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FINAL ENVIRONMENTAL ASSESSMENT

PARCEL 141, SITE STABILIZATION PICKWICK RESERVOIR TISHOMINGO COUNTY, MISSISSIPPI

TENNESSEE VALLEY AUTHORITY

APRIL 2009

The Proposed Decision and Need

Tennessee Valley Authority (TVA) has terminated a commercial recreation easement with the Tishomingo County (Mississippi) Development Foundation (TCDF) effective April 1, 2009, for an approximately 26-acre tract (Tract No. XPR-460RE or Parcel 141 as described in the TVA 2002 *Pickwick Reservoir Land Management Plan*). The former developer has disturbed approximately half of the site, and best management practices (BMPs) established in accordance with the state-approved storm water pollution prevention plan (SWPPP) have not been implemented fully or maintained successfully to limit site erosion and sedimentation into Pickwick Reservoir. TVA, TCDF, and the Mississippi Department of Environmental Quality (MDEQ) performed a joint site inspection in January 2009 to identify necessary corrective measures. TCDF did not initiate any corrective actions as the easement holder. As a result, immediate corrective actions (Phase I) identified as necessary by TVA, and MDEQ, to end ongoing site erosion were successfully completed by TVA. Management of the property has reverted back to TVA, and TVA proposes to further stabilize the site to prevent water quality impacts to Pickwick Reservoir. Future water quality impacts may occur if the site is not fully stabilized.

At the request of MDEQ, TVA has sought the transfer of the storm water permit to TVA, and TVA has developed a revised SWPPP (see Attachment 1). Additional actions (Phase II) identified in the TVA SWPPP would further stabilize the site for potentially a long term and would enable closure of the present site construction phase. Successful implementation of the TVA SWPPP should further reduce the potential for water quality impacts to Pickwick Reservoir.

Background

In April 2005, TVA entered into a 40-year term commercial recreation easement agreement with TCDF on TVA Tract No. XPR-460RE. Subsequently, TCDF entered into a lease agreement with Pickwick Pines Marina Inc. (PPM) on the tract. TCDF informed TVA on November 30, 2008, that it had terminated its lease with PPM for various reasons. On January 28, 2009, TVA notified TCDF of TVA's intent to terminate the easement if TCDF failed to correct the following breaches of the easement agreement within 30 days: failure to make the required easement payments, failure to meet construction obligations for development, and failure to maintain the easement area to prevent erosion and protect water quality. TCDF failed to correct such breaches within the specified time, and TVA

provided notice of easement termination to TCDF on March 2, 2009, to be effective on April 1, 2009.

PPM obtained a large construction general SWPPP from MDEQ in June 2005. PPM initiated work on site including significant clearing and earth moving, construction of a 12-foot-wide golf cart path, and placement of riprap along the eastern shoreline. By December 2008, PPM's initial SWPPP BMPs were in varying states of failure and no longer met the SWPPP requirements. On January 12, 2009, MDEQ, TVA, and TCDF representatives inspected the site and found it to be noncompliant with the PPM SWPPP. MDEQ requested that the storm water permit be transferred to a responsible party and notified TCDF and TVA that emergency corrective measures must be taken to stabilize soil runoff into Pickwick Reservoir. The items of noncompliance included the following:

- Silt fencing not properly installed
- Riprap check dam on north drainage had been breached
- Silt curtains had been breached and were no longer floating at the surface
- Topsoil stockpile area not properly contained
- Silt fencing/straw bales not suitable stabilization for drainage swales

Following the inspection, TCDF did not indicate that it would initiate any corrective actions as the easement holder. Therefore at MDEQ's insistence, TVA initiated Phase I work immediately on the site to restore the storm water BMPs that MDEQ had deemed noncompliant. The Phase I corrective measures were begun on January 29, 2009, and completed by February 9, 2009. Phase I implementation included the following measures:

