

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 13-50, Appendix A.

APPLICANT: Shaw Industries Group, Inc.

WATERWAY & LOCATION: Unnamed Tributary of Poplar Springs Branch, Marion County, Tennessee

LATITUDE & LONGITUDE: USGS Quadrangle: Galen, TN.
Latitude: 36-59-59.9; Longitude: -85-42-33.8

PROJECT PURPOSE:

Basic: Expand existing manufacturing plant.

Overall: The work would consist of stream fill, stream relocation and wetland fill associated with the expansion of an existing manufacturing plant.

Water Dependency Determination: The project is not water dependent.

PROPOSED WORK: The proposed work consists of the expansion of the existing Shaw hardwood floor manufacturing facility onto an adjacent 13 acre tract in South Pittsburg, Tennessee. The plant expansion would permanently fill 0.16 acres of wetlands and impact 943 linear feet of an intermittent Unnamed Tributary of Poplar Springs Branch.

Avoidance and Minimization Information: The applicant has designed the project to avoid impacts to on-site streams and wetlands to the extent practicable.

Stream Compensatory Mitigation: Mitigation for the 943 linear feet of stream impacts would be handled by payment to the Tennessee Stream Mitigation Program (TSMP) at a 1:1 ratio.

Wetland Compensatory Mitigation: Mitigation for the 0.16 acre of wetland impacts would be handled by purchasing 0.32 credits (2:1 ratio) at the Sequatchie Valley Wetland Mitigation Bank.

EXISTING CONDITIONS: The proposed project is located in the extreme southern portion

of Marion County, Tennessee. This portion of the county is located within the Sequatchie Valley subecoregion of the Southwestern Appalachians Ecoregion. The area is characterized by structural association with an anticline, where erosion of broken rock to the south of the Crab Orchard Mountains scooped out the linear valley. The open, rolling valley floor, 600-1000 feet in elevation, is generally 1000 feet below the top of the Cumberland Plateau. A low, central chert ridge separates the west and east valleys of Mississippian to Ordovician-age limestones, dolomites, and shales. Similar to parts of the Ridge and Valley, this is an agriculturally productive region, with areas of pasture, hay, soybeans, small grain, corn, and tobacco. The proposed plant expansion site has been previously cleared due to the presence of secondary tree growth. The banks of the unnamed tributary are moderately sloped. The adjacent woods areas are dominated by Willow oak, Red maple, Black gum, Sweetgum, Water oak, American elm, and Shagbark hickory. Plant communities found in the area are characteristic of communities formed over limestone and sandstone. Different communities may develop on different limestone and sandstone strata. Forested habitats provide food, cover, and nesting opportunities for numerous mammals, including, deer, fox, rabbits, squirrels, and other rodents, as well as numerous reptiles, native birds, and an assortment of insects.

2. Authority:

- a. 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).
- b. The Tennessee Valley Authority (TVA) approval under Section 26a of the TVA Act. TVA is a cooperating agency.

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. The proposed project is an area project, not a corridor 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. Since the project is an expansion of the existing Shaw Industries manufacturing plant, the existing location of the facility has affected the location where the facility would be constructed. The interior of the existing plant is already optimized and designed in a manner that the location of the addition must be situated so that these processes are not interrupted, which necessitates expanding to the northeast of the existing plant.

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

proposed work would result in filling and relocating 943 linear feet of an Unnamed Tributary of Poplar Springs Branch. The unnamed tributary would be relocated to the north of the proposed expansion into 1,162 feet of new channel which is 219 feet longer than the existing reach. In addition, 0.16 acres of wetlands would be filled and be mitigated through the purchasing of 0.32 mitigation credits (2:1 ratio) at an approved wetland mitigation bank.

(iv) The extent of cumulative Federal control and responsibility. The USACE is responsible for authorizing permits for the discharge of dredge or fill material into the waters of the United States under Section 404 of the Clean Water Act.

(2) Determined scope: The discharge of material fill material associated with the filling and relocating of the unnamed tributary and the wetland fill is part of an expansion of an existing Shaw Industries manufacturing plant. The activity is not a corridor type project. Since the stream fill and relocation and the wetland fill and the plant expansion are intertwined, the scope is the entire footprint of the expansion area.

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.

(2) Determined scope: The determined scope is defined as the entire footprint of the expansion area including all uplands, existing waters and relocated waters.

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 determined scope is defined as the entire footprint of the expansion area, including all uplands, existing waters and relocated waters.

d. Public notice comments: NA - See Appendix B

(1) The public also provided comments at public hearing, public meeting, and/or *Explain*.

(2) Commenters and issues raised:

Name:	Issue:
The United Keetoowah Band of Cherokee Indians in Oklahoma- Email dated 15 December 2013	The United Keetoowah Band of Cherokee Indians in Oklahoma has reviewed the project and has no comments or objections to the project.
TN Historical Commission (Commission)- Letter Dated 6 January 2014; Letter Dated 13 March 2014	In their 6 January 2014, letter, the Commission states they would comment further upon receipt of the archaeological report. Until such time, Section 106 has not been met. In their follow-up letter dated 13 March 2014, the Commission stated their concurrence with USACE that the project as currently proposed will not adversely affect any property that is eligible for listing in the National Register of Historic Places. The Commission goes on to state they have no objection to the implementation of the project.
United States Fish and Wildlife Service (Service)-Letter dated January 10, 2014	The Service states previous coordination in regards to potential impacts to Indian bat (<i>Myotis sodalis</i>) summer roosting habitat indicates only a few trees were marginally suitable and the trees would be cleared between October 15 and March 31. The Service agrees that the proposed species protection measures would result in minor level of impacts to the Indiana bat. The Service adds this adequately address potential direct, indirect and cumulative effects upon the Indiana bat. The Service concurred with USACE's "not likely to adversely affect" determination for the Indiana bat would be appropriate. The Service goes on to state that based on their records and the best information available at this time, it is their belief that there are no federally-listed or proposed endangered or threatened plant or animal species in the impact area of the project, and that

	requirements of Section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. The Service does not anticipate significant adverse impacts to fish and wildlife or their habitats as a result of this project and has no objection to the issuance of permit for the work.
Tennessee Department of Environment and Conservation, Division of Water Resources (TDEC)- Email letter dated 17 January 2014	TDEC issued water quality certification on 17 January 2014.

