

**APPENDIX B – PUBLIC COMMENTS ON DRAFT EIS AND TVA
RESPONSES**

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Response to Public Comments

The draft environmental impact statement (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 ending on February 28, 2011. Printed copies and/or compact discs (CDs) containing electronic files of the document were mailed to state and federal agencies and federally recognized tribes. Others on the project contact list were mailed or e-mailed notifications of the availability of the document and were instructed how to submit comments. The draft EIS was also available on TVA's Web site for review. One hundred and forty agencies, businesses, organizations, and individuals commented on the draft EIS via commercial mail, e-mail, Internet, facsimile, and verbal statements.

TVA held a public meeting in Muscle Shoals, Alabama, on February 3, 2011, where the public had the opportunity to question TVA staff about the content of the draft EIS and to submit comments. About 80 individuals registered and participated in the meeting. This appendix summarizes the public's relevant comments on the draft EIS and provides TVA's responses to those comments.

Analysis of Comments

TVA received 146 comment submissions from 140 commenters. TVA carefully reviewed all comment submissions and identified the specific comments about the draft EIS in each of them. Specific comments received in different comment submissions that addressed the same issues and concerns were synthesized into comment statements. When a unique issue was raised in a comment, that unique issue appears as a separate comment statement even if the remainder of the comment is included in synthesized comment statements. The result of this analysis and synthesis process is a list of 186 individual comment statements. TVA has considered all of the substantive comments it received on the draft EIS and has either responded to them as set forth below or modified the text of the final EIS as appropriate. The comments and responses are categorized into 26 different topics. Many of these topics are further categorized into different issues.

The majority of the commenters did not state a preference for how they felt the land should be used in the future. Nineteen individuals stated a preference that the property be developed because of its potential to promote employment growth in the community. Some individuals stated a preference for certain alternative land uses evaluated in the draft EIS, while others mentioned a variety of concerns. Among those that stated a preference, the number of individuals desiring implementation of a particular alternative or type of future land use was mixed (see Comment Statements 6 through 13). Eleven individuals stated a preference for Alternative A; 10 individuals stated a preference for Alternative B; and 12 individuals stated a preference for Alternative E.

Other commenters expressed concerns about TVA's purpose and need for the proposal; effects on certain environmental resources, including wildlife, woodlands, wetlands, aesthetics, and historic buildings and structures; health and safety associated with solid and hazardous waste management; socioeconomics and environmental justice; specific future land uses; the role of the Comprehensive Master Plan (Master Plan) and how and when it would be developed; and the adequacy of the review. Two organizations, The American Chestnut Foundation and the Tennessee Valley Career Technology Center, made specific proposals for use of certain portions of the Muscle Shoals Reservation study area, and numerous citizens offered support for those proposals. Agencies expressed concerns

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about effects on environmental resources, lack of details about future land uses, cumulative effects analysis, and public health and safety.

The individuals, businesses, organizations, and agencies that commented on the draft EIS are listed in Table 1. The table lists each commenter alphabetically and identifies the comment statement or statements attributed to the commenter. The identifiers for the comment statements are associated with each comment statement in the section immediately preceding the table. The actual letters, e-mails, facsimiles, and transcripts of verbal statements have been included in the administrative record.

Muscle Shoals Reservation Redevelopment Comment Response Report

Air Quality

1. Section 4.8.1 should discuss the positive impact the MSR study area's natural areas, especially its woodlands, has on local air quality. (*Commenter: Charles L. Rose - Shoals Environmental Alliance [SEA]*)

Response: The air quality in the vicinity of the Muscle Shoals Reservation (MSR) study area is generally good. Table 3-13 shows the results of ambient air quality monitoring of criteria pollutants that are considered representative of the site. Colbert County is currently in attainment for all criteria pollutants. It is recognized that the MSR study area, especially the woodlands, in its present state has a positive influence on local air quality. Vegetated areas, particularly large forests, can serve as potential sinks for the storage of carbon dioxide (CO₂), moderating the potential effects of global climate change (see Section 4.8 of the final EIS). In Section 4.8.2, Effects on Local Climatology, TVA acknowledges that the potential for perceptible impacts of MSR redevelopment on local climate could come directly from changes in the land surface. Within about 1 kilometer (1.6 miles) of the reservation, increases in buildings and pavement could contribute to warming of the surface due to greater absorption of solar radiation during the day, longer retention of the absorbed heat during the night, and the increase in waste heat released near the ground from building energy use. Other energy use by industrial equipment also generates waste heat. These various factors contribute to the "urban heat island" effect that causes large urban centers to be consistently warmer than their rural outskirts. Therefore, any redevelopment that increases the near-surface energy balance will lead to a local warming effect. The opposite effect, positive impact, is possible if MSR redevelopment were to lead to greater vegetation cover, especially forest cover.

2. As stated in the draft EIS in Section 3.8.2, development activities contribute to greenhouse gases (GHG) while parks and open land act as sinks for CO₂ storage. If TVA is really serious about its Environmental Stewardship mission it would leave the natural areas of the MSR study area alone. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. As discussed in Section 4.8.2 of the final EIS, increased vegetation cover is being considered by major cities in an effort to reduce cooling demand during the summer (to reduce power usage, GHG emissions, and air pollution formation). Thus, if vegetation cover were to increase from redevelopment, then it could have a small beneficial effect on both the local climate (providing a cooling effect in summer) and could be a new source of CO₂ removal. This could be taken into account through urban planning associated with development of the comprehensive Master Plan.

3. Section 4.8.2 of the draft EIS states 'Global atmospheric levels of GHGs would not be changed by any detectable amount by implementation of any of the alternatives.' This may be true, but does it mean that we should never consider the effect of local development on global warming? (*Commenter: Charles L. Rose - SEA*)

Response: The effect of local development on global warming is described in Section 4.8.2 in the final EIS. The greenhouse gas emissions from local developments, such as the proposed redevelopment of the MSR, are one of many sources, which while individually small, cumulatively contribute to climate change.

4. The final EIS should include additional analysis of the potential air quality impacts under Alternative C. The transportation section provides trip estimations in Table 4-5, which should be used with the emission factors to determine the amount of CO₂ emissions estimated for this Alternative. If truck traffic and emissions associated with other activities are accounted for, it is not unreasonable to conclude that the greenhouse gas emissions could easily be more than the indicator value of 25,000 metric tons per year. (*Commenter: Larry Gautney*)

Response: Final EIS Table 4-2 provides emission estimates for passenger vehicles as an annual average. Final EIS Table 4-4 provides estimates on daily trip totals, which does not necessarily equate to one additional vehicle per trip. For example, several trips can be generated per vehicle. Due to the inconsistency in the comparisons (i.e., vehicles vs. trips and annual averages vs. daily totals), direct correlations cannot be made. A more detailed analysis would require either speculation on the anticipated number of additional vehicles that would be in the study area or definitive data with regard to additional vehicle miles traveled due strictly to the proposed alternatives, neither of which is known at this time. Even if a direct correlation could be made from final EIS Tables 4-2 and 4-4, it would not be reasonable to conclude that the greenhouse gas emissions related to each proposed alternative could be more than the 25,000 metric tons per year based on the estimated totals found in final EIS Table 4-4.

Aquatic Resources

5. Section 4.14.1 states, 'No direct, indirect, or cumulative impacts to aquatic resources (including state- and federally listed species) are likely to result from upland development of the MSR study area.' How can this be known since no one knows what kind of industry will be developed on the MSR study area? (*Commenter: Charles L. Rose - SEA*)

Response: TVA sale deeds include a requirement that all land-disturbing activities be performed in accordance with best management practices (BMPs) so as to prevent adverse impacts on water quality and related aquatic interests in accordance with Section 208 of the Clean Water Act (CWA). In addition, for any and all land-disturbing activities in, along, or across streams, wetlands, or floodplains needing approval, TVA would require the responsible landowner/developer (i.e., permittee), by way of the Section 26a permit, to implement sound engineering and construction BMPs. Any direct, indirect, or cumulative impacts to aquatic resources (including endangered and threatened species) would be assessed, avoided, and/or minimized via existing state and federal regulatory mechanisms (particularly the CWA, the Endangered Species Act (ESA), and the National Environmental Policy Act [NEPA]). This would occur in association with future environmental reviews (i.e., Section 26a) of projects that could affect water quality. Stream corridors would likely be incorporated into green space or low-impact development areas within the comprehensive Master Plan. Therefore, no such effects on aquatic life are expected.

Comments For and Against the Alternatives

6. I oppose developing this area for commercial, industrial or residential purposes (Alternative C). (*Commenters: Jackie Posey, Susan Ruffrage*)

Response: Comment noted.

7. I am in favor of the redevelopment of the TVA Muscle Shoals Reservation. It will promote employment growth in our community. (*Commenters: Martin Abrams, Henry Allen, James Bedsole, Janet Blazer, James Bowles, Wil Bryant, Sammy Dodson, Alex Godwin, Brenda Griffith, Quinton Hanson, Matthew Hea, Steve Holt, Vernon McGee, Jerome McGouyrk, John Rusevlyan, Sam Scarborough, Rick Sharp, Billy Shoemaker, Mayda Simone*)

Response: Comment noted.

8. I prefer Alternative D or E with the exclusion of residential (*Commenter: David Bradford*)

Response: Comment noted.

9. I prefer Alternative A or Alternative B. (*Commenters: Gregory J. Harber - Alabama Ornithological Society [AOS], Greg Jackson, M.D. - AOS, Mike Jordan*)

Response: Comment noted.

10. I prefer the implementation of Alternative A. (*Commenters: Robert W. Bentley, Sr., Denise Chupp, Brenda Cummings, Ginny Lee Hill, Jerome McGouyrk, R. H. McNeece, William Nelson, Edwin Quigley, Mary Wakefield, Kenneth Warhurst, Marilyn Watson*)

Response: Comment noted.

11. I prefer the implementation of Alternative B. (*Commenters: Forrest Bailey - Alabama State Parks Division [ALSPD], Janice Barrett, Jane Beavers, Paul D. Kittle, John C. Rist - The American Chestnut Foundation [TACF], Susan Ruffrage, Jessica N. Smith, Mary Etoile Smith, Janet Spahn, Joyce Stanley - United States Department of the Interior [USDOI]*)

Response: Comment noted.

12. I prefer the implementation of Alternative C. (*Commenters: Sheila Dugger, Tom Dugger*)

Response: Comment noted.

13. I prefer the implementation of Alternative E. (*Commenters: Martin Abrams, Barry Auchly, Kim Boyd, Gary Doyle, Pam Doyle, Jackie Hendrix, Jerome McGouyrk, Dr. Joan Parris - Shoals Economic Development Association [SEDA], William Smith, Don Walker, Ricky Williams, Jeff Wooten*)

Response: Comment noted.

Comprehensive Master Plan

14. Due to the speculation of impacts made in the draft EIS, it is recommended that the Master Plan be developed prior to any decision, and the content of that plan be incorporated into the environmental review. (*Commenters: Larry Gautney, Charles L. Rose - SEA*)

Response: As indicated in Section 1.3, 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. Based upon TVA's experience and expert professional opinion, the reasonably likely future uses of the property are those described in Action Alternatives B, C, D, and E. Although TVA would not require a particular type of land use or uses under its Preferred Alternative F, it is reasonably foreseeable that the property would be used or developed for one or more of those uses. Land use and the extent of development would be determined by the Comprehensive Master Plan as well as existing and future applicable local laws, regulations, and ordinances and, to some extent, by the future property owner(s) themselves. Through a coordinated effort, TVA would work with the community and local government authorities in the development of the Master Plan and approve it. See Comment Statement 15 below for response regarding the Master Plan development and timing of the TVA decision about disposing of the land and selling it. TVA believes its analysis and evaluation of effects of alternative future uses of the property to be adequate.

15. How can the Master Planning proceed before the final EIS is issued and before the TVA Board makes a final decision? It seems that if the master planning proceeds before the release of the final EIS, TVA would be in violation of Section 1502.2 of NEPA. (*Commenter: Charles L. Rose - SEA*)

Response: As indicated in Section 1.4, TVA would make the decision on the proposed surplus and sale of the property no sooner than 30 days after the notice of availability of the final EIS is published in the *Federal Register*. This decision would be based on the anticipated environmental impacts, as documented in the final EIS, and other considerations. The Master Plan would be completed and approved after the TVA decision but prior to any land transfer from federal ownership. TVA may, however, begin certain aspects of the planning process while the preparation of the final EIS is underway by seeking public input regarding future development of the area. After action by the Board of Directors or its designee, TVA would issue a record of decision explaining its decision, the rationale for the decision, and any required mitigation measures and monitoring and enforcement requirements. TVA believes the effects of implementing the comprehensive Master Plan will have been adequately assessed within the range of alternative land uses in the final EIS, as outlined above, and would not violate NEPA regulations regarding prejudicing the outcome of the decision.

16. How can TVA guarantee that the needs of low-income families would be taken into account during the Master Planning process when the draft EIS contained no detailed description about the Master Plan? (*Commenter: Charles L. Rose - SEA*)

Response: The comprehensive master planning process would include public meetings that would provide the opportunity for all segments of the community to be heard. The meetings would be scheduled at convenient times and locations, and appropriate timely notice would be given to encourage input from the public. In addition, the Northwest Alabama Cooperative District would participate in the process, representing all of its constituent groups, and improvements to the local and regional economies would benefit all communities and populations.

17. How can TVA state that it supports sustainable land uses and planning that promotes the smart growth of Sheffield, Muscle Shoals, Tusculumbia and Florence when the Shoals area is nothing but urban sprawl? Will TVA have the final say about development decisions or will the local officials control the redevelopment? (*Commenter: Charles L. Rose - SEA*)

Response: Recent trends in local city planning have focused on growth from within existing developed areas in their municipal limits instead of broadening their respective corporate limits, which suggests the potential for less characteristic sprawl in the future. TVA supports sustainable land uses and planning that promotes smart growth on the reservation property under consideration. Smart growth concepts would be discussed and evaluated during development of the comprehensive Master Plan. As indicated in Section 4.5, the potential for attracting new jobs and economic expansion opportunities from outside the region is a key to regional economic development and growth. The MSR study area has some potential advantages and attractions if well planned. Development decisions would be guided by the comprehensive Master Plan, which TVA would play a role in developing and ultimately approve. TVA's development philosophy will be reflected in the Master Plan, and accordingly, future land use decisions would be made by the local community.

18. The final EIS should include more details about the comprehensive Master Plan including the exact process for implementing the Master Plan, how public input will be used during planning, when it will be produced, etc. Will the future owner(s) of the property be required to follow this plan or will they have final say in what the property would be used for? (*Commenters: Paul D. Kittle, Charles L. Rose - SEA*)

Response: As indicated in the response to Comment Statement 15 above, the planning process for the comprehensive Master Plan began in the summer of 2011 while development of the final EIS was still underway. The Master Plan will not be completed or approved until after issuance of the final EIS and the TVA decision. The draft concept plan illustrating examples of how the historic buildings might be reused as a part of a larger redevelopment effort, included with the *Adaptive Re-Use Study* (Lord, Aeck, and Sargent Architecture 2009), may provide an initial vision for the Master Plan. See Section 2.1 of the final EIS for a description of the planned development approach and commitment under all the action alternatives. As indicated in Comment Statement 17, development decisions would be guided by the Master Plan and, thereby, future land use decisions would be made by the local community.

As indicated in Section 2.1, under all the Action Alternatives, the approved Master Plan would be relied on to guide future land use decisions, including adherence to measures for the treatment of historic properties in the Memorandum of Agreement (MOA) with the Alabama Historic Preservation Officer. Also, see discussion of the Master Plan in Sections 1.2, 1.3, 2.0, 2.3, 2.4, and elsewhere in the final EIS. Key considerations in developing the Master Plan would include appropriate site capability and suitability analyses and the integration of societal valued natural resources and avoidance of incompatible land uses. The environmental information summarized in this EIS would be a key input to the process of developing the Master Plan. The Master Plan would be implemented and enforced by local governments, perhaps through zoning or through other available means, thus, adhering to the plan. See also the response to Comment Statement 16 regarding public input into the planning process.

Economic Development

Impact to Local Economy

19. Conserving the MSR study area's natural areas can have a positive impact on home values. There are studies that show that the closer residential properties were to natural areas, the higher their values. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. As described in final EIS Section 4.15, the Action Alternatives would not directly affect formally designated natural areas such as the Old First Quarters Small Wild Area. Naturally appearing (e.g., woodlots, fields) areas of the MSR study area would likely be developed under the Action Alternatives, particularly under Alternatives C, D, E, and F. TVA anticipates that some portion of these areas would remain undeveloped under the Master Plan.

20. The final EIS should mention that the 'urban heat island effect' would be avoided if the natural areas on the MSR are preserved under its socioeconomic discussions of Alternatives A and B. By avoiding this effect, building energy use would not increase, which would provide positive economic impacts. (*Commenter: Charles L. Rose - SEA*)

Response: Effects on local climatology, such as the urban heat island effect, are discussed in Section 4.8.2 of the final EIS. As noted in Section 4.8.2, the effects on local climatology would be restricted to the area within about 1 kilometer of the reservation and the resulting economic impacts would be small. The effects of natural vegetation (e.g., woodlands) on local climate are also discussed in Comment Statement 1.

21. The redevelopment of the Muscle Shoals Reservation would have a significant positive impact to not only the Shoals area, but the Southeast. It would also increase job growth throughout the area. (*Commenters: David Bradford, Mitch Hamm, Steve Holt, Darren Rhodes, Ronnie Smith - AIDT, William Smith*)

Response: Comment noted. The extent of positive impact would depend upon the type and number of businesses that could potentially be created or relocated from outside the Shoals area. An influx of new dollars, instead of a redistribution of existing business development from within the area, would be key to the amount of economic benefit ultimately received in the community.

22. There is also a 'bottom line' benefit to the Shoals economy from the reduction in water and air pollutants provided by the MSR's green spaces. The reservation's woodlands and wetlands are constantly at work cleaning the air and water by removing pollutants. According to the Trust for Public Land, Atlanta's air pollution reduction from trees is worth \$15 million annually. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. TVA agrees that there is benefit to the local economy from these pollutant reductions. While we have not attempted to estimate the dollar value of these benefits, we believe they are great enough to warrant serious consideration in development of the Master Plan for the MSR.

