

CHAPTER 1

1.0 PURPOSE OF AND NEED FOR ACTION

1.1 Purpose

The Tennessee Valley Authority (TVA) is a wholly owned federal corporation and instrumentality of the United States (U.S.), established in 1933 by the U.S. Congress primarily to develop and manage certain resources of the Tennessee Valley region. Today, TVA is the nation's largest publicly-owned producer of electric power, serving about 9 million people in seven southeastern states. TVA is also a regional economic development agency and a steward of the Tennessee River basin and various lands in the Tennessee Valley. TVA's power program has been self-financing since 1959, and TVA has not received federal appropriations (taxpayer dollars) in support of its nonpower programs and projects since 1999.

TVA assumed custody and control of the 3,036-acre Muscle Shoals/Wilson Dam Reservation in Colbert County, Alabama, in 1933 when Congress directed its transfer to TVA from the U.S. War Department. TVA has since managed 2,600 acres of this nonreservoir property as the Muscle Shoals Reservation (MSR or Reservation). The Reservation is located in northwest Alabama in an area generally referred to as the "Shoals" or the "Quad Cities" (Figure 1-1). Since acquisition of the land, TVA's need for this amount of property at this location has changed. TVA's programs have changed over time Valleywide, and Muscle Shoals employee populations have declined. From a business perspective, TVA has proposed that an approximately 1,400-acre portion (study area) of its MSR (Figure 1-2) is no longer essential to its needs. Local public and private sector developers have been requesting use of this land for many years. In accordance with its economic development mission, TVA believes sale (i.e., disposal) and redevelopment of this property would help stimulate and grow the local and regional economy. Transferring this portion of the Reservation from TVA ownership would also help TVA reduce its operations and maintenance (O&M) costs and reduce its environmental footprint. Accordingly, TVA proposes to dispose of approximately 1,400 acres of its MSR. TVA has prepared this environmental impact statement (EIS) in accordance with Council on Environmental Quality (CEQ) regulations and TVA procedures for implementing the National Environmental Policy Act (NEPA) in order to assess and document the potential environmental effects of this proposal.

1.2 Background

The U.S. War Department constructed U.S. Nitrate Plant No. 2 (USNP2) between February and October 1918 to produce nitrates for World War I munitions. The construction of Wilson Dam was started in 1918 and was completed in 1925. Wilson Steam Plant, the largest of its kind when it was constructed in 1918, provided electric power to USNP2 during the war effort. In 1933, these facilities were transferred to TVA custody and control. TVA immediately began converting the nitrate facilities to produce fertilizers. From those days through the early 1940s, TVA developed and distributed fertilizers to help improve agriculture in the Tennessee Valley region. During World War II, TVA converted its fertilizer production facilities back to the manufacture of munitions as well as synthetic rubber.



Figure 1-1. General Locator Map of the Muscle Shoals Reservation, Colbert County, Alabama



Figure 1-2. The Approximately 1,400-Acre Muscle Shoals Reservation Study Area

These facilities supplied more than 60 percent of the elemental phosphorus needed for munitions and produced more than 200,000 tons of calcium carbide for the manufacture of synthetic rubber (Lord, Aeck, and Sargent Architecture 2009). During the Korean Conflict, TVA again produced munitions essential to that military effort.

In 1952, TVA began operation of two plants on the MSR for the U.S. Army: a chlorine plant and the Phosphate Development Works (PDW), which produced methyl phosphonous dichloride and methyl phosphonic dichloride, components used in the manufacturing of a nerve agent. In 1954, the chlorine plant was sold to a private company. In 1958, the PDW ceased operations and was placed on standby; in 1992, the PDW was demolished.

For over 50 years, TVA operated a fertilizer research and development facility at Muscle Shoals. It became internationally recognized for its fertilizer research, demonstrations, production, and patents. About 75 percent of fertilizers and fertilizer technology used around the world today were developed or improved during the 1950s to 1970s by scientists and engineers at TVA. An investment of \$41 million in fertilizer research through 1981 returned \$57 billion to U.S. agriculture, excluding benefits of the technology to the rest of the world. Thus, a benefit-to-cost ratio of more than \$20 to \$1 was recognized (International Fertilizer Development Center 2008).

In the early 1960s, the Muscle Shoals fertilizer complex was named the National Fertilizer Development Center (NFDC). While TVA had long been involved in identifying and addressing environmental issues related to fertilizer development and use since NFDC's inception, by 1988 TVA's environmental thrust began to become the focal point of the NFDC's mission. In January 1990, to emphasize its environmental commitment, TVA changed the name of the NFDC to the National Fertilizer and Environmental Research Center (NFERC). In May 1990, TVA closed the large-scale fertilizer production facilities and transitioned them to small-scale prototype plants. Through 1993, these facilities were used in experimental production of more environmentally friendly fertilizer products or in production of fertilizers by utilizing industrial by-products. By February 1994, a major refocusing of the NFERC's activities to environmental research, development, and technology transfer was complete. At that time, the name of the Muscle Shoals facility was changed from NFERC to the TVA Environmental Research Center (ERC), as it remains today. The ERC is located on an approximately 590-acre site south of the Tennessee River and is part of the MSR study area. The complex is currently comprised of numerous buildings, laboratories, greenhouses, pilot-scale plants, constructed wetlands research facilities, and other grounds, infrastructure, and support facilities.

