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Service Date: December 28, 2015

Comment Due Date: January 27, 2016

DRAFT ENVIRONMENTAL ASSESSMENT

STB FINANCE DOCKET NO. 35802

**NORTHWEST TENNESSEE REGIONAL PORT AUTHORITY
CONSTRUCTION AND OPERATION EXEMPTION
IN LAKE COUNTY, TENNESSEE**

Lead Agency:



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Memphis District

December 2015

SURFACE TRANSPORTATION BOARD
Office of Environmental Analysis
Washington, DC 20423

December 28, 2015

RE: STB Finance Docket No. 35802, Northwest Tennessee Regional Port Authority —
Rail Construction and Operation — in Lake County, Tennessee

Dear Reader,

The Surface Transportation Board's (the Board's) Office of Environmental Analysis (OEA) is pleased to provide you with a copy of the Draft Environmental Assessment (EA) for the proposal of the Northwest Tennessee Regional Port Authority (NWTRPA) to construct and operate approximately 5.5 miles of new rail line in Lake County, Tennessee. The proposed rail line would connect the newly constructed Port of Cates Landing on the Mississippi River to an existing rail line operated by the Tennken Railroad near Tiptonville, Tennessee, and would provide rail service to customers at the Port of Cates Landing and the adjacent Lake County Industrial Park, which is currently being developed by Lake County.

In deciding whether or not to approve NWTRPA's proposal, the Board must consider the potential environmental impacts of its decision. The Draft EA is the first step in this process. The Draft EA examines the potential environmental impacts that could occur as a result of the construction and operation of the proposed rail line. The Draft EA discusses potential impacts to safety, land use, geological resources, water resources, biological and natural resources, cultural and historical resources, transportation systems, air quality, noise and vibration, environmental justice and socioeconomics, safety, hazardous wastes or materials, energy resources, and greenhouse gases and climate change. In the Draft EA, OEA recommends a number of environmental mitigation measures that would minimize the potential impacts to these resource areas. OEA concludes that, if the Board requires NWTRPA to abide by the mitigation measures recommended in the Draft EA, construction and operation of the proposed rail line would not result in any significant environmental impacts to the quality of the natural or human environment.

We encourage you to send us written comments on ways we may improve our analysis in this Draft EA or to request supplementary analysis on issues that you feel need further work. OEA will consider and respond to comments submitted during the 30-day comment period in preparing a Final EA. The more specific your comments are, the better we will be able to respond to them. The Final EA will include OEA's final conclusions on potential impacts that could result from NWTRPA's proposal as well as OEA's final recommendations, including the final recommended environmental mitigation measures. To be considered in the Final EA, comments must be submitted during the 30-day comment period, which ends on January 27, 2016.

Comments may be submitted by mail or electronically. Mail written comments to:

Josh Wayland
Office of Environmental Analysis
Surface Transportation Board
395 E Street, S.W.
Room 1105
Washington, DC 20423

To file a comment electronically, visit the Board's website at <http://www.stb.dot.gov>, click on the "E-Filing" link, and then on the "Environmental Comments" link. The next page is a fillable form that allows you to fill in your information and comments. The Draft EA is available for viewing and download on the Board's website. Click on the "E-Library" link, then on the "Decisions & Notices" tab beneath the date [December 28, 2015]. Interactive maps of the proposed rail line and the alternatives that OEA has considered in this Draft EA are available on the Board's Railroad Map Depot at <http://stb.maps.arcgis.com>.

If you have questions or need clarification or guidance, please call Josh Wayland at (202) 245-0330. You may email Mr. Wayland at waylandj@stb.dot.gov. We appreciate your time and effort in helping us to carefully evaluate the potential environmental impacts of this proposed project, and we look forward to receiving your comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Victoria Rutson". The signature is fluid and cursive, with a large initial "V" and "R".

Victoria Rutson
Director
Office of Environmental Analysis

SUMMARY OF MAJOR CONCLUSIONS IN THIS DRAFT ENVIRONMENTAL ASSESSMENT

The Surface Transportation Board's (the Board's) Office of Environmental Analysis (OEA) has conducted an extensive review of the potential beneficial and adverse environmental impacts that could result from the Northwest Tennessee Regional Port Authority's (NWTRPA's) proposal to construct and operate approximately 5.5 miles of rail line in Lake County, Tennessee. OEA has reached the following major conclusions based on the information available to date; consultation with federal, state, and local agencies; and its own independent environmental analysis:

- The proposed rail line would extend approximately 5.5 miles from the newly constructed Port of Cates Landing to a connection with a rail line operated by the Tennken Railroad near Tiptonville, Tennessee. The proposed rail line would provide rail service to customers at the newly constructed Port of Cates Landing, as well as to the proposed Lake County Industrial Park adjacent to the port facility.
- NWTRPA anticipates that traffic on the proposed rail line would initially be fewer than 1,000 carloads per year, and would eventually rise to more than 1,000 carloads per year. This corresponds to approximately two round trips per week, for a total of four 10-car trains per week during the initial years of operations. This traffic level could increase in the future, depending on the needs of customers at the Port of Cates Landing and the Lake County Industrial Park. NWTRPA anticipates that service would be available to these customers once per day in either direction, 5 days per week. Depending on future markets, the proposed rail line could transport a variety of commodities, potentially including agricultural products, raw materials, industrial products, energy commodities, and finished manufactured products.
- In addition to NWTRPA's proposed alignment (Alternative A), OEA considered two alternative alignments that could feasibly be constructed (Alternative B and Alternative C). The construction and operation of any of these three Action Alternatives would not result in any significant environmental impacts related to land use, geological resources, water resources, biological resources, threatened and endangered species, transportation systems, air quality, noise and vibration, environmental justice and socioeconomics, safety, hazardous wastes or materials, energy resources, or greenhouse gases and climate change. OEA also considered the potential environmental impacts of the No Action Alternative, under which the proposed rail line would not be constructed. No significant environmental impacts would occur as a result of the No Action Alternative.
- The proposed rail line would cross several roadways. Alternatives A, B, and C would require two, two, and three at-grade crossings of roadways, respectively. Because the level of traffic

on local roads is low, because the level of proposed train traffic would be low, and because trains operating on the proposed rail line would travel at low speeds, the construction of the at-grade crossings would not adversely affect local transportation patterns or public safety. OEA is recommending mitigation measures to ensure that the at-grade roadway crossings would be appropriately designed and demarcated to protect public safety.

- The construction of the proposed rail line would result in the conversion of approximately 70 acres of farmland to nonagricultural use. The loss of farmland would be small relative to the amount of available agricultural land in the project area.
- The proposed rail line would primarily cross farmland that has been substantially altered by long-standing agricultural use. Therefore, essentially no natural habitat remains that could be affected by the proposed rail line. Construction and operation of the proposed rail line would have no effect on federally or state-listed threatened or endangered species. No impacts to wildlife habitat or abundance would occur.
- Each of the alternatives under consideration would cross at least one stream and several agricultural channels. Each of the alternatives would also cross at least one linear wetland. These crossings would require the construction of one bridge and several culverts. Impacts to these water resources would be minor and would be minimized by the mitigation conditions that OEA is recommending.
- Because trains on the proposed rail line would carry freight that would otherwise be transported by truck, the proposed construction and operation would reduce truck traffic on local roads, enhance transportation efficiency, improve public safety, and reduce local air pollution and greenhouse gas emissions relative to the No Action Alternative.
- A cultural resource survey was conducted and submitted to the Tennessee Historical Commission (the State Historic Preservation Officer [SHPO]), in compliance with Section 106 of the national Historic Preservation Act of 1966, to provide information to OEA and the SHPO with which to make a determination of effect to historic and cultural properties pursuant to Section 106. Based on the results of the survey and in consultation with the SHPO, OEA determined that the construction and operation of the proposed rail line would have no effect on historic properties within the area of potential effect. Pursuant to 36 Code of Federal Regulations 800.4(d)(1), OEA informed the SHPO of its determination on July 10, 2015. The SHPO has concurred with OEA's finding of no effect to historic properties.
- Benefits of the proposed rail line include increased efficiency in the local and regional transportation network, the potential for new employment opportunities for members of local communities, and the potential for increased air quality and climate change impacts from

displacing trucks that would otherwise be used to transport freight to and from the Port of Cates Landing and the Lake County Industrial Park if the proposed railroad is not constructed.

- Based on the information provided from all sources to date and its independent analysis, OEA preliminarily concludes that construction and operation of the proposed rail line would have no significant environmental impacts if the recommended mitigation measures set forth in the Draft EA are imposed. Therefore, the environmental impact statement process is unnecessary in this proceeding.
- OEA welcomes public comment on all aspects of the Draft EA during the 30-day comment period, which ends January 27, 2016. OEA will respond to comments received; make final recommendations to the Board, including recommendations for mitigation; and issue those recommendations in a Final EA. The Board will then issue its final decision addressing the proposed rail line and imposing any environmental mitigation that the Board determines appropriate.

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Table of Contents

SUMMARY OF MAJOR CONCLUSIONS	iii
EXECUTIVE SUMMARY	xiii
1.0 PURPOSE AND NEED FOR PROPOSED ACTION	1
1.1 Introduction.....	1
1.2 Background.....	1
1.3 Purpose and Need	2
1.4 Outreach and Consultation.....	4
2.0 PROPOSED ACTION AND ALTERNATIVES DESCRIPTION	7
2.1 Alternative A — NWTRPA’s Preferred Alternative	7
2.2 Alternative B.....	7
2.3 Alternative C.....	9
2.4 No Action Alternative.....	10
2.5 Alternative Not Analyzed in Detail	10
2.6 Environmentally Preferable Alternative	13
3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	15
3.1 Transportation and Safety	15
3.1.1 Definition of the Resource	15
3.1.2 Existing Conditions.....	15
3.1.3 Environmental Consequences.....	17
3.2 Land Use	20
3.2.1 Definition of the Resource	20
3.2.2 Existing Conditions.....	20
3.2.3 Environmental Consequences.....	21
3.3 Geological Resources.....	22
3.3.1 Definition of the Resource	22
3.3.2 Existing Conditions.....	22
3.3.3 Environmental Consequences.....	29
3.4 Water Resources	30
3.4.1 Definition of the Resource	30
3.4.2 Existing Conditions.....	32
3.4.3 Environmental Consequences.....	35
3.5 Biological and Natural Resources.....	37
3.5.1 Definition of the Resource	37
3.5.2 Existing Conditions.....	39
3.5.3 Environmental Consequences.....	41
3.6 Cultural and Historical Resources	43
3.6.1 Definition of the Resource	43
3.6.2 Existing Conditions.....	43
3.6.3 Environmental Consequences.....	44

3.7	Air Quality	46
3.7.1	Definition of the Resource	46
3.7.2	Existing Conditions	47
3.7.3	Environmental Consequences	48
3.8	Noise and Vibration	50
3.8.1	Definition of the Resource	50
3.8.2	Existing Conditions	52
3.9	Environmental Justice and Socioeconomics	56
3.9.1	Definition of the Resource	56
3.9.2	Existing Conditions	59
3.9.3	Environmental Consequences	59
3.10	Hazardous Waste Sites and Transportation of Hazardous Materials	62
3.10.1	Definition of the Resource	62
3.10.2	Existing Conditions	62
3.10.3	Environmental Consequences	63
3.11	Energy Resources	64
3.11.1	Definition of the Resource	64
3.11.2	Existing Conditions	64
3.11.3	Environmental Consequences	65
3.12	Greenhouse Gas Emissions and Climate Change	67
3.12.1	Definition of the Resource	67
3.12.2	Environmental Consequences	68
4.0	CUMULATIVE EFFECTS	71
4.1	Past, Present, and Reasonably Foreseeable Future Actions	71
4.1.1	Lake County Industrial Park	71
4.1.2	Port of Cates Landing	72
4.1.3	State Route 22 Expansion	72
4.1.4	Reelfoot Lake Recreation and Tourism Industry	73
4.2	Cumulative Impacts by Resource	73
4.2.1	Action Alternatives	73
4.2.2	No Action Alternative	76
5.0	MITIGATION MEASURES	77
5.1	Transportation and Safety	77
5.2	Land Use	78
5.3	Geological Resources	78
5.4	Water Resources	79
5.5	Biological and Natural Resources	79
5.6	Cultural and Historical Resources	80
5.7	Air Quality	80
5.8	Noise and Vibration	80
5.9	Socioeconomics and Environmental Justice	81
5.10	Hazardous Waste Sites and Transportation of Hazardous Materials	81
6.0	CONCLUSIONS AND REQUEST FOR COMMENTS	83

7.0	AGENCIES/TRIBES CONTACTED	87
8.0	LIST OF PREPARERS	89
9.0	REFERENCES	93

Figures

Figure 1-1	Project Location	3
Figure 2-1	Alternative A	8
Figure 2-2	Alternative B	9
Figure 2-3	Alternative C	11
Figure 2-4	Alternative D	12
Figure 3-1	Generalized Natural Features	24
Figure 3-2	Site Soils	25
Figure 3-3	New Madrid Seismic Zone	27
Figure 3-4	Seismic Hazard Map for the Conterminous United States, 2008	28
Figure 3-5	Water Resources	34
Figure 3-6	Typical Day-Night Average Noise Levels	52
Figure 3-7	Crossing Identification Map with Typical Rail Crossing Noise Profile	57

Tables

Table 3-1	Federal Transportation-Related Regulations and Guidance	16
Table 3-2	Soil Types in Each Alternative Route	26
Table 3-3	Water Resources Summary by Alternative	33
Table 3-4	Endangered, Threatened, and Rare Species of the Tiptonville USGS Quadrangle	41
Table 3-5	National Ambient Air Quality Standards	48
Table 3-6	Typical Sound Levels Measured in the Environment and Industry	51
Table 3-7	Existing Sound Levels	53
Table 3-8	Lake County Statistics	60
Table 3-9	Fuel Efficiency Comparison for Transportation Modes	65

Appendices

Appendix A Environmental Outreach and Consultation

- Exhibit 1 Request for Preliminary Environmental Consultation
- Exhibit 2 Correspondence with United States Department of Agriculture, Natural Resources Conservation Service
- Exhibit 3 Correspondence with City of Tiptonville, Tennessee
- Exhibit 4 Correspondence with Tennessee Department of Environment and Conservation
- Exhibit 5 Correspondence with Northwest Tennessee Development District
- Exhibit 6 Correspondence with Tennessee Wildlife Resources Agency
- Exhibit 7 Correspondence with United States Department of the Interior, Fish and Wildlife Service
- Exhibit 8 Correspondence with United States Army Corps of Engineers, Memphis District

Appendix B Cultural Resources Consultation and Documentation

- Exhibit 1 Cultural Resources Survey for the Proposed Cates Landing Railroad in Lake County, Tennessee
- Exhibit 2 Correspondence with Tennessee Historical Commission
- Exhibit 3 Tribal Consultation

Appendix C Board and NWTRPA Correspondence

- Exhibit 1 NWTRPA's Request for Waiver of Six-Month Pre-filing Notice
- Exhibit 2 NWTRPA's Request for Retention of EnSafe Inc. as the Third Party Consultant
- Exhibit 3 Board's Response to NWTRPA's Request for Waiver of Six-Month Pre-filing Notice
- Exhibit 4 Board's Response to NWTRPA's Request for Retention of EnSafe Inc. as the Third Party Consultant
- Exhibit 5 Financial Disclosure Statement Signed by EnSafe Inc.
- Exhibit 6 Memorandum of Understanding among NWTRPA, EnSafe Inc., and the Board
- Exhibit 7 NWTRPA's Request for Waiver of Environmental Impact Statement Requirements
- Exhibit 8 Board's Response to NWTRPA's Request for Waiver of Environmental Impact Statement Requirements
- Exhibit 9 Other Communications between NWTRPA and the Board

Acronyms

AADT	Annual Average Daily Traffic
APE	Area of Potential Effect
ARAP	Aquatic Resource Alteration Permit
BMPs	Best Management Practices
CEQ	Council on Environmental Quality
C.F.R.	Code of Federal Regulations
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibel
DNL	Day-night average noise level
EA	Environmental Assessment
EO	Executive Order
ESA	Endangered Species Act
ETW	Exceptional Tennessee Waters
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impacts
FRA	Federal Railroad Administration
GHG	Greenhouse Gases
GHGRP	Greenhouse Gas Reporting Program
HUC	Hydrologic Unit Classification
kV	Kilovolts
MSATs	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NMSZ	New Madrid Seismic Zone
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWTRPA	Northwest Tennessee Regional Port Authority
OEA	Office of Environmental Analysis
ONRW	Outstanding National Resource Waters
PCBs	Polychlorinated Biphenyls

SHPO	State Historic Preservation Officer
TDEC	Tennessee Department of Environment and Conservation
TDOT	Tennessee Department of Transportation
TMDL	Total Maximum Daily Load
TWRA	Tennessee Wildlife Resources Agency
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USEIA	United States Energy Information Administration
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
U.S. DOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
U.S.C.	United States Code
UST	Underground Storage Tank
VdB	Vibration decibels

EXECUTIVE SUMMARY

Introduction

On June 27, 2014, the Northwest Tennessee Regional Port Authority (NWTRPA) filed a petition with the Surface Transportation Board (the Board) for exemption from the requirements of 49 United States Code (U.S.C) § 10901, pursuant to 49 U.S.C. § 10502. NWTRPA proposes to construct and operate approximately 5.5 miles of new rail line that would connect the Port of Cates Landing on the Mississippi River to an existing line of railroad near Tiptonville in Lake County, Tennessee.

The Board's Office of Environmental Analysis (OEA) is issuing this Draft Environmental Assessment (EA) for public review and comment. The Board will consider the entire environmental record, comprising the Draft and Final EAs, public and agency comments submitted on the Draft EA, and OEA's environmental recommendations in making its final decision on NWTRPA's proposal. The Board will decide whether to approve, approve with conditions (which could include conditions designed to mitigate environmental impacts), or deny the proposal.

Purpose and Need

NWTRPA is a regional port authority and political subdivision of the State of Tennessee established by the counties of Dyer, Lake, and Obion in northwest Tennessee for the purpose of owning, constructing, and operating a regional river port in Lake County, Tennessee. NWTRPA recently completed construction of the Port of Cates Landing, a new river port facility on the Mississippi River near Tiptonville, the county seat of Lake County. In its petition for exemption, NWTRPA states that the purpose of the proposed rail line would be to provide rail service to the Port of Cates Landing and the adjacent Lake County Industrial Park, a new industrial park being developed by Lake County in conjunction with the Port of Cates Landing. NWTRPA claims that the proposed rail line is needed to facilitate efficient transportation to and from the Port of Cates Landing and the Lake County Industrial Park, and to attract new industries to this impoverished area of Tennessee.

Under the Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA), specifically 40 Code of Federal Regulations § 1508.9(b), an agency's environmental analysis shall include a brief discussion of the proposed project's purpose and need. OEA notes that the analysis of a project's purpose and need depends on the type of federal action that is involved in the particular project. Here, the proposed action involves an application by NWTRPA for a license or approval. The proposed project is not a project that is proposed or sponsored by the federal government. In cases such as this, courts have held that the project's purpose and need should be defined by the applicant's goals, in conjunction with the agency's enabling statute. For example, see *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir., 1991); *Alaska Survival v. STB*, 705 F.3d 1073, 084-85 (9th Cir., 2013); and *Nat'l Parks and Conservation Assoc. v. BLM*, 606 F.3d 1058, 1070 (9th Cir., 2009).

Proposed Action and Alternatives

The proposed rail line would extend approximately 5.5 miles from the Port of Cates Landing to a connection with a rail line owned by the Hickman River City Development Corporation of Hickman, Kentucky, and leased and operated by the Tennken Railroad, a Class III common carrier. The proposed line would pass through the Lake County Industrial Park, an initially 345-acre facility currently being developed by Lake County, Tennessee, and located adjacent to the Port of Cates Landing. The proposed line would provide service to customers at the Port of Cates Landing and the Lake County Industrial Park. If the Board approves the proposal, NWTRPA intends to contract with a qualified short-line railroad to operate the line.

NWTRPA anticipates that traffic on the proposed rail line would initially be fewer than 1,000 carloads per year, and would eventually rise to more than 1,000 carloads per year. This corresponds to approximately two round trips per week, for a total of four 10-car trains per week during the initial years of operations. This traffic level could increase in the future, depending on the needs of customers at the Port of Cates Landing and the Lake County Industrial Park. NWTRPA anticipates that service would be available to these customers once per day in either direction, 5 days per week. Depending on future markets, the proposed rail line could transport a variety of commodities, potentially including agricultural products, raw materials, industrial products, energy commodities, and finished manufactured products.

OEA considered four alternatives to NWTRPA's proposed rail line, including the No Action Alternative. One alternative, Alternative D, was eliminated early in the environmental review process and is not examined in detail in this Draft EA. The alternatives are described below:

- (1) Alternative A (NWTRPA's Preferred Alternative) — This alternative would extend approximately 5.5 miles from the Port of Cates Landing along the west side of a large unnamed agricultural stream bisecting the project area. It would connect to the existing Tennken Railroad at a point approximately 1.25 miles northeast of Tiptonville, Tennessee.
- (2) Alternative B — This alternative would follow an alignment similar and parallel to Alternative A but would be located on the eastern side of the agricultural stream bisecting the project area.
- (3) Alternative C — This alternative was originally proposed by the Tennessee Department of Transportation (TDOT). It would parallel State Route 22 to the east from the Port of Cates Landing to a connection with the Tennken Railroad at a point approximately 0.5 miles north of Tiptonville. State Route 22 is an established transportation corridor, and TDOT had recently completed a thorough environmental analysis of this area for the State Route 22 improvement project, which also covered most of the Alternative C project corridor. TDOT completed improvements to State Route 22 in 2015.

- (4) Alternative D — This alternative would extend eastward from the Port of Cates Landing following an alignment roughly parallel to Cates Landing-New Markham Road to a connection with the Tennken Railroad at a point approximately 4.5 miles northeast of Tiptonville. The entire project areas of Alternatives A, B, and C are located within the watershed of the Mississippi River. Alternative D is located partly within the watershed of Reelfoot Lake. Due to concerns about potential impacts to Reelfoot Lake, a unique hydrological feature that provides wildlife habitat, Alternative D was eliminated from further study early in the EA process. All of the alternatives considered in this Draft EA (Alternatives A, B, and C) are located outside of the Reelfoot Lake watershed and will not impact the watershed.
- (5) No Action Alternative — If the Board were to deny NWTRPA’s petition for authority to construct and operate a rail line, NWTRPA would not construct the proposed rail line. NWTRPA would, however, continue to develop the Port of Cates Landing and the Lake County Industrial Park. Transportation to and from the port and the industrial park would be provided by truck.

Description of the Affected Environment

Chapter 3 of this Draft EA provides a detailed description of the affected environment. The project area is located in Lake County, Tennessee, near the town of Tiptonville, the county seat. Lake County is located in northwestern Tennessee and had a population of 7,631 in 2013. The county is among the poorest in the state, with an annual per capita income of \$12,042 and a 31.7% poverty rate. The economy of the county is largely based on agriculture, with corn, cotton, soybeans, and wheat being the main crops. The Reelfoot Lake State Park generates tourism that is also important to the local economy. The park includes Reelfoot Lake, a shallow natural lake that was formed by the geological changes that took place during the New Madrid earthquakes of 1811 and 1812.

All alternatives under consideration would cross mostly agricultural land, as well as land within the Port of Cates Landing facility and land zoned as industrial for the development of the Lake County Industrial Park. Aside from the port facility, the only major structure in the project area is the Northwest Correctional Complex, a state prison. Several residences are located near the project area. Public roads in and near the project area include State Route 22, which serves the Port of Cates Landing; State Route 212, Cates Landing-New Markham Road; Donaldson Road; and Parks Road. There are also several unimproved farm access roads in the vicinity of the proposed rail line.

Due to geological uplift that occurred during the New Madrid earthquakes in 1811 and 1812, the project area is naturally located above the 100-year floodplain. There are no natural streams in the project area. The project area is bisected by an agricultural stream, which includes linear wetlands. Emergent wetlands are also present. The entire project area is located within the watershed of the Mississippi River, with the exception of the corridor of Alternative D. Alternative D is located

partly within the watershed of Reelfoot Lake. Due to concerns about potential impacts to the Reelfoot Lake watershed, OEA eliminated Alternative D from further study early in the EA process.

The interior least tern (*Sterna antillarum athalassos*), a federally listed endangered species, is known to occur in Lake County and nests on sand bars and sandy islands along the Mississippi River. The Mississippi River also provides habitat for the pallid sturgeon (*Scaphirhynchus albus*), another federally listed endangered species. Three plant species that occur in the Tiptonville area of Lake County — bristly sedge (*Carex comosa*), yellow water-crowfoot (*Ranunculus flabellaris*), and copper iris (*Iris fulva*) — are listed as threatened by the State of Tennessee. Because past agricultural use has eliminated or reduced available habitat, none of the federally or state-listed species are known to occur within the project area. The United States Fish and Wildlife Service (USFWS) has provided comments on the proposed project and determined that the proposed project would not impact any federally listed threatened or endangered species in the vicinity of the project area.

Lake County is in attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria airborne pollutants.

Summary of Environmental Impacts

Transportation and Safety

Construction and operation of the proposed rail line would not result in significant impacts to transportation systems or public safety. Each of the alternatives that OEA considered would require the construction of at-grade crossings of roadways. Alternative A would require two road crossings, Alternative B would require two, and Alternative C would require three. OEA is recommending mitigation measures to ensure that any new at-grade crossings would be appropriately designed and demarcated to protect public safety.

NWTRPA anticipates that traffic on the proposed rail line would initially be fewer than 1,000 carloads per year, and would eventually rise to more than 1,000 carloads per year. This corresponds to approximately two round trips per week, for a total of four 10-car trains per week during the initial years of operations. This traffic level could increase in the future, depending on the needs of customers at the Port of Cates Landing and the Lake County Industrial Park. NWTRPA anticipates that service will be available to these customers once per day in either direction, 5 days per week.

The proposed rail line would transport shipments to and from the Port of Cates Landing and the Cates Landing Industrial Park that would otherwise be transported by truck. Therefore, if the rail line is constructed, the local transportation system would benefit from increased efficiency and decreased truck traffic. Minor temporary impacts could occur due to road closures on both public and private roads and construction-related traffic during construction, and minor permanent impacts could occur as a result of the installation of several road crossings. No road crossing would be

required under the No Action Alternative, but the lack of rail access could increase truck traffic on existing roads. OEA is recommending Mitigation Measures 1-5 to minimize potential impacts related to rail operations and safety.

Land use

Construction and operation of the proposed rail line would not significantly affect local land use. All of the alternatives considered in this Draft EA would cross agricultural land, industrial land, and undeveloped land zoned as industrial. The alternatives would follow existing property boundaries and would not bisect any agricultural fields. Construction of any one of the alternatives would result in the conversion of approximately 70 acres of farmland to nonagricultural use. OEA is recommending Mitigation Measures 6-9 to minimize potential impacts related to land use.

Geological Resources

Construction and operation of the proposed rail line would not significantly affect local geological features or soils. Because the local soils have high shrink-swell potential, existing drainage patterns in the project area should be retained to the extent possible. Since the entire project area lies in close proximity to the New Madrid Seismic Zone, there is a possibility of future seismic activity in the project area, which could affect the proposed rail line. OEA is recommending Mitigation Measures 10-13 to minimize potential impacts related to topography, geology, and soils.

Water Resources

Construction and operation of the proposed rail line would not significantly affect water resources. Each of the alternatives under consideration would cross at least one stream and several agricultural channels. Each of the alternatives would also cross at least one linear wetland. Alternative A would require new construction of one bridge and five culverts and would impact approximately 0.01 acres of wetlands. Alternative B would also require new construction of one bridge and five culverts and would impact approximately 0.02 acres of wetlands. Alternative C would require new construction of three bridges and five culverts and would impact up to approximately 0.2 acres of wetlands.

The U.S. Army Corps of Engineers (USACE) Memphis District conducted a preliminary jurisdictional determination and concluded that the streams and wetlands identified within the project area are Waters of the United States, subject to regulation under Section 404 of the Clean Water Act (CWA) (USACE, 2015). As detailed in Section 5.4, OEA is recommending mitigation measures that would reduce impacts on water resources from construction and operation of the proposed rail line (see Mitigation Measures 14-17). If these mitigation measures are imposed, construction and operation of the proposed rail line would not result in significant impacts to surface or groundwater resources.

Biological and Natural Resources

Because the project area has been extensively developed for agricultural purposes, there is little wildlife habitat in the project area. There are several federally and state-listed threatened and

endangered species known to occur in Lake County, including the interior least tern, the pallid sturgeon, the bristly sedge, the yellow water-crowfoot, and the copper iris. During field surveys and analysis of available geospatial data and aerial and satellite imagery, OEA did not identify any habitat that would be suitable for these species within or adjacent to the corridors of the alternatives that OEA considered. The USFWS has indicated that federally listed species would not be affected by construction and operation of the proposed rail line.

Individual animals and plants could be displaced from areas where the proposed rail line would cross wetlands, waterways, or fencerows, but these impacts would not affect the abundance of any species of wildlife or vegetation. OEA concludes that, if Mitigation Measures 18-20 are implemented, construction and operation of the proposed rail line would not have a significant impact on biological resources.

Cultural and Historical Resources

OEA conducted a Phase I Archeological Survey within the proposed rail line right-of-way to identify historical and cultural resources and to assess the significance of those resources and their potential to be eligible for inclusion in the National Register of Historic Places. OEA also reviewed previous cultural resources surveys conducted in connection with other infrastructure and development projects near the proposed rail line. No resources of cultural or historical significance were identified that could be affected by the proposed rail line. In consultation with the Tennessee Historical Commission (the State Historic Preservation Officer [SHPO]), OEA determined that no historic properties would be affected by NWTRPA's proposal. The SHPO has concurred with OEA's finding of "No Historic Properties Affected." OEA is recommending Mitigation Measure 21, which would require NWTRPA to cease work and enter into consultation with OEA and the SHPO should previously undiscovered historical or cultural resources be discovered during project-related construction.

Air Quality

Lake County is currently categorized as being in attainment with the NAAQS. Construction of the proposed rail line could result in minor, short-term impacts to local air quality. Rail traffic on the proposed line would be less than the Board's threshold for quantifying air pollution impacts on air quality, which is defined as an increase of eight trains per day for areas in attainment for the NAAQS. Because the proposed rail line would displace truck traffic to and from the Port of Cates Landing and the Lake County Industrial Park, operation of the proposed rail line would result in beneficial impacts to air quality relative to the No Action Alternative. OEA is recommending Mitigation Measures 22-24 to minimize potential impacts related to air quality.

Noise and Vibration

Construction and operation of the proposed rail line would not result in significant noise and vibration impacts. No residences or other noise-sensitive receptors are located within or immediately adjacent to the proposed rail right-of-way for any of the alternatives that OEA

considered, and very few noise receptors are present in the general project area. Under Alternative A and Alternative B, the closest noise-sensitive receptor would be a residence located approximately 290 feet from the proposed rail line where it would enter the Port of Cates Landing facility. At this distance, OEA's noise model has predicted that the noise level at this residence would increase from approximately 38 day-night average level (DNL) to approximately 42 DNL if the proposed rail line were constructed. Under Alternative C, the closest noise-sensitive receptor would be a residence located approximately 180 feet from the proposed rail line. OEA's noise model has predicted that noise levels along the proposed rail line under Alternative C could increase from approximately 37 to 51 DNL to approximately 54 to 62 DNL if this alternative were approved.

OEA developed noise contours for each of the alternatives under consideration corresponding to the area that would experience a noise level of 65 DNL or greater. The 65 DNL contour would extend approximately 5 to 10 feet outward from the edge of the proposed rail line and approximately 20 feet at all rail crossovers and at-grade road crossings. The 65 DNL contour would fall well within the proposed rail line right-of-way, which would be approximately 150 feet in width at the narrowest. No residences or other noise-sensitive receptors would experience a noise level of 65 DNL or greater as a result of NWTRPA's proposal. OEA is recommending Mitigation Measures 25-26 to minimize potential impacts related to noise and vibration.

Environmental Justice and Socioeconomics

Because the construction and operation of the proposed rail line would not result in adverse impacts to local communities, OEA concludes that the project would not have disproportionate adverse impacts on low-income or minority populations. Beneficial long-term effects to the region from the overall Port of Cates Landing project could include job creation, business revenue, larger tax base, transportation cost savings, safety benefits, and reductions in fossil fuel use. Implementation of Mitigation Measures 27-28 would ensure that no adverse impacts related to socioeconomics and environmental justice would occur as a result of the proposed project.

Hazardous Waste Sites and Transportation of Hazardous Materials

Construction and operation of the proposed rail line would not result in significant impacts related to hazardous materials. OEA did not identify any known hazardous waste sites or spills in the project area, and NWTRPA does not have any immediate plans to transport hazardous materials on the proposed rail line. It is reasonably foreseeable, however, that the proposed rail line could be used to transport such materials in the future. OEA analyzed the potential impacts related to hazardous waste sites and hazardous materials, including the reasonably foreseeable future transportation of hazardous materials, and is recommending environmental Mitigation Measures 29-32 to minimize potential impacts.

Energy Resources

Operation of the proposed rail line would not significantly affect the transportation of energy resources or energy distribution infrastructure. Overall, the proposed rail line would increase energy

efficiency relative to the No Action Alternative by providing a rail transportation alternative to truck transportation. Minor, short-term disruptions to local utilities could occur during construction. As specified in Mitigation Measure 9, OEA is recommending that NWTRPA consult with local utility managers during design and construction to minimize these potential impacts.

Greenhouse Gas Emissions and Climate Change

Construction and operation of the proposed rail line would not significantly affect greenhouse gas emissions or climate change. Overall, the proposed rail line would provide beneficial impacts by decreasing greenhouse gas emissions relative to the No Action Alternative by providing a rail transportation alternative to truck transportation.

Cumulative Impacts

In its analysis of cumulative impacts, OEA considered several ongoing and proposed projects in the project area. These are the Lake County Industrial Park, the Port of Cates Landing, the expansion of State Route 22, and the Reelfoot Lake recreation and tourism industry. Taken together, the projects could result in minor impacts to land use, water resources, transportation systems, socioeconomics, traffic safety, and energy resources. None of these cumulative impacts would significantly affect the quality of the human environment. The contribution of the construction and operation of the proposed rail line to these impacts would be negligible relative to other ongoing and proposed projects.

Mitigation Measures

Based on available project information and comments received during scoping, OEA considered preliminary recommended mitigation measures to address potential environmental impacts that could occur as a result of construction and operation of the proposed rail line. The preliminary recommended mitigation measures address impacts to the following environmental resource areas: land use, geological resources, water resources, biological and natural resources, cultural and historical resources, transportation systems, air quality, noise and vibration, safety, and hazardous waste sites and transportation of hazardous materials. OEA emphasizes that these measures are preliminary and welcomes public and agency comment during the 30-day comment period on all aspects of this Draft EA, including the environmental analysis. To allow OEA to assess comments effectively, please be specific about any desired mitigation and the reasons why the suggested mitigation would be appropriate.

OEA preliminarily recommends the following mitigation measures be imposed on any decision granting NWTRPA authority to construct and operate the proposed rail line:

Transportation and Safety

1. NWTRPA shall schedule construction activity so as to minimize the periodic closing of roads or traffic delays to the public. NWTRPA shall coordinate with TDOT and the Lake County

Highway Commission regarding the scheduling of construction activities that could result in the temporary closing of roads and shall provide for detours and associated signage, as appropriate, or maintain at least one open lane of traffic at all times to allow for the passage of emergency and other vehicles.

2. NWTRPA shall confine all project-related construction traffic to a temporary access road within the right-of-way or established public roads. Where traffic cannot be confined to temporary access roads or established public roads, NWTRPA shall make necessary arrangements with landowners to gain access. After construction is completed, NWTRPA shall remove and restore any temporary access roads constructed outside the rail line right-of-way, unless otherwise agreed to with the landowners.
3. NWTRPA shall ensure that proposed activities within and along existing roads are consistent with the *Manual on Uniform Traffic Control Devices* for installation of signs (e.g., regulatory, warning/caution, speed); delineators; and other roadway appurtenances and in compliance with the terms and conditions of any American Association of State Highway and Transportation Officials safety standards.
4. NWTRPA shall consult with appropriate federal, state, and local transportation agencies to determine the final design and other details of the grade-crossing warning devices on public roads. Implementation of all grade-crossing warning devices on public roadways will be subject to the review and approval of reasonable warning devices by TDOT and by the Lake County Highway Commission. NWTRPA shall coordinate with TDOT and Lake County Highway Commission to identify the maintenance and repair responsibilities of each party for project-related warning devices and at-grade road crossings.
5. NWTRPA shall comply with the safety regulations implemented and enforced by the Federal Railroad Administration (FRA), including regulations that establish safe speed limits for train operations and regulations that establish procedures for implementing an inspection and maintenance program to minimize the potential for derailments and other rail-related accidents.

Land Use

6. NWTRPA shall, to the extent practicable, design the proposed rail right-of-way to minimize the conversion of prime farmland to nonagricultural use.
7. NWTRPA shall ensure that land areas directly disturbed by NWTRPA's project-related construction are restored to their original condition, as may be reasonably practicable, after project-related construction is completed.

8. NWTRPA shall require contractors involved in construction or operation of the proposed rail line to remove all trash and debris generated as a result of the project from public land and dispose of it at an authorized facility in accordance with all applicable federal, state, and local regulations.
9. NWTRPA shall consult with utility managers during design and construction so that utilities are protected during project-related construction activities. NWTRPA shall notify the manager of each such utility identified prior to project-related construction activities and coordinate with the owner to minimize damage to utilities.

Geological Resources

10. NWTRPA shall limit ground disturbance to only those areas necessary for project-related construction activities.
11. NWTRPA shall employ best management practices (BMPs) during construction to minimize the erosion of soil from disturbed areas.
12. NWTRPA shall stabilize any disturbed areas outside of the rail corridor with appropriate vegetative cover after the completion of construction activities.
13. NWTRPA shall design the rail line in accordance with engineering criteria related to seismic events and other geologic hazards to comply with applicable design codes. For example, NWTRPA shall design the proposed rail line in accordance with the latest applicable seismic codes, taking into account the region's potential for earthquake activity to mitigate potential damage to bridges and tracks.

Water Resources

14. NWTRPA shall design and construct the rail line authorized by the Board, including culverts and bridges, in such a way as to maintain natural water flow and drainage patterns to the extent practicable.
15. During project-related construction and operation, NWTRPA shall avoid and minimize impacts to water bodies and wetlands. NWTRPA shall obtain from the USACE any federal permits required by Section 404 of the CWA before initiating project-related construction activities that would impact wetlands and water bodies. NWTRPA shall comply with all reasonable requirements as required by USACE and shall incorporate the stipulations of these permits and authorizations into construction contract specifications. NWTRPA shall work directly with USACE to develop appropriate mitigation for direct wetland impacts as stipulated in the Section 404 permit.

16. NWTRPA shall coordinate with the Tennessee Department of Environment and Conservation, Division of Water Resources, to obtain all appropriate state permits related to impacts to water resources resulting from construction activities, including an Aquatic Resource Alteration Permit for alterations to waters of the state and coverage under Tennessee's General National Pollutant Discharge Elimination System Permit for Discharges of Storm Water Associated with Construction Activities.
17. In instances in which NWTRPA or its contractors need to apply herbicides for right-of-way maintenance, NWTRPA shall ensure the use of staff or contractors who are properly trained in herbicide application, shall require the following of label directions in herbicide application, and shall limit the amount potentially entering waterways. NWTRPA shall require the use only of herbicides regulated for such uses with U.S. Environmental Protection Agency and follow all state regulations that require their use.

Biological and Natural Resources

18. NWTRPA shall minimize disturbance to wildlife by restricting construction activities to the proposed rail right-of-way and immediate surrounding area.
19. NWTRPA shall notify OEA and the USFWS if any federally listed threatened or endangered species are discovered during project-related construction activities.
20. NWTRPA shall consult with the Tennessee Wildlife Resources Agency and shall comply with the reasonable recommendations of that agency regarding the design of in-stream structures to permit migration of aquatic species.

Cultural and Historical Resources

21. If any cultural resources are discovered or uncovered during construction of the rail line, NWTRPA shall halt all work immediately and notify the Tennessee Historical Commission (the SHPO) and the OEA to identify and implement the required consultation and mitigation. NWTRPA shall then consult with the SHPO and other consulting parties, if any, to determine whether appropriate mitigation measures are necessary.

Air Quality

22. NWTRPA shall work with its contractors to make sure that construction equipment is properly maintained and that mufflers and other required pollution-control devices are in working condition to limit construction-related air pollutant emissions.

23. NWTRPA shall minimize fugitive dust emission during construction by confining construction activity and clearing to the rail right-of-way and by employing BMPs in the control and suppression of dust emissions.
24. NWTRPA shall comply with all applicable federal, state, and local regulations regarding the control of air emissions.

Noise and Vibration

25. NWTRPA shall control temporary noise from construction equipment through the use and maintenance of appropriate muffler systems on machinery.
26. NWTRPA shall comply with FRA regulations that establish decibel limits for train operations and locomotive noise standards.

Environmental Justice and Socioeconomics

27. NWTRPA shall, before commencing construction activities related to this project, notify local communities, local agencies, local emergency response providers, and landowners about construction timeframes and potential disturbances related to construction.
28. NWTRPA shall ensure that project-related construction vehicles, equipment, and workers will not access work areas through landowners' properties without the permission of the property owners. In the unlikely event of inadvertent damage, NWTRPA shall work with affected landowners to appropriately redress any damage caused by NWTRPA's project-related construction activities.

Hazardous Waste Sites and Transportation of Hazardous Materials

29. NWTRPA shall ensure that waste materials related to this project are removed and disposed of promptly at an appropriate waste-disposal site. NWTRPA shall store and dispose of any hazardous waste generated or hazardous materials used in the normal course of construction, operation, and maintenance activities in accordance with applicable environmental laws.
30. NWTRPA shall develop a spill prevention plan for handling the release of petroleum products or other hazardous materials during construction activities and rail operations. In the event of a spill, NWTRPA shall comply with its spill prevention plan and applicable federal, state, and local regulations pertaining to spill containment and appropriate clean-up.

31. NWTRPA shall comply with applicable U.S. Department of Transportation regulations, policies, and procedures regarding the transportation of hazardous materials should any such material be transported on the proposed rail line.
32. If any undocumented hazardous waste sites are discovered or uncovered during construction of the rail line, NWTRPA shall immediately halt all work and notify the appropriate regulatory agencies.

Conclusion

This Draft EA considers the potential environmental impacts of NWTRPA's proposal to construct and operate an approximately 5.5-mile rail line in Lake County, Tennessee. OEA preliminarily concludes that, if the above mitigation measures are implemented, construction and operation of the proposed rail line would have no significant environmental impacts.

Issuance of this Draft EA

Distribution and notification of the availability of this Draft EA has been done in accordance with the requirements of NEPA and the CEQ's Regulation for Implementing NEPA. OEA has taken additional steps, described below, to ensure that all interested parties are notified of the availability of this Draft EA and afforded the opportunity to review and provide comments on the analysis and recommended mitigation measures.

Distribution and notification of the availability of this Draft EA has included the following:

- Distribution and/or notification of the Draft EA to parties on the Board's Service List for this proceeding, including NWTRPA and all parties requesting to be on the Service List.
- Distribution and/or notification of this Draft EA to U.S. Senators representing the State of Tennessee, U.S. Congresspersons representing the project area, State senators, and congresspersons representing the project area; interested federally recognized tribes; and federal, state, and local agencies with an interest in the project.
- Placing copies of this Draft EA in the following local, publically accessible locations:
 - (1) Tiptonville Town Hall
 - (2) Tiptonville Public Library
- Publication of a notice of the availability of this Draft EA in the *Federal Register* and on the Board's website at <http://www.stb.dot.gov>.

- Mailing a notice of the availability of this Draft EA to all residents and property owners within 1,500 feet of the proposed rail line construction and homeowner and neighborhood group representatives in the project area.
- Making available a notice of availability of this Draft EA on the Board's website (<http://www.stb.dot.gov>) and on the Board's interactive map platform (<http://www.stb.maps.arcgis.com>).

An interactive map of the proposed rail line and all of the alternatives considered in this Draft EA are available to the public through the Board's interactive map platform at <http://www.stb.maps.arcgis.com>.

Request for Comments

OEA invites comments on all aspects of this Draft EA, including the scope and adequacy of the recommended mitigation and any other reasonable alternatives. OEA will consider all comments received in response to this Draft EA in making its final recommendations to the Board. The Board will consider OEA's final recommendations and any comments submitted when making its final decision in this proceeding.

Comments on this Draft EA may be submitted by mail to:

Josh Wayland
Office of Environmental Analysis
Surface Transportation Board
395 E Street, S.W.
Room 1105
Washington, DC 20423

Mr. Wayland may also be contacted by telephone at (202) 425-0330. Comments may also be filed electronically on the Board's website at <http://www.stb.dot.gov>. Please refer to Docket No. FD 35802 in all correspondence addressed to the Board.

1.0 PURPOSE AND NEED FOR PROPOSED ACTION

1.1 Introduction

By petition filed with the Surface Transportation Board (the Board) on June 27, 2014, the Northwest Tennessee Regional Port Authority (NWTRPA) is seeking an exemption under 49 United States Code (U.S.C.) §10901 for authority to construct and operate a new rail line in Lake County, Tennessee. In the petition, NWTRPA proposed to construct and operate approximately 5.5 miles of new rail line to serve the newly constructed Port of Cates Landing on the Mississippi River near the town of Tiptonville, Tennessee.

Pursuant to 49 U.S.C. §10901, the Board is the federal agency responsible for granting authority for the construction, operation, and maintenance of new rail line facilities. The Board's Office of Environmental Analysis (OEA) is responsible for undertaking environmental review of proposed projects on behalf of the Board under the National Environmental Policy Act (NEPA) and related environmental laws. OEA has prepared this Draft Environmental Assessment (EA) in accordance with NEPA, the Council on Environmental Quality (CEQ) guidelines, and the Board's environmental rules to identify and analyze the potential environmental impacts associated with NWTRPA's proposed project and all reasonable and foreseeable alternatives, including the No Action Alternative.

To assist in conducting the NEPA environmental analysis, OEA approved EnSafe Inc. to act as the Board's independent third-party consultant, in accordance with the Board's environmental regulations. EnSafe worked solely under the OEA's direction, supervision, and control throughout the environmental review process.

In August 2004, the U.S. Army Corps of Engineers (USACE) Memphis District issued an EA with a Northwest Tennessee Regional Harbor Finding of No Significant Impacts (FONSI) (USACE, 2004). The Proposed Action presented in that EA/FONSI resulted in the construction of the current slack water harbor at the Port of Cates Landing and associated port facility. Because it has specialized knowledge and expertise regarding the project area, the USACE has agreed to be a cooperating agency in this NEPA action.

1.2 Background

NWTRPA is a regional port authority and political subdivision of the State of Tennessee established by the counties of Dyer, Lake, and Obion in northwest Tennessee for the purpose of owning, constructing, and operating a regional river port in Lake County, Tennessee. In 2013, NWTRPA completed construction of the Port of Cates Landing, a new river port facility on the Mississippi River approximately 5 miles north of the town of Tiptonville, Tennessee. The Port of Cates Landing is located on the highest point on the eastern bank of the Mississippi River between Memphis, Tennessee, and Cairo, Illinois, and, because it occurs naturally above the 100-year floodplain, the

port requires no levee protection from flooding. The Port of Cates Landing features a 9,000-foot slack water harbor and an approximately 66-acre port facility adjacent to the harbor.

An industrial park, known as the Lake County Industrial Park, is currently being developed by Lake County in connection with the Port of Cates Landing. The Lake County Industrial Park will be constructed in three phases, beginning with the approximately 345 acres of land adjacent to and immediately south of the Port of Cates Landing that have been zoned for industrial development. Figure 1-1 displays the locations of the Port of Cates Landing and Lake County Industrial Park. NWTRPA and Lake County plan to expand the site in the future to include a total of approximately 1,000 acres. To improve access to the Port of Cates Landing and the Lake County Industrial Park, the Tennessee Department of Transportation (TDOT) has completed construction on a new two-lane “Super Highway” by expanding and upgrading State Route 22 with funding from the Federal Highway Administration (FHWA).

