

**MEMORANDUM FOR RECORD**

**SUBJECT:** Department of the Army Environmental Assessment and Statement of Finding for Above-Numbered Permit Application

This document constitutes the Environmental Assessment, 404(b)(1) Guidelines Evaluation, Public Interest Review, and Statement of Findings.

1. Application as described in Public Notice – PN 11-12 (Appendix A).

APPLICANT: City of Huntsville

WATERWAY & LOCATION: Limestone Creek Mile 16.9, a Tributary to Tennessee River Mile 310.7 Right Bank, Huntsville, Limestone County, Alabama.

LATITUDE & LONGITUDE: Latitude: North: 34.75166  
Longitude: West: -86.82341

**PROJECT PURPOSE**

Basic: To provide sanitary sewer service.

Overall: To provide sanitary sewer service to recently annexed property located in Limestone County for future developments.

Water Dependency Determination: Project is not water dependent.

**PROPOSED WORK:** The proposed work consists of the removal of the existing piers and construction of two piers to support an aerial sanitary sewer line across Limestone Creek which would extend sanitary sewer service to recently annexed property. The pipe would be a 12" ductile iron pipe. The pipe would span the creek, approximately 86 linear feet, supported by two concrete piers within the stream, spaced 46 feet on center. The bottom elevation of the proposed sewer line pipe would be 630.80. Sheet piling would be used to construct a cofferdam during pier construction to provide a dry work area. Native substrate rock material excavated during the removal of the existing piers would be placed around the newly constructed piers.

Construction method for sanitary sewer line crossing over Limestone Creek includes:

- 1) The existing sewer line pipe will be saw-cut on each side of the pier and removed.
- 2) The contractor will construct a 10 ft x 10 ft cofferdam and underwater concrete will be used to seal the cofferdam.
- 3) A crane will be used to lower the cofferdam into the creek at the location where the first pier will be re-constructed.
- 4) A pump will be lowered into the cofferdam and the water will be pumped out of the cofferdam and discharged into a location where it can be treated by overland flow, a series

of sediment barriers, or a temporary sediment trap.

5) The existing pier will be demolished.

6) A Vactor truck suction pipe will be ran to the cofferdam to excavate the demolished pier material and prepare rock surface for new pier footings. Material removed from the excavation will be placed in a bucket and removed by crane.

7) Exploratory holes will be drilled to a minimum of 4' depth at the center of the proposed pier. The owner will retain the geotechnical engineer to be present to assess the competency of the rock and determine the required embedment depth for the rock bolt anchors.

8) Rock bolt anchors will be installed and tested as specified in the rock bolt anchor note on Sheet S-1 in the contract plans.

9) The forming of the pier will be constructed inside the cofferdam and a bucket, crane, or pump truck will be used to pour the concrete required for pier construction.

10) Fill material removed from excavation will be placed back around the bottom of each pier to return the disturbed area to its "natural"/pre-existing conditions as close as possible.

11) The crane will be used to remove all construction equipment.

12) The crane will be used to remove the cofferdam.

13) The crane will be used to place the cofferdam at the location of the second pier.

14) Repeat the procedure to construct the second pier.

There will be two piers reconstructed within the normal flow of the creek. A third pier is located in the overbank area of the creek that will not require a cofferdam for construction. The total disturbed area of the streambed will be less than 500 square feet. This is based on the maximum area of the cofferdam plus a couple of feet buffer around the dam at both pier locations.

**Avoidance and Minimization Information:** The impacts could be avoided, however it is not practicable for the applicant. In order to avoid impacts to Limestone Creek, the applicant would need to perform a bore under the creek, then construct and maintain a pumping facility. This type of project would normally have three concrete piers within the stream channel, but has been minimized by strategic placement of two concrete piers.

**Compensatory Mitigation:** No compensatory mitigation for the proposed work was submitted because of the small amount of direct stream impact.