After TVA fertilizer development production operations were shut down, intermediate products, raw materials, and various quantities of unneeded chemicals and equipment were stored on site. Prior to the passage of the Resource Conservation and Recovery Act (RCRA) in 1976, there were very few environmental laws governing waste handling and disposal practices. In keeping with industry standards at that time, TVA stored waste on site in pits, stockpiles, drums, and other such designed containments. Storage, handling, use, and disposal of some of these various chemicals on site resulted in the release of and the presence of some remnant contamination.

In 1988, as a result of a TVA-initiated RCRA facilities investigation and plans for a cleanup, the U.S. Environmental Protection Agency (USEPA) and the Alabama Department of Environmental Management (ADEM) initially identified 193 areas of potentially contaminated sites. These sites, also known as solid waste management units (SWMUs),

resulted from these historical operations at the ERC. Later in the investigation, 12 more SWMUs were discovered, bringing the total number of SWMUs to 205.

Another SWMU, bringing the total number of SWMUs to 206, included an inert construction-demolition landfill. The landfill was approved for disposal of such materials as roofing, rocks, bricks, soils, asphaltic concrete adhering to concrete, wood ash, wood, metal, glass, plastic, and fiberglass. The landfill was operated from 1992 to 2004, but because of the nature of the material disposed of there, it was not included in the RCRA facilities investigation. In accordance with Administrative Code R. 335-13-4-.20, by letter dated September 5, 2005 (Bryant 2005), ADEM approved the final closure of this landfill in 2005.

Staffing and Building Space Reductions

Valleywide, TVA's employee population has decreased over the years, resulting in an excess of office and related ancillary space. TVA has been actively disposing of unused space under its custody and control since 2001 in support of lowering operating costs and has since reduced its total corporate office and ancillary space by more than a million square feet.

Approximately 2,800 workers once occupied the TVA power service shops, heavy equipment, land management, laboratory, corporate, and other facilities on the Muscle Shoals/Wilson Dam Reservation at the peak of operations in the late 1970s. Currently, less than 700 employees are stationed on the MSR study area. Although several attempts to lease or sell space on the Reservation have been met with limited success, TVA continues to consolidate its operations and vacate buildings that no longer meet the current business direction or that are inefficient and costly to operate. TVA has reduced its facility operating expense by about 40 percent over the last 10 years, and further office consolidations are planned here.

From a business perspective, TVA needs to reduce its O&M costs. In accordance with its Environmental Policy, it is also TVA's goal to reduce its environmental footprint. The MSR study area (see Figure 1-2) contains approximately 1.2 million square feet of office and laboratory space. These buildings and structures, some with historic value, are in various states of usage and condition. Staff consolidations occurred in 2010, and additional relocations on the Muscle Shoals/Wilson Dam Reservation are being considered as TVA continues to optimize the use of space and make efficient use of its resources.

One lease and numerous licenses are in effect on the MSR study area. The lease, which expires in 2015, is to the State of Alabama Department of Revenue for use of a portion of the former Public Power Institute building. If this portion of the MSR study area has not been disposed of by 2015, TVA could consider entering into another lease for the same purposes. The current lease is likely transferable to a new owner. TVA has also issued a number of licenses on the property for a variety of uses. These licenses likely are not transferable to a new owner and would be terminated at the time of disposal.

Some buildings on the property are known to contain potentially hazardous materials commonly used during construction or appropriate maintenance at that time. As a result of contaminants (e.g., lead paint, asbestos) potentially present in existing buildings and structures, including those that possess historic value, future remedial actions may need to be taken prior to or in the course of reuse or demolition of such buildings and structures. Indoor contaminants could cause potential hazards to human health from exposure. Many vacant and some partly occupied buildings on the MSR study area have not been

thoroughly assessed for the safety of future occupants. Given that TVA is somewhat uncertain which buildings might ultimately be sold or reused, potentially substantial outlays of TVA funds to conduct such assessments would be premature and not ready for decision at this time. Such building assessments and resultant information are not presently available and are not included in evaluations presented in this EIS. As long as these buildings remain in federal ownership, TVA would continue to maintain them in accordance with applicable standards. Prior to transfer from federal ownership under any of the Action Alternatives, TVA would assure that any required environmental due diligence assessments on existing buildings are completed (see elements common to all the Action Alternatives in Section 2.1).

Land Sale Justifications

As part of its mission, TVA has a duty to manage its land wisely for present and future generations. In November 2006, the TVA Board of Directors approved the TVA Land Policy (http://www.tva.gov/river/landandshore/land_policy.htm) to govern the retention, disposal, and planning of interests in real property. As stated therein, it is TVA's policy to manage the lands under its control to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. Consistent with this policy, TVA proposes to dispose of approximately 1,400 acres of the MSR to allow redevelopment and reuse of this property. Disposal and subsequent redevelopment of this land, likely through partnerships with local governments, can help foster economic development in the Shoals area in support of TVA's economic development mission. Disposal of this property would also, as noted above, reduce TVA's related O&M costs and simultaneously facilitate the local governments' goals of furthering economic development.