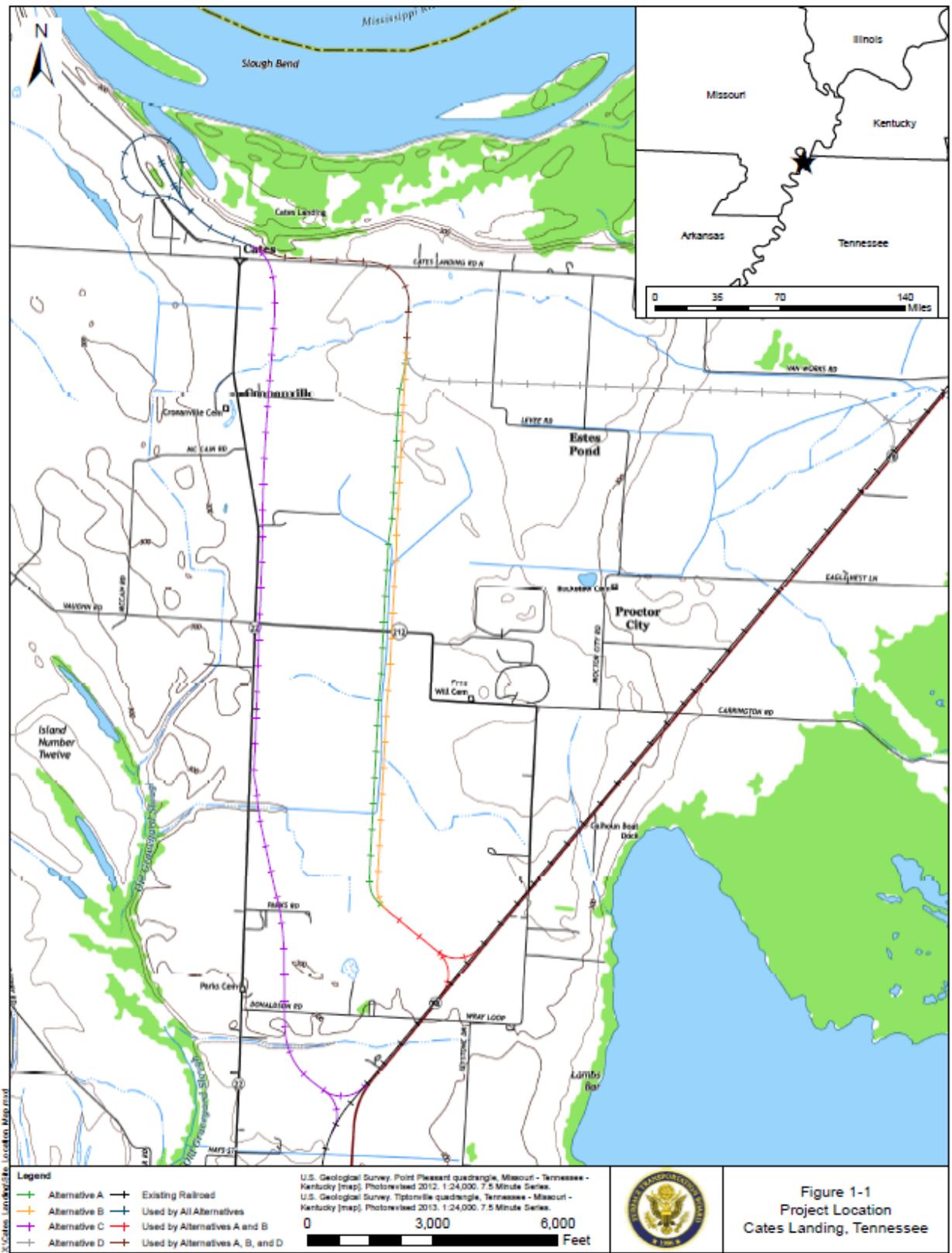
In 2004, the Memphis District of the USACE issued an EA that assessed the environmental impacts associated with the construction of the slack water harbor and imposed environmental mitigation. The USACE EA also considered the environmental impacts of the approximately 66-acre Port of Cates Landing facility development and the development of the approximately 345-acre Lake County Industrial Park. Prior to undertaking the State Route 22 expansion, TDOT conducted an archeological and historical assessment, in compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA) and Section 4(f) of the U.S. Department of Transportation Act.

Although the Port of Cates Landing has been completed and the Lake County Industrial Park is being developed, NWTRPA states that both sites are economically disadvantaged by the lack of available rail service. Currently, surface transportation to and from the Port of Cates Landing and Lake County Industrial Park is limited to motor vehicle traffic via the completed State Route 22 extension.

1.3 Purpose and Need

Under the CEQ’s NEPA regulations, specifically 40 Code of Federal Regulations (C.F.R.) § 1508.9(b), a federal agency’s EA shall include a brief discussion of the proposed project’s purpose and need. OEA notes that the analysis of a project’s purpose and need depends on the type of federal action involved. Here, the proposed action involves a petition by a rail carrier, NWTRPA, for a license to construct and operate a line of railroad. The proposed action is not a federal government proposed or sponsored project. In cases such as this, courts have held that the project’s purpose and need should be defined by the private applicant’s goals, in conjunction with the agency’s enabling statute, 49 U.S.C. § 10901.¹

¹ See, for example, *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir., 1991); see also *Nat’l Parks & Conservation Assoc. v. BLM*, 606 F.3d 1058, 1070 (9th Cir., 2009).



NWTRPA is proposing to construct and operate the proposed rail line to provide an additional transportation option to customers of the Port of Cates Landing and the Lake County Industrial Park. The proposed rail line would provide these customers access to the interstate rail network by connecting the port facility to an existing line of railroad owned by the Hickman River City Development Corporation of Hickman, Kentucky, and leased by the Tennken Railroad, a Class III common carrier short line.

In addition to supporting the development of a sound transportation system with effective competition, NWTRPA notes that the construction and operation of the proposed rail line would promote transportation safety and energy conservation by displacing trucks from local roads and highways as the Port of Cates Landing and the Lake County Industrial Park continue to develop.

According to NWTRPA, rail service on the proposed rail line would be available once per day in either direction depending on the needs of customers. NWTRPA estimates that rail traffic during the initial years of operation would consist of approximately 1,000 carloads per year which, at an average of 10 cars per train, would correspond to an average of two roundtrips per work week (i.e., Monday through Friday), for a total of four trains per week. Potential cargo would include agricultural commodities and products, industrial products and raw materials for industrial products, finished manufactured goods, energy commodities, and special cargos.

Under the CEQ regulations implementing NEPA, specifically 40 C.F.R. § 1508.9(b), an agency's environmental analysis shall include a brief discussion of the proposed project's purpose and need. OEA notes that the analysis of a project's purpose and need depends on the type of federal action involved in the particular project. Here, the proposed action involves an application by NWTRPA for a license or approval. The proposed project is not proposed or sponsored by the federal government. In cases such as this, courts have held that the project's purpose and need should be defined by the applicant's goals, in conjunction with the agency's enabling statute.

1.4 Outreach and Consultation

On July 24, 2014, OEA sent consultation letters to federal, state, and local agencies and tribal organizations that might have an interest in exercising a regulatory oversight role in the proposed project. OEA has incorporated agency comments and concerns into this Draft EA and provided responses where applicable. The comment letters are summarized below:

- By letter dated August 11, 2014, the Office of the Mayor of the City of Tiptonville, Tennessee, expressed full and unconditional support for the proposed rail line. The Mayor's office indicated that it has no concerns regarding potential environmental impacts from the proposed rail line related to public safety, local land use, air quality, energy use, water resources, noise, cultural resources, or biological resources. The Mayor's office also indicated that the proposed rail line would have a positive impact on local transportation systems and on the local economy (see Appendix A).

- By letter dated August 12, 2014, the Tennessee Department of Environment and Conservation (TDEC), Division of Water Resources, indicated that the proposed rail line would not impact public water supply sources or wetlands. TDEC notes that NWTRPA would need to ensure that appropriate permits are in place prior to beginning construction, including an Aquatic Resource Alteration Permit (ARAP) and coverage under Tennessee's General National Pollutant Discharge Elimination System (NPDES) Permit for Discharges of Storm Water Associated with Construction Activities. TDEC also states that appropriate erosion prevention and sediment control measures should be installed and maintained for the duration of the project. OEA is recommending Mitigation Measures 11 and 16 in response to TDEC's comments and its independent analysis (Appendix A).

- By letter dated August 28, 2014, the U.S. Fish and Wildlife Service (USFWS) indicated that no federally listed threatened or endangered species would be affected by the proposed rail line. USFWS notes that the least tern (*Sterna antillarum*), a federally listed endangered species, is known to occur and nest along the Mississippi River near the Port of Cates Landing. However, because the least tern tends to occupy sandbar-type areas along the river, USFWS does not expect it to occur in the vicinity of the proposed rail line (Appendix A).

- The USACE, a cooperating agency in preparing this Draft EA, conducted a survey of the project area with OEA in April 2015. USACE determined that four streams and four wetlands in the project area that could be affected by the proposed rail line are Waters of the United States, subject to regulation under Section 404 of the Clean Water Act (CWA). OEA recommends Mitigation Measure 15 in response to USACE's determination (Appendix A).

- By letter dated July 20, 2015, the Natural Resources Conservation Service (NRCS) indicated that the project area includes land classified as prime farmland and hydric soils. These soils would require an evaluation under the Farmland Protection Policy Act if NWTRPA were to seek federal funding for the proposed construction and operation. OEA is recommending Mitigation Measure 6 in response to the comments from NRCS (Appendix A).

- By letter dated June 15, 2015, the Tennessee Historical Commission (the State Historic Preservation Officer [SHPO]) informed OEA that the SHPO has reviewed the archeological survey conducted by OEA and found the report acceptable. In consultation with the SHPO, OEA made a finding of "No Historic Properties Affected" pursuant to the Section 106 of the National Historic Preservation Act. OEA informed the SHPO of its finding by letter dated July 10, 2015. By email on October 2, 2015, the SHPO informed OEA that the SHPO has concurred with OEA's finding of no effect to historic properties (Appendix B).

OEA is issuing this Draft EA for public review and comment. The Board will consider the entire environmental record, comprising the Draft EA and Final EA, public and agency comments submitted on the Draft EA, and OEA's environmental recommendations, in making its final decision on NWTRPA's proposal to construct and operate the proposed rail line. The Board will decide whether to approve, approve with conditions (which could include conditions designed to mitigate environmental impacts), or deny NWTRPA's proposal.

2.0 PROPOSED ACTION AND ALTERNATIVES DESCRIPTION

This section describes the alternatives that OEA considered in its analysis of the potential environmental impacts that could result from the construction and operation of the proposed rail line. To identify potential alternatives, OEA, in consultation with NWTRPA, applied the following criteria based on the purpose and need of the proposed project:

Initially, OEA considered four possible routes, but only three routes met the purpose and need of the proposed project. The three routes retained for full analysis included:

- Alternative A — A 5.5-mile rail line to connect with Tennken Railroad at milepost 32.5 on the west side of the main stream
- Alternative B — A 5.5-mile rail line to connect with Tennken Railroad at milepost 32.5 on the east side of the main stream
- Alternative C — A 5.5-mile rail line east of the State Route 22 right-of-way

2.1 Alternative A — NWTRPA’s Preferred Alternative

NWTRPA’s Preferred Alternative is Alternative A. Figure 2-1 shows the location of this alternative in the project area. The rail line would begin at a “wye junction”² connection with the Tennken Railroad north-northeast of Tiptonville, Tennessee, and would extend approximately 0.5 mile in a northwesterly direction before crossing an unnamed agricultural stream and turning due north. The alignment would remain to the west of the agricultural stream north of the crossing. Approximately 3 miles from the wye junction, the rail line would bisect the proposed Phase I of the Lake County Industrial Park. Approximately 2.5 miles beyond the industrial park, the rail line would terminate at the Port of Cates Landing. The rail right-of-way would traverse open farmland primarily along existing property boundaries. Compared to the other alternatives under consideration, Alternative A would require NWTRPA to purchase the smallest area of right-of-way and would affect the smallest number of landowners.

2.2 Alternative B

Alternative B would follow an alignment similar to Alternative A. The rail line would begin at a wye junction connection with the Tennken Railroad north-northeast of Tiptonville, Tennessee, and would extend 0.5 mile in a northwesterly direction until reaching an unnamed tributary to Graveyard Slough and turning due north (Figure 2-2). The alternative would remain to the east of the stream from this point. Approximately 3 miles from the wye junction, the rail line would bisect the proposed Phase I of the Lake County Industrial Park. Approximately 2.5 miles beyond the industrial park, the rail line would terminate at the Port of Cates Landing.

² A wye junction is a triangular shaped arrangement of rail tracks where two rail lines join to allow trains to pass from one line to the other line and/or is used for turning railway equipment.





2.3 Alternative C

Alternative C would be constructed to the east of and parallel to the right-of-way of State Route 22 north of Tiptonville, Tennessee, as shown in Figure 2-3. The alternative was proposed by TDOT to coordinate with the recent infrastructure improvements to State Route 22. State Route 22 is in an established transportation corridor, and TDOT recently completed a thorough environmental analysis of this area for the State Route 22 improvement project, which also covered most of the Alternative C project corridor.

The alignment would begin at a wye junction connection with the Tennken Railroad north-northeast of Tiptonville, Tennessee, about 0.25 mile north of the intersection of State Route 22 and State Route 78, and would proceed north, closely following the east side of State Route 22 (Figure 2-3). Approximately 1.25 miles south of Cates Landing-New Markham Road, the rail line would leave the State Route 22 right-of-way and would continue due north across open farmland to Cates Landing-New Markham Road. Approximately 3 miles from the wye junction, the rail line would bisect the proposed Phase I of the Lake County Industrial Park. After crossing Cates Landing-New Markham Road, the rail line would terminate at the Port of Cates Landing. Alternative C would cross two streams (about 0.45 mile and 1.55 miles north of the wye junction, respectively).

2.4 No Action Alternative

The No Action Alternative serves as a benchmark that enables decision-makers to compare the magnitude of environmental effects of the Action Alternatives. Under the No Action Alternative, the proposed rail line would not be constructed. The NWTRPA and Lake County would continue to develop the Port of Cates Landing and the Lake County Industrial Park as planned, but rail transportation would not be available for customers at those facilities. Without a rail transportation option, trucks would continue to transport freight to and from the Port of Cates Landing and the Lake County Industrial Park using State Route 22.

2.5 Alternative Not Analyzed in Detail

One alternative, Alternative D, was considered early in the process but eliminated because of public concern regarding potential impacts to Reelfoot Lake, Reelfoot Lake State Park, and Reelfoot Lake National Wildlife Refuge. Under Alternative D, the proposed rail line would extend from the Port of Cates Landing east and parallel to Cates Landing-New Markham Road before crossing Cates Landing-New Markham Road and connecting to the existing rail infrastructure at Highway 78, as shown in Figure 2-4. Because it is shorter than the alternatives carried forward for detailed analysis at approximately 3.6 miles in length, this alternative would decrease total costs associated with rail construction and operation.

OEA eliminated this alternative from further consideration because a portion of the alignment would be located in the watershed of Reelfoot Lake, Reelfoot Lake State Park, and Reelfoot Lake National Wildlife Refuge. Reelfoot Lake is a nationally recognized ecological, economic, and recreational resource. It is a natural lake that was formed when the area subsided, or sank, during the New





Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community; Some railroad data were approximated from Fortum Lannom Contractors, LLC; data: Some road data are from the United States Census Bureau.

Madrid earthquakes of 1811 and 1812. The lake supports a unique ecosystem of bald cypress forest and wetlands that provide habitat for bald and golden eagles as well as many species of freshwater fish and waterfowl. Reelfoot Lake State Park and Reelfoot Lake National Wildlife Refuge have nearly 1 million visitors annually and generate an estimated \$22 million a year in total economic impact to the area.

State and federal natural resource agencies and the public are generally unwilling to support any activity that could adversely affect water quality and aquatic habitat in Reelfoot Lake and its watershed. When USACE conducted the NEPA review for the construction of the slack water harbor at the Port of Cates Landing in 2004, agencies and the public continually expressed concern for protection of the Reelfoot Lake and its resources (USACE 2004). In particular, people and agencies have identified potential impacts to the lake from erosion and sedimentation, spills of hazardous materials, and similar factors that would diminish the recreation and tourism industry associated with the lake.

In its review of existing data, in communications with NWTRPA and applicable agencies, and during the course of a site visit to Lake County in May 2014, OEA has not been made aware of any information suggesting that the potential environmental impacts in any resource area could be reduced or eliminated by the approval of this alternative. Therefore, based on the information available to date, OEA believes that the consideration of Alternative D in the substantive environmental analysis would not be beneficial because this alternative could introduce a new set of environmental impacts of concern to the local community and state and federal agencies tasked with managing Reelfoot Lake.

2.6 Environmentally Preferable Alternative

Following the 30-day comment period for this Draft EA, OEA will prepare a Final EA that will incorporate responses to any public and agency comments on the Draft EA received during the comment period. In the Final EA, OEA will select and recommend an Environmentally Preferable Alternative. The Environmentally Preferable Alternative is the alternative that minimizes environmental impacts and best protects, preserves, and enhances natural, historical, and cultural resources. In making its final recommendations to the Board, OEA will consider the entire record for this case, including NWTRPA's petition, the analysis presented in this Draft EA, and any comments received during the 30-day comment period.

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3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Transportation and Safety

3.1.1 Definition of the Resource

OEA considered the potential impacts of the proposed rail line operations on existing and planned transportation systems, including public roads and highways in the project area that would result from the construction and operation of the proposed rail line.

According to NWTRPA, the proposed rail line would provide an alternative transportation option for various shippers at the recently opened Port of Cates Landing and the planned Lake County Industrial Park. The rail line would connect the Port of Cates Landing and the Lake County Industrial Park to an existing line of railroad operated by the Tennken Railroad at a connection near Tiptonville, Tennessee. Currently, transportation to and from the Port of Cates Landing and the Lake County Industrial Park is limited to trucks. By diverting truck traffic to rail traffic, the proposed rail line would increase transportation efficiency and safety in the project area.



Tennken Railroad
Source: <http://www.cartracks.com/tennken.htm>

Various federal, state, and local regulatory agencies and guidelines exist to promote transportation efficiency and ensure public safety during construction and operation (see Table 3-1). Construction activities that affect transportation patterns are regulated by TDOT and local planning agencies. The Federal Railroad Administration (FRA) is primarily responsible for ensuring freight rail safety by establishing and enforcing guidelines for rail operations. The design of at-grade road crossings and the use of grade crossing warning devices are subject to TDOT regulations. OEA considered the applicable regulations and appropriate agency responsibilities in analyzing the potential impacts of the proposed rail line to transportation and safety.

3.1.2 Existing Conditions

At present, rail line freight transportation is not directly available to the Port of Cates Landing and the Lake County Industrial Park. Freight shipments to and from those facilities are carried by trucks along State Route 22. Because it is the primary route for accessing the Port of Cates Landing and the Lake County Industrial Park, State Route 22 is the most heavily traveled roadway in the project area and the most likely to be affected by the proposed rail line. Other roads that could be affected include State Route 212 and Cates Landing-New Markham Road, which would cross all three of the

Table 3-1 Federal Transportation-Related Regulations and Guidance	
Federal Railroad Safety Act of 1970	Gives FRA rule-making authority over all areas of rail line safety. FRA has designated that state and local law enforcement agencies have jurisdiction over most aspects of highway/rail grade crossings, including warning devices and traffic law enforcement.
Highway Safety Act and the Federal Railroad Safety Act	Gives FHWA and FRA regulatory jurisdiction over safety at federal highway/rail grade crossings. USDOT has promulgated rules addressing grade-crossing safety and provides funding for installation and improvement of warning devices. All traffic control devices installed at railroad facilities involving federal aid must comply with 23 C.F.R. § 655(f). On certain projects where federal funds are used for the installation of warning devices, those devices must include automatic gates and flashing light signals. FRA has issued rules that impose minimum maintenance, inspection, and testing standards for at-grade crossing warning devices for highway/rail grade road crossings on federal highways and state and local roads (49 C.F.R. § 234-236).
Federal Railroad Administration general regulations (49 C.F.R. § 200-209)	Regulates safety, including operations, engineers and crew, track signaling, and rolling stock (e.g., locomotives, passenger and freight cars) for common carrier rail lines that are part of the general rail line system of transportation.
Federal Railroad Administration safety regulations (49 C.F.R. § 171-180)	Regulates hazardous materials shipment by rail with standards for packaging, training, emergency response, and tank cars.
<i>Railroad-Highway Grade Crossing Handbook</i> (Federal Highway Administration, 2007); <i>Manual on Uniform Traffic Control Devices</i> (23 U.S.C. § 109(d))	Allows states jurisdiction over grade-crossing safety issues, including the selection and placement of warning devices and enforcement of traffic laws. Provides guidelines for traffic control devices that consider delay, roadway classification, average daily traffic, number of trains per day, and train speed at grade road crossings.

Notes:

- C.F.R. = Code of Federal Regulations
- FHWA = Federal Highway Administration
- FRA = Federal Railroad Administration
- U.S.C. = United States Code
- U.S. DOT = United States Department of Transportation

Action Alternatives. Donaldson Road, Parks Road, and several unimproved farm access roads would also cross Alternative C, but not Alternative A or Alternative B.

TDOT recently completed improvements to approximately 4.65 miles of State Route 22 in the project area, from Tiptonville to the Port of Cates Landing. The improvements included the realignment of the southern portion of State Route 22 to the east to connect to State Route 78 at its intersection with State Route 21 and the creation of a grade separated crossing where State Route 22 crosses at the Tennken Railroad. The typical cross-section of this state-maintained highway is two 12-foot travel lanes with curbed and guttered 4-foot shoulders and a 12-foot left turn lane for the southern 0.30 mile. The typical cross-section for the remainder of the highway is two 12-foot travel lanes with 10-foot shoulders having sufficient right-of-way for the future addition of two 12-foot travel lanes with 10-foot shoulders and a 52-foot median.

Preliminary estimates of the annual average daily traffic on State Route 22 for 2012 were 7,620 to 8,400 vehicles, including between 686 and 756 trucks. Estimated traffic volumes for 2032 were projected to climb to 15,240 to 16,110 vehicles in 2032 (including 1,372 to 1,450 trucks) (TDOT, 2007). On average, this is 20.8 to 23.0 cars per day and 1.9 to 2.1 trucks per day, based on 2012 projections, and 42.2 to 44.1 cars per day and 3.8 to 4.0 trucks per day, using 2032 projections. These estimates assume that the proposed rail line would be constructed and that rail transportation would be available to customers at the Port of Cates Landing and the Lake County Industrial Park.

Current vehicle traffic in the project area is low in volume, with Annual Average Daily Traffic (AADT) of less than 400 vehicles at monitored locations. Traffic counts published by TDOT in 2013 show an AADT of 123 vehicles at Cates Landing Road North between State Route 22 and Proctor City Road, and 385 vehicles at the intersection of State Route 22 and Cates Landing-New Markham Road (TDOT, 2013). States vary in definition of low-volume versus high-volume AADT. However, for comparison purposes, an AADT of 50,000 may be considered high in some places, while 100,000 may be the threshold in other places (FHWA, 2014).

3.1.3 Environmental Consequences

OEA considered both short-term and long-term impacts to transportation systems and public safety that could potentially occur as a result of the construction and operation of each of the three Action Alternatives and the No Action Alternative. If the proposed rail line is constructed, NWTRPA anticipates that traffic on the proposed rail line would initially be fewer than 1,000 carloads per year, and would eventually rise to more than 1,000 carloads per year. NWTRPA estimates that traffic would consist of two round trips per week, for a total of four 10-car trains per week during the initial years of operations.

In general, because of the low volume of vehicle traffic in the project area and the low volume of potential train traffic on the proposed rail line, the potential for impacts to public safety from construction and operation is low. According to the FRA Office of Safety Analysis (FRA, 2015), a total of 11,728 railroad accidents/incidents were reported nationwide in 2014. Of these total accidents/incidents, 1,220 were derailments, and 2,280 were accidents involving road crossings. FRA data show an average accident rate of 2.58 accidents per million train miles. At this rate, with estimated rail traffic of four trains per week, an accident would be expected to occur on the proposed rail line once in approximately 340 years.

3.1.3.1 Alternative A — NWTRPA’s Preferred Alternative

The construction of the proposed rail line could result in minor, short-term impacts to local traffic patterns due to temporary road closures and an increase in construction-related traffic. These impacts would occur only during construction. NWTRPA would coordinate construction activity with TDOT and the local government to minimize these impacts, as specified in the Mitigation Measure 1.

OEA anticipates that the operation of the proposed rail line would lead to a decrease in over-the-road truck traffic in the area relative to the No Action Alternative. Truck traffic that would otherwise serve the Port of Cates Landing and the Lake County Industrial Park would be diverted to rail traffic. This would decrease truck traffic on State Route 22, which currently serves as the primary access to the port, the industrial park, and various residential areas in northwest Lake County. Reduced truck traffic on State Route 22 would increase the efficiency of transportation on this roadway, decrease travel time, and reduce the risk of accidents, relative to the No Action Alternative.

Minor impacts to local traffic could occur where the proposed rail line would cross roadways. Based on the alignment proposed under Alternative A, at-grade road crossings would be required where the rail line intersects with State Route 212, a state-maintained highway that serves as the primary access to the Northwest Correctional Complex and Cates Landing-New Markham Road. In accordance with the FHWA *Manual on Uniform Traffic Control Devices*, and as specified in Mitigation Measure 3, traffic control devices would be installed at each at-grade crossing. Traffic control devices used in connection with at-grade road crossings may include warning signs; crossbucks; pavement markings; and, in some locations, bells, flashing lights, and gates. As specified in Mitigation Measure 4, NWTRPA would coordinate with TDOT in designing traffic control devices at road crossings.

Because road traffic in the project area is low and because rail traffic on the proposed rail line is expected to also be low, OEA expects that construction and operation of the proposed rail line under Alternative A would not adversely affect transportation systems in the project area. Because NWTRPA would implement the mitigation measures related to transportation and safety imposed by the Board, as well as construct and operate the proposed rail line in compliance with applicable safety guidelines and regulations required by state and local law, implementation of Alternative A would not result in adverse impacts to public safety. In addition, the diversion of truck traffic on State Route 22 to rail traffic on the proposed rail line would result in beneficial impacts to transportation efficiency and public safety relative to the No Action Alternative.

3.1.3.2 Alternative B

The proposed alignment of the rail line under Alternative B is similar to that proposed under Alternative A. New at-grade road crossings would be required at the intersections of State Route 212 and Cates Landing-New Markham Road with the alignment proposed under Alternative B.

As with Alternative A, the availability of rail line transportation options to the nearby Port of Cates Landing and adjoining industrial park would result in beneficial long-term impacts from the anticipated decrease in truck traffic on State Route 22 and in the overall region. Other impacts to transportation patterns under this alternative would be similar to those considered for Alternative A.

The potential safety impacts from Alternative B would be similar to those described for Alternative A. Like Alternative A, Alternative B would cross State Route 212, Cates Landing-New Markham Road, and several private access roads. As specified in the mitigation measures in Section 5.1 of this Draft EA, NWTRPA would consult with TDOT regarding construction activities and the design of road crossings to minimize safety hazards. Accordingly, implementation of Alternative B would not result in significant, cumulative, or adverse safety concerns since NWTRPA would operate the rail line in full compliance with all related safety guidelines and regulations required by state and local law.

3.1.3.3 Alternative C

Alternative C would be constructed east of and parallel to the right-of-way of State Route 22. This alternative was proposed by TDOT to coordinate with the recent infrastructure improvements to State Route 22.

At-grade crossings would again be required where the rail line bisects State Route 212 and Cates Landing-New Markham Road. An additional crossing would be required under this alternative at Donaldson Road. Short-term and long-term impacts under this alternative would be consistent with those considered under Alternatives A and B.

The potential safety impacts from Alternative C would be similar to those described for Alternatives A and B, although Alternative C would require a total of three road crossings. As specified in the mitigation measures in Section 5.1 of this Draft EA, NWTRPA would consult with TDOT regarding construction activities and the design of road crossings and warning devices to minimize safety hazards. Accordingly, implementation of Alternative C would not result in significant, cumulative, or adverse safety concerns since NWTRPA would operate the rail line in full compliance with all related safety guidelines and regulations required by state and local law.

3.1.3.4 No Action Alternative

Under the No Action Alternative, NWTRPA would not construct the proposed rail line. However, NWTRPA would continue to develop and operate the Port of Cates Landing and the Lake County Industrial Park. Direct rail transportation that would provide prioritized non-stop deliveries of containerized shipments, truck trailers, grain, and aggregates would not be available to either facility. State Route 22 would remain the primary route for ingress and egress of shipments for the Port of Cates Landing and adjoining industrial park.

No direct traffic impacts would result from the construction and operation of the rail line under the No Action Alternative. However, adverse traffic impacts related to over-the-road trucking would likely occur if the Port of Cates Landing and the Lake County Industrial Park grow as planned without relying on rail traffic to augment barge and truck transport. NWTRPA anticipates that full operations at the Port of Cates Landing and the Lake County Industrial Park would eventually generate a traffic level of more than 1,000 rail cars of freight per year. Considering that one rail car can carry the equivalent of four truckloads of freight per rail car (Tennessee–Tombigbee Waterway, 2015), this level of freight traffic is equivalent to 4,000 trucks per year.

Therefore, if the proposed railroad were not constructed, it is possible that truck traffic to and from the Port of Cates Landing and the Lake County Industrial Park could increase by as much as 4,000 trucks per year, or about 11 trucks per day. Because these trucks would primarily use State Route 22, the main road serving the Port of Cates Landing and the Lake County Industrial Park, truck traffic on this road could rise to as many as 15 trucks per day, well above the TDOT projection of approximately 4 trucks per day for the year 2032.

The potential impacts from increased truck traffic could include a greater potential for accidents stemming from increased truck traffic, the potential for traffic congestion, increased noise from the additional trucks, and degradation in localized air quality.

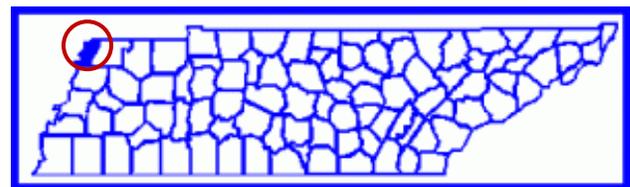
3.2 Land Use

3.2.1 Definition of the Resource

In this Draft EA, land use refers to how land is managed and how it has been modified for residential and economic purposes.

3.2.2 Existing Conditions

The proposed rail line is located in Lake County, the northwestern-most county in Tennessee. The area of the county is 194 square miles, or 124,160 acres. The proposed rail line would be located within the jurisdiction of the incorporated town of Tiptonville, the county seat of Lake County.



Lake County shown in northwest corner of Tennessee
Source: <http://tngenweb.org/lake/>

Land use in Lake County is primarily agricultural. Corn, cotton, soybeans, and wheat are the major crops in the county (USACE, 2004). Major roads include State Route 78 (Tiptonville to Dyersburg) and State Route 22 (Tiptonville to Union City). The Tennken Railroad provides rail service to the area.

The Action Alternatives would cross land that is currently zoned for industrial or agricultural use. Industrial lands include about 350 acres designated for the Lake County Industrial Park at the southwest corner of State Route 22 and Cates Landing-New Markham Road and all land north of Cates Landing-New Markham Road. The only developed industrial land is inside the Port facility. Currently, all land south of Cates Landing-New Markham Road is used for agriculture. The remaining industrial land north of Cates Landing-New Markham Road is undeveloped open land. Utilities currently serving the area surrounding the Action Alternative corridors include electricity (12-kilovolt [kV] and 161-kV transmission lines), water (capacity 2.8 million gallons per day), and wastewater (capacity 2.5 million gallons per day).

3.2.3 Environmental Consequences

To identify the potential impacts of the Action Alternatives on land use in the project area, OEA conducted a Geographic Information Systems analysis. Maps of the Action Alternatives were overlaid on maps of existing land uses to identify potential conflicts. OEA also conducted field visits to the project area and reviewed existing planning documents and other available sources and consulted with appropriate federal, state, and local agencies.

3.2.3.1 Alternative A — NWTRPA’s Preferred Alternative

Under Alternative A, the proposed rail line would result in minor permanent impacts to local land use. These impacts would include the acquisition of approximately 70 acres of open farmland from private landowners, primarily along existing property boundaries from the wye junction at the Tennken Railroad to the southern boundary of the Lake County Industrial Park. The remainder of the route is owned by Lake County or NWTRPA. The project right-of-way also includes an additional 30 acres that comprises Lake County property within the industrial park site and NWTRPA land north of Cates Landing-New Markham Road. Although the land owned by Lake County and NWTRPA is zoned for industrial use, it is currently used for agriculture or is within the confines of the Port of Cates Landing (Office for Information Resources, 2015). OEA is recommending Mitigation Measure 6, which would require NWTRPA to design the proposed rail line to minimize the conversion of prime farmland to nonagricultural use. The proposed rail line would not affect any residential land use.

3.2.3.2 Alternative B

The potential impacts from the construction and operation of Alternative B would be similar to those described for Alternative A since they share the same wye junctions with the existing Tennken Railroad. However, Alternative B follows the east side of the unnamed tributary to Graveyard Slough up to Lake County Industrial Park. The right-of-way of Alternative B would encompass approximately 70 acres of open farmland purchased from private landowners, primarily along existing property boundaries south of the Lake County Industrial Park. The remainder of the route includes approximately 30 additional acres of land owned by Lake County or NWTRPA, as described in Section 3.2.3.1. OEA is recommending Mitigation Measure 6, which would require

NWTRPA to design the proposed rail line to minimize the conversion of prime farmland to nonagricultural use. Alternative B would not affect any residential land use.

3.2.3.3 Alternative C

Impacts associated with Alternative C would be similar to those described for Alternative A and B. The 3 miles of rail right-of-way that would traverse open farmland would impact approximately 70 acres of private farmland. The remaining 30 acres of the route is owned by Lake County or NWTRPA, as described in Section 3.2.3.1. Much of the rail right-of-way would follow property boundaries and the State Route 22 right-of-way. OEA is recommending Mitigation Measure 6, which would require NWTRPA to design the proposed rail line to minimize the conversion of prime farmland to nonagricultural use. Alternative C would not affect any residential land use.

The Alternative C right-of-way would cross a 161-kV electrical transmission line. As specified in the Mitigation Measure 9, NWTRPA would coordinate construction activities with the local utility managers to ensure that no utilities are damaged or service disrupted.

3.2.3.4 No Action Alternative

Under the No Action Alternative, NWTRPA would not construct the proposed rail line. However, NWTRPA would continue to develop and operate the Port of Cates Landing and Lake County Industrial Park. Land use along the corridor of the proposed rail line outside Lake County Industrial Park would not change.

3.3 Geological Resources

3.3.1 Definition of the Resource

This section discusses the underlying geology and soil information important to understanding the potential impacts of construction and operation of the proposed rail line.

3.3.2 Existing Conditions

Lake County is located in the north-central portion of the Mississippi Embayment, which is the plain along the Mississippi River. The soils of the area are characterized by sediments from the Mississippi River, and are underlain by thousands of feet of older sediments dating back at least 2.5 million years to the Tertiary age (Cox and Van Arsdale, 2002; Parks and Carmichael, 1990).



The main landforms present in the area consist of the Mississippi River and the floodplain; the Tiptonville Dome; Reelfoot Lake and its surrounding

wetlands; and upland areas that extend to the line of bluffs on the east side of the county (Figure 3-1). Land elevation ranges from 185 to 230 feet above mean sea level.

Lake County soils are similar to those of the underlying river deposits (Brown et al., 1969). Soils are generally sandy, clayey, or silty depending on elevation of the land on which they form. Figure 3-2 shows the traces of Action Alternatives, and the various soils that they cross. Table 3-2 provides more detail about the soils found in the project area; information presented has been compiled from the U.S. Department of Agriculture (USDA) soil survey for Lake County (Brown et al., 1969) and the USDA Web Soil Survey (Soil Survey Staff, 2015).

Strong earthquakes are possible in the Cates Landing and Tiptonville area that could damage or destroy infrastructure, including railroads. Northwest Tennessee, including Tiptonville and Cates Landing, is situated in the New Madrid Seismic Zone (NMSZ) (Schweig and Van Arsdale, 1997; Kingsbury and Parks, 1993), as shown in Figure 3-3. Formed more than 600 million years ago, the extensively faulted Reelfoot rift structure (McKeown and Pakiser, 1982) is currently the most active seismic zone in the United States east of the Rocky Mountains. A seismic hazard map from U.S. Geological Survey (USGS) (Figure 3-4) shows that the project area is located within the area of the highest potential for strong earthquakes (Petersen et al., 2008). Cates Landing is less than 3 miles from young and active faults in the NMSZ.

A sequence of strong earthquakes occurred in the New Madrid region in 1811 and 1812 that caused major damage to the project area. According to USGS, the geological record suggests that large earthquakes have occurred in the NMSZ throughout the past several thousand years, including around the years 1450 A.D., 900 A.D., and 2350 B.C. (USGS, 2009).

The region continues to experience small earthquakes on a regular basis, although most are too small to be noticed or to cause damage. Based on this history of past earthquakes, USGS has estimated the probability that a sequence of earthquakes similar to the 1811-12 sequence will occur in the next 50 years to be approximately 7 to 10 percent. The probability that a magnitude 6 or larger earthquake will occur in the next 50 years is 25 to 40 percent, according to USGS (USGS, 2009).

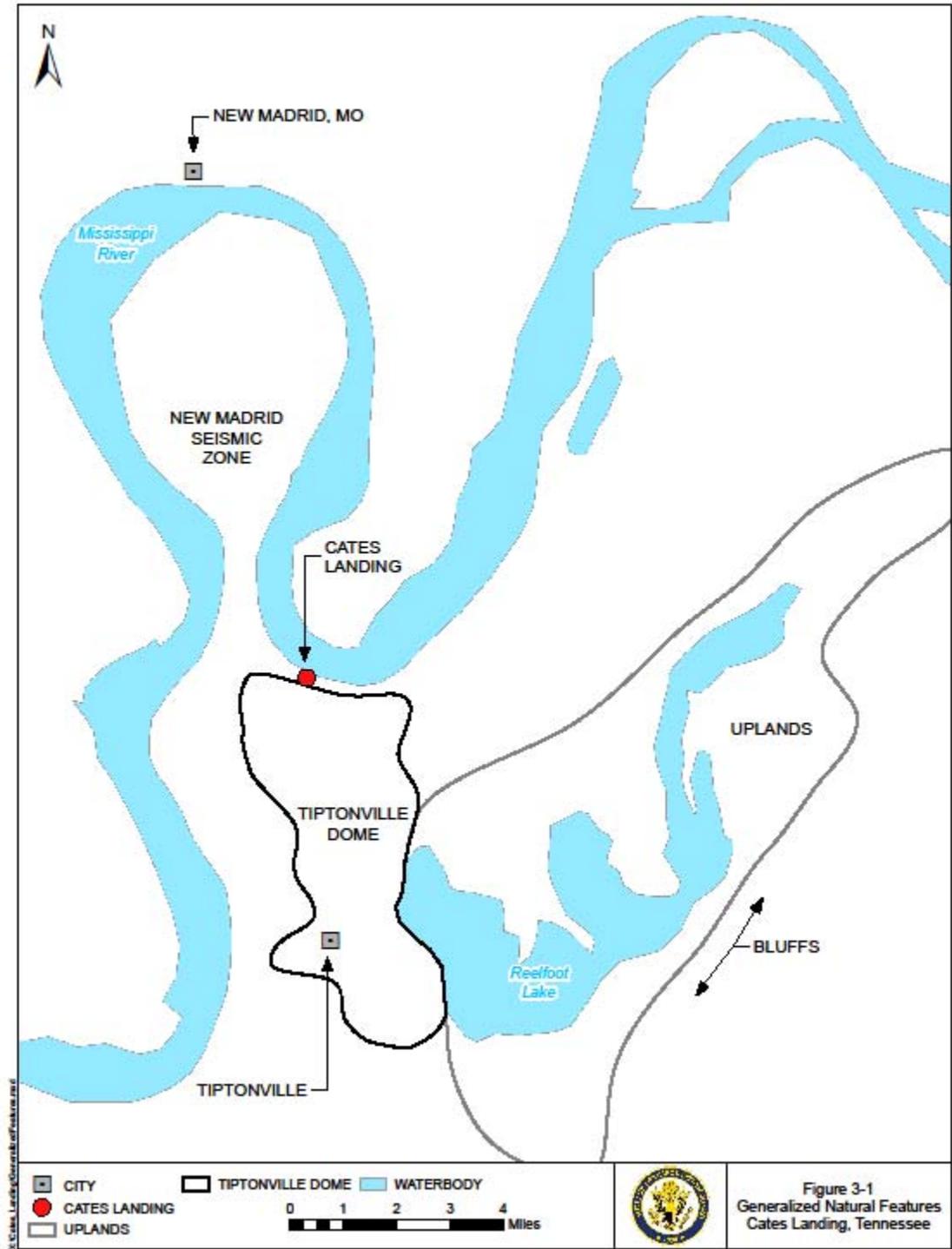


Figure 3-1
Generalized Natural Features
Cates Landing, Tennessee

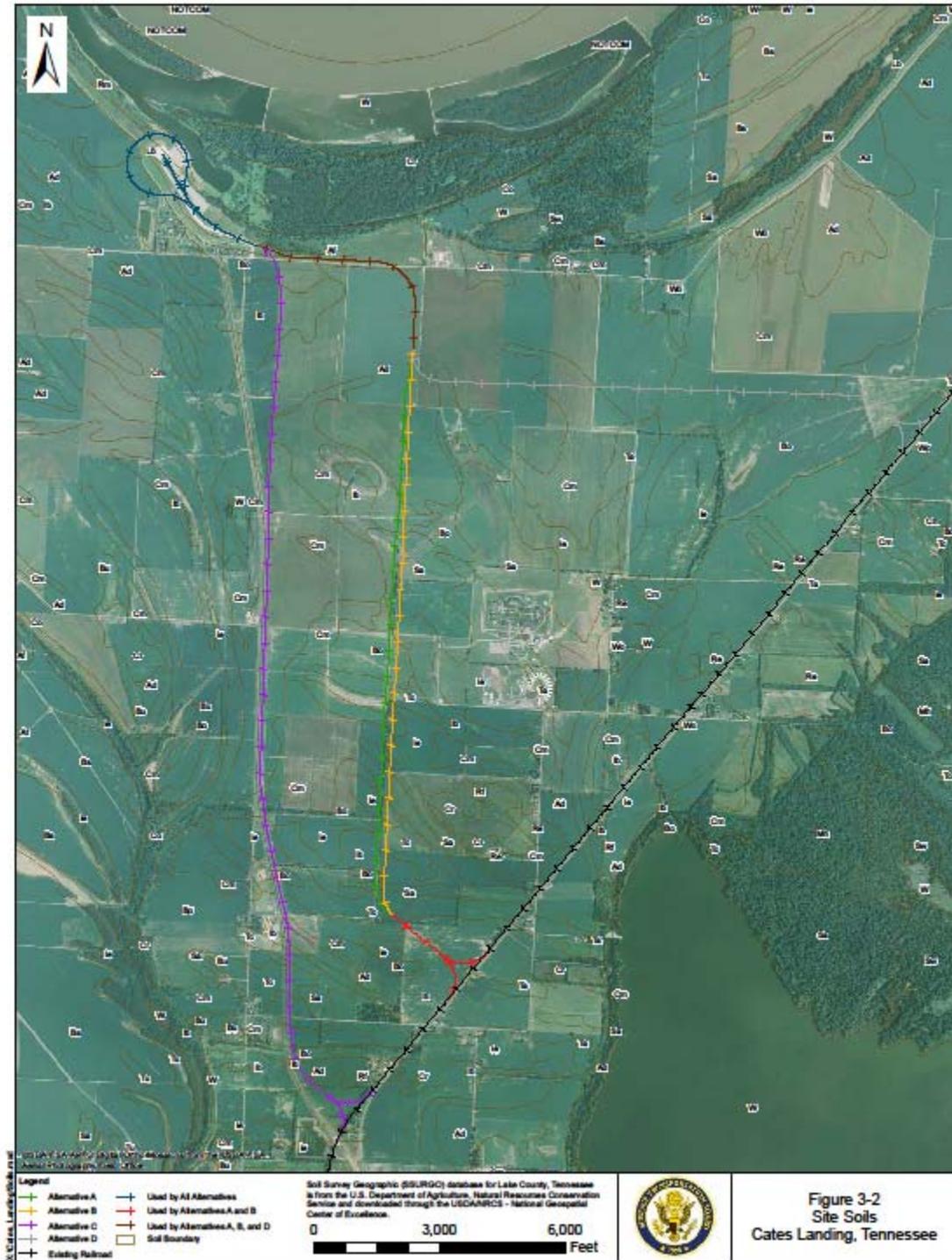
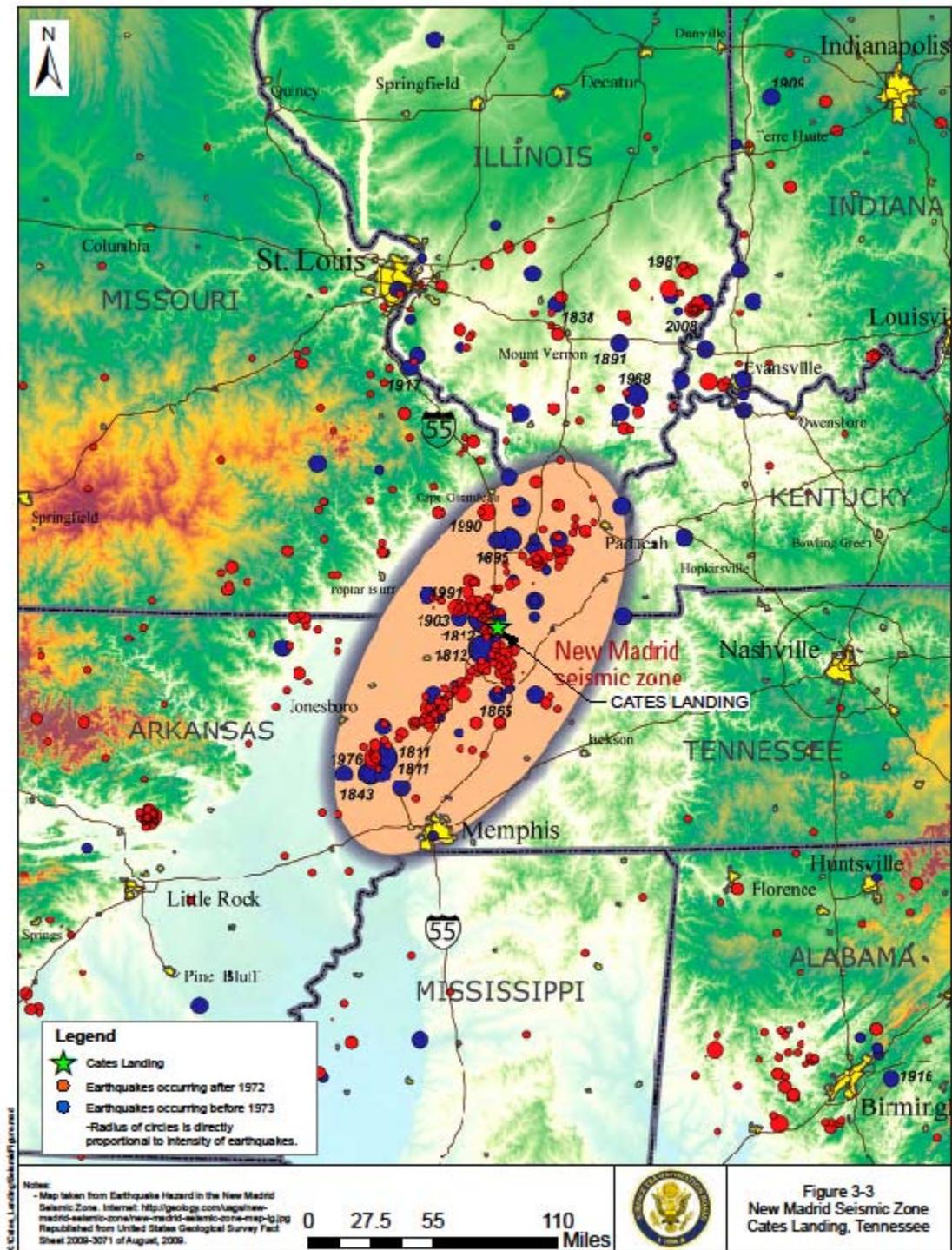


Table 3-2 Soil Types in Each Alternative Route			
Name	Description	Alternative Encountered	Properties
Adler (Ad)	Silt loam	A, B, C	Deep, moderately well-drained silt loam with some sand. Low shrink-swell potential.
Adler (Af)	Silt loam, flooded	A, B, C	Deep, moderately well-drained, fertile soil that occurs within the western portion of Lake County. Has gray mottling, indicating it is periodically flooded. Low shrink-swell potential.
Bowdre (Bo)	Soils and alluvial land	A, B, C	Poorly drained soil with surficial silty clay and clay to 20 inches grading to clay, silty clay, silt, or fine sandy loam. Water will stand on it after a rain. Moderate shrink-swell potential.
Commerce (Cm)	Silt loam	A, B, C	Silty and lack clay in the subsoil. They are somewhat poorly drained and fertile. Silt loam to 2.5 feet, then fine sandy loam or clay below. Allows some standing water and can be excessively wet during rainy seasons. Low shrink-swell potential.
Iberia (Ib)	Silt loam	A	Poorly drained fertile soil on low, broad flats. Surface layer of silt loam with underlying clay. Moderate shrink-swell capacity.
Iberia (Ie)	Silt clay loam	A, B, C	Poorly drained fertile soil on low, broad flats (0-2% slopes). Surface layer of silty clay loam with underlying clay. High shrink-swell capacity.
Sharkey (Sa)	Clay	A, B, C	Fertile but poorly drained soil with clay to more than 40 inches. Frequently flooded and stays wet for some time. Forms large cracks. High shrink-swell potential.
Tunica (Tc)	Clay, flooded	A, B, C	Poorly drained in low places. About 2 feet of clay underlain by sandy, silty, and/or silty clay loam. Wet and sticky during the wet months.



