for which you have kindly provided information (reference # 6718), are also included on the map. If possible, please exclude the information for these routes. Thank you in advance for your help. Should you require additional information, please contact me via phone or email listed below.

Sincerely,

Maya

Maya R. Scohier
Associate Scientist I
Environmental Consulting & Technology, Inc.

10/9/2008

3701 NW 98th Street
Gainesville, FL 32606
352-332-0444
<mailto:mscohier@ectinc.com>

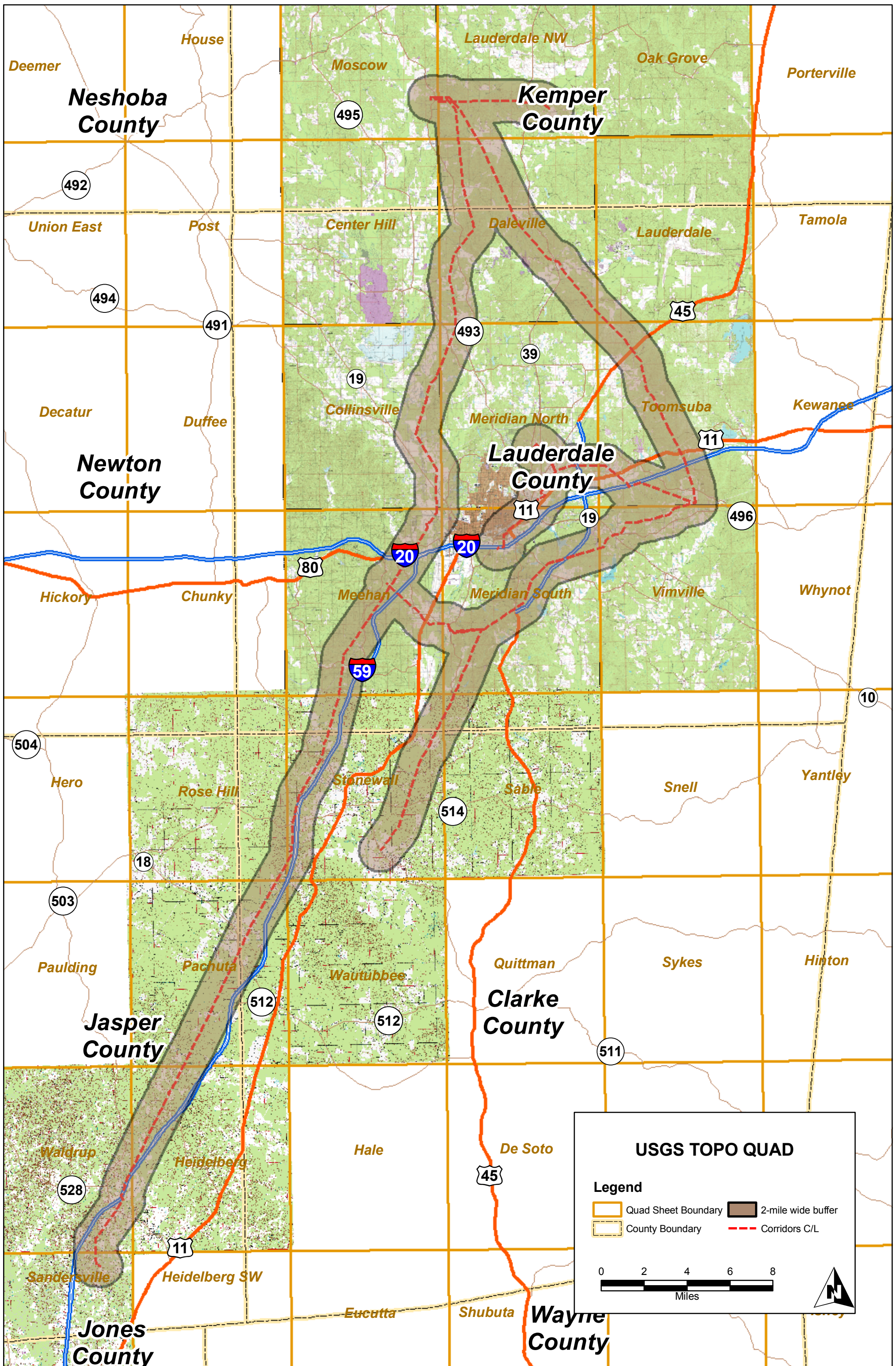
From: Phillip Sanderson [mailto:phillip.sanderson@mmns.state.ms.us]
Sent: Monday, October 06, 2008 12:43 PM
To: Maya Scohier
Subject: General T&E Eval for Pipeline

Hi Maya,

I just finished the review for this project, per our conversation. The new letter includes review for the previous quads you sent us as well as for the new quads; however, we only charged you for the 9 new quads. Since this letter is slightly different than the first, you can feel free to use it for the entire project rather than referring to both the first and second letters. Please feel free to call or email me if you have any questions regarding this or any other project.