In recent years, TVA has received numerous inquiries from a variety of governmental, nongovernmental, and community groups interested in the availability of MSR land, buildings, and facilities for development. The inquiries to date about other possible uses of this land have come mainly from local governments and developers and involved use of specific individual parcels of land at key locations around the perimeter of the area. In some cases, TVA has transferred property to the surrounding communities for business development. However, if TVA continued a piecemeal approach to property disposal at the MSR, economic development of the area would lack strategic direction. Such piecemeal development could also reduce the overall value of the property for the community; thus, the highest and best use of the property to the community would perhaps not be realized in the future. In addition, TVA could likely be left with an industrial brownfield site at the interior core of the MSR that would have limited access and potential for future use. To maximize economic benefits to the region and to avoid the likelihood of an interior brownfield site remaining in TVA ownership, TVA is working with the Shoals area community, the Northwest Alabama Cooperative District (NACD), and other appropriate local, state, or federal authorities to develop a comprehensive master plan (Master Plan) for the holistic redevelopment of the approximately 1,400-acre area of MSR property.

The cities of Florence, Muscle Shoals, Sheffield, and Tuscumbia and the counties of Colbert and Lauderdale comprise the NACD. The NACD was created in 2009 and represents the interests of the people of the area through their elected officials. The NACD is working in partnership with TVA on the potential redevelopment of the MSR study area. As noted above, TVA is working with NACD, as well as with local people, interest groups, private developers, and others, to create the Master Plan. This would help to provide a framework and focus and to establish standards and provide guidance to allow more

effective long-term planned development. The Master Plan would reflect the objectives of the particular alternative selected by the TVA Board of Directors (see Section 2.1).

Consideration of site capability and suitability of various areas, portions, and parcels on the MSR study area, along with any restrictions on potential land uses, would be incorporated into the Master Plan to guide the development of the MSR study area. The Master Plan could be strengthened and enforced by local zoning laws or other appropriate land use ordinances.

The NACD could work with state or federal government agencies or other local authorities such as SEDA (<http://www.seda-shoals.com/>), the Northwest Alabama Council of Local Governments (<http://www.nacolg.com/>), Top of Alabama Regional Council of Governments (<http://tarcog.org/>), and similar regionally based organizations in developing the Master Plan for development of the MSR.

1.3 The Decision

TVA must decide whether to declare this approximately 1,400-acre property unnecessary to carry out future business plans and projects (i.e., surplus) and whether to sell it for future development. Although TVA would ultimately make available for sale all 1,400 acres of this nonreservoir property, TVA may sell the land in multiple parcels over time rather than as one large parcel in one sale. If the entire property is not sold or transferred to a single purchaser as one large parcel, TVA may make interim use of the unsold portions or parcels of the idle land during the anticipated 20-year plus development build-out period. Such interim land uses would likely represent ongoing TVA uses consistent with the TVA 1996 *Muscle Shoals/Wilson Dam Reservation Land Use Plan Final Environmental Assessment* (1996 Plan) for the property, or they may also include other public or private uses or partnerships consistent with the Master Plan.

Disposal decisions for the MSR study area and buildings would be made by the TVA Board of Directors or its designee. In accordance with the TVA Land Policy, the decisions regarding the sale of this property would be based primarily on business considerations consistent with the TVA Act and other applicable requirements.

1.4 National Environmental Policy Act Process

TVA has prepared this final EIS in accordance with NEPA (42 USC §§ 4321 et seq.), CEQ regulations for implementing NEPA (40 Code of Federal Regulations [CFR] §§ 1500-1508), and TVA's procedures for implementing NEPA. The NEPA process requires federal agencies to consider the impact of their proposed actions on the environment before making decisions. If an action is expected to have a significant impact on the environment, the agency proposing the action must develop a study for public and agency review. This study, called an EIS, is an analysis of the potential impacts to the natural and human environment from the proposed action, as well as from a range of reasonable alternatives. CEQ regulations (40 CFR § 1505.1) require federal agencies to make environmental review documents, comments, and responses a part of each agency's administrative record.

Internal scoping was conducted by TVA to determine the extent of the geographic area and the possible environmental resource issues to be considered in the environmental review. In compliance with 40 CFR § 1501.7, TVA prepared and issued a notice of intent (NOI) to prepare this EIS. The NOI was published on June 18, 2009 (74 *Federal Register* 116). This NOI briefly described the proposed action, reasonable alternatives, and probable environmental issues to be addressed in the EIS (see Section 1.5.2).

The completed draft EIS was distributed to interested individuals, groups, and federal, state, and local agencies on January 5, 2011. It was also transmitted to the USEPA, which published a notice of availability (NOA) in the *Federal Register* on January 14, 2011. The draft EIS public comment period began with the publication of the NOA by USEPA in the *Federal Register*. During the public comment period, TVA held a public meeting as a forum to obtain comments on the draft EIS on February 3, 2011 (see Section 1.5.3). Notice of the public meeting was distributed through appropriate media and direct mailings. At the close of the draft EIS public comment period, TVA responded to the comments received and incorporated any required changes in this final EIS. Notification of the completion of the final EIS will be sent to those who received the draft EIS, submitted comments on the draft EIS, or asked to be included on the mailing list.