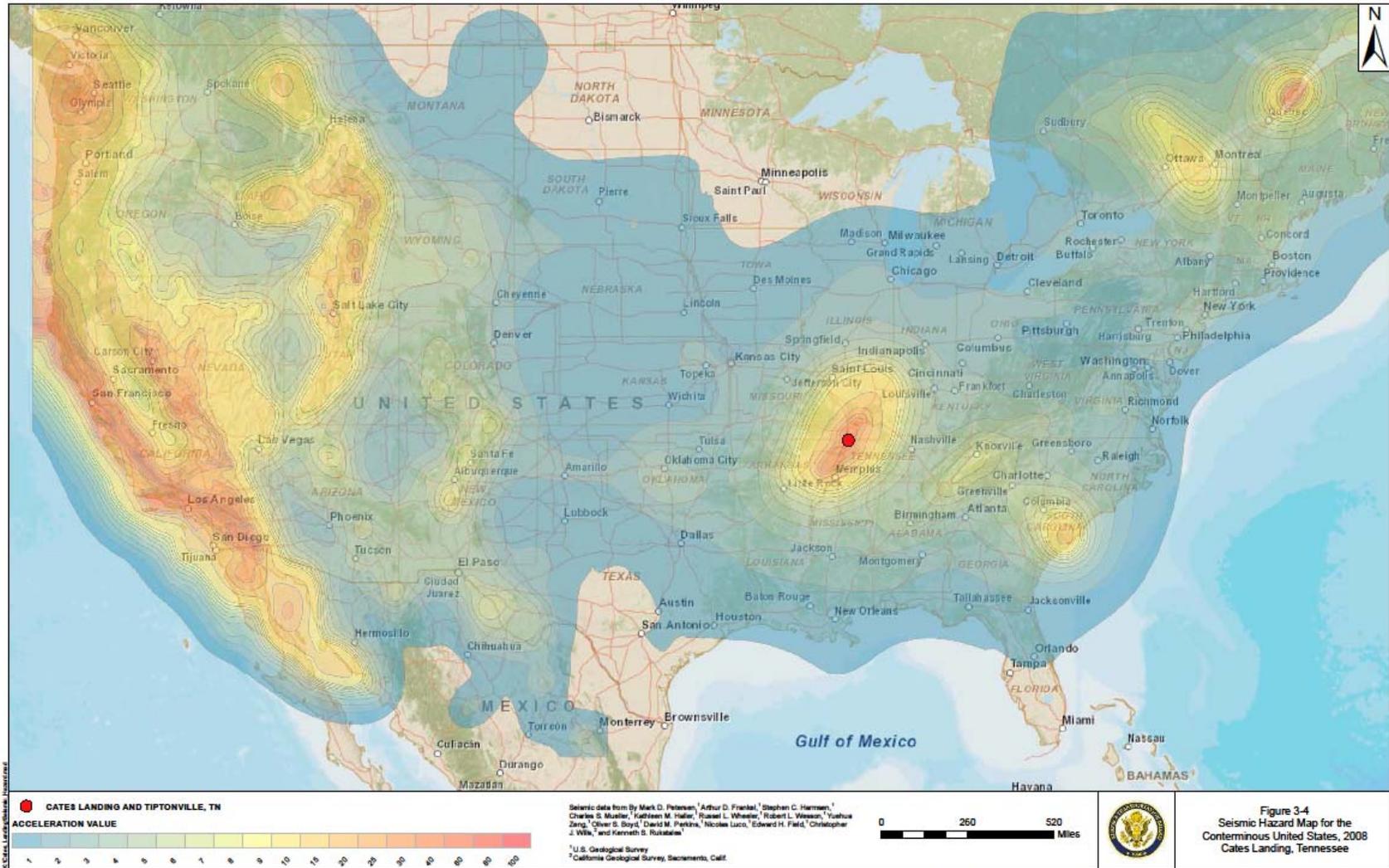


Figure 3-4
 Seismic Hazard Map for the
 Conterminous United States, 2008
 Cates Landing, Tennessee

3.3.3 Environmental Consequences

OEA analyzed and considered the three Action Alternatives and the No Action Alternative using the known geologic, soil, and seismic information.

3.3.3.1 Alternative A — NWTRPA's Preferred Alternative

Alternative A would cross areas of tightly compacted sediments. As a surface structure, the proposed rail line would have no direct effect on the underlying soils or sediments.

As a surface structure, the proposed rail line would have no direct effect on the underlying groundwater. If the railroad was used to haul hazardous materials and, in the unlikely event that a spill of such material were to occur, the tightly compacted sediments underlying Alternative A would provide an additional level of protection for groundwater resources because these sediments would help to slow the migration of any hazardous materials into the groundwater.

The proposed rail line would likely have no direct compressive effect on the underlying soils. Some of these soils have a high shrink-swell potential, and this must be considered during construction.

Agricultural fields on some of these soil types do require drainage channels and other features to reduce standing water. The rail line could affect these features unless structural controls are put in place to retain present drainage patterns. As specified in Mitigation Measures 15-16, NWTRPA would consult with USACE and TDEC regarding potential impacts to drainage and would adopt measures to minimize these impacts, to the extent practicable.



Mississippi River along Port of Cates
Landing

Source: <http://www.northwesttn.com/news-archive/67-port-of-cates-landing>

Operation of Alternative A would not likely affect the underlying soil structure, the potential for soil liquefaction, or the breakdown of soil structure, under normal conditions. Soil liquefaction could, however, be a concern if a strong earthquake were to occur in the project area.

Construction of Alternative A would not increase the risk of earthquakes. The construction of the proposed rail line would not create enough subsurface energy to cause an earthquake. However, if a strong earthquake were to occur in the project area, it could damage the proposed rail line and increase the risk of derailments or other accidents. It is impossible to predict exactly when or where an earthquake will occur, but USGS has estimated the probability of a magnitude 6 or larger earthquake in the next 50 years to be approximately 25 to 40 percent. To minimize the potential damage to the proposed rail line in the event of a strong earthquake, OEA is recommending

Mitigation Measure 13, which would require NWTRPA to design the proposed rail line in accordance with appropriate design codes and guidelines related to seismic and other geological hazards.

3.3.3.2 Alternative B

The right-of-way of Alternative B closely follows that of Alternative A. Therefore, the effects of rail construction and operation on geology, hydrogeology and aquifers, soils, geologic hazards, and seismic activity for Alternative B would be identical to those described for Alternative A.

3.3.3.3 Alternative C

The effects of construction and operation of Alternative C would be similar to those described for Alternative A. However, this alternative would cross areas of alluvium with coarser sediments associated with point bars and meander belts. The alignment would also come within 1,500 feet of an area of permeable soils that could allow spilled materials from the rail line to infiltrate into groundwater. OEA does not expect that these differences in soil composition between the alternatives would result in different impacts to geology, hydrogeology and aquifers, soils, geologic hazards, and seismic activity.

3.3.3.4 No Action Alternative

Under the No Action Alternative, NWTRPA would not construct the proposed rail line and geology and soils along the proposed rail corridor would remain unchanged. However, NWTRPA would continue to develop and operate the Port of Cates Landing and Lake County Industrial Park. The risk associated with large earthquakes and other geological hazards would be the same under the No Action Alternative as under the Action Alternatives.

3.4 Water Resources

This section discusses the water resources (including surface water bodies, wetlands, and floodplains) in the project area and the potential impacts to water resources that could occur as a result of the construction and operation of the proposed rail line.

3.4.1 Definition of the Resource

Surface waters, including lakes, rivers, and streams, are important for irrigation, power generation, recreation, flood control, and human health. USACE and the U.S. Environmental Protection Agency (U.S. EPA) define wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” Wetlands provide important ecosystem services and habitat for many species of wildlife. Executive Order (EO) 11988, *Floodplain Management*, defines floodplains as “the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, including at a minimum, the area subject to a one percent or greater chance of flooding in any given year” (i.e., that area

inundated by a 100-year flood). Effective floodplain management is essential for promoting public safety and minimizing the potential economic impact of natural disasters.

A number of federal and state laws and regulations exist to prevent impacts to water resources. Under the CWA, it is illegal to discharge pollutants from a point source into any surface water without an NPDES Permit. Applicants for a federal license or permit to conduct activities that may result in the discharge of a pollutant into Waters of the United States must obtain certification from the state in which the discharge would originate, or if appropriate, from the interstate water pollution control agency with jurisdiction over the affected waters at the point where the discharge would originate. Therefore, all projects that have a federal component and may affect state water quality, including projects that require federal agency approval, such as issuance of a Section 404 permit, must also receive a Section 401 Water Quality Certification. USACE has legal authority to implement and enforce the provisions of the CWA, while U.S. EPA retains oversight responsibilities. CWA permits include nationwide permits for activities affecting small environmental effects or individual permits for projects affecting more aquatic resources.

In Tennessee, TDEC administers regulatory protection for water resources in accordance with the state's storm water management program, the Tennessee ARAP program, and the Section 401 Certification program. TDEC has established erosion and sedimentation control regulations and a permitting system for controlling erosion and sedimentation from land-disturbing activities. TDEC requires permit applicants to submit an erosion and sedimentation control plan that incorporates specific conservation and engineering practices or mitigation measures. The permitting process includes special requirements for land-disturbing activities in stream buffer zones. No land-disturbing activities are allowed within 30 feet of any state waters unless TDEC grants a variance for drainage structures; TDEC requires an average of a 60-foot buffer for streams categorized as Outstanding National Resource Waters (ONRW), Exceptional Tennessee Waters (ETW), or impaired waters (TDEC, 2012a).

Section 404 of the CWA established a program to regulate the discharge of dredged and fill material into Waters of the United States, including wetlands. USACE is the lead agency in regulating wetland resources. USACE maintains jurisdiction over federal wetlands (33 C.F.R. § 328.3) under Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. In addition, EO 11990, *Protection of Wetlands*, requires federal agencies to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. EO 11990 requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative. TDEC further regulates activities affecting wetlands as part of the ARAP program.

EO 11988 requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

3.4.2 Existing Conditions

The corridors of the Action Alternatives include parts of two sub-watersheds of the Mississippi River. The northernmost part of the project area (generally north of Cates Landing Road) is located within the Donaldson Point section of the Mississippi River (Hydrologic Unit Classification [HUC] 080101000106). Drainage from this portion of the project area flows directly into the Mississippi River near the Port of Cates Landing. The majority of the project area is located in the Stewart Towhead section of the Mississippi River (HUC 080101000301). This area drains into Old Graveyard Slough to the south-southwest.

Both the Mississippi River and Old Graveyard Slough are on the Tennessee 303(d) List of Impaired Waters (TDEC, 2014a). The Mississippi River is listed as impaired due to elevated levels of polychlorinated biphenyls (PCBs), dioxin, and chlordane in sediments and alteration of physical substrate and habitat from dredging. Old Graveyard Slough is listed as impaired due to alteration of physical substrate and habitat, as well as loss of biological integrity due to siltation, channelization, and crop production. U.S. EPA has approved Total Maximum Daily Loads (TMDLs) for mercury, PCBs, chlordane, and dioxin that address some of the known pollutants in the Mississippi River. U.S. EPA has not established TMDLs for Old Graveyard Slough.

Despite its impaired status, TDEC classifies all parts of the Mississippi River in Tennessee as an ETW, due in part to its being suitable habitat for the pallid sturgeon (*Scaphirhynchus albus*), a federally listed endangered species, and the blue sucker (*Catostomus elongatus*), a state-listed threatened species (TDEC, 2012b; TDEC, 2015). According to TDEC's anti-degradation policy for ETWs, no degradation is allowed unless that change is justified due to necessary economic or social development and will not interfere with or become injurious to any classified uses existing in such waters (TDEC, 2012b; TDEC, 2015).

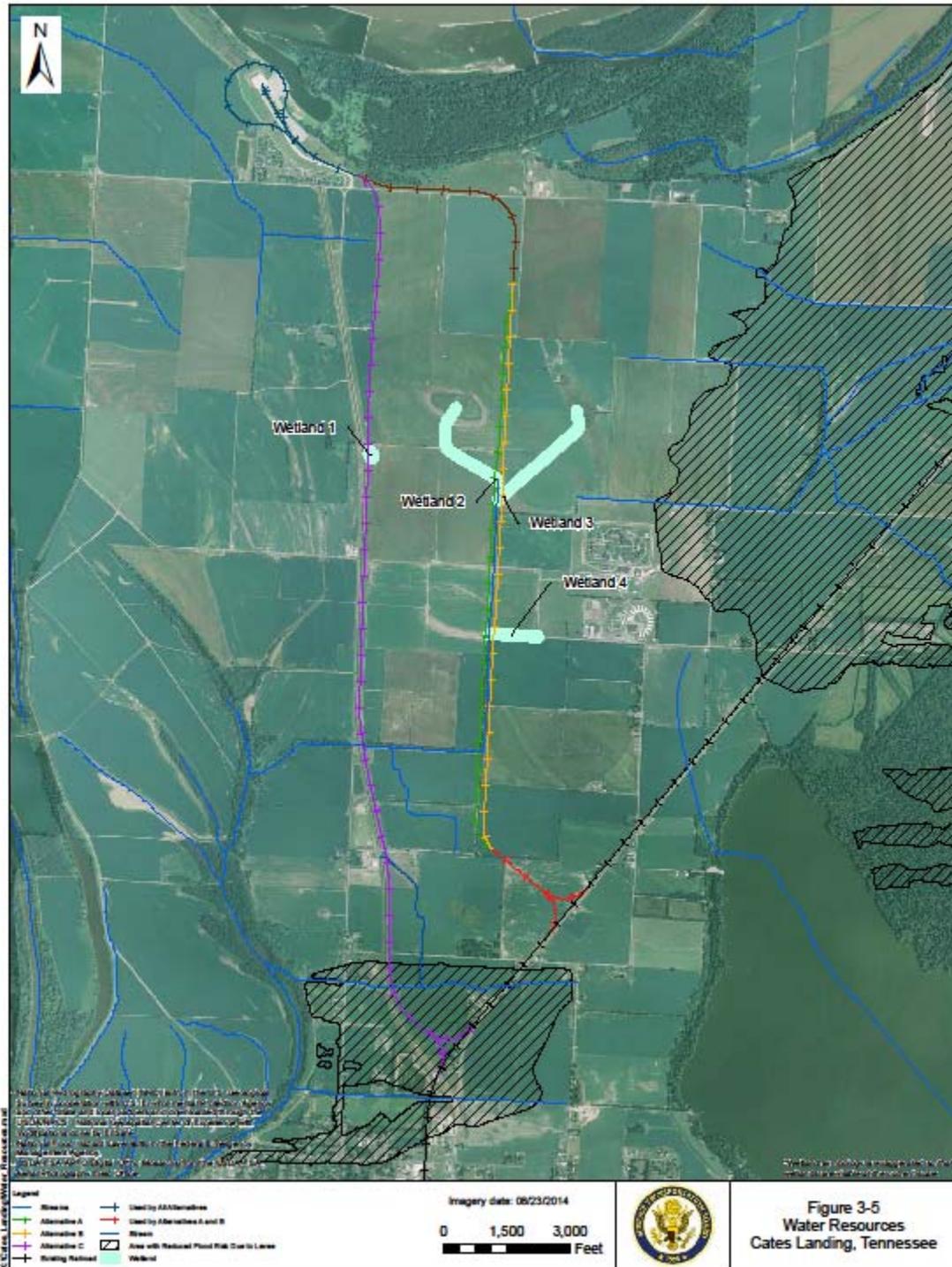
Reelfoot Lake is an ONRW and an impaired waterway in Tennessee that is located within a mile of the southern end of the Action Alternative corridors (TDEC, 2012b; TDEC, 2015). Although Reelfoot Lake is located near the project area, the lake is in a different watershed, and none of the Action Alternatives would affect the lake.

All of the streams in the project area have been substantially altered from their natural state. Most have been channelized for use as agricultural drainage. As a result, the streams in the project area are generally of poor quality with almost no natural aquatic and riparian habitat. OEA reviewed preliminary project plans and conducted a field survey in October 2014 to identify the streams, wet weather conveyances, and drainage channels located within the corridors of each Action Alternative. Table 3-3 summarizes water resources affected by each alternative.

Table 3-3 Water Resources Summary by Alternative			
Route	Streams	Other Channel Crossings	Wetlands
Alternative A	1	5	1 (0.01 acre affected)
Alternative B	0	7	2 (0.02 acre affected)
Alternative C	3	4	1 (0.2 acre affected)
No Action Alternative	0	0	0

Historically, wetlands covered much of the project area. Large areas of these wetlands were cleared and drained many years ago for agriculture and other uses. Today, very little natural wetland habitat remains. OEA conducted a wetland delineation in October 2014 and identified several low-quality wetlands in the project area (see Figure 3-5 and Table 3-3). There is one linear jurisdictional wetland (WA1) within a drainage channel that covers 0.01 acre in the Alternative A corridor, and two linear jurisdictional wetlands (WB1 and WB2), each covering 0.01 acre in the Alternative B corridor. There is one small jurisdictional wetland (WC1) covering 0.2 acre in the Alternative C corridor. The USACE Memphis District conducted a preliminary jurisdictional determination and concluded that the four streams and four wetlands identified in Table 3-3 are Waters of the United States, subject to regulation under Section 404 of the CWA (USACE, 2015).

Although there are no floodplains within the Action Alternative corridors, Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (FEMA) identify the southernmost end of the Alternative C corridor (between Donaldson Road and the southern terminus) as an area that is protected from a 100-year flood hazard by a levee system (see Figure 3-5) (FEMA, 2010a; FEMA, 2010b). The entire corridors of Alternatives A and B, the Alternative C corridor north of Donaldson Road, and the Port of Cates Landing port facility naturally occur above the Mississippi River floodplain.



3.4.3 Environmental Consequences

OEA documented the proximity of each Action Alternative to surface water features based on topographic maps, aerial photographs, and field surveys conducted in October 2014 and considered the potential for construction and operation activities to impact identified water features. The impact analysis focused on a corridor approximately 250 feet wide and centered on each Action Alternative route. The analysis also identified regulatory requirements associated with disturbance to water resources and measures to minimize or mitigate potential adverse effects to those resources.

3.4.3.1 Alternative A — NWTRPA's Preferred Alternative

Construction of Alternative A would result in minor permanent impacts to surface water resources, namely the construction of crossings at streams and drainage channels. Preliminary construction plans indicate that NWTRPA would build a trestle rail bridge at one stream crossing (SA1) and box culverts and/or pipe culverts crossing five wet weather conveyances and/or drainage channel (see Figure 3-5). Structures at each drainage crossing would affect approximately 35 feet of the channel to support the railroad ballast and tracks. As specified in Mitigation Measure 14, NWTRPA would design the rail line, including culverts and bridges, in such a way as to maintain natural water flow and drainage patterns to the extent practicable.

Soil disturbance from rail line construction and associated vehicle traffic would increase the potential for temporary storm water impacts. As stipulated in Mitigation Measures 14-15, NWTRPA would consult with USACE and TDEC and would obtain all necessary permits from these agencies related to stream crossings and stormwater discharge. Permit conditions would specify necessary best management practices (BMPs) and other measures that would help to reduce or prevent the release of sediment or other pollutants into the



View to northwest (upstream) of linear wetland (WA1) in drainage channel at northwest end of central stream, Alternative A

stream and wet weather conveyances. Since the one stream crossing is on a tributary to an impaired stream (Old Graveyard Slough), TDEC may request special buffer conditions. Implementation of Alternative A would not adversely affect the Mississippi River (an ETW) or Reelfoot Lake (an ONRW).

Under Alternative A there would be minor, permanent impacts to approximately 0.01 acre in one linear jurisdictional wetland (WA1). The wetland crossing would require approximately 35 feet of culvert to support the railroad ballast and tracks. Construction activities would increase the potential for temporary storm water impacts due to soil disturbance by construction equipment and increased

vehicle traffic. As stipulated in Mitigation Measures 15-16, NWTRPA may be required to obtain a nationwide permit from USACE, an ARAP from TDEC, and storm water permits, as described above.

Permit conditions would specify necessary BMPs and other measures that would help to reduce or prevent the release of sediment or other pollutants into the wetland.

Construction and operation of Alternative A would not affect any floodplains.



View to east (upstream) of a wet weather conveyance in drainage channel on east side of central stream, Alternative B

3.4.3.2 Alternative B

Under Alternative B, there would be minor, permanent impacts to surface water resources from culvert placement at seven wet weather conveyances. Each surface water crossing would require approximately 35 feet of culvert to support the railroad ballast and tracks. The same consultation and permitting requirements, BMPs, and other mitigation measures would apply as those described for Alternative A to avoid storm water impacts and other indirect effects to surface water resources. Implementation of Alternative B would not adversely affect the Mississippi River (an ETW) or Reelfoot Lake (an ONRW).

Under Alternative B there would be minor, permanent impacts to wetland resources from culvert placement at two linear jurisdictional wetlands (WB1 and WB2). Each wetland crossing would require approximately 35 feet of culvert to support the railroad ballast and tracks and disturb approximately 0.01 acre in each wetland. The same permitting requirements, BMPs, and other mitigated measures would apply as those described for Alternative A to avoid storm water impacts and other indirect effects to wetlands. Implementation of Alternative B would not affect any floodplains.

3.4.3.3 Alternative C

Under Alternative C there would be minor, permanent impacts to surface water resources from culvert placement at three stream crossings and four wet weather conveyances. Each crossing would require approximately 35 feet of culvert to support the railroad ballast and tracks. The same permitting requirements, BMPs, and other mitigation measures would apply as those described for Alternative A to avoid storm water impacts and other indirect effects to surface water resources. Implementation of Alternative C would not adversely affect the Mississippi River (an ETW) or Reelfoot Lake (an ONRW).

Construction of Alternative C could result in direct or indirect impacts to as much as 0.2 acre of WC1, a jurisdictional wetland. The same consultation and permitting requirements, BMPs, and other mitigation measures would apply as those described for Alternative A to avoid storm water impacts and other indirect effects to wetlands. Implementation of Alternative C would not affect any floodplains.



View of Wetland WC1 (east) from State Route 22, Alternative C

3.4.3.4 No Action Alternative

Under the No Action Alternative, NWTRPA would not construct the proposed rail line. However, NWTRPA would continue to develop and operate the Port of Cates Landing and the Lake County Industrial Park. Under the No Action Alternative, there would be no changes to the existing conditions of surface water resources and wetlands along the proposed rail corridor. Surface water resources and wetlands would continue to receive occasional discharges of sediment and storm water runoff from adjacent agricultural fields and roads. The project area is located outside designated floodplains or in areas protected from flooding by levees.

3.5 Biological and Natural Resources

This section describes the potential impacts to biological resources — including vegetation, wildlife, and protected species — that could occur as a result of the construction and operation of the proposed rail line. OEA assessed the distribution of wild vegetation and wildlife in the project area using data from TDEC and USFWS. OEA also conducted field surveys to directly observe wildlife habitat and consulted with USFWS, TDEC, and the Tennessee Wildlife Resources Agency (TWRA). The land surrounding the three Action Alternatives is agricultural and, therefore, has already been heavily altered from its natural state. OEA evaluated the remaining habitat in the corridors of the three Action Alternatives for the presence of wildlife and vegetation of concern.

3.5.1 Definition of the Resource

OEA considered both state and federally listed protected species in its evaluation. Federally listed species are those that are afforded protection under the Endangered Species Act (ESA), and include endangered and threatened species. Under the ESA, these categories are defined as follows:

- Endangered — Any species that is in danger of extinction throughout all or a significant portion of its range.
- Threatened — Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

The ESA also provides protection for critical habitat for federally listed threatened and endangered species.

TDEC categorizes state-listed protected species as endangered, threatened, deemed in need of management, and special concern. According to TDEC, these terms are defined as follows:

- Endangered — Any species or subspecies whose prospects of survival or recruitment within the state are in jeopardy or are likely to become so within the foreseeable future.
- Threatened — Any species or subspecies that is likely to become an endangered species within the foreseeable future.
- Deemed in Need of Management — Any species or subspecies of non-game wildlife that the Executive Director of the TWRA believes should be investigated to develop information relating to populations, distribution, habitat needs, limiting factors, and other biological and ecological data so it can determine management measures necessary for their continued ability to sustain themselves successfully.
- Special Concern — Any species or subspecies of plant that is uncommon in Tennessee, or has unique or highly specific habitat requirements or scientific value and, therefore, requires careful monitoring of its status.

In addition to federally and state listed protected species, OEA also considered the potential impact of the proposed rail line on species of wildlife and vegetation that are not protected under state or federal law.

3.5.2 Existing Conditions

The agricultural land in the project area offers little habitat suitable for most types of wildlife. Taller crops like corn may offer limited cover and foraging areas for birds and other wildlife (TDOT, 2008a). The upland and floodplain forested areas could provide cover and habitat for common species, including various rodents, reptiles, and birds (TDOT, 2008a).

The Action Alternative corridors would cross mainly open agricultural fields of corn and soybeans before joining the existing Tennken Railroad. Any potentially impacted wildlife habitats have already been heavily disturbed and fragmented due to agricultural practices, so there is no remaining area where wildlife could be present in large numbers. Each of the Action Alternatives would cross agricultural field boundaries and waterways. These areas contain narrow and highly fragmented strips of forest and shrub area. Such areas would be unsuitable for the majority of larger wildlife, but as an ecotone (i.e., two communities that meet and integrate) may provide nesting habitats and cover for small rodents like squirrels and mice, as well as birds, as they forage among the crop rows nearby.



Corn (left) and soybean (right) row crops
Source: <http://www.cureriver.org/voices/2013/06/08/garfield-eckberg/>

The Action Alternatives would cross highly disturbed habitat that has been converted to row crop agricultural land. Since the agricultural fields are heavily plowed and controlled with herbicides, the vegetation is homogeneous; the predominant vegetation is row crops, such as corn and soybeans. During field surveys, OEA observed that very few natural and undisturbed areas of forests or vegetation are still present in the area.

Small amounts of natural habitats exist along the streambanks and fencerows between agricultural fields, consisting of shrub thickets and trees in the early stages of succession. These forest communities are dominated by hackberry (*Celtis occidentalis*), honey locust (*Gleditsia triacanthos*), green ash (*Fraxinus pennsylvanica*), oaks (*Quercus* spp.), and red maple (*Acer rubrum*), which are common on disturbed agricultural land (TDOT, 2008a). The floodplain and fencerow areas are dominated by Japanese honeysuckle (*Lonicera japonica*), multiflora rose (*Rosa multiflora*), and blackberry (*Rubus argutus*) (TDOT, 2008a). None of these species are considered to be threatened or endangered by TDEC or the USFWS (Appendix A). The small amounts of fragmented shrub thickets and trees that exist along the streambanks and fencerows are narrow ecotones that

buffer the agricultural land. The Action Alternatives corridors are largely outside the main stream treeline, except for some crossings of smaller streams and fencerows.

OEA contacted the USFWS, TWRA, and TDEC to identify any threatened or endangered species that may have habitats in the project area (see Appendix A). USFWS notes that the interior least tern (*Sterna antillarum athalassos*) is known to occur near the Cates Landing area of Lake County. The interior least tern is a federally and state-listed endangered species and is known to nest in the area on sand bars and sandy islands along the Mississippi River. All of the Action Alternatives would terminate at the Port of Cates Landing and would not extend into or near the sandy areas of the Mississippi River, where the interior least tern could be present.

As discussed in Section 3.4, the Mississippi River is considered an ETW since the river provides habitat for the federally listed endangered pallid sturgeon and the state-listed threatened blue sucker. The Action Alternatives would not cross and would not be located immediately adjacent to the Mississippi River, where these fish may occur.

OEA coordinated with TWRA and conducted a search of the TDEC Rare Species database for all wildlife and vegetation species within the Tiptonville USGS quadrangle that are listed at the federal and state levels as endangered or threatened. In addition to the interior least tern, the database lists three plants recognized as threatened species in the area: bristly sedge (*Carex comosa*), yellow water-crowfoot (*Ranunculus flabellaris*), and copper iris (*Iris fulva*) (TDEC, 2014b). The database also included 11 other species of wildlife and vegetation that are of Special Concern (plants) or Deemed in Need of Management (animals), meaning that that they are uncommon in the area and, therefore, require careful monitoring (TDEC, 2014b). Table 3-4 provides a list of all species considered endangered, threatened, or in need of special monitoring by TDEC for the Tiptonville USGS Quadrangle. Past agricultural use, road construction, and other human activities have drastically altered the physical landscape of the Action Alternative corridors. As a result, no suitable habitat remains in any of the Action Alternative corridors for any of the species listed in Table 3-4.



Interior Least Tern, Photo by Greg Lavaty
Source : http://www.abcbirds.org/abcprograms/domestic/Interior_LeastTern.html

Type	Category	Scientific Name	Common Name	Federal Status	State Status
Vascular Plant	Flowering Plant	<i>Hottonia inflata</i>	Featherfoil	—	S
Vascular Plant	Flowering Plant	<i>Carex comosa</i>	Bristly Sedge	—	T
Vascular Plant	Flowering Plant	<i>Ranunculus flabellaris</i>	Yellow Water-crowfoot	—	T
Vertebrate Animal	Bird	<i>Sterna antillarum athalassos</i>	Interior Least Tern	E	E
Vertebrate Animal	Bird	<i>Haliaeetus leucocephalus</i>	Bald Eagle	—	D
Vertebrate Animal	Bird	<i>Ictinia mississippiensis</i>	Mississippi Kite	—	D
Vertebrate Animal	Bird	<i>Anhinga anhinga</i>	Anhinga	—	D
Vascular Plant	Flowering Plant	<i>Sagittaria platyphylla</i>	Ovate-leaved Arrowhead	—	S
Vascular Plant	Flowering Plant	<i>Neobeckia aquatica</i>	Lake Cress	—	S
Vascular Plant	Flowering Plant	<i>Elodea nuttallii</i>	Nuttall's Waterweed	—	S
Vertebrate Animal	Bird	<i>Ardea alba</i>	Great Egret	—	D
Vascular Plant	Flowering Plant	<i>Iris fulva</i>	Copper Iris	—	T
Vertebrate Animal	Bird	<i>Limnithlypis swainsonii</i>	Swainson's Warbler	—	D
Vertebrate Animal	Reptile	<i>Nerodia cyclopion</i>	Mississippi Green Water snake	—	D
Vertebrate Animal	Bird	<i>Ixobrychus exilis</i>	Least Bittern	—	D

Source: Tennessee Department of Environment and Conservation. 2014b, April. *Rare Species by Quadrangle: Tiptonville*. Retrieved from http://environment-online.state.tn.us:8080/pls/enf_reports/f?p=9014:2:0::NO

Notes:

- E = Listed Endangered
- S = Of Special concern: Any species that is uncommon in Tennessee or has unique or highly specific habitat requirements and, therefore, requires special monitoring
- T = Threatened Species
- D = Deemed in Need of Management: Any species that the executive director of TWRA believes should be investigated to sustain population size
- USGS = U.S. Geological Survey

3.5.3 Environmental Consequences

OEA considered potential impacts from the proposed rail line to wildlife, vegetation, and protected species. TDEC and USFWS provided details on endangered and threatened species that may occur within or near the Action Alternatives. OEA consulted the TDEC Rare Species database to identify species of plants or wildlife previously documented in the vicinity of the Action Alternatives corridors. OEA also conducted field investigations of the area within each of the Action Alternative

corridors, to visually inspect the area for vegetation and animals and to evaluate habitat suitability for listed species.

3.5.3.1 Alternative A — NWTRPA’s Preferred Alternative

Very little suitable natural habitat remains for wildlife in the area of Alternative A due to the intensive clearing of forests and shrublands for agricultural use. With the exception of the ecotones that exist along the streambanks and fencerows, no other areas would provide adequate places for wildlife to nest or forage.

Although Alternative A would remove some agricultural lands from production, the loss of foraging locations for rodents and birds would not be significant, even though taller crops, such as corn, are an important temporary source of cover and food. The loss of agricultural land would have a negligible impact on the source of cover and food in the region.

The trees and shrubs on streambanks would largely remain unaffected by Alternative A and, therefore, would continue to provide habitat for nesting and cover for the small animals and reptiles that live in or near the Action Alternative corridor. However, loss of some shrub habitat due to fencerow and channel crossings of the proposed corridor may displace some individuals of wildlife species, but would not significantly affect the amount of habitat available in the region.

Construction and operation of Alternative A would not adversely affect the limited forest and shrub habitat that exists along the streambanks and fencerows. This vegetation helps stabilize the streambanks and provides habitat and cover for small animals that forage in the surrounding agricultural land. Most of this habitat would be unaffected by the implementation of Alternative A. Vegetation clearing and continual vegetation maintenance through mechanical clearing or herbicide spraying could affect habitat at one stream crossing (SA1). As specified in Mitigation Measure 18, NWTRPA would, to the extent possible, limit construction activity to the rail right-of-way to minimize such impacts.

The Interior Least Tern, which is listed as endangered at both the state and federal levels, is known to nest along sandbanks in the Mississippi River and could occur near the project area (see Appendix A). However, because the Action Alternative would not extend into or near the sandy areas of the Mississippi River, construction and operation of the proposed rail line would not affect this species.

The TDEC Rare Species Database also lists three state-listed threatened species of plants — bristly sedge, yellow water-crowfoot, and copper iris — that occur in the Tiptonville, Tennessee, area (TDEC, 2014b). Because the majority of the land that Alternative A would traverse consists of monoculture crop fields, it is unlikely that any of these species are present in the corridor of Alternative A.

Construction of the proposed rail line in the Alternative A corridor would not have any adverse effects on wildlife, vegetation, threatened and endangered species, or their habitat.

3.5.3.2 Alternative B

Construction of the proposed rail line in the Alternative B corridor would be similar to those described for Alternative A. Implementation of Alternative B would not have any adverse effects on wildlife, vegetation, or threatened and endangered species.

3.5.3.3 Alternative C

Construction of the proposed rail line in the Alternative C corridor would be similar to those described for Alternative A. Much of the Alternative C corridor occurs in the State Route 22 right-of-way, which has already been intensively cleared and, therefore, contains little suitable habitat for wildlife. Implementation of Alternative C would not have any adverse effects on wildlife, vegetation, or threatened and endangered species.

3.5.3.4 No Action Alternative

Under the No Action Alternative, NWTRPA would not construct the proposed rail line. However, NWTRPA would continue to develop and operate the Port of Cates Landing and the Lake County Industrial Park. No land would be removed from cultivation within the corridors of the Action Alternatives, and no habitat, wildlife, or vegetation would be directly affected outside of the Lake County Industrial Park.

3.6 Cultural and Historical Resources

3.6.1 Definition of the Resource

Cultural and historical resources are defined as physical evidence or location of past human activity that is of significance to a group of people traditionally associated with it. Section 106 of NHPA requires that federal agencies consider the potential impact of proposed projects to properties of historical significance — archeological or ethnographical resources, historic structures, and cultural landscapes, among others — that are included or eligible for inclusion on the National Register of Historic Places (National Register).

3.6.2 Existing Conditions

To evaluate the existing conditions in the project area with regard to cultural resources, OEA conducted historical and archeological assessments for the proposed rail line expansion and reviewed the results of previous investigations in the project area. The Area of Potential Effect (APE) for the proposed rail line included the right-of-ways associated with Alternative A, Alternative B, and Alternative C.

In its analysis, OEA reviewed historical and archeological assessments that TDOT conducted in 2008 (TDOT, 2008b) as part of that agency's compliance with Section 106 and Section 4(f) of the

U.S. Department of Transportation Act for the proposed improvements to State Route 22. According to the TDOT investigation, the Tennessee Historical Commission (SHPO) had surveyed the area in the 1980s but identified no properties that were eligible for the National Register. The TDOT study concluded that only one property, the Capture of Island No. 10 Monument, was eligible for listing in the National Register. TDOT contacted eight Native American tribes or representatives requesting information regarding potential tribal resources in the project area and inviting tribal representatives to participate as a consulting party in the Section 106 review process. Only one Native American tribe, the Chickasaw Nation, responded to the TDOT request, indicating that the Chickasaw Nation did not know of any specific historic properties or traditional, cultural, religious and/or sacred sites in the area affected by the State Route 22 improvements.

OEA also reviewed a Phase I Archeological Assessment conducted by Smith Archaeological Consultants (Smith and Smith, 2013) for the proposed Lake County Industrial Park in June 2013. The 2013 study identified a new site, designated as 40LK121 in the report (Smith and Smith, 2013). Both the proposed industrial park and Site 40LK121 are within the APE for the proposed rail line. Materials recovered from 40LK121 included a small amount of plain and decorated whiteware, some deep amber to black apothecary and other bottle fragments, and some thick sheet iron fragments. There appeared to be no surviving cultural deposits, but the site warranted further investigation. Site 40LK121 is, so far, the earliest recorded occupation area in the vicinity and appeared to correspond well with the beginning date of the 1838 Cronanville cemetery.

On behalf of OEA, Smith Archaeological Consultants conducted a Phase I Archeological Survey in August 2014 that focused explicitly on the proposed rail rights-of-way under Alternative A and Alternative B, as documented in the Cultural Resources Survey of the Railroad Access Right of Way for the Cates Landing Industrial Park (Appendix B). The 2014 investigation did not identify any new cultural resource sites in the vicinity of the potential routes for the proposed rail line.

3.6.3 Environmental Consequences

Pursuant to NHPA, OEA entered into consultation with the SHPO in July 2014. In consultation with the SHPO, OEA conducted a Phase I Archeological Survey in August 2014 (Appendix B) and provided the report to the SHPO for review. The August 2014 survey specifically covered the entire corridors of Alternative A and Alternative B and northern portion of Alternative C. To identify historic properties in the southern portion of the Alternative C corridor between Cates Landing-New Markham Road and the Tennken Railroad, OEA relied on the 2008 TDOT study of the State Route 22 project corridor (TDOT, 2008b). The APE of the TDOT study included the APE for Alternative C and concluded that no cultural resources were present in the APE.

OEA also considered the findings of the Phase I Archeological Assessment conducted by Smith Archaeological Consultants in June 2013 in connection with the development of Lake County Industrial Park (Smith and Smith, 2013). The APE of the industrial park includes a 345-acre tract

southeast of the intersection of State Route 22 and Cates Landing-New Markham Road. Relative to the proposed rail line, the APE of the Lake County Industrial Park includes approximately 3,250 linear feet of the northern end of each Action Alternative corridor (see Figure 1-1).

OEA contacted the following six federally recognized Native American tribes requesting comments regarding properties of religious or cultural significance within the project area (Appendix B):

- The Choctaw Nation of Oklahoma
- The Mississippi Band of Choctaw Indians
- The Eastern Shawnee Tribe of Oklahoma
- Quapaw Tribe of Oklahoma
- The Chickasaw Nation
- Tunica-Biloxi Indians of Louisiana

To date, the Mississippi Band of Choctaw Indians and the Choctaw Nation of Oklahoma have responded to OEA's request for comments. These tribes indicated that they have no interest in any properties in the project area.

3.6.3.1 Alternative A — NWTRPA's Preferred Alternative

The OEA's 2014 Phase I Archeological Survey did not identify any new archeological sites. During the 2014 survey, OEA reinvestigated a previously identified site called 40LK121, discovered during the 2013 Phase I Archeological Assessment for the Lake County Industrial Park project. The 40LK121 site is located within the APE of Alternative A and Alternative B. The 2013 assessment had concluded that the 40LK121 site warranted further investigation. During the 2014 survey, however, OEA did not identify any structures or pre-modern artifacts at the 40LK121 site and concluded that no further investigation of that site is necessary. Since none of the cultural resources surveys prepared for this or other projects in the area have identified any additional historic or prehistoric archeological sites within the APE, OEA concludes that construction of the proposed rail line, as described for Alternative A, would not have any adverse effect on cultural resources.

3.6.3.2 Alternative B

None of the cultural resources surveys completed for the proposed rail line extension or other previous investigations identified any cultural resources in the Alternative B corridor. Therefore, construction of the rail, as described for Alternative B, would not have any adverse effects to cultural resources.

3.6.3.3 Alternative C

None of the cultural resources surveys completed for the proposed rail line extension or other previous investigations identified any cultural resources in the Alternative C corridor. Therefore, construction of the rail, as described for Alternative C, would not have any adverse effects to cultural resources.

3.6.3.4 No Action Alternative

Under the No Action Alternative, NWTRPA would not construct the proposed rail line. However, NWTRPA would continue to develop and operate the Port of Cates Landing and the Lake County Industrial Park. No adverse effects on cultural and archeological resources would occur from the No Action Alternative.

3.6.3.5 Finding of No Historic Properties Affected

On June 15, 2015, the SHPO informed OEA by letter that OEA's Phase I Archeological Survey report was found to be consistent with the SHPO's Standards and Guidelines for Archaeological Resource Management Studies. In the letter, the SHPO requested that OEA notify the SHPO if project plans are changed or if archeological remains are discovered during construction.

Based on the findings of the Phase I Archeological Survey, review of previous archeological surveys, and other available sources of information, OEA determined that the construction and operation of the proposed rail line would have no effect on historical properties listed on or eligible for listing on the National Register. Pursuant to 36 C.F.R. § 800.4(d)(1), OEA informed the SHPO of its finding on July 10, 2015. By telephone and by email on October 2, 2015 (see Appendix B), the SHPO informed OEA that the SHPO has concurred with OEA's finding of no historic properties affected.

3.7 Air Quality

3.7.1 Definition of the Resource

Air quality is defined as the degree to which the ambient air is pollution free, assessed by measuring a number of pollution indicators. Air quality can be affected in many ways by the pollution emitted from stationary, mobile, and naturally occurring sources. Stationary sources include factories, power plants, and smaller sources such as dry cleaners and body shops. Mobile sources of pollution include cars, buses, planes, trucks, and trains. Windblown dust and volcanic eruptions are examples of naturally occurring pollution sources.

The Clean Air Act provides the principal framework for national, state, and local efforts to protect air quality. Under the Clean Air Act, U.S. EPA is responsible for setting standards, also known as National Ambient Air Quality Standards (NAAQS), for pollutants considered harmful to people and the environment. U.S. EPA is also responsible for ensuring that these air quality standards are met or attained (in cooperation with state, tribal, and local governments) through national standards and

strategies to control pollutant emissions. TDEC is responsible for enforcing state and federal environmental laws within Tennessee. Under TDEC, the Division of Air Pollution Control establishes emission standards and procedural requirements to monitor industries in the state through the issuance of construction and operating permits. The Division also maintains surveillance of the state's ambient air sampling stations to monitor pollutant levels relative to the NAAQS.

The NAAQS include primary and secondary standards. Primary standards protect against adverse health effects; secondary standards protect against welfare effects, such as damage to farm crops and vegetation, and damage to buildings. The six criteria pollutants addressed in the NAAQS are carbon monoxide, nitrogen dioxide, lead, ozone (or smog), particulate matter, and sulfur dioxide. If the levels of these pollutants are higher than what is considered acceptable by U.S. EPA, the area in which the level is too high is called a nonattainment area. Table 3-5 shows primary and secondary NAAQS for the six criteria pollutants.

Typically, the potential for air quality impacts from the construction and operation of a new rail line is proportional to the increase in train traffic that would occur as a result. The Board's environmental rules set thresholds for the analysis of air quality impacts based on the expected volume of train traffic that would result from a proposed action. As specified at 49 C.F.R. § 1105.7, the threshold for areas that are in attainment for all NAAQS is an increase of at least eight trains per day, and the threshold for nonattainment areas is an increase of at least three trains per day. OEA does not typically conduct a detailed air quality analysis for projects that would result in increased train traffic below these thresholds because the incremental increase in air pollution that could occur as a result of additional train traffic would be insignificant.

3.7.2 Existing Conditions

OEA used the NAAQS as a guideline for assessing the existing environment and the impacts of the proposed project. Lake County, Tennessee, and the surrounding counties (Obion and Dyer Counties, Tennessee; Pemisco and New Madrid Counties, Missouri; and Fulton County, Kentucky) are designated as in attainment for all NAAQS. Therefore, the current air quality in the proposed project area is not a concern.

For each alternative considered in this Draft EA, the amount of Mobile Source Air Toxics (MSATs) emitted would be proportional to the amount of truck vehicle miles traveled and rail activity, assuming that other variables (e.g., travel not associated with the intermodal facility) are the same for each alternative. Additional MSAT emissions from increased rail activity could be offset by reduced truck traffic due to increased use of rail for outbound freight and from increased speeds on area highways due to the decrease in truck traffic. Additionally, MSAT emissions are expected to decline due to the effect of U.S. EPA engine and fuel standards begun in 2008. The emissions standards for newly built locomotives require the use of high-efficiency catalytic after-treatment technology and take effect in 2015.

Table 3-5 National Ambient Air Quality Standards				
Pollutant	Primary/Secondary	Averaging Time Periods	Level	Form
Carbon Monoxide	Primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Lead	Primary and Secondary	Rolling 3-month average	0.15 µg/m ³	Not to be exceeded
Nitrogen Dioxide	Primary	1-hour	100 ppb	98 th percentile, averaged over 3 years
	Primary and Secondary	Annual	53 ppb	Annual mean
Ozone	Primary and Secondary	8-hour	0.075 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
PM _{2.5}	Primary	Annual	12 µg/m ³	Annual mean, averaged over 3 years
	Secondary	Annual	15 µg/m ³	Annual mean, averaged over 3 years
	Primary and Secondary	24-hour	35 µg/m ³	98 th percentile, averaged over 3 years
PM ₁₀	Primary and Secondary	24-hour	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide	Primary	1-hour	75 ppb	99 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Notes:

- PM = particulate matter
- ppb = parts per billion
- ppm = parts per million
- ug/m³ = microgram per cubic meter

3.7.3 Environmental Consequences

The impact of railroad operations on air quality depends upon the level of train traffic. In its petition, NWTRA anticipates that trains on the proposed rail line would initially transport fewer than 1,000 carloads per year. During the initial years of operation, NWTRPA estimates that traffic on the proposed rail line would average approximately 20 carloads per week, or about two roundtrips per week, a total of four trains per week. This level of train traffic is below OEA's thresholds for conducting a detailed air quality analysis. Accordingly, rather than quantifying the potential impacts of the proposed rail line to air quality, OEA relied on qualitative descriptions of these impacts in its assessment.

3.7.3.1 Alternative A — NWTRPA’s Preferred Alternative

The location of the proposed rail line is in Lake County, Tennessee. Lake County and the surrounding counties have been designated by U.S. EPA as in attainment for all NAAQS. The contribution to ambient air pollutant concentrations due to operation of Alternative A would not exceed the NAAQS because the increase in rail activity would result in a small emission increase that would be distributed over the length of the rail corridor. In addition, as federal emission standards require continued improvements to newly manufactured and remanufactured locomotive engines, the amount of pollutants released by rail operations should continue to decrease, offsetting the emissions associated with the expected increase in rail activity.

The amount of air pollutants, including MSATs, emitted due to operation of the proposed rail line would be proportional to the amount of truck vehicle miles traveled and rail activity, assuming that other variables (e.g., travel not associated with the intermodal facility) are the same. Additional emissions from increased rail activity could be offset somewhat by reduced truck traffic due to increased use of rail for freight and increased speeds/better fuel efficiencies on area highways due to the decrease in truck traffic. Additionally, MSAT emissions could decline due to the 2008 U.S. EPA engine and fuel standards. The proposed rail line is exempt from air quality permitting requirements since the equipment to be used during rail activity consists of mobile sources.

Short-term impacts are anticipated from the construction project. These would be limited to a local, temporary increase in construction-related traffic and to the potential emission of fugitive dust associated with land clearing and transportation of construction-related materials. Air emissions related to construction and operation activities are unlikely to result in significant adverse impacts because these impacts would be minimized by abiding by federal and state permitting requirements and by adopting BMPs during construction, as specified in Mitigation Measures 22-24.

3.7.3.2 Alternative B

The same air quality impacts from the construction and operation of the proposed rail line considered for the Alternative A would also apply under Alternative B.

3.7.3.3 Alternative C

The same air quality impacts from the construction and operation of the proposed rail line considered for the Alternative A and Alternative B would also apply under Alternative C.

3.7.3.4 No Action Alternative

Under the No Action Alternative, NWTRPA would not construct the proposed rail line. Therefore, no new impacts relating to air quality would occur within the proposed rail corridor. However, NWTRPA would continue to develop and operate the Port of Cates Landing and the Lake County Industrial Park. This could lead to an increase in air emissions on regional highways as truck traffic increases to meet demands of the customers at the industrial park. Assuming that the Port of Cates Landing and Lake County Industrial Park continue to develop as expected, cargo that would have

been shipped by rail would have to be carried by truck. Assuming an initial traffic level of 1,000 rail cars per year and a conversion factor of four trucks per rail car, the lack of a rail connection could increase truck traffic by about 4,000 trucks per year, or approximately 14 trucks per day. On average, current truck traffic levels, without projected port or industrial park traffic, are two trucks per day for 2012 with an estimated increase to four trucks per day by 2032 (TDOT, 2007). Most truck traffic would be concentrated on State Route 22 since it is the most direct route to reach State Route 78, but trucks might also use State Route 212 and various county roads.