Have a great week,

Andy Sanderson, Conservation Resources Biologist
Mississippi Natural Heritage Program
Mississippi Museum of Natural Science
Mississippi Department of Wildlife, Fisheries & Parks
2148 Riverside Drive
Jackson, MS 39202-1353
(601) 354-7303, ext. 117 [office]
(601) 354 -7227 [fax]



ObjectID	USGS_QD_ID	QUAD_NAME	ST_NAME1
47580	32088-F7	Moscow	Mississippi
47581	32088-F6	Lauderdale NW	Mississippi
47594	32088-E7	Center Hill	Mississippi
47595	32088-E6	Daleville	Mississippi
47608	32088-D7	Collinsville	Mississippi
47609	32088-D6	Meridian North	Mississippi
47621	32088-C7	Meehan	Mississippi
47622	32088-C6	Meridian South	Mississippi
47815	32088-B8	Rose Hill	Mississippi
47816	32088-B7	Stonewall	Mississippi
47817	32088-B6	Sable	Mississippi
47829	32088-A8	Pachuta	Mississippi
47830	32088-A7	Wautubbee	Mississippi
47841	31089-H1	Waldrup	Mississippi
47842	31088-H8	Heidelberg	Mississippi
47856	31089-G1	Sandersville	Mississippi
51288	32088-E5	Lauderdale	Mississippi
51303	32088-D5	Toomsuba	Mississippi
51318	32088-C5	Vimville	Mississippi



MISSISSIPPI
DEPARTMENT OF WILDLIFE, FISHERIES, AND PARKS

Sam Polles, Ph.D.
Executive Director

October 6, 2008

Maya R. Scohier
Environmental Consulting & Technology, Inc.
3701 NW 98th Street
Gainesville, FL 32606

Re: Pipeline
General T & E Evaluation
Multi-County County, Mississippi

R#6879

To Maya Scohier,

In response to your request for information dated September 29, 2008, we have searched our database for occurrences of state or federally listed species and species of special concern that occur within 2 miles of the site of the proposed project. Please see the table below for a list of these species/communities and find our comments and recommendations below.

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EUPHAGUS CAROLINUS	RUSTY BLACKBIRD			S2N
PICOIDES BOREALIS	RED-COCKADED WOODPECKER	LE	LE	S1
PERCINA AURORA	PEARL DARTER	C	LE	S1
PERCINA LENTICULA	FRECKLED DARTER			S2
GRAPTEMYS FLAVIMACULATA	YELLOW-BLOTCHED MAP TURTLE	LT	LE	S2
PEROMYSCUS POLIONOTUS	OLDFIELD MOUSE			S2S3
GRAPTEMYS GIBBONSI	PASCAGOULA MAP TURTLE			S3

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Comments and Recommendations:

- **Red-Cockaded Woodpecker (*Picoides borealis*); LE (Federal), LE (MS)**

If any red-cockaded woodpeckers, their cavities, or cavity starts are observed please contact Nick Winstead ((601) 354-7303, ext. 108) with MS Dept. Wildlife, Fisheries, & Parks. The red-cockaded woodpecker, a relatively small woodpecker about 20 cm (8 in.) in length, is listed as endangered by the U.S. Fish and Wildlife Service and by the state of Mississippi, where the species has been recorded primarily from the southern two-thirds of the state and only sporadically in the northern counties. *Picoides borealis* occur in southern pine forests where their preferred nesting habitat is open, park-like, mature pine woodlands with few or no hardwood trees present. Preferred feeding habitats are pine stands with trees 23 cm (9 in.) and greater in diameter. Red-cockaded woodpeckers excavate nesting and roosting cavities in living trees, primarily older, mature trees, and are the only species known to do so exclusively. Most cavities are between 6-15 m (20-50 ft.) above the ground and are usually located on the trunk below the level of the first live limb. The completed cavity is 15-25 cm (6-10 in.) deep and 7.5-12.5 cm (3-5 in.) wide. As long as a cavity is being used for roosting or nesting, the bark is chipped around it, the plate is continually enlarged, and the resin wells are worked to provide a flow of resin to deter predators. The red-cockaded woodpecker has become endangered because of its dependence upon mature pine forests with open understories. These forests were historically maintained by recurring wildfires, but are uncommon today (1) because modern forestry practices that emphasize the growth and cutting of young to middle-aged trees and (2) because fire has been excluded from many pine woodlands, thus depriving red-cockaded woodpeckers of suitable nesting habitat and encouraging the encroachment and growth of hardwood trees. Survival of this species is dependent on wise management of publicly owned lands because the economic value of timber precludes the maintenance of mature forests on most private lands. Mature pine trees should also be maintained along major highway corridors to provide habitat for displaced woodpeckers and to link isolated stands of suitable habitat.
- **Pearl Darter (*Percina aurora*); C (Federal); LE (MS)**

The pearl darter is a relatively small, nondescript fish. The body is olive to light brown in color with the sides marked with a series of dark oval to oblong blotches and a single black caudal spot located at the base of the caudal fin. The upper sides are speckled with dark "X" shaped markings. The common name, pearl darter, refers to the pearly, pastel blue coloration prominently located on the sides and lower portions of the head. The maximum size is 75 mm (2.95 in.) total length. *Percina aurora* is known only from Louisiana and Mississippi, where it originally occurred in the Chickasawhay, Leaf, and Pascagoula River systems of

the Pascagoula drainage, and in the Pearl and Strong River systems of the Pearl drainage. The pearl darter has been known to occur in rapids or riffles over gravel or bedrock substrata in slow to moderate currents. In the Pascagoula River, it occurs in the slow flowing waters along the downstream edge of sandbar point bars in runs 90-150 cm deep over a substratum of sand with scattered patches of detritus. The pearl darter was last taken from the Pearl drainage in the early 1970's, and it is now assumed that both Mississippi and Louisiana populations in the Pearl drainage are extirpated. Extirpation in the Pearl drainage is attributed to the deterioration of instream habitat. The primary cause is increased sedimentation resulting from localized gravel mining, removal of bankside riparian vegetation, and extensive cultivation near the river's edge. Recent survey efforts (1996-2000) have documented its continued existence in the Leaf, Chickasawhay, Chunky, Bowie, and Pascagoula Rivers. Restrictions on water quality degradation and improved land management practices should be implemented to reduce instream habitat alterations for those streams known to harbor pearl darters.

- **Yellow-Blotched Map Turtle, Yellow-Blotched Sawback (*Graptemys flavimaculata*); LT (Federal), LE (MS)**

The yellow-blotched map turtle is a medium-sized turtle with males reaching 7-10 cm (3-4 in.) carapace length as adults and females growing to 10-18 cm (4-7 in.). The carapace is olive to brown with large, yellow to orange blotches on the costal scutes and vertebral scutes. The plastron is usually cream-colored, sometimes with black along the seams between the scutes. There is a large, variable bar or spot behind each eye and two broad yellow stripes extending from behind each eye down the neck. The dorsal keel of the carapace has conspicuous black, spine-like projections which are best developed in adult males and juveniles.

Graptemys flavimaculata is endemic to Mississippi and occurs only in the Pascagoula River and its larger tributaries, including the Escatawpa River, the Leaf River, and the Chickasawhay River. The yellow-blotched map turtle requires streams with strong, consistent current and large sandbars for nesting. It spends much of the day basking, so it needs streams which are wide enough to receive several hours of direct sunlight per day and which have abundant snags and logs on which to bask. *Graptemys flavimaculata* is listed as threatened by the U.S. Fish and Wildlife Service and endangered by the state of Mississippi, because of its limited distribution in the Pascagoula River watershed.

Additionally, it has a very low reproductive frequency, a relatively low clutch size, and a very small proportion of nests that successfully produce offspring. Human occupation of nesting beaches for recreational purposes may interfere with the use of beaches by female yellow-blotched map turtles. Many of the sandbars in the lower Pascagoula are being colonized by non-native vegetation such as cogon grass, which reduces their usefulness as nesting sites. In addition, chemical pollutants in the Pascagoula River may be disrupting the hormonal regimes and thus interfering with the reproductive cycles of both male and female turtles.