The TVA decision on the proposed disposal of the property will be made no sooner than 30 days after the NOA of the final EIS is published in the *Federal Register*. This decision will be based on various factors, including the anticipated environmental impacts, as documented in the final EIS, along with cost, schedule, technology and other considerations. TVA then will issue a record of decision (ROD). The ROD normally includes: (1) what the decision was; (2) the rationale for the decision; (3) what alternatives were considered; (4) which alternative was considered environmentally preferable; and (5) any required mitigation measures and monitoring and enforcement requirements.

1.5 Scope of the Analysis

1.5.1 Geographic Scope

The MSR study area site lies adjacent to the cities of Muscle Shoals and Sheffield. It is primarily bounded by Second Street (State Route [SR] 184) to the south, Hatch Boulevard (U.S. Highway [US] 43/72) to the west, Wilson Dam Road (SR 133) to the east, and Reservation Road to the north (see Figure 1-2).

The MSR study area also includes three areas north of Reservation Road: two existing facilities (the Western Area Radiological Laboratory and Multipurpose Building) and the phosphate slag storage area. The rest of the MSR property north of Reservation Road, which includes a hiking trails system and other public use facilities, is not proposed for disposal and would continue to be available for public use and enjoyment. The proposed land disposal also excludes TVA property located along Reservation Road east of Wilson Dam Road (SR 133) and north of River Road (Figure 1-3). TVA would also retain land in the vicinity of monitored SWMUs, as well as retain for the foreseeable future land south of Reservation Road used by the International Fertilizer Development Center and TVA Employees Credit Union under long-term easement agreements (see Figure 1-2).

The Muscle Shoals Reservation Redevelopment Environmental Impact Statement Final Scoping Report (TVA 2009) provides a more detailed description of the geographic bounds of the study area.

