

APPENDIX F

Biological Opinion



United States Department of the Interior

FISH AND WILDLIFE SERVICE

1208-B Main Street
Daphne, Alabama 36526

FEB 19 2009

IN REPLY REFER TO:
2008-F-0007

Ronald E. Gatlin, Chief
Regulatory Branch
Department of the Army
Nashville District, Corps of Engineers
3701 Bell Road
Nashville, Tennessee 37214

ATTN: Ms. Amy Robinson

Dear Mr. Sir:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion of the proposed City of Athens (applicant) Utilities Improvements Project (Application Nos. 2007-01488 and 2007-02202)(Piney and French Mill Creeks) located in Limestone County, Alabama, and its effects on the endangered armored snail (*Marstonia pachyta*) and slender campeloma snail (*Campeloma decampi*) in accordance with section 7 of the Endangered Species Act of 1973 (ESA), as amended, (16 U.S.C. 1531et seq.). Your July 7, 2008, request for formal consultation was received with additional information on July, 31, 2008. Formal consultation was initiated on August 12, 2008.

This biological opinion is based on information provided in the biological assessment that we received on July 31, 2008, Corps of Engineers (Corps) and Tennessee Valley Authority (TVA) joint public notice #08-25, telephone conversations, e-mails, and other correspondence with Krebs Engineering and Corps personnel, field investigations, and other sources of information. A complete administrative record of this consultation is on file in the Alabama Field Office.

Consultation History

- September 27, 2007 Survey results received from AST Environmental, on behalf of Athens Utilities for Federally listed gastropods. The survey revealed the presence of listed snails at 7 of 10 stream reaches and requested concurrence on snail survey protocol and results.
- October 29, 2007 The Service responded providing concurrence on survey methods and requested to be kept informed on the progress of the project by AST, Athens Utilities or their consultant, Krebs and Associates.

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| March 7, 2008 | Letter received from Krebs Engineering requesting a biological opinion. |
| March 28, 2008 | The Service responded with a letter, stating that only federal agencies may initiate formal consultation and described the section 7 process. Also provided a description of a complete biological assessment and what information would be needed for us to continue consultation. |
| June 5, 2008 | Meeting held between Corps, TVA, Krebs, and USFWS personnel. The purpose of the meeting was to discuss additional information and make clarifications to the Biological Assessment. |
| July 7, 2008 | Biological Assessment was received from the Corps and request for initiation of formal consultation. |
| July 16, 2008 | Letter received from TVA requesting that they be included in the formal consultation and any permits that may result. |
| July 25, 2008 | Letter sent to Corps. The revised Biological Assessment contained a discrepancy in the number of stream crossings described. USFWS requested clarification and description of additional impacts, if any. |
| July 31, 2008 | An e-mail was received from the Corps forwarding Krebs' clarification of information contained in the Biological Assessment. |
| August 12, 2008 | Letter sent to Corps acknowledging receipt of additional information necessary to initiate formal section 7 consultation. Stated that formal consultation would be completed within 90 calendar days and a biological opinion would be issued within 45 days upon completion of formal consultation. |
| December 18, 2008 | Final Biological Opinion issued |
| February 18, 2008 | Biological Opinion modified to include TVA as a lead agency. |

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The overall project consists of a sanitary sewer and water main project to be installed in the southeast portion of the Athens Utilities service area adjacent to U.S. Highway 72, along a 2 mile stretch of Piney Creek and along a 1.5 mile section of French Mill Creek. Specifically, the project will consist of approximately 24,000 linear feet of 8-inch and 12-inch water main and 19,500 linear feet of 8 to 24-inch sewer.

The improvements will be located south of U.S. Highway 72, west of Mooresville Rd., east of Cambridge Lane, and along the Piney Creek and French Mill Creek between the highway and the City's existing Canebrake pump station (Figure 1). The project will provide sewer and water service to the residential and commercial developments being planned and those currently underway.