Although the addition of these trucks would be unlikely to cause the NAAQS to be exceeded in the project area, OEA concludes that the air quality impacts under the No Action Alternative would be greater than under the Action Alternatives if development of the Port of Cates Landing and Lake County Industrial Park continues as planned.

3.8 Noise and Vibration

Noise guidelines and regulations have been established to protect citizens from potential hearing damage and various other adverse physiological, psychological, and social effects associated with noise. Under NEPA, the Noise Control Act of 1972, and EO 12088, *Federal Compliance with Pollution Control Standards*, the environmental impact of noise produced by the Action Alternatives is evaluated.

3.8.1 Definition of the Resource

Noise is generally defined as unwanted sound. The intensity of loudness of sound is measured in units called decibels (dB). To account for the way the human ear hears sound, the sound level is adjusted to A-weighted decibels (dBA). A noise level change of 3 dBA is barely perceptible to average human hearing, while a 10 dBA increase is perceived to be a doubling of noise loudness. To provide context to compare the magnitude of noise levels, Table 3-6 presents examples of sources of noise and their loudness in dBA.

Sound intensity decreases as it travels away from the source. The general rule-of-thumb for the attenuation of sound from line sources such as trains traveling on a rail line is a reduction of 3 dBA per doubling of distance from the source, beginning at 50 feet from the source. Natural and man-made barriers can block sound. Therefore, the sound level that a person hears depends upon the topography, level of development, and vegetation cover in an area, as well as how far away the person is from the source of the sound.

Noise is often measured in terms of the day-night average noise level (DNL), which is the average sound level (in dBA) over a 24-hour time period. The DNL includes a 10 dBA adjustment factor for noise that occurs between 10:00 p.m. and 7:00 a.m. to account for the fact that noise is a greater nuisance during the night. For reference, Figure 3-6 shows typical noise levels (DNL) for selected community environments.

Table 3-6 Typical Sound Levels Measured in the Environment and Industry	
Source	Noise Level (dBA)
Shotgun (at shooter’s ear); Carrier Flight Deck	140 (painfully loud)
Civil Defense Siren (100 feet away)	130
Jet Takeoff (200 feet away)	120 (threshold of pain)
Loud Rock Music; Rock Music Concert; Train Horn (maximum)	110
Pile Driver (50 feet away)	100 (very loud)
Train Horn (minimum)	96
Ambulance Siren (100 feet away); Boiler Room	90
Pneumatic Drill (50 feet away); Noisy Restaurant	80
Busy Traffic; Hair Dryer; Freeway Traffic	70 (intrusive)
Normal Conversation (5 feet away); Data Processing Center	60
Light Traffic (100 feet); Rainfall; Typical Suburban Background	50 (quiet)
Bird Call (distant); Living Room; Library	40
Soft Whisper (5 feet away); Quiet Bedroom	30
Recording Studio	20
Normal Breathing; Rustling Leaves	10 (threshold of hearing)

Note:
dBA = A-weighted decibel

Vibration is often described as ground-born noise. Vibration is a shaking of the ground that can cause buildings to shake and rumbling to be heard inside structures. Vibrations can be measured in terms of vibration decibels (VdB). Most people would not feel vibrations of 65 VdB or less, while a vibration level of 80 VdB would be considered annoying. Minor cosmetic damage to structures can occur at 100 VdB.

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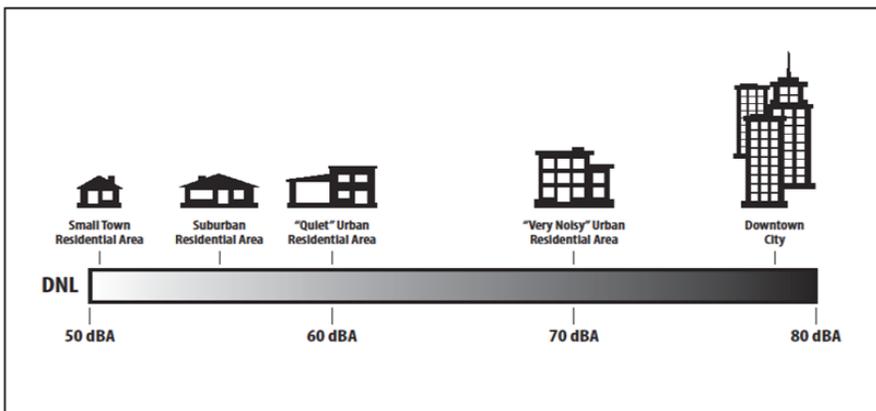


Figure 3-6. Typical Day-Night Average Noise Levels

Source: U.S. Environmental Protection Agency. 1974. Web page: Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Available: http://www.fican.org/pdf/EPA_Noise_Levels_Safety_1974.pdf. Accessed: April 14, 2015.

3.8.2 Existing Conditions

The proposed rail line would cross a generally rural area. Currently, the primary sources of noise in the project area are agricultural equipment activities and limited roadway traffic. Noise levels are higher in areas with higher population densities, such as near Tiptonville, and near existing industrial areas, such as the Port of Cates Landing.

To estimate existing noise levels in the project area, OEA reviewed a study conducted in 2008 by Bowlby & Associates, Inc., as part of the environmental review of the TDOT's improvements to State Route 22 (TDOT, 2008c). The study used the FHWA Traffic Noise Model to calculate existing sound levels along State Route 22. Table 3-7 summarizes the existing sound levels at various locations in the project area.

3.8.3 Environmental Consequences

To evaluate the potential noise impacts from construction and operation of the proposed rail line, OEA identified the noise-sensitive receptors (e.g., schools, libraries, hospitals, residences, retirement communities, nursing homes) in the vicinity of the proposed rail line. OEA performed a noise contour analysis to determine if the operation of the proposed rail line would result in adverse noise impacts on the noise-sensitive receptors. Potential impacts were analyzed based on the following criteria:

- An increase in noise exposure of 3 dBA or more
- An increase to a noise level of 65 DNL or greater

**Table 3-7
Existing Sound Levels**

Receiver Location	Existing Sound Level (dBA)	Relationship to Proposed Rail Line Corridor
Donaldson Road North	43	Immediately adjacent to Alternative C alignment
Donaldson Road South	42	Immediately adjacent to Alternative C alignment
State Route 22 (near Tipton Street)	39	Approximately 1,740 feet southwest of Alternative C “wye” junction
SR 78	53	Immediately adjacent to Alternative C “wye” junction
Carl Perkins Highway	56	Approximately 3,130 feet south of Alternative C “wye” junction
Lake Street	47	Approximately 2,930 feet south of Alternative C “wye” junction
Martin Road	47	Approximately 2,320 feet south-southeast of Alternative C “wye” junction
Wright Street	46	Approximately 2,320 feet south-southeast of Alternative C “wye” junction
Church Street	51	Approximately 3,475 feet south-southeast of Alternative C “wye” junction
Parks Road (west of State Route 22)	41	Approximately 449 feet west of Alternative C alignment and approximately 2,655 feet west of Alternative A and B alignments
Parks Road (east of State Route 22)	37	Approximately 628 feet east of Alternative C alignment and approximately 1,625 feet west of Alternative A and B alignments
State Route 22 (at Parks Road)	51	Approximately 1,100 feet west of Alternative C alignment and approximately 3,215 feet west of Alternative A and B alignments
Cates Landing-New Markham Road West	38	Approximately 780 feet west of Alternative C alignment and approximately 4,520 feet west of Alternative A and B alignments
Cates Landing-New Markham Road East	38	Approximately 473 feet east of Alternative C alignment and approximately 3,336 feet west of Alternative A and B alignments
State Route 22 (north of Vaughn Road)	39	Approximately 380 feet east of Alternative C alignment and approximately 2,820 feet west of Alternative A and B alignments

Source: Tennessee Department of Transportation. 2008c, February 19. *Air Quality and Noise Evaluation for State Route 22 from State Route 21 to Cates Landing Road, Lake County, Tennessee*, Prepared by Bowlby & Associates, Inc., Franklin, TN, January.)

Notes:

dBA = A-weighted sound level
SR = State Route

Both of these two components are used to determine an upper bound of any area of potential noise impact. Both components must be met to cause an adverse noise impact (49 C.F.R. §1105.7 (e)(6); Coate, 1999). That is, the Board would find an adverse noise impact in any location the proposed rail line noise levels both increase by 3 dBA or more and are equal to at least 65 DNL. If the estimated noise levels would exceed these criteria, the number of affected receptors would then be estimated.

OEA developed the 65 DNL noise contours for the proposed rail line based on the assumption that train traffic would not exceed one train per day, that trains would operate between 7:00 am and 10:00 pm 5 days per week and that train speeds would not exceed 20 miles per hour. Noise levels would be greatest at rail crossovers at the wye junction connection with the existing rail line and at road crossings, due to horn noise.

3.8.3.1 Alternative A — NWTRPA's Preferred Alternative

Very few noise-sensitive receptors were identified in the vicinity of Alternative A. These include residences along Parks Road (approximately 1,700 feet west of the line); residences along Wray Road (between 2,500 and 3,500 feet east of the line); the Northwest Correctional Complex (approximately 2,700 feet east of the proposed rail line); residences along State Route 22 (approximately 3,200 feet west of the proposed rail line); one residence along Cates Landing-New Markham Road (approximately 885 feet northeast of the proposed rail line); and residences south and east of Port Terminal Access Road (between 290 and 600 feet from the proposed rail line). None of these noise-sensitive receptors would experience adverse noise impacts as a result of construction and operation of Alternative A.

During construction, daytime noise levels in the project area would increase temporarily due to increased truck traffic and heavy equipment use. OEA is recommending Mitigation Measure 25, which would require that NWTRPA use industry BMPs to minimize noise during construction activities. If this mitigation measure is implemented, temporary noise generated during construction of the proposed rail line should have minimal, if any, impacts on noise-sensitive receptors.

The results of OEA's noise model indicate that the 65 DNL contour for the operation of the proposed rail line under Alternative A would extend approximately 5 to 10 feet outward from the edge of the rail line (Figure 3-7). This distance would increase to approximately 20 feet at all rail crossovers and at-grade road crossings. Because the right-of-way of the proposed rail line would be approximately 150 feet in width at its narrowest point, the 65 DNL contour would fall well within the rail right-of-way. It is possible that train traffic levels may increase in the future as the Port of Cates Landing and the Lake County Industrial Park develop and expand. OEA's noise model results indicated that an increase in train traffic levels would be unlikely to result in noise impacts to noise-sensitive receptors. The model predicted that the 65 DNL contour would still be well within the rail

right-of-way even if train traffic level were to increase to one round trip per day due to future demand at the Port of Cates Landing and the Lake County Industrial Park.

Under Alternative A, the closest noise-sensitive receptor to the proposed rail line would be a residence located approximately 290 feet from the rail line at the point where the rail line would enter the campus of the Port of Cates Landing, well outside of the 65 DNL contour. The current noise level at this noise-sensitive receptor is not precisely known, but can be inferred from the measurements taken during the 2008 study conducted by TDOT (TDOT, 2008c). That study found noise levels at Cates Landing-New Markham Road (approximately 3,500 feet south of the noise-sensitive receptor) to be 38 DNL. Because the entire area is largely rural and undeveloped, it is likely that the current noise level at the closest noise-sensitive receptor is also approximately 38 DNL. OEA's noise model predicted that, under Alternative A, the noise level at the closest noise-sensitive receptor would increase to 42 DNL, an increase of 4 DNL. Other noise-sensitive receptors would be located further from the proposed rail line and would, therefore, experience smaller increases in noise levels as a result of rail operations under Alternative A.

To evaluate potential vibration impacts, OEA followed the approach of the Federal Transit Administration, which typically uses a distance of 150 feet from the source to the potential receptor as the point at which impacts could be experienced for residential land uses. The residential area south of Port Terminal Access Road is the closest potential receptor, but the intervening distance is anticipated to be greater than 150 feet. Therefore, no adverse vibration impacts would occur as a result of rail operations.

3.8.3.2 Alternative B

Due to the close proximity of routes proposed under Alternatives A and B, similar conditions would be expected for both alternatives (see Figure 3-7). This is especially true for the identical routes proposed on the Port property north of Cates Landing-New Markham Road. Therefore, the potential noise impacts would be the same under Alternative B as under Alternative A. No noise-sensitive receptors would be adversely affected because all potential receptors would be located outside of the 65 DNL contour. It is possible that train traffic levels may increase in the future as the Port of Cates Landing and the Lake County Industrial Park develop and expand. OEA's noise model results indicated that an increase in train traffic levels would be unlikely to result in noise impacts to noise-sensitive receptors. The model predicted that the 65 DNL contour would still be well within the rail right-of-way even if train traffic level were to increase to one round trip per day due to future demand at the Port of Cates Landing and the Lake County Industrial Park.

3.8.3.3 Alternative C

If Alternative C were constructed, the proposed rail line would be closer to residential areas than under Alternative A or Alternative B, but would not result in adverse noise impacts to residences or other noise-sensitive receptors. Under this alternative, the closest noise sensitive receptor would be

a residence located approximately 180 feet from the rail line. This residence would not experience adverse noise impacts related to the construction and the operation of the proposed rail line because it would still be located well outside of the 65 DNL contour (see Figure 3-7).

Under Alternative C, the 65 DNL contour would extend approximately 5 to 10 feet outward from the edge of the rail line except at rail crossovers and at-grade road crossings, where it would extend approximately 20 feet outward. Because the right-of-way of the proposed rail line would be approximately 150 feet wide at its narrowest point, the 65 DNL contour would fall well within the rail right-of-way. It is possible that train traffic levels may increase in the future as the Port of Cates Landing and the Lake County Industrial Park develop and expand. OEA's noise model results indicated that an increase in train traffic levels would be unlikely to result in noise impacts to noise-sensitive receptors. The model predicted that the 65 DNL contour would still be well within the rail right-of-way even if train traffic level were to increase to one round trip per day due to future demand at the Port of Cates Landing and the Lake County Industrial Park.

Current noise levels along the Alternative C corridor would be between 37 and 51 DNL. If the proposed rail line were constructed, noise levels would increase to approximately 54 DNL to 62 DNL due to rail operations. No noise-sensitive receptors would experience an increase in noise to a level greater than the 65 DNL threshold.

Because the closest residence would be more than 150 feet from the proposed rail line under Alternative C, no adverse vibration impacts would occur as a result of rail operations.

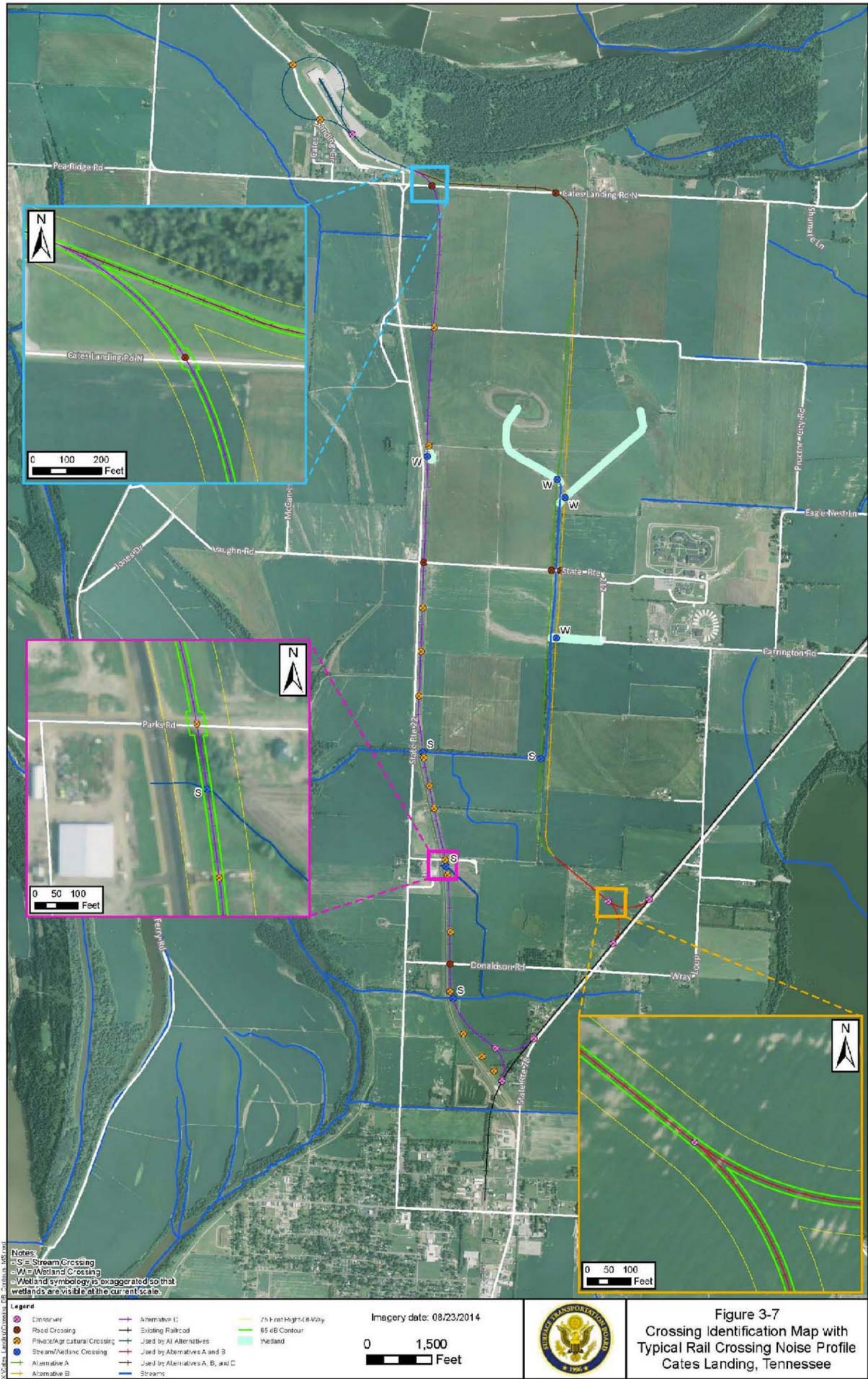
3.8.3.4 No Action Alternative

Under the No Action Alternative, the rail line would not be constructed, and no increase in noise or vibration along the proposed rail right-of-way would be experienced. However, NWTRPA would continue to develop and operate the Port of Cates Landing and the Lake County Industrial Park. Therefore, noise associated with industrial activity at those facilities and with increased truck traffic on State Route 22 could increase, with possible impacts for residences and other noise-sensitive receptors.

3.9 Environmental Justice and Socioeconomics

3.9.1 Definition of the Resource

Socioeconomics is the study of how economics affects and is shaped by social processes. An important component of socioeconomics as it applies to the analysis of environmental impacts is environmental justice. The U.S. EPA defines environmental justice as the "fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or



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socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies” (U.S. EPA, 2014).

3.9.2 Existing Conditions

Lake County is the northwestern-most county in Tennessee. As of 2010, Lake County was the fifth least-populated county in Tennessee (Tennessee State Data Center, 2014). As of 2013, Lake County, Tennessee, had a population of 7,631, a decrease of 2.60% from a population of 7,832 in 2010. Minority populations make up 32.7% of the Lake County population, compared to 26.0% for Tennessee. U.S. Census Bureau statistics are given in Table 3-8.

Lake County’s economy is based on agriculture, with corn, cotton, soybeans, and wheat the major crops (USACE, 2004). The Illinois Central Railroad also plays an important role in the county’s economy (Tennessee Historical Society, 1998). Additionally, Lake County’s economy relies heavily on Reelfoot Lake. A 2007 study estimated that Reelfoot Lake visitors spent approximately \$2.1 million on trip expenditures within 30 miles of the lake in 2006 (Bray, Jones, and Burton, 2007).

Per capita income in 2000 for Lake County was \$12,042, compared to \$24,409 for the state of Tennessee (see Table 3-8) and \$28,155 for the national average. Individuals with incomes below the poverty level in 2009-13 accounted for 31.7% of all persons in the county, compared to 17.6% for Tennessee and 15.4% for the national average (U.S. Census Bureau, 2014). The unemployment rate for 2013 was 7.4% for the nation, 8.2% for the state, and 10.4% for Lake County (United States Bureau of Labor Statistics, 2014). Due to the low per capita income in Lake County, OEA considers the project area to constitute an environmental justice community, meaning that disproportionate adverse impacts to this community should be avoided.

The Port of Cates Landing complex is located within a federal government “qualified census tract” for New Markets Tax Credit opportunities (Northwest Tennessee Regional Economic Development Group, 2015). The New Markets Tax Credit Program provides tax incentives to attract investment capital to low-income communities. The goal of the program is for investment capital to revitalize low-income communities by creating more jobs and more manufacturing, office, and retail space, which should eventually attract more investors (Community Development Financial Institutions Fund, 2015).

3.9.3 Environmental Consequences

This section addresses pertinent socioeconomic information, including demographic, income, and poverty-level data in the area that could be affected by the Action Alternatives and the No Action Alternatives.

Table 3-8 Lake County Statistics		
Lake County Statistic	Lake County	Tennessee
Population, 2013 estimate	7,631	6,549,352
Population, 2010 (April 1) estimates base	7,832	6,346,275
Population, percent change, April 1, 2010 to July 1, 2013	-2.6%	3.2%
Population, 2010	7,832	6,346,105
Persons under 5 years, percent, 2013	4.5%	6.1%
Persons under 18 years, percent, 2013	15.6%	22.8%
Persons 65 years and over, percent, 2013	14.7%	15.1%
Female persons, percent, 2013	36.1%	51.3%
White alone, percent, 2013 (a)	69.4%	78.9%
Black or African American alone, percent, 2013 (a)	28.1%	17.1%
American Indian and Alaska Native alone, percent, 2013 (a)	0.5%	0.4%
Asian alone, percent, 2013 (a)	0.2%	1.7%
Native Hawaiian and Other Pacific Islander alone, percent, 2013 (a)	<0.1%	0.1%
Two or More Races, percent, 2013	1.8%	1.7%
Hispanic or Latino, percent, 2013 (b)	2.0%	5.0%
White alone, not Hispanic or Latino, percent, 2013	67.8%	74.6%
Living in same house 1 year & over, percent, 2009-2013	78.7%	84.6%
Foreign born persons, percent, 2009-2013	2.2%	4.6%
Language other than English spoken at home, percent age 5+, 2009-2013	2.9%	6.6%
High school graduate or higher, percent of persons age 25+, 2009-2013	70.6%	84.4%
Bachelor's degree or higher, percent of persons age 25+, 2009-2013	7.0%	23.8%
Veterans, 2009-2013	563	484,901
Mean travel time to work (minutes), workers age 16+, 2009-2013	18.9	24.3
Housing units, 2013	2,607	2,869,323
Homeownership rate, 2009-2013	55.4%	67.8%
Housing units in multi-unit structures, percent, 2009-2013	24.2%	18.3%
Median value of owner-occupied housing units, 2009-2013	\$72,700	\$139,200
Households, 2009-2013	2,201	2,475,195
Persons per household, 2009-2013	2.41	2.52
Per capita money income in past 12 months (2013 dollars), 2009-2013	\$12,042	\$24,409
Median household income, 2009-2013	\$27,115	\$44,298
Persons below poverty level, percent, 2009-2013	31.7%	17.6%

Source: U.S. Census Bureau. 2014. State and County QuickFacts. Data derived from Population Estimates, American Community Survey, Census of Population and Housing, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.

3.9.3.1 Alternative A — NWTRPA’s Preferred Alternative

The majority of the project would occur in rural areas. Minor impacts to residents along the proposed rail line access routes, such as elevated noise levels, would be expected. Positive impacts could include employment opportunities associated with the construction (i.e., temporary employment) of the rail line and operation (i.e., permanent employment) of the harbor, port facility, and industrial area (USACE, 2004).

Projected long-term impacts to the region from the overall Port of Cates Landing project include job creation, business revenue, transportation cost savings, safety benefits, and reductions in fossil fuel use. Within 3 to 5 years of commencement of operations at the Port of Cates Landing, a total of 1,700 new jobs would be created in support of port and marine operations. The initial construction activities at the Lake County Industrial Park and firms supporting Port operations would create an additional 234 temporary jobs. Other new jobs, indirectly related to the Port of Cates Landing or induced by the project throughout the Region (i.e., Lake, Dyer, and Obion Counties), would total 717. New opportunities for import and export trade would result in the retention of 2,293 potentially at-risk jobs. As a result of the Port, the region’s unemployment would be reduced by 6.5%.

The new economic opportunities are expected to increase business revenue in the Region on a long-term basis by approximately \$259.2 million and personal income by \$59.7 million to \$87.3 million, annually. A large number of these new jobs would be in the transportation, warehousing, and manufacturing sectors, for which wages are significantly higher than the average wage paid in the region. These new wages would increase individual wages in Lake County by 62.84%, in Obion County by 37.6%, and in Dyer County by 22.54% (NWTRPA, 2009).

3.9.3.2 Alternative B

Socioeconomic impacts under Alternative B are expected to be similar to those described for Alternative A.

3.9.3.3 Alternative C

Socioeconomic impacts under Alternative C are expected to be similar to those described for Alternative A.

3.9.3.4 No Action Alternative

Under the No Action Alternative, NWTRPA would not construct the proposed rail line. Therefore, there would be no impact to issues of environmental justice and socioeconomics. NWTRPA would continue to develop and operate the Port of Cates Landing and the Lake County Industrial Park.

3.10 Hazardous Waste Sites and Transportation of Hazardous Materials

3.10.1 Definition of the Resource

A hazardous waste site is an uncontrolled or abandoned place where hazardous waste is located. The U.S. EPA broadly defines hazardous waste as a waste that is dangerous or potentially harmful to human health or the environment. Hazardous materials, on the other hand, are substances that have, or would have when combined with other materials, a harmful effect to human health or the environment. Stationary hazardous materials are primarily regulated at the federal level under the Comprehensive Environmental Response, Compensation and Liability Act of 1980; the Resource Conservation and Recovery Act; and the Superfund Amendments and Reauthorization Act. At the state level, TDEC regulates hazardous materials/waste in accordance with the Tennessee Hazardous Waste Management Act of 1983. Hazardous materials in transit are those identified under comprehensive hazardous materials transportation laws and United States Department of Transportation (U.S. DOT) regulations administered through the Pipeline and Hazard Materials Safety Administration and the FRA.

3.10.2 Existing Conditions

OEA anticipates that the only potentially hazardous substances that could currently be present within the Action Alternative corridors are agricultural chemicals used in routine crop applications. The U.S. EPA Envirofacts database lists 43 sites with environmental records within Lake County. Regulatory records on file for these sites — all outside the immediate vicinity of the Action Alternative corridors — relate to air emissions, storm water permits, hazardous waste management, and federal and state hazardous waste reporting.

An EA completed for the nearby Port of Cates Landing site indicated that database searches and inquiries with TDEC did not identify any active or inactive hazardous waste sites within 4 miles of the project area (USACE, 2004). However, two illegal landfills were identified north of the harbor site and the proposed rail construction. According to that EA, the landfills contained household waste, household hazardous waste, used tires, and empty 55-gallon drums. These areas were reported to TDEC and avoided during construction of the port facility. They are located north of the project corridors of Alternatives A, B, and C and would have no effect on construction of the proposed rail line.

Based on information presented in a June 26, 2008, letter from TDOT to FHWA, one known underground storage tank (UST) site was located along the proposed route of the State Route 22 construction project, which is adjacent to the rail alignment proposed under Alternative C. An Environmental Data Resources, Inc., search was conducted, and the USTs were found to be registered to Donnie Owens Shop, with an owner address of 1409 Church Street, Tiptonville, Tennessee 38079 (Environmental Data Resources, 2015). This location is within the limits of Tiptonville and more than 0.5 miles south of any of the Action Alternative corridors. According to the TDEC UST database, the two registered tanks were last used in July 1988 and subsequently

removed from the ground. Impacts or remnant environmental issues due to the listed USTs by the proposed construction and operation of the railroad are not anticipated.

In May 2013, Delta Exploration and Assessment, Inc. (Delta) conducted a Phase I Environmental Site Assessment of 350.2 acres of agricultural land that represents the first phase of the Lake County Industrial Park (Delta, 2013). Proposed rail alignments for all three Action Alternatives cross portions of this property. As part of this Phase I Environmental Site Assessment, Delta obtained standard federal and state environmental records for the area in the form of an Environmental Data Resources' Radius Map Report. This integrated database report listed one clandestine drug lab site at 40 Cates Landing Road, which is located within the residential neighborhood between the Port of Cates Landing property and Cates Landing-New Markham Road. This site had a reported quarantine date of August 17, 2012, and a clean-up tier designation of 3.³ No other landfills, USTs, or other sites with environmental records were identified within respective American Society for Testing and Materials minimum search distances.

3.10.3 Environmental Consequences

The nature and magnitude of potential impacts associated with hazardous materials and wastes depends on the toxicity, transportation, storage, and disposal of these substances.

Hazardous materials and hazardous waste impacts are considered significant if the storage, use, transportation, or disposal of these substances substantially increases the human health risk or environmental exposure. The following sections outline the impacts from hazardous materials and wastes anticipated from the proposed alternatives. A brief summary of significant regulatory considerations for the construction and operation of the proposed rail line is also provided.

3.10.3.1 Alternative A — NWTRPA's Preferred Alternative

No significant or adverse impacts from hazardous materials or wastes are anticipated from implementing Alternative A. There are no current plans to transport hazardous materials or wastes, nor would an increase in such materials or wastes result from the construction of Alternative A.

Although it is not anticipated based on the current and known historical use of the area, if unknown hazardous materials or waste sites are identified within the Alternative A corridor during construction, NWTRPA would dispose of these materials or wastes in accordance with federal and state regulations and in consultation with appropriate agencies (see Mitigation Measures 29-32).

NWTRPA has no immediate plans to transport hazardous materials or wastes during normal railroad operations. In the event that hazardous materials or wastes are transported in the future, NWTRPA

³ According to TDEC's Cleanup Response and Documentation Guidance for Properties Quarantined Because of Clandestine Methamphetamine Laboratory Activities, a Tier 3 Cleanup designation indicates "crime scene evidence suggests that numerous Red-P and/or Nazi 'cooks' (methods), or precursors and reagent production have occurred periodically over an extended period of time, many weeks to several months. Chemical spills, staining, and burn pits are often observed at these locations. An example of when this Tier designation would be appropriate would be homes and rental property where owners or tenants manufacture methamphetamine periodically."

would abide by all applicable federal and state regulations regarding the transportation of hazardous materials and would notify and coordinate with appropriate regulatory authorities in the event of an incident involving hazardous materials, as specified in Mitigation Measures 29-32.

3.10.3.2 Alternative B

There are no significant or adverse impacts from hazardous materials or wastes anticipated from implementing Alternative B, as there are no current plans to introduce new types or significantly increase quantities of hazardous materials/wastes along the proposed rail line route. The same regulatory requirements for the construction and operation of the proposed rail line considered for Alternative A would also be applicable under Alternative B.

3.10.3.3 Alternative C

There are no significant or adverse impacts anticipated from implementing Alternative C, as there are no current plans to move hazardous materials/wastes along the proposed rail line route. The same regulatory requirements for the construction and operation of the proposed rail line that are applicable for the Alternative A and Alternative B would also be applicable under Alternative C.

3.10.3.4 No Action Alternative

Under the No Action Alternative, NWTRPA would not construct the proposed rail line. However, NWTRPA would continue to develop and operate the Port of Cates Landing and Lake County Industrial Park. Although NWTRPA does not have any current plans to transport hazardous materials or wastes, should such materials be transported in the future, the use of truck transport instead of rail transport could increase the risk of spills or releases relative to the Action Alternatives.

3.11 Energy Resources

3.11.1 Definition of the Resource

Energy resources are any renewable or nonrenewable resource that is used as an energy source. Examples of renewable energy resources include sun and wind. Oil is an example of a nonrenewable resource and is the major energy resource to be considered in association with the proposed rail construction project.

3.11.2 Existing Conditions

Diesel-powered truck transportation is the current means of moving products to and from the Port of Cates Landing. According to the FHWA, trucking accounted for nearly three-quarters of freight transportation energy consumption in 2009. In 2007, the Texas Transportation Institute issued a report detailing the fuel efficiency of various modes of transportation (Texas Transportation Institute, 2009). As summarized in Table 3-9, fuel efficiency in rail freight transportation far exceeds that of over-the-road truck freight transportation. In fact, fuel efficiency in rail freight transportation is second only to barge transportation, which is by far the most fuel-efficient mode of freight transportation.

Table 3-9 Fuel Efficiency Comparison for Transportation Modes	
Transportation Mode	Tons-Miles/Gallon
Inland Towing	576
Railroad	413
Truck	155

Source: Texas Transportation Institute, Center for Ports & Waterways. (December, 2007; Amended March, 2009). A Modal Comparison of Domestic Freight Transportation Effects on the General Public Final Report, prepared for the U.S. Maritime Administration and the National Waterways Foundation. Retrieved March 10, 2015, from http://www.americanwaterways.com/press_room/news_releases/NWFStudy.pdf

No major energy transfer corridors were identified within the project area from review of the U.S. Energy Information Administration Website. However, an overhead 161-kV electrical transmission line was identified north of Tiptonville on Google Earth as well as by a site survey conducted in October 2014. This line intersects the southern end of the rail line route proposed under Alternative C.

3.11.3 Environmental Consequences

Energy use and savings can be difficult to measure. The following sections describe energy usage and impacts during construction and operation of the proposed rail line. Consideration was also given to any potential impacts the proposed rail line may present to existing energy distribution infrastructures within the Action Alternatives corridor.

3.11.3.1 Alternative A — NWTRPA’s Preferred Alternative

Under Alternative A, a temporary increase in energy consumption would occur in preparing the proposed route, constructing the rail line, and constructing and operating at-grade road crossings. Energy would be consumed by diesel-fueled heavy machinery, electric- or gas-powered hand tools, battery or generator electrical lighting, and traffic safety signals.

Temporary traffic delays could occur on roadways during construction. These delays could result in temporary, insignificant increases in energy use, including gasoline and diesel fuel.

Based on OEA’s review of Google Earth imagery of the route proposed under Alternative A, no impacts to significant energy distribution infrastructures along the corridor are anticipated. However, minor short-term disruptions to local utilities could be experienced during construction. As specified in Mitigation Measure 9, NWTRPA would coordinate with local utilities to avoid or minimize any impacts.

The proposed rail line is expected to improve overall energy efficiency. These improvements would benefit the entire area. Upon completion of the project, the new rail line would allow increased storage capacity of raw materials, making the transfer of goods to industries more efficient.

Rail transportation in itself is efficient, moving a ton of products about 413 miles using one gallon of fuel. Assuming that each rail car can carry approximately 100 tons of cargo and that rail can transport each ton of cargo approximately 413 miles using one gallon of diesel fuel, on average, the estimated fuel consumption of trains on the proposed rail line would be approximately 1,332 gallons of diesel fuel per year. By way of comparison, transporting the same amount of cargo by truck would consume approximately 3,548 gallons of diesel fuel per year, assuming an average fuel consumption of 155 ton-miles per gallon.

3.11.3.2 Alternative B

The same positive and negative impacts to energy resources considered for Alternative A would be applicable under Alternative B.

3.11.3.3 Alternative C

Although the overall positive and negative impacts to energy resources considered for Alternative A and Alternative B would also be applicable under Alternative C, additional inconveniences to local utilities and disruption of traffic patterns could be experienced under Alternative C due to the close proximity of the rail alignment with the right-of-way of State Route 22 and the need for more road crossings.

A 161-kV electrical transmission line bisects the southern portion of the alignment proposed under this alternative. As specified in Mitigation Measure 9, NWTRPA would coordinate construction activities with local utility managers to obtain proper authorization and design specifications for crossing the transmission line right-of-way.

3.11.3.4 No Action Alternative

Under the No Action Alternative, NWTRPA would not construct the proposed rail line. However, NWTRPA would continue to develop and operate the Port of Cates Landing and Lake County Industrial Park. The No Action Alternative would not affect energy transmission and distribution in the project area. Overall energy use, however, would increase relative the Action Alternatives because customers at the Port of Cates Landing and Lake County Industrial Park would continue to transport goods and materials by truck rather than rail. OEA estimates that, assuming a total estimated cargo of 1,000 rail carloads per year, truck transportation would consume approximately 3,548 gallons of diesel fuel per year, compared to approximately 1,332 gallons of diesel fuel per year under the Action Alternatives.

3.12 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

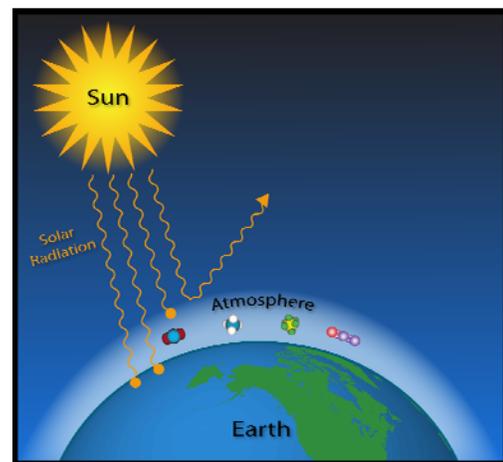
3.12.1 Definition of the Resource

Greenhouse gases (GHGs) are components of the atmosphere that trap heat relatively near the surface of the earth; via the greenhouse effect, they contribute to global warming. GHGs include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Most GHGs occur naturally in the atmosphere, but human activities such as fossil fuels combustion increase their concentration. According to U.S. EPA, freight railroads account for just 2.6% of U.S. GHG emissions from transportation services and just 0.7% from all U.S. GHG sources.

Global warming refers to the recent and ongoing rise in global average temperatures near Earth's surface. It is caused mostly by increasing concentrations of GHGs in the atmosphere. Global warming is causing climate patterns to change. However, global warming itself represents only one aspect of climate change. Climate change refers to any significant change in the measures of climate lasting for an extended period of time. In other words, climate change includes major changes in temperature, precipitation, or wind patterns, among other effects, that occur over several decades or longer.

According to U.S. EPA's climate change web site (<http://www3.epa.gov/climatechange/>), temperatures are rising, snow and rainfall patterns are shifting, and more extreme climate events, such as heavy rainstorms and record high temperatures, are taking place. Scientists are highly confident that many of these observed changes can be linked to the climbing levels of carbon dioxide and other GHGs in the atmosphere. The changing climate impacts society and ecosystems in a broad variety of ways. Among other potential impacts, climate change can increase or decrease rainfall, influence agricultural crop yields, affect human health, cause changes to forests and other ecosystems, or impact energy supply.

On October 30, 2009, U.S. EPA published a rule for the mandatory reporting of U.S. GHG emissions from sources that in general emit 25,000 metric tons or more of carbon dioxide equivalent per year in the United States. Smaller sources and certain sectors, such as the agricultural sector, and land use changes are not included. Implementation of 40 C.F.R. Part 98 is referred to as the Greenhouse Gas Reporting Program (GHGRP). 40 C.F.R. § 98 applies to direct GHG emitters, fossil fuel suppliers, industrial gas suppliers, and facilities that inject carbon dioxide underground for sequestration or other reasons.



The greenhouse effect contributes to global warming.

Source:
http://www.esrl.noaa.gov/gmd/outreach/carbon_toolkit/basics.html,
Barb Deluigi, NOAA

An estimated 85 to 90% of the total U.S. GHG emissions from over 8,000 facilities are covered by the GHGRP.

On December 7, 2009, U.S. EPA finalized its finding under Clean Air Act Section 202(a), which states that GHGs in the atmosphere endangers both the public health and the environment for current and future generations. The agency also found that the combined emissions of GHG from new motor vehicles and new motor vehicle engines are contributing to the buildup of GHGs in the atmosphere, and thus contribute to the climate change problem. The specific findings were:

- U.S. EPA found that the elevated concentrations of the six GHGs in the atmosphere — carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride — endanger both the public health and the public welfare of current and future generations.
- U.S. EPA found that the combined emissions of GHG from new motor vehicles and new motor vehicle engines contribute to the GHG air pollution, which endangers both public health and welfare.

U.S. EPA also found that the GHG emissions from new motor vehicles and motor vehicle engines contribute to the atmospheric concentrations of key GHGs and hence to the threat of climate change. U.S. EPA and the National Highway Traffic Safety Administration are taking coordinated steps to enable the production of clean vehicles, through reduced GHG emissions and improved fuel use from on-road vehicles and engines. The agencies finalized standards to extend the light-duty vehicle GHG National Program for model years 2017-25 and have adopted GHG regulations for heavy-duty engines and vehicles.

3.12.2 Environmental Consequences

3.12.2.1 Alternative A — NWTRPA's Preferred Alternative

The construction and operation of Alternative A would result in negligible GHG emissions relative to current levels. OEA estimates that the total estimated traffic on the proposed rail line would be approximately 1,000 car loads per year. Assuming that each rail car can carry approximately 100 tons of cargo and that rail can transport each ton of cargo approximately 413 miles using one gallon of diesel fuel, on average, the estimated fuel consumption of trains on the proposed rail line would be 1,332 gallons of diesel fuel per year. This is equivalent to approximately 13.52 metric tons of carbon dioxide per year from rail operations, based on a conversion factor of 10.15 kilograms of carbon dioxide per gallon of diesel fuel (U.S. Energy Information Administration, 2011).

Construction of Alternative A would require the use of machinery and equipment that would emit GHGs. These emissions would be temporary and insignificant.

3.12.2.2 Alternative B

The same impacts to GHG emissions and climate change from the construction and operation of the proposed rail line considered for the Alternative A would also apply under Alternative B.

3.12.2.3 Alternative C

The same impacts to GHG emissions and climate change from the construction and operation of the proposed rail line considered for the Alternatives A and B would also apply under Alternative C.

3.12.2.4 No Action Alternative

Under the No Action Alternative, NWTRPA would not construct the proposed rail line. However, NWTRPA would continue to develop and operate the Port of Cates Landing and Lake County Industrial Park. Without access to the rail transportation option, customers at those facilities would need to rely on truck transportation. OEA estimates that the total estimated traffic on the proposed rail line would be approximately 1,000 car loads per year, the equivalent of 4,000 trucks per year. Assuming that a truck can transport each ton of cargo approximately 155 miles using one gallon of diesel fuel, on average, the estimated fuel consumption for trucks would be approximately 3,548 gallons of diesel fuel per year. This is equivalent to approximately 36.02 metric tons of carbon dioxide per year from truck operations, based on a conversion factor of 10.15 kilograms of carbon dioxide per gallon of diesel fuel (USEIA, 2011). This is much higher than the estimated 1,332 metric tons of carbon dioxide that would be emitted under if the proposed rail line is constructed.

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4.0 CUMULATIVE EFFECTS

Cumulative effects are defined as “the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 C.F.R. § 1508.7). The effects of individual minor disturbances and other changes to the environment by humans would accumulate when the frequency of disturbances is so high that the ecosystem or human environment has not fully rebounded before another stressful event is introduced. The spatial and temporal crowding of such disturbances can result in cumulative effects. CEQ guidance states that for cumulative effects analysis to help the decision maker and inform interested parties, it must be limited through scoping to effects that can be meaningfully evaluated. The boundaries for evaluating cumulative effects should be expanded to the point at which the resource is no longer affected significantly or the effects are no longer of interest to affected parties.

4.1 Past, Present, and Reasonably Foreseeable Future Actions

Past human actions in the region have gradually converted the landscape from largely forested habitats to the agriculturally oriented community present today. Early settlers began clearing land for agriculture that has continued up to the present. Levees constructed for flood control along the Mississippi River protected adjacent lands from flooding, which allowed farmers to bring additional land into agricultural production. Agriculture continues to be the dominant industry in Lake County, but recreation and tourism associated with Reelfoot Lake increasingly provide an important effect on the local economy.



Lake County Industrial Park

Source:

http://wtia.org/home/templates/wtia_buildings/buildings/sitesfeature.php?Record=86

Future activities that were evaluated in the cumulative effects analysis included the development of Lake County Industrial Park, continued development of the Port of Cates Landing, future expansion of State Route 22, and expansion of the tourism and recreation industry surrounding Reelfoot Lake. Brief descriptions of these activities follow.

4.1.1 Lake County Industrial Park

The Lake County Industrial Park site covers more than 2,000 acres and is located adjacent to the Port of Cates Landing. Construction of Lake County Industrial Park would commence with a 350-acre

parcel located southeast of the Port of Cates Landing between Cates Landing-New Markham Road and State Route 22. Future development would more than quadruple the size of the industrial park. More than 1,700 acres of land is available that would extend the industrial area as far east as Proctor City Road and southward towards the Tennken Railroad. Future expansion of the industrial park would depend on growth and build-out of the Phase I area and general economic conditions in the region.

Development of the industrial park would spur great economic growth in the region. Between 1995 and 2008 at least nine different industries, representing a combined potential investment of more than \$3.5 billion and 2,200 jobs, expressed interest in the industrial site but selected other sites largely because the Port of Cates Landing was not available at the time. All three Action Alternatives for the proposed railway extension would pass through the planned industrial park. The development of the industrial park is not dependent on, but would benefit from, the proposed rail line extension.

4.1.2 Port of Cates Landing

The Port of Cates Landing has largely been completed, but additional infrastructure is needed to load and unload barge traffic to the port facilities. NWTRPA plans to install a 100-ton mobile crane with winch system at the barge terminal. Once fully operational, the Port of Cates Landing could accommodate barge traffic year round, and truck traffic would also increase. With recent upgrades to State Route 22, the Port of Cates Landing can handle increased truck traffic, but a fully functional multimodal facility would require rail access. The future growth of the Port of Cates Landing is not dependent on construction of the proposed rail line extension, but rail availability would greatly enhance transportation options.

4.1.3 State Route 22 Expansion

TDOT recently completed improvements to State Route 22 between Tiptonville and Cates Landing. Improvements included construction of two 12-foot travel lanes and 10-foot shoulders, on a 250-foot right-of-way; partial realignment of the route; and construction of a separated grade crossing at the Tennken Railroad. The unused portion of the right-of-way would allow for the future addition of two more 12-foot lanes and conversion of the road to a four-lane divided highway, when traffic volumes indicate the need. The State Route 22 expansion may be needed to handle increased traffic demand spurred by development of the Port of Cates Landing, Lake County Industrial Park, any other commercial development, and construction of a new access road connecting to the existing route. The future State Route 22 expansion is not dependent on construction of the proposed rail line extension.

4.1.4 Reelfoot Lake Recreation and Tourism Industry

Reelfoot Lake is one of the most important natural resources for conservation, recreation, and tourism in northwest Tennessee. Nearly 1 million people visit the lake each year to enjoy a variety of recreational pursuits, including bird watching, camping, canoeing and kayaking, fishing, hiking, and hunting. Numerous small local businesses provide lodging and other services to visitors. The total economic impact of tourism to the local economy is estimated at more than \$27 million each year. The lake is an important economic and natural resource for local residents and tourists.

Protection of the Reelfoot watershed was a primary concern of the public during the scoping phase of the Port of Cates Landing environmental review process (USACE, 2004). Visitor use at Reelfoot is expected to continue to increase as accessibility to the area via Interstates 155 and 69 and other area highways improves. Tourism in Reelfoot is not dependent on construction of the proposed rail line, but activities associated with the other reasonably foreseeable future actions could increase previously identified threats affecting the lake's resources, especially if these activities occur in the Reelfoot watershed.

4.2 Cumulative Impacts by Resource

4.2.1 Action Alternatives

The Action Alternatives would result in cumulative effects for most of the environmental resources evaluated. These impacts would be minimal, especially relative to the impacts of the other ongoing and planned projects that OEA considered. The cumulative impacts for each environmental resource are discussed below.

4.2.1.1 Transportation and Safety

Construction and operation of the proposed rail line would result in the introduction of rail traffic to the area that would reduce the reliance on trucks to transport commodities to and from the area. Therefore, the proposed rail line would not contribute to a cumulative impact to transportation systems.

The Action Alternatives would include safety measures such as signals or other warning devices at proposed at-grade road crossings and result in other minimal impacts to public health and safety that would be offset by minimization and mitigation measures. Reasonably foreseeable future projects are anticipated to have public health and safety effects similar to those associated with the proposed action. Considered cumulatively, these impacts would not significantly affect safety in the project area.



Reelfoot Lake
Source: reelfoottourism.com

4.2.1.2 Land Use

The Action Alternatives would have minor effects on local land use relative to other reasonably foreseeable future projects. The construction of the Port of Cates Landing and the expansion of State Route 22 have resulted in the conversion of agricultural and forested land to industrial use. The development of the planned Lake County Industrial Park would convert an additional approximately 355 acres of land to industrial use. Considered cumulatively, these impacts would not significantly affect land use in the project area.