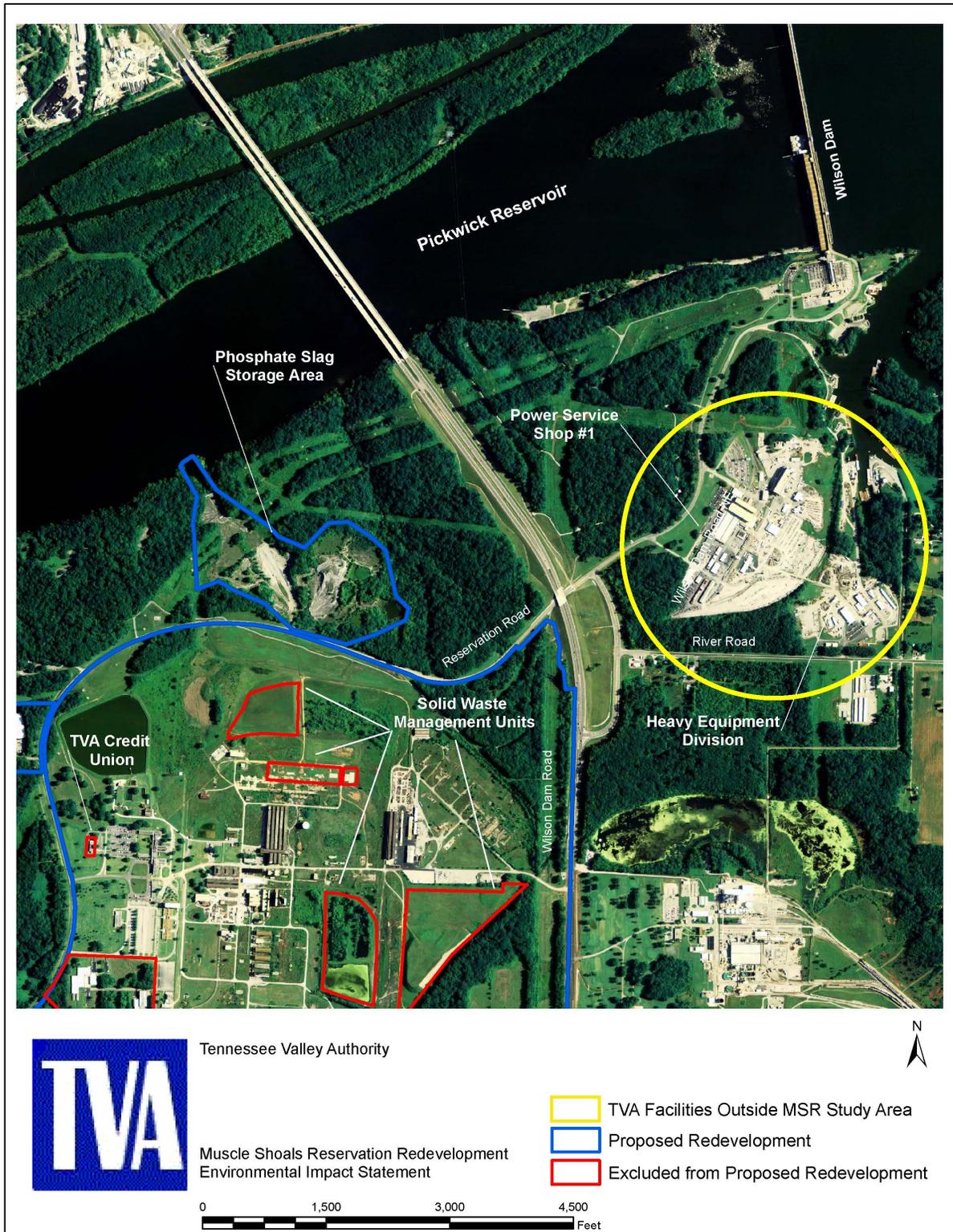


Figure 1-3. TVA Facilities Outside the Muscle Shoals Reservation Study Area

1.5.2 Public Scoping

During summer 2009 and following internal scoping, TVA asked the public to help refine the scope of this EIS, to determine potential alternative uses for the MSR lands to be redeveloped, and to identify environmental issues to be addressed. The major public involvement steps are listed below.

<u>June 18, 2009</u>	An NOI was published in the <i>Federal Register</i> informing other agencies and the public of TVA's intent to prepare the EIS. Project-related scoping information, including a site map, the NOI, a mailing list sign-up sheet, notice of the public scoping meeting, and an online comment form, was posted on the TVA Web site (http://www.tva.com/environment/reports/muscle_shoals/index.htm). The public comment period officially opened.
<u>July 9, 2009, and July 13, 2009</u>	An announcement of the July 14, 2009, public scoping meeting was published in two local newspapers: The <i>Times Daily</i> (Florence) and <i>The Huntsville Times</i> .
<u>July 11, 2009</u>	An announcement of the July 14, 2009, public scoping meeting was published in <i>Standard & Times/Lauderdale County News</i> .
<u>July 14, 2009</u>	A public scoping meeting was held at Muscle Shoals High School and was attended by about 100 people.
<u>June 18, 2009, to August 5, 2009</u>	TVA held a 48-day scoping comment period, which resulted in the receipt of 90 comments from 82 commenters. One hundred-forty people provided names and addresses for the mailing list to receive notification of other project-related information to be made available during the environmental review process.

In addition, newspaper articles on the MSR redevelopment project were published, primarily at <http://www.timesdaily.com>, prior to, during, and following the comment period by the news media largely from early May 2009 to October 2009. Various local interest groups also published editorials and other articles about the project.

Other useful information about the MSR study area was made available to the public early in the process. Following its completion in October 2009, TVA posted the results of the commissioned *Adaptive Re-Use Study* (Lord, Aeck, and Sargent Architecture 2009) on the project Web site. This study evaluates the importance, condition, and adaptability of buildings in the MSR study area potentially eligible for listing in the National Register of Historic Places (NRHP). It also examines the viability of these buildings based on current and foreseeable market trends in the region and provides a draft concept plan illustrating examples of how the historic buildings might be reused as a part of a larger redevelopment effort. This information will help TVA in its work with the Shoals community, the NACD, and others on the Master Plan, as well as during consultations with the Alabama State Historic Preservation Officer (SHPO), the Advisory Council on Historic Preservation, federally recognized tribes, and other consulting parties in this undertaking, which has the potential to affect historic properties. This consultation process is required to comply with the National Historic Preservation Act (NHPA) and is an integral part of this EIS.

Issues and Resources Addressed in Detail

The resources listed below have been identified during scoping as those likely to be directly affected by the implementation of the project alternatives and/or constrain any eventual site redevelopment. The existing conditions of these resources and the potential for impacts resulting from the various redevelopment alternatives are described in more detail in Chapters 3 and 4.

- Air Quality, Greenhouse Gases, and Global Climate Change (Sections 3.8 and 4.8)
- Aquatic Ecology, including Aquatic Endangered and Threatened Species (Sections 3.13 and 4.13)
- Environmental Justice (Sections 3.6 and 4.6)
- Floodplains (Sections 3.12 and 4.12)
- Geology (Sections 3.2 and 4.2)
- Groundwater (Sections 3.3 and 4.3)
- Historic and Archaeological Resources (Sections 3.4 and 4.4)
- Land Use (Sections 3.7 and 4.7)
- Natural Areas (Sections 3.15 and 4.15)
- Navigation (Sections 3.19 and 4.19)
- Noise (Sections 3.20 and 4.20)
- Recreation (Sections 3.16 and 4.16)
- Scenic Resources (Sections 3.18 and 4.18)
- Socioeconomic Resources (Sections 3.5 and 4.5)
- Soils and Prime Farmland (Sections 3.9 and 4.9)
- Solid and Hazardous Waste (Sections 3.1 and 4.1)
- Surface Water Quality (Sections 3.10 and 4.10)
- Terrestrial Ecology, including Endangered and Threatened Species (Sections 3.14 and 4.14)
- Transportation (Sections 3.17 and 4.17)
- Wetlands (Sections 3.11 and 4.11)

Issues and Resources Not Addressed in Detail

Some comments submitted during scoping dealt with vacant or unused buildings and facilities on private land in the surrounding area. These private buildings and lands are outside the scope of TVA's federal control and responsibility and are not addressed in detail in this environmental review. The EIS does consider the potential of these buildings and lands to influence the development of the MSR study area. Comments regarding other nonenvironmental issues, such as appreciation or critiques of TVA processes and guidelines, have been forwarded to the appropriate TVA organization for attention and are not addressed further in this environmental review.