Construction of these improvements will result in 11 total crossings of Piney and French Mill Creeks via open cut trenches. Temporary construction access adjacent to some crossings of Piney Creek will also be necessary. Water and sewer pipe installed parallel to each other will be installed concurrently to minimize impacts. Pipe material will be ductile iron. Construction of utilities at creek crossings will require installation of cofferdams to divert flow. Stream flow will be diverted so complete blockage will not occur. Cofferdams may consist of materials such as stone, concrete blocks, and portable water barriers (bladders). Earthen-type cofferdams using dirt or soil will not be authorized. All materials utilized for flow diversion will be removed once the crossing has been completed.

The applicant has proposed to minimize effects to listed species through best management practices (BMP's) and relocation of individual snails. Relocation would be performed prior to construction by a qualified biologist familiar with the creek crossing locations and in possession of a valid collection permit. Construction would take place during low flow conditions and BMP's utilized to minimize erosion and siltation. Restoration of stream crossings to pre-construction conditions, to the extent possible, would be performed.

The Service has described the action area to include the entire lengths of Piney and French Mill Creeks beginning at Highway 72 and extending to a point just southwest of their confluence at the first proposed creek crossing for reasons that will be explained and discussed in the "EFFECTS OF THE ACTION" section of this consultation.

STATUS OF THE SPECIES

Armored Snail

The armored snail was described by Thompson (1977) and was listed as endangered by the Service on February 25, 2000. It was historically only known to occur in Limestone and Piney Creek in Limestone County, Alabama; however recent surveys have located the snail in French Mill Creek, a major tributary to Piney Creek (AST 2007). Critical habitat has not been designated for this species.

The armored snail is very small (less than 4 mm in length), has an ovate-conical shaped shell and is presumed to have a life cycle of only one year. It is usually found among submerged root masses and bryophytes (mosses) along creek edges, bryophytes growing on rocks in slow to moderate current, especially around submerged water willow roots, but may also occur on leafy/woody debris and on other aquatic macrophytes (FWS 1994, Garner 2004, Haggerty and Garner 2007).

The armored snail is believed to be endemic to the Limestone and Piney Creek system (FWS 2008) (Figure 2). No populations are known to have been lost, however the construction of Wheeler Lake may have separated a once larger population into the two present today (FWS 1994). While both populations remain viable, the snail appears to be more widely distributed in Limestone Creek (Haggerty and Garner 2007).

Because the armored snail is restricted to just a few stream reaches, the species remains in a vulnerable position. Due to its annual life cycle, it could be subject to sudden extinction should its habitat be degraded to the point of causing a single year's reproduction to fail. Thus, a population's survival is dependent upon successful reproduction each year.

The threat of human-related activities and development continues to increase in the basin and surrounding areas. Indiscriminant logging, agriculture, withdrawal of water, road and bridge construction, and other multiple point and non-point source pollution discharges are inevitable as human activities migrate out from the cities of Huntsville, Madison, Decatur, and Athens, into the Limestone and Piney Creek watersheds (FWS 2008). Toxic spills could also pose a risk to the snail. While toxic chemical spills may not be imminent threats, the impact of such an event in either of the creeks involved could potentially eliminate one-half of the population.

Other threats to the armored snail may include the introduction of nonnative species. The zebra mussel (*Dreissena polymorpha*), could pose a threat as a competitor, but is not currently known to occur within the Limestone or Piney Creek watersheds. Diseases of aquatic snails are for the most part unknown, as are predators of the armored snail.

Slender Campeloma

The slender campeloma was listed as endangered by the Service on February 25, 2000. It is currently restricted to three stream reaches in Limestone, Piney, and Round Island Creeks. Critical habitat has not been designated for this species.

The slender campeloma is medium to large in size ranging between 5mm to 35mm in length and

is ovately conic with a tapered pointed spire. The snail is distinguished from related species by the presence of fine sculpture in the form of faint striations and a relatively higher spire on the shell. Little is known about the life history of the slender campeloma. However, it belongs to

the family Viviparidae, in which all members give birth to young crawling snails rather than laying eggs that hatch in an external environment (FWS 2000).