Recreation and Tourism

23. The implementation of Alternative B would have a huge financial impact on the local economy by increasing recreation and ecotourism. Therefore, I do not agree that social and economic impacts would only be 'relatively minor' under Alternative B. (*Commenter: Charles L. Rose - SEA*)

Response: There are three ways in which Alternative B would have social and economic impacts on the area. One, as mentioned in the final EIS, is improvement of the quality of life for those who already live in the area. The second is through attracting new residents and businesses or companies to the area. The third is by attracting more visitors to the area. Alternative B would likely have positive impacts in all three of these ways. New residents might be attracted due to the increased quality of life. Depending on the extent that new businesses or companies locate in the area, this effect would be limited largely to retirees or people who otherwise would be living in neighboring counties. It is unlikely that this would be a major impact. The quality of life in an area is one factor that affects location decisions of businesses and companies. Therefore, improving the quality of life in the Shoals area would increase the attractiveness of the area to businesses and companies. Attracting more visitors to the area is likely, but would be limited unless the area offers unique attraction to those living outside the Shoals area. While major economic impacts are possible, small to possibly moderate impacts appear to be more likely. Social impacts are likely to be more important as they relate to increasing the quality of life for residents of the area.

24. TVA should provide a location to house the many artifacts TVA has and encourage tourism where TVA 'was born.' (*Commenters: Anonymous, Debbie Bradford*)

Response: Comment noted. TVA acknowledges the important role the Shoals has played since TVA's inception in 1933.

Final EIS Section 4.4 and Appendix A describe the actions that TVA will complete in order to document and interpret the historic resources that would be affected by the Action Alternatives. The documentation and related items will be archived in the Special Collections Department of Collier Library at the University of North Alabama, where they would be available for public viewing. This could potentially serve as another valued tourist attraction.

Endangered & Threatened Species

Impacts

25. Considering that this stretch of the Tennessee River is an important mussel sanctuary, including many endangered species, why is TVA going to consider allowing a barge terminal at the Utility corridor as stated in Section 4.19.4? (*Commenter: Charles L. Rose - SEA*)

Response: As stated in final EIS Section 2.1 and elsewhere, TVA would not approve a barge terminal, commercial dock, or other similar shoreline facility along the adjacent (south) bank of the Tennessee River. If needed along the shore within the utility access corridor (in the vicinity of the slag pile), TVA would consider approval of intakes; outfalls; water, gas or petroleum pipelines; other chemical or electrical transmission lines; or other associated shoreline alterations, etc., to the river in support of development south of Reservation Road. Such actions within the floodplain would create obstructions, affect TVA land, and require independent review and approval under Section 26a once the details of such proposals were specified it (see the responses to Comment Statements 65, 121, and 180). In addition, see the response to Comment Statements 5, 26, and 177 on the potential effects on aquatic endangered species in the Tennessee River.

26. When discussing Alternative C, the draft EIS states: 'Actions resulting from the adoption of this alternative would have a greater potential for direct, indirect, or cumulative effects on

aquatic resources on Pond Creek and in the Tennessee River compared to Alternatives A and B.' Could these 'cumulative effects' negatively impact the endangered mussel species in the river here? (*Commenter: Charles L. Rose - SEA*)

Response: Any direct, indirect, or cumulative impacts to Pond Creek or aquatic resources in the Tennessee River (including endangered and threatened species) would be assessed, avoided, and/or minimized via existing state and federal regulatory mechanisms (particularly the CWA, the ESA and NEPA) associated with future environmental reviews of specific proposals for use of this area. It is not anticipated that development potentially occurring under Alternative C would have direct, indirect, or cumulative adverse impacts to these resources.

Adequacy of Surveys

27. I have found a glade plant similar to that of the Lyrate bladderpod, Widow's Cross, in several locations on the MSR even though the USDA database doesn't list it as being found in Colbert County. Databases are not always complete; therefore, a plant survey should be conducted in the MSR study area for the Lyrate bladderpod. (*Commenter: Charles L. Rose - SEA*)

Response: According to the U. S. Fish and Wildlife Service (USFWS), *Lesquerella lyrata* (lyrate bladderpod), a federally listed as threatened plant species, has a worldwide distribution consisting of six populations found in Colbert, Franklin, and Lawrence counties, Alabama. Dr. David Webb, a TVA aquatic plant specialist, botanist, and long-time resident of the Muscle Shoals area, discovered the Colbert County populations. Dr. Webb has worked on the MSR for more than 25 years and has never encountered lyrate bladderpod in the area of the reservation. He too has noted the presence of *Sedum pulchellum* but commented that the plants seem to be restricted to rock or gravel brought in for trails or road maintenance and are not associated with cedar glades. He concurs with the statement that "habitat to support lyrate bladderpod does not occur within the action area of the MSR EIS."

28. The lack of data in TVA's Natural Heritage database doesn't mean there are no federally listed plants on the MSR study area, it simply means there is not one listed in the database. Databases are incomplete. A systematic survey of the MSR study area should be completed before TVA disposes of this land. (*Commenter: Charles L. Rose - SEA*)

Response: TVA agrees that database information is useful in providing occurrence records for species, and this information is systematically and regularly updated to reflect current data. The TVA database includes records collected from the field and other reliable sources (e.g., museums, arboretums) provided to us by all the state natural heritage programs as well as USFWS on listed species within the 201-county TVA power service area. These data allow TVA to determine what to expect in a given area and, with knowledge of its ecology, what habitat requirements are needed to support listed species. While all 1,400 acres within the MSR study area were not completely surveyed, much of the area has been covered by informal field reviews by staff working on the MSR and by TVA botanists. Habitats to support federally listed species known from the region do not occur within the project study area. The state-listed species found within the small wild area and ravines adjacent to the project area would not likely be impacted by the proposed actions.

Bats and Other Terrestrial Animals

29. The importance of protecting known foraging areas for the endangered bat species is well known. How is TVA still willing to let the natural areas be displaced by development when they know the gray bat forages on the MSR study area? (*Commenter: Charles L. Rose - SEA*)

Response: Gray bats typically forage over medium and large bodies of water, as well as smaller streams and branches. Given that suitable foraging habitat for gray bats is abundant throughout this area along Pickwick and Wilson reservoirs and associated tributaries, it is not anticipated that any impacts to this particular stretch of foraging habitat would significantly impact this species.

Environmental Justice

30. According to the DEIS, the minority population is lower in Colbert County and the Impact Area compared to the State of Alabama and the U.S. The DEIS also examined the minority populations in Census Tracts 207.01 and 207.02 and the blocks immediately around the site. The Census Tracts and blocks also showed minority populations below the County, State and National Average. Colbert County's poverty level is lower than the impact area and State, but is similar to the poverty level nationally. However, Table 3-8 also indicates that the average income levels in Colbert County and in the impact area are lower than the State of Alabama and national levels. (*Commenter: Heinz J. Mueller - United States Environmental Protection Agency [USEPA]*)

Response: Comment noted. Section 3.6 of the final EIS has been updated to reflect the recently released data from the United States Census of Population (2010).

31. It is unclear how low-income or minority populations currently utilize the MSR study area. The final EIS should include a discussion on the potential impacts on current uses for EJ populations, especially loss of recreational amenities. (*Commenters: Heinz J. Mueller - USEPA, Charles L. Rose - SEA*)

Response: Excluding the fence-restricted portion of the MSR study area, which comprises approximately 540 acres of its developed interior core, the reservation is public land available to all populations, regardless of race or income levels. This includes minority and low-income populations that reside in the area and elsewhere in the state or region who use the area (particularly the TVA land north of Reservation Road) for recreation. These recreational activities include walking, nature study, bird watching, fishing, boating (kayaking, canoeing, etc.), and historical interpretation (e.g., historic markers, information kiosk) and viewing. Recreation opportunities are somewhat limited on the study area but are more available on surrounding public and private land and on the Tennessee River. The local municipalities and private venues also provide substantial recreational activities and events at little or no cost. As indicated in Section 4.14.2, TVA's evaluation suggests that development under Alternatives C, D, E, and F could cause habitat loss in the southwest portion of the study area that could significantly affect migrant birdlife and local recreation opportunity (i.e., bird watching). Because similar habitat does not occur on the remainder of the TVA land on the Muscle Shoals/Wilson Dam Reservation, compensatory on-site mitigation for these losses would be difficult to accomplish. There are no known data, anecdotal evidence, or staff observations to suggest that bird watching is particularly desired or valued by low-income or minority recreationists, and such experiences could be found on other public or private land elsewhere in the area.

The potential for adverse loss of recreation opportunities would likely be greater for the 1-mile segment of the National Recreation walk/bike trail and a separate 900-foot section of this trail (see Section 3.16 Recreation of the final EIS). Observations suggest that the trails, including those that provide access to bank fishers, attract substantive use by minority and low-income populations from the surrounding communities. TVA would take necessary action to either maintain these segments for their present use or offset their loss by similar or increased opportunities provided elsewhere in the vicinity. Pending the nature of any proposed infrastructure enhancements in the utility access corridor, temporary effects could reduce access and associated opportunities for use of the Rockpile Hiking Trail. Minority and low-income populations, as well as others, would continue to have these opportunities available to them (see Sections 3.16 and 4.16 of the final EIS). Therefore, there would be no noticeable impacts to users of the trail network, including minority and low-income populations.

32. The Environmental Justice section should include a summary of the public comments, concerns and TVA's response to them and any efforts used to specifically engage potential EJ populations in the Scoping public involvement process. In addition, the project's website address should be included in the EJ section for those interested in more detailed information about the Scoping document. (*Commenter: Heinz J. Mueller - USEPA*)

Response: In the summer of 2009 during initial public scoping, notice to the communities of the proposal was provided via a notice of intent (NOI) in the *Federal Register* and several media outlets. As indicated in the final Scoping Report, numerous articles and editorials were subsequently published in newspapers with circulation throughout the area, including minority and low-income communities, furthering discussion of the proposal. TVA hosted a public meeting at a convenient location in Muscle Shoals in July 2009, and about 100 people attended. Minority participation in the meeting was not differentiated. TVA also posted its NOI, and later the final Scoping Report, on its Web site. Commenters were given the opportunity to provide their comments easily through several means, including online. Commenters could also sign up online to be included on a project mailing list; about 140 individuals signed up. TVA provided the draft EIS or 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, placed in 13 public libraries from Huntsville, Alabama to Iuka, Mississippi and public notices (ads) of the February 2011 public meeting were placed in four newspapers of circulation in the area and across the state. Additional outreach was performed to inform EJ populations by notifying local churches, the statewide Spanish-language *PAISANO* newspaper, African-American radio stations, a local chapter of the National Association for the Advancement of Colored People, and African-American fraternities and sororities in the project area. Although 146 comment submittals on the draft EIS were received from 140 commenters, there is no discernable evidence of a particular increase in the participation of EJ populations thus far. Additional opportunities would be forthcoming for participation in planning and development of the property.

Geology

33. The DEIS states: 'No mining, mineral extraction, or petroleum exploration, drilling, or deep excavation that could cause or contribute to bedrock subsidence are anticipated.' Does this statement mean that although it is not anticipated, this mining or drilling still might possibly occur? It doesn't appear to be prohibited. (*Commenter: Charles L. Rose - SEA*)

Response: Any development is expected to occur in accordance with acceptable sound engineering methods and environmental BMPs. Beyond necessary excavation for building

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foundations and underground support structures for purposes of weight distribution and stability, TVA does not expect any extraction, exploration or deep excavation to occur. Although not specifically prohibited, any primary industrial development involving such disturbance would have to be compatible with the comprehensive Master Plan and local laws, regulations, and ordinances.

Groundwater

34. The ecological value of protected forests, wetlands, and green spaces is undisputed. These areas prevent runoff and restore rainwater to the groundwater at a time when flooding from severe episodes of rainfall is becoming more common in areas of our cities where asphalt and cement interrupt the natural cycle of groundwater restoration and runoff and erosion prevention provided only by trees. (*Commenter: Margaret M. McCloy*)

Response: Comment noted. Information regarding ecological values associated with this property is provided in the final EIS. This and other information would be considered by participants in the development of the comprehensive Master Plan and allocation of green spaces across the area.

Historic and Archaeological Resources

General

35. How will the redevelopment affect known cemeteries in the MSR study area? (*Commenter: Charles L. Rose - SEA*)

Response: There are two known cemeteries within the MSR study area, the Murphy-Kemper-Cockburn and Cuba cemeteries. Both would pass from federal control and be covered by state laws applying to cemeteries, such as the Alabama Burial Act (Section 13A-7-23.1). TVA has cleared these cemeteries of excess woody vegetation so that their locations are clearly defined for any future owners of this land. TVA has also erected a fence at the Cuba Cemetery. Because these cemeteries are not considered eligible for listing in the National Register of Historic Places, they are not included in the MOA on the treatment of adverse effects on historic properties.

36. How will this redevelopment affect the historic Wilson Village No. 2? (*Commenter: Charles L. Rose - SEA*)

Response: The Preferred Alternative would likely have an adverse effect on the remains of Wilson Village No. 2. All residential structures and outbuildings were relocated or demolished when the village was closed in the 1950s. The remaining archaeological evidence has been recorded and the adverse effect mitigated through an MOA with the Alabama State Historic Preservation Officer (SHPO).

37. The discussion of possible impacts to archaeological resources in the draft EIS is vague since it is not known what would be developed on the MSR study area. The final EIS should include a detailed description of the potential impacts on archaeological resources. (*Commenter: Charles L. Rose - SEA*)

Response: All of the MSR study area has been surveyed for both archaeological and architectural (i.e., buildings and structures) properties. Only three of the archaeological sites identified in the surveys for historic properties are eligible for listing in the National Register of Historic Places (NRHP). The Preferred Alternative would likely have an adverse effect on these three sites. TVA has consulted with the Alabama SHPO regarding

mitigation of the adverse effects on these historic properties. This includes an Oral History survey and report from interviews of some of the remaining inhabitants of Wilson Village No. 2 to augment the existing archaeological and documentary information covering the three eligible archaeological sites. This information will be donated to the Special Collections Department of Collier Library at the University of North Alabama. See final EIS Section 4.4 and Appendix A.

38. The MSR study area contains Native American history (Trail of Tears) and most likely burial sites that we don't know about so TVA needs to disturb as little land as possible. It was also used as the encampment site for Union troops under General Sherman during his march to Atlanta as well as General Hood's troops at one time. (*Commenters: Janet Spahn, Kenneth Warhurst*)

Response: As described in Section 3.4.1.5 of the final EIS, there have been two large-scale cultural resource surveys in the 21st century that included the MSR. All Civil War sites are north of Reservation Road and not in the MSR study area subject to potential disposal and redevelopment. No Trail of Tears sites or Native American burials have been identified in the MSR study area. Any burial, regardless of ethnic origin, would be covered under the Alabama Burial Act (Section 13A-7-23.1) once the property has been transferred from federal ownership.

39. The Shoals Environmental Alliance has no objections to the sale, and adaptive reuse of the MSR's industrial sites and office buildings, as long as no harm is done to the integrity of any historic sites or structures. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted.

40. Why under Alternative B (Conservation) is there discussion of activities that involve intensive or extensive earth disturbance that could adversely affect cemeteries and unavoidable adverse impacts on eligible buildings/structures and archaeological sites? The conservation Alternative should place high importance on the conservation of archaeological sites, cemeteries and historic buildings. (*Commenter: Charles L. Rose - SEA*)

Response: Alternative B – Conservation Alternative would require that the MSR study area be used for conservation of natural resources and/or sustainable low-impact development uses. The Conservation Alternative does make reference to ecotourism and the possibility of improvements made to existing recreation facilities. As stated in Section 4.4.1.2, TVA acknowledges the possibility that even low-impact development could have an effect on sensitive and fragile historic archaeological resources. However, under Alternative B, TVA is committed to encouraging development that has a small environmental footprint. Reuse of existing buildings, limited new construction that is restricted to brownfield areas of the MSR, and avoidance of greenfield areas are all elements expressed in Alternative B. TVA further acknowledges that Alternative B would likely result in beneficial effects on historic architectural resources.

41. What happened to the archives that were in the visitor center? (*Commenter: Gary Hester*)

Response: The Wilson Dam Visitors Center was closed in September 2001. TVA retained records of property removed from the center and properly stored these furnishings and materials. As indicated in Comment Statement 103, there are no plans to reopen the visitors center.

Memorandum of Agreement (MOA)

42. The draft EIS states: 'With the application of necessary and appropriate mitigation, potential effects to historic properties across the action alternatives would be insignificant.' How can this be known? How can impacts from Alternative C possibly be comparable to those from Alternative B, under which the goal should be to preserve all historical buildings and historical contexts as much as possible? (*Commenter: Charles L. Rose - SEA*)

Response: Previously identified potential mitigation measures described in Section 2.3 of the final EIS, stipulations in the MOA developed in partnership with the Alabama SHPO included in Appendix A, and context-sensitive site design associated with and resulting from the development of a comprehensive Master Plan would all serve to reduce the severity of impacts to historic properties associated with Alternative C or any of the Action Alternatives. The potential effects associated with any of the Action Alternatives would not be identical. However, through mitigation measures associated with the final EIS and stipulations in the MOA, the effects of the proposed Action Alternatives would be brought to similar levels of insignificance.

43. TVA should provide additional details regarding the Memorandum of Agreement (MOA) between TVA and the Alabama State Historic Preservation Officer (SHPO) in the final EIS; and the effect of the MOA on land use decisions. (*Commenter: Heinz J. Mueller - USEPA*)

Response: Comment noted. The terms of the MOA are summarized in final EIS Section 4.4 and a copy of the MOA is included in Appendix A. Included in the MOA is the commitment to develop a Comprehensive Master Plan for the redevelopment of the MSR property (see Elements Common to All Action Alternatives in Section 2.1 of the final EIS). This Master Plan would involve the consulting parties, local governments, and the public in shaping the vision for redevelopment on the site. This plan would also include design guidelines and architectural controls for new construction in the vicinity of historic properties so that infill development of any type is compatible and does not significantly affect the historic integrity of the extant features/resources. These design guidelines and architectural controls would not have an appreciable effect on land use decisions as many potential uses could be integrated into the historic context of the site. However, land use decisions may be affected by the involvement of all parties during the comprehensive planning process as potential uses as well as opportunities and constraints are discussed and refined.

Muscle Shoals Historic District

44. Considering that the entire Muscle Shoals Reservation is eligible for the National Register of Historic Places as the 'Muscle Shoals Historic District' (MSHD), why can TVA not take measures, even if they want to relinquish ownership here, that the MSR's natural areas are preserved and incorporated into this historic district, which could be the centerpiece of the Muscle Shoals National Heritage Area? (*Commenter: Charles L. Rose - SEA*)

Response: TVA has committed to work with the Northwest Alabama Cooperative District, the Alabama Historical Commission, and local citizens to develop a comprehensive Master Plan for the MSR property. Through this master planning process, areas could be identified to preserve, support, conserve, and interpret the legacy of the region. TVA anticipates that through this master planning process, future development of the property would promote heritage, cultural, and recreational tourism.