**EXISTING CONDITIONS:** The site is located approximately 40 feet south of U.S. Highway 72, also known as Lee Highway, on Limestone Creek in a rural setting approximately midway between Huntsville and Athens, Alabama. U.S. Highway 72 is a major roadway that is highly used by commercial and private traffic. This highway spanning Limestone Creek consists of 2 two-lane bridges supported with concrete piers located in the creek. The existing pipeline crossing was placed on the northern outer fringe of a mixed hardwood forest that extends along each side of the creek, but south of the highway's maintained right-of-way. The existing piers are unstable and leaning. There are farms located within a mile east and west of the project site.

Limestone Creek is listed as a navigable water in Nashville District Public Notice #86-23,

dated 8 May 1986. Limestone Creek is a slow moving perennial creek with a low gradient situated in a well developed floodplain. The first five miles of Limestone Creek is within the Wheeler Lake Reservoir and Wheeler National Wildlife Refuge Boundaries. The creek's substrate is mainly composed of silt and sand which has been deposited during normal and heavy flow events. The creek banks are vertical and stable because of the vegetation, low gradient and Wheeler Lake located approximately 12 miles downstream. Along the creek is a palustrine broad leaved riparian forest that may temporarily flood during extended rain events. The tree's roots along the creek extend into the creek, as well as the bank, to provide aquatic species habitat (i.e. habitat for T&E species – *Marstonia pachyta* and *Campeloma decampi*). The creek does have riffle and pool complexes, gravel bars and partially submerged tree falls.

2. Authority.

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403).

Section 404 of the Clean Water Act (33 U.S.C. §1344).

Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

3. Scope of Analysis.

a. NEPA. (*Write an explanation of rationale in each section, as appropriate*)

(1) Factors.

(i) Whether or not the regulated activity comprises "merely a link" in a corridor type project.

(ii) Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity.

(iii) The extent to which the entire project will be within the Corps jurisdiction.

(iv) The extent of cumulative Federal control and responsibility.

(2) Determined scope.

Only within the footprint of the regulated activity within the delineated water. The regulated fill activity is part of a sanitary sewer service expansion project. The impact (two concrete piers) to waters of the U.S. would occur at the crossing which would constitute merely a link in the overall project. The Corps regulatory jurisdiction is limited to the entire pipeline crossing footprint of Limestone Creek and its directly abutting shoreline.

Over entire property.

b. NHPA "Permit Area".

(1) Tests. Activities outside the waters of the United States are/are not included

because all of the following tests are/are not satisfied: Such activity would/would not occur but for the authorization of the work or structures within the waters of the United States; Such activity is/is not integrally related to the work or structures to be authorized within waters of the United States (or, conversely, the work or structures to be authorized must be essential to the completeness of the overall project or program); and Such activity is/is not directly associated (first order impact) with the work or structures to be authorized. The work could be constructed in a manner which would not affect waters of the U.S.; however, that method would involve more expense and require the construction of a pump station and yearly maintenance costs. Therefore, the "but for" test is not satisfied by the entire utility line project.

- (2) Determined scope: The Area of Potential Effect (APE) would be considered the area within the banks of Limestone Creek that would be directly impacted by the excavation and fill material associated with the construction of two concrete piers and the shoreline directly adjacent to the creek.

c. ESA "Action Area".

- (1) Action area means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.
- (2) Determined scope. The action area consists of the construction footprint (direct impact) totaling approximately 680 square feet, and the stream bed 100 yards downstream of the construction footprint (indirect impact).

d. Public notice comments.  NA - Public Notice Comments are found in Appendix B.

- (1) The public also provided comments at public hearing, public meeting, and/or  *Explain*.
- (2) Commenters and issues raised.

Name	Issue
Alabama Historical Commission (AHC)	Responded by letter dated 01 April 2011, stating, "Upon review of the above referenced project, we have determined that the project activities will have no effect on any known cultural resources listed on or eligible for the National Register of Historic Places. Therefore, we concur with the proposed project activities."
Alabama Department of Environmental Management (ADEM)	Responded by letter dated 07 April 2011, notifying applicant of processing fees for its permit and certification actions. ADEM requested application, project information and