This species is typically found burrowing in soft sediment (sand or mud) or detritus. Haggerty and Garner (2007) found slender campeloma burrowing within patches of water willow growing in a substratum of clay and mud, and at shallow depths composed of clay along creek margins. The food habits of the snail are unknown, but they likely feed on detritus.

The range of the slender campeloma has been reduced by at least three-quarters from its historical distribution, and existing populations are now isolated by Wheeler Reservoir (FWS 2008a). While the snail is present in three stream reaches (Limestone, Piney, and Round Island), Haggerty and Garner (2007) found greatest abundance within Round Island Creek. This was presumably due to the presence of more suitable habitat; however specific life history and habitat needs are not entirely understood at present.

Only three creeks comprise the known range of the slender campeloma. As such, it is vulnerable to extirpation should these habitats be threatened. Land use surrounding the creeks remains heavily agricultural (e.g. cotton production and sod farming), potentially making this species susceptible to pollution from pesticides and fertilizers, excessive irrigation, and sedimentation (FWS 2008a). Toxic spills could also pose a risk to the snail. While toxic chemical spills may not be imminent threats, the impact of such an event in any one of the creeks involved could potentially eliminate one-third of the population.

Other threats to the slender campeloma may include disease and predation. However, diseases of aquatic snails are for the most part unknown. Some fishes, mammals, and birds consume snails, are undoubtedly a normal aspect of the population dynamics of the slender campeloma (FWS 2000).

Analysis of the species/proposed and designated critical habitat likely to be affected

The armored snail and slender campeloma populations within the action area would be directly and indirectly affected by the proposed stream crossings. Affects to the two snail species would result from the temporary loss of natural habitat, removal of streamside buffers, and direct take of species. These effects would be minimized through best management practices and relocation of individuals to appropriate habitat outside the construction area.

Critical habitat for these species has not been designated, and therefore will not be affected by this project.

ENVIRONMENTAL BASELINE

The environmental baseline is an analysis of the effects of past and ongoing human and natural factors leading to the status of the species, its habitat (including designated CH), and ecosystem, within the action area. To date, there have been no biological opinions prepared for the two species addressed in this document.

Status of the species within the action area

The armored snail population in Piney Creek remains isolated from the Limestone Creek population by Wheeler Reservoir. Although significant quantitative sampling has not been completed within the action area, recent surveys have located the snail in French Mill Creek at one of the proposed stream crossings (AST 2007). Haggerty and Garner (2007) also discovered an additional occupied site on Piney Creek and found the snail in relatively good numbers if suitable habitat was present.

The slender campeloma populations are similarly isolated within Round Island, Piney, and Limestone Creeks, which is a reduction of about three-quarters of its historical range. This species was found at only one sampling location (10 individuals) within the action area on Piney Creek during a recent survey conducted in association with the proposed stream crossings (AST 2007). Of the three populations, the lowest detection rates and greatest distance between occupied sites have been reported in Piney Creek (Haggerty and Garner 2007).

Factors affecting species environment within the action area

The primary threat to both snail species in the action area is the potential degradation of the water quality of Piney and French Mill Creeks. The area surrounding these streams remains heavily agricultural, and French Mill Creek has been identified under Section 303d of the Clean Water Act as impaired for pathogens associated with pasteurized grazing.

Although agricultural practices are most common, non-point source pollution from land surface runoff can originate from virtually all land use activities in the area, and may include sediments, fertilizers, herbicides, pesticides, animal wastes, septic tank and gray water leakage, oils and greases. Major tributaries like French Mill Creek could become important source populations should a disastrous event such as a toxic chemical release eradicate the main population within Piney Creek.

EFFECTS OF THE ACTION

Factors to be considered

Proximity

Four of the proposed stream crossings will be constructed within a relatively short reach of Piney Creek. Two of the crossings actually occur on small tributaries of Piney Creek and one will

cross a bypass channel. The other four will occur on French Mill Creek, a major tributary to Piney Creek. Limestone Creek will remain unaffected by this project.

Distribution and timing

Construction is proposed to occur any time of day or week during a low flow time of year.