45. How can commercial, retail and residential development be compatible with a future Muscle Shoals Historic District? (*Commenter: Charles L. Rose - SEA*)

Response: Commercial, retail, and residential development have the potential to be compatible with a historic district. Through context-sensitive design of new construction and adaptive reuse of historic buildings, new development may be integrated with historic buildings that establish a historic district. TVA has committed to work with the Northwest Alabama Cooperative District to develop a comprehensive Master Plan, with input from the Alabama Historical Commission and local citizens. This Master Plan would address integration of new development into the context of a historic district. See MOA Stipulation No. 3 requiring implementation of certain design guidelines and architectural controls.

46. It seems like every building structure located on the MSR study area was examined individually without any associative relevance to its surroundings. To adequately assess this entire historical complex, each building structure should be weighed historically for its overarching legacy; first to the neighboring structures, then to the locale or region. The draft EIS doesn't seem to consider the totality of the cluster of historical structures with any sensitivity for discerning history, heritage, legacy, etc. (*Commenter: John Agricola - TACF*)

Response: In Section 3.4 of the final EIS, TVA explains the architectural context and relative eligibility of the buildings and structures within the study area. The two primary architectural contexts are the Industrial Army Vernacular buildings associated with USNP2 and the buildings associated with the New Deal and TVA. While TVA has listed the buildings and structures individually in final EIS Table 3-6, the buildings are only considered eligible, generally, as a complex (final EIS Table 3-4). The buildings/complexes within the study area are eligible for listing in the NRHP, primarily under Criterion A and not under Criterion C. These historic buildings and structures are eligible because of their association with the significant contributions made in peace time and in war, in fertilizer and munitions development. They are eligible in this context collectively because of the international significance of the area's contributions during World War I and the formative years of TVA. Also see response to Comment Statement 44.

47. There is no discussion in Chapter 4 of the Muscle Shoals Historic District. The final EIS should provide additional information regarding the potential impact of the alternatives on the district and if/how this would impact future land use decisions within the study area. Why has TVA not nominated the MSR to the National Register of Historic Places (NRHP)? (*Commenters: Heinz J. Mueller - USEPA, Charles L. Rose - SEA*)

Response: The Muscle Shoals Historic District, as described in the 2002 report by TRC, includes a large geographic area, of which the MSR is but a portion. This historic district was comprised of five contexts described in Section 3.4.1 of the final EIS. Within the MSR, only two of these contexts exist, with two primary identifying architectural features. The Wilson Dam (1916-1933) context includes the period of construction of the USNP2. This context is architecturally identifiable by the Industrial Army Vernacular Style, which is starkly in contrast with the neoclassical styled dam and powerhouse. The second context within the MSR is TVA's development of Muscle Shoals after the New Deal (1942-1970). This context is architecturally identifiable by the strong connection to the International Style, which was popular during the early part of the 20th century. Both contexts are described in detail in Section 3.4.2 of the final EIS. TVA, in consultation with the Alabama SHPO, determined that a redefined historic district with a narrower and more appropriately focused historic context would be developed as a result of the MSR Redevelopment Project. This historic district will focus on the two periods of significance previously identified in the TRC report and generally described above and in the final EIS. TVA will prepare an NRHP

Registration Form for this redefined historic district as part of the negotiated stipulations included in an MOA with the Alabama SHPO (Appendix A). Future land use decisions within the study area would be guided by the comprehensive Master Plan, which would be developed with the Northwest Alabama Cooperative District, the Alabama Historical Commission, and local citizens.

National Historic Preservation Act (NHPA) Compliance and Tribal Consultation

48. Section II of the National Historic Preservation Act (NHPA) states that 'it shall be the policy of the Federal Government...to provide leadership in the preservation of the prehistoric and historic resources of the United States.' TVA is disregarding its responsibilities under the NHPA with the proposed land disposal. (*Commenter: Charles L. Rose - SEA*)

Response: Section 106 of the NHPA (16 USC 470f) and the regulations implementing that section (36 CFR part 800) provide a mechanism where the Alabama SHPO and the Advisory Council on Historic Preservation (ACHP) can comment on federal undertakings such as the transfer of property out of federal ownership. TVA has funded archaeological and architectural surveys to identify historic properties that are eligible for listing in the NRHP. There are no prehistoric archaeological sites eligible for the NRHP within this project's area of potential effect. There are, however, historic archaeological sites and structures that are eligible for the NRHP. Following established regulations, TVA has negotiated an MOA with the SHPO to address the adverse effects to these historic properties. TVA will encourage the adaptive reuse of historic buildings under this agreement and recordation where reuse is not possible. TVA is funding an Oral History project to permanently record the memories of some of the remaining residents of Wilson Village No. 2 to augment the archaeological and documentary record of this historic site. This information will be donated to the University of North Alabama for preservation and public access.

49. The Alabama Historic Commission agrees with the content of the draft EIS. We look forward to working with you to address potential impact to cultural resources in the coming MOA. (*Commenter: Elizabeth Ann Brown - Alabama Historical Commission [AHC]*)

Response: Comment noted.

Viewshed

50. How are the viewsheds at the historic sites on the MSR study area going to be affected by the proposed redevelopment? (*Commenter: Charles L. Rose - SEA*)

Response: Viewing positions where a historic context is established by extant architectural features, such as the USNP2, would potentially be affected by the proposed redevelopment. TVA has acknowledged this potential, as well as the potential of new development to be compatible with viewsheds containing historic properties. To address the possibility of adverse effects, TVA has committed to work with the Northwest Alabama Cooperative District, the Alabama Historical Commission, and local citizens to develop a comprehensive Master Plan for the MSR property. This Master Plan would address integration of new development in a viewshed that contains historic properties. Additional information may be found in the MOA developed in consultation with the Alabama SHPO. Design guidelines for new construction located within a reasonable distance of certain historic buildings would be required. The MOA is included in Appendix A of the final EIS.

Land Use

Other

51. The Shoals Environmental Alliance feels that the Muscle Shoals Reservation, with its many historic sites and centrally located green spaces, offers the public a unique opportunity for recreation, observation of nature and the appreciation of our local history. Its redevelopment should be undertaken with great care. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted.

52. The wetlands, forested and all natural areas on the MSR study area should be left alone. (*Commenters: Janice Barrett, Noel M. Beck, Paul D. Kittle, Margaret M. McCloy, Grant Posey, Jackie Posey, Charles L. Rose - SEA*)

Response: Comment noted.

53. TVA is trying to sell the water source for Hall Memorial Native Plant Garden located on the north side of Reservation Road. (*Commenter: Marilyn Watson*)

Response: The water treatment plant, south of Reservation Road, is the source of water for the Hall Memorial Native Plant Garden and TVA's trailhead restroom facilities. The water plant could be sold, but TVA would have a continuing need for water for the restroom facilities. The native plant garden is located on TVA land north of the road and is maintained by conservation partners, the Shoals Environmental Alliance, Shoals Wildflower Society, and Shoals Master Gardeners. The garden is located in an area allocated for public recreation and open space and would not be sold. Under all the alternatives being considered, TVA would retain a source of water for its restroom facilities, and therefore, water would be available in the vicinity of the native plant garden. In the future, TVA could possibly reassess the need for this water source and make water available to the garden only at an appropriate usage fee.

Proposed Uses

54. Forever Wild would be wonderful stewards for the wetlands, woods, and possibly the walking trails. (*Commenter: Jackie Posey*)

Response: Comment noted.

55. I support the efforts to provide better education and training opportunities for the North Alabama community through the development of the Tennessee Valley Career Technical Center on the MSR study area. The existing facilities have the ability to easily be repurposed into world-class facilities for training in the agricultural, aquaculture, natural and environmental sciences. Many local educational institutions, businesses, and environmental groups support this proposal as well. (*Commenters: Anonymous, Robert B. Aderholt, Tim Alford, Grady Batchelor, George Blanks, Don Blazer, Steve Carpenter, Ed Castile, David Cline, Adam Daniel, Dennis Deaton, Pam Doyle, Tom Dugger, Lynn Greer, Coy Johnson, Jason Lard, James Laurent, Darin Liles, Brian Lindsey - Muscle Shoals City Schools [MSCS], Rex Mayfield, Brandon Moore - Alabama Farmers Federation [AFF], Nancy Muse - SEA, Stephanie Newland - SCC, Jackie Norton, Kathy Pigg, Jackie Posey, Billy Quesenberry, Joel Retherford, Darren Rhodes, Tommy Riner - National Alabama Corporation [NAC], Charles L. Rose - SEA, Celia Rudolph - MSCS, Susan Ruffrage, W. David Sample, Jeff Sibley, Ronnie Smith - AIDT, Tiffany Stonecipher - Muscle Shoals Center for Technology [MSCT], Joseph Touchton - Auburn University [AU], Gary Warren, Bonnie*

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White, Jeff Wooten)

Response: Comment noted. TVA recognizes the support from within the Shoals community and the potential value of the career technical school. Depending on the Tennessee Valley Career Technical Center's ability to acquire the land, such land use decisions would ultimately be made through development of the comprehensive Master Plan by local governments, TVA, and citizens of the community.

56. I am formally requesting that a portion of the Muscle Shoals Reservation be utilized for an innovative secondary school career academy currently titled the Tennessee Valley Career Technology Center (TVCTC). It would serve as a career and technical magnet school for the state of Alabama and the Southeastern US. Buildings on the property could be remodeled and used for classrooms, research and learning laboratories, offices, and possibly dormitories. The existing wetlands, ponds and greenhouses could be used for future research and learning laboratories. The TVCTC would assist in meeting the steadily growing demand for employment in our region and state with highly qualified individuals.

(Commenter: Gary Dan Williams - MSCT)

Response: Comment noted. See response to Comment Statement 55 above. This request has been provided to appropriate decision makers involved in this process.

57. I propose that the 'brown fields' on the MSR study area be used for solar farms.

(Commenters: Anonymous, Nancy Muse)

Response: Comment noted. Use of appropriate portion(s) of the MSR study area for green energy research and development, as well as the application of green energy technology, would likely be considered in the Master Plan development and land use decision process.

58. I would like to see the MSR study area used as an interactive wildlife sanctuary and nature habitat allowing hiking, picnic areas, biking trails and other nature oriented activities managed by UNA as a teaching tool for administrative, archeological, biological training for UNA students and faculty as well as regional k-12 schools. *(Commenters: Nancy Muse, Kenneth Warhurst)*

Response: Comment noted. This concept could be considered in the potential integration of open green space concepts in the Master Plan development process.

59. Jack-o-Lantern farms should be subsidized to expansion at its current location as a producer of fresh local produce year round for the surrounding area. It could be used as a free roaming USDA organic chicken facility. This will boost our local economy and well being of future generations. *(Commenters: Nancy Muse, Jackie Posey)*

Response: Jack-O-Lantern Farms, under an existing revocable license agreement, began operating on the MSR in May 2005. The agreement has been modified, rent adjusted accordingly, and a small expansion of the business has occurred to include an additional greenhouse and some surrounding grounds. The agreement requires the licensee to accept full responsibility for maintaining the property and paying all operational expenses. TVA acknowledges the potential for additional growth, but has no plans to subsidize this business. Like any other property in the study area, the land being used by Jack-O-Lantern could still potentially be sold and, in accordance with the Master Plan, be used in the future for the same or another purpose.

60. The American Chestnut Foundation (TACF) would like to create a formal partnership with TVA to bring the American chestnut tree back to Alabama. TACF already has a Memorandum of Understanding with the USDA Forest Service, and in partnering with TACF and the Alabama Chapter, TVA will join a growing number of organizations and agencies committed to American chestnut restoration. (*Commenter: George M. Phillippi - TACF*)

Response: Comment noted. TVA and TACF have opened communications about each organization's interest and are seeking a possible mutually beneficial cooperative partnership. TVA and TACF have shared technical information about American chestnut genetics and TACF's long-term goals and possible cooperative approaches. TVA has shared information about its historical role in cooperative tree improvement research, tree seedling nurseries, land reclamation, watershed protection projects, and reforestation.

61. The Muscle Shoals Reservation should be turned into something free like a State Park so that people can enjoy the beauty of the property. The park could represent some of the history of TVA and the Muscle Shoals area. (*Commenters: Susan and Chuck Bolton, Kim Boyd, Debbie Bradford, Steve Carpenter, Alison Dodson, Jackie Posey, Linda Sherk, Mayda Simone*)

Response: Comment noted. This concept could be considered among other citizen's inputs and interests in the Master Plan development and land use decision process.

62. The Muscle Shoals Reservation should be used as a civic center that showcases music, especially how the Muscle Shoals area has influenced the music industry. This could include concerts, sporting events, and other community based activities. (*Commenters: Jackie Posey, Neal Willis*)

Response: Comment noted. See response to Comment Statement 61 above.

63. The Muscle Shoals Reservation should be used for Medical Uses; i.e., hospital, medical office buildings, medical retail, retirement center, nursing home, etc. Such investments would be beneficial to the local community. (*Commenters: Michael Lansdell, David J. Malone*)

Response: Comment noted. See response to Comment Statement 61 above.

Natural Areas

64. The identified 'informally recognized natural areas' in the draft EIS comprise the great majority of the MSR study area. In the past TVA has seen the value in preserving them, recognizing the park-like nature of the reservation. Instead of sacrificing them for the envisioned commercial, retail and residential development, why can't TVA create something of more value to the public here? Public open spaces are finite, especially those that are in such close proximity to the center of the Shoals area. (*Commenter: Charles L. Rose - SEA*)

Response: TVA recognizes the importance of preserving resource conservation areas of high biological integrity. See reference to the TVA *Natural Resource Plan* in Section 1.5.3 of the final EIS. The naturally appearing landscapes (native grass plots south of Reservation Road, forested and other types of wetland areas, and informal wetland trail complex) all within the MSR study area do provide habitat value for wildlife and are natural in appearance. Some of these areas occur on previously contaminated sites or lands with currently restricted use (See Sections 3.1 and 4.1 of the final EIS). Through the master planning process, local government officials and citizens can consider the value of these

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areas in determining their future use.

The designated natural area (i.e., Old First Quarters SWA) and land allocated to open space and public recreation north of Reservation Road are not included in the property proposed for redevelopment. This area will remain available to public recreation and open space.

Navigation

65. Section 4.19.4 of the draft EIS 'These potential effects are related to the generation of additional barge traffic in a reach of the river that is not especially suitable for such traffic (see Section 4.19 above). All requests for such uses at this location would require independent review and Section 26a approval by TVA as described in Alternatives B and C.' However, earlier in the document it states that a barge terminal would not be allowed. (*Commenter: Charles L. Rose - SEA*)

Response: Final EIS Section 4.19 has been revised to better address the potential impacts on commercial navigation. TVA would not approve commercial docks and barge terminals along the left-descending bank (south shoreline) of the Tennessee River from Wilson Dam to O'Neal Bridge, particularly in the vicinity of the utility access corridor. However, other types of uses of the shoreline such as those identified in final EIS Section 4.19.4 would potentially be permissible. In order to determine the potential permissibility of a proposal that would affect TVA land and require approval under Section 26a, it would be independently reviewed once the details of such a proposal were specified. While industrial development of the MSR study area under Alternatives D, E or F could generate increased barge traffic, this barge traffic would be restricted to the commercial navigation channel located near the north shoreline and would likely use existing terminals.

NEPA Compliance/Adequacy

Adequacy

66. EPA has concerns that impacts to natural resources could range from minimal to significant based on final land use decisions at the MSR. EPA recommends that once final decisions are made with regards to land use changes at the MSR, impacts to natural resources be re-assessed in the final EIS. (*Commenter: Heinz J. Mueller - USEPA*)

Response: TVA has identified the resources present on the MSR study area, the nature of these resources, and their general extents and locations. The potential effects of a variety of potential alternative land uses on these resources are then described based on the types, extent, and intensities of use. Future land uses would be determined in accordance with a comprehensive Master Plan to be developed with local governments and community inputs. This Master Plan would also focus development of particular types on land uses at most suitable locations and help minimize or reduce effects of such use. The results of the Master Plan could reasonably be a mixture of future land uses, and this range of uses is bound by the alternatives considered and their effects evaluated in the EIS.

67. In accordance with 40 CFR Section 1502.22, the final EIS should provide specific details regarding proposed future zoning and proposed changes to current land uses within the MSR. It is also important for TVA to consider the relevance of the incomplete or unavailable information to evaluating reasonable foreseeable significant adverse impacts on the human environment. (*Commenter: Heinz J. Mueller - USEPA*)

Response: In the final EIS, TVA has revised Alternatives B, C, D, and E so that they each

prescribe specific land uses or combinations of uses. The new Preferred Alternative F would allow the property to be sold without restrictions on the types of future land uses. These land uses would be developed through a more detailed comprehensive master planning process with local governments and the public, thus representative of the norms, values, and needs of the community. TVA is confident that the analyses in the EIS including the effects on resources across the alternatives are adequately bounded by Action Alternatives B, C, D, and E.

Alternatives

68. The reasoning behind choosing Alternative E as the preferred alternative is flawed. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. TVA has revised the alternatives in the final EIS as described in the final EIS Section 2.1 and summarized in the response to Comment Statement 67. The new Alternative F is very similar to the Alternative E described in the draft EIS and is TVA's preferred alternative.

Adoption of Alternative F would provide the greatest opportunity for economic benefits to the area and region, would reduce TVA's O&M costs and environmental footprint, would encourage reuse of some historic buildings and structures, and leave future land use decisions to the local community. Also, see Section 2.4 in the final EIS.

TVA is working with local governments and the public to create a comprehensive Master Plan, which would guide development and allow these decisions to be made at the local level. Although TVA would not require a particular type of land use or uses under Alternative F, it is reasonably foreseeable that the property would be developed for one or more uses evaluated and the range of effects bounded by those described under the other Action Alternatives. TVA believes it is most likely that the property would be developed for mixed uses.

69. Alternatives C, D and E sound very similar. (*Commenter: Mayda Simone*)

Response: Comment noted. The final EIS has been revised to better describe and explain the Action Alternatives in Chapter 2. This includes revising Alternatives B through E to require specific types of land uses and the addition of Alternative F, which would require that the property be sold with no restrictions on the types of land uses that could occur.