	<p>processing fee of \$1,980 to be submitted for National Pollutant Discharge Elimination System (NPDES) General Permit.</p>
<p>Alabama Department of Conservation and Natural Resources (ADCNR)</p>	<p>Responded by letter dated 11 April 2011, stating, the Division of Wildlife and Freshwater Fisheries personnel has determined this project may impact several state and federally-protected species which are known to inhabit Limestone Creek: armored marstonia (<i>Pyrgulopsis pachyta</i>), Anthony’s riversnail (<i>Athearnia anthonyi</i>), and slender campeloma (<i>Campeloma decampi</i>). In addition, Tennessee Pigtoe (<i>Pleuroaia barnesiana</i>), a rare freshwater aquatic mussel designated as a greatest conservation need (GCN) species in Alabama’s Comprehensive Wildlife Conservation Strategy may be present at this location. Strongly recommended a sensitive species survey and habitat assessment by a qualified biologist. Please contact the U.S. Fish and Wildlife Service regarding potential impacts to federally-protected species. Encouraged best management practices as outlined in the Alabama Handbook for Erosion Control. The project will impact state-owned submerged lands and the applicant must coordinate with the State Lands Division to obtain the proper permits for the impacts.</p>
<p>U.S. Fish and Wildlife Service (USFWS)</p>	<p>Responded by letter dated 20 April 2011. Our records indicate that the following endangered freshwater snails may occur within or near to the project area: Armored snail (<i>Marstonia pachyta</i>) – Endangered; Slender campeloma (<i>Campeloma decampi</i>) – Endangered; Anthony’s riversnail (<i>Athearnia anthonyi</i>) – Endangered. Species status surveys were conducted at bridge crossings within Limestone Creek during 2006 for all three of the above listed snails. The Armored snail and Slender campeloma were both collected upstream and downstream of the proposed project site. The Anthony’s riversnail has been collected downstream of the proposed project site. If a boring method or if the project could aerially span the creek without the aid of instream construction activity, we agree the project will not likely adversely affect the above listed species. No further endangered species consultation will be required for the project unless: 1) the identified action is modified in a manner that causes an effect on a listed species or on proposed or designated critical habitat; 2) new information reveals the identified action may affect Federally protected species or designated critical habitat in</p>

	a manner or to an extent not previously considered; or 3) a new species is listed or critical habitat is designated under the ESA that may be affected by the identified action.
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- (3) Site  was/ was not visited by the Corps to obtain information in addition to delineating jurisdiction. Gary Davis and Eric Sinclair of the Western Regulatory Field Office in Decatur, AL, visited the site on 07 February 2011, to verify the jurisdictional limits of the waters involved and any navigation concerns. Limestone Creek is a Section 10 navigable water, but this section of creek provides very limited navigation opportunities. Any navigational opportunities would be limited to kayaks and/or canoes. In reviewing the creek upstream and downstream of the project area, fallen trees and islands were observed fallen trees and islands which would make navigating this section of the creek very challenging, if not impassable. Digital photographs were taken during the site visit.
- (4) Issues identified by the Corps. There were several issues identified during the public review process to be resolved prior to permit approval.
- a) USFWS issues: The Corps is the lead federal action agency in the Section 7 compliance of the Endangered Species Act for this project and TVA as the cooperating federal agency. USFWS identified 3 Endangered snail species on Limestone Creek. A snail survey was conducted by AST Environmental on 25 May 2011, 100 yards upstream and 300 yards downstream of the permit area. No Endangered snail species were identified within the permit area. However, two Endangered snail species were found downstream and one Endangered snail species was found upstream of the permit area. USFWS requested the city not to use riprap around the concrete piers or along the bank for stabilization. They requested that native creek rocks and stones removed from the impact area be used around the piers and native vegetation for shoreline stabilization. The City of Huntsville agreed to the request. The Corps and TVA requested formal consultation with USFWS by letter dated 12 July 2011. USFWS acknowledged receipt of the request by letter dated 10 August 2011 and assigned Log Number 2011-F-0519 to this consultation (See Appendix C).
  - b) ADEM issues: The processing fee and information requested by ADEM were received. National Pollutant Discharge Elimination System (NPDES) General Permit Number ALR107869 was issued by letter 04 August 2011 (See Appendix D)
  - c) Section 10 Navigation issues: Limestone Creek is considered a Section 10 navigable waterway from its mouth to Creek Mile 32.0 as noted in Corps Navigable Waters' Study (Nashville District Public Notice #86-23, dated 8 May 1986). At the location where the proposed sanitary sewer line crosses