1.5.3 Public Review of the Draft Environmental Impact Statement

The Muscle Shoals Reservation Redevelopment draft EIS was issued to the public on January 5, 2011, and the notice of its availability was published in the *Federal Register* on January 14, 2011. This initiated a 45-day public comment period, which closed on February 28, 2011.

TVA provided the draft EIS or postcard notification of its availability to individuals on the mailing list, agencies, organizations, interests groups, and institutions. The draft EIS was posted on the TVA Web site and placed in 13 public libraries from Huntsville, Alabama (Madison County), to Iuka, Mississippi (Tishomingo County). A news release and public notices (paid advertisements) were published in four newspapers announcing the February 3, 2011, public meeting. This included one newspaper of statewide circulation for Spanish-speaking stakeholders and three local newspapers. Commenters were given the opportunity to provide their comments online or by e-mail, fax, commercial mail, or telephone. Commenters could also sign up online to be included on a project mailing list to receive additional information; about 140 individuals signed up.

On February 3, 2011, TVA held a public meeting at the Muscle Shoals High School to receive comments on the draft EIS. About 80 people, representing various personal and organizational interests, registered and participated in the meeting. Twenty written and oral comments were received at the meeting, and many ideas were exchanged with TVA staff experts.

At the end of the comment period, a total of 146 comment submissions on the draft EIS, which included letters, e-mails, oral statements, and comments through the project Web site, had been received. These submissions were carefully reviewed and synthesized into 186 individual comment statements to which TVA has provided responses in this final EIS (see Appendix B, Public Comments and TVA Responses).

Some individuals stated a preference for certain alternatives presented in the draft EIS, while others expressed concerns about TVA's purpose and need for the proposal; effects on certain environmental resources, including historic buildings and structures, health and safety, socioeconomics, and environmental justice; specific future land uses; the role of the Master Plan and how and when it would be developed; and the adequacy of the review. Agencies expressed concerns primarily about effects on environmental resources, lack of project details of future land uses, cumulative effects analysis, and health and safety (see Appendix B). No new issues were raised during the comment period. However, as a result of the comments, TVA made several changes to the final EIS.

Some comments on the draft EIS suggested that TVA was not giving appropriate consideration to its stewardship responsibilities as it relates to the potential to sell and allow redevelopment of the MSR study area property. TVA has prepared a Natural Resource Plan, with accompanying EIS, to establish a strategy for managing its environmental stewardship projects (biological, cultural, recreation, and water resources) over the next 20 years. The final plan and EIS can be viewed at <http://www.tva.gov/environment/reports/nrp/index.htm>.

1.6 Other Pertinent Environmental Reviews or Documentation

The following environmental reviews are relevant to the proposed action, given the local and regional nature of anticipated effects of the proposed disposal and redevelopment. These reviews address actions in the vicinity of the MSR study area. Several include a

review and evaluation of issues and impacts similar to those addressed in this EIS, which relies upon or tiers from information contained in these documents.

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

This environmental review updated the 1981 *Pickwick Reservoir Land Management Plan* (TVA 1981) for TVA-managed public land on Pickwick Reservoir in Alabama, Mississippi, and Tennessee. It also allocated additional unplanned land not considered in the 1981 plan. The 2002 EIS also reflected new information and TVA policies, and serves as a guide for land use approvals, water use facility permitting, and resource management on Pickwick Reservoir. The EIS evaluated three alternative land plans. Under the selected alternative, the 19,237 acres planned are allocated as follows: 16,291 acres as natural resource conservation (Zone 4), sensitive resource management (Zone 3), and TVA project operations (Zone 2); 1,327 acres as developed recreation (Zone 6) uses such as marinas, campgrounds, parks, and boat ramps; 1,085 acres as residential lake access (Zone 7), and 534 acres as industrial or commercial use (Zone 5). The final EIS may be viewed at <http://www.tva.gov/environment/reports/pickwickplan/index.htm>. The MSR is not considered reservoir property and was not included in this plan.

Muscle Shoals/Wilson Dam Reservation Land Use Plan Final Environmental Assessment (TVA 1996)

In 1996, TVA developed the *Muscle Shoals/Wilson Dam Reservation Land Use Plan*. This planning effort focused on identifying how much of both reservations, totaling approximately 3,040 acres, was needed for TVA use. It also identified portions of the reservations that could be made available for use by others to meet non-TVA needs. As a result of public input, a large percentage of the land, particularly on the north side of Reservation Road, was allocated for public recreation and open space (see Section 2.1.1). In this plan, most of the land south of Reservation Road was allocated to ERC-related uses, and about 12 acres were allocated for non-TVA regional economic development opportunities. Of those 12 acres, a 3-acre tract of land in Florence, north of the Tennessee River, is occupied by the Marriott Shoals Hotel and Spa and Convention Center (formerly Renaissance Tower). The other remaining TVA property allocated for development opportunities is a 9-acre parcel of land in Sheffield that lies near an electrical substation, just west of Hatch Boulevard and north of Second Street.

