

Appendix E

Environmental Resources Documentation

1. Introduction to Appendix E
2. Land Cover
 - A. Land Cover Effects Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices
 - D. Land Use Planning Documents
3. Agricultural Lands (Prime Farmlands and Prime Timberlands)
 - A. Agricultural Lands (Prime Farmlands and Prime Timberlands) Effects Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices
4. Parklands and Wild and Scenic Rivers
 - A. Parklands and Wild and Scenic Rivers Effects Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices

5. Hydrologic/Water Resources
 - A. Coastal Zones and Saltwater Wetlands
 - a. Coastal Zones and Saltwater Wetlands Effects Assessment Methodology
 - b. Application of Effects-Assessment Methodology
 - c. Data Matrices – Coastal Zones
 - d. Data Matrices – Saltwater Wetlands
 - B. Floodplains
 - a. Floodplains Effects Assessment Methodology
 - b. Application of Effects-Assessment Methodology
 - c. Data Matrices
 - C. Freshwater Resources
 - a. Freshwater Resources Assessment Methodology
 - b. Application of Effects-Assessment Methodology
 - c. Data Matrices
 - D. Waterbody Inventory
6. Ecological Resources
 - A. Ecological Resources Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices – Ecologically Sensitive Habitat
 - D. Data Matrices – Threatened and Endangered Species
 - E. Data Matrices – Essential Fish Habitat
 - F. Correspondence (Chronological Order)
7. Geologic Resources
 - A. Geologic Resources Effects Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices
8. Hazardous Waste and Contaminated Materials
 - A. Hazardous Materials Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices
9. Cultural Resources and Historic Properties
 - A. Cultural Resources and Historic Properties Effects Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices
10. Visual and Aesthetic Resources
 - A. Visual and Aesthetic Resource Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices

11. Environmental Justice And Demographics
 - A. Environmental Justice
 - a. Environmental Justice Effects Assessment Methodology
 - b. Application of Effects-Assessment Methodology
 - c. Data Matrices – Environmental Justice
 - B. Demographics
 - a. Demographics Effects Assessment Methodology
 - b. Data Matrices – Demographics
12. Noise and Vibration
 - A. Noise and Vibration Impact Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices
13. Air Quality
 - A. Air Quality Effects Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices
14. Energy
 - A. Energy Effects Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices
15. Climate Change
 - A. Climate Change Effects Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices – Occurrences
 - D. Data Matrices – Number of Acres
16. Section 4(f) and 6(f) Resources (see Appendix H)
17. Electromagnetic Fields and Electromagnetic Interference
 - A. Electromagnetic Fields and Electromagnetic Interference Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices
18. Safety
 - A. Safety Effects Assessment Methodology
19. Cumulative Effects
 - A. Cumulative Effects Assessment Methodology
 - B. Application of Effects-Assessment Methodology
 - C. Data Matrices
20. Construction Effects
 - A. Tier 1 EIS Construction Effects Approach

1. Introduction to Appendix E: Environmental Resources Documentation

Appendix E provides the data supporting the resource analysis in Chapter 7. Each section of the appendix is organized by resource and includes the following documents:

- ▶ Resource Effects-Assessment Methodology
- ▶ Application of Effects-Assessment Methodology
- ▶ Resource Data Compiled by Alternative, then by State and County

1.1 RESOURCE EFFECTS-ASSESSMENT METHODOLOGY

The Resource Effects-Assessment Methodologies were developed by the Federal Railroad Administration (FRA) in cooperation with the Federal Transit Administration and resource/regulatory agencies as appropriate. The methodologies lay out a plan for assessing the potential effect of the Tier 1 Draft EIS Action Alternatives on each of the identified resources. Each methodology includes a discussion on the following topics: definition of the resource; agency and regulatory framework; the methodology to identify existing conditions, environmental consequences, and mitigation; Tier 1 Draft EIS outcomes; and applicability to subsequent Tier 2 analysis.

1.2 APPLICATION OF EFFECTS-ASSESSMENT METHODOLOGY

The purpose of the Application of Effects-Assessment Methodology is to document changes that occurred during the resource effects assessment analysis since the development of the Resource Effects-Assessment Methodology.

The Application of Effects-Assessment Methodology is formatted in two major sections. The first section describes any issues or modifications that occurred from the time that the methodology was finalized until the publication of the Tier 1 Draft EIS. These modifications could include methodology updates (e.g., data manipulation modifications or changes in how the data are presented in the Tier 1 Draft EIS). The second section addresses data variations such as identification of new data or identification of data that were not used as described in the methodology.

The second section addresses the criteria for analysis. The criteria for analysis are organized by existing conditions, environmental consequences, and environmental consequences-stations. The criteria were used by the FRA to identify those resources that are sensitive to changes in the affected environment and context area or where there is potential for impact to a resource. The criteria were used to develop the qualitative and quantitative analysis in Chapter 7 and in this appendix.

1.3 RESOURCE DATA COMPILED BY ALTERNATIVE

The data for individual resources have been compiled at a county level. County level data are also typically aggregated to a higher level such as state or specific resource classification (e.g., developed land cover or National Historic Landmarks within cultural resources). The data are presented in columns for the existing NEC; Alternatives 1 and 2; and Alternative 3 by route option. The Alternative 3 route options and their abbreviations, as used in the appendix, are as follows:

- ▶ Washington, D.C., to Boston via Central Connecticut (CC) and Providence (PVD) (Option 3.1)
- ▶ Washington, D.C., to Boston via Long Island (LI) and Providence (PVD) (Option 3.2)
- ▶ Washington, D.C., to Boston via Long Island (LI) and Worcester (WOR) (Option 3.3)
- ▶ Washington, D.C., to Boston via Central Connecticut (CC) and Worcester (WOR) (Option 3.4)

All Action Alternatives include improvements and modifications to the existing NEC, so the entire existing NEC routing is included in the calculation of resource results for each Action Alternative.