70. If TVA adopts Alternative E as the Preferred Alternative, the Department of the Interior recommends that sustainable low-impact developments including business and residential uses that have a lower associated risk to surface waters be targeted for the redevelopment. (*Commenter: Joyce Stanley - USDOJ*)

Response: Comment noted. Regardless of the land uses, TVA would offer insights, identify potential benefits, and attempt to motivate local governments and citizens to consider appropriate low-impact development (LID) strategies in the comprehensive Master Plan to minimize or reduce effects on water resources. Other agencies that practice LID methods would be encouraged to participate in the plan development process. As previously mentioned, adoption of the formerly Preferred Alternative E, Mixed Land Use Alternative, would require the property to be used for a mixture of land uses. Adoption of the new Preferred Alternative F would require that the property be sold with no restrictions on the types of future land uses that could occur.

71. Since the DEIS is very conceptual it is difficult to determine the true environmental impact of any of the alternatives, but overall EPA supports TVA's approach to designating areas of the MSR for conservation and utilizing environmentally responsible development practices such as LID. We hope that conservation of high quality natural areas will be a priority for future land use decisions at the MSR. (*Commenter: Heinz J. Mueller - USEPA*)

Response: Comment noted. As described in Section 4.15 of the final EIS, TVA does not anticipate adverse impacts to any of the designated natural areas in the vicinity of the MSR study area. High quality plant and animal habitats do occur on the MSR study area. While their future development and/or preservation would be addressed in the Master Plan, TVA does not intend to require their preservation under the preferred Alternative F. Final EIS Section 2.3 lists potential measures to reduce impacts to these areas and TVA will encourage the adoption of these measures in the Master Plan.

72. The draft EIS states: 'Redevelopment of the centrally located MSR study area, for the purposes of adjacent community growth and development, could potentially reduce the need for more impactful greenfield development.' If TVA wants to reduce the need for greenfield development, why are they willing to sell for development the hundreds of acres of woodlands, wetlands and grasslands in the MSR Study Area, all important urban wildlife habitat, with no restrictions on their use? (*Commenter: Charles L. Rose - SEA*)

Response: TVA is proposing this land for sale because it is likely unnecessary for TVA's future business plans and projects. The sale and redevelopment of the property would help foster economic development in the area, reduce TVA's related operation and maintenance (O&M) costs, and simultaneously facilitate the local governments' goals of furthering economic development. Reducing the need for greenfield development would also be a consequence of these actions, and reuse of this land could reduce the need elsewhere in the area or region. Through development and use of the comprehensive master planning approach, TVA believes that the effect on important resources such as those in question will be avoided, minimized, or mitigated.

73. The final EIS should add another Alternative that would include the conservation approach to the redevelopment of the MSR by TVA to form new TVA jobs. This would have a direct impact on local economy. (*Commenters: B. Paul Bernauer, M. Nash, Kenneth Warhurst*)

Response: TVA could decide to declare the 1,400-acre MSR study area unnecessary for its future business plans and projects because of its current underutilization. Thus, an alternative to increase operations there to create new jobs is not a viable alternative for future TVA development. See related response to Comment Statement 99. TVA has evaluated a reasonable range of future alternative uses of the property and logical environmental consequences. Under the Preferred Alternative, TVA would not restrict the types of future land uses that could occur on the land but, through the master planning process, would allow such decisions to be made at the local level.

74. The final EIS should include a new alternative that only allows development in the 'brown spaces' on the MSR and preserves all the 'green spaces.' The MSR is environmentally significant and retaining the green space would be a good marketing tool for any redevelopment of the buildings. (*Commenters: Gregory J. Harber - AOS, Greg Jackson, M.D. - AOS, Margaret M. McCloy, William Nelson, Tom Piper, Tom Ress, Charles*

L. Rose - SEA, Kenneth Wills)

Response: Comment noted. TVA has evaluated a reasonable range of future alternative uses of the property and logical environmental consequences. TVA would not restrict the types of future land uses that could occur on the land but, through the master planning process, allow such decisions to be guided by the comprehensive Master Plan. Through this process, TVA anticipates that the industrial core of the property (i.e., brownfield) would likely be designated to support appropriate redevelopment. TVA also expects that important natural and recreation resources would likely be incorporated into green spaces or LID areas, or set aside or enhanced as mitigation for development elsewhere on the area.

75. The final EIS should list the Alternatives in a descending order that present the highest environmental risk to TVA in regards to the Solid and Hazardous waste located on the MSR study area. Based on the information provided in the draft EIS, the alternative with the highest environmental (cost) risk to TVA is 1) Alternative C, 2) Alternative E, 3) Alternative D, 4) Alternative B, and 5) Alternative A. (*Commenter: B. Paul Bernauer*)

Response: Comment noted. Based upon records, data, information, health risk assessments, remediation, and monitoring and reporting to the Alabama Department of Environmental Management (ADEM), TVA has described areas on the property, depending upon future use, which could pose health risks. Under Alternative A (No Action), TVA would continue working with regulators to comply with appropriate laws and regulations and, as landowner, managing its risks. Future land uses could potentially expose landowners to differential level of risks of health effects from remaining contaminants. However, the Action Alternatives would involve potential postsale environmental risks, which from TVA's perspective, would not change. To minimize its risk, TVA has conducted a cleanup in accordance with applicable regulations and would conduct needed due diligence prior to transferring a building. TVA would also work with ADEM to have the property released from the area included in the Resource Conservation and Recovery Act (RCRA) permit. Regardless, TVA would provide any warranties required under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

Based on the information provided in the final EIS, the following is a ranking of the alternatives from the highest to lowest environmental (cost) risk to TVA from TVA's perspective is 1) Alternative C, 2) Alternative E, 3) Alternative F, 4) Alternative D, 5) Alternative B, and 6) Alternative A.

76. TVA correctly identifies the Environmentally Preferred Alternative as Alternative B, Conservation. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted.

77. TVA should identify programs within TVA where future needs could be met by utilizing existing TVA assets on the MSR under the No Action Alternative. The TVA Data Information Center is a great example of a program TVA could put on the MSR and have a direct impact on the local economy. (*Commenters: B. Paul Bernauer, Jerome McGouyrk*)

Response: TVA is developing program requirements for all current uses on the property that will provide the type of space being used and the square footage needed. Some of these uses may remain where they are, while others may be consolidated into fewer buildings on unsold property on the Reservation. As a part of developing the program, TVA

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will also identify the type and quantity of space available that could be used for other TVA purposes on unsold property during the anticipated 20-year-plus development build-out.

78. We believe that the draft EIS contains a good range of Alternatives that were well thought out by TVA. (*Commenter: Steve Holt*)

Response: Comment noted.

79. Why does TVA acknowledge the Environmentally Preferred Alternative as Alternative B (Conservation), but then indicates that the TVA Preferred Alternative is Alternative E (Mixed Use)? It would appear that Alternative E would present the highest environmental liability/risk given the history of the site, especially since the site was cleaned up to industrial levels and not residential/commercial levels. (*Commenter: B. Paul Bernauer*)

Response: TVA analyses suggest the likely environmental effects of implementing Alternative B would be less than those of the other Action Alternatives evaluated, including the new Alternative F. TVA believes that the mixture of reasonably expected future land uses, now captured under the Preferred Alternative F (Unrestricted Land Use Alternative), would best meet the purpose and need of the proposed action by providing the most economic benefits to the area and region, reducing TVA's O&M costs and environmental footprint, encouraging reuse of historic buildings and structures, and leaving future land use decisions to the local community (see response to Comment Statement 68). The identification of the action agency's preferred alternative is based on a broader set of criteria than the identification of the environmentally preferred alternative, which includes environmental impacts. Potential environmental risk and liability will also be considered during the development of the Master Plan and any subsequent development of the site.

80. Why is TVA considering including commercial, retail and residential development as part of the Preferred Alternative when the draft EIS states that the implementation of the Alternative has so many negatives? Considering the DEIS's conclusions about the economic impact of commercial, retail & residential development in the MSR study area, it would seem entirely reasonable to bar it from all the MSR's natural areas. (*Commenter: Charles L. Rose - SEA*)

Response: On balance, TVA analysis suggests that socioeconomic benefits would result from an attractive and well-planned development initiative that includes commercial, retail, and residential elements. It further believes such development could be accomplished on this property consistent with a Master Plan directing the general types and locations of other compatible uses (i.e., conservation, industrial) and that development of this Master Plan would provide opportunities to avoid, minimize, or reduce potential environmental effects.

Cumulative Impacts Assessment

81. Cumulative impacts should be included in the 'Summary of Potential Effects by Alternative' table in the final EIS. (*Commenter: Heinz J. Mueller - USEPA*)

Response: Comment noted. See Tables S-1 and 2-1 in the final EIS. A more thorough analysis of the potential for cumulative impacts by resource across the alternatives is presented in the final EIS text and referenced in these tables (see footnotes).

82. The final EIS should include a cumulative impacts discussion for all affected

environment sections and a discussion that provides specifics on how cumulative impacts will differ under the different alternatives. (*Commenter: Heinz J. Mueller - USEPA*)

Response: Chapter 4 of the final EIS has been revised to provide additional discussion of the cumulative impacts and how they might differ under the alternatives (see Chapter 4).

Draft EIS Errors

83. Statements in the summary table (Table 2-1) are not always supported by what is provided in the text of the draft EIS and there are many errors when comparing impacts related to each Alternative. These inconsistencies should be reconciled. (*Commenters: Larry Gautney, Charles L. Rose - SEA*)

Response: Comment noted. Several statements in Table 2-1 of the final EIS have been revised to better describe the impacts.

84. Table 2-1 (Groundwater) states that under Alternative D there is 'potential for contamination from spills or leaks,' but Alternative E, which includes industrial, there will only be 'Minor effect.' Why is the industrial development under Alternative E different than Alternative D? (*Commenter: Charles L. Rose - SEA*)

Response: Under Alternatives E and F, there is the expectation that there would be less industrial development compared to Alternative D (Industrial Land Use Alternative); and therefore, the likelihood of spills, leaks or other environmental releases would be less. Given the locally developed comprehensive Master Plan, TVA expects that the likelihood of a single use development (i.e., conservation, industrial) of this property would be low.

85. Table 2-1 states that there are 'minor impacts' for wetlands, surface water quality, floodplains, aquatic ecology, terrestrial ecology, natural areas and scenic resources. How can TVA make these claims when they have no idea about the specific developments that might occur on the MSR study area? (*Commenter: Charles L. Rose - SEA*)

Response: Table 2-1 reflects the anticipated context and intensity of effects on resources and assumes mitigation would be implemented for certain resources such as streams, floodplains, and wetlands. Future owners will utilize appropriate BMPs during construction and operation of the property. As appropriate, other agencies (i.e., local, state, or other federal agency) would be involved in permitting or land use approvals that impose environmental protection requirements. Some land would likely be set aside or developed in a compatible manner through guidance provided by the comprehensive Master Plan.

86. The final EIS should include a more quantitative evaluation of impacts for each resource issue and each alternative. Also, the terms 'small' and 'minor' as used in Table 2-1 should be defined for each resource. (*Commenter: Larry Gautney*)

Response: Analyses of effects are based on the anticipated consequences of land development associated with typical uses covered under the Action Alternatives. Analyses prepared in the EIS allow the determination of likely needs to mitigate for a land use change depending on the type and extent of the change. TVA also compared the effects on resources across the range of alternatives. Given the uncertainty of the ultimate change in use and where that use might occur, a quantitative evaluation of all resource effects is neither practical nor feasible. Terminology used is typical and acceptable for qualitative analysis and impacts comparison.

87. The Navigation section of Table 2-1 incorrectly states the impacts under the Alternatives in my written copy. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. The Navigation section of Table 2-1 in the final EIS has been revised.

Mitigation

88. The final EIS should include additional detail on how TVA will require incorporation of LID practices into future design projects at the MSR, what LID practices will be required, and proposed locations of LID projects within the MSR. (*Commenter: Heinz J. Mueller - USEPA*)

Response: As previously mentioned in Comment Statement 70, TVA would offer insights, identify potential benefits, and attempt to motivate local governments and citizens to consider appropriate LID strategies in the comprehensive master planning process. TVA would require development of the Master Plan and approve it prior to transfer of any study area property from federal ownership. In development of the Master Plan, TVA would include sensitive and societal valued resources in areas where environmental conflicts with development could likely be avoided and/or areas where such LID practices would be mandatory. As it relates to urban storm water management and green infrastructure, TVA believes that incorporation of LID-design principles into development plans would be cost effective and environmentally beneficial.

89. Why doesn't TVA require the mitigation measures identified in Section 2.3 of the draft EIS instead of stating that they would probably be required of future landowner(s) by agencies other than TVA? How can TVA describe the impacts of this federal action if these mitigations are not required? (*Commenter: Charles L. Rose - SEA*)

Response: In accordance with 40 CFR § 1502.14 and § 1502.16, Section 2.3 lists appropriate measures to mitigate adverse environmental impacts. These mitigation measures are listed regardless of whether they are within TVA's jurisdiction and whether TVA intends to implement them. TVA anticipates that many of these mitigation measures will be incorporated in the Master Plan. The Record of Decision will identify the mitigation measures that TVA will implement and the measures that TVA will require others to implement as conditions of the proposed land transfer and redevelopment.

NEPA requirements

90. If TVA disposes of this property 'without use restrictions' or any description of 'specific uses,' how is this compatible with NEPA's requirement that they 'prepare detailed statements assessing the environmental impact' of this action? (*Commenter: Charles L. Rose - SEA*)

Response: During and as a result of project scoping, TVA identified reasonable and likely future uses of the property and evaluated individual uses and combinations of uses that could be proposed to occur on the MSR property. As previously mentioned in responses to Comment Statements 66, 67, and 79, TVA would not dictate the future land uses that could occur on this property, but such use would be guided by a comprehensive Master Plan developed in concert with local governments and the community. This does not mean that use of the property for a particular purpose would be allowed without avoiding, minimizing, rectifying, reducing, or compensating for adverse environmental impacts or resource effects. This EIS identifies resources and potential effects of future alternative land uses. It also identifies potential mitigation measures to offset the adverse effects of future development. TVA believes that this EIS describes a discrete project scope, purpose and need for action, TVA decision, resources, alternatives, and potential effects, and compares

the effects of the alternative uses in sufficient detail so that informed choices can be made by responsible managers and agency decision makers.

91. The draft EIS does not satisfy the NEPA requirement that TVA provide a 'detailed statement' describing the environmental impact of the proposed action, any adverse environmental effects and alternatives to the proposed action. The draft EIS only discusses development concepts and is therefore premature and fundamentally deficient.

(Commenter: Charles L. Rose - SEA)

Response: See Comment Response 90. As previously mentioned, this EIS identifies resources and potential effects of potential future alternative land uses. If land is declared surplus, sold (disposed) and projects proposed, the EIS also identifies potential mitigation measures to offset adverse effects. TVA believes that this EIS describes a discrete purpose and need for action, TVA decision, resources, alternatives, and potential effects, and compares the effects of the alternative uses in sufficient detail so that informed choices can be made by responsible managers and agency decision makers.

92. The draft EIS is insufficient to satisfy the requirements of the NEPA process since it is at a very early stage of the decision making process. I recommend that TVA use the tiering process defined in Section 1508.28(b) of the CEQ regulations, which provides a sensible and effective way to carry out the NEPA process in multiple-stage situations like the current proposal. *(Commenters: John Crowder, Charles L. Rose - SEA)*

Response: Comment noted. This EIS was not intended to address a broad TVA action, such as a program or plan (i.e., a programmatic EIS) for which only very general environmental information is known. In some cases, as the commenter describes, a site-specific EIS or environmental assessment may be "tiered" from a programmatic EIS on project-specific or site-specific action. However, TVA considers the MSR Redevelopment EIS to be a site-specific discrete proposed action involving 1,400 acres of its property for which substantial environmental detail is available. TVA will conduct additional environmental reviews for future TVA actions (i.e., Section 26a permitting) associated with the redevelopment of the MSR study area. These reviews may supplement or incorporate by reference the findings of this EIS.

Purpose and Need

93. Did TVA consider its environmental stewardship mandate in regards to this redevelopment? TVA should base its actions on its declared mission not just from a business perspective. *(Commenter: Charles L. Rose - SEA)*

Response: Yes. TVA's mission is to serve the people of the region by providing reliable, low-cost electricity; managing the Tennessee River system; promoting economic development; and providing environmental stewardship. TVA believes that this proposed action reflects its vision and values. Through its environmental review procedures under NEPA, TVA assesses the effects of its plans, programs, and policies as well as its operations on the environment.

94. How will the redevelopment of the Muscle Shoals Reservation reduce TVA's operation and maintenance (O&M) costs when there are only a few jobs left at the Environmental Research Center? Current TVA employees are being relocated to the Multi-purpose building and most of the other buildings are empty, surely TVA's O&M costs for these facilities are minimal. *(Commenter: B. Paul Bernauer)*

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Response: Square footage and acreage are two drivers of O&M costs associated with buildings and land. As you note, these costs have been reduced as the buildings were vacated, but there are still ongoing O&M costs required for maintenance of the buildings. In addition, there are long-term repairs that will need to be made.

95. It is stated that this action 'Will help TVA reduce its environmental footprint,' but how, under CERCLA regulation, can TVA transfer their environmental liability for this site and reduce its footprint? (*Commenter: B. Paul Bernauer*)

Response: TVA cannot transfer environmental liability. However, TVA would be reducing the square footage of buildings and acres of land used for TVA operations. Reducing TVA's energy use and waste streams is an example of reducing its environmental footprint.

96. So far, only one reasonable explanation for a sale has appeared – that TVA is operating an environmentally harmful number of facilities on the property. Instead of selling the property for development, however, a better solution would be to ask how much energy it takes to maintain the TVA Reservation. It can't take more than would be used by developers. If this is the best justification, then I have to question the real reason for this drive. (*Commenter: Jessica N. Smith*)

Response: The MSR is an underutilized piece of property and a large area of it is no longer needed for TVA operations. As a result, and consistent with the TVA Act, TVA is considering declaring it surplus and selling the 1,400-acre tract. TVA also believes this action could help support economic development in the Shoals area. TVA is currently operating facilities on the Reservation in accordance with applicable federal, state, and local laws and regulations and will continue to do so.

97. The disposal of the MSR may reduce TVA's 'environmental footprint,' but it is obviously going to increase the MSR study area' tract's environmental footprint. If the natural areas on the MSR are opened up for commercial development there is going to be a net increase in this tract's environmental footprint, therefore for TVA to be stating there would be a reduction in its own footprint is misleading. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. If the property is sold and redeveloped by others, the environmental impact from TVA's operations would decrease. As described in the final EIS, most of the Action Alternatives would increase the overall environmental impacts over those of the No Action Alternative.