Nature and Duration

The applicant proposes to use open cut trenching to install piping at all crossings. Blasting may be used at some crossings due to the amount of rock present beneath the stream bed. The use of non-blasting methods was considered to lengthen the duration time of installation in the creek. Using the proposed construction methods, the duration per each crossing is estimated to take 10 days or less. Duration will be dependent upon the amount of rock, length of crossing, amount of stream flow, and size of pipe.

Disturbance frequency, intensity, severity

Installation of the utility lines will be a one time event. In-stream construction limits vary from a minimum 30 feet to a maximum of 45 feet in width, depending on the number and size of piping used, or if temporary access roads are needed. Therefore, it is estimated that stream crossing clearance widths for all 11 crossings will total 325 linear feet. This equals about 1.4 percent of the stream habitat within the action area.

The utilities, once installed, will be monitored for maintenance as needed. A permanent clearing width of 20 feet for the sewer line and 30 feet for the parallel water line and sewer line will be maintained by mechanical means to perform this monitoring.

Initially, heavy disturbance of habitat within the swaths centered on each crossing is expected to occur. However, these effects will be temporary and restoration to pre-construction conditions will lessen the long-term effect on snails and stream habitat.

Analyses for effects of the action

Direct effects

Snails will be relocated to an appropriate site outside of the construction zone. While efforts will be directed at complete removal of individuals from each impact area, it is impossible to ensure that 100% will be found and relocated. Snails located within submerged tree roots, detritus and other concealed features are vulnerable to being injured, killed or removed to non-aquatic areas during excavation. Relocation would be performed by a qualified biologist possessing a permit to handle these species. However, snails could become stressed or injured during the collection

and relocation attempts. Aquatic habitat will be impacted by the removal action but these effects will be considered temporary.

Indirect effects

Indirect effects include the potential for sedimentation of downstream habitats. The applicant has proposed to minimize this potential through the use of BMP's. BMP's will include, but are not limited to, hay bales, check dams, culvert inlet protection, and silt fences.

Species' response to the proposed action

Numbers of individuals in action area

Both species of snails found within the action area are small, with the armored snail being extremely small. Thus, exact numbers of individuals will be difficult to determine.

Species' sensitivity to change

Habitat modification associated with this project is considered to be temporary. Connectivity will remain unaffected, eliminating further isolation of populations.

Species resilience and recovery rate

There is currently no data documenting the success and survival rates of relocating armored or slender campleoma snails. Reproductive characteristics are also poorly understood. It is reasonable to assume that relocated individuals will continue to thrive if placed in appropriate habitat. Repopulation of impacted areas should occur over time once construction activities have ceased and restoration to pre-construction conditions is completed.

Cumulative effects

Cumulative effects include the effects of future State, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the ESA.

Residential and commercial development is currently taking place in the areas surrounding the reaches of Piney and French Mill Creeks described as the action area for this project. These private actions may be a contributor of sediments and other pollutants from construction and increased storm runoff from impervious surfaces. Predicting the type and timing of future development is difficult, but the area is attractive for people migrating out from the Athens area.

Urbanization alters hydrology, water quality, and ecosystem function. The rapid delivery of stormwater to surface waters, due to impervious surfaces, leads to higher, more destructive peak

flows. Land development activities contribute to the erosion process by exposing disturbed soils to rainfall and to storm runoff. In this particular case, it is virtually impossible to accurately predict the cumulative long-term effects of these and other activities on these species.

Conclusion

After reviewing the current status of the armored snail and slender campeloma snail, the environmental baseline for the action area, the effects of the proposed utility construction, and the cumulative effects, it is the Service's biological opinion that the proposed project is not likely to jeopardize the continued existence of these species, and is not likely to destroy or adversely modify proposed critical habitat. No critical habitat has been designated for the armored snail or slender campeloma.