- Silt fencing and silt curtains were replaced and installed properly. New silt fencing was placed at the top of shoreline riprap behind straw bales. Over 1,500 feet of silt fencing has been installed. New silt curtains have been installed with a 5-foot standard depth.
- Riprap check dams were constructed across drainage swales on the north and south ends of the property. New riprap check dams were installed in the two drainages on the south side of the property instead of straw bales and/or silt fences. A new riprap check dam was installed across the main north drainage. Riprap was also installed along the gully in the north drainage.
- The area at the bottom of the slope (i.e., the 12-foot-wide cart path) along the east property boundary (reservoir) was seeded after the silt fence was installed.
- The topsoil storage area was shaped, graded, compacted, seeded, and encircled by silt fencing.

Since TVA has resumed management of the site as a result of the termination of the easement with TCDF, in addition to the emergency corrective measures taken, TVA proposes to complete Phase II corrective measures for long-term site stabilization.

Other Environmental Reviews and Documentation

- *Pickwick Reservoir Land Management Plan and Final Environmental Impact Statement* (TVA 2002)

Completed in August 2002, this environmental impact statement evaluated the potential impacts of designating various uses of TVA-controlled land along Pickwick Reservoir and designated Tract No. XPR-460RE (Parcel No. 141) for future recreation use.

- *Tishomingo County Development Foundation, Request for Long-Term Commercial Recreation Easement, Tract XPR-460RE Final Environmental Assessment* (TVA 2000).

Completed in December 2000, the environmental assessment (EA) evaluated the impacts of granting an easement for commercial recreation on TVA property, including the construction of a commercial marina, hotel, restaurant, convention center, lodge, and cabins.

- *Proposed Pickwick Pines Marina Inc. Final Supplemental Environmental Assessment* (TVA 2006)

In November 2006, TVA completed a supplemental EA (SEA) related to the 2000 EA to evaluate the impacts associated with constructing and operating the proposed marina facilities consisting of 228 boat slips, a fuel dock, a pump-out facility, riprap, a retaining wall, a boat ramp, a bulkhead, a dry storage building, a cart path, a dock, and a dolphin.

- Files memorandum from Jon M. Loney to Buff L. Crosby, dated August 15, 2007, with a subject of Tishomingo County Development Foundation, Long-Term Commercial Recreation Easement, Tract XPR-460RE, and Pickwick Pines Marina - Modification of Easement and Environmental Commitments (see Attachment 2).

TVA evaluated modifying the easement and the environmental commitments discussed in the SEA to better address vegetation removal activities along the shoreline affecting the 50- and 100-foot buffers.

- Files memorandum from Helen G. Rucker to Anda A. Ray, dated May 6, 2008, with a subject of Tishomingo County Development Foundation, Long-Term Commercial Recreation Easement, Tract XPR-460RE, and Pickwick Pines Marina – Clarification of Environmental Commitments (see Attachment 3).

At the direction of the U.S. District Court for the Northern District of Mississippi, TVA evaluated the 100-foot buffer consistent with NEPA regulations and clarified the location of the 100-foot buffer.

Alternatives and Comparison

This EA evaluates two alternatives for site stabilization by TVA—the No Action Alternative and the Action Alternative.

The No Action Alternative would include no further action regarding long-term stabilization of the site. The corrective measures identified by MDEQ for immediate corrective action

(Phase I) have been accomplished and are currently successful in containing site runoff into Pickwick Reservoir. TVA would continue to monitor the newly installed BMPs weekly to ensure they are working correctly. The shoreline riprap put in place by PPM would stay intact, and the 12-foot-wide cart path area and topsoil piles are stabilized and seeded. Under the No Action Alternative, the silt material, which has accumulated at the outlets of the north and south drainage culverts, would remain in place at least until the anticipated future implementation of a new development proposal. Additional compliance measures ordered by MDEQ would be addressed as they are presented or identified.