98. The draft EIS states that 'in accordance with its economic development mission, TVA believes transfer and redevelopment of this property would help stimulate and grow the local and regional economy. In regards to commercial development on the MSR's fringes, on its natural areas, this statement is at odds with the DEIS's own findings in its 'Socioeconomic Resources' section. (*Commenter: Charles L. Rose - SEA*)

Response: TVA believes redevelopment of this property would support economic development in the Shoals area and recognizes some of the surrounding business and industrial properties have been underutilized, abandoned, or vacant for some time. As indicated in Section 4.5.3 (Alternative C) of the final EIS, TVA anticipates the economic effects to be positive but likely small. Benefits under this alternative are expected to be less than those under Alternatives D, E, and F. Under Alternative C, most of the development would likely be a transfer of locations within the area, including fringes of the study area, and would add little to the overall economy of the area. Under Alternatives D,

E, and F, developers would more likely be attracted from outside the area and the immediate community, bringing in new jobs and, thus, new ideas, talents, and money to the area.

99. The purpose and need for this proposed land disposal lacks clarity and direct reference to the original and revised TVA Act. TVA was established to create TVA jobs to directly enhance economic development. Economic development by means of transfer of property and redevelopment of said property to stimulate and grow the local and regional economy was not the intent of the TVA Act. (*Commenters: B. Paul Bernauer, Jessica N. Smith*)

Response: See Section 1.1 in the final EIS as well as Section 1.2 on Staffing and Building Space Reductions and Land Disposal Justification. As stated in responses to Comment Statements 96 and 100, TVA believes this is an underutilized piece of property that is no longer needed at its current size for TVA operations. As a result, and consistent with the TVA Act, TVA is considering declaring it surplus and selling it. In addition, TVA also believes this action would help support economic development in the Shoals area.

TVA's economic development mission is not limited to creation of TVA jobs, as the comment seems to state. Pursuant to its mission, the disposal of property to allow creation of jobs by private companies has long been a part of TVA's economic development activities.

100. There is ample land available in the Shoals area for commercial/retail and industrial development. Florence and Muscle Shoals have industrial parks which currently have less than 50 percent utilization. The Muscle Shoals Reservation should not be used for this purpose. (*Commenters: Janice Barrett, B. Paul Bernauer, Steve Carpenter, Greg Jackson, M.D. - AOS, Paul D. Kittle, Margaret M. McCloy, Jerome McGouyrk, Jackie Posey, Charles L. Rose - SEA, Jessica N. Smith, Mary Etoile Smith, Janet Spahn, Kenneth Warhurst, Marilyn Watson*)

Response: Comment noted. TVA believes that the MSR is an underutilized piece of property that could be used for other purposes. Consistent with the TVA Act, TVA is considering disposing of the property as it is no longer needed for TVA operations. The comprehensive Master Plan will guide how the property is used in the future to benefit the Shoals area community.

See Section 3.5 for a discussion of other potential development sites around the area and region and some attributes of these sites. The MSR study area provides a large site, centrally located near large population, and some existing infrastructure (water, electric, gas, etc.) that could be used to support various types of development. Other environmental factors (e.g., air quality attainment area, flat topography, nearby water-based transportation) generally make this land potentially attractive for industrial and other types of land use. Standards and expectations established under the Master Plan would also help create a holistic, well-planned environment with nearby or integrated recreation and open space.

101. TVA does not need to reduce its environmental footprint in this or any other area. TVA is much more than a power producer and should continue to be so. (*Commenter: Anonymous*)

Response: Comment noted. TVA agrees that it is much more than a power producer, as reflected in our vision and values.

Noise

102. Commercial, retail and residential development on the MSR, as envisioned in the draft EIS, would increase noise levels. How would this affect wildlife on the MSR? How would it affect the endangered Gray Bat, which forages here? Has TVA studied this? (*Commenter: Charles L. Rose - SEA*)

Response: TVA concurs that extensive development of virtually any type likely would increase the level of noise within the MSR study area. TVA has not conducted site-specific studies of the potential impact of noise on wildlife in general or on gray bats specifically within the redevelopment area. This area is surrounded on all sides by existing development and is near the Muscle Shoals Airport and thus already is subjected to the impacts of a variety of human-generated noise. As described in Section 4.20 of the final EIS, the increased level of noise from redevelopment could impact some wildlife and is unlikely to affect gray bats.

Other

Out of Scope

103. Are there any plans to open the visitors center at the Wilson Dam area? It would be an economic boost for the area if TVA and USACE would consider reopening the visitor center. (*Commenter: Gary Hester*)

Response: Comment noted. The future plans for the Wilson Dam Visitors Center are outside the scope of this EIS. While TVA does recognize the potential benefits, there are no plans to reopen the visitor center.

104. TVA should put the corporate headquarters back at Muscle Shoals like the TVA charter states it shall be. (*Commenter: Michael Lansdell*)

Response: Comment noted.

Public Involvement

105. Consistent with the federal NEPA process, The American Chestnut Foundation formally requests that a public hearing be held concerning this proposal and associated EIS in order to receive additional comment and input from the public and potentially affected parties. (*Commenter: George M. Phillippi - TACF*)

Response: TVA held public forums in July 2009 and in February 2011 to receive comments on the proposal allowing the public more than 90 days to provide scoping and draft EIS comments. This meets TVA's procedural requirement for implementing NEPA. TVA will publicly announce and individually notify those involved in the MSR redevelopment of the availability of the final EIS. TVA will also review any comments received on the final EIS prior to making its final decision.

106. I would like to serve on any TVA committee, especially those concerning the redevelopment of the Muscle Shoals Reservation. (*Commenter: Ginny Lee Hill*)

Response: Comment noted. TVA will ensure that the public is notified through various forms of media releases of opportunities to participate in the development of the comprehensive Master Plan.

107. TVA should consult with Muscle Shoals retirees on potential land uses for the MSR. (Commenter: James Bedsole)

Response: Comment noted. See response to Comment Statement 106 above. Several TVA retirees in the area have participated in public involvement efforts in support of this environmental review and are now on the TVA mailing list. This mailing list will be used as a part of the database of potential candidates for solicitation of continuing public involvement in development of the comprehensive Master Plan.

Prime Farmland

108. 'Agriculture development' would suffer if natural areas on the MSR are paved over and built upon. Most of the tracts that would be developed for retail, commercial or residential are prime farmland. 182 acres, mostly fescue fields, are currently in TVA's agricultural land use licensing program. There is also great potential in these areas for research into sustainable or organic farming methods under the Conservation Alternative. (Commenter: Charles L. Rose - SEA)

Response: See responses to Comment Statements 109 and 110 below. The current use of the area for agricultural purposes, as well as the presence of soils classified as prime farmland, are described in Section 3.9 and 4.9. As determined by the procedure described in the Farmland Protection Policy Act (FPPA) of 1981, the redevelopment of the MSR study area, including the permanent conversion of those areas classified as prime farmland to non-agricultural uses, would not result in significant impacts to prime farmland. The future use of areas classified as prime farmland, as well as other areas currently used for agricultural production, would be determined through the comprehensive master planning process at the local level.

109. TVA should try to retain the farmland on the MSR study area for public agricultural uses, we have loss too much prime farmland to urbanization, the farmland on the reservation does not need to be lost to urbanization as well. However, if any highway frontage land has to be sacrificed, it would do less environmental damage to develop the farmland rather than wetlands and forests. (Commenter: Kenneth Wills)

Response: As indicated in responses to Comment Statements 108 and 110, TVA evaluated impacts to prime farmland prior to allowing for the potential to permanently convert the land to a nonagricultural land use. To maintain its current level of agricultural productivity and unless otherwise compliant with the agreement, the presently farmed 182 acres would continue to be used until the land is sold. As indicated in Section 4.9, prior to the sale of any land covered under the TVA agricultural use license, such use would likely be terminated by TVA with a 30-day written notice. This would not prevent the licensee from pursuing a license agreement with the new landowner for use of the land.

110. Why are 747.4 acres of prime farmland being sacrificed for the typical sprawl-type development possible under the proposed action? All of these acres of prime farmland are in Zone C, land deemed suitable for 'unrestricted use.' (Commenter: Charles L. Rose - SEA)

Response: As indicated in Section 3.9.2 of the final EIS, about 53 percent (about 747.4 of the 1,400 acres) of the MSR study area contains the appropriate types of soils (i.e., mapping units) recognized by their inherent attributes as prime farmland. However, to be considered prime farmland, these soil types on the landscape cannot be urban, built up, or covered by water (or prone to flooding). This reduces the overall acreage, technically classified as prime farmland, to 669.3 acres. See Figures 3-22 and 3-23 for farmland soil

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classifications. Finally, upon completion of the needed evaluation and consultation with the Colbert County Natural Resources Conservation Service, the total points for farmland conversion associated with the potential TVA land disposal and redevelopment were too low to suggest that the land's value for farming is high enough to recommend that it not be converted to nonfarm use. The total point score reflects the fact that buildings already occupy the best farmland in the study area.

Recreation

Public Use

111. I believe TVA's decision to dispose of this tract is short sighted. The demand by the public for recreational opportunities is always on the increase. Public green spaces are seldom increased. The MSR with its thousands of acres of open space right in the center of the Shoals is quite unique and should be preserved in order to meet future demand for recreation by the public. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. The majority of lands dedicated to public recreation and open space north of Reservation Road would remain available under any of the Action Alternatives. While Alternatives C and D would likely result in a loss of open space within the redevelopment area, implementation of Alternatives B, E, or F could result in the same or even an increase in total acreage allocated to recreation and open space compared to the No Action Alternative.

112. If the natural areas on the MSR study area are preserved for conservation and public recreation there could be a dollar and cents benefit to the Shoals area by reduction in health care costs. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted.

113. The draft EIS states that recreational use opportunities occur largely outside the MSR study area and north of Reservation Road. This is true, but recreation does occur on the MSR study area including jogging, walking, bird watching, botanizing, hiking, nature photography, even whitewater rafting and kayaking on Pond Creek. (*Commenter: Charles L. Rose - SEA*)

Response: As indicated in Section 3.16 of the final EIS, informal recreation use does currently occur on some of the lands within the proposed development area. Potential impacts on existing recreation uses would vary depending on the alternative selected and the resulting type, extent, and intensity of development. The desire to maintain open green space and recreation would be considered during preparation of the comprehensive Master Plan and implementation, as needed, of mitigation measures indicated in Section 2.3 to offset recreation opportunity losses.

114. The public access property should remain open to the public. (*Commenters: Susan Hardy, Janice Barrett*)

Response: As indicated in Section 4.16 of the final EIS, some of the lands currently designated as public recreation and open space under TVA's 1996 *Muscle Shoals/Wilson Dam Reservation Land Use Plan* could be converted to other uses, depending on the alternative selected. However, all formally developed public recreation facilities in the area, including the 12-mile-long trail complex, would remain open to the public. In addition, some additional recreational improvements on the properties retained by TVA could be provided

as mitigation for loss of opportunities within the redevelopment area.

Recreation Areas

115. Alternative B (Conservation), as stated in the draft EIS, would be ideal for encouraging recreational use of the MSR. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted.

116. The proposed redevelopment should not adversely impact the existing recreation areas on the Reservation. (*Commenter: Chuck Moring*)

Response: Under any of the Action Alternatives, it is TVA's goal to ensure the integrity of all formally developed recreation areas on Muscle Shoals /Wilson Dam Reservation, including the 12-mile trail complex.

117. The USEPA would recommend that TVA specifically protect the areas designated as 'Informal Recreation and Wildlife Observation area' from future development. Since the preferred alternative is described as the 'mix use' alternative it would appear that designating such areas as natural or recreational areas could be accommodated within this alternative. In addition, USEPA would support the preservation of these areas which would minimize the loss of forested areas located on the MSR. The final EIS should include specific details regarding areas to be designated and protected as natural and recreational areas.

(*Commenter: Heinz J. Mueller - USEPA*)

Response: Comment noted. TVA envisions some forested areas and other green space being targeted for LID or set aside for protection of natural and recreation areas in the comprehensive Master Plan development.

Trail System

118. The Rockpile Trail should remain accessible through the proposed utility access corridor. The trail is heavily used by hikers and its unique features make it irreplaceable.

(*Commenters: Larry Gautney, Chuck Moring*)

Response: Comment noted. Future use of the utility access corridor would not be likely to affect the integrity or character of the Rockpile Trail since this segment of the trail crosses an inlet over the top of a concrete skimmer wall developed as part of the old Wilson Steam Plant.

119. TVA has assured the public that the Nature Trail complex on the North side of Reservation Road would not be affected by the proposed project. However, under Alternative C, the draft EIS states that the overall experience of users of the SWA and MSR trail complex might decrease due to the potential increased traffic and noise levels.

(*Commenter: Charles L. Rose - SEA*)

Response: Except for small parcels where the Western Area Radiological Laboratory and multipurpose buildings are located, the property north of Reservation Road would remain in federal ownership and not be considered for potential transfer. While recreation areas and activities located north of Reservation Road may not be directly affected, it is possible, as acknowledged in the final EIS, that increased traffic and noise levels associated with some alternative uses of the property could have some negative indirect impact on recreation activities in these areas.

120. TVA should protect the one mile segment of the paved National Recreation Trail Complex that extends south of Reservation Road into the MSR study area. These areas could be excluded or an agreement could be made with future property owners that these trails remain as-is with future maintenance consideration born by the new property owner(s). (*Commenters: Larry Gautney, Chuck Moring*)

Response: As indicated in Section 4.16 of the final EIS, there are options, including mitigation measures, for maintaining the integrity of the paved walkway/bikeway and ensuring it remains open to the public.

Section 26a Authority

121. The draft EIS states that TVA would review any proposed development on portions of the MSR study area that are located within the limits of the 100-year floodplain under Section 26a of the TVA Act and complete appropriate environmental review. However, numerous projects that lie within the 100-year floodplain have not been required to obtain Section 26a approval because it was determined that the 'obstruction' did not affect navigation, flood control, or 'public lands or reservations.' The final EIS should include a description of the potential Section 26A actions and properly recognize the limitations of this section of the TVA Act. (*Commenter: John Crowder*)

Response: Section 26a of the TVA Act requires that TVA's approval be obtained prior to the construction, operation, or maintenance of any dam, appurtenant works, or other obstruction affecting navigation, flood control, or public lands or reservations along, across, or in the Tennessee River or any of its tributaries. TVA jurisdiction under Section 26a is implemented through Section 26a regulations (18 CFR Part 1304). With regard to the range of construction and development activities along the shoreline, an obstruction is any man-made physical condition that during its continuance after completion, impounds, checks, hinders, restricts, retards, diverts, or otherwise interferes with the movement of water or of objects on or in the water. TVA would not approve large water use facilities such as a barge terminal or commercial dock along the left-descending bank of the river in the vicinity of the utility access corridor. Future TVA reviews and approvals under Section 26a could potentially involve such proposals as intakes; outfalls; water, gas or petroleum pipelines; other chemical or electrical transmission lines; or other associated shoreline alterations. By way of example only, activities or alterations in, on, over, or along Pond Creek could include some similar activities but could also include proposals for such obstructions as aerial cables, culverts, devices for discharging effluent, bridge construction and fills for roads, businesses, and homes.

On land over which TVA owns a flowage easement, such as most of the Wilson Reservoir shoreline, a request for a dredge, even if it is located within the 100-year floodplain, would not require Section 26a approval because removal of such spoil material does not create an obstruction. TVA may conduct project reviews and determine that a proposed action does not create an obstruction requiring approval. For example, excavation of a trench for a submarine sewer, telephone, or other utility line, in which the trench is backfilled to the original contour and is located outside the area of a marked navigation channel does not create an obstruction. However, Section 26a approval is required for trenches excavated in the marked navigational channel or for a dredge constructed in association with a new dock permit.

122. The final EIS should clarify whether, after transfer of the MSR study area, the MSR study area would be considered to be 'public lands or reservations' as stated in Section 26a of the TVA Act. Does the term 'public lands or reservations' refer to only those lands under

TVA ownership or does it include other federal lands or public lands of states and/or local governments? Unless the “public lands or reservations” of the transferred MSR study area are subject to Section 26A, TVA cannot legally invoke its Section 26A authority on the basis of an “obstruction’s” impact on “public lands or reservations” absent a finding that a proposed action affects lands owned by TVA outside the former reservation lands transferred to others. (Commenter: John Crowder)

Response: TVA’s jurisdiction under Section 26a applies to both the geographical reach and range of activities described in the response to Comment Statement 121. It is most likely that, upon disposal, the MSR study area will be owned by private developers; at that point, the land would cease to be “public lands or reservations” under Section 26a. However, under Section 26a, TVA would continue to have the authority to regulate obstructions across, along, or in the Tennessee River or its tributaries that affect navigation or flood control; this is regardless of the landrights or ownership at the location. TVA can exercise this jurisdiction on private land within the geographical reach of the Tennessee River basin and its tributaries including on land previously owned by TVA.

Solid and Hazardous Waste

Cleanup

123. It appears that CERCLA regulations were not sufficiently addressed in the draft EIS. (Commenter: B. Paul Bernauer)

Response: CERCLA and RCRA are the primary federal environmental laws governing the investigation and cleanup of contaminated sites. These laws share the common primary goal of protecting human health and the environment. The cleanup of contaminated sites may be governed by either CERCLA or RCRA depending on such factors as the source and cause of the contamination, the status of the installation as either a National Priorities List (NPL) or a non-NPL site, and whether the installation has sought or is seeking a RCRA permit for managing hazardous wastes. Although CERCLA and RCRA are separate statutes, each remedial cleanup program should operate consistently with the other and should yield similar environmental solutions when faced with similar circumstances. Any procedural differences between CERCLA and RCRA should not substantively affect the outcome of remediation. Both CERCLA and RCRA investigations were initiated at this site. Early in the process, USEPA decided that duplication could be eliminated, and a satisfactory cleanup achieved, by managing the site under the RCRA Corrective Action Program.

124. The HWSA Permit issued for the site was to TVA and, therefore, TVA is solely liable under CERCLA with the liability nontransferable, not the United States. Have the TVA Act and CERCLA regulations been changed to allow for the United States (Appropriated Funds) to assume the environmental liability for TVA? (Commenter: B. Paul Bernauer)

Response: The land known as the Muscle Shoals Reservation is owned by the United States and in the custody and control of TVA. In certain situations, CERCLA requires that deeds for transfer of land owned by the United States include a covenant warranting that the United States will perform any remediation found to be necessary on the property. The required covenant does not address the source of funding for the remediation, which would be determined at the time any necessary remediation is undertaken.