Limestone Creek, no commercial traffic has the potential to navigate this section of the creek. Non-motorized vessels, i.e. kayaks and canoes, may potentially navigate this area. However, reviewing sections upstream and downstream of the proposed crossing revealed natural obstructions, such as tree falls and snags, which makes this area impassable to kayaks and canoes. Gary Davis contacted the President of the Huntsville Canoe Club and talked about the proposed crossing to find out if anyone canoed/kayaked that area. Prior to issuing the Public Notice (PN), Mr. Davis emailed location map and plans for the club to discuss at their next meeting. In addition, when the PN was issued, a copy was sent to the club for official documentation of their comments. This office did not receive any comments from the Huntsville Canoe Club. Because of the debris in the creek and no response from the Huntsville Canoe Club, it appears there is no boating activity occurring in this section of Limestone Creek.

- (5) Issues/comments forwarded to the applicant. NA/Yes. The issues/comments to Public Notice #11-12 were forwarded by letter to the applicant on 29 April 2011.
- (6) Applicant replied/provided views. NA/Yes. Gary Davis met with the applicant after they reviewed the comments. They were receptive of all the comments, except for the absence of a termination date on the required annual report requested by USFWS. They requested after the completion of the pipeline crossing a reasonable end date to the required annual reporting.
- (7) The following comments are not discussed further in this document as they are outside the Corps purview.  NA/ Yes *Explain*.

4. Alternatives Analysis.

- a. Basic and Overall Project Purpose (as stated by applicant and independent definition by Corps).
  - Same as Project Purpose in Paragraph 1.
  - Revised:
- b. Water Dependency Determination:
  - Same as in Paragraph 1.
  - Revised
- c. Applicant preferred alternative site and site configuration.
  - Same as Project Description in Paragraph 1.
  - Revised:

Criteria.

Issue	Measurement and/or constraint
Stream Impact	680 square feet.
Indirect Impacts to Endangered Species	100 yards downstream of construction footprint.

- d. Off-site locations and configuration(s) for each. As the project is the extension of an existing gravity sanitary sewer line, alternative locations are not practicable under Section 404(b)(1) Guidelines. There are no known properties that could practicably meet the stated project purpose. Therefore, the only practicable alternatives analyzed in detail by this document will be on-site crossing alternatives.

Off-site locations and configurations

Description	Comparison to criteria
N/A	N/A

- e. ( NA) Site selected for further analysis and why.

f. On-site configurations.

Description	Comparison to criteria
Re-alignment of gravity sanitary sewer line upstream or downstream	680 square feet stream impact. Potentially direct impacts to endangered species.
Directional Bore - This would be costly; it would involve the construction and yearly maintenance of a pump station.	No impacts to waters of the U.S. Possible downstream direct impact to endangered species and other aquatic species from leakage of lubricants if fracture of bedrock occurs.

g. Other alternatives not requiring a permit, including No Action.

Description	Comparison to criteria
No Action	No impacts to waters of the U.S. or endangered species.

- h. Alternatives not practicable or reasonable. *Describe/explain* (a) The applicant could re-align the proposed sewer line upstream or downstream of the proposed crossing. However, this would result in the sewer line potentially encroaching on and directly impacting endangered species habitat, either upstream or downstream. It would not be economically feasible with the increase cost of extra materials, time to complete the project and may result in decreased efficiency of the sewer line. (b) The applicant could perform a directional bore to avoid all impacts to waters of the U.S. and endangered species. However, this would not be economically feasible because it would require the construction of a pump station (approximately \$845,000) and yearly maintenance costs (approximately \$100,000). There is also a possibility of direct impact to

endangered species from leakage of a lubricant through fracture of bedrock and may result in a larger impact area if a clean-up is needed for the spill.

- i. Least environmentally damaging practicable alternative. *Describe/explain* The least environmentally damaging practicable alternative has been determined by the Corps to be the applicant's preferred alternative as advertised in the Public Notice with the exception of one item. That would be the use of native creek rocks and stones around the concrete piers and native vegetation for shoreline stabilization, instead of the proposed riprap. This conclusion has been made after carefully considering other practicable on-site designs that meet the applicant's needs.