Under the Action Alternative, TVA would implement additional Phase II corrective measures identified in the TVA SWPPP. In summary, the proposed Phase II actions are as follows:

- The east-facing slope uphill from the 12-foot-wide cart path would be revegetated, monitored, and stabilized with riprap, as needed. Reshaping the slope is not feasible due to the hardness of the subsoil. The topsoil that has been stockpiled may be used as substrate for revegetation efforts.
- The east-facing vertical cut bank adjacent to the northern 12-foot-wide cart path would be isolated from the reservoir by a riprap berm along the top of the existing shoreline.
- The crest of the slope would be stabilized by seeding and mulching; the remainder of the slope would be hydro-seeded to promote growth of vegetation. A berm would be constructed along the top of the shoreline riprap to prevent any sediment from leaving the site and to help stabilize the area.
- Silt material, which has accumulated in the reservoir at the outlets of the north and south drainage culverts, would be removed. This would be accomplished by mechanical excavation while the reservoir is at winter pool prior to filling Pickwick Reservoir to summer pool elevation (typically the first to middle of April). The excavated material would be stabilized in upland areas on the site with vegetation and mulch.
- All disturbed areas (as identified in the SWPPP) would be revegetated with native and quick cover grasses and mulched, and regeneration of native species would be encouraged. Loblolly pines may also be planted in suitable areas. The shoreline area would be allowed to revegetate with volunteer species.
- All disturbed areas would be inspected weekly until a uniform perennial vegetative cover with a density of at least 70 percent for the disturbed areas has been established. Silt fences, silt curtains, and other BMPs would be removed from the site after successful revegetation has been established and site closure.

The Phase II corrective measures would ensure protection from erosion and sedimentation of the site and enhanced water quality protection to Pickwick Reservoir. The additional site stabilization efforts would be satisfactory for long-term site closure but would not prevent the future utilization of the tract for recreation development. Any new site development proposal would be reviewed in accordance with TVA procedures for environmental review under the *National Environmental Policy Act* (NEPA).

Under each alternative, protective BMP measures have been or will be put in place to prevent soil erosion and additional water quality impacts to Pickwick Reservoir. Under the No Action Alternative, the corrective measures identified and implemented have stabilized the site to a satisfactory level to correct the immediate ongoing soil erosion. Under the Action Alternative, additional corrective measures (Phase II) including additional riprap and revegetation of the site would be implemented to provide additional water quality protection and long-term site closure.

Alternative Considered but Dismissed

PPM obtained a large construction general SWPPP from MDEQ in June 2005. The permit expires on May 31, 2010. While the permit contains adequate provisions for protecting water quality impacts to Pickwick Reservoir during construction, the provisions were not adequately followed, and the construction-related BMPs put in place failed. The project plan and PPM's SWPPP anticipated the construction of retention ponds, installation of groundwater drains, and construction of a retaining wall. These features of the project development have not been completed and are not a part of the TVA SWPPP and site stabilization planned by TVA. Because the PPM SWPPP was intended to support a developed site with villas, a restaurant, impervious traffic and parking areas, and a dry stacking area, utilization of the PPM SWPPP would not accomplish the site stabilization and site closure now necessary. Therefore, the continued use of the PPM SWPPP was considered as an alternative but dismissed as unreasonable.

Affected Environment and Evaluation of Impacts

The site location, description of the property, terrestrial ecology, and historical and recent land uses of Tract No. XPR-460RE were previously discussed in the TVA 2000 EA and 2006 SEA. The site contains no wetlands. There are no cultural resources on the site, and there are no affected threatened and endangered species or natural or managed areas. Since there would be no upland development or marina constructed at this time, there would be no increased recreation opportunities or new boating or highway traffic, and the increased opportunity for economic development would not be realized.

There are some construction-related impacts that have already occurred as a result of clearing and earth moving, construction of a 12-foot-wide golf cart path, and placement of riprap along the eastern shoreline by PPM. The impacts of these activities were evaluated in the 2006 SEA. The short-term construction-related air and noise impacts (Sections 3.2.1 and 3.4.8 of the SEA) during site development have now ceased. Although much of the site was cleared, impacts to site flora and fauna (Sections 3.2.2 and 3.2.3 of the SEA) from site development were insignificant. Impacts to water quality/aquatic ecology and visual resources were also discussed. As described below, the water quality/aquatic ecology impacts were greater than anticipated due to the inadequacy and failure of the PPM BMPs. Additional evaluations beyond the 2006 SEA included a more detailed look at vegetation management requirements for the site (see Attachments 2 and 3). Since ongoing and potential impacts to water quality/aquatic ecology, visual resources, and vegetation management could occur, these resource areas are discussed in this EA.