This determination is based on the fact that individuals of each snail species will be relocated out of the impact area and less than two percent of habitat within the action area will be affected. Impacts to habitat are considered to be temporary and indirect effects to the species will be minimized through implementation of the terms discussed in the incidental take statement.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered or threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent that as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, carrying out an otherwise lawful activity. Under the terms of section 7 (b)(4) and section 7(o)(2), taking that is incidental and not intended as part of the agency action is not considered to be prohibited under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the Corps and TVA so that they become binding conditions of any permit issued to the City of Athens Utilities, as appropriate, for the exemption in section 7(o)(2) to apply. The Corps and TVA have a continuing duty to regulate the activity covered by this Incidental Take Statement. If the Corps or TVA: (1) fails to assume and implement the terms and conditions or (2) fails to require the permittee to adhere to the terms and conditions of the Incidental Take Statement through enforceable terms that are added to the permit document, the protective coverage of section 7 (o)(2) may lapse. In order to monitor the impact of incidental take, the Corps and TVA must report the progress of the action and its impact on the species as specified in the Incidental Take Statement [50 CFR § 402.14(I)(3)].

Amount or Extent of Incidental Take

The Service anticipates that incidental take of these species will be difficult to accurately assess due to the very small size of the individuals and their cryptic habitat. Therefore it is unlikely that dead or impaired individuals of either of these species will be found. Appropriate implementation of the attached Reasonable and Prudent Measures and Terms and Conditions should greatly reduce any potential of lethal take of listed snails. However, take in the form of harm caused by the killing of individuals not found and relocated to unaffected habitat may occur. The relocation itself could potentially stress or harm individuals to the point that lethal take occurs. Therefore, incidental take during all construction activities is limited to harm or stress due to the relocation effort or construction activities. Incidental take will result for all individuals located within the **stream crossing construction limits**. Specifically, take will be authorized as follows:

Crossing 1.1, Tributary to Piney Creek – Take is limited to all individuals located within the 40 linear feet of stream impacted by water and sewer installation and a temporary construction access road.

Crossing 1.2, Tributary to Piney Creek – Take is limited to all individuals located within the 40 linear feet of stream impacted by water and sewer installation and a temporary construction access road.

Crossing 1.3, Bypass channel of Piney Creek – Take is limited to all individuals located within the 35 linear feet of stream impacted by water and sewer installation.

Crossing 1.4, Piney Creek – Take is limited to all individuals located within the 40 linear feet of stream impacted by water and sewer installation and a temporary construction access road.

Crossing 1.5, French Mill Creek – Take is limited to all individuals located within the 30 linear feet of stream impacted by sewer installation.

Crossing 1.6, French Mill Creek – Take is limited to all individuals located within the 30 linear feet of stream impacted by sewer installation.

Crossing 2.1, French Mill Creek – Take is limited to all individuals located within the 30 linear feet of stream impacted by sewer installation.

Crossing 3.1, Piney Creek – Take is limited to all individuals located within the 30 linear feet of stream impacted by sewer installation.

Crossing 3.2, Piney Creek – Take is limited to all individuals located within the 30 linear feet of stream impacted by sewer installation.

Crossing 4.1, Piney Creek – Take is limited to all individuals located within the 30 linear feet of

stream impacted by water main installation.

Crossing 4.2, French Mill Creek – Take is limited to all individuals located within the 30 linear feet of stream impacted by water main installation.

If downstream sedimentation of habitat occurs, or if the project is modified to encompass a larger area, the authorized level of take will be exceeded and all work must cease immediately and the Service's Alabama Field Office notified.

EFFECT OF TAKE

In the accompanying Biological Opinion, the Service determined that this level of expected take is not likely to result in jeopardy or adverse modification of critical habitat.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize impacts of incidental take to the armored snail and slender campeloma:

1. Design the relocation effort to maximize the number of individuals removed from the construction areas and ensure their survival when introduced to new habitat.
2. Design the restoration with the intent of achieving pre-construction habitat conditions.
3. Develop site-specific sediment and storm water control plans for each stream crossing aimed at eliminating sedimentation of adjacent habitats.
4. Minimize impacts and alterations to streambeds and stream banks.
5. Design long term maintenance plans that preserve water quality.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the Corps and TVA must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non discretionary.