4.2.1.3 Geological Resources

The proposed rail line would result in minor impacts to soil resources that would be minimized by the implementation of Mitigation Measures 10-13. Soil resource impacts are anticipated to occur over a much larger area from reasonably foreseeable future projects. Therefore, the Action Alternatives, when considered with reasonably foreseeable future actions, would result in a negligible cumulative effect on this resource. Considered cumulatively, these impacts would not significantly affect geological resources in the project area.

4.2.1.4 Water Resources

Construction and operation of the proposed rail line would result in minor impacts to water resources that would be minimized by the implementation of Mitigation Measures 14-17. These impacts could include minor impacts to several waterways and wetlands resulting from the construction of bridges and culverts. The development of Lake County Industrial Park would also result in minor impacts to streams and wetlands in that project's footprint, but these impacts would be appropriately mitigated. Because the waterways and wetlands in the project area have been substantially altered by agricultural activities and because the impacts of the proposed rail line and other ongoing and future projects would be minimal, OEA concludes that the cumulative effects of these projects would not significantly affect water resources in the project area.

4.2.1.5 Biological and Natural Resources

Construction and operation of the proposed rail line would result in minor impacts to biological resources. Impacts from other reasonable foreseeable projects would also be minor. Considered cumulatively, these impacts would not significantly affect biological resources in the project area.

4.2.1.6 Cultural and Historical Resources

The construction and operation of the proposed rail line would not result in impacts to cultural and historical resources and would not contribute to cumulative impacts on these resources.

4.2.1.7 Air Quality

The projects included in the cumulative effects analysis would contribute to fugitive dust and vehicle emissions. Although construction and operation of the Action Alternatives would produce small amounts of dust and vehicle emissions during construction, the proposed rail line would result in

much lower vehicle emissions compared with shipping the same amount of freight by truck. The efficiency and capacity improvements would result in reduced delay times that contribute to vehicle emissions and other factors affecting air quality. Reasonably foreseeable future actions would also benefit from these improvements and result in reduced delay times that contribute to decreased air quality. Thus, when considered cumulatively, the proposed rail line would contribute to a cumulative beneficial impact to air quality relative to the No Action Alternative.

4.2.1.8 Noise and Vibration

The proposed rail line would result in a minor increase in noise levels and vibration in the areas immediately adjacent to the right-of way. Noise levels associated with rail operations would be below 48 dBA and are not anticipated to cause an adverse impact to community noise. Vibration impacts would increase slightly from the Action Alternatives. Noise and vibration associated with construction activity would be minor and temporary. Minor noise and vibration impacts would be anticipated from reasonably foreseeable future projects.

4.2.1.9 Environmental Justice and Socioeconomics

Because the environmental impacts of the proposed rail line and other ongoing and future projects would have negligible adverse impacts to local populations, these projects, when considered cumulatively, would not result in disproportionately adverse impacts to disadvantaged populations. These projects may result in beneficial impacts to the low-income population of Lake County directly by creating employment opportunities and indirectly by stimulating economic growth.

4.2.1.10 Hazardous Waste Sites and Transportation of Hazardous Materials

The proposed rail line would not result in impacts to hazardous waste sites or the transportation of hazardous materials and would not contribute to cumulative impacts regarding such sites or materials.

4.2.1.11 Energy Resources

The proposed rail line would increase efficiency and capacity of transportation at the Port of Cates Landing and the Lake County Industrial Park and would result in a decrease in fuel usage relative to the No Action Alternative. Therefore, the proposed rail line would not contribute to cumulative impacts regarding transportation and the use of energy resources.

4.2.1.12 Green House Gases and Climate Change

The projects included in the cumulative effects analysis would contribute to GHG emissions. Although construction and operation of the proposed rail line would produce GHG emissions, the proposed rail line would result in much lower emissions, compared with shipping the same amount of freight by truck. As stated, part of the purpose of the Action Alternatives is to increase efficiency and introduce rail operations at the Port. The efficiency and capacity improvements would result in reduced delay times that contribute to GHG emissions. Reasonably foreseeable future actions would also benefit from these improvements and result in reduced delay times that contribute to GHG

emissions. Thus, when considered cumulatively, the proposed rail line would contribute to a cumulative decrease in GHG emissions relative to the No Action Alternative.

4.2.2 No Action Alternative

The No Action Alternative would have no direct impact on land use, geological resources, water resources, biological and natural resources, cultural and historical resources, noise and vibration, environmental justice and socioeconomics, safety, or hazardous waste sites and transportation of hazardous materials. Therefore, the No Action Alternative would not contribute to a cumulative effect on these resources.

As previously discussed, the future development of the Port of Cates Landing and Lake County Industrial Park would proceed with or without the proposed railway extension. Without rail availability, the Port of Cates Landing and industrial park tenants would have to rely on truck traffic as the primary means to deliver and receive shipments of raw materials and finished products. This would result in increased truck traffic on State Route 22 and possible congestion on local roads, minor adverse effects on air quality and GHGs from truck emissions, and increased energy use from fuel consumption. Therefore, they would have minor cumulative impacts on transportation systems, air quality, and energy resources. Impacts associated with increased traffic on State Route 22 could be significant if no other transportation alternatives become available.

The continued development of Lake County Industrial Park could impact water resources, biological and natural resources, cultural and historical resources, air quality, and noise and vibration. NWTRPA would build the industrial park on land that is zoned as industrial. The construction of the industrial park could affect surface and groundwater conditions in the immediate project area. Development of the industrial park could also result in minor impacts to habitat, vegetation, and individual wildlife but would be unlikely to adversely impact federally or state-listed threatened or endangered species, or to affect the overall abundance of wildlife or vegetation species.

The sole identified historical site near the proposed rail line, 40LK121, is located within the APE of Lake County Industrial Park and would be disturbed whether or not the proposed rail line is constructed. A 2013 assessment concluded that the 40LK121 site warranted further investigation (Smith and Smith, 2013). However, during the 2014 follow-up survey, OEA did not identify any structures or pre-modern artifacts at the 40LK121 site and, therefore, concluded that no further investigation of that site is necessary (see Appendix B).

The development of Lake County Industrial Park could lead to an increase in air emissions on regional highways as truck traffic increases to meet demands of the customers at the park. Cargo that would have been shipped by rail would have to be carried by truck. Assuming an initial traffic level of 1,000 rail cars per year and a conversion factor of four trucks per rail car, the lack of a rail connection could increase truck traffic by about 4,000 trucks per year once the port facilities and industrial park are fully operational.

5.0 MITIGATION MEASURES

This section summarizes special operating procedures and mitigations for the No Action Alternative. Since environmental impacts associated with the three Action Alternatives are similar, these alternatives are addressed collectively.

5.1 Transportation and Safety

OEA recommends the following mitigation measures related to rail operations and safety:

1. NWTRPA shall schedule construction activity so as to minimize the periodic closing of roads or traffic delays to the public. NWTRPA shall coordinate with TDOT and the Lake County Highway Commission regarding the scheduling of construction activities that could result in the temporary closing of roads and shall provide for detours and associated signage, as appropriate, or maintain at least one open lane of traffic at all times to allow for the passage of emergency and other vehicles.
2. NWTRPA shall confine all project-related construction traffic to a temporary access road within the right-of-way or established public roads. Where traffic cannot be confined to temporary access roads or established public roads, NWTRPA shall make necessary arrangements with landowners to gain access. After construction is completed, NWTRPA shall remove and restore any temporary access roads constructed outside the rail line right-of-way unless otherwise agreed to with the landowners.
3. NWTRPA shall ensure that proposed activities within and along existing roads are consistent with the *Manual on Uniform Traffic Control Devices* for installation of signs (e.g., regulatory, warning/caution, speed), delineators, and other roadway appurtenances and in compliance with the terms and conditions of any American Association of State Highway and Transportation Officials safety standards.
4. NWTRPA shall consult with appropriate federal, state, and local transportation agencies to determine the final design and other details of the grade-crossing warning devices on public roads. Implementation of all grade-crossing warning devices on public roadways will be subject to the review and approval of reasonable warning devices by TDOT and by the Lake County Highway Commission. NWTRPA shall coordinate with TDOT and Lake County Highway Commission to identify the maintenance and repair responsibilities of each party for project-related warning devices and at-grade road crossings.

5. NWTRPA shall comply with the safety regulations implemented and enforced by the FRA, including regulations that establish safe speed limits for train operations and regulations that establish procedures for implementing an inspection and maintenance program to minimize the potential for derailments and other rail-related accidents.

5.2 Land Use

OEA recommends the following mitigation measures related to land use:

6. NWTRPA shall, to the extent practicable, design the proposed rail right-of-way to minimize the conversion of prime farmland to nonagricultural use.
7. NWTRPA shall ensure that land areas directly disturbed by NWTRPA's project-related construction are restored to their original condition, as may be reasonably practicable, after project-related construction is completed.
8. NWTRPA shall require contractors involved in construction or operation of the proposed rail line to remove all trash and debris generated as a result of the project from public land and dispose of it at an authorized facility in accordance with all applicable federal, state, and local regulations.
9. NWTRPA shall consult with utility managers during design and construction so that utilities are protected during project-related construction activities. NWTRPA shall notify the manager of each such utility identified prior to project-related construction activities and coordinate with the owner to minimize damage to utilities.

5.3 Geological Resources

OEA recommends the following mitigation measures related to topography, geology, and soils:

10. NWTRPA shall limit ground disturbance to only those areas necessary for project-related construction activities.
11. NWTRPA shall employ BMPs during construction to minimize the erosion of soil from disturbed areas.
12. NWTRPA shall stabilize any disturbed areas outside of the rail corridor with appropriate vegetative cover after the completion of construction activities.
13. NWTRPA shall design the rail line in accordance with engineering criteria related to seismic events and other geologic hazards to comply with applicable design codes. For example, NWTRPA shall design the proposed rail line in accordance with the latest applicable seismic codes taking into account the region's potential for earthquake activity to mitigate potential damage to bridges and tracks.

5.4 Water Resources

OEA recommends the following mitigation measures related to water resources and wetlands:

14. NWTRPA shall design and construct the rail line authorized by the Board, including culverts and bridges, in such a way as to maintain natural water flow and drainage patterns to the extent practicable.
15. During project-related construction and operation, NWTRPA shall avoid and minimize impacts to waterbodies and wetlands. NWTRPA shall obtain from the USACE any federal permits required by Section 404 of the CWA before initiating project-related construction activities that would impact wetlands and waterbodies. NWTRPA shall comply with all reasonable requirements as required by USACE and shall incorporate the stipulations of these permits and authorizations into construction contract specifications. NWTRPA shall work directly with USACE to develop appropriate mitigation for direct wetland impacts as stipulated in the Section 404 permit.
16. NWTRPA shall coordinate with TDEC, Division of Water Resources to obtain all appropriate state permits related to impacts to water resources resulting from construction activities, including an Aquatic Resource Alteration Permit for alterations to waters of the state and coverage under Tennessee's General NPDES Permit for Discharges of Storm Water Associated with Construction Activities.
17. In instances in which NWTRPA or its contractors need to apply herbicides for right-of-way maintenance, NWTRPA shall ensure the use of staff or contractors who are properly trained in herbicide application, shall require the following of label directions in herbicide application and shall limit the amount potentially entering waterways. NWTRPA shall require the use only of herbicides regulated for such uses with U.S. EPA and follow all state regulations that require their use.

5.5 Biological and Natural Resources

OEA recommends the following mitigation measures related to biological resources:

18. NWTRPA shall minimize disturbance to wildlife by restricting construction activities to the proposed rail right-of-way and immediate surrounding area.
19. NWTRPA shall notify OEA and the USFWS if any federally listed threatened or endangered species are discovered during project-related construction activities.

20. NWTRPA shall consult with the TWRA and shall comply with the reasonable recommendations of that agency regarding the design of in-stream structures to permit migration of aquatic species.

5.6 Cultural and Historical Resources

Based on historical research, field surveys, and consultation with the SHPO, OEA has determined that no known cultural or historic resources would be affected by the proposed rail line. To address potential impacts to unidentified cultural or historic resources, OEA recommends the following mitigation measures:

21. If any cultural resources are discovered or uncovered during construction of the rail line, NWTRPA shall halt all work immediately and notify the Tennessee Historical Commission (the SHPO) and the OEA to identify and implement the required consultation and mitigation. NWTRPA shall then consult with the SHPO and other consulting parties, if any, to determine whether appropriate mitigation measures are necessary.

5.7 Air Quality

OEA recommends the following mitigation measures regarding potential impacts to air quality:

22. NWTRPA shall work with its contractors to make sure that construction equipment is properly maintained and that mufflers and other required pollution-control devices are in working condition to limit construction-related air pollutant emissions.
23. NWTRPA shall minimize fugitive dust emission during construction by confining construction activity and clearing to the rail right-of-way and by employing BMPs in the control and suppression of dust emissions.
24. NWTRPA shall comply with all applicable federal, state, and local regulations regarding the control of air emissions.

5.8 Noise and Vibration

OEA recommends the following mitigation measures regarding potential impacts to noise and vibration:

25. NWTRPA shall control temporary noise from construction equipment through the use and maintenance of appropriate muffler systems on machinery.
26. NWTRPA shall comply with FRA regulations that establish decibel limits for train operations and locomotive noise standards.

5.9 Socioeconomics and Environmental Justice

OEA recommends the following mitigation measures related to socioeconomics and environmental justice:

27. NWTRPA shall, before commencing construction activities related to this project, notify local communities, local agencies, local emergency response providers, and landowners about construction timeframes and potential disturbances related to construction.
28. NWTRPA shall ensure that project-related construction vehicles, equipment, and workers will not access work areas through landowners' properties without the permission of the property owners. In the unlikely event of inadvertent damage, NWTRPA shall work with affected landowners to appropriately redress any damage caused by NWTRPA's project-related construction activities.

5.10 Hazardous Waste Sites and Transportation of Hazardous Materials

OEA recommends the following mitigation measures regarding potential impacts to hazardous materials:

29. NWTRPA shall ensure that waste materials related to this project are removed and disposed of promptly at an appropriate waste-disposal site. NWTRPA shall store and dispose of any hazardous waste generated or hazardous materials used in the normal course of construction, operation, and maintenance activities in accordance with applicable environmental laws.
30. NWTRPA shall develop a spill prevention plan for handling the release of petroleum products or other hazardous materials during construction activities and rail operations. In the event of a spill, NWTRPA shall comply with its spill prevention plan and applicable federal, state, and local regulations pertaining to spill containment and appropriate clean-up.
31. NWTRPA shall comply with applicable U.S. DOT regulations, policies, and procedures regarding the transportation of hazardous materials should any such material be transported on the proposed rail line.
32. If any undocumented hazardous waste sites are discovered or uncovered during construction of the rail line, NWTRPA shall immediately halt all work and notify the appropriate regulatory agencies.

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6.0 CONCLUSIONS AND REQUEST FOR COMMENTS

6.1 Conclusions

This Draft EA identifies the potential environmental impacts that could occur as a result of NWTRPA's proposal to construct and operate approximately 5.5 miles of new rail line in Lake County, Tennessee. In preparing this Draft EA, OEA consulted with federal, state, and local agencies and NWTRPA; conducted site visits to the project area and surroundings; reviewed relevant published reports and literature; and conducted detailed technical analyses. OEA's evaluation covered the following wide range of possible impacts to the environment:

- Rail Operations and Safety
- Land Use
- Geological Resources
- Water Resources
- Biological Resources
- Cultural and Historical Resources
- Air Quality
- Noise and Vibration
- Environmental Justice and Socioeconomics
- Safety
- Hazardous Waste Sites and Transportation of Hazardous Materials
- Energy Resources
- Greenhouse Gas Emissions and Climate Change
- Cumulative Impacts

OEA determined that construction and operation of the proposed rail line could result in minor impacts to some of the resource areas. As specified in Chapter 5, OEA is recommending that the Board impose a number of mitigation measures should it approve NWTRPA's proposal. OEA concludes that, if the recommended mitigation measures are imposed, the proposed construction and operation would not significantly affect the quality of the human environment. Therefore, the Environmental Impact Statement process is unnecessary.

All of the Action Alternatives would have similar environmental impacts, and none of the alternatives would have significant impacts. NWTRPA, the project petitioner, has selected Alternative A as its preferred alternative. OEA has not yet selected its environmentally preferable alternative. After reviewing public comments on this Draft EA, OEA will prepare a Final EA, which will identify OEA's environmentally preferable alternative and will specify OEA's final recommendations to the Board.

6.2 Request for Comments

OEA specifically invites comments on all aspects of this Draft EA, including the scope and adequacy of the recommended mitigation measures, as well as any other reasonable alternatives. OEA will consider all comments received in response to this Draft EA in making its final recommendations to the Board. The Board will consider OEA's final recommendations and any submitted comments in making its final decision in this proceeding whether to approve, deny, or approve with environmental mitigation.

OEA distributed and provided notification of the availability of this Draft EA in accordance with the requirements of the NEPA and CEQ's Regulation for Implementing NEPA. OEA has taken additional steps to ensure that all interested parties are notified of the availability of this Draft EA and afforded the opportunity to review and provide comments on the analysis and recommended mitigation measures in this Draft EA.

Distribution and notification of the availability of this Draft EA has included the following:

- Distribution and/or notification of this Draft EA to parties on the Board's Service List for this proceeding, including NWTRPA and all parties requesting to be on the Service List.
- Distribution and/or notification of this Draft EA to U.S. Senators representing the State of Tennessee, U.S. Congresspersons representing the project area, State senators, and congresspersons representing the project area; interested federally recognized tribes; and federal, state, and local agencies with an interest in the project.
- Placing copies of this Draft EA in the following local, publically accessible locations:
 - (1) Tiptonville Town Hall
 - (2) Tiptonville Public Library
- Publication of a notice of the availability of this Draft EA in the *Federal Register* and on the Board's public website (<http://www.stb.dot.gov>).
- Mailing a notice of the availability of this Draft EA to all residents and property owners within 1,500 feet of the proposed rail line construction and homeowner and neighborhood group representatives in the project area.
- Posting a notice of availability of this Draft EA on the Board's website and on the Board's interactive map platform (<http://www.stb.maps.arcgis.com>).

An interactive map of the proposed rail line and all of the alternatives considered in this Draft EA are available to the public through the Board's interactive mapping platform online at <http://www.stb.maps.arcgis.com>.

Comments on this Draft EA may be filed during the 30-day comment period by mail to:

Josh Wayland
Office of Environmental Analysis
Surface Transportation Board
395 E Street, S.W.
Room 1105
Washington, DC 20423

Mr. Wayland may also be reached by telephone at (202) 245-0330. Comments may also be filed electronically on the Board's website at <http://www.stb.dot.gov>. Please refer to Docket No. FD 35802 in all correspondence addressed to the Board.

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9.0 REFERENCES

- Bray, L., Jones, L., and Burton, M. 2007. The Regional Importance of Reelfoot Lake. The University of Tennessee, Center for Transportation Research and the County Technical Assistance Service.
- Brown, W.T., Jackson, W.C., Keathley, G.L., and Moore, C.L. 1969. Soil Survey of Lake County, Tennessee. U.S. Department of Agriculture, Soil Conservation Service.
- Coate, D. 1999. *Annoyance Due to Locomotive Warning Horns*. Transportation Research Board Noise and Vibration Subcommittee A1FO4. August 1–4. San Diego, CA.
- Community Development Financial Institutions Fund. 2015. New Markets Tax Credit Program. Retrieved February 2015 from:
http://www.cdfifund.gov/what_we_do/programs_id.asp?programID=5
- Cox, R., and Van Arsdale, R. 2002. The Mississippi Embayment, North America: A first order continental structure generated by the Cretaceous superplume mantle event. *Journal of Geodynamics*, Vol. 34, pp. 163–176.
- Delta Exploration and Assessment, Inc. 2013, May. Phase I Environmental Site Assessment Report, 350.2 Acres of Agricultural Land North of Cronanville Road and South of Cates Landing Road, Tiptonville, Tennessee. Memphis, Tennessee.
- Environmental Data Resources. 2015. Tennessee Department of Environment and Conservation Registered Underground Storage Tank database. Retrieved September 10, 2015, from:
<http://edrnet.com>
- Executive Order 11988. *Floodplain Management* (24 May 1977).
- Executive Order 11990. *Protection of Wetlands* (24 May 1977).
- Federal Emergency Management Agency. 2010a. Flood Insurance Rate Map, Lake County, Tennessee and Incorporated Areas, Panel 88 of 275 (Map Number 47095C0088C).
- Federal Emergency Management Agency. 2010b. Flood Insurance Rate Map, Lake County, Tennessee and Incorporated Areas, Panel 89 of 275 (Map Number 47095C0089C).
- Federal Highway Administration. 2014. Guidelines for Data Collection for High-Volume Routes. Highway Performance Monitoring System. Retrieved from:
<https://fhwa.dot.gov/policyinformation/hpms/volumeroutes/ch5.cfm>

- Federal Railroad Administration. 2015. Accident Trends — Summary Statistics website. Office of Safety Analysis. <http://safetydata.fra.dot.gov/officeofsafety/publicsite/summary.aspx>
- Harris Miller Miller & Hanson (HMMH) Inc. 2003. Anchorage Rail Capacity Improvements Milepost 110-114 Noise and Vibration Study. Report No. 298680.01. January 2003.
- Kingsbury, J.A., and Parks, W.S. 1993. Hydrogeology of the Principal Aquifers and Relation of Faults to Interaquifer Leakage in the Memphis Area, Tennessee. USGS Water-Resources Investigation Report 93-4075. Memphis, TN.
- McKeown, F.A., and Pakiser, L.C. 1982. Investigations of the New Madrid, Missouri, Earthquake Region. U.S. Geological Survey Professional Paper 1236. Washington, D.C.
- Northwest Tennessee Regional Economic Development Group. 2015. Port of Cates Landing is America's Newest Multimodal Inland Port. Retrieved February 2015 from: <http://www.northwesttn.com/news-archive/81-port-of-cates-landing.html>
- Northwest Tennessee Regional Port Authority. 2009. The Port of Cates Landing, Transportation Investment Generating Economic Recovery Grant Application.
- Office for Information Resources, GIS Services. 2015. Tennessee Property Viewer. Retrieved February 2015 from: <http://tnmap.tn.gov/assessment/>
- Parks, W.S, Mirecki, J.E., and Carmichael, J.S. 1990. Geology and Ground-Water Resources of the Memphis Sand in Western Tennessee. USGS Water-Resources Investigation Report 88-4182. Memphis, Tennessee.
- Petersen, M., Frankel, A., Harmsen, S., Mueller, C., Haller, K., Wheeler, R., Wesson, R., Zeng, Y., Boyd, O., Perkins, D., Luco, N., Field, E., Wills, C., and Rukstales, K. 2008. Documentation for the 2008 Update of the United States National Seismic Hazard Maps. Version 1.1. U.S. Geological Survey Open-File Report 2008-1128, 61 p.
- Schweig, E. and Van Arsdale, R. 1997. Neotectonics of the upper Mississippi embayment. *Engineering Geology*, Vol. 45, pp. 185–203.
- Smith, G.P., and Smith, N.C. 2013, June. Phase I Archaeological Survey of the Intermodal Regional Industrial Park Tract at Cates Landing, Lake County, Tennessee. Birmingham, AL: Smith Archeological Consultants.

- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Retrieved July 2015 from:
<http://websoilsurvey.sc.egov.usda.gov>
- Tennessee Department of Environment and Conservation. 2012a. *Tennessee Erosion and Sediment Control Handbook*, Fourth Edition. Nashville.
- Tennessee Department of Environment and Conservation. 2012b. 2012 305(b) Report: The Status of Water Quality in Tennessee. Division of Water Resources, Nashville.
- Tennessee Department of Environment and Conservation. 2014a. Year 2012 303(d) List, Final Version. Planning and Standards Section. Nashville.
- Tennessee Department of Environment and Conservation. 2014b, April. *Rare Species by Quadrangle: Tiptonville*. Retrieved from:
http://environment-online.state.tn.us:8080/pls/enf_reports/f?p=9014:2:0::NO
- Tennessee Department of Environment and Conservation. 2015. The Known Exceptional Tennessee Waters and Outstanding National Resource Waters (Mississippi River) Retrieved February 9, 2015, from:
http://environment-online.state.tn.us:8080/pls/enf_reports/f?p=9034:34304:3801595635491
- Tennessee Department of Transportation. 2007. *Transportation Planning Report: State Route 22 from State Route 21 to Cates Landing Road, Lake County, Tennessee, PIN NO. 107384.00*, Prepared by Transportation Planning Division, June.
- Tennessee Department of Transportation. 2008a, February 19. *Ecology Report: State Route 22 from State Route 21 to Cates Landing Road, Lake County, Tennessee, PIN NO. 107384.00, P.E. No. 48003-1202-14*.
- Tennessee Department of Transportation. 2008b, May 1. *Historical/Architectural Assessment, Pursuant to 36 C.F.R. 800 and Section 4(f) Evaluation: Improvements to State Route 22 from State Route 21 to Cates Landing Road, Lake County, Tennessee*.
- Tennessee Department of Transportation. 2008c, February 19. *Air Quality and Noise Evaluation for State Route 22 from State Route 21 to Cates Landing Road, Lake County, Tennessee*, Prepared by Bowlby & Associates, Inc., Franklin, TN., January.

- Tennessee Department of Transportation. 2013. Traffic History. Retrieved from: <https://www.tdot.tn.gov/APPLICATIONS/traffichistory>
- Tennessee Historical Society. 1998. The Tennessee Encyclopedia of History and Culture, Lake County. Retrieved January 2015 from: <http://tennesseeencyclopedia.net/entry.php?rec=759>
- Tennessee State Data Center. 2014. 2014 State and County Population Estimates Change, and Rankings: Annual Estimates of the Resident Population: April 1, 2010, to July 1, 2014, Tennessee and Counties. University of Tennessee Knoxville, Center for Business and Economic Research. Retrieved from: <http://tndata.utk.edu/sdcdemographics.htm>
- Tennessee-Tombigbee Waterway. Shipping Comparison: Cargo Capacity of Different Transportation Modes. Accessed August 26, 2015, from: <http://business.tenntom.org/why-use-the-waterway/shipping-comparisons/>
- Texas Transportation Institute, Center for Ports & Waterways. 2007, December. Amended 2009, March. A Modal Comparison of Domestic Freight Transportation Effects on the General Public Final Report. Prepared for the U.S. Maritime Administration and the National Waterways Foundation. Retrieved March 10, 2015, from: http://www.americanwaterways.com/press_room/news_releases/NWFStudy.pdf
- Tri-State Testing Services. 2009. Geotechnical Investigation Report Proposed Industrial Site, Port of Cates Landing, Cates Landing, Tennessee. Job No. E-9-235; Memphis, Tennessee.
- U.S. Census Bureau. 2014. State and County QuickFacts. Data derived from Population Estimates, American Community Survey, Census of Population and Housing, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits.
- U.S. Geological Survey. 2009. *Earthquake Hazard in the New Madrid Seismic Zone Remains a Concern*. Fact Sheet 2009–3071.
- U.S. Geological Survey. 2015. *Earthquake Hazards Program: Historic Earthquakes*. Retrieved from: <http://earthquake.usgs.gov/earthquakes/states/events/1811-1812.php>
- United States Army Corps of Engineers. 2004. Section I, Northwest Tennessee Regional Harbor, Finding of No Significant Impact and Environmental Assessment. August 2004.
- United States Army Corps of Engineers. 2015. Preliminary Jurisdictional Determination (File No. MVM-2014-395), April 15.

United States Bureau of Labor Statistics. 2014. Databases, Tables, and Calculators by Subject, Unemployment. Retrieved February 2015 from: <http://www.bls.gov/data/#unemployment>

United States Department of Transportation, Federal Transit Administration. May 2006. *Transit Noise and Vibration Impact Assessment Guidance Manual*. Retrieved February 9, 2015, from: http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf

United States Energy Information Administration. 2011. Voluntary Reporting of Greenhouse Gases Program, Fuel Emission Coefficients. Retrieved June 5, 2015, from: <http://www.eia.gov/oiaf/1605/coefficients.html#tbl2>.

United States Environmental Protection Agency. 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Accessed April, 14, 2015, from: https://fican1.files.wordpress.com/2015/10/reports_public_health.pdf

United States Environmental Protection Agency. 2014. Environmental Justice, What is Environmental Justice? Retrieved January 2015 from: <http://www.epa.gov/environmentaljustice/>

United States Environmental Protection Agency. Envirofacts. Lake County, Tennessee. Retrieved January 29, 2015, from: <http://www.epa.gov/envirofacts>

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Appendix A
Environmental Outreach and Consultation

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Environmental Outreach and Consultation

- Exhibit 1 Request for Preliminary Environmental Consultation
- Exhibit 2 Correspondence with United States Department of Agriculture, Natural Resources Conservation Service
- Exhibit 3 Correspondence with City of Tiptonville, Tennessee
- Exhibit 4 Correspondence with Tennessee Department of Environment and Conservation
- Exhibit 5 Correspondence with Northwest Tennessee Development District
- Exhibit 6 Correspondence with Tennessee Wildlife Resources Agency
- Exhibit 7 Correspondence with United States Department of the Interior, Fish and Wildlife Service
- Exhibit 8 Correspondence with United States Army Corps of Engineers, Memphis District

Exhibit 1
Request for Preliminary Environmental Consultation

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SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Office of Environmental Analysis

July 24, 2014

RE: STB Finance Docket No. 35802, Northwest Tennessee Regional Port Authority—Rail Construction and Operation—in Lake County, Tennessee: Request for Information and Comments on Proposed 5.5 Mile Rail Line to serve the Port of Cates Landing

The Northwest Tennessee Regional Port Authority (NWTRPA or Port Authority) is interested in constructing a new rail line and has filed a petition before the Surface Transportation Board (Board). The Board is an independent agency within the United States Department of Transportation that has jurisdiction over railroad construction and operations. As part of its licensing process, the Board will conduct an environmental review under the National Environmental Policy Act (NEPA). We are writing to you to ask you for any information you may have on the Port Authority's proposed new rail line and to request your comments so that we may begin our environmental review process.

Pursuant to NEPA and the Board's environmental rules at 49 CFR 1105, the Board's Office of Environmental Analysis (OEA) will prepare an environmental document that evaluates the potential environmental impacts of the proposed rail construction project and the reasonable and feasible alternatives to the proposal. OEA is beginning the process of gathering information on the project area and project-related issues and concerns. Information collected will assist us in preparing the appropriate NEPA document for the proposed project.

Description of the Proposed Rail Project

NWTRPA is a political subdivision that has been established by the counties of Dyer, Lake, and Obion in northwest Tennessee for the purpose of owning, constructing, and operating a regional river port facility in Lake County, Tennessee. On June 27, 2014, NWTRPA filed a petition with the Board, pursuant to 49 U.S.C. 10502, for authority to construct approximately 5.5 miles of new railroad line that would connect an existing rail line near Tiptonville, Tennessee to the site of a newly constructed port facility on the Mississippi River at Cates Landing (see the attached map which shows the location of the proposed rail line as proposed by NWTRPA). If the proposed rail line is constructed, NWTRPA intends to enter into a contract with an existing short line railroad to provide common carrier service to customers located at the port and at an adjacent

industrial park currently under development in conjunction with the port.

The proposed rail line would begin at an intersection with the existing Tennken Railroad near Tiptonville, Tennessee and would extend to the northwest in the direction of the port. Approximately three miles from the connection with the existing railroad, the proposed rail line would bisect the proposed Lake County Industrial Park. Approximately 2.5 miles northwest of the Industrial Park, the line would enter the campus of the Port of Cates Landing and would parallel the port's slack water harbor to the main dock facility. The rail right-of-way would primarily cross open farm land and could cross as many as two public roads.

The proposed rail line would be used to transport shipments of agricultural products, as well as industrial and energy commodities and products. Once the port facility and the adjacent industrial park are fully developed, NWTRPA anticipates that the rail line would also transport raw materials for industrial products, finished manufactured goods, agricultural commodities and products, and special cargoes. NWTRPA predicts that rail traffic on the line would initially consist of fewer than 1,000 carloads annually, but would eventually increase to more than 1,000 carloads annually as the port facility and industrial park becomes fully developed.

Agency Consultation

At this time, I request your preliminary comments regarding the proposed rail project. Any information you provide relating to the following issues will assist OEA in determining what environmental issues should be addressed in its environmental review:

- Safety
- Local land use
- Existing transportation systems
- Air emissions and ambient air quality
- Energy use
- Water quality and wetlands
- Ambient noise levels
- Historic sites, archaeological sites, or cultural resources
- Socioeconomics (population, employment, growth, and development)
- Wildlife, vegetation, and fisheries
- Soils and geology

Information on additional issues or concerns that you consider appropriate would also be appreciated. Please respond by September 1, 2014 so that we can incorporate your response into the environmental review process, as appropriate, and schedule any meetings, site visits, surveys, and conduct any necessary follow-up activities. Please submit comments and responses to EnSafe, Inc., OEA's independent third-party contractor in this case, at the following address:

EnSafe, Inc.
Attn: Brian Yates
5724 Summer Trees Drive
Memphis, Tennessee 38134

I appreciate your assistance on this project. If you have any questions, please do not hesitate to contact Josh Wayland of my staff at (202) 245-0330 or Brian Yates of EnSafe at (901) 372-7962. Thank you for your assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Victoria Rutson". The signature is written in a cursive style with a large initial "V".

Victoria Rutson
Director
Office of Environmental Analysis

Exhibit 2
**Correspondence with United States Department of Agriculture,
Natural Resources Conservation Service**



Natural Resources Conservation Service
675 U.S. Courthouse
801 Broadway
Nashville, Tennessee 37203

August 5, 2014

Victoria Rutson
Director, Office of Environmental Analysis
Surface Transportation Board
395 E Street, S.W.
Washington, DC 20423

Dear Ms. Rutson:

We received your request for any concerns we might have with a project to build a rail line to serve the Port of Cates Landing in Lake County, Tennessee.

NRCS has responsibility for implementing the Farmland Protection Policy Act (FPPA). The FPPA is intended to minimize the impact that Federal programs have on the conversion of farmland to nonagricultural uses. When locations and all possible alternates have been established for this project, a CPA-106 form should be initiated by the responsible agency and submitted to this office. NRCS will then supply a farmland conversion impact rating. More information about FPPA can be found at <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/>.

In most cases, an FPPA Assessment will not be required for modifications to existing structures, for land that is already in or committed to urban uses (commonly identified as having density of 30 or more structures per 40-acre area), for land within an existing right-of-way purchased on or before August 4, 1984, for corridor projects less than 10 acres in 1 mile where an approved LESA system is in place, for land used for water storage, or for other projects that do not irreversibly convert prime farmland to non-agricultural uses. Land use zoning for non-agricultural use in itself, or current ownership however are not exemptions under FPPA.

Our soil survey information can also be found online at <http://websoilsurvey.nrcs.usda.gov>. This website will provide you with all of our most current soil survey data and interpretations, including prime farmland and hydric soils.

Please feel free to call me at (615) 277-2550, or e-mail me at doug.slabaugh@tn.usda.gov, if you have questions about this request, or if you need assistance with accessing our soils information on the web and any other needs that may arise for Tennessee Soil Survey products or information.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Douglas Slabaugh".

J. DOUGLAS SLABAUGH, State Soil Scientist



Date: July 20, 2015

Josh Wayland
Office Of Environmental Analysis
Surface Transportation Board

Mr. Wayland:

As requested, I have reviewed the proposed Port of Cates Landing-Rail Extension and the following is my response on the impact that Hydric Soils and Prime Farmland would have on project, for the three alternatives.

Alternatives A & B are very similar in proximity therefore I will address these two alternatives together and I will use percentages rather than acres due to not being able to copy the exact footprint of the project. Web Soil Survey indicates that approximately 86.7 percent of the site is Prime Farmland. It also has about 54.7 percent of soils that are hydric by component or has hydric inclusions within the map unit. Since the majority of the area (all alternatives) have been cleared and in a croppable condition, the only concern for wetlands would most likely be Farmed Wetlands (FW).

Alternative C is a short distance to the west and the Web Soil Survey indicates that approximately 90.9 percent of the project is Prime Farmland. The soils in this site with hydric concerns is about 35.6 percent. Again, this area is predominately cropland or in a croppable condition and FW is the main concern as far as having wetland issues.

Basically Prime Farmland and the possibility of encountering a wetland are the only two concerns that I see with the proposed project from a Food Security Act or Prime Farmland Policy Act stand point. As always, streams that may be impacted by the project may be regulated by the Corps of Engineers or Tennessee Department of Environment and Conservation.

If you have any additional questions concerning this report, please contact me at (731) 668-0700.

A handwritten signature in black ink, appearing to read "Charles L. Davis".

Charles L. Davis
Resource Soil Scientist

Exhibit 3
Correspondence with City of Tiptonville, Tennessee

Danny Cook
Mayor



CITY OF TIPTONVILLE

Dewayne Haggard
Mario Montgomery
Daisy Parks
Richard Perkins
Sarah J. Woods
Reid Yates

130 South Court Street
Tiptonville, Tennessee 38079
731-253-9922

Fran Hearn, City Treasurer

EI-20712

August 11, 2014

Victoria Rutson, Director
Office of Environmental Analysis
Surface Transportation Board
Washington, DC 20423

RE: STB Finance Docket No.: 35802
Northwest Tennessee Regional Port Authority
Rail Construction and Operation in Lake County, Tennessee

Dear Ms. Rutson:

I am in receipt of your letter of July 24, 2014, in connection with the referenced matter.

By letter dated June 16, 2014, addressed to Ms. Cynthia T. Brown, Chief of Administration of the Surface Transportation Board, I advised of the full and unconditional support of the Northwest Tennessee Regional Port Authority's Petition for Exemption by the City of Tiptonville and by me, personally. The entire project comprising the development of the Port of Cates Landing, including the construction of the proposed Rail Line, will benefit the City of Tiptonville and all of Northwest Tennessee in a multitude of ways, and we encourage the Surface Transportation Board to approve the pending Petition at the earliest possible date.

In response to the specific issues enumerated in your letter, I advise as follows:

Safety: We foresee no prejudice to the safety of the Citizens and residents of Tiptonville or Lake County as a result of the Rail Line construction or operation of the Port.

Local Land use: Local land use will be maximized, and the public benefited by the construction of the Rail Line and operation of the Port of Cates Landing.

Existing Transportation Systems: Existing transportation systems will be enhanced as a result of the Rail Lines construction and operation of the Port of Cates Landing.

Air Emissions and Ambient Air: We foresee no prejudice to air quality as a result of the development of the Port of Cates Landing and construction and operation of the Rail Line.

Energy use: We foresee no prejudice to existing energy infrastructure as a result to the development of the Port and construction and operation of the Rail Line.

Water Quality and Wetlands: We foresee no prejudice to local water quality or wetlands as a result of the development of the Port and Rail Line.

Ambient Noise Levels: We foresee no objectionable increase to current environmental conditions or noise levels as a result of the development of the Port and Rail Line.

Historic Sites, Archeological Sites, or Cultural Recourses: No historical sites, archeological sites or cultural resources will be prejudiced or impaired as a result of the development of the Port and Rail Line.

Socio-Economics (Population Employment, Growth, and Development): Lake County, Tennessee, is one of the most impoverished counties in the Nation. We foresee huge, positive changes in population, employment, growth and development resulting from the Port and Rail Line.

Wildlife, Vegetation and Fisheries: We foresee no prejudice to wildlife, vegetation or fisheries resulting from the development and operation of the Port and Rail Line.

Soils and Geology: We see no prejudice whatsoever to local soils and geology resulting from the operation of the Port and Rail Line.

I appreciate very much you attentiveness and diligence in researching the foregoing matters to ensure no ill effect arising from the Port and Rail Line. However, this project holds huge, substantive promise for our population and region for generations

Victoria Rutson, Director

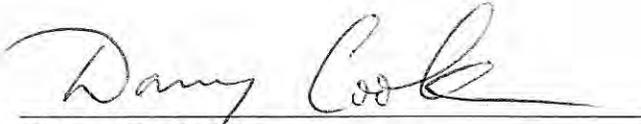
August 11, 2014

Page 3

to come. For this reason, I urge you to expedite your due diligence efforts, approve the construction of the Rail Line, and in doing so, allow us to incur the benefits these projects will surely bring.

With thanks for your service to our Nation, I am

Respectfully yours,



Danny Cook, Mayor

cc: Mr. Brian Yates, Ensafe Inc.
5724 Summer Trees Drive
Memphis, TN 38134

Exhibit 4
**Correspondence with Tennessee Department of Environment and
Conservation**



EI-20713

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

William R. Snodgrass - Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor
Nashville, Tennessee 37243-1102

August 12, 2014

Mr. Brian Yates
ENSAFE, Inc.
5724 Summer Trees Drive
Memphis, Tennessee 38134

RE: Northwest Tennessee Regional Port Authority – Rail Construction
STB Finance Document No. 35802

Dear Mr. Yates:

Thank you for contacting the Division of Water Resources for a review of the proposed rail construction for the Northwest Tennessee Regional Port Authority (NTRPA) in Lake County. According to the information submitted by the Surface Transportation Board in their July 24, 2014, the NTRPA Regional Port Authority is proposing to construct 5.5 miles of rail line to serve the Port of Cates Landing.

NTRPA will need to ensure that all appropriate permits are in place before construction may begin including, but not limited, to an Aquatic Resource Alteration Permit (ARAP), needed for any alterations to waters of the state, and coverage under Tennessee's General NPDES Permit for Discharges of Storm Water Associated with Construction Activities (CGP) needed for any land disturbance of one acre or more. Also, appropriate erosion prevention and sediment control measures must be installed and maintained throughout the duration of the project. From our information, it does not appear that any public water supply sources are in such close proximity of the project that they would be impacted. It does not appear that the proposed route of the rail line itself will have an impact upon wetlands that would require an ARAP or any endangered species; however, just past the northern end of the rail line where I presume the riverport itself is going to be constructed is the habitat the Interior Least Tern and the area is also considered wetlands. Jimmy Smith is the Manager of the Natural Resources Unit within the Division of Water Resources and will be the contact regarding ARAP permits. He can be reached at jimmy.r.smith@tn.gov or at (615) 532-0648. Roger McCoy, Director of the Division of Natural Areas can be reached at (615) 532-0437 or roger.mccoy@tn.gov regarding endangered species information.

If you have any further questions, I will be glad to try to assist you. You may reach me at (615) 532-0170 or tom.moss@tn.gov.

Sincerely,

Thomas A. Moss
Environmental Review Coordinator

Exhibit 5
Correspondence with Northwest Tennessee Development District



EI-20714

Regional Planning

P.O. Box 963
124 Weldon Dr.
Martin, TN 38237-0963
731.587.4213
Fax: 731.587.4587

August 21, 2014

Attn: Brian Yates
EnSafe, Inc.
5724 Summer Trees Dr.
Memphis, Tennessee 38134

RE: STB Finance Docket No. 35802, Northwest Tennessee Regional Port Authority --- Rail Construction and Operation--- in Lake County, Tennessee: Request for Information on proposed 5.5 Mile Rail Line to serve the Port of Cates Landing

Dear Mr. Yates:

Thank you for your letter dated July 24th, 2014 requesting comments from the Northwest Tennessee Human Resource Agency concerning the proposed 5.5-mile rail line to serve Cates Landing in Lake County, Tennessee. John Bucy, executive director of the Northwest Tennessee Human Resource Agency and the Northwest Tennessee Development District has requested that I respond to your request in writing for both agencies.

We have been involved from the start with grant proposals to assist in funding the Northwest Regional (Deep Water) Port at Cates Landing. We have assisted in obtaining funds from the Delta Regional Authority (DRA), the Tennessee Department of Economic & Community Development (ECD), and the Tennessee Department of Transportation TDOT. Other support we have been able to give to the Port's efforts included writing letters of support to elected officials, attending many Port meetings, and assisting other agencies with their prospective funding opportunities.

I say all of the above to make a point that we are very familiar with the Port and it's request going forward to the Surface Transportation Board (STB) to build a 5.5 mile connector rail line to join up to the Tenn-Kenn Railroad main line. We are very much in support of the efforts to go forward with obtaining the necessary approvals to build this rail line.

The Northwest Tennessee Regional Port at Cates Landing will one day have a large company locate there and with the adjoining Industrial Park, there will definitely be a need to rail to be connected to this site running from the main line of Tenn-Kenn Railroad

Progress Through Planning

Serving Benton • Carroll • Crockett • Dyer • Gibson • Henry • Lake • Obion • Weakley

which is 5.5 miles to the east. Much planning and work has already taken place including a new wide highway recently built by TDOT for heavy truck traffic. The deep-water port is now in operation. Now, the need for the rail to be built for the future industries has come front and center.

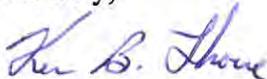
We do not see any negatives to be listed in the forms of:

- Safety
- Local land use
- Existing transportation systems
- Air emissions and ambient air quality
- Energy Use
- Water quality and wetlands
- Ambient noise levels
- Historic sites, archaeological sites, or cultural resources
- Socioeconomics (population, employment, growth, and development)
- Wildlife, vegetation, and fisheries
- Soils and geology

Again, we fully support this request moving forward to assist in building the rail connector line to the Port.

If you have any questions, please feel free to phone me at (731)587-4213 ext. 229

Sincerely,



Ken Thorne
Director of Planning
NWTDD

C: Mr. John Bucy, Executive Director NWTDD and Nwthra

Exhibit 6
Correspondence with Tennessee Wildlife Resources Agency

**TENNESSEE WILDLIFE RESOURCES AGENCY**

ELLINGTON AGRICULTURAL CENTER
P. O. BOX 40747
NASHVILLE, TENNESSEE 37204

August 28, 2014

Ensafe, Inc.
Attention: Brian Yates
5724 Summer Trees Drive
Memphis, TN 38134

Re: STB Finance Docket No. 35802, Northwest Tennessee Regional Port Authority – Rail Construction and Operation – Lake County, Tennessee:
Response to Request for Information and Comments on Proposed 5.5 Mile Rail Line to Serve the Port of Cates Landing

Dear Mr. Yates:

The Tennessee Wildlife Resources Agency has received and reviewed the information that was sent to us regarding the 5.5 Mile rail line to serve the Port of Cates Landing project proposed by the Northwest Tennessee Regional Port Authority in Lake County, Tennessee. Our concerns for this proposed rail line project are potential impacts to streams and wetlands. We request that if streams and/or wetlands are delineated within the project footprint that mitigation for these impacts occur in accordance with state and federal rules and regulations. We also request that the design of the rail line allow the migration of aquatic life through in-stream structures and that hydrology be maintained on both sides of the rail line, if wetlands are delineated.

Thank you for the opportunity to comment on these projects. If you have further questions regarding this matter, please contact me at 615-781-6572 or at Rob.Todd@tn.gov.

Sincerely,

A handwritten signature in cursive script that reads "Robert M. Todd".

Robert M. Todd
Fish and Wildlife Environmentalist

cc: Allen Pyburn, Region I Habitat Biologist
Alan Peterson, Region I Manager
Mary Jennings, USFWS
Kelly Laycock, EPA

The State of Tennessee

IS AN EQUAL OPPORTUNITY, EQUAL ACCESS, AFFIRMATIVE ACTION EMPLOYER

Exhibit 7
Correspondence with United States Department of the Interior,
Fish and Wildlife Service



United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

August 28, 2014

Mr. Brian Yates
Ensafe
5724 Summer Trees Drive
Memphis, Tennessee 38134

Subject: FWS# 2014-CPA-0659. STB Finance Docket No. 35802. Northwest Tennessee Regional Port Authority – Rail Construction and Operation in Lake County, Tennessee.

Dear Mr. Yates:

The Surface Transportation Board (STB) has requested the U. S. Fish and Wildlife Service (Service) provide comments during the environmental review phase of the subject project. The Northwest Tennessee Regional Port Authority is proposing a new 5.5-mile rail line to serve the Port of Cates Landing on the Mississippi River. The rail line would primarily cross open farmland and possibly cross two public roads. The STB has requested our agency submit comments to your office since Ensafe, Inc., is OEA's independent third-party contractor for this proposal. The following constitute the comments of the U.S. Department of the Interior, provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), Migratory Bird Treaty Act (16 U.S.C. 703–712), and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

Information available to the Service does not indicate that wetlands exist within the impact area of the proposed project. However, our wetland determination has been made in the absence of a field inspection and does not constitute a wetland delineation for the purposes of Section 404 of the Clean Water Act. The Corps of Engineers and Tennessee Department of Environment and Conservation should be contacted if other evidence, particularly that obtained during an on-site inspection, indicates the potential presence of wetlands and or streams.

The least tern (*Sterna antillarum*) is known to occur and nest along the Mississippi River near the Port of Cates Landing. However, the least tern tends to occupy sandbar-type areas along the river and we would not expect it to occur in the area where the project is proposed. Our database does not indicate any current federally listed species in the vicinity of the project that would be impacted by the project. Therefore, based on the best information available at this time, we believe that the requirements of the Fish and Wildlife Coordination Act and section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. Obligations under section 7 of the

Act must be reconsidered if (1) new information reveals impacts of the action that may affect listed species or critical habitat in a manner not previously considered, (2) the action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the action. Thank you for the opportunity to comment on this proposed action. If you have any questions regarding the information which we have provided, please contact Robbie Sykes of my staff at 931/525-4979.

