

Appendix H

Section 4(f) and Section 6(f) Resources

1. Section 4(f) Resource Methodology
2. Section 6(f) Resource Methodology
3. Application of Effects-Assessment Methodology
4. Data Matrices



Section 4(f) Resource Methodology

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1. Section 4(f) Resources

1.1 INTRODUCTION

This methodology explains how the NEC FUTURE program will address the potential effects of the Tier 1 EIS Alternatives on Section 4(f) Resources in the Tier 1 EIS.

This methodology presents the regulatory framework, involved government agencies, expected regulatory and other outcomes of the Tier 1 EIS process, and relevance to Tier 2, project-level assessments. It also identifies data sources, metrics, and methods to be used to document existing conditions and analyze environmental consequences. The methodology may be revised as the NEC FUTURE program advances and new information is available.

1.2 DEFINITIONS

Section 4(f) of the U.S. *Department of Transportation Act* of 1966 (DOT Act) was enacted as a means of protecting the following resources from conversion to transportation uses:¹ publicly owned public parks,² recreation areas, and wildlife/waterfowl refuges³ as well as historic sites of local, state or national significance (eligible or listed).

Under Section 4(f), a transportation “use” is considered to occur under the following conditions:

- ▶ When a U.S. Department of Transportation (USDOT) project permanently incorporates land from a Section 4(f) property into transportation use (“permanent use”),
- ▶ When a project temporarily occupies land within a Section 4(f) property during construction activities that is adverse in terms of the statute’s preservation purpose (“temporary use”), or
- ▶ When a project introduces proximity effects, such as noise or visual effects, which substantially impair the protected activities, features, or attributes of the Section 4(f) property that qualify the property for protection under Section 4(f) (“constructive use”).

1.3 RELATED RESOURCES

The effects assessment from other resources evaluated as part of the Tier 1 EIS will contribute to the assessment of potential uses of Section 4(f) resources. These resources are identified in Table 1. Note that the effects assessment for those related resources will be documented within their respective Tier 1 EIS sections.

¹ http://environment.transportation.org/environmental_issues/section_4f/

² “Publicly owned” is defined as being owned by a local, state or federal government entity.

³ “Open to the General Public” means that the identified resource must be accessible to the general public during normal operating hours. However the public access requirement does not apply to wildlife refuges.

Table 1: Related Resource Input to Section 4(f) Resource Assessment

Resource	Input to Section 4(f) Assessment
Land Cover	<ul style="list-style-type: none"> Review land cover assessment for areas where a “conversion” of land use may occur by the Tier 1 EIS Alternatives and result in a potential “permanent or temporary” Section 4(f) use
Parklands and Wild and Scenic Rivers	<ul style="list-style-type: none"> Review of parklands assessment for areas which would be directly impacted or encroached upon by the Tier 1 EIS Alternatives and could be considered a potential “permanent or temporary” Section 4(f) use
Cultural Resources	<ul style="list-style-type: none"> Review of cultural resources assessment for resources which would be potentially affected by the Tier 1 EIS Alternatives and could be considered a potential “permanent or temporary” Section 4(f) use
Noise and Vibration	<ul style="list-style-type: none"> Location of areas where noise and vibration thresholds are exceeded by the Tier 1 EIS Alternatives within the Affected Environment and could be considered a potential “constructive” Section 4(f) use, especially if they cannot be mitigated.
Visual and Aesthetic Resources	<ul style="list-style-type: none"> Location of NRHP-eligible historic properties or parks and recreational resources areas where there would be a substantial impairment viewsheds or aesthetic characteristics are identified and potentially affected by the Tier 1 EIS Alternatives within the Affected Environment and could be considered a potential “constructive” Section 4(f) use

Source NEC FUTURE JV Team, 2014

1.4 AGENCY AND REGULATORY FRAMEWORK

Section 4(f) only applies to USDOT actions, including actions taken by FRA. As the lead federal agency, FRA will be responsible for administration of Section 4(f) for the NEC FUTURE program. FRA’s compliance with Section 4(f) is guided by FRA’s Procedures for Considering Environmental Impacts (64 Fed. Reg. 28545, May 26, 1999). FTA is serving as a cooperating agency for the NEC FUTURE Tier 1 EIS. Therefore, FRA will also consider the Section 4(f) regulations issued by FHWA and FTA (23 CFR Part 774) and the FHWA Section 4(f) Policy Paper.