The continued use of this land use plan represents the No Action Alternative in the current EIS, and land outside the current MSR study area would remain subject to this plan until superseded by a future planning effort (see Section 2.1.1).

Final Environmental Impact Statement: Patton Island Bridge and Approaches Crossing the Tennessee River and Connecting the Cities of Florence and Muscle Shoals, Lauderdale and Colbert Counties (Federal Highway Administration [FHWA] 1991)

In 1991, the FHWA issued a final EIS on the Patton Island Bridge project (now known as Singing River Bridge). TVA was a cooperating agency in the preparation of this document. Subsequently, TVA issued a ROD on September 20, 1994, on its decision to provide a permanent easement over 63.7 acres of TVA-managed public land for the bridge and highway approaches, and to provide approval under Section 26a of the TVA Act for the bridge over the Tennessee River at Tennessee River Mile (TRM) 258. The final EIS concluded that implementation of the Patton Island Bridge project would not have substantial land use impacts. The south shoreline of Patton Island was found to be a valuable fish spawning area and mussel sanctuary. Mussels, federally listed as

endangered, inhabiting the Tennessee River in the vicinity of the bridge were relocated to a suitable area prior to the placement of bridge piers. No adverse impacts to aquatic resources were expected from implementing the project as long as best management practices (BMPs) were used to control erosion and sedimentation.

Bridge construction was completed in 2002. This six-lane bridge, connecting Muscle Shoals and Florence via SR 133, provides an improved level of service (LOS) and safety and an increased volume of traffic. Compared to O'Neal Bridge (North Jackson Highway) and Wilson Dam (via northeast Wilson Dam Road), it also provides greater accessibility from Colbert and Lauderdale counties along this reach of the Tennessee River.

City of Florence, Alabama, Wastewater Treatment Plant Expansion Environmental Assessment (TVA 1997)

The City of Florence, Alabama, requested that TVA grant a permanent easement over approximately 121.8 acres of TVA public land abutting the Cypress Creek Wastewater Treatment Plant for the purpose of making improvements in the facility. The requested land is part of the area identified in the *Pickwick Reservoir Land Management Plan* (TVA 1981) as Planned Tracts XPR-74PT and XPR-75PT (Parcel No. 33 in TVA 2002). The environmental assessment (EA) analyzed the environmental consequences of two alternatives: the No Action Alternative and the proposed Action Alternative to upgrade the existing facility by adding an additional 20 million gallons per day (MGD) of wastewater treatment capacity. The EA concluded that implementation of the proposed Action Alternative would not result in significant impacts. TVA selected the Action Alternative, and the proposed upgrades, in anticipation of continued development and growth in the Florence area, have been completed.

Florence Wagon Works Site Remediation at Pickwick Reservoir, Wilson Dam Reservation Environmental Assessment (TVA 1998a)

This EA evaluated the environmental impacts of TVA's proposed corrective action plan and alternatives to conduct remediation at the former site of the Florence Wagon Works (FWW). The FWW site is located on TVA-managed reservoir land in Lauderdale County, Alabama, in the city of Florence on the north bank of the Tennessee River at TRM 258.6R (right bank). Lead contamination was identified at the site in the fall of 1994 during a preliminary survey of the area for a proposed historic riverside trail route. The contamination at the site was caused by paint and other chemicals used during the operation of the FWW plant. The EA describes and documents the health and ecological basis for TVA's decision and evaluates the environmental consequences of the proposed corrective action and alternatives. The proposed remediation action was designed to reduce the level of lead (the principal chemical of potential concern) below the health-based cleanup level of 500 parts per million (ppm). This work has been completed.

Barton Industrial Site Environmental Assessment (TVA 1998b)

This EA evaluated the environmental effects of developing the Barton industrial site as an industrial park. TVA proposed to lend \$1.85 million to the Shoals Economic Development Authority (SEDA) for the purchase and development of a 1,284-acre industrial site at Barton, Alabama, 12 miles west of Tusculumbia in western Colbert County. Future development would be based on specific projects centered on industries proposing to locate in the park.

Barton Site Expansion Environmental Assessment (TVA 1999)

This EA evaluated the environmental impacts of expanding the Barton industrial site. TVA proposed to lend SEDA \$560,000 of Economic Development Loan funds to refinance the purchase of two parcels of land known as the McWilliams property and the Blankenship property (approximately 320 acres). These parcels bordered the Barton industrial site in Colbert County, Alabama. TVA also proposed to issue Section 26a approvals for the development of a port facility and to approve a permanent industrial easement for an access road and approximately 20 acres of TVA property needed to develop the port.

TVA made a loan from its Economic Development Loan Fund through SEDA for purchase of the Barton industrial site in 1996 for \$1,910,000. TVA made a second loan in 2005 for \$291,000 to the Colbert County Commission to purchase property at the Barton site.