1. Design the relocation effort to maximize species survival before, during, and after construction:
 - a. Prior to relocation, complete and submit the proposed relocation plan for each stream crossing to the Alabama Field Office for review. The plan must contain collection methods, a description of the habitat collected from, and a description of the habitat

proposed for re-introduction.

b. The relocation areas will be monitored for a minimum of five years. After relocation is completed, an initial report must be submitted giving the results of the effort such as number of individuals collected, locations of species, mortality, etc. Thereafter, survival studies will be completed and reported twice a year for five years.

2. Restoration to pre-construction conditions will be accomplished by the following:

a. The pipe trench within the stream bed will be backfilled with crushed stone to restore the original depth.

b. Stream banks will be restored to original contours and shape using material suitable for plant growth. This material will be stabilized using a biodegradable fabric and revegetated with native plants and trees. Vegetation must be of suitable type to allow establishment along stream banks and provide snail habitat (i.e. submerged tree roots).

c. Prior to construction, a complete restoration plan for each stream crossing must be submitted to the Alabama Field Office.

d. Restored stream crossings will be monitored for the presence of listed snails for a period of five years. Reports will address the status of the armored snail and slender campleoma in the impact areas and must be submitted to the Alabama Field Office once per year.

3. Develop site-specific sediment and stormwater controls for each stream crossing:

a. BMP's will be designed to eliminate the release of sediment into adjacent habitat outside of the construction limits. This includes construction and digging activities that occur on adjacent uplands.

b. BMP's will be inspected and maintained during and after rainfall events to ensure that are working properly.

c. Develop emergency measures to control erosion within the construction site in the event work is stopped or delayed for a period exceeding 48 hours.

4. Alteration of stream banks and beds will be minimized.

a. Minimize the removal of stream bank and in-stream vegetation.

b. Submerged tree roots and other habitat features shall remain intact where possible.

c. Construction duration at each crossing will not exceed 10 days.

5. Long-term maintenance of adjacent upland easements will be achieved through mechanical means. Chemicals or pesticides will not be used. All maintenance should include BMP's designed to prevent sedimentation of adjacent aquatic habitats. No heavy equipment shall be used in-stream.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. The Service believes that all listed snails within no more than 325 linear feet of stream habitat will be incidentally taken. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agencies must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

CONSERVATION RECOMMENDATIONS

Section 7 (a)(1) of the Act directs federal agencies to use their authorities to further the purposes of the act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help carry out recovery plans, or to develop information.

This utility project will undoubtedly serve present or future subdivisions. We recommend the Corps and TVA design an informational kiosk (with our assistance) highlighting stream diversity, the presence of listed snails, and the importance of protecting water quality in Piney and French Mill Creeks. The kiosks could be placed near subdivisions or parks along the streams for residents to access.

We also recommend that the Corps, TVA, and Service work cooperatively with county and local governments in establishing setbacks or buffers along Piney and French Mill Creeks. These buffers would serve to help protect water quality in these drainages should future development occur.

REINITIATION NOTICE

This concludes formal consultation on the action outlined in the request. As written in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Corps and TVA involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the Corps action that may affect listed species or Critical Habitat in a manner or to an extent not considered in this opinion; (3) the Corps action is subsequently modified in a manner that causes an effect to the listed species or Critical Habitat not considered in this opinion; or (4) a new species is listed or Critical Habitat designated that may be affected by the action. In instances where the amount

or extent of incidental take is exceeded, any operations causing such take must cease until reinitiation.

For this biological opinion the incidental take would be exceeded when impacts occur outside of the construction limits described above which is what has been exempted from the prohibitions of section 9 by this opinion. We appreciate the cooperation of the Corps and TVA during this consultation.

We look forward to working with the Corps and TVA regarding the City of Athens Utilities water and sewer line construction on Piney and French Mill Creeks. For further coordination please contact Mr. Josh Rowell of my staff at (251) 441-5836 or via email at josh_rowell@fws.gov.