- (3) Site was/ was not visited by the Corps to obtain information in addition to delineating jurisdiction. 20 November 2013, Appendix C.
- (4) Issues identified by the Corps: Stream Fill and relocation and Wetland Fill
- (5) Issues/comments forwarded to the applicant. NA/ Yes. The issues/comments to Public Notice 13-50 were forwarded by letter to the applicant on 22 January 2014.
- (6) Applicant replied/provided views. NA/ Yes. The agent replied to the comments by a letter dated 29 January 2014. The agent responded by saying they had received the comments of Public Notice 13-50. The agent noted a cultural resources survey had been conducted and the reports sent to the Corps, Tennessee State Historic Preservation Office and to TVA. The agent concluded that the clearing of trees would occur between October 15 and March 31 to avoid roosting Indian bats, See Appendix D.
- (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: Not Water dependent.
 - 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 Fill, Stream Relocation and Wetland Fill	943 feet of direct permanent impact to the Unnamed Tributary of Poplar Springs Branch and filling of 0.16 acres of wetland.

- d. Off-site locations and configuration(s) for each: Shaw Industries did not consider off-site alternatives. In 1992, Shaw Industries purchased the plant from Salem Carpet Mills. The plant is optimal because it is located adjacent to major north-south, east-west interstate distribution network (I-24, I-59, and I-75). In 2004, Shaw closed the plant to convert it to a state of the art engineering hardwood flooring manufacturing facility. After the multi-million dollar investment was complete, the plant was reopened in 2006 to begin producing proprietary engineered hardwood flooring. The South Pittsburg, Tennessee Plant site is the preferred alternative because the site/plant is already owned by Shaw Industries and the feasibility of expanding the existing operations of the facility already designed to produce this product. Also, the property has the available room on-site to accommodate the proposed expansion facility, and would not require acquisition of any additional property. Finally, the plant site produces the same engineered hardwood flooring product that would be manufactured in the proposed expansion facility, promoting an integrated streamlined manufacturing process.

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: N/A

Description:	Comparison to criteria:
The Minimal Water Impact Alternative	In designing the proposed expansion, the existing Plant needed to remain operational through the construction of the expansion, including loading and unloading areas (southeastern and southwestern sides of building). Additionally, the interior of the existing plant is already optimized and designed in a manner that the location of the expansion must be situated so that these processes are not interrupted, which necessitates expanding to the northeast of the existing plant. This area is available to the northeast of the existing plant since the area south and southeast of the plant is primarily 100-and 500-year floodplain. Also, since capacity and product demand are the drivers behind sizing the expansion footprint, any plant design smaller than 160,000 ft ² would not fulfill

	<p>the maximum production capacity needed. A smaller facility, such as a 80,000 ft² expansion would allow for a reduced production capacity. This alternative and footprint would be added to the northeast side of the plant but would not be able to meet maximum capacity demands. Therefore, another building expansion (80,000 ft² to 100,000 ft² addition) would be required on-site to meet the maximum capacity. The Minimal Water Impact Alternative would be an impact of 668 feet of stream impacts and 0.15 acres of wetlands impacts. Mitigation for the 668 feet of stream impacts would be handled by payment to the TSMP at a 1:1 ratio. However, the expansion of the plant again to the northeast would be required in several years resulting in additional fill impacts to 275 feet of stream channel and an additional 0.10 acre of wetland fill. The total cumulative impacts are equal to those proposed in the Preferred Alternative. Additionally, potential impacts to summer roosting habitat for the Indiana bat were also evaluated by Geosyntec at the request of USFWS and the field evaluation concluded that marginal summer roost habitat may exist in select trees on-site but that the proposed development activities would not be likely to adversely affect the Indiana bat due to construction and land clearing being timed to occur in non-summer roosting periods. The social and economic benefits resulting from the proposed expansion site include, but would not be limited to increases in jobs, property values, local and state tax revenues, and economic business development. However, the total jobs produced by this expansion would be nearly a half of the Preferred Alternative.</p>
<p>Preferred Alternative</p>	<p>The preferred alternative is much like the minimal water impact alternative in that designing the proposed expansion, the existing Plant needed to remain operational through the construction of the expansion, including loading and unloading areas. The interior of the existing plant is already optimized and designed in a manner that the location of the addition must be situated so that these processes are not interrupted, which necessitates expanding to the northeast of the existing plant. This area is available to the northeast of the existing plant since the area south and southeast of the plant is primarily 100- and</p>

	<p>500-year floodplain. Since capacity and product demand are the drivers behind sizing the expansion footprint, the 160,000 ft² plant design is the preferred alternative and would fulfill the maximum production capacity needed. The preferred alternative would impact 943 feet of stream channel and 0.16 acres of wetlands initially. Mitigation for the 943 feet of stream impacts would be handled by payment to the TSMP at a 1:1 ratio. In addition, the applicant would relocate 943 feet of stream into a new 1,162 feet channel to the north of the facility. Impacts to Indian bat habitat would be similar to the minimal water impact alternative in that potential impacts to summer roosting habitat was evaluated by Geosyntec at the request of USFWS. The field evaluation concluded that marginal summer roost habitat may exist in select trees on-site but that the proposed development activities would not be likely to adversely affect the Indiana bat due to construction and land clearing timed to occur in non-summer roosting periods. The social and economic benefits would be similar to the minimal water impact alternative result from locating the proposed expansion would include increases in jobs, property values, local and state tax revenues, and economic business development. This alternative would realize the full job potential produced by the plant expansion.</p>
--	--

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

Description:	Comparison to criteria:
No Action	No impacts to waters of the US
The no action alternative equates to denial of the DA permit or the applicant modifying the proposal such that a DA permit is not required.	The no action alternative would result in no impacts to the stream or wetlands. However, the no action alternative would not meet the purpose and need of the proposed project.

Alternatives not practicable or reasonable: *Describe/explain.* Within the alternatives analysis provided by the applicant, the applicant explained why further avoidance and minimization is not practicable or feasible.

No-Build Alternative:

1. Feasibility of locating the project on the site: The No-Build Alternative would result in the project not being built; therefore, there would be no need to identify a potential site for the project. Additionally, the No-Build Alternative would not meet the purpose and need for the proposed project.
2. Environmental consequences to locating on the site: The No-Build Alternative would result in the project not being built and therefore no aquatic or environmental resource impacts would result.
3. Increase or decrease in the social and economic benefits of the project by locating at the site: The No-Build Alternative would likely result in a net decrease in economic benefits from the status quo. Not building the project would remove the possibility of 25 new full-time jobs from the community and the economic benefit to the community in retail services, real estate, and lodging from construction of the facility and the temporary work force employed in the area for the duration of construction as well as the permanent positive impact 25 new jobs would also contribute. Additionally, the No-Build Alternative would not support Shaw's ability to meet product demand, maintain market share, and would result in lost revenues based on consumer demand for the product.