FRA’s own environmental procedures require consultation with the U.S. Department of Interior, and in some cases other federal, State, and local officials before approving the use of Section 4(f) resources. The FHWA/FTA Section 4(f) regulations provide more specific direction. Under the regulations, the USDOT agency is responsible for soliciting and considering the comments of “officials with jurisdiction” over Section 4(f) resources. Thus, when a Section 4(f) Evaluation is prepared, the USDOT agency is:

- ▶ responsible for soliciting and considering comments of the “officials with jurisdiction” over Section 4(f) resources;
- ▶ required to submit the draft Section 4(f) Evaluation to the U.S. Department of Interior for review;
- ▶ in addition, required by Section 4(f) to obtain written concurrence of the officials with jurisdiction over the Section 4(f) resource when a finding of de minimis impact is made.

The issue of compliance with Section 4(f) in a tiered NEPA process is not specifically addressed in the FRA’s environmental procedures, but is addressed in the FHWA/FTA Section 4(f) regulations:

“(e) A Section 4(f) approval may involve different levels of detail where the Section 4(f) involvement is addressed in a tiered EIS under § 771.111(g) of this chapter.

(1) When the first-tier, broad-scale EIS is prepared, the detailed information necessary to complete the Section 4(f) approval may not be available at that stage in the development of the action. In such cases, the documentation should address the potential impacts Section 4(f) property and whether those impacts could have a bearing on the decision to be made. A preliminary Section 4(f) approval may be made at this time as to whether the impacts resulting from the use of a Section 4(f) property are de minimis or whether there are feasible and prudent avoidance alternatives. This preliminary approval shall include all possible planning to minimize harm to the extent that the level of detail available at the first-tier EIS stage allows. It is recognized that such planning at this stage may be limited to ensuring that opportunities to minimize harm at subsequent stages in the development process have not been precluded by decisions made at the first-tier stage. This preliminary Section 4(f) approval is then incorporated into the first-tier EIS.

(2) The Section 4(f) approval will be finalized in the second-tier study. If no new Section 4(f) use, other than a de minimis impact, is identified in the second-tier study and if all possible planning to minimize harm has occurred, then the second-tier Section 4(f) approval may finalize the preliminary approval by reference to the first-tier documentation. Re-evaluation of the preliminary Section 4(f) approval is only needed to the extent that new or more detailed information available at the second-tier stage raises new Section 4(f) concerns not already considered.

(3) The final Section 4(f) approval may be made in the second-tier CE, EA, final EIS, ROD or FONSI.”⁴

Pursuant to these regulations, the Tier 1 EIS will “address the potential impacts to Section 4(f) properties and whether those impacts could have a bearing on the decision to being made.” In addition, the Tier 1 EIS may include a preliminary Section 4(f) approval for the NEC FUTURE Preferred Investment Program, as well as whether the impacts resulting from the use of a Section 4(f) property are de minimis or whether there are feasible and prudent avoidance alternatives. The preliminary Section 4(f) approval if made in the Tier 1 EIS, also would include “all possible planning to minimize harm to the extent that the level of detail available allows,” while recognizing that “such planning at this stage may be limited to ensuring that opportunities to minimize harm at subsequent stages would not be precluded by decisions made at the Tier 1 stage.”

If preliminary Section 4(f) approvals are made in the Tier 1, the Section 4(f) approvals would be finalized during subsequent project-level Tier 2 environmental reviews. In the Tier 2 phase, FRA (or

⁴ in 23 CFR 774.7(e).

another USDOT agency, as appropriate) would finalize the Section 4(f) approval, as provided in the regulations.