Sincerely,



Rob W. Tawes
Deputy Field Supervisor
Alabama Field Office

cc: Ms. Peggy W. Shute, TVA, Knoxville, Tennessee
Ms. Samantha Strickland, TVA, Muscle Shoals, AL
Mr. Ken Graham, USFWS, Region 4, Atlanta, GA

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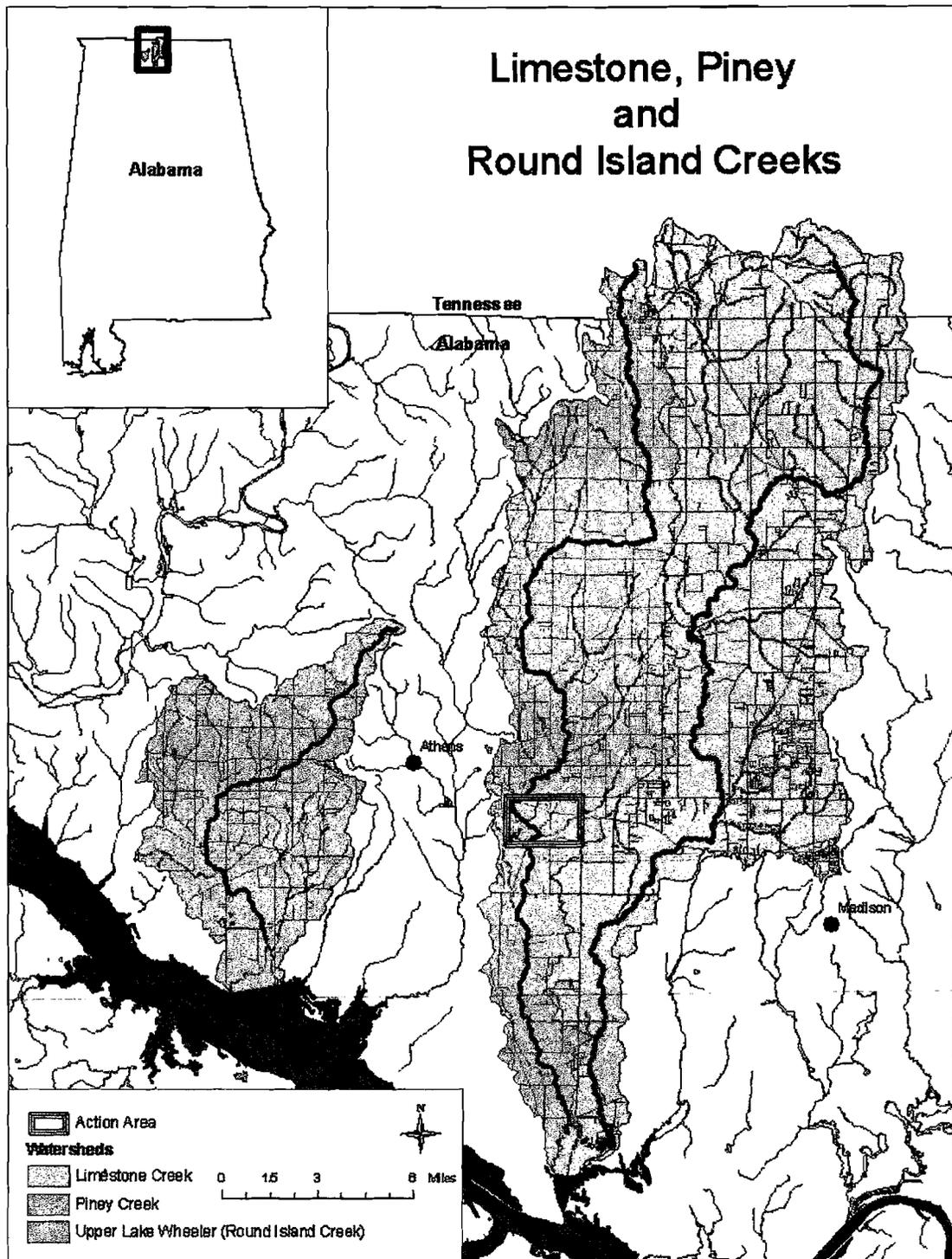


Figure 2: Limestone, Piney and Round Island Creeks