Minimal Water Impact Alternative:

1. Feasibility of locating the project on the site: In designing the proposed expansion, the existing plant needs to remain operational through the construction of the expansion, including loading and unloading areas (southeastern and southwestern sides of building). Additionally, the interior of the existing plant is already optimized and designed (process engineered) in a manner that the location of the addition must be situated so that these processes are not interrupted, which necessitates expanding to the northeast of the existing plant (as in this and the Preferred Alternative below). This area is available to the northeast of the existing plant since the area south and southeast of the plant is primarily 100- and 500-year floodplain. Also, since capacity and product demand are the drivers behind sizing the expansion footprint, any plant design smaller than 160,000 ft² would not fulfill the maximum production capacity needed. A smaller facility, such as a 80,000 ft² expansion would allow for a reduced production capacity. This alternative and footprint would also be added to the northeast side of Plant HW but would not be able to meet maximum capacity demands. Therefore, another building expansion (80,000 ft² to 100,000 ft² addition) would be required on-site to meet the maximum capacity.
2. Environmental consequences to locating on the site: The environmental consequences of building a smaller footprint (80,000 ft²) than the planned

160,000 ft² would still result in the plant expansion extending northeast over an unnamed tributary and would necessitate its relocation to the northeast of the new building site. The relocated channel length would be approximately 668 feet which is 350 feet less than the Preferred Alternative. Additionally, 0.15 acres of wetlands would be filled from the proposed plant expansion and balancing cut/fill for the 100-year and 500-year floodplain zones on-site. The environmental consequences would be minimized by mitigating for impacts to 668 feet of the unnamed tributary by purchase of in-lieu fee credits from the Tennessee Stream Mitigation Program. The 0.15 acres of wetland impacts would be mitigated through the purchase of 0.30 mitigation credits from the Sequatchie Valley Mitigation Bank. However, the expansion of the plant again to the northeast would be required in several years resulting in fill impacts to 275 feet of the unnamed tributary and impact 0.1 acres of wetlands. The total cumulative impacts are equal to those proposed in the Preferred Alternative. Additionally, potential impacts to summer roosting habitat for the Indiana bat were also evaluated by Geosyntec at the request of USFWS and the field evaluation concluded that marginal summer roost habitat may exist in select trees on-site but that the proposed development activities would not be likely to adversely affect the Indiana bat due to construction and land clearing being timed to occur in non-summer roosting periods.

3. Increase or decrease in the social and economic benefits of the project by locating at the site: Many social and economic benefits would result from locating the proposed expansion site on Shaw's South Pittsburg, Tennessee facility. These include, but would not be limited to increases in jobs, property values, local and state tax revenues, and economic business development. However, the total jobs produced by this expansion would be nearly a half of the Preferred Alternative.

Preferred Site Alternative – South Pittsburg, TN Plant HW Site:

The Shaw South Pittsburg location was previously a carpet yarn mill. Shaw purchased this property from Salem Carpet Mills in 1992. The facility closed in 2004. In 2006, Shaw reopened this plant as an engineered hardwood floor manufacturing facility.

1. Feasibility of locating the project on the site: The South Pittsburg, Tennessee plant site is the preferred alternative because the site/plant is already owned by Shaw and the feasibility of expanding the existing operations of the facility already designed to produce this product. First, this property has the available room on-site to accommodate the proposed expansion facility, and would not require acquisition of any additional property. Secondly, the plant site produces the same engineered hardwood flooring product that would be manufactured in

the proposed expansion facility, promoting an integrated streamlined manufacturing process.

2. Environmental consequences to locating on the site: By locating on the Preferred Site, 943 feet of an unnamed tributary would be filled and relocated into a new 1,162 feet channel to the north of the facility. Additionally, 0.16 acres of wetlands would be filled from the proposed plant expansion and balancing cut/fill for the 100-year and 500-year floodplain zones on-site. The environmental consequences would be minimized by mitigating for impacts to 943 feet of the unnamed tributary by purchase of in-lieu fee credits from the Tennessee Stream Mitigation Program. The 0.16 acres of wetland impacts would be mitigated through the purchase of 0.32 mitigation credits from the Sequatchie Valley Mitigation Bank. However, the relocation of the unnamed tributary has been designed with an active floodplain that would likely develop wetlands similar to the proposed impacted wetlands along the existing unnamed tributary and replace the impacted wetland habitat on-site. Additionally, potential impacts to summer roosting habitat for the Indiana bat were also evaluated by Geosyntec at the request of USFWS and the field evaluation concluded that marginal summer roost habitat may exist in select trees on-site but that the proposed development activities would not be likely to adversely affect the Indiana bat due to construction and land clearing timed to occur in non-summer roosting periods.
3. Increase or decrease in the social and economic benefits of the project by locating at the site: Many social and economic benefits would result from locating the proposed expansion site on Shaw's South Pittsburg, Tennessee facility. These include, but would not be limited to increases in jobs, property values, local and state tax revenues, and economic business development.
- h. 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. The South Pittsburg, Tennessee plant site is the preferred alternative because the site/plant is already owned by Shaw and the feasibility of expanding the existing operations of the facility already designed to produce this product. The property has the available room on-site to accommodate the proposed expansion and would not require acquisition of any additional property and the existing plant produces the same engineered hardwood flooring product that would be manufactured in the proposed expansion facility, promoting an integrated streamlined manufacturing process. The environmental impacts by locating on the Preferred Site would entail the filling of 943 feet of an unnamed tributary and relocate the unnamed tributary to the north of the proposed expansion into 1,162 feet of new channel which is 219 feet longer than the existing reach. Additionally, 0.16 acres of wetlands would be filled from the proposed plant expansion and balancing cut/fill for the 100-year and 500-year floodplain zones on-site. The environmental consequences would be

minimized by mitigating for impacts to 943 feet by purchase of in-lieu fee credits from the Tennessee Stream Mitigation Program. The 0.16 acres of wetland impacts would be mitigated through the purchase of 0.32 mitigation credits from the Sequatchie Valley Mitigation Bank. The relocated unnamed tributary has been designed with an active floodplain that would likely develop wetlands similar to the proposed impacted wetlands along the existing unnamed tributary and replace impacted wetland habitat on-site. Additionally, potential impacts to summer roosting habitat for the Indiana bat were also evaluated by Geosyntec at the request of USFWS and the field evaluation concluded that marginal summer roost habitat may exist in select trees on-site but that the proposed development activities would not be likely to adversely affect the Indiana bat due to construction and land clearing timed to occur in non-summer roosting periods. Increase or decrease in the social and economic benefits of the project by locating at the site: Many social and economic benefits would result from locating the proposed expansion site on Shaw's South Pittsburg, Tennessee facility. These include, but would not be limited to increases in jobs, property values, local and state tax revenues, and economic business development.