The site contains two large drainage swales, and two culverts channel flow from across Highway 25 to the reservoir at these points. There are steep grades, from 10-30 percent, ascending from the reservoir shoreline. A significant 12-foot-wide cut has been completed along the eastern edge of the property adjacent to Pickwick Reservoir. The cut was intended to become an access path for golf carts and pedestrians to the marina facility.

The area at the top of the slope has been graded, and virtually all topsoil has been removed. Other areas of notable disturbance are the site entrance and a site designated for parking at the southern end of the property.

Water Quality/Aquatic Ecology

Water quality and aquatic ecology were previously addressed in Sections 3.3.1 and 3.3.2 of TVA 2006 SEA. Because of soil disturbances associated with construction of access roads and site development discussed in the SEA, potential impacts to reservoir water quality and aquatic ecology were expected. Therefore, TVA required special and routine conditions of approval (see Section 6.0, Permit and Mitigation Measures, of the 2006 SEA) that would reduce potential impacts to water quality and aquatic ecology to insignificant levels with successful implementation of the requirements.

Site development and construction-related commitments contained in the 2006 SEA pertaining to water quality/aquatic ecology protection included special condition #5 regarding maintenance of site and shoreline vegetation buffers and routine conditions #6 and #7 regarding the use of construction BMPs. In addition, the Department of the Army permit would include special condition #5, requiring a shoreline erosion and sediment control program for the life of the project. Finally, the MDEQ construction PPM SWPPP was issued in June 2005 with comparable water quality and aquatic ecology protection requirements.

Under the No Action Alternative, there would be no further site stabilization beyond those Phase I emergency corrective actions that have been installed to stop soil erosion and sedimentation in Pickwick Reservoir. The Phase I measures would be maintained and monitored to ensure that the corrective actions are successful in preventing water quality/aquatic ecology impacts. Under the Action Alternative, additional stabilization measures (Phase II) would be implemented to further enhance water quality/aquatic ecology protection. The additional measures would stabilize the site for long-term closure until some future use of the site may be proposed. Under the Action Alternative, TVA would also remove the sediment deposits from the reservoir that are presently contained with silt curtains. These actions would result in increased water quality and improved conditions for aquatic life. Because of the nature of the Phase II measures, the impacts to water quality and aquatic ecology under the Action Alternative are somewhat less than under the No Action Alternative, are expected to be environmentally beneficial, and are not expected to be significant.

Visual Resources

Visual resources were previously discussed in Section 3.4.4 of TVA 2006 SEA. No structures or other amenities have been developed either on the site or in the reservoir adjacent to the site. As discussed in the 2006 SEA, much of the site understory vegetation had been previously cleared from the center of the property and along the shoreline. Vegetation toward the perimeter of the property to the north remains intact. Much of the eroded shoreline that rises steeply from the reservoir has been stabilized by the placement of riprap by PPM, and the shoreline stabilization will remain to protect the failing banks. PPM has also cleared the topsoil on about half of the 26-acre easement area and cut a 12-foot-wide cart path visible on the east-facing vertical bank. The 12-foot-wide cart path cut constructed by the PPM would remain, and no further land clearing would occur at the present time. The Phase I site stabilization actions implemented to prevent soil erosion and sedimentation, including silt fences (over 1,500 feet along the shoreline riprap), silt curtains, rock check dams (across the drainage swales on the north and south end of the property),

and vegetative cover, are now visible on the property. Topsoil stockpiles have been graded, seeded, and encircled by silt fencing. The silt fences would be left intact until the site is revegetated and site inspections indicate that they are no longer needed to stabilize the site.