Sincerely,


for Mary E. Jennings
Field Supervisor

Exhibit 8
Correspondence with United States Army Corps of Engineers,
Memphis District



SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Office of Environmental Analysis

September 17, 2014

Tim Flinn
 US Army Corps of Engineers
 Memphis District, Regulatory Branch
 167 N. Main Street, Room B-202
 Memphis, TN 38103-1894

RE: Cooperating Agency Invitation for Environmental Review
 STB Finance Docket No. 35802—Northwest Tennessee Regional Port
 Authority—Rail Construction and Operation—in Lake County, Tennessee.

Dear Mr. Flinn,

I am writing to invite you to participate as a cooperating agency in an environmental document to be prepared by the Surface Transportation Board (Board) in conjunction with a proposal by the Northwest Tennessee Regional Port Authority (NWTRPA) to construct and operate a new rail line in Lake County, Tennessee.

Pursuant to the National Environmental Policy Act (NEPA) and the Board's rules, the Board's Office of Environmental Analysis (OEA) will prepare an environmental document that evaluates the potential environmental impacts of the proposed rail construction project and the reasonable and feasible alternatives to the proposal. Under NEPA and applicable rules of the Board and the Council on Environmental Quality (CEQ), an Environmental Impact Statement (EIS) will be required if the proposed project would have significant environmental impacts. If the proposed project appears unlikely to have significant environmental impacts, then an Environmental Assessment (EA) may be prepared instead.

Because we believe that NWTRPA's proposal would have the potential to impact resources under your jurisdiction, we are writing to you now, consistent with 40 C.F.R. § 1501.6, to ask you to join us as a cooperating agency in the preparation of an appropriate environmental document for this project.

Description of the Proposed Rail Project

NWTRPA is a political subdivision and noncarrier established by the counties of Dyer, Lake, and Obion in northwest Tennessee for the purpose of owning, constructing, and operating a regional river port facility in Lake County, Tennessee. On June 27, 2014, NWTRPA filed a petition with the Board seeking authority to construct

and operated approximately 5.5 miles of new rail line. The new rail line would provide rail service to the newly constructed Port of Cates Landing on the Mississippi River and would connect to the existing Tennken Railroad near Tiptonville, Tennessee. The enclosed map shows the project area and the location of the proposed rail line.

If the proposed rail line is constructed, NWTRPA intends to enter into a contract with the Tennken Railroad to provide common carrier service to customers located at the Port of Cates Landing and at the adjacent Lake County Industrial Park, which is currently under development in conjunction with the port. As you are aware, the harbor at the Port of Cates Landing was the subject of an EA prepared by your agency between 2000 and 2004, which concluded that the construction of the harbor and the port facility, as mitigated by compensatory wetland restoration and other actions, would not significantly affect the quality of the human environment.

The proposed rail line would begin at an intersection with the existing Tennken Railroad near Tiptonville, Tennessee and would extend to the northwest in the direction of the port. Approximately three miles from the connection with the existing railroad, the proposed rail line would bisect the Lake County Industrial Park. Approximately 2.5 miles northwest of the Industrial Park, the proposed rail line would enter the Port of Cates Landing and would parallel the port's slack water harbor to the main dock facility. The proposed rail right-of-way would primarily cross open farm land and could cross as many as two public roads.

The proposed rail line would be used to transport shipments of agricultural products, as well as industrial and energy commodities and products. Once the port facility and the adjacent industrial park are fully developed, NWTRPA anticipates that the rail line would also transport raw materials for industrial products, finished manufactured goods, agricultural commodities and products, and special cargoes. NWTRPA predicts that rail traffic on the line would initially consist of fewer than 1,000 carloads annually, but would eventually increase to more than 1,000 carloads annually as the port facility and industrial park becomes fully developed.

Cooperating Agency Involvement

We expect your agency's involvement to include primarily those issue areas under your agency's jurisdiction and special expertise. No direct writing or analysis should be required of your agency for the document's preparation. The activities we plan to undertake to facilitate interagency cooperation will likely include the following:

1. Invite you to participate in any public or stakeholder meetings;
2. Consult with you on any relevant technical studies that will be required for the project;
3. Provide you with project information, including study results;
4. Request your review of relevant sections of the environmental document prior to its release for comment by the public and other agencies;
5. Encourage your agency to provide input on subjects within your jurisdiction

- and expertise; and
6. Include information in the environmental document required by your agency to discharge its NEPA responsibilities and any other requirements regarding jurisdictional approvals, permits, licenses, and/or clearances.

Please be assured that we will work closely with you to ensure that the environmental document allows you to discharge your jurisdictional responsibilities. And we ask that you feel free to tell us if, at any point in the process, your needs are not being met. We expect that at the end of the environmental review, the environmental document and our public involvement process will satisfy all of our NEPA requirements, including those related to project alternatives, environmental consequences, and mitigation.

If you have any questions or would like to discuss the proposal in more detail or our agencies' respective roles and responsibilities during the preparation of the environmental document, please contact Josh Wayland at 202-245-0330 (e-mail address: **joshua.wayland@stb.dot.gov**), or Bryan Yates of EnSafe, Inc., our independent third party contractor for this project, at (901) 372-7962 (e-mail address: **byates@Ensafecom.com**). Please forward confirmation that you will participate as a cooperating agency to us by November 1, 2014. We look forward to your response and to working with you.

Sincerely,

A handwritten signature in black ink that reads "Victoria Rutson". The signature is written in a cursive style with a large, stylized initial "V".

Victoria Rutson
Director
Office of Environmental Analysis



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
MEMPHIS DISTRICT CORPS OF ENGINEERS
167 NORTH MAIN STREET B-202
MEMPHIS, TENNESSEE 38103-1894

EI-20717

September 25, 2014

Operations Division
Regulatory Branch

Ms. Victoria Rutson
Surface Transportation Board
Office of Environmental Analysis
395 E Street SW
Washington, DC 20423

Dear Ms. Rutson:

This is in response to your letter dated September 17, 2014, concerning our participation as a cooperating agency during preparation of environmental documentation for the construction and operation of a new rail line in Lake County, Tennessee (STB Finance Docket No. 35802). The environmental documentation would be prepared by the Surface Transportation Board with a proposal by the Northwest Tennessee Regional Port Authority.

We appreciate the opportunity to participate as a cooperating agency. We look forward to working with you on this project. I have assigned this effort to Mitch Elcan of my staff. He can be reached at (901) 544-0737 or by email at james.m.elcan@usace.army.mil. For future reference, this project has been assigned File No. MVM-2014-395.

Sincerely,

Tim H. Flinn, P.E.
Chief, Eastern Section
Regulatory Branch



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
MEMPHIS DISTRICT CORPS OF ENGINEERS
167 NORTH MAIN STREET B-202
MEMPHIS, TENNESSEE 38103-1894

EI-21012

January 12, 2015

Operations Division
Regulatory Branch

Mr. Joshua Wayland
Surface Transportation Board
Office of Environmental Analysis
395 E Street SW
Washington, DC 20423-0001

Dear Mr. Wayland:

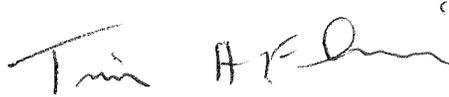
This is in response to your recent request dated December 18, 2014, requesting our agency's review and comment of the Port of Cates Landing – Rail Extension, Description of Proposed Action and Alternatives (DOPPA) prepared as part of the environmental documentation under the National Environmental Policy Act. Based on the information provided, we offer the following comments in regard to the DOPPA:

1. Our office would require verification of the presence of all waters and/or other waters of the United States within the project area prior to submission of a Department of the Army (DA) permit application. It is stated in Sections 2.1 – 2.3 that preliminary investigations indicate wetlands have not been identified within each of the alignments. Please provide our office with sufficient information (photographs, maps, wetland delineation forms, etc.) so that we may verify the wetland/stream survey. Our office will also be glad to accompany you and/or your representative for a site visit to review this delineation.
2. Figure 1-1 (USGS Topographic Map) indicates there are potentially jurisdictional other waters of the United States (OWUS) which would be crossed with each of the alternative rail alignments. These watercourses are shown on the USGS map by either solid or dashed blue lines. These watercourses should also be shown on Figures 2-1, 2-2, and 2-3 if they are determined to be OWUS. Currently, these figures indicate one OWUS is present within the alignment of Alternative A.
3. For DA permits, each crossing of a single water of the United States at a specific location is considered a single and complete linear project. Although it is appropriate to document impacts to biological, water and other natural resources with each alternative as part of environmental documentation, any proposed wetland and stream impacts should be specified at each project location as part of a permit application. This will determine the appropriate type of DA permit for this project.
4. The DOPPA indicates that preliminary investigations have not identified any historic structures or Native American cultural resources with each of the alternative rail alignments.

Documentation substantiating this finding should be provided as part of a permit application.

We appreciate the opportunity to provide comments on the DOPPA. If you have questions, please contact Mitch Elcan at (901) 544-0737 or by email at james.m.elcan@usace.army.mil and refer to File No. MVM-2014-395.

Sincerely,

A handwritten signature in black ink, appearing to read "Tim H. Flinn". The signature is fluid and cursive, with a distinct loop at the end.

Tim H. Flinn, P.E.
Chief, Eastern Section
Regulatory Branch

Appendix B
Cultural Resources Consultation and Documentation

Appendix B
Cultural Resources Consultation and Documentation

- Exhibit 1 Cultural Resources Survey for the Proposed Cates Landing Railroad in
Lake County, Tennessee

- Exhibit 2 Correspondence with Tennessee Historical Commission

- Exhibit 3 Tribal Consultation

Exhibit 1
Cultural Resources Survey for the Proposed Cates Landing Railroad
in Lake County, Tennessee

**CULTURAL RESOURCES SURVEY FOR THE PROPOSED CATES LANDING
RAILROAD IN LAKE COUNTY, TENNESSEE**

by

Gerald P. Smith and Nancy C. Smith
Smith Archaeological Consulting
3453 Blueberry Lane
Birmingham, Alabama 35216
(478) 225-7263

for

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MANAGEMENT SUMMARY

By petition filed with the Surface Transportation Board (the Board) on June 27, 2014, the Northwest Tennessee Regional Port Authority (NWTRPA) is seeking an exemption under 49 United States Code §10901 for authority to construct and operate a new rail line in Lake County, Tennessee. In the petition, NWTRPA proposed to construct and operate approximately 5.5 miles of new rail line to serve the newly constructed Port of Cates Landing on the Mississippi River near the town of Tiptonville, Tennessee.

The Board is the federal agency responsible for granting authority for the construction, operation, and maintenance of new rail line facilities. The Board's Office of Environmental Analysis (OEA) is responsible for undertaking environmental and historic review of proposed projects on behalf of the Board under the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (Section 106), and related laws. OEA is preparing an Environmental Assessment (EA) in accordance with NEPA, the Council on Environmental Quality guidelines, and the Board's environmental rules to identify and analyze the potential environmental impacts associated with NWTRPA's proposed project and all reasonable and foreseeable alternatives, including the No Action Alternative.

NWTRPA is a regional rail authority and political subdivision of the State of Tennessee established by the three counties of Dyer, Lake, and Obion in northwest Tennessee for the purpose of constructing, owning, and operating a regional river port on the Mississippi River. In 2014, NWTRPA completed construction of the Port of Cates Landing near Tiptonville in Lake County (river mile 900) and approved the contracting firm R.J. Corman Railroad Group as the port operator. The port site includes a slack water harbor and a 44-acre site for the port facilities and associated infrastructure. The proposed rail line would service the port, as well as a proposed 345 acre industrial park located south of and adjacent to the port.

The proposed rail line would be approximately 5.5 in length and would have a right-of-way approximately 150 in width, for a total project area of approximately 100 acres. The entire project area is on the Tiptonville 1:24,000 topographic sheet (Index No. 419 NW).

The Cultural Resources Phase I reconnaissance survey was conducted on behalf of the Board in partial compliance with the Board's Section 106 obligations and will inform the EA that OEA is preparing for the proposed rail line construction.

Field surveys were conducted by Gerald and Nancy Smith on August 2-4, 2014 under generally good to excellent field conditions. The entire area except for roads was under cultivation with clear soil visibility under standing crops. No archaeological sites were found within the proposed railroad corridor.

Table of Contents

MANAGEMENT SUMMARY	2
INTRODUCTION	1
ENVIRONMENT	4
CULTURE/HISTORICAL BACKGROUND	6
Prehistory	6
History: Regional Settlement.....	9
Local Archaeology and History	11
FIELD METHODS.....	17
RESULTS AND RECOMMENDATIONS.....	19
REFERENCES CITED.....	30

Figures

Figure 1. Project Location. Base map is Dyersburg Tenn.:KY,MO,IL 1:250,000 sheet, 1982.	3
Figure 2. Project area location showing railroad right of way.	20
Figure 3. View southward along right of way from southeastern corner of industrial park.	21
Figure 4. View eastward across right of way toward Northwest Correctional Center.	22
Figure 5. View northwest along right of way from main line railroad.	23
Figure 6. Transect locations, Sheet 1 of 6.	24
Figure 7. Transect locations, Sheet 2 of 6	25
Figure 8. Transect locations, Sheet 3 of 6.	26
Figure 9. Transect locations, Sheet 4 of 6.	27
Figure 10. Transect locations, Sheet 5 of 6.	28
Figure 11. Transect locations, Sheet 6 of 6.	29

INTRODUCTION

This was a Phase I survey of a proposed railroad corridor done on the Surface Transportation Board (the Board), and its contractor, Ensafe, Inc. of Memphis, Tennessee. The project proponent for the proposed rail line is the Northwest Tennessee Regional Port Authority (NWTRPA), a port authority and political subdivision of the State of Tennessee. NWTRPA has submitted a petition to the Board for authority to construct and operate the proposed rail line, which would provide rail service to the newly constructed Port of Cates Landing and the planned Lake County Industrial Park adjacent to the port. The Board is not involved in the planning, approval, or construction of either the Port of Cates Landing or the Lake County Industrial Park.

The Board is federal agency responsible for granting authority for the construction, operation, and maintenance of new rail line facilities. The Board's Office of Environmental Analysis (OEA) is responsible for undertaking environmental and historic review of proposed projects on behalf of the Board under the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (Section 106), and related laws. The Board is the lead federal agency for the historic and environmental review of the proposed rail line. OEA is preparing an Environmental Assessment (EA) that will analyze the potential impacts to environmental, cultural, and historic resources should the Board approve NWTRPA's proposal. The U.S. Corps of Engineers is a cooperating agency.

The proposed rail line would extend approximately 5.5 miles from the Port of Cates Landing, through the Lake County Industrial Park, to a connection with the Tennken Railroad, a Class III common carrier short line railroad. The rail corridor would be approximately 150 in width. The total project area is approximately 100 acres. The entire project area is on the Tiptonville 1:24,000 topographic sheet (Index No. 419 NW). Figure 1 shows the location of the project area and of identified archeological sites in the vicinity of the project area.

The field survey was conducted by Gerald and Nancy Smith on August 2-4, 2014, under generally good to excellent field conditions. The survey covered the portion of the proposed rail corridor south of the planned Lake County Industrial Park. Longitudinal pedestrian transects

were conducted at 30 foot intervals along the entire route. No cultural remains were observed.

The Lake County Industrial Park, including the area that the proposed rail line would cross, was the subject of a 2013 survey conducted by Gerald and Nancy Smith. This survey identified one archeological site (40LK212) within the industrial park area, but outside of the proposed rail corridor. Because no archeological sites were identified in the proposed rail corridor in the 2013 survey, no additional survey was conducted in that area for the present project.

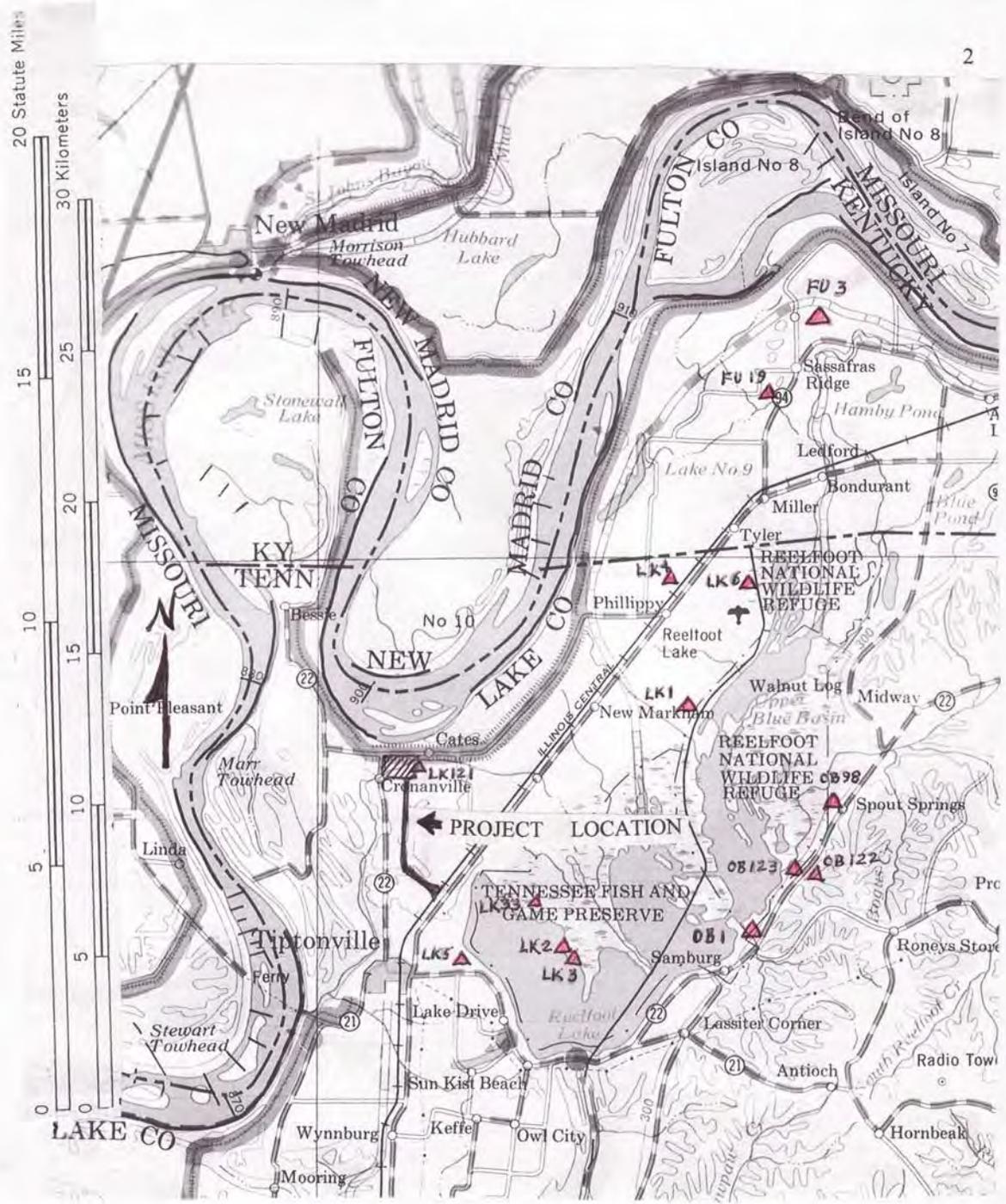


Figure 1. Project Location. Base map is Dyersburg Tenn.:KY,MO,IL 1:250,000 sheet, 1982.

ENVIRONMENT

The project area is in the Lower Mississippi River Alluvial Valley, adjacent to the Mississippi River, with the industrial park and northern railroad corridor areas on a recent natural levee of the river and the central and southern railroad corridor passing through lower lying earlier river channel scars. The climate is moderate, with a growing season averaging about 221 days (Brown 1969:2). Average temperatures range from a high of 92° Fahrenheit in July to 49° in January and lows of 70° in July to 28° in January. Rainfall is fairly evenly distributed throughout the year with an occasional dry periods in August - October. Winter and spring rains tend to come as long periods of drizzle and summer rains generally as thunderstorms.

Geologically, the area is quite young, being comprised of late and post-Pleistocene Mississippi River surfaces and meander belt ridge and channel fill deposits. The areas east and west of the industrial park consist of a mosaic of recent channels and meander belt ridges, and the industrial park itself is on a modern natural levee formation. Reelfoot Lake and much of southern and eastern Lake county are in areas noted by Saucier (1994: 298-299) as being on the downwarped eastern side of the Reelfoot Fault, while the project area is mainly on the uplifted western side.

The Reelfoot area has long been the focus of extensive ecological study, including reconstruction of the probable preclearing forest habitats by Victor Shelford (1963). Shelford's work there (1963: 94 - 103) emphasizes development of a succession of habitats as the area is abandoned by the river and is gradually elevated by flood deposits. Initial Cottonwood-Willow forest is characteristic of sand bars and banklines in and along the active channel. The Mature Cottonwood-Willow Forest is less frequently flooded and includes a wide range of vines and understory plants with swamp rabbits, opossums, and raccoons, commonly present and grey squirrels and deer also present. The Old Cottonwood-Willow Forest begins to develop as soil deposition reaches 28 to 30 feet above mean low water and the previous forest is invaded by boxelder, hackberry, elm, and sweetgum.

Shelford's Sugarberry (a.k.a. hackberry)-Elm-Sweetgum Forest includes a wide range of other tree species along with vines and shrubs. Additional animal species present include bear, cougar, bobcat, and wolf. This forest is followed by the Floodplain Oak-Hickory Forest of about

50% cherrybark and pin oak, 15 to 20% shellbark and bitternut hickory, and otherwise including a wide range of species from previous stages. The Tulip Poplar-Oak Forest is considered probable for all areas 40 to 45 or more feet above low water and not disturbed by the river for several hundred years. It includes tulip poplar, basswood, chinkapin oak, Shumard oak, beech, elm, and hackberry as major arboreal species. Backswamp and lake marginal areas of permanent to extensive seasonal flooding are characterized by the Cypress-Ash Forest of cypress, tupelo gum, and ash. Successive non forest aquatic zones extend into progressively deeper areas of old meander loop lakes such as Reelfoot Lake and others in the area.

Correlation of Shelford's forest type distributions (1963: Fig. 4-2 and 4-3) with soils on the Lake County soil survey (Brown *et al*: 1969) suggests Tulip Poplar - Oak Forest on Reelfoot-Tiptonville-Adler soils with Sugarberry-Elm-Sweetgum and Cypress-Ash Forest on various elements of the Iberia-Sharkey-Bowdre soil association. Had conversion from forest to agriculture not occurred, the industrial park would have been in Tulip Poplar-Oak forest and most of the railroad corridor in a mosaic of wetland habitats. Sweetgum-Elm-Cypress Seasonal Swamp would be expectable in Iberia and Bowdre soil areas and Cypress Swamp areas of Sharkey clay. However, the area has been cleared and converted to cropland. The majority of the industrial park and railroad corridor is located within row crops comprised of soybeans and corn.

CULTURE/HISTORICAL BACKGROUND

Prehistory

The Mississippi River drainage of western Tennessee and Kentucky has been occupied by humans for at least the past 10,000 to 12,000 years. It is covered in general regional treatments as provided by McNutt (1996); Morse and Morse (1983); Phillips (1970); and Phillips, Ford, and Griffin (1951). More localized information is provided in Mainfort (1996), Smith (1979, 1990, 1993, and 1996), Smith and Evans (1987), and Smith and Smith (2013). The summary provided here is intended as a general framework for the study area discussion.

The cultural remains of the earliest inhabitants consist primarily of large fluted points and an associated complex of scrapers, flake knives, multipurpose flake tools, and unfluted points otherwise similar to the fluted forms. Most of the known specimens are from east of the loess sheet, but some are also known from the vicinity of the Mississippi River bluffs where they have apparently been exposed by deep erosion cutting into the loess deposits in which they were included. Specimens from this period are rare, and very few sites are known. The population was apparently small and consisted of small groups living by hunting large animals and gathering plant foods. Climatic conditions were much cooler than the present and may well have been more similar to those currently characteristic of the Great Lakes than to local modern conditions.

By approximately 8000 BC the archaeological record indicates increasing importance of plant foods by the appearance of grinding tools meant mainly for grinding seeds and nuts from species present in the environment. The large, slow game animals of the late Pleistocene were gone and deer was the main large animal available. Hunting weapons emphasized the use of spear thrower darts tipped with stemmed, notched, or barbed points. The population during this cultural period, the Early Archaic, appears to have increased and archaeological sites are now present on the oldest exposed surfaces of the Alluvial Valley itself.

The Middle Archaic period of about 5000 to 3500 BC is poorly known in the area. Basally notched Eva points are present in the Tennessee River valley during this period, and a variety of side notched types are present to the north in the Midwest. Some of the Midwestern types are

occasionally found in western Tennessee, but many are also similar to Early Archaic types, thus rendering clear definition of Middle Archaic occupations in western Tennessee difficult. Ground stone axes and spear thrower weights appear regionally during this period and continue in use into late prehistoric times. The climate had become much warmer and drier than the present, with the upland forests likely made up of xeric oak and hickory species of minimal food value and permanent surface water restricted to the largest streams. Middle Archaic occupations are known from the Mississippi alluvial valley and adjacent uplands to the south, and are quite distinct from either the Tennessee River or the Midwestern materials of the period.

By about 3500 BC climatic and environmental conditions had improved to approximate modern conditions in the area. This change and the introduction of new subsistence methods appear to have resulted in continuing population growth. The most important development combined concentration on seasonally concentrated food sources with storage methods allowing effective preservation of food from times of abundance through those of severe shortage. In the western Tennessee area this Late Archaic development resulted in spring and summer occupation of the Tennessee River valley, emphasizing use of fish and mussels along with generalized hunting and gathering, followed by movement to the eastern part of the loess sheet for fall and winter occupation of groves of shagbark and scalybark hickories on stream terraces for storable nuts as well as hunting territory.

Between about 1500 and 1000 BC, a new way of life, and possibly new people, appeared from the south in southwestern Tennessee, southwest of the Hatchie River. This new culture in the area represented the expanding frontier of the Poverty Point culture based in Louisiana and southern Mississippi. By about 500 BC these sites had appeared throughout the Mississippi River drainage of western Tennessee, to the exclusion of Tennessee River based Late Archaic activity. Projectile point styles are distinct from those of the Tennessee River valley, corresponding instead to those of the lower Mississippi River valley. The larger sites in particular are marked by the presence of a wide variety of spherical, biconical, and ellipsoidal baked clay objects used to the south for baking food in cooking pits. The form, frequencies, and decoration of these objects occur in distinctive local clusters, suggestive of local social groups. Use of these objects continued to some extent after the introduction of pottery which marks the beginning of the Early Woodland period.

The Early Woodland cultural period in the area appears to have lasted from about 400 BC to about AD 100. The initial ceramic styles were drawn from the Tchula tradition of northwestern Mississippi, with local variation suggesting continuation of the previous Poverty Point derived local groups. However, by the end of the period, Adena projectile points derived from the Ohio River Valley and sand tempered cordmarked and fabric impressed ceramics derived from the Hatchie-Tombigbee-Yalobusha headwaters area had become common.

During the Middle Woodland period of about AD 100 to 400, western Tennessee was included in the vast trade network shared by the Marksville culture of the lower Mississippi River valley, Hopewell in the Ohio and upper Mississippi valleys, Miller in the Hatchie-Tombigbee-Yalobusha headwaters, and others along the coast of the Gulf of Mexico. The Pinson site near Jackson on the South Fork of Forked Deer River (Mainfort 1986) is the primary center for the western Tennessee area at this time. Baldwin series sand tempered ceramics, primarily with plain and cordmarked surface finishes, are the most common marker for the period. The lack of variability in this ware has so far precluded any effort to use it for defining local groups.

Late Woodland sites of the approximate AD 400 to 1000 period are common in the Mississippi delta portions of westernmost Tennessee and Kentucky, but are rare in the uplands. The few known upland sites of the period are mostly on the main stem and North Fork of Obion River and appear to be small special purpose camps rather than permanent occupations. Ceramics are of clay grog tempered ware and have plain, cordmarked, or occasionally check stamped surfaces. Projectile points are generally small notched or triangular forms apparently meant for use on arrows rather than spear thrower darts.

The Mississippian cultural period of about AD1000 to 1550 is the era of large town and ceremonial centers in the southeastern and midwestern United States. Agriculture, fishing, and hunting provided the food supply for a large and growing population. Large towns, usually fortified, were up to 100 acres or more of dense occupation with a central plaza. Pyramidal earthen platform mounds were the homes of most of the population of the Mississippi River flood plain and bluffs below the Ohio River. Hunting camps and hamlets are scattered up the lower 20 miles or so of the tributary streams, but the incipient Mississippian Obion site (Garland) on the upper North Fork of Obion River is the only known large upland center in the area.

Numerous local area cultural units have been defined throughout the area, including one centered in the Reelfoot Lake area and another in far western Kentucky north of Reelfoot Lake.

Mississippian ceramics include a wide variety of vessel forms, mainly jars, bottles, and bowls and a wide variety of punctuated, painted, decorated, incised, and engraved decoration as well as plainware and effigy vessels of all kinds. Stone items primarily include small triangular and lanceolate arrow points along with chipped and ground stone axes and chisels.

Arrival of the DeSoto expedition in 1541 at once provided a glimpse of Mississippian culture at its peak of powerful chiefdoms, extensive agriculture, and elaborate arts and crafts, and brought its demise through Old World epidemic diseases which killed nearly everyone. Accounts written by survivors of this expedition provide virtually our only non-archaeological information about this culture until the eighteenth century French accounts of the Natchez and their neighbors.

History: Regional Settlement

After the DeSoto expedition there were no further recorded European activities in the lower Mississippi River valley until the Marquette and Jolliet expedition of 1673, when they descended the Mississippi to the vicinity of the mouth of the Arkansas River. They found no trace of the populous provinces reported by the Spanish until they reached the Quapaw at the mouth of the Arkansas. By this time the Quapaw already had European trade goods, an expectable state of affairs given the flood of trade goods pouring into Cherokee, Creek, Choctaw, and Chickasaw territory by this time as a result of the deerskin trade with Virginia and South Carolina. French activity in the Mississippi valley grew gradually, but resulted in regular travel by the early 1700's with the establishment of New Orleans, Natchez, Arkansas Post, Kaskaskia, and points to the north which relied upon the river system for the transportation of supplies and exports.

British claim to the territory between the Tennessee and Mississippi Rivers was solidified with the capture of French Canada, and was passed to the United States at the end of the Revolutionary War. Actual control of the area, however, rested with whichever adjacent tribal claimant could evict intruders first, with the Chickasaw and Shawnee as primary contenders, and

the Cherokee and Choctaw were also occasionally involved. In 1793, the Chickasaw sold Spain a tract on the Fourth Chickasaw Bluff of the Mississippi River for Fort San Fernando and its associated settlement and trading facilities. This grant was assumed by the United States in 1798, with the existing Fort San Fernando being replaced by a new fort and trading facilities to the south near the present railroad and highway bridges. North Carolina was particularly energetic in providing land grants in the area to Revolutionary War veterans. These grants often overlapped and became the subjects of rampant land speculation and decades of lawsuits rather than being settled by their nominal owners. Non-tribal settlement of these lands was considered illegal until after the Jackson Purchase of the area from the Chickasaws in 1818. Squatter occupation of the area appears to have been rare in most of the area until then.

After the Jackson Purchase the area filled rapidly, with most of the key towns and major routes of travel established by the 1830's. Towns were generally established along the main rivers and were served by keelboats and small steamboats for primary transportation. Roads were both in poor condition and of only seasonal utility. Settlement of the upland areas was mainly by small scale subsistence farmers, with large commercial plantations operated by slave labor found mainly in the river bottom areas. By the 1840's cotton was the cash crop for all, with grains and general food crops raised only to the extent necessary to provide for the draft animals and local human population. Effective rail transportation in most of the area was not established until just before the Civil War, during which most of it was destroyed.

Large troop operations in the area were virtually over by the middle of 1862. After that the main activities were small units of the regular armies, mainly raids and recruiting trips by Confederate cavalry and pursuit by Union occupation troops. Irregular and guerrilla group attacks against both military and civilian facilities were also frequent. While local damage was often severe, the project area was spared the wholesale destruction visited on such areas as northern Virginia or the Chattanooga-Atlanta-Charleston corridor.

After the Civil War the end of the plantation-slavery agricultural system required formation of new working relationships between the large landowners and their now free former slaves in order for all to survive. Tenant farming became the dominant system, in which the tenant provides the labor and the landowner provides the rest of the resources necessary to produce a crop whose proceeds are then shared. Formerly tightly nucleated plantation headquarters

communities became dispersed as tenant farmers were scattered along roads and bayous on the 20 to 60 acre tracts each family was now responsible for farming.

Settlement of lowland areas was severely hampered by repeated flooding, which restricted most occupation either to rarely flooded natural levee ridges, terraces, or the adjacent uplands until stream channelization and effective levee construction during the first half of the twentieth century. Southern timber became a more valued commodity by the 1880's with the exhaustion of the great northern forests, and commercial clearing of previously uncultivated areas began in earnest. Logging railroads and ephemeral/portable sawmills abounded until most of the major stands of timber were cut by the end of the 1930's. The introduction of soybeans, capable of growing well on land too wet for other commercial crops of the area, spurred the clearing of most of the surviving tracts of lowland timber during the mid-1900's. The modern post-tenancy era emphasizes diversified wheat, soybean, rice, and sorghum/milo production which is conducted with heavy farm equipment requiring only a fraction of the previously necessary labor force. By the 1950's most of the rural population was moving in to the nearby towns and cities in search of new employment. Lowland areas once characterized by large plantation operations now only have a few families and most of the once ubiquitous small sawmill/cotton gin towns are now gone.

Local Archaeology and History

Human occupation of the Reelfoot area is known to have occurred since the Late Pleistocene Pleo Indian hunter-gatherers visited the loess covered uplands overlooking the modern Mississippi River flood plain (Mainfort 1996:80), followed by evidence of Archaic Period activity (Smith 1979 and Mainfort 1996) in the uplands and Early to Middle Woodland occupations in the adjacent upland drainages and a few sites in the flood plain itself. The Woodland materials include Tchula related Early Woodland and sand tempered ceramics apparently related to Middle Woodland materials better known from the Pinson and related sites in western Tennessee and the LaPlant site in southeastern Missouri.

Several large Late Woodland sites have been recorded along and near the base of the bluffs forming the eastern margin of the Reelfoot Basin. These are part of the extensive Late

Woodland tradition of the northern Mississippi delta and the Mississippi River valley northward to the vicinity of St. Louis at the mouth of the Missouri River. Ceramics of the period are primarily grog tempered Mulberry Creek Cordmarked and Baytown Plain with small amounts of Wheeler Check Stamped, Kimmswick Fabric Impressed, Larto Red, Kersey Incised, and Wickliffe Thick. Mill Creek chert hoe flakes, produced by sharpening hoes imported from southern Illinois, are frequent on these sites. Particularly large sites include 40OB98, 40OB128, 40LK6, 15FU18, and 15FU19, all on old natural levees of the Mississippi River. This complex is dated to the approximate AD 700 to 950 time span (Mainfort 1996:84).

The Emergent Mississippian Period of approximately AD 950 to 1050 is represented by a group of sites near Samburg which are characterized by a high frequency of Mulberry Creek Cordmarked, Baytown Plain, Mississippi Plain, and Varney Red Filmed ceramics with Mississippian vessel forms, apparently related to the similar Malden Plain complex of southeastern Missouri and northeastern Arkansas. Sites 40OB1, 40OB6, 40OB122, and 40OB123 are part of this group. Site 40LK10 in the central part of Reelfoot Lake and 40LK5 at the southwestern end of the lake also appear to be related, but distinctive sites of this period. Later Mississippian sites related to the Cairo Lowland sites of southeastern Missouri and similar sites in western Kentucky are present in the area, particularly 40LK1, 40LK2, 40LK3, 40LK33, and the major mound center at 15FU3. There is also a complex of approximate early to mid-seventeenth century date at 40LK4, 15FU119 in particular, characterized by snub nosed end scrapers, Nodena and large triangular projectile points, and jars with closely spaced vertical applique strips on their necks. This complex is also represented at the Campbell site in Pemiscott County, Missouri and others near it. Also present are three fragments of iron and a brass tinkler from 40LK4, which have carbon dates indicating occupation around AD 1650 (Mainfort 1996:94).

Although there was early French activity on the Mississippi River near the study area, there is no evidence of local French occupation. By the mid eighteenth century French travelers were using a small river east of the study area, which they called Bayou du Chein. There was some trading with local Indians along this stream, but little is known about it. The Chickasaws were the main claimants of the area by this time.

In 1775, J. F. D. Smyth, an English traveler on the Mississippi, noted a river he called the

Kiskinopa, which seems to have been Bayou du Chein (Williams 1930:30-31). The first systematic exploration of the area was undertaken in June 1785. This was done by a party consisting of Henry Rutherford, James Robertson, Edward Harris, and two assistants, who explored much of western Tennessee. They found a small Indian settlement near Bayou du Chein, which they called "Reelfoot" after their name for the headman of the community. In remarking on the local terrain they noted that there were no hills and little rolling land between the Mississippi River and the Reelfoot cliffs. Most was essentially first or second bottoms - ideal for agriculture but not for permanent settlement due to flooding.

The Rutherford survey attracted some interest in the study area, but the continued Chickasaw presence was enough to discourage white settlement into the nineteenth century. By this time New Madrid had been established on the west bank of the Mississippi. This community had been established by Colonel George Morgan, a prominent veteran of the American Revolution, on land he purchased from the Spanish (Penwick 1976:16-31). New Madrid became famous as a result of the massive earthquakes of 1811-1812. These earthquakes began in December 1811 and continued into January 1812. The land along the Reelfoot Cliffs sank from one to fifteen feet and up to twenty feet just east of the study area. The Mississippi River is said to have run backwards for 48 hours as it flooded the new great depression now known as Reelfoot Lake (Fuller 1912:9-11, Penwick 1976:43-81).

Andrew Jackson and Isaac Shelby negotiated the Jackson Purchase treaty of 1818, which extinguished the Chickasaw title to West Tennessee and opened the area to white settlement. The area was rapidly settled, with George W. L. Marr, a war of 1812 veteran and friend of Andrew Jackson, as a prominent local settler. He claimed Island No. 10 in the Mississippi in 1823 (Henley 1962:6-7) and the Meriwether family established Silver Top plantation just above the present location of Tiptonville in 1826. In 1856 William Tipton moved from Kentucky and built a house and store on the Mississippi River about a mile and a half below Silver Top plantation on land purchased from James Reeves. Tiptonville then grew up around his store (Goodspeed 1887: 734).

Tiptonville served as the shipping point and mercantile center for the surrounding area, where cotton was the main cash crop. Grain was initially ground with horse-powered mills, but a steam powered mill was established in the area in 1845. By 1860 the study area had developed a

typical slave labor based cotton economy. Although still part of Obion County, the county held separate courts west of Reelfoot Lake due to the difficulties of travel to the rest of the county.

At the beginning of the Civil War, the white residents of the Tiptonville area were nearly unanimous in support of the Confederacy and provided four companies of troops for the Confederate Army. Island No. 10 was regarded as crucial to the defense of the Mississippi valley and was the next point of defense between Memphis and the fortifications at Columbus, Kentucky. There were five batteries of artillery on the island, five batteries on the Tennessee bank, two earthwork forts at New Madrid, a battery of six heavy guns above the New Madrid bend, and a 16-gun floating battery moored at the island. The garrison approximated 7,000 troops. (Henley *et al*: 1962:4)

Early in 1862, Grant's capture of Forts Henry and Donelson opened both the Tennessee and Cumberland Rivers to the Union navy and outflanked the fortifications at Columbus. The guns from there were sent to strengthen the defenses at Island No. 10. On March 3, 1862, the earthwork forts on the Missouri side of the river were overcome from the rear, and only part of the garrisons and artillery could be evacuated to Tiptonville. (Melton 1979:8).

The next Union move, an attack by seven ironclads, was beaten off by the floating battery, so the Union forces under Pope awaited the arrival of their ten mortar rafts. Heavy rains and flooding complicated efforts by both sides and forced abandonment of the Confederate works above the island. Before daylight on April 6, 1862, two ironclads fought past the island to provide artillery cover for a Union crossing of the river from New Madrid. The Confederate Army was then forced to fall back from the island, but was trapped between Reelfoot Lake and the Mississippi River at Tiptonville, and surrendered April 7 (Melton 1979:46; Henley 1962:5-6). This essentially ended the war in the area, except in Tiptonville, as a known center of support for the Confederacy, was shelled by Union gunboats and completely burned out.

No effort was made to rebuild Tiptonville until 1865 when J. C. Harris and W. H. Shelton were instrumental in its restoration. In 1870 the state legislature created Lake County with Tiptonville as its county seat. Cotton remained the economic base of the area and Tiptonville was its main shipping point. A major ferry crossing was established by Robert Nall about a mile above Tiptonville.

In 1880, a fire destroyed much of Tiptonville, and then in 1891 the Mississippi River shifted its course about a quarter mile eastward and destroyed the rest of the original 1865 town area. By 1902, the river had moved another half mile eastward, and by 1905 began shifting back westward to its 1891 course. Another major fire in 1905 destroyed most of the town as it existed at that time. Arrival of the railroad in 1907 provided rail transport to Dyersburg, which was extended to Hickman, Kentucky by 1910. In 1885 the Keystone Lumber Company built a railroad from Reelfoot Lake to the river and began cutting large quantities of cypress, oak, and walnut. Their operations also included the removal of large quantities of sunken timber from Reelfoot Lake itself.

Even as late as the 1880's, most settlement in Lake County was restricted to the high ground from Tiptonville northward to the Mississippi River at Cates Landing. Goodspeed (1887:854) notes that the only approximation of a village in the county was the community of Cronanville. It then consisted of a store, cotton gin, and gristmill owned by James Cronan along with a few houses. Cronan had built a blacksmith shop and saloon there after the Civil War and continued operations there. The area seems to have been a center of activities in the area well before the Civil War; Emmet Lewis (personal communication) notes that the first burial in the Cronanville cemetery took place in 1838 and a Cumberland Presbyterian church was built near the northwest corner of the cemetery in 1852 or 1853. The 1890 Mississippi River Commission map of the area shows several structures in the area, some of which seem to have survived to appear on the 1965 aerial photographs used as the base for the Lake County soil map of 1969 (Brown *et al*: 1969).

Historic period sites noted in the area include late nineteenth century through twentieth century tenant occupation sites in Fulton County, Kentucky, and Lake County, Tennessee, recorded by Gerald Smith (1993), and sites near Grays Camp in Lake County, Tennessee, recorded by Guy Weaver (2008). The late nineteenth century through mid-twentieth century rural center of Cronanville was recorded by Gerald Smith (1993) and revisited by Smith and Smith (2013) in connection with the survey done for the Lake County Intermodal Industrial Park. The earliest local sites include the mid nineteenth century cemetery at Cronanville (Smith 1993) and also 40LK121 (Smith and Smith 2013: 11-12) containing mid nineteenth century residential scatter in the eastern edge of the industrial park tract. This area probably represents the western

edge of a site centered to the rim fields outside the present survey areas and too densely covered in standing crops for effective investigation.

The industrial park survey of 2013 covered the industrial park under bare ground conditions and included investigation of a late nineteenth through late twentieth century farmstead noted in 1993 as an active farm headquarters. By 2013 it had been completely demolished and the remains were hauled away, leaving a clean field in its place. The northeastern margin of the tract included scattered mid-20th century debris from a series of structures noted on the 1940's and 1950's topographic maps, but there were no definable concentrations and no indication of pre 1935 occupation. The rest of the area was devoid of evidence of human occupation. Whatever additional settlement activity was associated with Cronanville, it was apparently as scattered farmsteads such as 40LK121 whose apparent occupation span is within the use period of the Cronanville cemetery. Adjacent settlement in the area to the northeast of the industrial park tract is indicated on the late nineteenth century Mississippi River Commission maps as present on Mississippi River natural levee areas.

Materials recovered from 40LK121 range in approximate date from about 1840 to 1875. These include:

Aqua blown-in-mold rectilinear bottle fragments with beveled corners	2
Aqua paneled apothecary bottle fragment with lettered panel	1
Very dark green bottle glass, 1 applied/turned lip and 1 embossed rectilinear mold blown fragment	2
Very dark amber bottle glass: rectilinear base, blown in snap mold	1
Plain whiteware	4
Blue sponge decorated whiteware	1
Blue edge painted/embossed whiteware	1
Botanic embossed whiteware	1
Salt glazed exterior/reddish brown interior stoneware	1
Salt glazed exterior/black interior glazed stoneware	1
Dark reddish brown glazed stoneware	1
Cast iron fragments, approximately 1/8 inch thick, slightly curved	2

The "very dark" glass semiopaque items fall within the "black glass" category generally used for wine, liquor, and a wide variety other items considered to need protection from sunlight, commonly used from at least the 1500's into the mid 1800's, and still in use for some goods. The applied/turned lip finish is noted by Weaver (1993: 197) as having been in use from the late 1820's into the early 1870's when improved lipping tools came into general use. Blue edge painted/embossed whiteware appeared by the 1780's and continued into the 1850's; the specimen from 40LK121 appears to be relatively late in the sequence. The cast iron fragments could easily have come from simple flared-wall skillet, kettle, or Dutch oven-like cooking vessels.

FIELD METHODS

The railroad right of way was all under cultivation except for a paved road crossing it at a right angle, with good visibility under the standing crops. A drainage ditch forms the eastern edge of the central third of the right of way, with lateral drainage ditches entering the main ditch from the adjacent fields and the county road. The southern three quarters of the right of way is in swampy Mississippi river channel fill soils, primarily Bowdre silty clay, Iberia silt loam, Iberia silty clay loam, and Sharkey clay. The northern quarter is Adler silt loam on the backslope of a Mississippi River natural levee. There were no sites recorded in the survey area in the state site files and no structures visible on extant aerial photographs or topographic maps.

Field surveys were carried out along the main line route as longitudinal pedestrian transects covering the entire route at 30 foot intervals, proceeding outbound from the local parking spot outbound along one side of the right of way and returning along the other half. The fan shaped area at the connection with the main line was covered at approximate 50 foot intervals in parallel pedestrian transects. Lateral drain banks were examined for evidence of buried cultural horizons, with such exposures present at irregular intervals rarely exceeding 200 feet.

There were no cultural remains found during the survey. Examination of the lateral drains across the right of way into main ditches revealed only sterile channel fill without buried soil horizons. Soil visibility was excellent over most of the area and soil disturbances consisted of plowing fields for farming and excavation of drainage ways to prevent ponding of water in the fields, both activities that tend to expose rather than conceal sites. The right of way over most of

the area passes through channel fill deposits which formed in relict lake/swamp bottoms and thus should not have been suitable for human occupation. This would also be consistent with local flood plain settlement patterns which emphasize settlement on natural levee crests adjacent to rather than within lacustrine habitats.

Ditch profile logs are as follow:

1. South edge of industrial park; Plat Sheet 5
 - 0 - 16 cm PZ 10YR5/3 sandy silt loam
 - 16 - 39 cm 10YR4/3 silt loam

2. Lateral ditch about 3400 feet south of industrial park; Plat Sheet 4
 - 0 - 112 cm 10YR4/2 clay

3. TN SR 212 south road ditch; Plat Sheet 4
 - 0 - 20 cm road fill
 - 20 - 67 cm 10YR4/2 silty clay
 - 67 - 126 cm 10YR3/2 silty to sandy loam

4. Lateral ditch about 1600 feet south of SR212; Plat Sheet 3
 - 0 - 37 cm 10YR3/1 silty clay
 - 37 - 43 cm 10YR4/1 clay

5. Lateral ditch about 1400 feet south of location 4; Plat Sheet 3
 - 0 - 41 cm 10YR3/1 clay

6. North side of main ditch at corner, upper part of 3 to 4 meter deep ditch with vertical sides; Plat Sheet 2
 - 0 - 90+ cm 10YR4/1 clay

7. West side east property line ditch, about 1300 feet S of corner in main ditch; Plat Sheet 2
 - 0 - 115+ cm 10YR4/1 clay

8. Edge of current railroad ditch; Plat Sheet 1
 - 0 - 41 cm 10YR3/1 sandy to silty loam

RESULTS AND RECOMMENDATIONS

No cultural remains were recorded or reported. Therefore, no further investigation of the project area is recommended.



Figure 3. View southward along right of way from southeastern corner of industrial park.



Figure 4. View eastward across right of way toward Northwest Correctional Center.

Right of way is marked by tree line at eastern edge of cornfield and dry grass strip along eastern edge of soybean field.



Figure 5. View northwest along right of way from main line railroad.

