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Project Name: Hampton Meadows wetland fill
Project Number: 2014-47

ADOPTION OF ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
 DISCHARGE OF FILL MATERIAL INTO WETLANDS ADJACENT TO VARNELL CREEK
 HAMILTON COUNTY, TENNESSEE

Pratt & Associates, a real estate development firm located in Chattanooga, Tennessee, (hereafter referred to as “the applicant”) proposes to develop an approximately 26.7-acre, 50-lot residential subdivision near Ooltewah, Tennessee. Development of the proposed subdivision would involve the placement of approximately 13,500 cubic yards of fill on the site, including the discharge of fill material into 1.49 acres of wetlands adjacent to Varnell Creek, a tributary to Savannah Bay, an embayment of Chickamauga Reservoir on the Tennessee River. A vicinity map of the proposed development is provided as Figure 1.



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Figure 1. Vicinity Map of the Proposed Project

The applicant’s proposed wetland fill requires a permit from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act. Additionally, the proposed placement of approximately 13,500 cubic yards of fill on the site below elevation 689 mean sea level is subject to approval by the Tennessee Valley Authority (TVA) under Section 26a of the TVA Act. In the absence of federal permits and approvals for the fill, the applicant could not undertake the

residential development as proposed. Thus, the applicant's proposed 26.7-acre residential development, including the proposed wetland fill and appropriate compensatory wetland mitigation, was the subject of an environmental assessment (EA) prepared by USACE. That EA is incorporated by reference. TVA has independently reviewed the EA and found it to be adequate. TVA is therefore adopting the USACE EA.

In addition to the No Action Alternative, four action alternatives were considered in the USACE EA. Two of these alternatives involved locating the proposed residential development on properties located immediately north of the preferred site. The other two action alternatives involved using the proposed site. These sites are shown in Figure 2. The alternatives are described briefly below.



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Figure 2. Preferred Site and Alternate Offsite Locations

No Action Alternative

Under this alternative, the applicant would either not undertake the proposed residential development or undertake the development at a site where federal permits or approvals would not be required.

Offsite Alternative 1

Under this alternative, the applicant would locate the residential development on an approximately 19.2-acre site located immediately north of Roy Lane (see Figure 2). Although no onsite streams would be affected directly, site development would affect approximately 2.5 acres of wetlands on the site and 0.5 acres of offsite wetlands. Therefore, this option was considered infeasible.

Offsite Alternative 2

Under this alternative, the applicant would site the planned development on an approximately 20.5-acre tract immediately north of the Offsite Alternative 1 property. Development of this property would require installation of an extensive drainage system as well as the disturbance of onsite and offsite wetlands, resulting in the fill of approximately 2.2 acres of onsite wetlands and the disturbance of 0.3 acre of offsite wetlands. Due to the amount of potential wetland impacts and the difficulty in establishing adequate site drainage, this alternative was considered infeasible.

Onsite Alternative 1 – Complete Avoidance of Onsite Wetlands

Under this alternative, the applicant would avoid all onsite wetlands on the subject 26.7-acre site shown in Figure 2. Approximately 38 lots could be developed. Although potential impacts would be avoided, the developer considered this option economically infeasible.

Applicant's Preferred Alternative

Under this alternative, the applicant would develop the approximately 26.7-acre property shown in Figure 2. The development would involve the placement of fill into 1.49 acres of onsite wetlands. These wetlands are currently used for pasture and have been affected by previous agricultural practices. The applicant proposes to mitigate for the unavoidable impacts to waters of the U.S. by implementing mitigation consisting of enhancing 1.24 acres of wetlands and creating 3.77 acres of wetlands on the property.

According to the EA, implementing the Applicant's Preferred Alternative would not result in effects to conservation, historic properties, navigation, shore erosion and accretion, recreation, water supply and conservation, energy needs, safety, prime farmlands, mineral needs, considerations of property ownership or essential fish habitat. TVA concurs with these findings. The proposed action would not disproportionately affect any minority or low-income populations. Thus, the requirements of Executive Order 12898 (Environmental Justice) are satisfied. The property is currently zoned for residential use. Thus, the proposed federal actions would not facilitate the conversion of prime farmlands to other, non-agricultural uses, and the requirements of the federal Farmland Protection Policy Act are satisfied.