5. Evaluation of the 404(b)(1) Guidelines. (NA)

a. Factual determinations.

Physical Substrate. <input checked="" type="checkbox"/> See Existing Conditions, paragraph 1 <input type="checkbox"/>
Water circulation, fluctuation, and salinity. <input checked="" type="checkbox"/> Addressed in the Water Quality Certification (See Appendix D). <input type="checkbox"/>
Suspended particulate/turbidity. <input checked="" type="checkbox"/> Turbidity controls in Water Quality Certification (See Appendix D). <input type="checkbox"/>
Contaminant availability. <input checked="" type="checkbox"/> General Condition requires clean fill. <input type="checkbox"/>
Aquatic ecosystem and organism. <input checked="" type="checkbox"/> Wetland/wildlife evaluations, paragraphs 5, 6, 7 & 8. <input type="checkbox"/>
Proposed disposal site. <input type="checkbox"/> Public interest, paragraph 7. <input checked="" type="checkbox"/> N/A
Cumulative effects on the aquatic ecosystem. <input checked="" type="checkbox"/> See Paragraph 7.e. <input type="checkbox"/>
Secondary effects on the aquatic ecosystem. <input checked="" type="checkbox"/> See Paragraph 7.e. <input type="checkbox"/>

b. Restrictions on discharges (230.10).

- (1) It has/has not been demonstrated in paragraph 5 that there are no practicable nor less damaging alternatives which could satisfy the project's basic

purpose. The activity is/is not located in a special aquatic site (wetlands, sanctuaries, and refuges, mudflats, vegetated shallows, coral reefs, riffle & pool complexes). The activity does/does not need to be located in a special aquatic site to fulfill its basic purpose.

- (2) The proposed activity does/does not violate applicable State water quality standards or Section 307 prohibitions or effluent standards (based on information from the certifying agency that the Corps could proceed with a provisional determination). The proposed activity does/does not jeopardize the continued existence of federally listed threatened or endangered species or affects their critical habitat. The proposed activity does/does not violate the requirements of a federally designate marine sanctuary.
- (3) The activity will/will not cause or contribute to significant degradation of waters of the United States, including adverse effects on human health; life stages of aquatic organisms' ecosystem diversity, productivity and stability; and recreation, esthetic, and economic values.
- (4) Appropriate and practicable steps have/have not been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (see Paragraph 8 for description of mitigative actions).

6. Public Interest Review: All public interest factors have been reviewed as summarized here. Both cumulative and secondary impacts on the public interest were considered. Public interest factors that have had additional information relevant to the decision are discussed in number 7.

				+ Beneficial effect
				0 Negligible effect
				- Adverse effect
				M Neutral as result of mitigative action
+	0	-	M	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Conservation.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Economics.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Aesthetics.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	General environmental concerns.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wetlands.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Historic properties.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Fish and wildlife values
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flood hazards.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Floodplain values.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Land use.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Navigation.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Shore erosion and accretion.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recreation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water supply and conservation.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water quality.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Energy needs.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Food and fiber production.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mineral needs.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Considerations of property ownership.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Needs and welfare of the people.

7. Effects, policies and other laws.

a.  NA

Public Interest Factors. *(add factors that are relevant to specific project that you checked in number 6 above and add a discussion of that factor)*

Factor	Discussion
Economics	The installation of the sanitary sewer line to recently annexed property will benefit the City of Huntsville economically with job growth from the proposed industrial park.
Fish and Wildlife Values	Use of native creek rocks and stones, instead of limestone riprap rock, around the concrete piers will deter any drastic change in ph of the creek There may be a possibility of debris accumulation on the concrete piers during high water events. If not routinely inspected, there is a possibility of the Endangered snail species may colonize the debris. Removal of any accumulated debris within a reasonable time frame will deter this from happening.
Shore erosion and accretion	Native vegetation will be used for shore stabilization. This would provide more environmental benefits than limestone riprap rock.

b. Endangered Species Act.  NA

The proposed project:

(1) Will not affect these threatened or endangered species:

Any/ Anthony's riversnail (*Athearnia anthonyi*) – Endangered. According to the USFWS Biological Opinion (Page 1) states, “The endangered Anthony’s riversnail (*Athearnia anthonyi*) was determined not to be in the project area and, therefore, will not be addressed in this opinion.”