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

a. Substrate (40 CFR Section 230.20): The proposed manufacturing plant expansion project would result in the discharge of fill material into approximately 943 linear feet of the Unnamed Tributary of Poplar Springs Branch and 0.16 acres of wetland. To mitigate for the 943 feet of stream impacts, the applicant would provide compensatory mitigation through the purchase of stream credits from the Tennessee Stream Mitigation Program. Mitigation for the 0.16 acre of wetland impacts would be handled by purchasing 0.32 credits (2:1 ratio) at the Sequatchie Valley Wetland Mitigation Bank. The fill would permanently impact the complex physical, chemical, and biological characteristics of the substrate of the stream. Additionally, the applicant would relocate the unnamed tributary to the north of the proposed expansion into 1,162 feet of new channel which is 219 feet longer than the existing reach. Therefore, the USACE has determined that the proposed project would have a long term minor effect on the stream's substrate.

FINDINGS: No Effect Negligible Major (Significant)
 Short Term Minor Long Term Minor

b. Suspended Particulates/Turbidity (40 CFR Section 230.21): Erosion control methods would be used in and around the proposed impacted stream and relocated stream and plant expansion area to stabilize and control the unconsolidated material. However, during the initial rains there would likely be minor runoff and an increase in turbidity and suspended particulates in the surrounding areas, but would be minimized by compliance with TDEC's permit. After a few weeks, the fill material would have had a chance to compact and runoff would not be a problem and turbidity levels should return to pre-construction levels. All work on the relocation stream channel would be conducted in the dry or during low flow periods. Plugs at the upper and lower ends of the new relocated stream channel would remain in place until the entire

channel has been completed and has become stabilized to reduce the amount of turbidity in the waterway. Therefore, the USACE has determined that the proposed project would have short term minor effect on suspended particulates/turbidity.

FINDINGS: **No Effect** **Negligible** **Major (Significant)**
 Short Term Minor **Long Term Minor**

c. Water (40 CFR Section 230.22): The discharge of fill material into the unnamed tributary from the stream relocation would change the chemistry and the physical characteristics of the stream being impacted and that of the water, through the introduction of chemical constituents in suspended or dissolved form. Although erosion control methods would be used in and around the impoundment and reservoir construction site to stabilize and control the unconsolidated material, during the initial rains there would likely be minor runoff and an increase in turbidity and suspended particulates in the surrounding areas. After the fill material has had a chance to compact, the runoff would not be a problem and turbidity levels should return to pre-construction levels. Overall, adverse water quality impacts would be minimal. TDEC issued water quality certification on 17 January 2014. Therefore, the USACE has determined that the proposed project would have short term minor effect on water.

FINDINGS: **No Effect** **Negligible** **Major (Significant)**
 Short Term Minor **Long Term Minor**

d. Currents Patterns & Water Circulation (40 CFR Section 230.23): The discharge of fill material into the Unnamed Tributary of Poplar Springs Branch would modify the current patterns and water circulation by obstructing the flow, changing the direction of the water flow, velocity of water flow, and the water circulation. The dimensions unnamed tributary would be permanently changed. Approximately 943 linear feet of an unnamed tributary would be filled and relocated to the north of the proposed expansion into 1,162 feet of new channel which is 219 feet longer than the existing reach. The relocated channel would mimic the existing channel as much as possible. Therefore, the USACE has determined that the proposed project would have a long term minor effect on the currents patterns and water circulation of the impacted stream.

FINDINGS: **No Effect** **Negligible** **Major (Significant)**
 Short Term Minor **Long Term Minor**

e. Normal Water Fluctuations (40 CFR Section 230.24): The discharge of fill material would alter the normal water-level fluctuation pattern of the area. Such water level modifications may alter erosion or sedimentation rates, aggravate water temperature extremes, and upset the nutrient and dissolved oxygen balance of the aquatic ecosystem. The project area is not in the floodway, but contains some areas in the 100-year and 500-year floodplain. In design, all efforts were made to avoid and minimize fill and balance cut for both floodplain zones. The relocated channel would be constructed in such a manner as to mimic the channel that is being filled in width and depth. Therefore, the USACE has determined that the proposed

project would have long term minor effect on the normal water fluctuations of the impacted stream.

FINDINGS: No Effect Negligible Major (Significant)
 Short Term Minor Long Term Minor

f. Salinity Gradients (40 CFR Section 230.25): Salinity gradients would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on salinity gradients.

FINDINGS: No Effect Negligible Major (Significant)
 Short Term Minor Long Term Minor

2. Part V, Subpart D – Potential Effects on Biological Characteristics of the Aquatic Ecosystem:

a. Threatened or Endangered Species (40 CFR Section 230.30): The Service states previous coordination in regards to potential impacts to Indian bat (*Myotis sodalis*) summer roosting habitat indicates only a few trees were marginally suitable and the trees would be cleared between October 15 and March 31. The Service agrees that the proposed species protection measures would result in minor level of impacts to the Indiana bat. The Service adds this adequately address potential direct, indirect and cumulative effects upon the Indiana bat. The Service concurred with USACE that a “not likely to adversely affect” determination for the Indiana bat would be appropriate. The Service goes on to state that based on their records and the best information available at this time, it is their belief that there are no federally-listed or proposed endangered or threatened plant or animal species in the impact area of the project, and that requirements of Section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. The Service does not anticipate significant adverse impacts to fish and wildlife or their habitats as a result of this project and has no objection to the issuance of permit for the work. The USACE has determined that the proposed project would have no effect on threatened and endangered species due to a lack of habitat.