USACE concluded that under the Applicant's Preferred Alternative there would be a small positive effect to the local economy and that the proposed action is in visual character with surrounding land uses. The entire site, including approximately 16 acres of farmland that provides marginal wildlife habitat, would be converted to residential use. Once completed, the wetland mitigation area would provide a higher quality riparian and wetland habitat for wildlife. Thus, the change in wildlife habitat and agricultural productivity would be minor. The USACE

permit would require the applicant to implement measures to avoid the introduction or spread of invasive species. Thus, requirements of Executive Order 13112 (Invasive Species) have been satisfied. Potential effects to local water quality are expected to be minor. The proposed residential development would provide additional housing in an expanding suburban area. TVA agrees with these findings.

One federally listed plant species, the large-flowered skullcap (*Scutellaria montana*), as well as five state-listed plants, i.e., purple milkweed (*Asclepias purpurascens*), tall larkspur (*Delphinium exaltatum*), fragrant bedstraw (*Galium uniflorum*), ovate-leaved arrowhead (*Sagittaria platyphylla*), and prairie-dock (*Silphium pinnatifidum*), have been recorded within 5 miles of the proposed project. No suitable habitat for the large-flowered skullcap exists on the site; thus the proposed project would not affect this federally listed species. Populations of these five state-listed species would not be affected by the proposed action.

Two federally listed mussels, i.e., the dromedary pearlymussel (*Dromus dromas*) and the pink mucket (*Lampsilis abrupta*) and two state-listed aquatic animal species, i.e., the Tennessee dace (*Phoxinus tennesseensis*) and the Chickamauga crayfish (*Cambarus extraneus*), have been documented within 10 miles of the project. Because no suitable habitat for any of these species exists on the site of the proposed project, no effects to any protected aquatic animal species are expected.

Review of the TVA Natural Heritage Project Database indicated there are no records of state-listed or federally listed terrestrial animals within 3 miles of the proposed action. However, the bald eagle (*Haliaeetus leucocephalus*) is known to nest in Hamilton County. The closest recorded nest is approximately 5.4 miles from the proposed project. Thus, bald eagle nesting habitat would not be affected, and no effects to bald eagles are expected.

The federally listed as endangered Indiana bat (*Myotis sodalis*) and the proposed endangered northern long-eared bat (*Myotis septentrionalis*) are both thought by the U.S. Fish and Wildlife Service to occur state-wide in Tennessee. USACE determined that the proposed action “may affect, but not likely to adversely affect” the Indiana bat and the northern long-eared bat, that the project would not affect any designated critical habitat, and that it is not likely to jeopardize the continued existence of the northern long-eared bat. The U.S. Fish and Wildlife Service (USFWS) concurred with these determinations by letter of April 22, 2014. TVA agrees with USACE’s findings regarding threatened and endangered species and initiated informal consultation with USFWS. USFWS concurred with TVA’s determination of potential effects to threatened and endangered species on August 7, 2014. Thus, TVA’s obligations under Section 7(a)(1) of the Endangered Species Act have been met.

USFWS also indicated that additional bat habitat surveys are required if tree clearing for the proposed activities has not yet occurred within two years of the original bat habitat surveys.

A Phase I archaeological survey was conducted in 2008 on an approximately 20-acre portion of the proposed development on the site by Webb and Associates. The architectural area of potential effects (APE) included the viewshed within a 0.5-mile radius of the project. No historic properties were identified. Since 2008, an additional parcel containing approximately 3.3 acres was added to the proposed development. Subsequently, a Phase I survey was conducted by R.S. Webb on that 3.3-acre parcel. No historic properties were identified by that survey. In an April 10, 2014 letter, the Tennessee State Historic Preservation Office concurred with the USACE’s finding of “no effect.” USACE also consulted with federally-recognized Indian Tribes regarding properties within the proposed project’s APE that may be of religious and cultural

significance to them and eligible for the National Register of Historic Places. No objections were provided. The United Keetoowah Band of Cherokee Indians in Oklahoma responded to the public notice, requesting to be notified if any human remains are encountered when constructing the project and USACE agreed to honor that request. TVA concurs with USACE's findings that no historic properties would be affected by the proposed undertaking.

The applicant proposes to fill 1.49 acres of onsite wetlands to facilitate the planned residential development. These wetlands provide minor wetland functions due to previous impacts from long-term agricultural activities. The applicant proposes to compensate for the unavoidable loss of these 1.49 acres by enhancing 1.24 acres of onsite wetlands and creating an additional 3.77 acres of wetlands on the property. Additionally, the applicant would temporarily affect 0.077 acre of wetlands associated with the construction of stormwater pile crossing. USACE determined that compensatory mitigation is not required for impacts to this 0.077 acre because the impact is temporary. A description of the conditions of approval of the applicant's mitigation plan is provided in the EA.