- (2)  May affect, but is not likely to adversely affect:  
Species:
- (3)  Will/ Will not adversely modify designated critical habitat for the Armored snail (*Marstonia pachyta*) – Endangered; Slender campeloma (*Campeloma decampi*). According to USFWS Biological Opinion, “No critical habitat has been designated for the species; therefore, none will be affected.” (See Appendix E)
- (4)  Is/ Is not likely to jeopardize the continued existence of the Armored snail (*Marstonia pachyta*) or Slender campeloma (*Campeloma decampi*). According to USFWS Biological Opinion (Conclusion, Page 9) states, “After reviewing the current status of the armored snail and the slender campeloma, the environmental baseline for the action area, the effects of the construction activities associated with the proposed municipal aerial sewer line, and the cumulative effects, it is the Service’s biological opinion that the proposed construction of the proposed municipal sewer line crossing on piers is not likely to jeopardize the continued existence of the armored snail or the slender campeloma.” (See Appendix E)
- (5) The Services  concurred/ provided a Biological Opinion(s). The U.S. Fish and Wildlife Service issued a Biological Opinion dated December 08, 2011 on the proposed project that states, “After reviewing the current status of the armored snail and the slender campeloma, the environmental baseline for the action area, the effects of the construction activities associated with the proposed municipal aerial sewer line, and the cumulative effects, it is the Service’s biological opinion that the proposed construction of the proposed municipal sewer line crossing on piers is not likely to jeopardize the continued existence of the armored snail or the slender campeloma. No critical habitat has been designated for the species; therefore, none will be affected.” (See Appendix E) The Service provided a second Biological Opinion dated March 31, 2014 stated, “After reviewing the current status of the armored snail and the slender campeloma, the environmental baseline for the action area, the effects of the construction activities associated with the proposed municipal aerial sewer line, and the cumulative effects, it is the Service’s biological opinion that the proposed demolition and reconstruction of the proposed municipal sewer line crossing on piers is not likely to jeopardize the continued existence of the armored snail or the slender campeloma. No critical habitat has been designated for the species; therefore, none will be affected.”

- c. Essential Fish Habitat.  N/A  
Adverse impacts to Essential Fish Habitat  will/ will not result from the proposed project. *Explain.*

- d. Historic Properties. The proposed project will/will not have any effect on any sites listed, or eligible for listing, in the National Register of Historic Places, or otherwise of national, state, or local significance based on letter from SHPO. Alabama Historical Commission responded by letter dated 01 April 2011, stating, "Upon review of the above referenced project, we have determined that the project activities will have no effect on any known cultural resources listed on or eligible for the National Register of Historic Places. Therefore, we concur with the proposed project activities." (See Appendix B)
- e. Cumulative & Secondary Impacts. The geographic area for this assessment is the Lower Limestone Creek watershed (HUC Code 060300020703).
- (1) Baseline. Approximately 10% of the watershed area is wetland. There are also approximately 40 stream miles contained within the Lower Limestone Creek watershed comprised of 10% perennial, 50% intermittent, and 40% ephemeral tributaries. A search of the Corps of Engineers files and ORM2 Database, indicates there have been 23 permitted actions within this watershed. 48% were Jurisdictional Determinations, 35% were utility line crossings (i.e. water, sewer, gas and fiber optic) and 17% consisted of stream relocation, water intake, sub-impoundment structure. 82% of the utility line crossings were constructed by directional boring and 18% were constructed by open trench cut across the stream channel. Corps permits for the period from 1989 to 2011 has authorized the fill of 0.7 acres and 1,040 linear feet of stream. The projection is that authorizations will continue  at the current rate/ increase/ decrease because of the proposed Industrial Park and expansion of Huntsville City Limits. Natural resource issues of particular concern [from Corps & non-Corps activities] are Threatened and Endangered species.
- (2) Context. The proposed project is typical of/a precedent/very large compared to/ other activities in the watershed. Development similar to the proposal has occurred since 1989. The majority of the projects have been constructed by directional boring due to the existence or construction of pump stations. Future conditions are expected to be the same as current. Besides Corps authorized projects, other activities include agriculture developments and road and building construction. Property due east of the project area is currently being considered for commercial development. The proposed sewer line crossing is a byproduct of growth and urbanization of the area which is expected to increase. Resulting natural resource changes and stresses include potential increased sedimentation into local streams, increased rate of runoff and loss of greenspace.