FINDINGS: No Effect May Affect Not Likely to Adversely Affect
 Adverse Effect Jeopardy

b. Fish, Crustaceans, Mollusks, and Other Aquatic Organisms in Food Web (40 CFR Section 230.31): During construction, some organisms would be covered by the discharge of fill material into the unnamed tributary. The organisms would not have a chance to relocate and recolonize. The USACE has determined that the proposed project would have a long term minor impact on fish, crustaceans, mollusks, and other aquatic organisms in the food web.

FINDINGS: No Effect Negligible Major (Significant)
 Short Term Minor Long Term Minor

c. Other Wildlife (40 CFR Section 230.32): Direct effects to wildlife resources would be expected during construction activities within the project footprint. The mechanical equipment used to clear the land for the proposed plant expansion could injure or kill individual wildlife species caught by the equipment. In addition, the noise produced by the mechanical equipment may have short-term impacts to wildlife species in and around the project area by forcing these species away from the immediate area. Once the work at the site has been completed, noise levels should decrease to normal levels for this location and wildlife may return. Indirect effects to wildlife resources would be expected due to displacement of wildlife and habitat loss. The proposal would produce some permanent habitat alteration, but this is very small compared to the total forested land available. The proposal may temporarily change the movement of wildlife in wooded areas due to the cut vegetation; however, the majority of these species could move to the forested areas in adjacent areas to the proposed project site. Areas that are cleared and not used would gradually change through natural succession providing a variety of habitat to species over time. The USACE has determined that the proposed project would have a long term minor impact on other wildlife factors.

FINDINGS: No Effect Negligible Major (Significant)
 Short Term Minor Long Term Minor

3. Part V, Subpart E – Potential Effects on Special Aquatic Sites:

a. Sanctuaries and Refuges (40 CFR Section 230.40): Sanctuaries and refuges would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on sanctuaries and refuges.

FINDINGS: No Effect Negligible Major (Significant)
 Short Term Minor Long Term Minor

b. Wetlands (40 CFR Section 230.41): The proposed plant expansion would impact 0.16 acres of wetlands that are adjacent to the Unnamed Tributary of Poplar Springs Branch. Mitigation for the 0.16 acre of wetland impacts would be handled by purchasing 0.32 credits (2:1 ratio) at the Sequatchie Valley Wetland Mitigation Bank. Therefore, the USACE has determined that the proposed project would have short term minor effect on wetlands.

FINDINGS: No Effect Negligible Major (Significant)
 Short Term Minor Long Term Minor

c. Mud Flats (40 CFR Section 230.42): There are no mud flats that would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on mud flats.

FINDINGS: No Effect Negligible Major (Significant)
 Short Term Minor Long Term Minor

d. Vegetated Shallows (40 CFR Section 230.43): Vegetated shallows would not be

impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on vegetated shallows.

FINDINGS: **No Effect** **Negligible** **Major (Significant)**
 Short Term Minor **Long Term Minor**

e. Coral Reefs (40 CFR Section 230.44): Coral reefs would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on coral reefs.

FINDINGS: **No Effect** **Negligible** **Major (Significant)**
 Short Term Minor **Long Term Minor**

f. Riffle and Pool Complexes (40 CFR Section 230.45): Riffle and pool complexes would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on riffle and pool complexes.

FINDINGS: **No Effect** **Negligible** **Major (Significant)**
 Short Term Minor **Long Term Minor**

4. Part V, Subpart F – Potential Effects on Human Use Characteristics:

a. Municipal and Private Water Supplies (40 CFR Section 230.50): Municipal and private water supplies would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have a major effect on municipal and private water supplies.

FINDINGS: **No Effect** **Negligible** **Major (Significant)**
 Short Term Minor **Long Term Minor**

b. Recreational and Commercial Fisheries (40 CFR Section 230.51): Recreational and commercial fisheries would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on recreational and commercial fisheries.

FINDINGS: **No Effect** **Negligible** **Major (Significant)**
 Short Term Minor **Long Term Minor**

c. Water-related Recreation (40 CFR Section 230.52): Water-related recreation would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on water-related recreation.

FINDINGS: **No Effect** **Negligible** **Major (Significant)**
 Short Term Minor **Long Term Minor**

d. Aesthetics (40 CFR Section 230.53): The existing Shaw Industries Plant site is located on 26.3 acres, including 12.7 acre existing plant facility and 13.6 acres adjacent undeveloped site which would be used for the proposed facility expansion. The plant (building) expansion would be 3.7 acres. Approximately 943 feet of the Unnamed Tributary to Poplar Springs Branch would be filled and relocated to the north of the proposed expansion into 1,162 feet of new channel which is 219 feet longer than the existing reach. Additionally, 0.16 acres of wetlands would be filled. The site would be transformed from a wooded site with a stream to a manufacturing plant building. During construction, there would be the presence of heavy earth moving machinery and construction workers on-site working. After construction has been completed, the machinery and construction workers would leave the site and it would become a functional hardwood floor manufacturing plant. Therefore, the USACE has determined that the proposed project would have long term minor impact on aesthetics.

FINDINGS: No Effect Negligible Major (Significant)
 Short Term Minor Long Term Minor

e. Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites and Similar Preserves (40 CFR Section 230.54): Parks, national and historical monuments, national seashores, wilderness areas, research sites and similar preserves would not be impacted by the proposed activity. Therefore, the USACE has determined that the proposed project would have no effect on parks, national and historical monuments, national seashores, wilderness areas, research sites and similar preserves.