1.5 METHODOLOGY TO ASSESS POTENTIAL SECTION 4(F) USE

This effects assessment methodology identifies the approach and assumptions for describing the existing conditions of Section 4(f) resources and environmental consequences of the Tier 1 EIS Alternatives on those resources. It identifies data sources, defines the Affected Environment and Context Area considered for Section 4(f) resources and the approach for determining whether an alternative would cause a “use” of Section 4(f) resources.

1.5.1 Identification of Section 4(f) properties

The FRA will use the data sources listed in Table 2 to establish the existing conditions for Section 4(f) resources.

The Tier 1 EIS will include documentation of the existing conditions for Section 4(f) resources for an established Affected Environment and Context Area. The Section 4(f) analysis area is referred to as the Affected Environment for purposes of this Tier 1 EIS. The Affected Environment for the following Section 4(f) resources is a 2,000-foot swath centered on the Representative Route⁵ for each of the Tier 1 EIS Alternatives: parks, recreational areas, and wildlife and waterfowl refuges. For historic sites that are Section 4(f) resources, the Affected Environment is a 1-mile swath centered on the Representative Route for each of the Tier 1 EIS Alternatives. These affected environments are intended to:

- ▶ Encompass and account for the improvements associated with a Representative Route including infrastructure improvements (such as embankments, aerial structures, track improvements), ancillary facilities (such as stations, yards and parking structures), or service changes
- ▶ Account for continuous Section 4(f) resources that may extend beyond the Representative Routes

Existing Section 4(f) resources within the Affected Environments will be mapped using GIS. Section 4(f) resources will be documented by type (historic sites, parks, recreation areas, and wildlife and waterfowl refuges, etc.). The total acres of Section 4(f) resources within the Affected Environments will be quantified and reported in tabular format for each state on a county-by-county basis.

⁵ Representative Route refers to a proposed route or potential alignment for a Tier 1 EIS Alternative. The Representative Route includes the physical footprint of the improvements associated with the Tier 1 EIS Alternatives. The horizontal and vertical dimensions of the footprint of the Representative Route are based on prototypical cross-sections for these improvements. The Representative Route is used as a proxy for estimating the potential effects of a route whose location could shift during subsequent project-level reviews.

Table 2: Data Sources for the Evaluation of Section 4(f) Resources

Resource	Data Source	Data Application
Historic properties listed in the National Register for Historic Places	<ul style="list-style-type: none"> ▪ National Park Service, Keeper of the National Register 	<ul style="list-style-type: none"> ▪ Excel spreadsheet and GIS information to identify listed sites within each state/county
Historic properties eligible or potentially eligible for the NRHP	<ul style="list-style-type: none"> ▪ State Historic Preservation Offices ▪ External source documents relating to cultural resources and historic properties (i.e. other project specific Section 106 documents, Phase 1A, Historic Architectural Building Surveys, etc.) 	<ul style="list-style-type: none"> ▪ Mix of GIS, files and maps of state-listed sites and those sites identified as potentially eligible by the states ▪ Review documentation for relevant resource information and past Section 106 undertakings/approvals for applicability/relevancy to the NEC FUTURE program
Parklands	<ul style="list-style-type: none"> ▪ Land and Water Conservation Fund (LWCF) for detailed listing of LWCF Grants by county ▪ National Atlas of the United States for data on federally-owned or administered lands of the United States, Puerto Rico, and the U.S. Virgin Islands ▪ National Park Service for data on National Parks and Recreation Areas, National Heritage Areas, National Wild, and National trails. ▪ U.S. Department of Agriculture Natural Resources Conservation Service for state forest boundary coverage. ▪ U.S. Fish and Wildlife Service for data on National Wildlife Refuges. ▪ State of Connecticut Department of Energy and Environmental Protection for state data on: forests, parks, park scenic reserves, park trail, natural area preserve, wildlife area, wildlife sanctuaries, and the CT <i>Comprehensive Statewide Outdoor Recreation Plan</i>. ▪ University of Connecticut for data on CT open spaces ▪ Delaware Dept. of Agriculture - Delaware Forest Service for data on Delaware’s State Forests. 	<ul style="list-style-type: none"> ▪ Data will be reviewed and cross checked with other park data collected. ▪ Data will be mapped in GIS and overlain on the affected environment to identify the total acres of each resource within the affected environment.