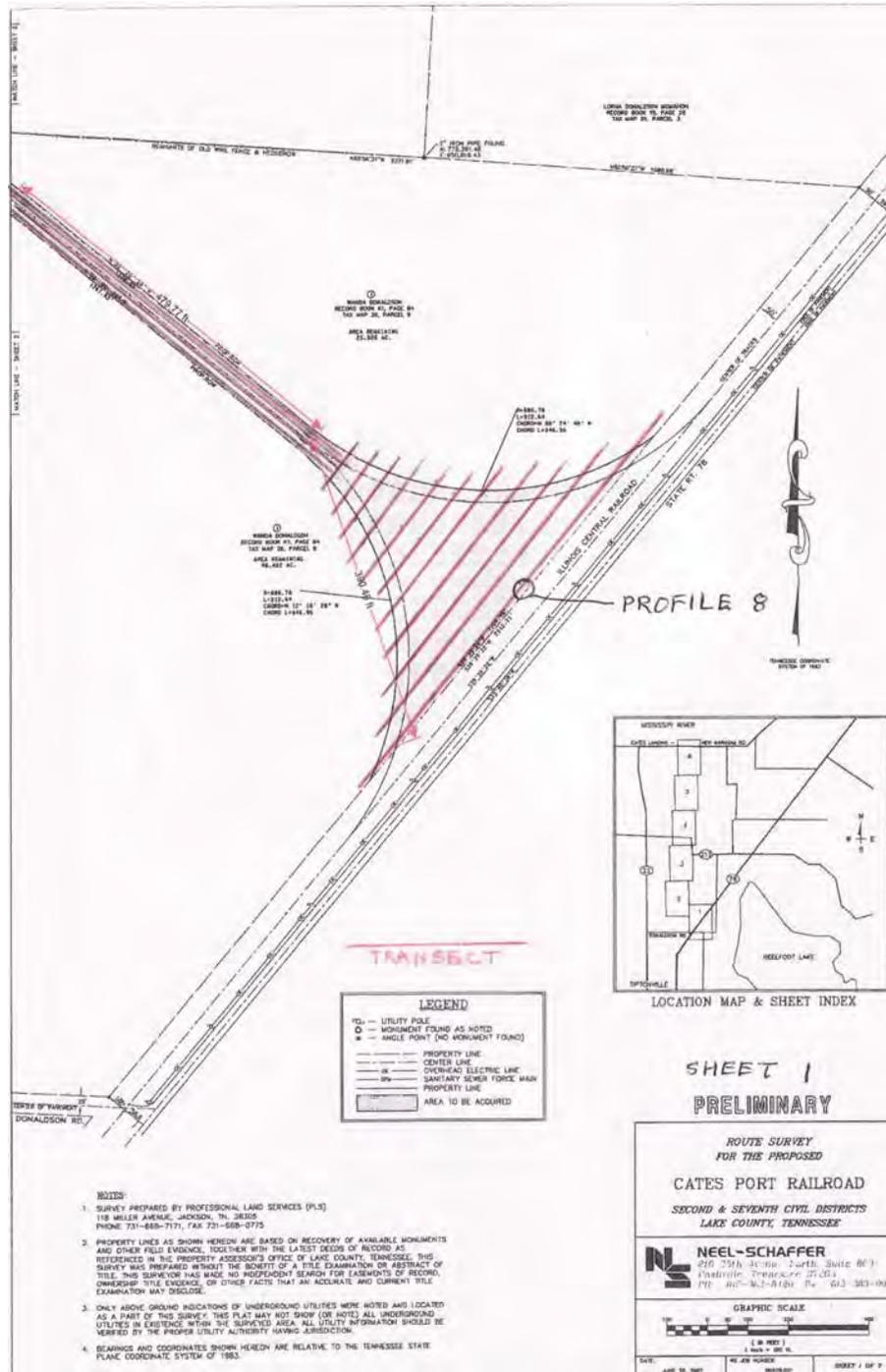


Figure 6. Transect locations, Sheet 1 of 6.

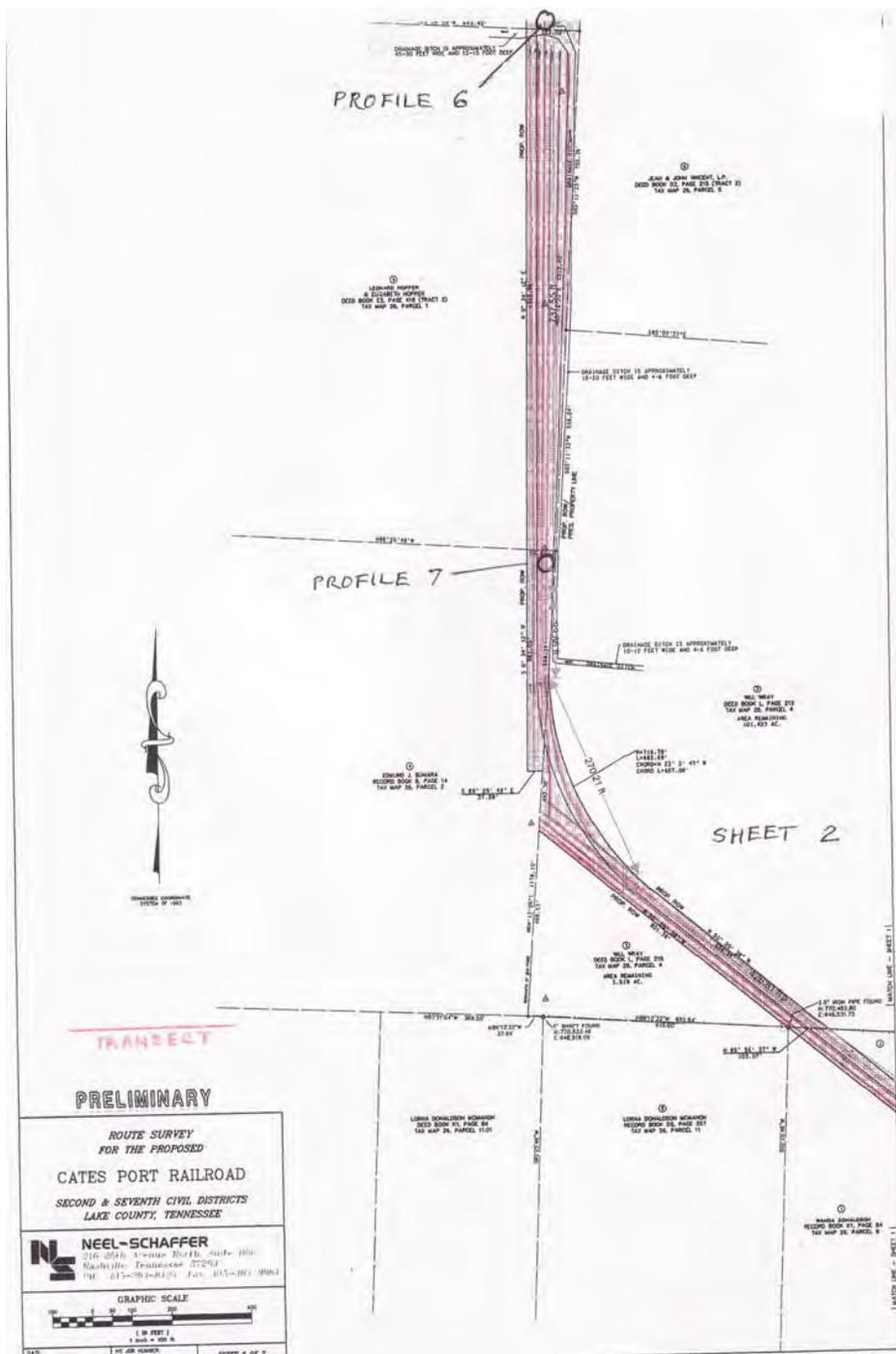


Figure 7. Transect locations, Sheet 2 of 6

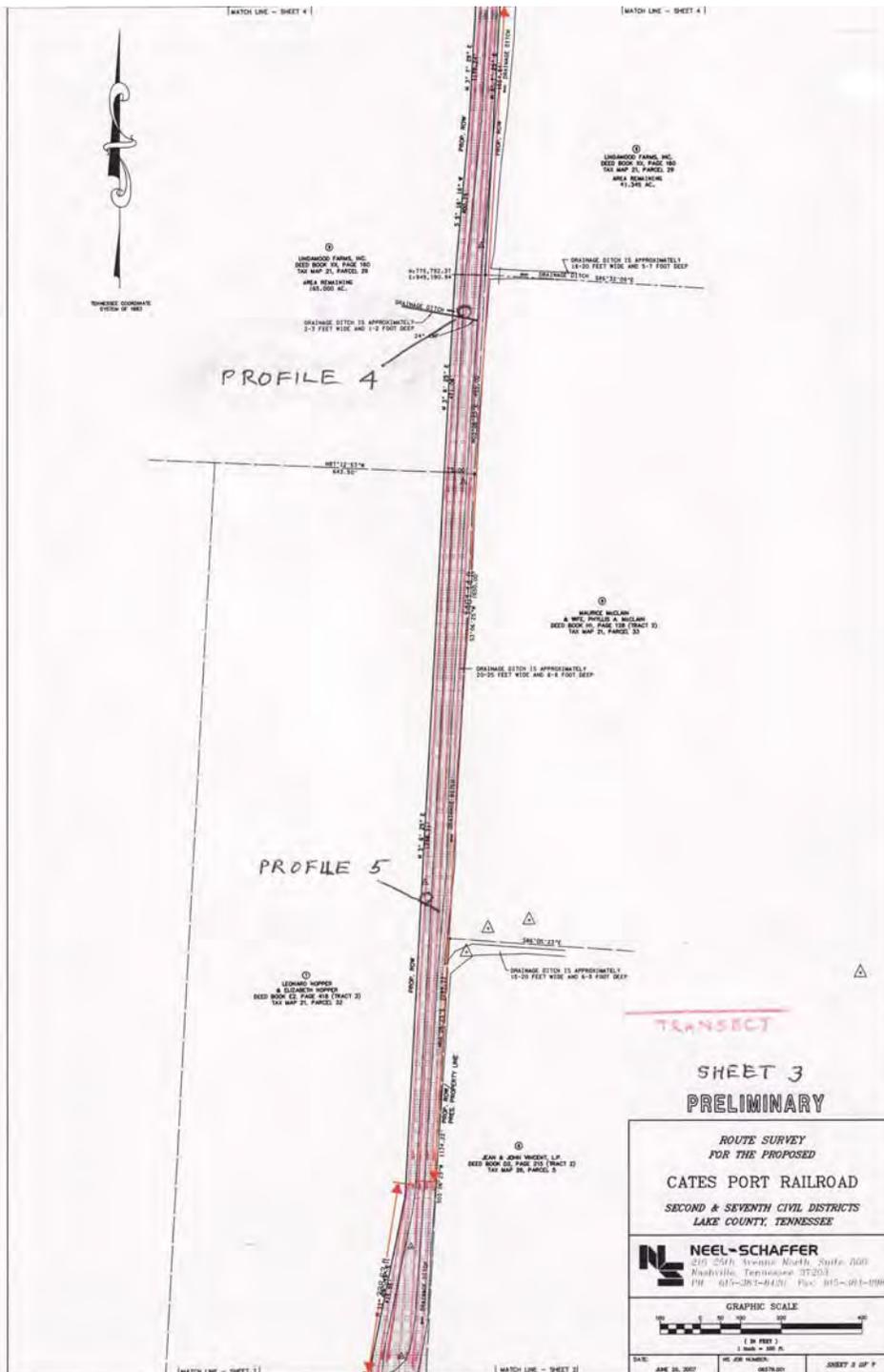


Figure 8. Transect locations, Sheet 3 of 6.

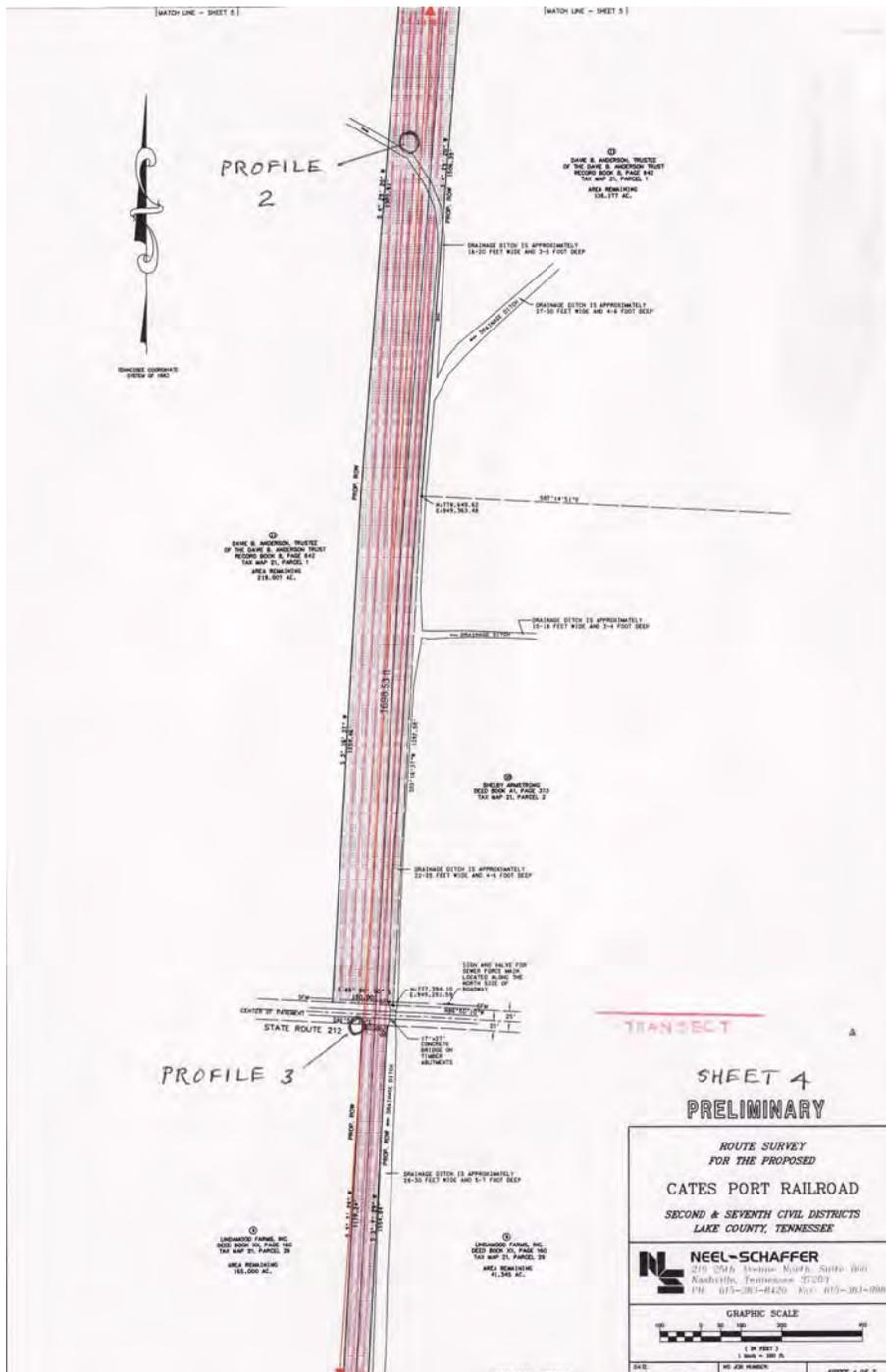


Figure 9. Transect locations, Sheet 4 of 6.

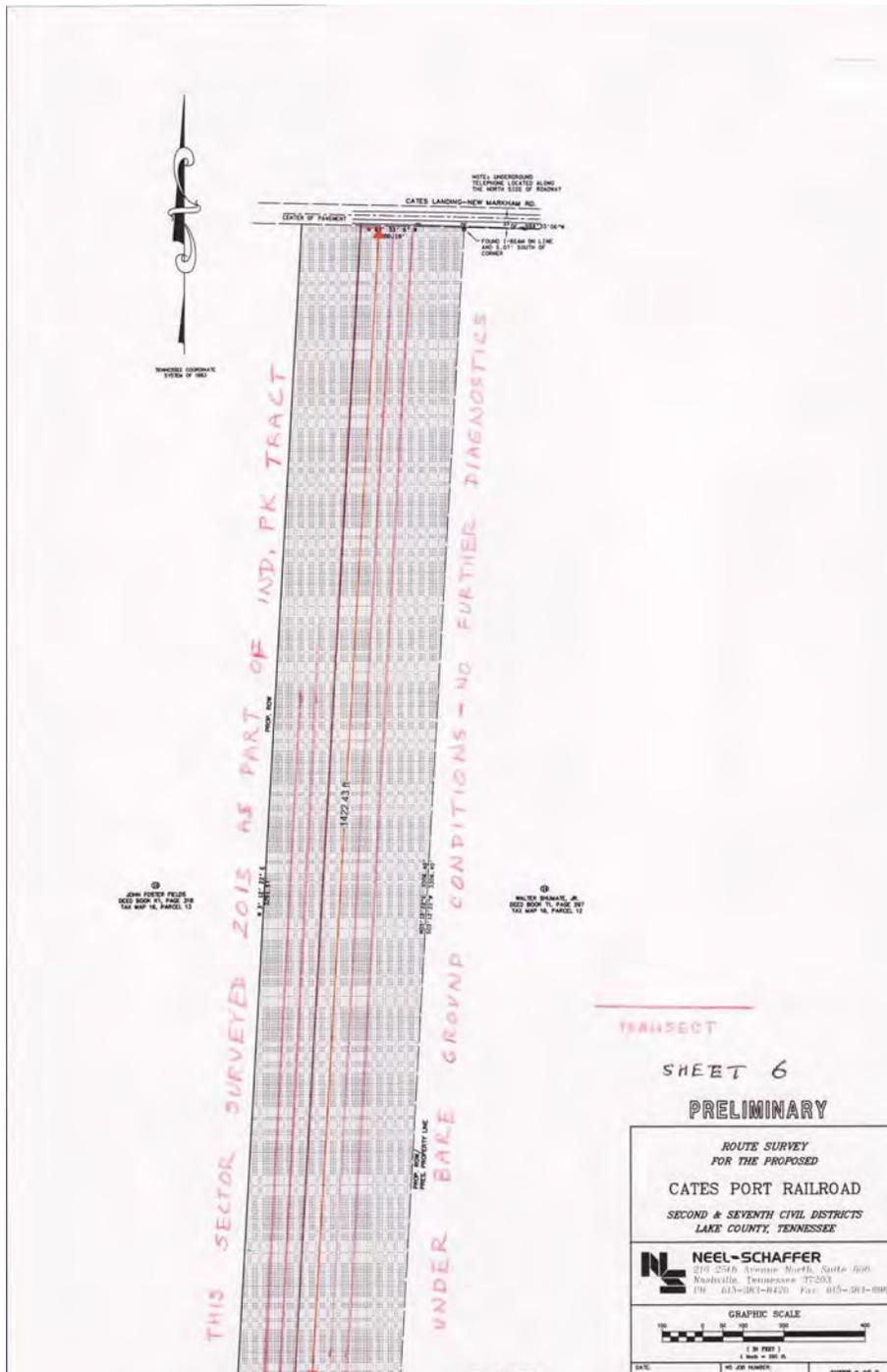


Figure 11. Transect locations, Sheet 6 of 6.

REFERENCES CITED

- Brown, William T.; W. C. Jackson; G. L. Keathley; and C. I. Moore, 1969. *Soil Survey of Lake County, Tennessee*. U. S. Department of Agriculture Soil Conservation Service. Washington, D.C.
- Fuller, Myron L., 1912. *The New Madrid Earthquake*. U. S. Department of the Interior Bulletin 392.
- Garland, Elizabeth B., 1992. *The Obion Site: An Early Mississippian Center in Western Tennessee*. Mississippi State University, Cobb Institute of Archaeology Report of Investigations No. 7. Starkville.
- Goodspeed, W., 1887. *History of Tennessee*. Goodspeed Publishing Co., Nashville, Tennessee.
- Mainfort, Robert C., Jr., 1996. The Reelfoot Lake Basin, Kentucky and Tennessee. In: *Prehistory of the Central Mississippi Valley*, pp 77-96, edited by Charles H. McNutt. University of Alabama Press, Tuscaloosa.
- McNutt, Charles H. (ed), 1996. *Prehistory of the Central Mississippi Valley*. University of Alabama Press, Tuscaloosa.
- Melton, Maurice, 1979. The Struggle for Island No. 10. *Civil War Times Illustrated* 17(1): 4-46.
- Morse, Dan F., and Phyllis A. Morse, 1983. *Archaeology of the Central Mississippi Valley*. Academic Press, San Diego.
- Palmer, N. Nicole, and Guy G. Weaver, 2008. *Phase I Archaeological Assessment of a Proposed 50 Acre Tract on Donnell Road for Wetland Mitigation, Near Grays Camp on Reelfoot Lake, Lake County, Tennessee*. Weaver & Associates, LLC, for Tennessee Department of Transportation, Nashville.
- Peacock, Blanche G., 1977. A Note on Lake County. *Tennessee Historical Quarterly* 36(4): 537-538.
- Penwick, James, 1976. *The News Madrid Earthquake of 1811-1812*. University of Missouri Press, Columbia.
- Phillips, Philip, 1970. *Archaeological Survey in the Lower Yazoo Basin, Mississippi, 1949-1955*. Papers of the Peabody Museum of Archaeology and Ethnology 60. Harvard University, Cambridge, MA.

- Phillips, Philip; James A. Ford, and James B. Griffin, 1951. *Archaeological Survey in the Lower Mississippi Alluvial Valley, 1940-1947*. Papers of the Peabody Museum of Archaeology and Ethnology 25. Harvard University, Cambridge, MA.
- Saucier, Roger T., 1994. *Quaternary Geology of the Lower Mississippi Valley*. Arkansas Archaeological Survey Research Series 6. Fayetteville.
- Sease, E. C.; R. L. Flowers; W. C. Mangrum; and R. K. Moore, 1970. *Soil Survey of Shelby County, Tennessee*. United States Department of Agriculture, Soil Conservation Service. Washington, D. C.
- Shelford, Victor E., 1963. *The Ecology of North America* University of Illinois Press, Urbana.
- Smith, Gerald P., 1979. *Archaeological Surveys in the Obion-Forked deer and Reelfoot-Indian Creek Drainages, 1969 Through Early 1975*. Memphis State University Anthropological Research Center Occasional Papers No. 9.
- Smith, Gerald P., 1990. The Walls Phase and Its Neighbors. In: *Towns and Temples Along the Mississippi*, pp 135-169. Edited by David H. Dye and Cheryl Anne Cox. University of Alabama Press, Tuscaloosa.
- Smith, Gerald P., 1993. *Phase I Archaeological Surveys of Three Tracts in Tennessee and Kentucky*. University of Memphis, for Tennessee Valley Authority.
- Smith, Gerald P., 1996. The Mississippi River Drainage of Western Tennessee. In: *Prehistory of the Central Mississippi Valley*, pp 97-118, edited by Charles H. McNutt. University of Alabama Press, Tuscaloosa.
- Smith, Gerald P., and Nancy C. Smith, 2013. *Phase I Archaeological Survey of the Intermodal Regional Industrial Park Tract at Cates Landing, Lake County, Tennessee*. For Reelfoot Area Chamber of Commerce, Tiptonville, Tennessee.
- South, Stanley, 1977. *Method and Theory in Historical Archaeology*. Academic Press, New York.
- Weaver, Guy G., 1993. *The Gowan Farmstead Archaeological Data Recovery at Site 40DV401 (Area D), Davidson County, Tennessee, Final Report*. Garrow & Associates, Inc., Memphis. For the Nashville Airport Authority and Tennessee Department of Conservation, Division of Archaeology.
- Williams, Samuel Cole, 1930. *Beginnings of West Tennessee: In the Land of the Chickasaws*.

Exhibit 2
Correspondence with Tennessee Historical Commission



EI-20710

TENNESSEE HISTORICAL COMMISSION

STATE HISTORIC PRESERVATION OFFICE

2941 LEBANON ROAD

NASHVILLE, TENNESSEE 37214

OFFICE: (615) 532-1550

www.tnhistoricalcommission.org

August 1, 2014

Ms. Victoria Rutson
Office of Environmental Analysis
Surface Transportation Bd.
Washington, D. C., 20423

RE: STB, 5.5 MILE RAIL LINE/35802, UNINCORPORATED, LAKE COUNTY

Dear Ms. Rutson

In response to your request, received on Tuesday, July 29, 2014, we have reviewed the documents you submitted regarding your proposed undertaking. Our review of and comment on your proposed undertaking are among the requirements of Section 106 of the National Historic Preservation Act. This Act requires federal agencies or applicant for federal assistance to consult with the appropriate State Historic Preservation Office before they carry out their proposed undertakings. The Advisory Council on Historic Preservation has codified procedures for carrying out Section 106 review in 36 CFR 800. You may wish to familiarize yourself with these procedures (Federal Register, December 12, 2000, pages 77698-77739) if you are unsure about the Section 106 process.

To complete our review of this undertaking, this office will need to receive from you a DETAILED AND CLEARLY MARKED hard copy of a USGS topographic 7.5 minute series 1:24000 map to scale plus the name of the quadrant map indicating the exact location of every specific project activity and a clear project narrative. You may obtain the appropriate USGS maps through the Department of Environment and Conservation, Division of Geology, Maps and Publications Sales Office at (615) 532-1516. Please be sure to give us the name of the quad map.

Upon receipt of the additional information, we will complete our review of this undertaking as expeditiously as possible. Until this office has rendered a final comment on this project, your Section 106 obligation under federal law has not been met. Please inform us if this project is not funded or canceled by the federal agency. Questions and comments may be directed to Joe Garrison (615) 770-1092.

Your cooperation is appreciated.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jyg



TENNESSEE HISTORICAL COMMISSION
2941 LEBANON ROAD
NASHVILLE, TENNESSEE 37243-0442
OFFICE: (615) 532-1550
www.tnhistoricalcommission.org

June 15, 2015

Mr. Joshua Wayland
Surface Transportation Board
Office of Environmental Analysis
395 E. Street, SW
Washington, DC 20423-0001

RE: STB, ARCHAEOLOGICAL ASSESSMENT, CATES LANDING RAILROAD,
UNINCORPORATED, LAKE COUNTY

Dear Mr. Wayland:

At your request, our office has reviewed the above-referenced archaeological survey final report in accordance with regulations codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739). We find that the report meets the Tennessee SHPO Standards and Guidelines For Archaeological Resource Management Studies.

If project plans are changed or archaeological remains are discovered during construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.

Your continued cooperation is appreciated.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jmb



SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Office of Environmental Analysis

July 10, 2015

E. Patrick McIntyre, Jr.
Executive Director
Tennessee Historical Commission

RE: STB Finance Docket No. 35802, Northwest Tennessee Regional Port Authority—Rail Construction and Operation—in Lake County, Tennessee:
Finding of No Historic Properties Affected

Dear Mr. McIntyre,

I am in receipt of your letter, dated June 15, 2015, regarding the proposal of the Northwest Tennessee Regional Port Authority (NWTRPA) to construct and operate an approximately 5.5 mile rail line in Lake County, Tennessee. Your letter indicates that the Tennessee Historical Commission has determined that the archaeological survey report submitted to your office for this project meets the Tennessee SHPO Standards and Guideline For Archaeological Resource Management Studies. I want to thank you for your timely review of this report and for your continued support during the Surface Transportation Board's (the Board) historic review process of NWTRPA's proposal.

With this letter we are notifying you that we have made a finding of "No Historic Properties Affected" pursuant to 36 C.F.R. 800.4(d)(1), based on our independent review of the available information, including the archeological survey submitted to your office, which indicated that there are no historic properties impacted within Area of Potential Effect. The documentation for this finding include the archeological survey report, all relevant correspondences, and this letter, which have been made publically available on the Board's website at www.stb.dot.gov.

The Board's Office of Environmental Analysis (OEA) is currently preparing an Environmental Assessment (EA) that analyzes the potential impacts of the proposed rail line on the human and natural environment, including cultural and historic resources. In the EA, OEA will recommend that the Board impose a condition on any decision granting approval for NWTRPA's proposal that will require NWTRPA to consult with OEA and the Tennessee Historical Commission if NWTRPA's project plans are changed or in the event that archeological remains are discovered during construction activities in order to determine what further action would be necessary to comply with the Board's Section 106 responsibilities.

In accordance with 36 C.F.R 800.4(d)(i), your office has thirty days to object to

this finding. Please respond within this timeframe, otherwise we will assume that you concur with our finding.

Thank you for your assistance with this project. If you have any questions, please do not hesitate to contact Josh Wayland of my staff at (202) 245-0330 (email: waylandj@stb.dot.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Victoria Rutson". The signature is written in a cursive, flowing style.

Victoria Rutson
Director
Office of Environmental Analysis



RE: Railroad Construction in Lake County , TN
Joseph Garrison to: Joshua.Wayland@stb.dot.gov

10/02/2015 09:21 AM

History: This message has been replied to.

Mr. Wayland,

Thank you for your recent email. You are correct. The Tennessee State Historic Preservation Office has concurred that no Historic Properties will be affected by this Federal undertaking. We appreciate the discernment and diligence that prompted your inquiry.

Best,

Joseph Y. Garrison, PhD
Review and Compliance Coordinator
Tennessee State Historic Preservation Office
Tennessee Historical Commission
2941 Lebanon Road
Nashville, Tennessee 37243-0442

Joseph.Garrison@tn.gov

(615)770-1092

"I can explain it to you, but I can't understand it for you"

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From: Joshua.Wayland@stb.dot.gov [Joshua.Wayland@stb.dot.gov]
Sent: Thursday, October 01, 2015 11:08 AM
To: Joseph Garrison
Subject: Railroad Construction in Lake County, TN

*** This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - OIR-Security. ***

Dr. Garrison,

I am following up regarding a proposed rail line construction at Cates Landing in Lake County, TN by the Northwest Tennessee Regional Port Authority. My agency is in the process of finalizing the environmental and historic review for this project. Before we publish the Environmental Assessment, I wanted to follow up your your office once again regarding the Section 106 review. The last communication we received from the Historical Commission was on June 15, 2015 and is attached to this email. In response, we sent a letter dated July 10, 2015 to document our finding of no historic properties affected (also attached). Can you confirm that the Tennessee

Historical Commission still does not have any concerns regarding this proposed project? Please feel free to call me at the number below.

(See attached file: EI-21020.pdf)(See attached file: EO-2605.pdf)

Thank you for your assistance,

Josh Wayland
Environmental Protection Specialist
Office of Environmental Analysis
Surface Transportation Board
Tel: (202) 245-0330

Exhibit 3
Tribal Consultation

Recipient List

Choctaw Nation of Oklahoma
P.O. Box 1210
Durant, OK 74702-1210

Eastern Shawnee Tribe of Oklahoma
12705 E. 705 Road
Wyandotte, OK 74370

Mississippi Band of Choctaw Indians
P.O. Box 6257
Choctaw, MS 39350

Quapaw Tribe
5681 S. 630 Rd.
Quapaw, OK 74363

Chickasaw Nation
P.O. Box 1548
Ada, OK 74821

Tunica-Biloxi Indians of Louisiana
P.O. Box 1589
Marksville, LA 71351



SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Office of Environmental Analysis

June 2, 2015

Jefferson Keel
Tribal Historic Preservation Officer
Chickasaw Nation

RE: STB Finance Docket No. 35802, Northwest Tennessee Regional Port Authority—Rail Construction and Operation—in Lake County, Tennessee:
Request for Information and Comments on Proposed 5.5 Mile Rail Line to serve the Port of Cates Landing

Dear Mr. Keel,

I am writing you to request your comments regarding the proposed construction and operation of a new line of railroad in Lake County, Tennessee. The Northwest Tennessee Regional Port Authority (NWTRPA) has filed a petition before the Surface Transportation Board (the Board) to construct and operate approximately 5.5 miles of rail line near the recently constructed Port of Cates Landing on the Mississippi, north of Tiptonville, Tennessee. The Board is an independent agency within the United States Department of Transportation that has jurisdiction over railroad construction and operations. As part of its licensing process, the Board is conducting an environmental review under the National Environmental Policy Act (NEPA) and an historic review under Section 106 of the National Historic Preservation Act. Our research indicates that the Chickasaw Nation may have historical connections to the project area and may have knowledge regarding properties of traditional, religious, and cultural significance in the Area of Potential Effect.

Pursuant to NEPA, Section 106 of the National Historical Preservation Act, and the Board's environmental rules (49 CFR 1105), the Board's Office of Environmental Analysis (OEA) is preparing an environmental document that evaluates the potential environmental impacts of the proposed rail construction project and the reasonable and feasible alternatives to the proposal.

Description of the Proposed Rail Project

NWTRPA is a political subdivision that has been established by the counties of Dyer, Lake, and Obion in northwest Tennessee for the purpose of owning, constructing, and operating a regional river port facility in Lake County, Tennessee. On June 27, 2014, NWTRPA filed a petition with the Board, pursuant to 49 U.S.C. 10502, for authority to construct approximately 5.5 miles of new railroad line that would connect an existing rail line near Tiptonville, Tennessee to the site of a newly constructed port facility on the Mississippi River at Cates Landing (see the attached map which shows the location of the proposed rail line as proposed by NWTRPA). If the proposed rail line is constructed, NWTRPA intends to enter into a contract with an existing short line railroad to provide common carrier service to customers located at the port and at an adjacent

industrial park currently under development in conjunction with the port.

The proposed rail line would begin at an intersection with the existing Tennken Railroad near Tiptonville, Tennessee and would extend to the northwest in the direction of the port. Approximately three miles from the connection with the existing railroad, the proposed rail line would bisect the proposed Lake County Industrial Park. Approximately 2.5 miles northwest of the Industrial Park, the line would enter the campus of the Port of Cates Landing and would parallel the port's slack water harbor to the main dock facility. The rail right-of-way would primarily cross open farm land and could cross as many as two public roads.

The proposed rail line would be used to transport shipments of agricultural products, as well as industrial and energy commodities and products. Once the port facility and the adjacent industrial park are fully developed, NWTRPA anticipates that the rail line would also transport raw materials for industrial products, finished manufactured goods, agricultural commodities and products, and special cargoes. NWTRPA predicts that rail traffic on the line would initially consist of fewer than 1,000 carloads annually, but would eventually increase to more than 1,000 carloads annually as the port facility and industrial park becomes fully developed.

Request for Comments

At this time, I request your preliminary comments regarding the proposed rail project. Any information you provide will assist OEA in making its final recommendations to the Board. We expect that the Draft EA will be made available to the public in July 2015. If you are interested in receiving a hard copy of the Draft EA, please contact Josh Wayland of my staff at 202-245-0330 (email: waylandj@stb.dot.gov) or Brian Yates of EnSafe, Inc., OEA's independent third party contractor in this case, at 901-372-7962 (email: byates@ensafe.com). You can also submit comments and responses by mail to the following address:

EnSafe, Inc.
Attn: Brian Yates
5724 Summer Trees Drive
Memphis, Tennessee 38134

I appreciate your assistance on this project. If you have any questions, please do not hesitate to contact Josh Wayland at the number above. Thank you for your assistance.

Sincerely,



Victoria Rutson
Director
Office of Environmental Analysis

EI-21018



STB Finance Docket No. 35802, Northwest TN Regional Port Authority - Rail Construction
and Operation - Leake Co., TN

Carleton, Ken

to:

waylandj@stb.dot.gov

06/04/2015 12:22 PM

Hide Details

From: "Carleton, Ken" <KCarleton@choctaw.org>

To: "waylandj@stb.dot.gov" <waylandj@stb.dot.gov>

Dear Mr. Wayland:

I am in receipt of a letter dated May 29, 2015, concerning the above reference project. The Mississippi Band of Choctaw Indians has no interest in being consulted concerning any project in the state of Tennessee, except for Lauderdale County in which the tribe has Trust Land/Reservation. For future reference, I am attaching a map of the areas in which the Mississippi Band of Choctaw Indians should be consulted.

Kenneth H. Carleton

THPO/Archaeologist

Mississippi Band of Choctaw Indians

P.O. Box 6257

Choctaw, MS 39350

601.650.7316

EI-21021



RE: STB Finance Docket No. 35802, Northwest Tennessee Regional Port Authority---Rail Construction and Operation---in Lake County, Tennessee: Request for Information and Comments on Proposed 5.5 Mile Rail Line to serve the Port of Cates Landing
Daniel R. Ragle

to:

waylandj@stb.dot.gov

06/18/2015 01:50 PM

Cc:

"byates@ensafe.com"

Hide Details

From: "Daniel R. Ragle" <dragle@choctawnation.com>

To: "waylandj@stb.dot.gov" <waylandj@stb.dot.gov>

Cc: "byates@ensafe.com" <byates@ensafe.com>

History: This message has been replied to.

Mr. Wayland,

The Choctaw Nation of Oklahoma thanks you for the correspondence regarding the above referenced project. Lake County, Tennessee lies outside of the Choctaw Nation of Oklahoma's area of historic interest. The Choctaw Nation of Oklahoma respectfully defers to the other Tribes that have been contacted. If you have any questions, please contact me by email.

Thank You,

Daniel Ragle

NHPA Section 106 Reviewer

Choctaw Nation of Oklahoma

Historic Preservation Department

P.O. Box 1210

Durant, OK 74702

(580)924-8280 ext. 2727

dragle@choctawnation.com

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the
Chickasaw
Nation HEADQUARTERS

Arlington at Mississippi / Box 1548 / Ada, OK 74821-1548 / (580) 436-2603

Bill Anoatubby
Governor

Jefferson Keel
Lieutenant
Governor

August 24, 2007

Mr. Gerald Kline
Tennessee Department of Transportation
Suite 900, James K. Polk Bldg.
505 Deaderick St.
Nashville, TN 37243-0334

Dear Mr. Kline:

Thank you for your letter of notification regarding the Tennessee Department of Transportation's project for the proposed State Route 22 from State Route 21 to Cates Landing Road in Lake County, Tennessee.

We wish to participate as a consulting party on this project and receive copies of the cultural assessment reports that identify Native American related properties. We are unaware of any specific historic properties or traditional cultural, religious and/or sacred sites at this time. However, in the event of inadvertent discoveries, we expect all construction activities to cease and we be notified according to all applicable state and federal laws.

If you have any questions, please contact Ms. Giny Nail, historic preservation officer, at (580) 332-8685.

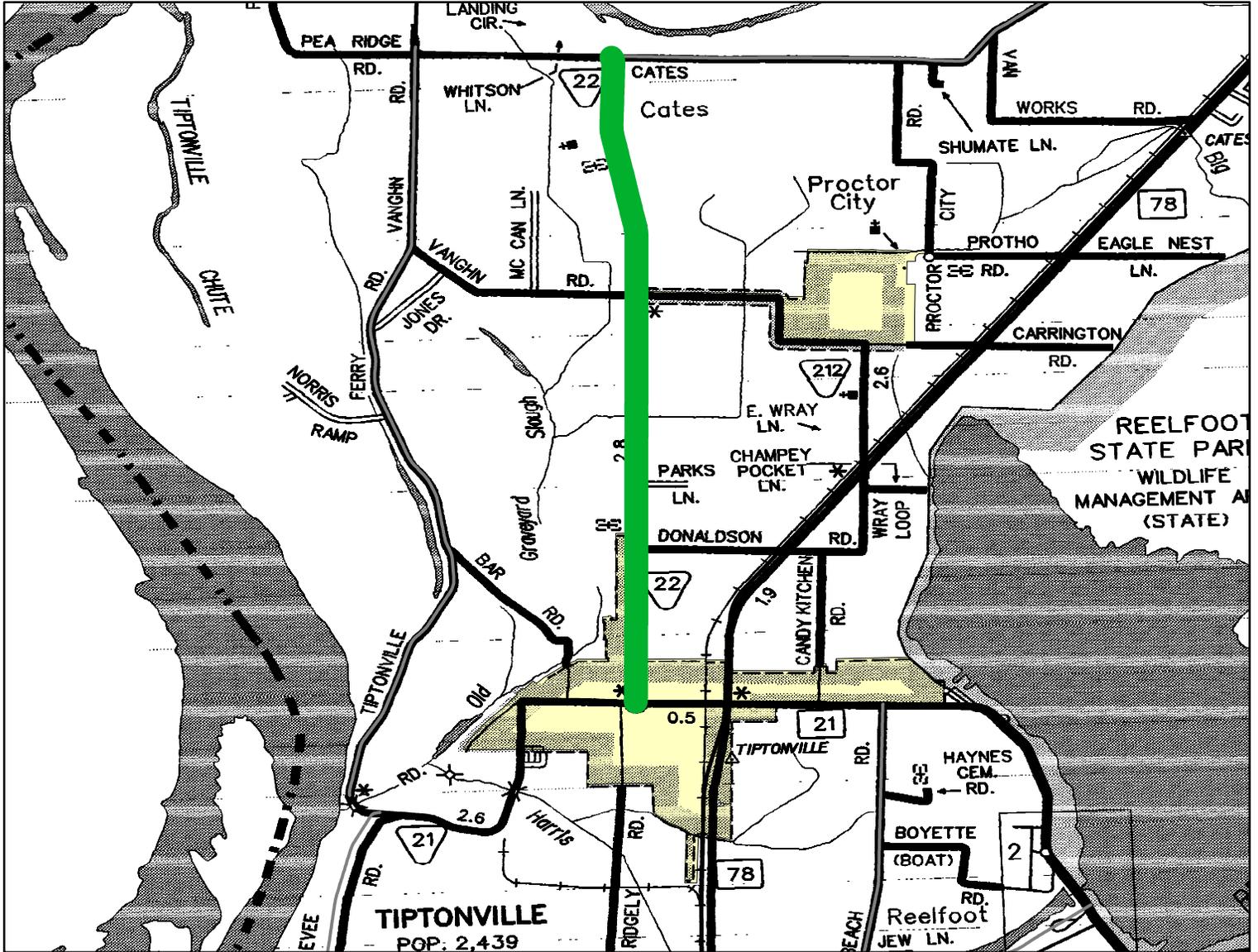
Sincerely,

Jefferson Keel, Lt. Governor
The Chickasaw Nation



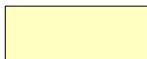
God Bless America!

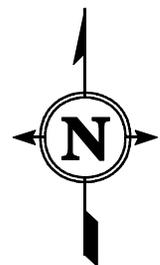
LAKE COUNTY



SR-22 (From SR-21 to Lake County Port) L.M. 0.00 - L.M. 4.50

Legend

-  Active TPR (Roads)
-  City



Appendix C
Board and NWTRPA Correspondence

Appendix C
Board and NWTRPA Correspondence

- Exhibit 1 NWTRPA's Request for Waiver of Six-Month Pre-filing Notice
- Exhibit 2 NWTRPA's Request for Retention of EnSafe Inc. as the Third Party Consultant
- Exhibit 3 Board's Response to NWTRPA's Request for Waiver of Six-Month Pre-filing Notice
- Exhibit 4 Board's Response to NWTRPA's Request for Retention of EnSafe Inc. as the Third Party Consultant
- Exhibit 5 Financial Disclosure Statement Signed by EnSafe Inc.
- Exhibit 6 Memorandum of Understanding among NWTRPA, EnSafe Inc., and the Board
- Exhibit 7 NWTRPA's Request for Waiver of Environmental Impact Statement Requirements
- Exhibit 8 Board's Response to NWTRPA's Request for Waiver of Environmental Impact Statement Requirements
- Exhibit 9 Other Communications between NWTRPA and the Board

Exhibit 1
NWTRPA's Request for Waiver of Six-Month Pre-filing Notice

January 14, 2014

JOHN D. HEFFNER
(202) 742-8607
Direct Fax (202) 742-8697
John.Heffner@strasburger.com

Mr. Josh Wayland
Office of Environmental Assessment
Surface Transportation Board
395 E Street, S.W.
Washington, D.C. 20423

**RE: Northwest Tennessee Regional Port Authority-Construction and
Operation of Line of Railroad**

Dear Mr. Wayland:

Pursuant to 49 CFR §1105.10(c)(2), I am writing on behalf of the Northwest Tennessee Regional Port Authority (hereafter "NWTRPA") to request a waiver of the six months' pre-filing notice required by the Board's environmental regulations at 49 CFR §1105.10(a)(1). Within the next several months NWTRPA plans to petition the Board for an individual exemption under 49 U.S.C. §10901 to permit it to construct and operate approximately 5 miles of new common carrier railroad trackage ("the Line"). NWTRPA submits that a waiver of the 6 months' advance notice requirement is consistent with the regulations of the Office of Environmental Assessment ("OEA") and the Board's policies.

For your information, NWTRPA is a public agency and political subdivision of the State of Tennessee that in 2013 completed the construction of a new port facility at a point called Cates Landing, located at mile marker 900L on the Mississippi River in Lake County, Tennessee. This facility is significant insofar as it is located on a plain of 5,000 acres at the highest point on the east bank of the Mississippi River between the confluence of the Mississippi and Ohio Rivers on the north and Baton Rouge, LA on the south. This elevated location requires no levee protection from flooding and in combination with the Port's 9,000 foot water harbor, enables year round intermodal port operation.

Strasburger & Price, LLP

1025 Connecticut Ave., N.W. Suite 717 | Washington, DC 20036 | 202.742.8600 tel | 202.742.8699 fax | www.strasburger.com
Austin | Collin County | Dallas | Houston | San Antonio | New York, N.Y. | Washington, D.C. | Mexico City - Strasburger & Price, SC

The Line will extend from its junction with an existing line of the Tenneken Railroad near Tiptonville, in Lake County, TN, to the port facility on the Mississippi River. The Line will also serve a new industrial park to be constructed roughly half way between the Line's origin and destination points. As noted in the "briefing book" provided the OEA staff, the Line will serve a very lightly settled, economically depressed, agricultural area in northwest Tennessee near the Kentucky and Missouri borders. There are no tourist attractions, shopping areas, schools or hospitals along or near the line. The nearest population sources consist of a State prison east of the Line and a small rural settlement south of the Port facility. NWTRPA believes the Line will be extremely important in enabling the port to attain its full potential as well as an important asset in attracting industry and therefore jobs to the area.

Once constructed, NWTRPA anticipates contracting with a short line railroad to provide operations over the Line. Nevertheless, it seeks operating as well as construction authority from the Board and will have a "residual" common carrier obligation over the Line once that authority is consummated.

The waiver provisions of the Board's environmental rules require a party seeking a waiver to describe as completely as possible the environmental effects and timing of the proposed action and to show that all or part of the six months' lead time is not appropriate. Moreover, the regulations require a party seeking a waiver to indicate (1) whether the area affected is a nonattainment area, (2) the number of trains per day that would be involved and the commodities and tonnage that would be handled, and (3) the impacts, if any, on endangered species.

In response to these inquiries, NWTRPA believes the environmental effects of the proposed construction project will be minimal. Regarding the questions identified above, the subject area is an attainment area. Because the Port is not yet operational, precise estimates of cargo types and volumes likely to move over the Line are speculative. However, anticipated cargoes will include freight of all kinds, including agricultural and other, diverse commodities. NWTRPA does not expect traffic over the Line to exceed the traffic threshold of 8 trips per day for an attainment area as per 49 CFR §1105.7(e) (5) and (6). All of this traffic represents new business.

Regarding environmental impacts, the "briefing book" included an Environmental Assessment (EA) prepared by the Army Corps of Engineers for

Mr. Josh Wayland
January 14, 2014
Page 3

construction of the port facility on the river. Currently the port facility is generating no traffic as there are no current operations. Once operations do commence, movement of freight by rail instead of truck will be very beneficial due to reduced highway congestion and associated air and noise pollution and energy consumption. The Line will be built on land owned or to be acquired by NWTRPA. There will be only two highway crossings, one near the state prison and one at a county road which connects the Port facility to the planned industrial park.

The EA concluded that the project would have no adverse environmental impacts and includes a FONSI to that effect. As to wetland impacts, the EA identified farm wetlands east and west of the rail corridor. However, none would appear to be affected by the Line. Aside from some small streams and a drainage channel, the Line will not cross any bodies of water. Nor did the EA find any active or inactive hazardous waste sites.

While the EA notes the presence of bald eagles and interior least terns as endangered species in Lake County, the associated Biological Assessment did not identify any such species within the proposed harbor areas or along the rail corridor. Because the environmental effects of this project are negligible, NWTRPA does not believe that an environmental impact statement would be necessary. Accordingly, the six months' lead time is unnecessary and should be waived.

Please date stamp and return one copy of this letter.

Sincerely yours,



John D. Heffner

cc: Victoria Rutson, Esq.
John M. Lammon, Esq.

Exhibit 2
NWTRPA's Request for Retention of EnSafe Inc. as the
Third Party Consultant

January 17, 2014

JOHN D. HEFFNER
(202) 742-8607
Direct Fax (202) 742-8697
John.Heffner@strasburger.com

VIA EMAIL

Mr. Josh Wayland
Office of Environmental Assessment
Surface Transportation Board
395 E Street, N.W.
Washington, D.C. 20423

RE: Northwest Tennessee Regional Port Authority

Dear Mr. Wayland:

I am writing on behalf of the Northwest Tennessee Regional Port Authority (“NWTRPA”) to request your formal approval, in accordance with 49 CFR §1105.10(d), of an independent third-party consultant to work with your office to prepare the necessary environmental documentation associated with NWTRPA’s proposed construction and operation of a new rail line (“the Line”). The Line will extend from its junction with an existing line of the Tenneken Railroad near Tiptonville, in Lake County, TN, to NWTRPA’s port facility on the Mississippi River, a distance of approximately 5.5 miles. The Line will also serve a new industrial park to be constructed roughly half way between the Line’s origin and destination points.