This investment by TVA resulted in the creation of over \$1 billion in investment and 750 new jobs at the Barton industrial site with the location of SCA Tissue and National Alabama Corporation, both international companies. These projects illustrate examples of TVA working with local government and community-based organizations in northwest Alabama to promote and encourage economic development initiatives.

Memphis to Atlanta Corridor Study, Mississippi/Alabama State Line to Interstate 65, Colbert, Franklin, Lauderdale, Lawrence, Limestone, and Morgan Counties, Project DPS - A002, Final Environmental Impact Statement (FHWA and Alabama Department of Transportation [ALDOT] 2003)

This EIS was prepared by the FHWA and ALDOT, and cooperating agencies included the National Park Service, U.S. Army Corps of Engineers (USACE), and TVA. The EIS assessed the impacts for a proposal to build a controlled access highway from the Mississippi/Alabama state line to Interstate 65, a distance of approximately 75 miles. Five alternative highway corridors were considered. Corridor A was selected as the preferred corridor. Four reasonable and feasible build alternatives were evaluated with respect to costs, social economic impacts, and environmental consequences. The Preferred Build Alternative, Alternative C1, crosses Redstone Arsenal and TVA properties on Pickwick, Wheeler, and Guntersville reservoirs. Implementation of Alternative C1 would require approval by TVA under Section 26a of the TVA Act and land use agreements for multiple parcels of TVA-managed land. If this project comes to fruition, it would provide a major interstate transportation route across North Alabama connecting two major cities. The preferred route would traverse the Muscle Shoals area along portions of existing U.S. Highway (US) 72. Lack of such a major transportation route is believed to be a contributing factor to the absence of development, particularly industrial development, in the area.

1.7 Potentially Necessary Federal and State Permits or Approvals

TVA is subject to the requirements of permits issued by the State of Alabama covering current use and operations on the MSR study area property. This includes a National Pollutant Discharge Elimination System (NPDES) Permit for point source discharge via the Central Ditch to Pond Creek and a RCRA postclosure permit for access control, maintenance, and certain monitoring associated with on-site cleanup of contaminated sites on the property completed in 2001. The RCRA Permit, AL3 640 090 004, is applicable to 2,260 acres of TVA-managed land and covers the entire MSR study area. TVA must renew it at 10-year intervals. The first renewal application was submitted to ADEM in May 2010. Following discussions with ADEM and a visual site inspection in October 2011, permit renewal approval is expected by mid-year 2012, after release of this final document.

The proposed land sale itself would not require TVA to acquire any permits or other federal approvals or authorizations. TVA would comply with applicable provisions of RCRA, including required coordination with ADEM, and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in disposing of the property.

The list below identifies regulations, programs, permits, approvals, or other authorizations from federal or state authorities that may be required of new property owners or developers:

- Approvals from TVA under Section 26a of the TVA Act are required for private or public development proposals that would affect Pond Creek, the Tennessee River, or their respective 100-year floodplains.
- Authorization(s) under Section 404 of the Clean Water Act (CWA) or Section 10 of the Rivers and Harbors Act, administered by the USACE, are required for disposal of dredge or fill material in waters of the U.S. or construction with the potential to obstruct navigation.
- ADEM administers the following programs under Title 22 Alabama Code, Chapters 22, 28, or 30, for which permits or other authorizations may also be required:
 1. Water quality certification under Section 401 of the CWA could be required of new property owners or developers as a part of the process required for permitting development in wetlands or waters of the U.S. or the state of Alabama.
 2. Under the General Permit for Construction Storm Water under Section 1342 (ADEM Administrative Code, Chapter 335-6-9) of the CWA, an operator/owner registration is required prior to any land-disturbing activity on the project site exceeding 1 acre and up to 5 acres in size in accordance with ADEM guidelines. Individual NPDES Permit coverage is required for disturbance of sites equal to or greater than 5 acres.
 3. An NPDES Permit would be required under Section 402 of the CWA for point source discharge into waters of the U.S. or state of Alabama.
 4. Underground storage tanks are regulated under RCRA.
 5. Underground injection control, regulated under the Safe Drinking Water Act, requires ADEM permits.
 6. ADEM's Division of Air Pollution Control Program administers the Clean Air Act, requires appropriate permits, and prescribes regulations to protect and enhance the public health and welfare through the development and implementation of coordinated statewide programs for the prevention, abatement, and control of air pollution.
 7. ADEM's Division of Solid Waste Program establishes criteria for the disposal of solid waste and the design, location, operation, closure and postclosure of landfill units.
 8. ADEM's Division of Hazardous Waste Program provides comprehensive management of the generation, transportation, treatment, storage, and disposal of hazardous wastes.

9. ADEM's Division of Brownfield Redevelopment and Voluntary Cleanup Program provides a mechanism for the implementation of a cleanup program that encourages applicants to voluntarily assess, remediate, and reuse rural and urban areas of actual or perceived contamination.
 10. Authorization or permits would be required from ADEM, Colbert County Health Department, or other appropriate health department to install and operate septic system facilities.
- Local government agencies or offices may require approval of certain types of development, e.g., building permits and plats, in compliance with certain regulations, zoning laws, or other applicable ordinances.

Page intentionally blank