Table 2: Data Sources for the Evaluation of Section 4(f) Resources (continued)

Resource	Data Source	Data Application
Parklands (continued)	<ul style="list-style-type: none"> ▪ Delaware Division of Parks and Recreation for copies of the Draft <i>Delaware Statewide Integrated Recreational Trail Network Plan</i> and <i>Delaware State Comprehensive Outdoor Recreation Plan</i>, which provide system-wide frameworks and guidance for the long-term expansion and use of public lands ▪ District of Columbia Data Catalogue for data for parks, recreation, and trails ▪ Washington DC Department of Parks and Recreation for the DC Statewide Comprehensive Outdoor Recreation Plan ▪ National Capital Planning Commission for properties that were purchased using funds authorized by the Capper-Cramton Act ▪ Maryland Department of Natural Resources for data on state trails, parks, animal sanctuaries, recreation areas, natural resource management areas, and the Maryland Land Preservation, Parks & Recreation Plan 2009: Volume II ▪ State of Massachusetts GIS for data on conservation lands, outdoor recreational facilities, open space, and forest stewardship. ▪ MA Department of Conservation and Recreation for data on historic landscape preservation and LWCF Grants ▪ New Jersey Department of Environmental Protection for data on state owned parks, protected open space, and recreation areas ▪ New York State Office of Cyber Security for data on state owned parks and recreation areas ▪ Pennsylvania Spatial Data Access for data on state owned parks, recreation areas, forest lands, wild natural areas, wildlife management areas, trails, and game lands ▪ PA Department of Conservation and Natural Resources for the Pennsylvania Outdoor Recreation Plan 2009-2013 ▪ Rhode Island Geographic Information System for bikeways and trails ▪ Rhode Island Department of Administration Division of Planning and Rhode Island Department of Environmental Management for the Rhode Island's Comprehensive Outdoor Recreation Plan 	<ul style="list-style-type: none"> ▪ Data will be mapped in GIS and overlain on the affected environment to identify the total acres of each resource within the affected environment.

Source NEC FUTURE JV Team, 2014

The Context Area is 5 miles, centered on the Representative Route for each of the Tier 1 EIS Alternatives. Within the Context Area, 4(f) resources will be mapped but acreage will not be quantified in order to qualitatively characterize the resources that could be affected should the Representative Route shift. Resources within the Context Area, general characteristics of, and relative area of Section 4(f) resources will be presented; this information will be used to supplement the quantitative assessment of effects for the Affected Environment.

1.5.2 Environmental Consequences

The Tier 1 EIS will assess the environmental consequences of the Tier 1 EIS Alternatives within the Affected Environment. A qualitative assessment of resources present in the Context Area will supplement that effects assessment.

For the Affected Environment, the FRA will take the following steps to evaluate the environmental consequences of each Tier 1 EIS Alternative on Section 4(f) resources:

1. Identify and analyze potential impacts on 4(f) resources (number and total acreage) within the Representative Route for each Tier 1 EIS Alternatives using a GIS overlay of resources within the Affected Environment. This analysis will include an estimation of the direct permanent impacts (i.e. use) on Section 4(f) resources within the footprint of the Representative Route.
2. Identify and analyze potential impacts on Section 4(f) resources that are outside of the Representative Route but within the Affected Environment for each Tier 1 EIS Alternative. Using GIS data from related resources (see Table 1) this analysis will consider the potential for indirect (noise visual) affects, as well as affected resulting from a shift in the location of the Representative Route.
3. Identify areas where a Tier 1 EIS Alternative could potentially bisect concentrations of Section 4(f) resources
4. Identify if there are any feasible and prudent avoidance alternatives

For the Context Area (outside of the Affected Environment), Section 4(f) resources will be qualitatively discussed with regard to the potential to be affected should there be a shift in a Representative Route.