There have been documented occurrences of the Bald Eagle, *Haliaeetus leucocephalus*, near this area. If any potential eagle nests are observed please visit the following website to determine what best management practices to utilize:

<http://www.fws.gov/southeast/es/baldeagle/index.html>, and for information regarding the life history of Bald Eagles, please visit the following website:

http://www.fws.gov/southeast/es/baldeagle/baea_nhstry_snstvtvty.html

Portions of this project site are located in suitable/priority habitat (see attached map) for the federally threatened and state endangered Gopher Tortoise (*Gopherus polyphemus*).

There are also documented occurrences of gopher tortoises near the proposed project site.

Therefore, we recommend that gopher tortoise burrow surveys be conducted within twenty feet of the project site (particularly in well-drained sandy substrates). If tortoise burrows are found, the following individuals should be contacted: Tom Mann (601-354-7303, ext. 116) with the MS Dept. of Wildlife, Fisheries, & Parks and Will McDearman (601-321-1124) of the U.S. Fish and Wildlife Services.

- **Please note:**

There are also two species of special concern that may occur on gopher tortoise priority and suitable soils. These species are the Oldfield Mouse, *Peromyscus polionotus*, and the Florida Harvester Ant, *Pogonomyrmex badius*. The oldfield mouse has burrows that look like small gopher tortoise burrows, with conspicuous sand aprons. The harvester ants create beds that are broad, flat, and generally ringed with bits of charcoal, gravel, and plant detritus. Both species will be in open, very sandy spots, with ample herbaceous vegetation nearby. If either species is discovered during the course of this project, we would deeply appreciate it if your staff would contact the following individuals: Scott Peyton (Oldfield Mouse) or Mr. Tom Mann (FL Harvester Ant) at 601-354-7303. Our staff is currently conducting field surveys for these species. Any additional information provided would be quite supportive in determining the status of these species (Oldfield Mouse and FL Harvester Ant).

Please be advised that the proposed pipeline route crosses through a Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) Wildlife Management Area, Okatibbee WMA, in Lauderdale County. We recommend that you contact the appropriate MDWFP personnel about this proposed pipeline and how it may impact their Wildlife Management Area.

The proposed pipeline route crosses several rivers and streams that are important habitat for many rare aquatic species. We strongly recommend that the following rivers/streams be directionally drilled to prevent or minimize negative impacts to their water quality and instream habitat conditions: **Chunky River**, Yazoo Creek, Pawticfaw Creek, Chickasawhay Creek, Blackwater Creek, Okatibbee Creek, Buckatunna Creek, Baker Creek, and any tributary of these that is 10 feet wide or greater at the water's surface and at the point of construction. We also strongly recommend that adequate measures are taken to mitigate any negative impacts to streams that result from this project. We also recommend that best management practices are implemented and monitored for

compliance, specifically measures that will prevent ANY suspended silt and contaminants from leaving the site in stormwater run-off as this may negatively affect water quality and habitat conditions within nearby streams and waterbodies.

In addition, the Chunky River has been designated as a scenic stream. We strongly recommend that the potential negative impacts to the Chunky River that could result from this project be considered, and that all steps are taken to avoid/minimize these potential impacts.

Portions of this project site are underlain by hydric soils and may be designated wetlands. Should this project be approved, we ask that serious consideration be given to the cumulative impacts of wetland disturbance and elimination.

Please feel free to contact us if we can provide any additional information, resources, or assistance that will help minimize negative impacts to the species and/or ecological communities identified in this review. We are happy to work with you to ensure that our state's precious natural heritage is conserved and preserved for future Mississippians.

Sincerely,



Andy Sanderson, Conservation Resources Biologist
Mississippi Natural Heritage Program
(601) 354-6367, ext. 117

The Mississippi Natural Heritage Program (MNHP) has compiled a database that is the most complete source of information about Mississippi's rare, threatened, and endangered plants, animals, and ecological communities. The quantity and quality of data collected by MNHP are dependent on the research and observations of many individuals and organizations. In many cases, this information is not the result of comprehensive or site-specific field surveys; most natural areas in Mississippi have not been thoroughly surveyed and new occurrences of plant and animal species are often discovered. Heritage reports summarize the existing information known to the MNHP at the time of the request and cannot always be considered a definitive statement on the presence, absence or condition of biological elements on a particular site.

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