(3) Mitigation and Monitoring. The project affects the following key issue(s): Endangered Species. The USFWS has requested the applicant restrict its streambed impact from the previous 680 square feet to 392 square feet of stream bottom. Implement Best Management Practices during construction, remove accumulated debris at least once a year and provide annual report through written and photo documentation of debris removal and any newly observed streambed scour or bank erosion in the vicinity of the piers. The magnitude of the proposed effect is minimal within the watershed. Avoidance and minimization methods include using existing substrate material to backfill around the piers and native vegetation to stabilize the stream banks in place of riprap rock and use of Best Management Practices that will result in minimal impacts to the environment. Compensatory mitigation will not be required will result in no net loss of stream functions.

f. Corps Wetland Policy. The project does not involve wetland impacts.

g.  NA) Water Quality Certification under Section 401 of the Clean Water Act  has/ has not yet been issued by  / State/ Commonwealth of Alabama, Department of Environmental Management. The certification was issued by letter dated 4 August 2011, NPDES Permit No. ALR107869 (See Appendix D).

h.  NA) Coastal Zone Management (CZM) consistency/permit: Issuance of a State permit certifies that the project is consistent with the CZM plan.  There is no evidence or indication from the \_\_\_\_\_ that the project is inconsistent with their CZM plan.

i. Other authorizations: A permit from TVA, pursuant to Section 26a of the TVA Act, and Alabama State Lands Division may also be required. TVA was listed on the Joint Public Notice and is a cooperating agency with the Corps. The applicant has applied to TVA and State of Alabama for required permits. Samantha Strickland is the TVA point of contact.

j.  NA) Significant Issues of Overriding National Importance. *Explain.*

8. Compensation and other mitigation actions.

a. Compensatory Mitigation

(1) Is compensatory mitigation required?  yes  no [If "no," do not complete the rest of this section]

(2) Is the impact in the service area of an approved mitigation bank?  yes  no

(i) Does the mitigation bank have appropriate number and resource type of credits available?  yes  no

(3) Is the impact in the service area of an approved in-lieu fee program?  
 yes  no

(i) Does the in-lieu fee program have appropriate number and resource type of credits available?  yes  no

(4) Check the selected compensatory mitigation option(s):

- mitigation bank credits
- in-lieu fee program credits
- permittee-responsible mitigation under a watershed approach
- permittee-responsible mitigation, on-site and in-kind
- permittee-responsible mitigation, off-site and out-of-kind

(5) If a selected compensatory mitigation option deviates from the order of the options presented in §332.3(b)(2)-(6), explain why the selected compensatory mitigation option is environmentally preferable. Address the criteria provided in §332.3(a)(1) (i.e., the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed, and the costs of the compensatory mitigation project):

(6) Other Mitigative Actions

9. General evaluation criteria under the public interest review. We considered the following within this document:

- a. The relative extent of the public and private need for the proposed structure or work. (e.g. Public benefits include employment opportunities and a potential increase in the local tax base. Private benefits include land use and economic return on the property; for transportation projects benefits include safety, capacity and congestion issues.) *Explain.*
- b.  There are no unresolved conflicts as to resource use.  
 There are unresolved conflicts as to resource use. One or more of the alternative locations and methods described above are reasonable or practicable to accomplish the objectives of the proposed structure or work but are not being accepted by the applicant.  
 There are unresolved conflicts as to resource use however there are no practicable reasonable alternative locations and methods to accomplish the objective of the purposed work.) *Check the appropriate box, delete the statements that do not apply and explain.*
- c. The extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public, and private uses to which the area is suited.