FINDINGS: No Effect Negligible Major (Significant)
 Short Term Minor Long Term Minor

f. Cultural Resources Subject to Section 106 of the National Historic Preservation Act: A Phase I cultural resources survey was conducted on the entire site by R.S. Webb & Associates in December 2013, See Appendix E. The cultural resources survey noted that archaeological site 40MI306 is located within the permit area. Site 40MI306 was identified as part of cultural resource survey associated with a TVA powerline. R.S. Webb and Associates relocated the site and undertook additional investigations. The site contains a mix of prehistoric and historic artifacts. The majority of artifacts date to the mid-20th Century and are consistent with “discard deposits”. The R.S. Webb and Associates’ report *Phase I Cultural Resources Survey Shaw Industries Plant HW Facilities Expansion South Pittsburgh, Marion County, Tennessee* recommend the site as not eligible for inclusion in the National Register of Historic Places. Based on this information, the USACE finds the site is not eligible for inclusion in the National Register of Historic Places. R.S. Webb identified five structural resources in the visual permit area. These include HS-1, a Sears kit house, HS-2 the Gonce Family Farm, the National Guard Amory, the Jasper Branch or Sequatchie Valley Railroad, and the Cedar Avenue Extension Row Houses. Webb recommends the Gonce Family Farm and the National Guard Armory as “potentially” eligible for the National Register of Historic Places. The existing Shaw Industries plant and other developments in the area already alter the setting. The expansion of the Shaw Industries plant would not introduce new elements to the landscape. Therefore the expansion would not alter the location, design, setting, materials, workmanship, feeling, or association of

the Gonce Family Farm or the National Guard Armory. Based on the Phase I survey, USACE finds a 'no adverse effect' to historic properties at the site. The Tennessee Historical Commission stated their concurrence with USACE that the project as currently proposed will not adversely affect any property that is eligible for listing in the National Register of Historic Places. The Tennessee Historical Commission goes on to state they have no objection to the implementation of the project.

FINDINGS: No Effect No Adverse Effect Adverse Effect

a. Factual determinations:

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

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). 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, aesthetic, 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Air Quality
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Noise

7. Effects, policies and other laws:

a. NA

Public Interest Factors:

Factor	Discussion
Conservation	There are no conservation issues that would be impacted by the proposed activity.
Economics	The Shaw Industries plant expansion would provide a benefit for the contractor(s) performing the work. Construction activities would provide a minor short-term economic stimulus to the southern portion of Marion County and northern Jackson County, Alabama from temporary employment and related sales of goods and services. The plant expansion would be economically beneficial to Shaw Industries as the expansion would provide an avenue to produce more of their proprietary engineered hardwood product. In turn, Shaw Industries can expand their workforce by providing additional jobs to the area, including Jackson County, Alabama. With the additional product being produced, Shaw would need additional trucks to ship the product to the consumers. There would be an increase in property values and an increase the tax base for Marion County.
Aesthetics	The existing Shaw Industries Plant site is located on 26.3 acres, including 12.7 acre existing plant facility and 13.6 acres adjacent undeveloped site which would be used for the proposed facility expansion. The plant expansion would be 3.7 acres. Approximately 943 feet of the Unnamed Tributary to Poplar Springs Branch would be filled and relocated to the north of the proposed expansion into 1,162 feet of new channel which is 219 feet longer than the existing reach. Additionally, 0.16 acres of wetlands would be filled. The site would be transformed from a wooded site with a stream to a manufacturing plant building. During construction, there would be the presence of heavy earth moving machinery and construction workers on-site working. After construction has been completed, the machinery and construction workers would leave the site and it would become a functional hardwood floor manufacturing plant. .
General Environmental Concerns	General Environmental Concerns were not raised during the public review of the proposed action.
Wetlands	The proposed plant expansion would impact 0.16 acres of wetlands that are adjacent to the Unnamed Tributary of Poplar Springs Branch. Mitigation for the 0.16 acre of wetland impacts would be handled by purchasing 0.32 credits (2:1 ratio) at the Sequatchie Valley Wetland Mitigation Bank.
Historic properties	A Phase I Cultural Resources survey was conducted on the site in December 2013. After reviewing the survey, the Tennessee Historical Commission concurred with USACE that the project as currently proposed will not adversely affect any property that is eligible for

	listing in the National Register of Historic Places. The Tennessee Historical Commission went on to state they have no objection to the implementation of the project.
Fish and wildlife values	Direct effects to wildlife resources would be expected during construction activities within the project footprint. Any vegetation removed as a result of construction activities would result in a loss of wildlife habitat. Mortality of individual wildlife species may occur during the construction. In addition, the noise produced by the mechanical equipment performing the work may have short-term impacts to wildlife species in and around the project area by forcing these species away from the immediate area. Indirect effects to wildlife resources would be expected due to displacement of wildlife and habitat loss. The proposal may temporarily change the movement of wildlife in wooded areas due to the cut vegetation; however, the majority of these species could move to the forested areas in adjacent areas to the proposed project site. These areas would gradually change through natural succession providing a variety of habitat to species over time.
Flood hazards	Flood hazard issue was noted during the design and layout of the site. Shaw Corporate Engineering calculated the flood storage analysis. During design and grading plan preparation, the site layout was designed such that the proposed storage in the 100-year was increased by 2.74 acre-feet (ac-ft), and the 500-year storage was decreased by 0.38 ac-ft.
Floodplain values	Flood elevations for the project site were identified on Federal Emergency Management Administration Digital Flood Insurance Rate Map flood maps 47115C0215D and 47115C0355D. These maps were recently updated in January 2012. According to TVA, the floodplain elevations at the Shaw Plant the 100-year floodplain elevation were reported as 612.8 ft (NGVD 1929); the 500-year floodplain was reported as 615.70 ft (NGVD 1929). The project area is not in the floodway, but contains some areas in the 100-year and 500-year floodplain. In design, all efforts were made to avoid and minimize fill and balance cut for both floodplain zones. Shaw Corporate Engineering calculated the flood storage analysis. During design and grading plan preparation, the site layout was designed such that the proposed storage in the 100-year was increased by 2.74 acre-feet (ac-ft), and the 500-year storage was decreased by 0.38 ac-ft.
Land use	The proposed project site is currently a wooded area with an unnamed tributary flowing through the site. The proposed activity would require that the site be cleared of vegetation and the unnamed tributary filled and relocated to the northern portion of the property. The site would be transformed from its current use, a wooded area with an unnamed