Within the next few weeks NWTRPA anticipates filing an individual Petition for Exemption under 49 U.S.C. §10502 from the provisions of §10901 to permit it to construct and operate the Line.

NWTRPA proposes that the environmental consulting firm, ENSAFE, be retained as the Office of Environmental Analysis’s (“OEA’s”) third-party consultant. We know that ENSAFE has been identified by the OEA as an entity that is qualified to serve as a third-party consultant for railroad-related projects.

5601554.3/SP/31452/0101/011714

Mr. Josh Wayland
January 17, 2014
Page 2

Mr. Danny Adams is expected to lead the ENSAFE team. The contact information for Mr. Adams is:

Mr. Danny Adams, QHP
ENSAFE
Ecology Program Manager
5724 Summer Trees Drive,
Memphis, TN 38134
Work Tel: 901-372-7962
Cell: 901-489-8374
Email: dadams@Ensafecom

We expect ENSAFE's work to be performed under the OEA's direction, supervision, and control pursuant to 49 CFR §1105.(d). Further, we expect ENSAFE to undertake this project in accordance with the OEA's requirements for disclosure and pursuant to the memorandum of understanding entered among OEA, ENSAFE, and NWTRPA.

We look forward to your response and to answering any questions you might have.

Sincerely yours,



John D. Heffner

cc: Victoria Rutson, Esq.
John Lannom, Esq.

Exhibit 3
Board's Response to NWTRPA's Request for Waiver of Six-Month
Pre-filing Notice



SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Office of Environmental Analysis

January 29, 2014

Mr. John D. Heffner, Esq.
Strasburger & Price, LLP
1025 Connecticut Ave., N.W., Suite 717
Washington, DC 20036

Re: Northwest Tennessee Regional Port Authority- Lake County, Tennessee; Waiver
of Six-Month Prefiling Notice

Dear Mr. Heffner:

Pursuant to 49 CFR 1105.10(c), we are granting your request of January 14, 2014, for waiver of the six-month prefiling notice generally required for construction projects under 49 CFR 1105.10 (a)(1).

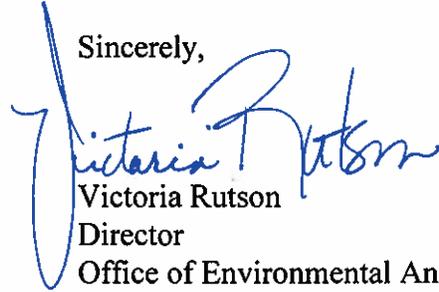
The Surface Transportation Board's Office of Environmental Analysis (OEA) has met and consulted with the Northwest Tennessee Regional Port Authority (NWTRPA) representatives regarding the proposed environmental impacts associated with the construction and operation of a new rail line in Lake County, Tennessee. At a meeting on December 19, 2013, NWTRPA's representatives provided OEA with an overview of the project. Additionally, you supplied additional information on behalf of NWTRPA regarding the proposed project and its potential environmental consequences.

NWTRPA is a public agency and political subdivision established under Tennessee law to develop, construct, and operate a port facility located on the Mississippi River in Lake County, Tennessee. The port facility, which was completed in 2013, is located in the vicinity of Cates Landing, on the left descending bank of the Mississippi River at approximately River Mile 900 near Tiptonville, Tennessee. The Cates Landing site is unique in being the only site in Tennessee, apart from Memphis, that is located directly on the Mississippi River but above the 100-year floodplain. The port facility was the subject of an Environmental Assessment by the U.S. Army Corps of Engineers, which found no significant environmental impacts. NWTRPA proposes to construct a rail line approximately 5.5 miles in length to connect the port facility with the existing Tennken Railroad. The railroad would also serve a new industrial park located near the port facility.

The preceding information provided by NWTRPA, and the fact that members of OEA have explained in detail the Surface Transportation Board's environmental review process to NWTRPA's representatives, lead OEA to believe that it has adequate information, and that NWTRPA is sufficiently aware of the environmental review process, to grant this request.

If we can be of further assistance, please contact me or Joshua Wayland of my staff at (202) 245-0330.

Sincerely,

A handwritten signature in blue ink, appearing to read "Victoria Rutson". The signature is stylized and written over the printed name and title.

Victoria Rutson

Director

Office of Environmental Analysis

Exhibit 4
Board's Response to NWTRPA's Request for Retention of
EnSafe Inc. as the Third Party Consultant



SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Office of Environmental Analysis

January 29, 2014

Mr. John D. Heffner, Esq.
Strasburger & Price, LLP
1025 Connecticut Ave., N.W., Suite 717
Washington, DC 20036

Re: Northwest Tennessee Regional Port Authority- Lake County, Tennessee;
Approval of Third-Party Consultant

Dear Mr. Heffner:

Your request for approval under 49 CFR 1105.10(d) and 40 CFR 1506.5 for retention of ENSAFE as an independent third-party consultant for the above referenced project is approved. ENSAFE will prepare the appropriate environmental document on behalf of the Surface Transportation Board (Board) in connection with a proposed project by the Northwest Tennessee Regional Port Authority (NWTRPA) to construct a rail line of approximately 5.5 miles in length to serve NWTRPA's port facility on the Mississippi River and an adjacent industrial park.

We have attached a disclosure statement that we ask you to forward to ENSAFE to complete. Once the statement is signed by ENSAFE, we request that ENSAFE send it directly to us. As we discussed in our meeting in December 2013, the Board's Office of Environmental Analysis will directly supervise, review, and approve all environmental documents prepared by the independent third-party contractor.

If we can be of further assistance, please do not hesitate to contact me or Joshua Wayland of my staff at (202) 245-0330.

Sincerely,

Victoria Rutson
Director

Office of Environmental Analysis

Enclosure

Exhibit 5
Financial Disclosure Statement Signed by EnSafe Inc.

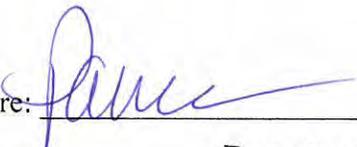
SURFACE TRANSPORTATION BOARD

DISCLOSURE STATEMENT

On behalf of EnSafe Inc., I certify that EnSafe Inc. has
(name of contractor) (name of contractor)

no financial or other interests in the outcome of the prospective petition of the

Northwest Tennessee Regional Port Authority to construct a rail line in part of Cateshawing, Lake County, TN
(name of petitioner) (location of proposed rail line)

Signature: 

Printed Name: **Pamela Skelton**
Vice President
Title: **Legal and Corporate Transactions**

Date 2-10-2014

Exhibit 6
Memorandum of Understanding among NWTRPA, EnSafe Inc., and
the Board

MEMORANDUM OF UNDERSTANDING
AMONG
SURFACE TRANSPORTATION BOARD, NORTHWEST TENNESSEE REGIONAL PORT
AUTHORITY, AND ENSAFE

RE: ENVIRONMENTAL ANALYSIS AND PREPARATION OF APPROPRIATE ENVIRONMENTAL DOCUMENTS RELATING TO THE CONSTRUCTION AND OPERATION OF A PROPOSED RAIL LINE BY THE NORTHWEST TENNESSEE REGIONAL PORT AUTHORITY IN LAKE COUNTY, TENNESSEE

I. Introduction and Purpose

- A. The Northwest Tennessee Regional Port Authority (NWTRPA or the Petitioner) intends to file a petition in Finance Docket No. 35802 seeking authorization from the Surface Transportation Board (Board) to construct and operate an approximately 5.5 mile rail line that would extend between a newly constructed port facility on the Mississippi River at Cates Landing, Lake County, Tennessee, and an existing line of railroad owned and operated by the Tennessean Railroad and located near Tiptonville, Lake County, Tennessee.
- B. In considering the petition, the Board will consider the potential environmental impacts resulting from construction and operation of the rail line and any rail-related alternatives. The Board will be the lead agency for preparing the environmental documentation required for the project, either an Environmental Impact Statement (EIS) or Environmental Assessment (EA), as required by the National Environmental Policy Act of 1968 (NEPA). Pursuant to 40 C.F.R. 1506.5(c), 49 C.F.R. 1105.4(j), and 1105.10(d), the Board, through its Office of Environmental Analysis (OEA), has selected and the Petitioner has agreed to engage, at the Petitioner's expense, EnSafe, a Tennessee corporation (the Contractor) as the Independent Third Party Contractor for this proposal. The Contractor shall assist OEA in conducting the environmental review and preparing the environmental documentation¹ related to the Petitioner's proposal. The Contractor's scope of work, approach, and activities shall be under the sole supervision, direction, and control of OEA.
- C. This Memorandum of Understanding (MOU) summarizes the relationship among the Contractor, the Petitioner, and OEA, as forth in applicable regulations and Board policy, regarding the conditions and procedures each party must follow in preparing all environmental documentation. The MOU does not supersede or amend, and is made expressly subject to, the requirements of NEPA, and, to the extent applicable, related environmental laws, and 49 C.F.R. Part 1105 and 40 C.F.R. Part 1500.
- D. The Petitioner, the Contractor, and OEA agree to work within the framework of this MOU to develop an efficient method to complete the environmental review for the proposed application. OEA shall maintain overall responsibility for the documentation,

¹ The terms "environmental documentation" and "environmental document(s)" embrace draft, supplemental, and final EAs, EISs, and any other reports, studies, surveys, or related documents.

analysis, methodology, consultation, and mitigation related to the environmental review process. OEA shall direct, evaluate, oversee, and approve the environmental review process.

II. Document Process

OEA will prepare, on behalf of the Board, the draft environmental document (EA or EIS) for agency and public review. OEA will independently draft mitigation, based on its review of potential environmental impacts of the project.

III. Agreement between the Petitioner and the Contractor

- A. Any contract between the Petitioner and the Contractor, and any subcontracts, shall be consistent with the provisions of the MOU.
- B. The terms of the MOU shall override any contradictory or conflicting terms regarding the scope and performance of any work to be conducted under any contract entered into between the Petitioner and the Contractor; provided, however, that the foregoing shall not limit the rights of the Petitioner and the Contractor to contract on terms which require the work to be performed cost-effectively.
- C. The contract between the Contractor and the Petitioner shall specifically provide, and the Contractor shall represent, that (1) the Contractor and any subcontractors do not and shall not have any financial or economic interest in the Petitioner or any entity or person directly or otherwise affiliated with the Petitioner except for payment for services rendered in connection with the preparation of all required environmental documentation, and except for services rendered pursuant to other agreements not prohibited by the MOU, and (2) there is no agreement between the Petitioner, or any other person or entity and the Contractor regarding future employment that is contingent upon the Contractor's performance under this contract. The Contractor shall concurrently execute a disclosure statement as mandated by the regulations of the Council on Environmental Quality (CEQ) (40 C.F.R. 1506.5(c)) and submit it to both OEA and the Petitioner, before beginning any work under OEA's direction. It is understood that the Contractor and any subcontractors have not been employed to conduct any environmental analysis related to the petition for the Petitioner, or for any other person or entity, and, therefore, can be retained as independent third party contractor(s).
- D. Restrictions on other work:
 - (1) No employee of the Contractor or employees of any subcontractor, who is a part of the Contractor's core team committed to the environmental review process for the application, shall engage in (a) other work for the Petitioner or any entity or person directly or otherwise affiliated with the Petitioner or (b) any work, relating to the petition, for any other party to this proceeding during the course of the proceeding; and

- (2) No other employee of the Contractor or other employee of any subcontractor shall, unless OEA is provided prior notice of and approves such work, engage in (a) other work for the Petitioner or any entity or person directly or otherwise affiliated with the Petitioner, or (b) any work, relating to the petition before the Board, or any cooperating agencies that may elect to participate in this process, or any other party to this proceeding during the course of this proceeding.
- E. The Petitioner shall bear the costs incurred by the Contractor, and by any subcontractor approved by OEA in accordance with Section III.A, in preparing the required environmental documentation to implement NEPA and related environmental laws under the direction of OEA. The Petitioner agrees to hold harmless and indemnify the United States of America and the Board with respect to any and all claims, demands, causes of action, and the like, which may arise in performing the work under the contract between the Contractor and the Petitioner.
 - F. Any contract between the Contractor and the Petitioner shall specifically limit any remedies available to the Contractor and subcontractors upon termination of the contract to affirmatively relieve the United States of America, the Board, and any officer, agent, or employee, from any liability from terminating the contract.

IV. Contractor Responsibilities

- A. The Contractor may engage subcontractors to perform work related to environmental review of the petition, subject to the provisions of Section III.C and Section III.D. All work performed by the Contractor or any subcontractors shall be under the sole direction, control, supervision, and final approval of OEA. Contractor and subcontractors, if any, will act as the agent(s) of the Board, not the Petitioner, in performing its/their duties.
- B. The Contractor shall provide:
 - (1) Appropriate expertise in the areas of environmental concern (including, but not limited to, air quality, wetlands, biological resources, geotechnical resources, hydrology, land use, safety, noise, social and economic, and cultural/historic resources);
 - (2) A good working knowledge of environmental laws, applicable laws and regulations (including environmental regulations) administered or promulgated by the Board, CEQ regulations and guidelines, other applicable federal regulations, state laws and regulations, and applicable local ordinances and regulations;
 - (3) The capacity to perform environmental impact analysis and prepare appropriate environmental documentation;
 - (4) Thorough, readable, technically sound, and informative environmental documents, as well as related charts, maps, diagrams, etc.;

- (5) Representatives to attend and/or facilitate meetings with federal, state, regional, and local agencies, other interested parties, and the Petitioner for the purpose of exchanging and obtaining information, explaining the petition and related environmental concerns and impacts, and receiving comments in preparing the required environmental documentation;
 - (6) Expertise in data management; and
 - (7) Assistance to OEA in ensuring that the data collection, analyses, and methodologies for the environmental documents are complete, accurate, and relevant to OEA's needs for the environmental review of the petition under NEPA.
- C. The Contractor shall maintain and provide OEA upon request:
- (1) Adequate record-keeping and reporting systems to assure preservation of all data gathered, including surveys, studies, etc.;
 - (2) Logs summarizing all telephone calls, meetings, document reviews, and other substantive communications with OEA, the Petitioner, local governments, governmental agencies, citizens' groups, and any other interested parties; and
 - (3) Lists of all agencies, other railroads, citizens' groups, organizations, and individuals (including their respective addresses and telephone numbers) contacted in preparing the environmental documentation.
- D. The Contractor shall perform the work in a timely, responsive, satisfactory, and cost-effective manner, pursuant to a work schedule developed with OEA in coordination with the Petitioner and approved by OEA.
- E. The Contractor shall assist OEA in coordinating the exchange of all relevant environmental information and technical data/studies related to the petition and all required environmental documentation among OEA staff, the Petitioner's staff and representatives, the Contractor, and any subcontractors.
- F. The Contractor will submit directly to OEA any and all work the Contractor performs in preparing all required environmental documentation, studies, surveys, etc. The Contractor, and any subcontractors, shall not disclose the results of their work nor release any of the underlying work papers, drafts, or other materials prepared under the contract to anyone, including the Petitioner, without OEA's express authorization. In no case shall the Petitioner be provided the opportunity to modify or edit the Contractor's work prior to submission to OEA, without OEA's express authorization.
- G. The Contractor shall follow the directions and instructions of OEA, and incorporate them into the environmental document(s) in a timely and responsive manner. The Contractor shall submit preliminary and final drafts of any documents to OEA for final review and approval.

- H. The Contractor shall provide OEA access to and the right to review all procedures and underlying data used in the Contractor's development and preparation of any and all environmental documents. This includes, but is not limited to, field reports/surveys, technical studies and analyses, subcontractor reports, and interviews with concerned private and public parties, whether or not such information may be reflected in draft, supplemental, or final environmental documents submitted to OEA.
- I. The Contractor, and any approved subcontractors, shall cooperate fully with OEA in organizing, participating in, and conducting any public workshops, informational meetings, and other meetings, as OEA determines are necessary, to foster public understanding of and/or participation in the environmental review process, and to assess potential environmental impacts and develop mitigation measures related to the petition.
- J. The Contractor will assist OEA in reviewing comments received during the environmental review process, will draft a summary of rail-related comments, and will coordinate analysis of these comments with OEA.
- K. The Contractor shall assist OEA in preparing the required environmental documentation, environmental recommendations, selection of alternatives, and development of mitigation measures.
- L. The Contractor's Project Director, Project Manager, other technical experts, as appropriate, shall be available to attend all meetings, briefings, consultations, and site visits as OEA deems necessary. The Project Director and the Project Manager shall devote as much time to environmental review of the petition as is necessary to assure the Contractor's performance of its responsibilities under this MOU. This work commitment will extend for the entire time necessary to complete the environmental review for the petition.
- M. Except as specifically authorized by OEA, the Contractor and any of its subcontractors shall refer all media/press inquiries directly to OEA.
- N. As needed, the Contractor will provide technical expertise and administrative support to OEA during preparation of the Board's decision and in addressing any environmental issues arising in the Board's consideration of this proceeding. In the event of any appeal from a Board decision in this proceeding, the parties hereto shall at that time determine the need for and terms of the Contractor's services in connection with judicial review of that decision.
- O. The Contractor shall provide any administrative and technical support that may be needed to assist OEA in reviewing, summarizing, and responding to environmental issues arising after issuance of the final environmental documentation, including in connection with Board decisions, correspondence, filing before the Board and by the Board in court in connection with any judicial review of the Board's decisions, and other inquiries involving environmental issues associated with the Petitioner's proposal.

V. Petitioner Responsibilities

- A. The Petitioner shall retain the Contractor to assist OEA in preparing all required environmental documentation and services, as that assistance and its costs are defined by a contract to be negotiated and executed by the Petitioner and the Contractor, and in the Work Plan described in Section VIII.
- B. The Petitioner, including its staff and representatives, shall provide to OEA and the Contractor any requested supportive expertise, resources, data, and technical capabilities necessary to undertake the environmental analysis, subject to the right of the Petitioner to advise OEA of any request received from OEA of the Contractor that the Petitioner believes either is not germane to matters appropriately reviewed in the environmental review process, is contrary to applicable statutes and regulations, would impose an extraordinary burden on the Petitioner, or is subject to the right of the Petitioner to maintain confidentiality as to proprietary, privileged, or other information which is not otherwise subject to disclosure. In the event that the Petitioner so advises OEA, OEA shall determine whether the request is appropriate and shall so advise the Petitioner and the Contractor of its determination. OEA shall, to the extent possible, maintain the confidentiality of any information if so requested by the Petitioner.
- C. The Petitioner shall cooperate fully with OEA in organizing and participating in any public workshops, hearings, and meetings, as OEA determines are necessary to (1) foster public understanding and/or participation in the environmental review process, and (2) assess potential environmental impacts and mitigation measures related to the petition.
- D. With respect to all reports, analyses, and documents, including drafts, supplements, and final copies of the environmental documents, the Petitioner shall be responsible for the Contractor's administrative and clerical costs, as well as the costs of graphics, maps, layouts, mailing, and printing, as those costs are defined by a contract to be negotiated and executed by the Petitioner and the Contractor. The Petitioner shall, however, have the option of directing that the printing of the environmental documentation be performed by a private entity, rather than OEA. The Petitioner shall be solely responsible for the cost of preparing and providing to OEA the appropriate number of copies of all required environmental documentation.
- E. The Petitioner shall provide complete, accurate, relevant, and timely responses to all reasonable requests for information pertaining to the petition to the Board, the Operating Plan, and the environmental aspects and effects of the proposed rail construction and operation.
- F. In the event of any litigation resulting from the environmental analysis in this proceeding, OEA shall at that time determine the need for and terms of the Contractor's services in connection with any litigation.

VI. Board/OEA Responsibilities

- A. The Board is responsible for ensuring compliance with the requirements of NEPA and other applicable environmental statutes and regulations by preparing appropriate environmental documentation.
- B. OEA shall:
 - (1) Direct, review, and approve all phases of preparing all required environmental documentation, including the work of the Contractor, using OEA's best efforts to ensure that the work is reasonably necessary to conduct the environmental review process regarding the proceeding and the work is within the scope of NEPA requirements. For example, OEA shall ensure that the Contractor considers existing data and environmental analyses available from the Petitioner, OEA, and other sources, and that the Contractor does not duplicate work already done, unless OEA determines that the existing data are not adequate for use in preparing the environmental documentation;
 - (2) Designate appropriate staff to review and approve all work as it is developed and completed;
 - (3) Ensure that its representatives attend meetings, as needed, with federal, state, regional, and local agencies, and other interested parties, as well as any public hearings or meetings, to exchange information, explain the petition and related environmental concerns and impacts, obtain technical input, and receive comments in preparing all required environmental documentation; and
 - (4) Coordinate, with the Contractor's assistance, the exchange of information among any planning, design, or construction engineers or technical staff employed by the Petitioner and the Contractor.
- C. OEA will periodically review the work of the Contractor to ensure that the Board's responsibilities under NEPA and related environmental laws and regulations are being satisfied. As each portion of any draft or final document is completed, OEA staff shall review and approve that portion and those tasks completed, and/or direct further work with regard to that portion or task.
- D. OEA will monitor the Contractor to ensure that the Contractor is making adequate progress toward meeting specific time frames established in the Work Plan described in Section VII. If OEA determines these commitments are not being met, it will notify the Petitioner of its findings. It will be the responsibility of OEA to recommend any necessary corrective action to be taken under this MOU.
- E. In all instances involving questions concerning the content or relevance of any material (including all data, analyses, charts, and conclusions) prepared by the Contractor, OEA shall make the final determination on including, deleting, or revising any such material in the environmental documents.
- F. To coordinate the preparation of all required environmental documentation, and to verify petition-related data, OEA may hold joint meetings with the Petitioner and the Contractor. As necessary, OEA may exclude the Petitioner from participation. OEA may also consult directly with appropriate federal, state, and local officials, and other interested parties. The Petitioner shall provide complete, accurate, relevant, and timely responses to all reasonable requests for information pertaining to the petition to the Board and the environmental aspects and effects of the proposed rail construction and operation.

- G. OEA, with the assistance of the Contractor, will be responsible for organizing and conducting any public workshops or meetings that may be necessary in preparing environmental documents during the environmental review process.
- H. OEA, with the assistance of the Contractor, will receive all relevant comments submitted during the environmental review process and comment period. At the close of any public review and comment period, OEA, in consultation with the Contractor, shall identify the issues and comments that will require a response from the Board. OEA may direct these comments to the Petitioner and to the Contractor, as appropriate, to be included in the final environmental document. OEA may modify these responses as appropriate.
- I. OEA, with the assistance of the Contractor, shall prepare final recommendations for the Board.
- J. OEA shall retain responsibility for deciding the environmentally preferable alternative, and any mitigation measures to be included in the final environmental document.

VII. Work Plan

- A. The Contractor, in consultation with OEA and the Petitioner, shall submit a draft Work Plan to OEA for preparing the required environmental documentation within thirty (30) days after all parties have signed this MOU. The draft Work Plan shall contain at least the following elements:
 - (1) A description of all work to be performed (including preparing and sending consultation letters; participating in public and agency meetings; outlining and drafting environmental documents; reviewing, analyzing, and summarizing public comments, conducting analyses, etc.);
 - (2) The projected schedule for completing the various tasks described;
 - (3) Identification of the Contractor's staff members who will be responsible for preparing, analyzing, and reviewing the work; and
 - (4) An outline of the environmental analysis.
- B. Following receipt of the draft Work Plan, OEA, in consultation with the Contractor and the Petitioner, shall finalize the Work Plan in a timely manner.
- C. Subsequent to consultation with the Contractor and the Petitioner, OEA may amend the Work Plan from time to time as the environmental review of the petition may necessitate. The parties hereto shall consult at least once every two weeks to confirm that the work is being performed in the most efficient and cost-effective manner and to consider possible measures to improve the efficiency and cost-effectiveness of the work.

VIII. Disputes

Disputes between the parties may arise regarding the environmental review process, including approach, methods, analysis, conclusions, and performance of the obligations of the parties to this MOU. The parties agree to seek resolution of disputes among the individuals or parties directly involved. In the event that resolution is not achieved, the parties agree to mark further attempts at resolution before bringing the dispute to the next supervisory level, and all individuals or parties directly involved shall be notified in the case of such a referral to the next supervisory level. In addition, the parties may seek independent facilitation or mediation to assist in resolving disputes in the event that resolution is not achieved.

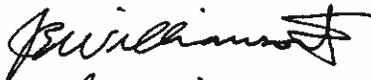
IX. Nonperformance and Termination

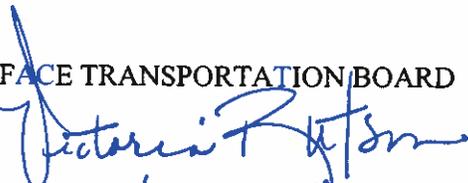
- A. The Petitioner or the Contractor shall notify OEA of any concerns either party might have with respect to the other party's performance under the contract between the Petitioner and the Contractor or this MOU. All parties will attempt to resolve, in good faith, any disputes or disagreements.
- B. If OEA determines that either the Contractor or the Petitioner is not adequately performing its responsibilities and duties in accordance with this MOU, OEA will discuss its concerns with the Contractor and the Petitioner. If OEA's concerns cannot be satisfactorily resolved, OEA will notify the Petitioner that OEA is removing the Contractor for cause, or direct the Petitioner to comply with the MOU. Upon removal of the Contractor, OEA shall endeavor to replace the Contractor with another qualified contractor as soon as practicable.
- C. Both the Petitioner and the Contractor shall immediately notify OEA of any attempt by either party to modify or terminate the contract between the Petitioner and the Contractor. Termination of the contract shall be subject to OEA's prior approval, after consultation with the Petitioner and the Contractor. Upon approving termination of the contract, OEA shall endeavor to replace the Contractor with another qualified contractor as soon as practicable. Notwithstanding the foregoing, the Petitioner may terminate the contract without OEA's approval in the event that it withdraws notice of intent or petition.

X. Modification

This MOU may be modified only by written amendment executed by OEA, the Petitioner, and the Contractor.

NORTHWEST TENNESSEE REGIONAL PORT AUTHORITY

By: 
Title: *Chairman*
Date: *5/24/14*

SURFACE TRANSPORTATION BOARD
By: 
Title: *Director, OEA*
Date: *June 2, 2014*

ENSAFE
By: 
Title: **Pamela Skelton
Vice President
Legal and Corporate Transactions**
Date: *4-29-2014*

Exhibit 7
NWTRPA's Request for Waiver of
Environmental Impact Statement Requirements



EI-20709

July 16, 2014

JOHN D. HEFFNER
(202) 742-8607
Direct Fax (202) 742-8697
John.Heffner@strasburger.com

Mr. Josh Wayland
Office of Environmental Assessment
Surface Transportation Board
395 E Street, S.W.
Washington, D.C. 20324

RE: FD 35802, Northwest Tennessee Regional Port Authority-Construction and Operation of a Line of Railroad

Dear Mr. Wayland:

I am writing on behalf of the Northwest Tennessee Regional Port Authority (“NWTRPA”), Petitioner in the above-captioned proceeding, for a waiver of the requirements of 49 CFR §1105.6(a) pertaining to the preparation of an Environmental Impact Statement for railroad construction transactions. For the reasons stated below, NWTRPA believes that an Environmental Assessment (EA) should be adequate to address the impacts of the proposed construction.

As you will recall, NWTRPA is a political subdivision and noncarrier that is seeking Board authority to construct and operate an approximately 5.5 mile-long rail line extending from the NWTRPA’s newly constructed port facility on the Mississippi River at the Port of Cates Landing to the connection with the national rail system at Tiptonville, TN.

In support of its request, NWTRPA or its representatives have met with members of the Office of Environmental Assessment (“OEA”) staff including you in late 2013 or early 2014 to discuss the proposed construction. Subsequently, NWTRPA sought and obtained a waiver of the six months’ advance notice requirement under 49 CFR §1105.10(a)(1) and OEA approval to engage EnSafe,

6056865.3/SP/31452/0101/071114

Strasburger & Price, LLP

1025 Connecticut Ave., N.W. Suite 717 | Washington, DC 20036 | 202.742.8600 tel | 202.742.8699 fax | www.strasburger.com
Austin | Collin County | Dallas | Houston | San Antonio | New York, N.Y. | Washington, D.C. | Mexico City - Strasburger & Price, SC

Mr. Josh Wayland

July 16, 2014

Page 2

Inc., as a third party independent environmental consulting firm. Thereafter, you and EnSafe's Paul Stoddard conducted a site visit in May 2014.

On June 2, 2014, NWTRPA, EnSafe, and the OEA executed a Memorandum of Understanding for handling the environmental and historic issues presented by this construction case. EnSafe under the OEA's supervision will coordinate the National Historic Preservation Act Section 106 consultation with the Tennessee State Historic Preservation Office (SHPO) and the Endangered Species Act Section 7 consultation with the US Fish and Wildlife Service. EnSafe under the OEA's supervision will conduct a field survey of the region that would be affected by the proposed rail project, including in particular the routing that is preferred by NWTRPA and will most likely be presented as the proposed route for the new line.

Subsequently, on June 27, 2014, NWTRPA filed its Petition for Exemption under 49 U.S.C. §10901 for construction and operation authority. To the best of my knowledge, no consultation letters have been sent out or other actions taken by EnSafe or the OEA.

The Board's regulations provide that an EIS normally is prepared in connection with a rail construction project. *See*, 49 CFR §1105.6(a). However, 49 CFR §1105.6(d) provides for flexible exceptions to the general rule:

The Board may reclassify or modify these requirements for individual proceedings...[I]n a rail construction case, an applicant can seek to demonstrate (with supporting information addressing the pertinent aspects of 49 CFR §1105.7(e)) that an EA, rather than an EIS, will be sufficient because the particular proposal is not likely to have a significant environmental impact.

NWTRPA respectfully submits that an EA is sufficient in this case under the standards of 49 CFR §1105.6(d), because the subject construction project is not likely to have a significant environmental impact. Moreover, the port facility was the subject of a previous environmental review and a Finding of No Environmental Significance by the US Army Corps of Engineers ("the Corps") back in 2004.

Mr. Josh Wayland

July 16, 2014

Page 4

generate. Because the Port of Cates Landing and the Lake County Industrial Park both represent new sources of traffic, there will be no diversion of existing freight or passenger traffic either to or from other transportation systems or modes as all traffic would be new.

(3) Land Use

Much of the land adjacent to the proposed right-of-way is undeveloped agricultural land and woodland. The major uses of the developed adjacent lands are for agricultural purposes and for a state prison. The proposed action is not expected to adversely affect or conflict with existing land use plans.

Between 60 and 80 acres of land would be required for the right-of-way. The right-of-way width is anticipated to be at least 150 feet.

(4) Energy

The proposed action will result in new rail traffic and, thus, a modest net increase in energy use for train operations. Based upon an average one roundtrip per day, seven days per week, it is estimated that 350 trains would operate over the proposed line each year. The proposed action will have no adverse effect on recyclable commodities, and may have a positive impact if recycled rail or crossties are used in the construction process. No diversions of existing traffic from rail to motor carriage are expected to occur.

(5) Air

No significant impact to local or regional air quality is expected. According to 40 CFR §81.344 and the Tennessee Department of Environment and Conservation, Lake County and the region encompassing the proposed line currently are in attainment under the Clean air Act.

(6) Noise

Mr. Josh Wayland

July 16, 2014

Page 5

Anticipated traffic volume can be expected to lead to a corresponding increase in noise levels. However, there do not appear to be any sensitive noise receptors located in areas immediately adjacent to the proposed rail line.

(7) Safety

As noted above, the proposed right-of-way will cross only two lightly travelled roads and the area it traverses is very sparsely settled. Consequently, safety impacts are not a major consideration.

(8) Biological resources

The majority of the land affected by the proposed action is either undeveloped agricultural land or woodlands. A review of National Wetland Inventory (NWI) maps identified only minimal mapped wetlands that could be affected by NWTRPA's proposed alignment. Although the proposed right-of-way does not cross any navigable waters, OEA will coordinate with the Corps to address any Clean Water Act permitting issues and NWTRPA will pursue and secure any permit(s) that may be needed (see water resources below).

There are no wildlife sanctuaries or refuges, national or state parks or forests that would be affected by the proposed action. While the EA prepared by the Corps back in 2004 identified certain endangered species in Lake County, the associated Biological Assessment did not identify any such species within the proposed harbor areas or along the rail corridor. The area is not a designated critical habitat for any wildlife species. If and to the extent any sensitive species are found along the rail alignment and would be adversely affected by the proposed action, mitigation measures will be developed in coordination with the US Fish and Wildlife Service and the Tennessee Department of Environment and Conservation.

No rare or sensitive native habitats were shown by preliminary review to be significantly affected by the proposed action.

(9) Water resources

Mr. Josh Wayland

July 16, 2014

Page 6

The proposed line crosses no traditional navigational waters or relatively permanent waters and the only potential impact to Waters of the U.S. could be minimal wetlands affected by the proposed project.

(10) Cultural resources

The lands adjacent to the right-of-way do not contain any known Native American cultural artifacts or other resources. Additionally, there are no historic structures or other potential historic or archeological resources on or along the proposed right-of-way. OEA will consult with the Tennessee SHPO to seek concurrence on appropriate measures to avoid or minimize potential project impacts to any cultural resources that may be discovered during project construction.

(11) Geology and Soils

In preliminary geotechnical evaluations undertaken by the Corps, the Project area was found not to include potential geologic hazards, such as areas of subsidence, giant desiccation cracks, landslides, or surface faults. The Project will incorporate features and measures to mitigate for potential seismic activity that is possible in the region.

We believe that the foregoing information should be sufficient under 49 CFR §1105.6(d) to justify reclassification of the NWTRPA rail project as one requiring only an EA. However, if your office believes that any additional information is needed in order to make that determination, please contact the undersigned.

Respectfully submitted,

John D. Heffner

cc: Paul Stoddard
John Lannom, Esq.

Exhibit 8
Board's Response to NWTRPA's Request for Waiver of
Environmental Impact Statement Requirements



SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Office of Environmental Analysis

September 26, 2014

John D. Heffner, Esq.
Strasburger & Price, LLP
1025 Connecticut Ave., NW
Suite 717
Washington, DC 20036

Re: FD 35802, Northwest Tennessee Regional Port Authority—Construction and Operation of a Line of Railroad—In Lake County, TN; Approval of EIS Waiver Request

Dear Mr. Heffner:

Pursuant to 49 C.F.R. § 1105.6(d), the Surface Transportation Board's (Board) Office of Environmental Analysis (OEA) is granting your July 16, 2014 request for a waiver from the requirements of 49 C.F.R. § 1105.6(a), which generally provide for the preparation of an Environmental Impact Statement (EIS) for a rail construction and operation proposal. OEA is granting the requested waiver based on available information gathered to date, including materials submitted by the petitioner, OEA's consultation with federal, state, and local agencies, and a site visit on May 13, 2014 to the project area.

On June 27, 2014, the Northwest Tennessee Regional Port Authority (NWTRPA) submitted a petition seeking exemption from the prior approval requirements of 49 U.S.C § 10901 for the construction and operation of approximately 5.5 miles of rail line that would extend between the Port of Cates Landing on the Mississippi River and the existing TennKenn Railroad near Tiptonville, Tennessee. The new rail line would serve the port, as well as the adjacent Lake County Industrial Park.

OEA understands that the projected traffic level once the port and the industrial park are completed would be an average of one train per day, or approximately 350 trains per year. The volume and type of freight to be moved on the line would depend on market conditions, but are anticipated to include agricultural products, industrial raw materials, industrial products, manufactured goods, energy commodities, and special cargoes.

Based on the information available to date, OEA believes that the proposed action would not result in significant environmental impacts and that any impacts could be addressed through appropriate mitigation measures. OEA's opinion is based on the reasons outlined below:

- The U.S. Army Corps of Engineers (the Corps) conducted an Environmental Assessment (EA) in 2004 in connection with the construction of the harbor at the Port of Cates Landing. The EA evaluated potential impacts of the harbor construction and related activities, including the construction of the port facility and industrial park, on the environment. The EA concluded that, with the implementation of appropriate mitigation activities, the project would not result in significant impacts. Because the EA analyzed the same general project area that will be considered in OEA's environmental review, OEA believes that it is unlikely that any potentially significant impacts will be identified in its analysis of the present action.
- On July 24, 2014, OEA sent out agency consultation letters to various federal, state, and local agencies. To date, OEA has received responses from the Tennessee Historical Commission (the State Historic Preservation Officer or SHPO); the Natural Resources Conservation Service (NRCS); the City of Tiptonville, Tennessee; the Tennessee Department of Environment and Conservation, Division of Water Resources (TDEC); the Northwest Tennessee Development District; the United States Fish and Wildlife Service (USFWS); and the Tennessee Wildlife Resources Agency (TWRA). The only environmental issue identified in these comments is the potential impact on stream and wetlands. Specifically, TWRA requests that, if streams or wetlands are delineated within the project area, mitigation for the impacts be implemented. In their comments, TDEC and USFWS indicate that, based on their records, no wetlands or water sources are likely to be impacted by the project. During the course of the environmental review, OEA will conduct a delineation of wetlands and streams in the project area and, should any be identified, will recommend appropriate mitigation for potential impacts.
- NRCS and the SHPO have requested additional information regarding the proposed project in order to assess potential impacts. OEA will provide the requested information to these agencies during the environmental review process.
- On May 13, 2014, OEA and EnSafe, Inc., OEA's third-party contractor, conducted a site inspection of the proposed project area. The proposed rail line would cross primarily agricultural land. In addition to the port facility, there are several residences and a state prison in the general project area. The line would cross two lightly-traveled public roads and an agricultural drainage ditch. There do not appear to be any homes or other structures located on or immediately adjacent to the proposed route.
- Also on May 13, 2014, OEA and EnSafe met with representatives of the local government of Lake County, Tennessee. No potential environmental issues were raised during this meeting.

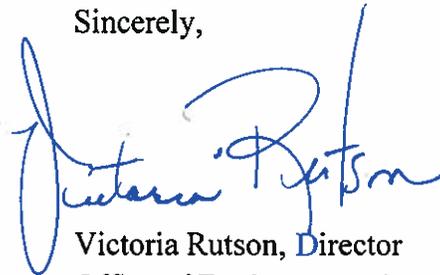
- Information collected to date indicates that there would be no significant impacts to transportation systems, land use, energy, air quality, noise, safety, biological resources, or surface or groundwater resources. Nor does OEA anticipate that there would be significant impacts on minority or low-income populations, based on initial site reconnaissance.

After the EA is prepared, OEA will make the document available for a 30-day public review and comment period. Once the comment period ends, OEA will prepare a Final EA that discusses the comments received and includes any additional analysis or appropriate modifications to its analysis. The Final EA will also set forth OEA's recommended mitigation measures for the Board. The Board will then consider the EA, the public comments, and the Final EA recommendations before making its final decision in this proceeding.

If during the environmental review process it becomes clear that potentially significant adverse environmental impacts would result from the project and that these impacts could not be adequately mitigated, OEA would then prepare a more detailed EIS, as required by the Council on Environmental Quality's regulations and the Board's environmental rules at 49 C.F.R. § 1105.6(a).

If you have any questions or would like to discuss this matter further, please contact Josh Wayland of my staff at (202) 245-0330 or email at waylandj@stb.dot.gov.

Sincerely,



Victoria Rutson, Director
Office of Environmental Analysis

Exhibit 9
Other Communications between NWTRPA and the Board



SURFACE TRANSPORTATION BOARD
Washington, DC 20423

Office of Environmental Analysis

January 29, 2015

John D. Heffner, Esq.
Strasburger & Price, LLP
1025 Connecticut Ave., NW, Suite 717
Washington, DC 20036

Re: STB Docket No. FD 35802, Northwest Tennessee Regional Port Authority—Rail
Construction and Operation—in Lake County, Tennessee;
Information Request #1

Dear Mr. Heffner:

Pursuant to 40 C.F.R. § 1506.5(a), the Surface Transportation Board's Office of Environmental Analysis (OEA) is requesting that you provide the information described below on behalf of the Northwest Tennessee Regional Port Authority, the project petitioner in the above referenced proceeding:

1. A description, based on available preliminary engineering or design plans, of the right-of-way width for the proposed rail line, including the maximum right-of-way width;
2. A description and any available design information of any structures, such as culverts or bridges across streams or wetlands, that would be constructed as part of the proposed rail line, including the lengths of any such structures; and
3. A description and any available design information for proposed road crossings, including the number of crossings proposed and any proposed safety features for these crossings (warning lights, cross bars, etc.).

This information is necessary for OEA's environmental review of the proposed project and we would appreciate as prompt a reply as possible to allow us to continue moving forward with the environmental analysis. Please provide a copy of your response to Mr. Josh Wayland of my staff at 395 E Street, SW, Washington, DC, 20423 (phone: 202-245-0330; e-mail address: Joshua.Wayland@stb.dot.gov).

Please feel free to contact me or Mr. Wayland if you have any questions. Thank you for your assistance.

Sincerely,

A handwritten signature in black ink that reads "Victoria Rutson". The signature is written in a cursive style with a large initial 'V'.

Victoria Rutson

Director

Office of Environmental Analysis

EI-21013



RE: Cates Landing
Randall Rhodes

to:
Brian Yates
02/10/2015 02:25 PM

Cc:
"Joshua.Wayland@stb.dot.gov", John Lannom, "jimmy_williamson@att.net"

Hide Details

From: Randall Rhodes <rrhodes@flcmail.com>

To: Brian Yates <byates@Ensaf.com>

Cc: "Joshua.Wayland@stb.dot.gov" <Joshua.Wayland@stb.dot.gov>, John Lannom <jlannom@lannomcoronado.com>, "jimmy_williamson@att.net" <jimmy_williamson@att.net>

2 Attachments



Railroad R.O.W - RR1.1.pdf Railroad R.O.W - RR1.2.pdf

Brian,

Per your email below....I have attached above two maps in PDF format and below is a written response to the information I think that you are looking for:

1. The likely width of right of way (minimum and maximum)

Answer: The first attachment labeled "Railroad R.O.W. – RR1.1" indicates the proposed R.O.W. shaded in RED. The R.O.W. width is indicated by blue dimensions and is typically 150 feet wide (minimum) but varies to a maximum of 227.50 feet where the proposed rail would cross the main drainage ditch. The R.O.W. would also include all the land inside of the delta (see map) at the existing short-line railroad connection due to the impact to the landowner's property.

2. Any available information about culverts, bridges, or other structures

Answer: The first attachment "Railroad R.O.W. – RR1.1" indicates by text and symbol the location of the foreseen culverts (called out drain pipes). A box culvert may be required at the crossing of State Hwy 212 where an existing concrete bridge over ditch exists (noted on the map). This ditch parallels the proposed rail line and would not be crossed, but a smaller feeder ditch will be crossed by the proposed rail line at this location. As to rail bridge there would likely be one required at the wider R.O.W. portion where the main drainage ditch is being crossed.

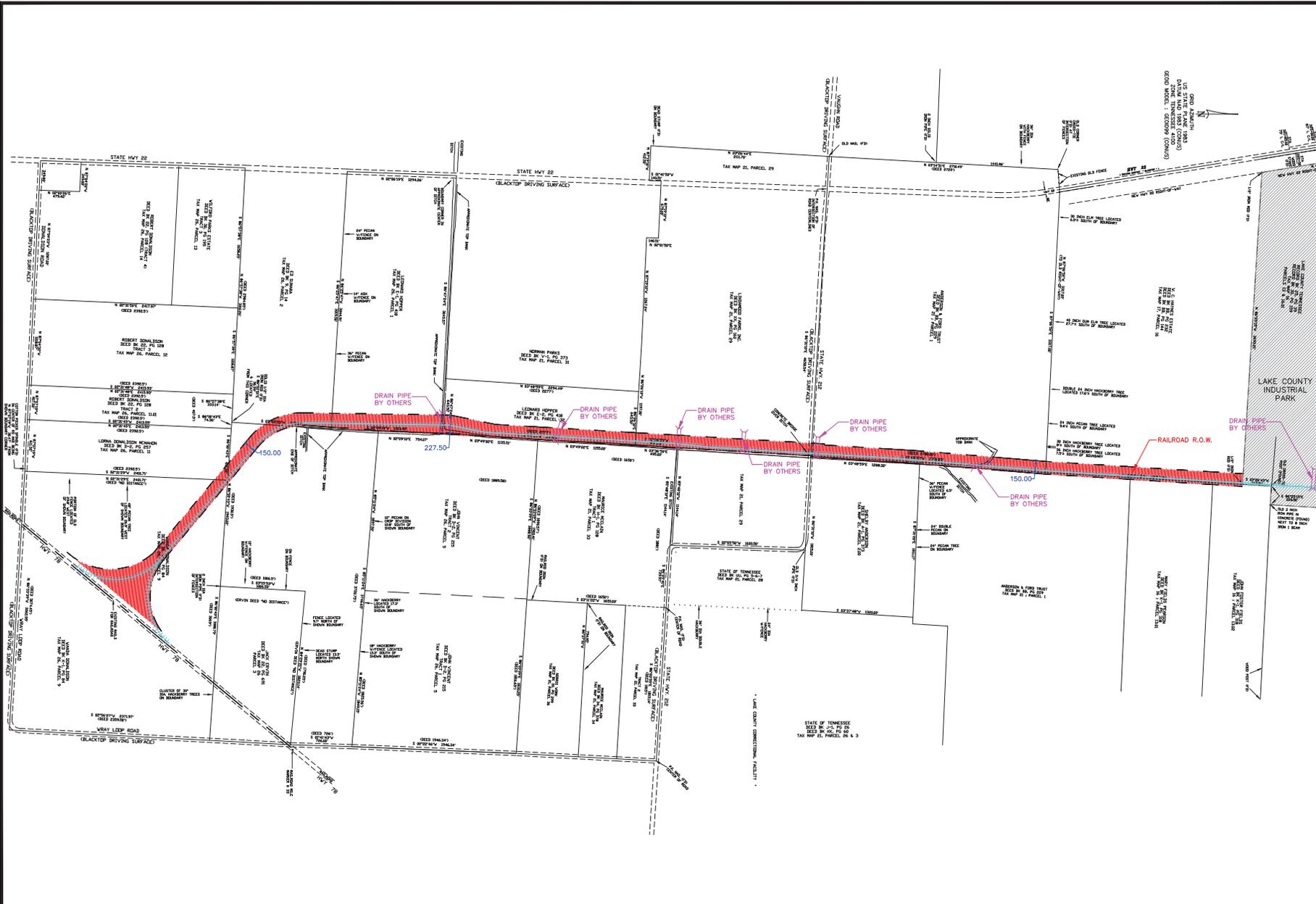
3. Information about proposed road crossings including any required safety features or anything that the applicant is proposing.

Answer: The second attachment labeled "Railroad R.O.W. – RR1.2" indicates two road crossings proposed. One is the State Hwy 212 in the center of the map labeled "State Hwy Crossing" and the second is a county road at the north end of the Lake County Industrial Park and is labeled "County Road Crossing". We proposed to provide the safety features for these two crossings as deemed proper by the Department of Transportation for the location and proposed application.

Look forward to our conference call on Tuesday February 17th at 3:00 PM Central Time.

All the best,
Randall

Randall W. Rhodes, PE



ENLARGED PLAN
 SCALE: 1"=500'-0"
 500' 0 500' 1000' 1500'

PRELIMINARY NOT FOR CONSTRUCTION
 DESIGN / BUILD PROPOSAL DRAWING
 THIS DRAWING IS FOR PROPOSAL INFORMATION ONLY
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PROJECT NO. ?	DATE
DRAWN BY ?	NO.
DESIGN LEADER ?	SCALE
CHECKED BY ?	REVISED
REVIEWED BY (PROJECT MANAGER)	

PRELIMINARY NOT FOR CONSTRUCTION

RAIL ROAD RIGHT OF WAY
 NORTHWEST TENNESSEE REGIONAL PORT AUTHORITY
 CATES LANDING, TENNESSEE

FORCUM LANNOM CONTRACTORS, LLC
 4901 GALE STREET, SUITE 100
 MEMPHIS, TENNESSEE 38117
 PH: (901) 527-4700

DATE: 02-02-15
 SHEET: RR1.1

**voluntary mitigation measures****Heffner, John D.** to: Joshua.Wayland@stb.dot.gov

04/28/2015 04:36 PM

Cc: "jlannom@lannomcoronado.com", "cateslanding@dyerchamber.com"...

[Show Details](#)

History: This message has been replied to.

This email will memorialize our conversation about Petitioner's voluntary mitigation measures. Josh, please supply me with language regarding historic-related impacts.

1. Petitioner will use best practices in its construction methods
2. Petitioner's construction will be within the existing right of way owned or to be acquired by petitioner
3. Petitioner will abide by mitigation measures recommended by the Army Corps in its 2004 environmental assessment for the port construction
4. Petitioner will consult with Tennessee DOT and other affected state and local agencies on the construction and operation of the line

Please advise if there is anything else you need. Also Brian please forward to your colleague who was on this call.

Strasburger

ATTORNEYS AT LAW

John Heffner • Strasburger & Price, LLP
1025 Connecticut Avenue, N.W., Suite 717, Washington, D.C. 20036
202.742.8607 • Fax 202.742.8697 • Strasburger.com

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