Human Health

125. Condition Number 9 on page 19 of the draft EIS states 'TVA would warrant in the sale

deed that the property has been cleaned up to USEPA/ADEM (i.e., the extent believe necessary to protect human health and the environment) and that the United States will perform any cleanup that becomes necessary in the future.' This must be clarified that the property was cleaned up to USEPA/ADEM Industrial Use Levels. Thus, the reference to protecting 'human health and the environment' should be deleted. (*Commenter: B. Paul Bernauer*)

Response: TVA acknowledges its obligations to comply with applicable laws and regulations and as indicated in Section 1.7, TVA would comply with applicable provisions of the RCRA, including required coordination with ADEM, and CERCLA in disposing of the property.

The property in the MSR study area was investigated and cleaned up to the extent believed necessary to protect human health and the environment. In the draft EIS, Item Number 9 was identified among other elements common to all the Action Alternatives. Instead, for more appropriate context and emphasis, this assurance is provided in Section 4.1, Solid and Hazardous Waste, and elsewhere in the final EIS. As required by law, TVA would warrant in the sale deed(s) that the property has been cleaned up to the extent necessary to protect human health and the environment and that the U.S. will perform any cleanup that becomes necessary in the future. Section 4.1, also indicates that this commitment would apply to all Action Alternatives (i.e., Alternatives B through F).

126. If undisclosed hazardous waste is discovered after the transfer, who will be responsible? If anyone is injured as a result of such undisclosed buried waste, who will be responsible? (*Commenter: Charles L. Rose - SEA*)

Response: In accordance with applicable state and federal regulations, TVA has expended every effort to document activities and areas at the MSR where waste, either hazardous or nonhazardous, could have been buried or otherwise released to the environment. In the unlikely event that a site, previously not investigated, is discovered that contains wastes that could potentially cause harm, as indicated in Section 2.1 of the final EIS, the United States will perform any necessary remediation. It is speculative at this time to assign liability for a hypothetical future injury, and TVA declines to do so.

127. With the MSR study area being a RCRA Remediation site, I feel it is not prudent for TVA to conclude that all actions have been taken to protect human health and the environment. Even if the site cleanup was to residential levels, I would not advise making a statement that the area is safe for human health and environment. As with any RCRA Remediation Site, unknowns remain. (*Commenter: B. Paul Bernauer*)

Response: As with any former industrial site, the potential for unknown contamination may exist within the MSR study area. However, TVA has extended great effort over many years to evaluate all potential and/or unknown areas of contamination. To the extent practicable, all areas were investigated that could have ever been impacted by TVA facilities and processes. Under the provisions of TVA's RCRA permit, Section 3004(u) of RCRA, the permit issued to the TVA facility addressed corrective actions for all releases of hazardous waste and hazardous constituents from any solid waste management unit (SWMU) regardless of when the waste was placed in such unit. This initial step, the RCRA Facility Assessment, included a review (by USEPA, ADEM, and TVA personnel) of existing information about the Environmental Research Center facility, a visit to the facility, and sampling to determine if there was an actual or potential release of hazardous wastes or hazardous constituents from the SWMUs at the facility. The primary focus was to

determine if there was the potential for contamination at levels that would pose human health or environmental concerns. This process continued in the RCRA Facility Investigation where extensive sampling and analyses were used to define the nature and extent of all known contamination. These steps, as prescribed by RCRA, ensured that all known sources of contamination were addressed to the full extent of all applicable federal and state regulations.

Low-Level Radioactive Waste Burial Site

128. How is TVA considering transferring the LLRWBS without cleanup even though it is now known that radioactive materials were illegally buried at the site? (*Commenter: Charles L. Rose - SEA*)

Response: See related responses to Comment Statements 131 and 132. TVA has undertaken an extensive search of all records pertaining to the low-level radioactive waste burial site (LLRWBS) and has found no written evidence that radioactive liquids were “illegally buried” at the LLRWBS. If citizens have knowledge and supporting data concerning “illegal” burial or radioactive material at the LLRWBS, such information should be provided to TVA as soon as possible so that it can be properly assessed as it relates to the future transfer or disposal of the site.

129. If the LLRWBS is not cleaned up prior to sale, how is TVA going to guarantee that some future land owner doesn't act irresponsibly? The site should be protected from accidental excavation as part of redevelopment activities by excluding it from the MSR study area and provide a concrete cap/barrier over the site. (*Commenters: Chuck Moring, Charles L. Rose - SEA*)

Response: See elements common to all the Action Alternatives in Sections 2.1 and ADEM guidance regarding the possible disposal and transfer of land in the MSR study area in Section 4.1 of the final EIS. Access to the LLRWBS is currently fence-restricted and, as indicated in Section 4.1.1, the site has a clay soil cap that prevents aboveground radiation exposure. No land would be sold or transferred from within the existing RCRA Hazardous and Solid Waste Amendments Permit area unless remediated to a level that would allow unrestricted use or transferred with appropriate covenants to protect human health and the environment. Such environmental covenants are outlined in ADEM Administrative Code Chapter 335-5-1 and are attached to and run with the land. Examples of covenants include groundwater development restrictions, use controls, engineering controls, and exclusion requirements. ADEM has authority through the civil court system to enforce these types of covenants.

130. Was there any additional Radiological Survey/Monitoring Data collected at the LLRWBS between 2005-2009? (*Commenter: B. Paul Bernauer*)

Response: TVA has no records of any official data collected at the LLRWBS between 2005 and 2009. As noted in Section 3.1.1.4 of the final EIS, the Nuclear Regulatory Commission released this site for unrestricted use in 1999, and no additional radiological surveys or monitoring was required.

131. Were only solids disposed at the LLRWBS? A listing/inventory of the types of materials disposed at the LLRWBS is needed in the final EIS. (*Commenter: B. Paul Bernauer*)

Response: See related response to Comment Statement 132. Most of the material buried at the LLRWBS was contaminated laboratory waste (i.e., gloves, paper towels, and contaminated soil from agricultural experiments at the nearby TVA greenhouse). Records

also indicate that a small amount of a xylene-based liquid scintillation cocktail, contained in 50 milliliter high-density plastic vials, was also buried at the site. A list of all radioactive isotopes buried at the LLRWBS is included in Appendix D in the final EIS.

132. What other TVA programs disposed of LLRW at the LLRWBS other than the fertilizer research and radioanalytical lab? What other radionuclides were in this waste? This information should be included in the final EIS. (*Commenter: B. Paul Bernauer*)

Response: Section 3.1.1.4 of the final EIS provides an overview of the material buried at the LLRWBS, and a list of radioactive isotopes is included in Appendix D in the final EIS. The material buried at the site was generated from agricultural experiments for fertilizer development and various lab analyses. The waste consisted mainly of isotopes of phosphorus, zinc, manganese, carbon, and sulfur. Also buried at the site was a small amount of waste containing uranium from quality control checks conducted at the Power Service Center on nonirradiated fuel pellets. No material from any of TVA's nuclear plants was buried at this site.

Phosphate Slag Storage Area

133. All alternatives should include the statement that the use of the phosphate slag storage area would be restricted to infrastructure enhancements and would not be available for occupied facilities. This language should be similar to what is stated under Alternative D (page 22 of the draft EIS). (*Commenter: James L. McNees - Alabama Department of Public Health [ADPH]*)

Response: A statement similar to that in Alternative D was added to the 'Elements Common to all Action Alternatives' list in Section 2.1 of the final EIS.

134. Due to the radiological concerns and lack of sampling data, the Alabama Department of Public Health recommends that the area identified as the phosphate slag storage area be removed from the MSR study area analyzed in the draft EIS. This area should continue to be managed under TVA's current land management plan until such time that the area is remediated to the standard of 5 pCi/g total radium. (*Commenter: James L. McNees - ADPH*)

Response: The final EIS emphasizes that the phosphate slag storage area is available only for infrastructure enhancements such as a utility corridor and will not be sold or transferred. In the event that the slag storage area is proposed to be used for infrastructural uses (e.g., pipeline, water intake), additional radiological monitoring will be conducted to ensure worker safety.

135. Release of the 90 acre phosphate slag area would require that the new owner(s) of the area be licensed by the Alabama Office of Radiation Control to possess the radioactive material on site or a variance of the Agency's Rules would be required to allow possession of the material on land that would no longer be exclusive federal jurisdiction. (*Commenter: James L. McNees - ADPH*)

Response: As stated in Section 2.1, Section 2.1.4, Section 2.3, and Section 4.1.1 of the final EIS, the phosphate slag storage area is available only for infrastructure enhancements such as a utility corridor necessary for the operation of adjoining industrial facilities or commercial businesses south of Reservation Road. It would not be sold or transferred or be made available for other types of development.

136. Table S-1 summarizes the potential effects by alternative. For the phosphate slag storage area (Zone B), footnote 1 states that TVA would warrant in the sale deed that the property has been cleaned up to EPA and ADEM standards, and that the United States will perform any clean up as necessary in the future. Yet, page 42 of the document states that the phosphate slag is excluded from RCRA and that EPA concluded that the area did not require a hazardous waste permit. (*Commenter: James L. McNees - ADPH*)

Response: The reference to footnote 1 for the phosphate slag storage area (Zone B) has been removed from Tables S-1 and 2-1. TVA does not intend to sell or transfer any land within the phosphate slag storage area.

137. The Alabama Department of Public Health believes that in order for the phosphate slag storage area to be released for unrestricted use, it should be remediated such that soil within the top fifteen centimeters of the surface contains no more than the national standard of 5 pCi/g total radium, and that all areas exceeding that standard should be clearly posted that utilization is restricted due to the presence of 'radiological contamination.' (*Commenter: James L. McNees - ADPH*)

Response: As stated in the final EIS, TVA does not intend to release this parcel of MSR property for "unrestricted use." Additional cleanup at this time is not deemed warranted by TVA. If the proposed use of the property should change, TVA would remediate the site according to applicable regulatory guidelines and standards.

138. The draft EIS does not address exposure to workers developing and constructing infrastructure enhancements in the phosphate slag storage area. (*Commenter: James L. McNees - ADPH*)

Response: The exposure to workers developing and constructing infrastructure enhancements in the phosphate slag storage area will be evaluated if and when specific proposals are made for use of the area. Any radiological exposure estimate without a specific time, frequency, and duration would be speculative and would not provide useful information at this time.

139. The draft EIS proposes making the phosphate slag storage area available under specific use agreements that limit access to the area to 500 hours per year. This number is based on a 2002 four point survey of ambient radiation levels one meter above ground. Additional surveys, including soil analysis, should be performed using statistically valid methodology such as MARSSIM. (*Commenter: James L. McNees - ADPH*)

Response: The radiation measurements conducted in and around the slag storage area over the course of several years have provided sufficient evidence for likely use as an aboveground conveyance for surface utilities or other infrastructure needs. If no subsurface or surface development use is proposed for this site, no additional surveys or monitoring will be conducted at the site. If it becomes necessary through the proposed use of the area for subsurface infrastructure enhancements, TVA will assess the need for further radiation measurements using the appropriate methodology.

140. The draft EIS proposes to restrict access to the phosphate slag storage area based on annual hours to comply with the 25 millirem per year limit. The statement allows for additional soil coverage to be used for longer exposures times. Who will evaluate the

effectiveness of the soil coverage and determine the additional exposure times allowed? (Commenter: James L. McNees - ADPH)

Response: If conditions at the slag storage area are altered as a part of the proposed infrastructure development or other appropriate usage and it becomes necessary to reevaluate radiation exposure, TVA, in consultation with the appropriate state and federal agencies (i.e., Alabama Department of Public Health), will verify any changes to the phosphate slag storage area that would allow increased exposure times. This would include any effort to mitigate radioactive levels at the site through the use of soil cover or caps of various materials.

141. The final EIS needs to include the actual Rad Survey Data as recorded by TVA and ADPH for the Phosphate Slag Storage Area for the last 15 years. (Commenter: B. Paul Bernauer)

Response: The summary of the actual radiological survey data for the phosphate slag storage area is included in Section 3.1.1.4. As stated in previous comments, TVA does not propose to sell or transfer any land within the phosphate slag storage area.

142. What is the personnel exposure as calculated by taking a direct reading using a calibrated Micro R Meter or equal instrument from the center line of Reservation Road where it is nearest to the Phosphate Slag Storage Area? (Commenter: B. Paul Bernauer)

Response: The use of 50 microRems/hour measured directly on the site will accurately reflect the likely radiation dose to a potential worker. Should any subsurface development be necessary for infrastructure enhancement, a more in-depth study of radiation measurements will be conducted.

143. Will TVA secure the Phosphate Slag Storage Area with a fence? (Commenter: B. Paul Bernauer)

Response: No decision has been made at this time on securing the Phosphate Slag Storage Area. TVA will investigate security measures along with any proposed infrastructure use of the site.

RCRA Permit

144. The USEPA concurs with ADEM's guidance for disposal of lands on the MSR stated in Section 4.1 of the draft EIS. (Commenter: Heinz J. Mueller - USEPA)

Response: Comment noted. TVA appreciates USEPA's concurrence with ADEM guidance for MSR disposal and will ensure that all regulatory and procedural requirements are followed.

Terrestrial Ecology

American Chestnut Orchard

145. The American Chestnut Foundation (TACF) urges TVA to consider not only the immediate environmental impact of the reservation redevelopment, but the longer term economic, social and environmental impacts of eliminating an important regional American chestnut tree research and breeding orchard currently located on the reservation. To this end, we are requesting that TVA group the approximately 4-acre Alabama TACF research orchard and its proposed 20-acre expansion with other environmentally important areas –

specifically the adjacent wetlands and floodplain areas to the west and south of the orchard - and exclude these areas from the redevelopment plan. This is entirely consistent with TVA's local economic development and environmental sustainability objectives.

(Commenters: George M. Phillippi - TACF, Paul Sisco - TACF)

Response: Comment noted. Please see Section 4.14 for TVA's analysis of the impacts that would likely result from elimination of TACF research orchard plot. TVA recognizes the support from within the Shoals area for maintenance of TACF research orchard plot and the potential value of the research being conducted. To that end, TVA is working with TACF to identify other lands that could be used for its research efforts if necessary; TVA and TACF are also discussing other projects and activities of mutual interests. However, land use decisions regarding the continued use of the 4-acre plot on the MSR and expansion into the proposed additional 20-acre area would be made through development of the comprehensive Master Plan by local governments and citizens of the community in cooperation with TVA. TVA's decisions regarding appropriate resource mitigation on the MSR are principally driven to ensure compliance with environmental laws and regulations and applicable executive orders, and there are no applicable laws, regulations, or executive orders related to the chestnut orchard. As a result, the decision whether to retain or expand the orchard would be best made at the local level as a part of the master planning process.

146. TVA should maintain the research orchard of the Alabama Chapter of the American Chestnut Foundation at the Muscle Shoals Reservation. The loss of this orchard would result in a setback to the mission of chestnut restoration in the state of Alabama.

(Commenters: Forrest Bailey - ALSPD, Steven W. Barnett - National Wild Turkey Federation, Janice Barrett, Noel M. Beck, Jim Bennett, Bryan Burhans, Linda Casey - Alabama Forestry Commission, Victor Dura - SEA, Leslie Ecklund, Larry Gautney, Steve Holt, Mark Johnston, Paul D. Kittle, Anthony L. Leigh, Jimmy Maddox - TACF, Patricia T. McMillion, Matthew Miller, Clint Neal - TACF, Grant Posey, Jackie Posey, Holly Rene', Amy Rhuland, John C. Rist - TACF, Susan Roessel, Charles L. Rose - SEA, Linda Sherk, Mary Etoile Smith, Stephen Smith - Southern Alliance for Clean Energy, Marilyn Watson, William White)

Response: Comment noted. See previous response. TVA recognizes the support from within the Shoals area for maintenance of TACF research orchard plot and the potential value of the research being conducted. As previously mentioned, TVA is also working with TACF to identify other lands that could be used for its research efforts if necessary.

147. TVA states throughout the draft EIS that the 4-acre TACF Research Orchard is an interim site use. Are gas stations, car washes and strip malls more important than the work that is going on at the orchard? Why doesn't TVA guarantee TACF's lease on the property, it is only 4-acres? This is at odds with TVA's claim of being environmental stewards.

(Commenter: Charles L. Rose - SEA)

Response: See response to Comment Statement 145. There is no lease or other formal land use agreement between TVA and TACF for use of this land for this purpose; as a result, it is considered an indefinite but interim use. By allowing the decision on the continued existence of the chestnut orchard at this location to be handled during the master planning process, TVA is not making a value judgment regarding the importance of the orchard versus the importance of other potential uses of the property, such as for commercial and/or industrial uses. Rather, TVA is simply allowing the planning process to determine the highest and best use of this parcel of land.

Habitat Fragmentation

148. The draft EIS does not address the potential impacts of habitat fragmentation caused by the proposed redevelopment. For example, development in the MSR study area will affect the wildlife habitat on the north side of the road. (*Commenter: Charles L. Rose - SEA*)

Response: The potential impacts of habitat fragmentation are described in final EIS in Section 4.14.2. Fragmentation of habitat is currently present both within the proposed redevelopment area boundary and the area north of Reservation Road in the form of existing rights-of-way, roads, agricultural use, industrial use, and other disturbances. These areas also are surrounded by land use practices (commercial, residential, etc.) that have fragmented habitat used by wildlife. Any clearing of forested habitat that occurs as a result of development within the MSR study area would contribute to further habitat fragmentation, but given the current extent of habitat fragmentation present, species present within the study area are already exposed to some degree to the effects of habitat fragmentation. Species that continue to use these habitats have adapted to such conditions to fulfill all or a part of their life cycles.

Invasive Species

149. If TVA allows commercial development, the invasive species removal volunteer efforts in the Old First Quarters Small Wild Area and elsewhere on the MSR will suffer. (*Commenter: Charles L. Rose - SEA*)

Response: As previously mentioned, there are no designated natural areas on the MSR Redevelopment study area. The invasive species removal in the Old First Quarters SWA would not be affected by any of the actions associated with the proposed disposal, sale, or alternative uses of the property considered in the MSR Redevelopment EIS. This SWA is located north of Reservation Road and, therefore, outside the geographic scope of the EIS.