	tributary flowing through the site, to a building (plant) that manufacture hardwood flooring.
Navigation	Navigation would not be impacted by the proposed activity.
Shore erosion and accretion	Shore erosion and accretion would not be impacted by the proposed activity.
Recreation	Recreation would not be impacted by the proposed activity.
Water supply and conservation	Water supply and conservation would not be impacted by the proposed activity.
Water quality	Section 401 Water Quality Certification issued by the Tennessee Department of Environment and Conservation indicating reasonable assurance that water quality standards would not be violated by the proposed project.
Energy Needs	Energy needs would not be impacted by the proposed activity.
Safety	It is the supervisors, contractors and their employees responsibility to use the equipment in constructing the plant expansion in accordance with the manufacturer's recommendations and all Occupational Safety and Health Administration Regulations are followed. Training guidelines set forth by the supervisors and contractors are applicable to all employees and are intended to emphasize that all employees would be trained in safety-related work practices, safe procedures, and other safety requirements, including those mandated by federal or state laws.
Food and fiber production	Food and fiber production would not be impacted by the proposed activity.
Mineral needs	Mineral needs would not be impacted by the proposed activity.
Considerations of property ownership	CE regulations at 33 CFR 320.4(g) state that authorization of work by the DA does not convey any property rights, either in real estate or material, or any exclusive privileges. Furthermore, a DA permit does not authorize any injury to property or invasion of rights or any infringement of federal, state or local laws or regulations. The applicant owns the property and has the legal right to enter and conduct the construction activities on the parcels provided the proper Federal and State permits are obtained.
Needs and welfare of the people	The work would consist of the expanding the existing Shaw Industries plant. The plant expansion would provide temporary jobs while the plant is being built and long term jobs at the plant. Shaw Industries needs the plant expansion to meet the needs of the consumers who want their product.
Air Quality	The project would have no substantial impact on the air quality of the area.
Noise	In the short term, this section of Marion County would experience an increase in noise levels from construction equipment preparing the site and the actual construction of the plant expansion. This increase

	would be short-term and there would be an immediate return to preconstruction ambient noise levels upon completion of the plant expansion. Noise created by the construction of the plant expansion should not be any higher than the noise that is currently produced by the existing plant. Therefore, the proposed plant expansion should not produce any significant direct or indirect effects on the noise levels within and around the project area.
--	---

b. Endangered Species Act:

The proposed project:

- (1) Will not affect these threatened or endangered species: Any/Endangered The Service states previous coordination in regards to potential impacts to Indiana bat summer roosting habitat indicates only a few trees were marginally suitable and they would be cleared between October 15 and March 31. The Service adds this adequately address potential direct, indirect and cumulative effects upon the Indiana bat. The Service goes on to state that based on their records and the best information available at this time, it is their belief that there are no federally-listed or proposed endangered or threatened plant or animal species in the impact area of the project, and that requirements of Section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. The Service does not anticipate significant adverse impacts to fish and wildlife or their habitats as a result of this project and has no objection to the issuance of permit for the work.
- (2) May affect, but is not likely to adversely affect: Species: Indiana bat (*Myotis sodalis*). *Explain:* Previous coordination in regards to potential impacts to Indiana bat (*Myotis sodalis*) summer roosting habitat indicates only a few trees were marginally suitable and the trees would be cleared between October 15 and March 31. The Service agrees that the proposed species protection measures would result in minor level of impacts to the Indiana bat. The Service adds this adequately address potential direct, indirect and cumulative effects upon the Indiana bat. The Service concurred with the USACE that a “not likely to adversely affect” determination for the Indiana bat would be appropriate.
- (3) Will/Will not adversely modify designated critical habitat for . *Explain.*
- (4) Is/Is not likely to jeopardize the continued existence of . *Explain.*
- (5) The Service concurred/provided (a) Biological Opinion(s).
- c. Essential Fish Habitat: Adverse impacts to Essential Fish Habitat will/will not result from the proposed project.
- 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/. In their 13 March 2014 comments, the Commission concurred with USACE that the project as currently proposed will not adversely affect any property that is eligible for listing in the National Register of Historic Places. The Commission went on to state they have no objection to the implementation of the project.

- e. Cumulative & Secondary Impacts: The geographic area for this assessment is the Poplar Springs Branch drainage area which lies within the Guntersville Lake Watershed (HUC 06030001). The site is located within the Tennessee River Subwatershed (HUC 060300010101) of the Guntersville Lake Watershed.

(1) Baseline: The Guntersville Lake Watershed is located in Northeast Alabama and southeast Tennessee. In Tennessee, the Guntersville Lake Watershed includes parts of Franklin, Grundy and Marion Counties. The majority of the land use in the water shed is forest. The Guntersville Lake Watershed flows into the Tennessee River. According to the USGS, the Guntersville Lake Watershed drains approximately 1,983 square miles, 337 miles in the State of Tennessee. In addition, there are 424.3 stream miles and 1,479 lake acres in the Tennessee portion of the watershed. The streams are affected by silvicultural and agricultural impacts including encapsulation, sedimentation, fertilizers, animal waste and other non-point source pollutions.

(2) Context: The proposed project is typical of / a precedent / very large compared to / other activities in the watershed.

(3) Mitigation and Monitoring: The project affects the following key issue(s): Approximately 943 feet of the Unnamed Tributary of Poplar Springs Branch would be filled and relocated to the north of the proposed expansion into 1,162 feet of new channel which is 219 feet longer than the existing reach. Mitigation for the 943 linear feet of stream impacts would be handled by payment to the Tennessee Stream Mitigation Program (TSMP) at a 1:1 ratio. In addition, 0.16 acres of wetlands would be filled by the proposed activity. Mitigation for the 0.16 acre of wetland impacts would be handled by purchasing credits (2:1 ratio) at the Sequatchie Valley Wetland Mitigation Bank.

- f. Corps Wetland Policy: The proposed 0.16 acres of wetland impacts would be offset by purchasing 0.32 credits (2:1 ratio) at the Sequatchie Valley Wetland Mitigation Bank.

- g. (NA) Water Quality Certification under Section 401 of the Clean Water Act has/ has not yet been issued by / Tennessee Department of

Environment and Conservation on 17 January 2014 NRS#13.226. See Appendix F.

- 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 _____ that the project is inconsistent with their CZM plan.
- i. Other authorizations:
- j. (NA) Significant Issues of Overriding National Importance: *Explain.*

8. Compensation and other mitigation actions:

Compensatory Mitigation:

- a. Is compensatory mitigation required? yes no [If “no,” do not complete the rest of this section]
- b. Is the impact in the service area of an approved mitigation bank? yes no
Does the mitigation bank have appropriate number and resource type of credits available?
yes no The Sequatchie Valley Wetland Mitigation Bank is located within the watershed of the impacts.
- c. Is the impact in the service area of an approved in-lieu fee program? yes no
Does the in-lieu fee program have appropriate number and resource type of credits available? yes no
- d. 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
- e. 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):
 - 1) Other Mitigative Actions: In addition to the compensatory mitigation, the applicant, to further minimize the stream impacts resulting from the filling of 943 feet of the unnamed tributary, would relocate the unnamed tributary to the north of the proposed expansion

into 1,162 feet of new channel which is 219 feet longer than the existing reach. The 1,162-ft long relocated channel would include a riparian buffer replanted with native vegetation in the floodplain and upland slopes. A minimum 65-foot riparian buffer (including both banks and channel) would be incorporated into the design of the relocated stream to promote riparian habitat. Native vegetation would be planted to establish the new riparian per the TDEC Erosion & Sediment Control Handbook, A Stormwater Planning and Design Manual for Construction Activities, 4th Edition, August 2012.