The proposed fill for the subdivision would be located outside the 100-year floodplain (i.e., elevation 686.5 feet mean sea level), but below the TVA Flood Risk Profile elevation of 689.0 feet mean sea level. The Flood Risk Profile is also the elevation of the 500-year flood at this location. Based on information provided by the applicant's engineer, material would be relocated within the flood control storage zone to elevate the ground for home construction. For compliance with Executive Order 11988 (Floodplain Management), restoration or creation of wetlands is not considered a repetitive action in the floodplain. Based on the applicant's information, TVA determined that there is no practicable alternative to the proposed restoration/creation of wetlands in the 100-year floodplain. The proposed action would comply with the TVA Flood Storage Loss Guideline because there would be no loss of flood control storage. However, TVA's Section 26a approval would stipulate that any future structures, facilities or equipment subject to flood damage shall be located above or floodproofed to elevation 691.0 feet mean sea level (i.e., the elevation of the TVA Flood Risk Profile plus 2 feet).

The proposed action is located in Hamilton County, which is a PM_{2.5} Nonattainment Area under the Clean Air Act. According to the USACE EA, construction associated with the proposed residential development would generate both combustive emission from heavy equipment and fugitive dust emission from soil disturbance. Uncontrolled fugitive dust emissions would be temporary, localized, and would occur in a less densely populated area of Hamilton County. USACE concluded that impacts of fugitive dust on air quality would be short-term and minor and determined that the activities proposed under this permit would not exceed the de minimis levels of direct or indirect emission of a criteria pollutant or its precursors. TVA concurs with these determinations.

USACE issued Public Notice 14-02 on its website on February 4, 2014, regarding the proposed discharge of fill into 1.49 acres of wetlands adjacent to Varnell Creek. The Public Notice stated that the applicant had applied for a Department of the Army Permit pursuant to Section 404 of the Clean Water Act for the discharge of fill material into waters of the United States. The Public Notice also stated that the applicant proposes to mitigate for the unavoidable impacts to waters of the United States by conducting on-site permittee responsible mitigation consisting of the enhancement of 1.24 acres of wetlands and the creation of 3.77 acres of wetlands. Comments in response to the Public Notice were received from the Tennessee Historical Commission, the United Keetoowah band of Cherokee Indians in Oklahoma, and the U. S. Environmental Protection Agency.

Consistent with requirement of Section 106 of the National Historic Preservation Act, USACE requested consultation regarding its "no historic properties affected" determination with the Absentee-Shawnee tribe of Oklahoma, the Alabama Coushatta Tribe of Texas, The Alabama Quassarte Tribal town, the Cherokee Nation, The Chickasaw Nation, the Eastern Band of the Cherokee Indians, Eastern Shawnee Tribe of Oklahoma, Muscogee (Creek) Nation – Oklahoma, the Poarch Band of Creek Indians, the Shawnee Tribe, the Tholphtlocco Tribal Town Oklahoma, and the United Keetoowah Band of Cherokee Indians in Oklahoma. Thus, requirements of Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments) have been met.

Mitigation and Special Permit Condition

TVA will require adherence to the routine environmental protection measures listed in the EA. TVA's Section 26a approval would stipulate that any future structures, facilities or equipment subject to flood damage shall be located above or floodproofed to elevation 691.0 feet mean sea level (i.e., the elevation of the TVA Flood Risk Profile plus 2 feet).

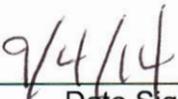
Conclusion and Findings

TVA has considered the potential environmental effects of the proposed residential development, including the proposed compensatory wetland mitigation, and has determined that any effects would be minor and insignificant. TVA has critically and independently reviewed the USACE EA and determined that the alternatives considered and the content of the EA are adequate and that the potential environmental impacts of implementing the proposed action have been addressed adequately. TVA has decided to adopt the EA and has not identified the need for additional mitigation or special conditions beyond those listed above. The EA is incorporated by reference.

Based on the USACE findings in the EA and the additional findings documented above, including implementation of the special permit condition stated above, TVA concludes that the proposed Section 26a approval and the subsequent residential development and wetland mitigation actions proposed by the applicant do not constitute a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required.



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Date Signed