Invasive species removal activities are also being implemented by TVA and its partners on parts of the study area. However, as indicated in Section 4.14.1.3, due to the number of invasive species present on the study area, development-related disturbance could foster their spread during and after construction. Preventive measures implemented by future landowners could potentially curb or reduce the introduction or spread of these species and their impact on native plants. The invasive species on the MSR, however, are relatively well established and widespread in the area and region.

150. The Shoals Environmental Alliance would be interested in helping remove invasive plant species from areas adjacent to streams in the MSR study area to improve habitat for the gray bats. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. Thank you for your past support and continuing interest in assisting with removal of invasive plants from TVA public land. Such assistance from the SEA could be feasible, particularly while the property remains in public ownership. Stream corridors that provide gray bat foraging habitat, such as along Pond Creek, could be subject to protection from future land use depending on the results of development and implementation of the Master Plan.

Site Impacts

151. I am concerned with the pristine old growth forest located between Hatch Boulevard and Wilson Dam Road along Second Avenue. This land could be used for strip mall

development and those businesses will be vacant and unoccupied five to ten years from now. (*Commenter: J. C. Hester*)

Response: The wooded area that lies between Hatch Boulevard and Wilson Dam Road along Second Avenue does contain some fairly large trees, primarily water and willow oaks. Soils through much of this area are wet during the growing season. This area would not, in biological terms, be classified as pristine or old-growth due to its age and structural characteristics. This area has remained relatively undisturbed in recent decades due to the presence of wetlands, the potential presence of cultural resources, and other factors. See response to Comment Statements 80 and 100. TVA believes that economic development on the MSR property, with appropriate mitigation, can be viable and long-lasting.

152. Section 4.14.2.3 of the draft EIS states: '...potential habitat loss from the MSR study area site would not likely adversely impact these bird populations or the recreational opportunity created on a regional scale.' By this logic, any negative impact by development can be explained away. At some point the accumulated 'insignificant habitat losses' add up to major losses. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. See discussion of potential cumulative effects on terrestrial ecology (i.e., plants and wildlife) in Section 4.14 of the final EIS.

153. TVA should preserve the habitat for rare plant populations and the location of the former Alabama Champion tree instead of just suggesting it. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. As noted in Section 3.14.1 of the final EIS, the former Alabama champion American chestnut tree occurs within the MSR study area. As of April 2010, it has been heavily infested with the chestnut blight; however, live sprouts still persist. Former champion trees have no status, and TVA is under no obligation to protect them. As a stewardship function, TVA will continue to attempt to avoid adversely impacting champion trees through its actions throughout the 201-county power service area.

154. While trying to conserve the green space areas, it might alter the natural ecosystems that are present through conversion of these areas to unnaturally open parklands through clearing of the understory (an important feature of this area to migrant birds). This should be avoided and in fact should be stipulated in any plan that is adopted. (*Commenters: Gregory J. Harber - AOS, Greg Jackson, M.D. - AOS*)

Response: Green space is used to refer to a wide variety of settings, from those reflecting more of a parklike setting to those that remain in a more natural state. TVA concurs that clearing of understory vegetation could result in a change in the type of habitat available to wildlife. Given the long existence of invasive plants, such as Chinese privet in the area, this structural component in forested areas would likely remain prominent.

Wildlife

155. Consulting the Land Use map on page 87 of the draft EIS, it seems that about 85.6 percent (1,198.4 acres) of the MSR study area is wildlife habitat of some kind or other. The great majority of this diverse habitat should be preserved as open land in support of local wildlife. If TVA truly wants to decrease its 'environmental footprint' it will not be responsible for allowing this land to be gutted during the proposed development. (*Commenter: Charles L. Rose - SEA*)

Muscle Shoals Reservation Redevelopment

Response: Comment noted. Local citizens and governments will play a role in determining how this land might eventually be used through their participation in the Master Plan development and enforcement process. Identification of future green space locations will be an important part of conserving wildlife habitat.

156. Instead of attempting to sell this invaluable urban green space, TVA should be working to improve it as wildlife habitat. If TVA doesn't want it anymore, instead of selling it for development, it should consider transferring it to another federal agency, the Alabama Dept. of Conservation and Natural Resources or a nongovernmental organization (NGO) such as the North Alabama Land Trust, that would be interested in maintaining it as an urban nature preserve. (*Commenter: Charles L. Rose - SEA*)

Response: Because of the potential for the redevelopment of this land to promote economic development and growth, TVA is primarily interested in selling the land for redevelopment purposes. TVA has had internal discussions about the potential of transferring the land to other federal agencies such as the Department of the Interior or Department of Defense for various uses. Informal contacts with these agencies have not prompted interests. These federal agencies would similarly be responsible for resource management and protection while, depending upon actions proposed, the State of Alabama or an NGO would likely not. In addition, see response to Comment Statement 158.

157. The currently undeveloped areas are highly significant biologically and should remain undeveloped. This mix of forest, wetlands, and small open spaces is heavily used by migrant birds in spring and fall, and also is of importance to both breeding and wintering birds. The reservation's proximity to the Tennessee River, which serves as a major "landmark" for migrating birds, is crucial to its significance as a migratory stopover point for birds where they can rest and feed. (*Commenters: Gregory J. Harber - AOS, Greg Jackson, M.D. - AOS*)

Response: Comment noted. See TVA's assessment and description of potential effects in Sections 3.11, 3.14.2, 3.14.3.2, 4.14.2, and 4.14.2.3 for discussion and potential effects on migrant birds.

158. The draft EIS states: 'Some migratory bird populations, particularly neotropical migrants and others that rely on wetland habitats, including those on the Muscle Shoals/Wilson Dam Reservation, are declining.' This is all the more reason to protect the MSR's natural areas from the non-productive commercial, retail and residential development TVA would allow. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. See response to Comment Statement 156 and discussion of potential cumulative effects on terrestrial ecology (i.e., plants and wildlife) in Section 4.14 of the final EIS.

159. There have been multiple cougar sightings on the MSR. (*Commenter: Charles L. Rose - SEA*)

Response: Eastern cougar (*Puma concolor cougar*) is native to the eastern United States and southeastern Canada. Based on the 2010 five-year review of the eastern cougar, the USFWS concludes that this species is extinct (<http://www.fws.gov/northeast/ecougar/QA.html>). TVA would welcome any documentation of eastern cougars on the reservation, but according to both the recent five-year review by

the USFWS and Alabama Wildlife, Volume 3, *Imperiled Amphibians, Reptiles, Birds, and Mammals*, the eastern cougar is considered extirpated from Alabama.

Transportation

160. Please explain in general detail the proposed 'Transportation Option 2,' specifically what is meant by 'Realign US 43/72 through Hatch Blvd'. Also what is the purpose of re-routing Jackson through Birmingham? (*Commenter: Nathan Willingham - NACOLG*)

Response: Section 4.17.3 of the final EIS was revised to include more details about the transportation mitigation options, especially the need to realign US 43/72 through Hatch Boulevard. In mitigation Option 1, Jackson Highway would be rerouted to the intersection of US 43/72 and Reservation Road to alleviate the traffic congestion at the intersection of Hatch Boulevard and US 43/72.

161. The final EIS should provide additional information on how the traffic mitigation strategies will be funded and how the cost of the mitigation strategies factors into the selection of the preferred Alternative. (*Commenter: Heinz J. Mueller - USEPA*)

Response: Road construction and improvements needed to accommodate the MSR development (on- and off-site) would be funded by future landowners, Colbert County Road Commission, and/or Alabama Department of Transportation. The cost of the mitigation strategies would not have an impact on the selection of the Preferred Alternative for this EIS.

162. Transportation mitigation strategy 'Option 2' includes an additional access point to the MSR between the Tennessee River and Hatch Boulevard and a flyover for southbound US 43/72. How will these activities impact the recreational opportunities on the North side of Reservation Road? (*Commenter: Charles L. Rose - SEA*)

Response: The transportation projects developed as part of the analysis are conceptual in nature and are not intended to indicate exact alignments or locations. A variety of factors would likely affect the nature and/or applicability of the recommended mitigation options as the proposed redevelopment options are refined. Likewise, when any of the applicable recommended transportation projects are designed, mitigation measures would be developed to address impacts as appropriate.

163. It appears that all action alternatives have a similar impact on transportation in Table S-1, however that is not the case in Section 4.17. The final EIS should provide a clearer description of the potential traffic related impacts in all summary tables in the document. (*Commenter: Heinz J. Mueller - USEPA*)

Response: Tables S-1 and 2-1 of the final EIS have been revised to include a clearer description of potential impacts of the Action Alternatives. As stated in Section 4.17.1, all Action Alternatives would involve level of service (LOS) failures at three intersections along the Hatch Boulevard corridor even though Alternatives C and E are likely to generate more trips to and from the MSR study area than Alternatives B and D. TVA believes this LOS failure at these locations would also likely occur under Alternative F.

164. The final EIS should include a description on how future traffic counts were predicted for the proposed action alternatives. It should also include a clearer discussion on how the LOS failures were determined for such conceptual plans. (*Commenter: Heinz J. Mueller -*

USEPA)

Response: As indicated in Section 4.17, future traffic counts for the proposed Action Alternatives were predicted using conceptual assumptions for generalized land uses that would potentially be constructed at build-out by the year 2035. The land use assumptions were determined using a variety of considerations including reasonable floor-to-area ratios, the amount of developable land, and an analysis previously conducted for TVA and documented in the *Muscle Shoals Reservation Adaptive Re-Use Study* (Lord, Aeck, and Sargent 2009). The land use assumptions were also utilized to conduct a trip generation analysis based on the rates and equations published in the standard Institute of Transportation Engineers' (2008) reference *Trip Generation User's Guide*. The results of the trip generation analysis are shown in Table 4-4. The resulting estimated new project trips for each Action Alternative were assigned to the local roadway network utilizing existing traffic distribution patterns to estimate the total (background + project) number of peak-hour vehicles at each intersection in the year 2035, which were then analyzed to determine future LOS.

TVA

Land Disposal

165. Based on the past actions of the NACD members, TVA should not depend on the NACD to make decisions with a favorable outcome for the environment or recreation, or that would be consistent with TVA's alternatives. It is recommended that if TVA decides to dispose of a part of the MSR, TVA should remain an active participant with NACD to ensure that environmental and recreational concerns are at least given some degree of consideration. In addition, TVA should ensure that there will be opportunities for meaningful public participation in decisions about the future use of the property. (*Commenter: Larry Gautney*)

Response: TVA believes the Northwest Alabama Cooperative District (NACD) would support the goals of many different constituents in the Shoals area. TVA intends to work with this group, which represents the people of the surrounding cities and counties, and other appropriate local government agencies to develop a comprehensive Master Plan for the land. Citizens of the area will be invited, and public notice provided, to participate in development of the Master Plan. Once TVA approves the plan, it feels decisions associated with its implementation would best be made with inputs from the local community. As the redevelopment effort moves forward, there will be many opportunities for public input from both public and private individuals, groups, and business interests. Commitments and mitigation measures, such as those listed in the final EIS, along with the plan, will help ensure that important environmental resources are protected.

166. I am concerned that selling this land at auction to the highest bidder without regard to the future use of the land purchased creates the opportunity for devastation of the MSR study area. TVA should sell with conditions for use of this land that assure appropriate environmental protection. Covenants can and should be required when this land is purchased, either by a public or a private entity. TVA should not relinquish control subject to only the zoning and building codes of the community of Sheffield or of Muscle Shoals. (*Commenter: David Cope*)

Response: Various ways of protecting the environmental resources (e.g., designation of green space) would be considered in the development of the comprehensive Master Plan. Where appropriate, TVA would include restrictive covenants and other prohibitions in

transfer deeds and other legal instruments to reduce, avoid, or minimize impacts to the environment. TVA would review future development actions that could affect the Tennessee River, streams, floodplains, and wetland areas. Local zoning laws and regulations (e.g., floodplain management regulations) are expected to be adhered to for future uses of the property. In addition, other federal and state agencies (e.g., USACE, ADEM) would be involved or require authorizations for the conduct of some activities.

167. The price of the Muscle Shoals Reservation should be based on local price of land and not inflated prices from other areas. TVA should not charge large prices to redevelop this land. (*Commenter: James Bedsole*)

Response: Prior to any land sale, TVA would obtain an appraisal of the property, which would take into account the fair market value of similar land in the area. This land would be valued the same way other land similarly situated and with similar amenities would be valued. Such appraisals are typically used to establish minimum bid prices.

168. TVA should revise the final EIS to clarify whether the proposed action is in fact anticipated to involve disposal of all of the 1,400 acres of reservation or whether TVA is reserving the option to dispose of its reservation lands "in whole or in part." (*Commenter: John Crowder*)

Response: At this time, TVA has not sought or received any expressions of interest in the property as a whole. TVA prefers to sell the entire 1,400-acre property as a whole in a single sales transaction. However, given the current status of the national and global economy, TVA recognizes the potential difficulty associated with attracting a purchaser to such a large acreage at this location. TVA and local government partners plan to develop and circulate requests for interests (RFI) and requests for proposals (RFP) in the future in an effort to attract potential buyers. Therefore, at its discretion, TVA would entertain the possibility of selling the land in smaller tracts or parcels. The potential disposition of unsold property is discussed in the final EIS in Section 1.3.

Mission

169. TVA is proposing the redevelopment of the MSR study area from a business perspective, which is the main reason to my objections to this project. What is TVA's mission? Is TVA just a power company? Is every TVA action going to be taken based on 'dollars and cents?' (*Commenter: Charles L. Rose - SEA*)

Response: TVA is not just a power company but a federal corporation with many other responsibilities to the people of the Tennessee Valley and the nation beyond production of electricity. TVA has not received taxpayer funding since 1999. Like any other large business, TVA must operate in a businesslike manner to be successful and fulfill its mission, while prudently relying on ratepayer (and bond holder) funding.

170. TVA's 'technological innovation' mission goal could be well served if the adaptive reuse of existing buildings and plant sites emphasized new technologies, including solar, and 'green,' energy efficient materials and building techniques. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted.

Other

171. I would like to obtain copies of all written comments received at the public scoping meeting for the Muscle Shoals Reservation Redevelopment initiative and all written comments on the scoping document received by TVA from the NACD, affiliated cities and counties of the NACD, and individual elected municipal or county governmental representatives from any of the affiliated cities or counties within the NACD.

(Commenter: John Crowder)

Response: TVA complied with this request for public scoping comments on January 25, 2011, and the recipient confirmed receipt of the comments February 1, 2011.

Visual Resources

172. Based on the definition of 'Urban Landscape Character' in the draft EIS, I would suggest that not all urban areas have the same level of 'scenic value class.' For example, the historic buildings on the MSR Study Area are of a much higher 'scenic value class' than typical urban sprawl development, as is found along Woodward Ave. in Muscle Shoals, Florence Blvd., and many other locations in the Shoals area. *(Commenter: Charles L. Rose - SEA)*

Response: Comment noted. TVA did not perform a comparative analysis of landscape character types outside the scope of the MSR study area (e.g., Woodward Avenue, Florence Boulevard). Although an urban landscape character could be perceived as aesthetically pleasing and have a strong sense of place, it would generally be difficult for areas of urban landscape character to have a high scenic value class as a result of impacts to scenic attractiveness and scenic integrity. Through the comprehensive planning process, TVA anticipates the eventual development of the MSR to be contextually sensitive to existing landscape character types.

173. The final EIS should include a detailed description of how scenic resources on the MSR would be affected by the redevelopment. *(Commenter: Charles L. Rose - SEA)*

Response: Scenic resources were evaluated and described in Chapters 3 and 4 of the EIS in terms of landscape character types. These landscape character types generally describe human perceptions of an area or viewshed and broadly establish the aesthetic sense of place. The scenic resource assessment included in this EIS identifies landscapes by their character and groups areas of a similar and contiguous character types, rather than a detailed description of discernable changes from specific viewing positions. TVA's methodology for assessing impacts to scenic resources was developed from the United States Forest Service's (USFS) detailed practice for scenic resource management entitled: *Landscape Aesthetics, A Handbook for Scenery Management*, Agriculture Handbook Number 701, USFS, USDA 1995. TVA's methodology for assessing scenic value is described in Appendix P of the final EIS.

174. The general public in the Muscle Shoals area would be opposed to commercial development that would degrade the visual characteristic of the MSR. *(Commenter: Charles L. Rose - SEA)*

Response: Comment noted.

175. The phosphate slag storage pile is more pleasing to the eye than typical Shoals area urban development because nature is slowly reclaiming it; a great variety of vegetation is

taking hold there. Why does the draft EIS include a portion of the phosphate slag storage area as 'areas of urban landscape character?' (*Commenter: Charles L. Rose - SEA*)

Response: TVA acknowledges that the slag storage area is slowly reverting to a landscape character type more closely associated with a rural or naturally appearing landscape. TVA staff evaluated the phosphate slag storage area using a combination of field reconnaissance, aerial photography, topographic maps, and land use/land cover maps. At the time of data collection, several factors, including vegetation patterns, variations in topography and soil type, foreground visibility of transmission lines, rail features, and materials storage within the phosphate slag storage area resulted in a scenic value class of common to minimal. The scenic integrity was determined to be low to very low. Further, the phosphate slag storage area experiences a very low scenic visibility due to land uses and available points of public access. The number and duration of views are generally low, with most being available to motorists and recreational trail users to the south of the phosphate slag storage area. Visibility from these positions includes a foreground view of moderately dense trees and herbaceous vegetation, which screens portions of the slag storage area that would otherwise be directly visible. The portions of the slag storage area that exhibit characteristics of an urban landscape character include areas where vegetation is sparse, where topography has been noticeably altered, and where material storage/stockpile areas are visible in the immediate foreground.

Water Quality

176. When discussing Alternative D, the draft EIS states: 'Industrial development could also require water withdrawals from or discharges to the Tennessee River.' What kind of discharges are anticipated? (*Commenter: Charles L. Rose - SEA*)

Response: Depending on the type of industry and extent of development, TVA expects that potential discharge to the river could include a variety of liquid effluents. However, depending on the nature of the effluent and how it is conveyed (e.g., outfall pipe), state and other federal approvals would likely be necessary, including additional environmental review and approval by TVA under Section 26a. Such effluent would also have to meet specific quantity and quality standards prior to being discharged.