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 temporary employment opportunities and a safer transportation corridor. *Explain.* The proposed plant expansion would provide Shaw Industries the needed room to produce more of their in demand hardwood flooring product. The plant expansion would provide jobs during the construction of the plant and provide addition jobs within the plant after the plant expansion has been completed.
 - 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.* The applicant has shown that their preferred alternative is the least environmentally damaging practicable alternative. See number 4.
 - 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.* The permanent loss of the section of the unnamed tributary that would be relocated would be within the footprint of the plant expansion. The plant expansion would provide jobs during the construction of the plant and jobs after in the plant after construction has been completed.
 - d. Special Conditions Consideration (*include rationale for each required condition/explanation for requiring no special conditions*): yes no
 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. *Justification: 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. *Justification: Recommended at 33 CFR 325, Appendix A.*

3. Siltation and erosion control methods, such as entrenched silt fences, straw bales, rock check dams, erosion control mats, etc., shall be utilized and in place prior to commencement of any work. Appropriate methods for controlling erosion and minimizing sedimentation shall be maintained for the life of the project. Areas disturbed during construction shall be properly seeded, ripped, or otherwise stabilized as soon as practicable. *Justification: To minimize turbidity and water quality impacts.*

4. All work performed must be in accordance with the Tennessee Department of Environment and Conservation Water Quality Certification (NRS 13.226) issued 17 January 2014 including all conditions for the permitted activity. *Justification: Compliance with water quality requirements.*

5. You must provide documentation indicating the purchase of 943 mitigation credits from the Tennessee Stream Mitigation Program no later than sixty days from the date of this permit and prior to commencing any activity involving fill in the stream channel. *Justification: To ensure mitigation commensurate to impacts to the Unnamed Tributary of Poplar Springs.*

6. All stream relocation work must be conducted in the dry or during low flow periods. *Justification: Performing the work during low flow periods would minimize the amount of turbidity in the waterways and would have less of an impact to aquatic life in the stream.*

7. Plugs at the upper and lower ends of the relocated channel would remain in place until the entire channel has been completed and the relocated channel has stabilized. *Justification: Leaving the plugs in and stabilizing the upper and lower ends would insure stability of the project while the new channel is being constructed and would reduce the amount of turbidity associated with the work.*

8. You must provide documentation indicating the purchase of 0.32 mitigation credits from the Sequatchie Valley Wetland Mitigation Bank no later than sixty days from the date of this permit and prior to commencing any activity involving fill in the wetlands. *Justification: To ensure mitigation commensurate to impacts to wetlands.*

9. In the event any previously unknown cultural resources, historic or archaeological sites or human remains are uncovered or encountered while accomplishing the activity authorized by this permit, the permittee must cease all work immediately and contact local, state and county law enforcement offices (*only contact law enforcement on findings of human remains*), our office at (615) 369-7500, and the Tennessee Historical Commission at (615) 741-1588. *Justification: To ensure that the project is in full compliance with the National Historic Preservation Act and applicable state and local laws and regulations.*

10. Should new information regarding the scope and/or proposed impacts of the project become available that was not submitted to this office during our review of the proposal, you shall submit written information concerning proposed modification(s) to this office for review and approval. *Justification: This is in the public's interest so that if new information concerning the project becomes available, the permit can be modified to reflect the new information.*

11. Section 7 obligations under Endangered Species Act shall be reconsidered if new information reveals impacts of the proposed project that may affected federally listed species or critical habitat in a manner not previously considered, the proposed project is subsequently modified to include activities which were not considered during Section 7 consultation with the USFWS, or new species are listed or critical habitat designated that might be affected by the proposed project . *Justification: To ensure that the project is in full compliance with the Endangered Species Act at the time of permit issuance and any subsequent modifications to the permit.*

12. The permittee shall clear trees only between the dates of October 15 and March 31. *Justification: To help ensure the roosting habits of the federally-listed Indiana bat are not disturbed for compliance with the Endangered Species Act.*

13. The permittee shall notify this office in writing two weeks before work commences. Point of contact is Floyd Carnes and the mailing address is Regulatory Branch, 3701 Bell Road, Nashville, TN 37214. *Justification: To give this office an indication that work is about to commence so that this office can perform compliance inspections while the work occurring.*

10. Determinations:

- a. Public Hearing Request: NA No requests for a public hearing were received.
 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. Flood elevations for the project site were identified on Federal Emergency Management Administration Digital Flood Insurance Rate Map flood maps 47115C0215D and 47115C0355D. These maps were recently updated in January 2012. According to TVA, the floodplain elevations at the Shaw Plant the 100-year floodplain elevation were reported as 612.8 ft (NGVD 1929); the 500-year floodplain was reported as 615.70 ft (NGVD 1929). The project area is not in the floodway, but contains some areas in the 100-year and 500-year floodplain. In design, all efforts were made to avoid and minimize fill and balance cut for both floodplain zones. Shaw Corporate Engineering calculated the flood storage analysis. During design and grading plan preparation, the site layout was designed such that the proposed storage in the 100-year was increased by 2.74 acre-feet (ac-ft), and the 500-year storage was decreased by 0.38 ac-ft.

Floodplain Storage Changes Resulting from Proposed Plant Expansion, South Pittsburg, Tennessee

	100-Year Floodplain 612.8 ft (NGVD 1929)		500-Year Floodplain 612.8 ft (NGVD 1929)	
	Storage (cy)	Storage (ac-ft)	Storage (cy)	Storage (ac-ft)
Existing	8,938	5.54	29,497	18.28
Proposed	13,364	8.28	28,887	17.91
Difference	4,426 (gain)	2.74 (gain)	-610 (loss)	-0.38 (loss)

- (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.

(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.)

d. 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.

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

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

PREPARED BY:



Floyd M. Carnes
Project Manager

Date: 3/20/14

APPROVED BY:



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

Date: 3/20/14