As a condition of the 2006 SEA, and as readdressed in the August 15, 2007, files memorandum (Attachment 2) regarding environmental commitment modification, the developer was required to establish and maintain a 50-foot vegetative strip as a visual buffer on the slope above the 12-foot-wide cart path. Except for seeding and mulching, the landscaping of a 50-foot vegetative visual buffer is not included as a Phase II stabilization effort. If a new development proposal is considered for the site, TVA will reevaluate this requirement. The existing 100-foot-wide woodland visual buffer along the cove at the north end of the property would continue undisturbed and would be managed by TVA unless and until a new development proposal is received, which would require additional NEPA review.

Under the No Action Alternative, no further site stabilization efforts would occur on the site. The site would be monitored to ensure Phase I efforts taken to prevent soil erosion have been successful. Under the Action Alternative, the additional stabilization efforts identified as Phase II in the TVA SWPPP would be implemented. The slope above the 12-foot-wide cart path would be revegetated and stabilized (possibly with riprap) but not planted as a visual buffer as described in the SEA. All disturbed areas would be revegetated with quick cover grasses and mulches and inspected weekly until a uniform perennial vegetative cover with a density of a least 70 percent for the disturbed areas has been established. Silt fences, silt curtains, and other BMPs would be removed from the site after successful revegetation has been established and site closure. These actions would improve the appearance of the site by revegetating large areas of bare ground and removing some of the construction materials. Under the Action Alternative, impacts to visual resources would be somewhat less than under the No Action Alternative and would be insignificant.

Vegetation Management

The 2006 SEA required the developer of Tract No. XPR-460RE to maintain vegetation buffers on the tract. Additional study beyond the 2006 SEA included a more detailed evaluation of vegetation management requirements for the site. An August 15, 2007, files memorandum (Attachment 2) evaluated the modification of the environmental commitment requiring the developer to establish and maintain a 50-foot vegetative buffer above the 12-foot-wide cart path. An existing 100-foot-wide woodland buffer along the cove at the north end of the property was to be managed in accordance with an approved Vegetation Management Plan. A May 6, 2008, files memorandum (Attachment 3) further delineated the location of the 100-foot buffer.

Under the No Action Alternative, no additional vegetation management beyond the planting of grass cover would occur. The 50-foot vegetation buffer would not be established at this time, and this requirement would be reevaluated if a new development proposal were presented to TVA. The existing 100-foot-wide woodland buffer along the cove at the north end of the property would continue undisturbed and would be managed by TVA at least until a new development proposal is received and evaluated appropriately. Under the Action Alternative, additional vegetation above the 12-foot-wide cart path and on all previously disturbed areas would be planted. All disturbed areas would be inspected weekly until a uniform perennial vegetative cover with a density of a least 70 percent for the disturbed areas has been established. This would result in the establishment of a more

diverse, perennial vegetative cover with enhanced erosion control and wildlife habitat values.

References

- Tennessee Valley Authority. 2000. *Tishomingo County Development Foundation, Request for Long-Term Commercial Recreation Easement, Tract XPR-460RE Final Environmental Assessment*. Muscle Shoals, Ala.: TVA, Pickwick Watershed Team
- . 2002. *Pickwick Reservoir Land Management Plan and Final Environmental Impact Statement*. Muscle Shoals, Ala.: TVA, Resource Stewardship, Pickwick Watershed Team.
- . 2006. *Proposed Pickwick Pines Marina Inc. Final Supplemental Environmental Assessment – Yellow Creek Embayment at Mile 448.4R on the Tennessee Tombigbee Waterway – Pickwick Reservoir*. Chattanooga, Tenn.: TVA, prepared in cooperation with the U.S. Army Corps of Engineers.

Attachments

- Attachment 1 – TVA Revised Storm Water Pollution Prevention Plan
Attachment 2 – August 15, 2007, Files Memorandum
Attachment 3 – May 6, 2008, Files Memorandum