- Detrimental impacts are expected to be minimal although they would be permanent in the construction area. The beneficial effects associated with utilization of the property would be permanent. *Explain.*

- d. Special Conditions Consideration (*include rationale for each required condition/explanation for requiring no special conditions*):  yes  no

### SPECIAL CONDITIONS

1. The work must be in accordance with the plans attached to this permit and any changes to the plans must be approved in advance by this office. *Rationale: Permit compliance [33 CFR 326.4(d)]*
2. You must have a copy of this permit available on-site and ensure all contractors are aware of its conditions and abide by them. *Rationale: Recommended at 33 CFR 325.*
3. The permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States. *Rationale: Recommended at 33 CFR 325.*
4. Install and maintain a warning sign upstream of pipeline crossing which may be easily seen from the center of Limestone Creek. Sign should state on Line 1 – Boaters Warning; Line 2 – Aerial Pipeline Crossing Ahead; Line 3 – Port Around; Line 4 – City of Huntsville – Telephone Number. Lettering should be black on a white background. Line 1 should be 3 inch lettering and lines 2-4 should be 2 inch lettering. The sign panel should not exceed 8' x 4'. *Rationale: Required Corps Policy Section 10 Utility Line Crossings and for safety by notifying potential boaters traveling downstream of approaching safety hazard (pipeline crossing).*
5. The Corps does not authorize you to take an endangered species, in particular the Armored snail (*Marstonia pachyta*) or Slender campeloma (*Campeloma decampi*). In order to legally take a listed species, you must have separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permit, or a Biological Opinion (BO) under ESA Section 7, with "incidental take" provisions with which you must comply). The enclosed U.S. Fish and Wildlife Service (USFWS) BO contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" that is also specified in the BO. Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your Corps permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA.
6. You must contact the Regulatory Office (Gary Davis at 256-350-5620) to arrange a pre-construction meeting with you, your contractors, and representatives from this office prior to any work in the waterway

10. Determinations.

a. Public Hearing Request:

NA

I have reviewed and evaluated the requests for a public hearing. There is sufficient information available to evaluate the proposed project; therefore, the requests for a public hearing are denied.

b. Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit will not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps' continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons a conformity determination is not required for this permit action.

c. Relevant Presidential Executive Orders.

(1) EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians.

This action has no substantial direct effect on one or more Indian tribes.  
*Explain, if appropriate.*

(2) EO 11988, Floodplain Management.

Not in a floodplain.

Alternatives to location within the floodplain, minimization, and compensation of the effects were considered above.

(3) EO 12898, Environmental Justice. In accordance with Title III of the Civil Right Act of 1964 and Executive Order 12898, it has been determined that the project would not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities.

(4) EO 13112, Invasive Species.

There were no invasive species issues involved.

The evaluation above included invasive species concerns in the analysis of impacts at the project site and associated compensatory mitigation projects.

Through special conditions, the permittee will be required to control the introduction and spread of exotic species.

CELRN-OP-F/W

Application LRN-2011-00100

SUBJECT: Department of the Army Environmental Assessment and Statement of Findings for the Above-Numbered Permit Application

- (5) EO 13212 and 13302, Energy Supply and Availability.
- The project was not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety.
  - The review was expedited and/or other actions were taken to the extent permitted by law and regulation to accelerate completion of this energy-related (including pipeline safety) project while maintaining safety, public health, and environmental protections.

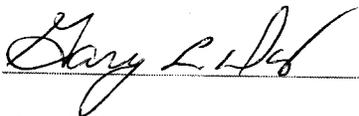
b. Finding of No Significant Impact (FONSI). Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

c. Compliance with 404(b)(1) guidelines.  NA

Having completed the evaluation in paragraph 5, I have determined that the proposed discharge  complies/ does not comply with the 404(b)(1) guidelines.

d. Public Interest Determination: I find that issuance of a Department of the Army permit  is not/ is contrary to the public interest.

**PREPARED BY:**



Date: 08 May 2014

Gary L. Davis  
Regulatory Specialist, Western Regulatory Field Office  
Operations Division  
Nashville District

**REVIEWED AND APPROVED BY:**



Date: 28 May 2014

Forrest E. McDaniel  
Acting Chief, Western Regulatory Section  
Operations Division  
Nashville District