177. The Tennessee River below Wilson Dam has been designated as a state mussel sanctuary. The Tennessee River/Wilson Dam tailwaters is also designated as habitat for Nonessential Experimental Populations (NEP) of 16 federally listed mussels and one federally listed aquatic snail. While this area of the Tennessee River remains one of the most important remaining habitats for mussels of the Tennessee River mainstem fauna, it remains under constant stress from impairments to upstream water quality. It is understood that development with the highest potential to affect aquatic resources in the Tennessee River would be addressed as part of TVA's environmental review of proposed projects subject to Section 26a of the TVA Act, and as such be subject to Section 7 review under the Endangered Species Act. However, water quality parameters have already been shown to exceed protective standards and any additional inputs may further degrade this critically important and already stressed habitat and fauna. (*Commenter: Joyce Stanley - USDOJ*)

Response: TVA recognizes the high value of this portion of the Tennessee River and will work within existing state and federal regulatory mechanisms (particularly the CWA, the ESA, and NEPA) to assess, avoid, and/or minimize any direct, indirect, or cumulative impacts to aquatic resources (including endangered and threatened species) that could result from development of the MSR.

178. TVA should work with the local Municipal Separate Storm Sewer System (MS4) program to incorporate LID practices into all phases of the redevelopment of this area. TVA has an opportunity to guide the redevelopment of the MSR which could be a model for the region for redeveloping federal lands in an environmentally responsible manner.

(Commenter: Heinz J. Mueller - USEPA)

Response: Comment noted. TVA would be involved in working with local governments on the comprehensive Master Plan. Its development and implementation would involve local, state, and other federal authorities including those experienced in LID practices and responsible for regulation and protection of water quality.

179. Since the preferred alternative is described as the 'mixed use' alternative, future land use decisions such as designating areas suitable for industrial or agricultural use could potentially exacerbate the impaired condition of Pond Creek. EPA recommends that TVA clearly identify in the final EIS what types of land uses would be permitted in areas of the MSR that could potentially negatively impact Pond Creek. EPA also recommends that TVA coordinate with ADEM regarding land use decisions that could negatively impact Pond Creek. *(Commenter: Heinz J. Mueller - USEPA)*

Response: Under the Preferred Alternative F, TVA would make the property available for unrestricted land use. TVA, therefore, would not dictate the ultimate land uses across this property but would work with local governments and the public in the development of a Master Plan. TVA expects that some amount of conservation and green space would be established by the plan and that some of this land would encompass areas of sensitive or important resources such as Pond Creek and its floodplain, wetland, agricultural land, and woodlots, thus, minimizing the potential for negative effects to these areas. Further, even after the land is sold, TVA would review future projects that could affect Pond Creek and areas within the limits of the 100-year floodplain, which includes some wetlands, under Section 26a of the TVA Act. ADEM received the draft EIS and is aware of the proposal. Depending on the nature of future actions that could affect Pond Creek, ADEM could be involved through its water quality regulation and permitting requirements.

180. The Department of Interior is concerned with any Action Alternative that may lead to increased degraded water quality in Pond Creek and/or in the Tennessee River mainstem by allowing future developments that may result in new industrial/municipal point source discharges. Pond Creek is already a stressed system and is listed on the Alabama 303(d) list for impairments to water quality by organic enrichment (CBOD/NBOD) and metals (arsenic, cyanide, and mercury). Pond Creek empties into the Tennessee River below Wilson Dam. The Pond Creek watershed already supports several point source discharges including a municipal wastewater treatment facility and industrial discharges (i.e., Wise Alloys and Occidental Chemical). It also supports multiple Confined Animal Feeding Operations, primarily poultry broiler and breeder houses in the upper portions of the watershed. The adjacent drainages (e.g., Spring Creek and Sweetwater Creek) support multiple other industrial discharges. Recent continuous monitoring (unpublished TVA data, 2010) of dissolved oxygen (DO) at three monitoring stations below Wilson Dam to the head of Seven Mile Island has shown numerous exceedances of the minimum state water quality standard (4 mg/l DO). *(Commenter: Joyce Stanley - USDO)*

Response: TVA has documented in the final EIS the current status of water quality and related aquatic resources issues in Pond Creek and the Tennessee River (Wilson Dam tailwater) in the vicinity of the proposed land disposal. As previously described, TVA

expects the Master Plan development process to result in some potential impact avoidance and resource protection including in the vicinity of Pond Creek. TVA would review future projects that could affect Pond Creek and the Tennessee River and areas within the limits of their 100-year floodplains under Section 26a of the TVA Act. TVA would also work with ADEM and other permitting authorities, as appropriate.

181. Section 4.2.3 of the draft EIS describes the impacts of the expected loss of pervious surfaces and possible sinkhole development due to the activities associated with Alternative C. This is another reason against allowing commercial, retail and residential development on the MSR study area. (*Commenter: Charles L. Rose - SEA*)

Response: Comment noted. TVA expects that through the Master Plan development process, involvement of knowledgeable individuals and agencies with experience in low-impact development practices, use of sound engineering principles and practices, water quality protection, and storm water runoff management, the effects of such potential development on surface water and possible sinkhole development would be minimal.

Wetlands

182. Section 404 permitting should be summarized in the final EIS when discussing potential impacts to wetlands. (*Commenter: Heinz J. Mueller - USEPA*)

Response: As indicated in Section 4.11 of the final EIS, the Section 404 permitting process, administered by the USACE regulates wetlands under the CWA, which regulates the discharge of fill. The regulatory review process for jurisdictional wetlands involves a standard sequence of avoidance, minimization, and mitigation of wetland impacts. Permit applicants must avoid wetlands wherever practicable, minimize impacts, and mitigate impacts according to USACE district guidelines. Public review of Section 404 permits is a part of the regulatory review. Mitigation planning is in many cases site-specific, but in most cases will consist of the purchase of credits in a USACE-approved mitigation bank.

183. For wetlands deemed not to be “jurisdictional wetlands” TVA should include provisions within the conveyance document, including provisions for further NEPA review that will assure a thorough assessment of the impacts of such work and the imposition of appropriate mitigation for loss or damage to such wetlands. (*Commenter: John Crowder*)

Response: As described in Section 4.11 of the final EIS, TVA procedures implementing Executive Order (EO) 11990 provide that the agency, once a no practicable alternative determination is made, minimize wetland destruction, loss, or degradation and preserve and enhance natural and beneficial wetland values, while carrying out its responsibilities, including the disposal of federal land. TVA will include specific language in the conveyance documents pertaining to the sale of the property describing the presence of wetlands, and all legal obligations regarding wetland avoidance, protection, and impact minimization. TVA will review future proposals to alter wetlands and conduct any additional environmental review necessary to determine whether there is no practicable alternative to adversely impacting the wetland. If no alternative is available, effects on wetlands would be minimized. Where appropriate, TVA would work with the USACE during the Section 404 process in making such determinations and developing appropriate mitigation strategies.

184. The final EIS should state which, if any, of the wetlands on the property are deemed to be jurisdictional and which are deemed non-jurisdictional. It should also discuss the

regulatory review and mitigation planning for each classification. (*Commenters: John Crowder, Charles L. Rose - SEA*)

Response: Nonjurisdictional wetlands are wetlands that lack one of the three criteria (prevalence of wetland vegetation, hydric soils, and wetland hydrology) used to identify wetlands that are regulated by state and federal regulations. In the project area, nonjurisdictional wetlands typically lack hydric soils but will have a prevalence of wetland vegetation and undergo saturation or inundation long enough to drive the composition of the plant community.

For the purposes of this EIS, wetlands were identified primarily via National Wetland Inventory maps, aerial photography, and limited ground surveys. There was no distinction made between jurisdictional and nonjurisdictional wetlands. Jurisdictional wetlands, as the name suggests, fall under the jurisdiction of state and federal wetland regulations. Alabama, however, does not have separate wetlands permitting regulations. Applications for wetlands projects are made directly to USACE with copies to ADEM for water quality certification. USACE regulates wetlands under the CWA, specifically Section 404, which regulates the discharge of fill.

The regulatory review process for jurisdictional wetlands involves a standard sequence of avoidance, minimization, and mitigation of wetland impacts. Permit applicants must avoid wetlands wherever practicable, minimize impacts, and mitigate impacts according to USACE district guidelines. Public review of Section 404 permits is a part of the regulatory review. Mitigation planning is in many cases site specific but, in most cases, will consist of the purchase of credits in a USACE-approved mitigation bank.

Nonjurisdictional wetlands are not regulated by state or federal law as waters of the State or the United States, but do have some level of protection under Presidential EO 11990. This EO defines wetlands as “Those areas which are inundated or saturated by surface or groundwater with a frequency sufficient to support or that under normal hydrologic conditions does or would support, a prevalence of vegetation or aquatic life typically adapted to saturated or seasonally saturated soil conditions. Examples of wetlands include, but are not limited to, swamps, fresh and salt water marshes, estuaries, bogs, beaches, wet meadows, sloughs, potholes, mud flats, river overflows, and other similar areas.” This definition is based primarily on a prevalence of wetland vegetation.

See response to Comment Statement 183 above. Regarding EO 11990, TVA will include specific language in the legal documents pertaining to the sale of the property describing the presence of wetlands, and all legal obligations regarding wetland avoidance, protection, and impact minimization. This fulfills agency responsibility under Section 4 of EO 11990, which states “When Federally-owned wetlands or portions of wetlands are proposed for lease, easement, right-of-way or disposal to non-Federal public or private parties, the Federal agency shall (a) reference in the conveyance those uses that are restricted under identified Federal, State or local wetlands regulations; and (b) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal.”

185. To ensure wetlands are protected on the MSR during future development, EPA recommends TVA place these aquatic systems under the protection of a perpetual restrictive covenant or conservation easement before the land is transferred to new ownership. EPA also recommends that a minimum 25-foot upland riparian buffer be included in the protection

instrument. If this is not an option, EPA recommends that additional information be provided in the final EIS regarding potential mitigation options that TVA would consider if no practicable alternatives can be identified to prevent adverse impacts to wetlands on the MSR. (*Commenter: Heinz J. Mueller - USEPA*)

Response: See responses to Comment Statements 183 and 184 above. TVA will include specific language in the conveyance documents pertaining to the sale of the property describing the presence of wetlands and all legal obligations regarding wetland avoidance, protection, and impact minimization. Prior to the sale of the properties, the local community will develop a comprehensive Master Plan to guide development options for the site. This process will identify suitable land uses for the parcel. Public input could set aside wetland and streamside areas for preservation. Potential vehicles for this level of protection include conservation easements held by a local land trust, natural resource management agency, or other entity. These areas could also be delineated as separate parcels and purchased in fee by a local conservation entity.

As discussed in the EIS, the need for wetland mitigation would also be assessed and determined during additional project review in coordination with the Section 404 permitting process. Developers would have to show why wetland areas are unavoidable, minimize impacts to the degree practicable, and finally mitigate impacts.

186. Why is TVA considering selling the wetlands on the MSR study area, especially when they recognize the local and regional importance? Executive Order 11990 (Protection of Wetlands) requires Federal agencies to take action to avoid adversely impacting wetlands wherever possible. By selling the wetlands on the MSR study area that are now in its care, TVA is violating EO 11990. (*Commenter: Charles L. Rose - SEA*)

Response: TVA is cognizant of the local and regional importance of wetlands on the site and is hopeful that community input into the Master Plan development process will facilitate enhanced protection of these areas. The Master Plan will be developed prior to the sale of the properties and will identify suitable land uses for these parcels. Public input could set aside wetland areas for preservation; potential vehicles for this level of protection include conservation easements held by a local land trust, natural resource management agency, or other entity. These areas could also be divided out as separate parcels and purchased in fee by a local conservation entity.

See responses to Comment Statements 183, 184, and 185 above. TVA has determined it is not practicable from a long-term financial standpoint to continue to maintain ownership of these discrete wetland parcels, thus withholding these areas from disposal was not considered in this review. As stated in the response to Comment Statement 183, TVA complies with EO 11990 and minimizes its effects on wetlands while carrying out its responsibilities, including the disposal of federal property.

Table 1. List of Commenters

Name Business or Organization	Associated Comment Statement Numbers
Anonymous	24
Abroms, Martin <i>Abroms & Associates, P.C.</i>	7, 13
Aderholt, Robert B.	55
Agricola, John <i>The American Chestnut Foundation – Alabama Chapter (TACF)</i>	46
Alford, Tim <i>Alabama Construction Recruitment Institute</i>	55
Allen, Henry	7
Auchly, Barry <i>Chamber of Commerce</i>	13
Bailey, Forrest <i>Alabama State Parks Division (ALSPD)</i>	11, 147
Barnett, Steven W. <i>National Wild Turkey Federation - Alabama Chapter (NWTF)</i>	147
Barrett, Janice	11, 52, 100, 114, 147
Batchelor, Grady <i>Winston County Industrial Development Authority</i>	55
Beavers, Jane	11
Beck, Noel M.	52, 147
Bedsole, James	7, 107, 168
Bennett, Jim <i>State of Alabama Department of Labor</i>	147
Bentley, Robert W., Sr.	10
Bernauer, B. Paul	73, 75, 79, 94, 95, 99, 100, 124, 125, 126, 128, 131, 132, 133, 142, 143, 144
Blanks, George	55
Blazer, Don	55
Blazer, Janet	1
Bolton, Susan and Chuck	61
Bowles, James <i>B Electric Inc.</i>	7
Boyd, Kim	13, 61
Bradford, David <i>City of Muscle Shoals</i>	8, 21
Bradford, Debbie <i>Muscle Shoals Education Foundation</i>	24, 61
Brown, Elizabeth Ann <i>Alabama Historic Commission</i>	49
Bryant, Wil <i>Emerald River Hotel</i>	7
Burhans, Bryan <i>The American Chestnut Foundation (TACF)</i>	147
Carpenter, Steve <i>Tuscumbia City Board of Education</i>	55, 61, 100
Casey, Linda <i>Alabama Forestry Commission</i>	147
Castile, Ed	55

Name Business or Organization	Associated Comment Statement Numbers
Chupp, Denise	10
Cline, David <i>Alabama Cooperative Extension System</i>	55
Cope, David	167
Crowder, John	92, 122, 123, 169, 172, 184, 185
Cummings, Brenda	10
Daniel, Adam <i>Hatton High School Agriscience Department</i>	55
Deaton, Dennis	55
Dodson, Alison <i>Hendrix Glass Service, Inc.</i>	61
Dodson, Sammy <i>Hendrix Glass Service, Inc.</i>	7
Doyle, Gary	13
Doyle, Pam <i>Superior Print Solutions</i>	13, 55
Dugger, Sheila	12
Dugger, Tom	12, 55
Dura, Victor <i>Shoals Environmental Alliance (SEA)</i>	147
Ecklund, Leslie <i>Burritt on the Mountain</i>	147
Gautney, Larry	4, 14, 83, 86, 118, 120, 147, 166
Godwin, Alex <i>Wise Alloys LLC</i>	7
Greer, Lynn <i>Greer Construction LLC</i>	55
Griffith, Brenda <i>Shoals Home Builders Association</i>	7
Hamm, Mitch <i>Shoals Chamber of Commerce</i>	21
Hanson, Quinton	7
Harber, Gregory J. <i>Alabama Ornithological Society (AOS)</i>	9, 74, 155, 158
Hardy, Susan	114
Hea, Matthew <i>Northwest Alabama Regional Airport</i>	7
Hendrix, Jackie	13
Hester, Gary	41, 103
Hester, J. C.	152
Hill, Ginny Lee	10, 106
Holt, Steve <i>Shoals Chamber of Commerce</i>	7, 21, 78, 147
Jackson, Greg, M.D. <i>Alabama Ornithological Society (AOS)</i>	9, 74, 100, 155, 158
Johnson, Coy	55
Johnston, Mark, Executive Director <i>McDowel Environmental Center</i>	147
Jordan, Mike	9
Kittle, Paul D.	11, 18, 52, 100, 147
Lansdell, Michael	63, 104

Muscle Shoals Reservation Redevelopment

Name Business or Organization	Associated Comment Statement Numbers
Lard, Jason <i>Lexington High School</i>	55
Laurent, James	55
Leigh, Anthony L. <i>Huntingdon College</i>	147
Liles, Darin <i>R. A. Hubbard High School</i>	55
Lindsey, Brian <i>Muscle Shoals City Schools (MSCS)</i>	55
Maddox, Jimmy <i>The American Chestnut Foundation-Alabama Chapter (TACF)</i>	147
Malone, David J., Executive Vice President <i>Balfour Concord</i>	63
Mayfield, Rex <i>Russellville City Schools</i>	55
McCloy, Margaret M.	34, 52, 74, 100
McGee, Vernon <i>SBS Electric Supply Company, Inc.</i>	7
McGouyrk, Jerome	7, 10, 13, 77, 100
McMillion, Patricia T.	147
McNeece, R. H.	10
McNees, James L. <i>Alabama Department of Public Health (ADPH)</i>	134, 135, 136, 137, 138, 139, 140
Miller, Matthew <i>Living River Environmental Center</i>	147
Moore, Brandon <i>Alabama Farmers Federation (AFF)</i>	55
Morring, Chuck	116, 118, 120, 130
Mueller, Heinz J. <i>United States Environmental Protection Agency (USEPA)</i>	30, 31, 32, 43, 47, 66, 67, 71, 81, 82, 88, 117, 145, 162, 164, 165, 179, 180, 183, 186
Muse, Nancy <i>Shoals Environmental Alliance (SEA)</i>	55, 57, 58, 59
Nash, M.	73
Neel, Clint <i>The American Chestnut Foundation (TACF)</i>	147
Nelson, William	10, 74
Newland, Stephanie <i>Shoals Chamber of Commerce (SCC)</i>	55
Norton, Jackie <i>Sheffield Junior High School</i>	55
Parris, Dr. Joan <i>Shoals Economic Development Association (SEDA)</i>	13
Phillippi, George M. <i>The American Chestnut Foundation (TACF)</i>	60, 105, 146
Piggq, Kathy <i>Brindley Construction LLC</i>	55
Piper, Tom	74
Posey, Grant	52
Posey, Jackie	6, 52, 54, 55, 59, 61, 62, 100, 147

Name Business or Organization	Associated Comment Statement Numbers
<i>Shoals Environmental Alliance (SEA)</i>	
Quesenberry, Billy <i>Alabama Electric Motor Services LLC</i>	55
Quigley, Edwin	10
Rene', Holly <i>People For TVA</i>	147
Ress, Tom	74
Retherford, Joel <i>LCCT</i>	55
Rhodes, Darren <i>AGC</i>	21, 55
Rhuland, Amy	147
Riner, Tommy <i>National Alabama Corporation (NAC)</i>	55
Rist, John C. <i>The American Chestnut Foundation (TACF) - Alabama Chapter</i>	11, 147
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