Detailed information regarding the duration and extent of construction, specific construction methods and staging areas will not be identified as part of the Tier 1 EIS effort. In addition, the location of the alignment will not be determined in the Tier 1 EIS; the Representative Route is merely illustrative of a potential alignment. Therefore, this methodology assumes that FRA will not make a finding regarding constructive use, temporary use or de minimis in Tier 1. These determinations will be made in Tier 2 level evaluations when more detailed information is available regarding the project location and design and regarding the location, boundaries and significance of 4(f) resources.

A qualitative discussion of the potential for “constructive use” or proximity effects to Section 4(f) resources will be provided for each of the Tier 1 EIS Alternatives based on the findings of the Tier 1 EIS noise and vibration and visual and aesthetic resources analyses (Table 1). Such effects could

include increased noise levels or new visual obstructions that substantially diminish the activities, features or attributes that qualify the property for Section 4(f) protection.

1.5.3 Mitigation Strategies

Potential mitigation measures would be developed on a programmatic scale for consideration in Tier 2 evaluations. In the context of all possible planning to minimize harm, examples of programmatic mitigation measures would include design considerations and alternative construction methods.

1.6 TIER 1 EIS OUTCOMES

As part of the Tier 1 EIS Preliminary Section 4(f) evaluation, the NEC FUTURE team will:

- ▶ Quantify the number of Section 4(f) resources and acres of Section 4(f) lands by type (park, wildlife refuge, historic site) within the Affected Environment based on existing data sources
- ▶ Map the distribution of Section 4(f) resources in the Affected Environment and Context Area based on existing data sources
- ▶ Identify direct impacts on Section 4(f) resources for each alternative. This will include:
 - Identify potential “permanent use” of Section 4(f) resources associated with each alternative as a result of property acquisition or bisection by type (park, wildlife refuge, historic site)
 - List of specific resources in an appendix.
 - Include a discussion of the potential “uses” by county and state addressing resource groups (city parks, etc.) and notable individual resources that would be impacted.
- ▶ Provide a qualitative discussion of potential for “constructive use” for each alternative
- ▶ Determine if there are feasible and prudent avoidance alternatives to the “permanent use” of Section 4(f) resources
- ▶ Identify a menu of potential mitigation measures that include all possible planning to minimize harm (to the extent that level of detail is available)
- ▶ Describe regulatory compliance requirements for subsequent Tier 2 evaluations

1.7 APPLICABILITY TO TIER 2 ASSESSMENTS

The Tier 1 EIS analysis will identify areas where there is a potential “use” of a Section 4(f) resource. During Tier 2 analyses, project-level Section 4(f) evaluations will be completed and permanent, temporary, and constructive uses, as well as *de minimis* impacts, evaluated. This will include the evaluation of possible avoidance alternatives. Continued consultation with the officials with jurisdiction for Section 4(f) properties would then be undertaken as part of Tier 2 activities.

Additionally, the FRA will identify ways in which agency coordination during the Tier 1 EIS process can help streamline subsequent Tier 2 reviews and approvals. For example, the work performed in

Tier 1 may provide a basis for identifying specific resources, categories of resources or those resources that do not require further investigation in Tier 2.



Section 6(f) Resource Methodology

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1. Section 6(f) Resources

1.1 INTRODUCTION

This methodology explains how the NEC FUTURE program will address the potential effects of the Tier 1 EIS Alternatives on Section 6(f) resources in the Tier 1 EIS.

This methodology presents the regulatory framework, involved government agencies, expected regulatory and other outcomes of the Tier 1 EIS process, and relevance to Tier 2, project-level assessments. It also identifies data sources, metrics and methods to be used to document existing conditions and analyze environmental consequences. This methodology may be revised as the NEC FUTURE program advances and new information is available.

1.2 DEFINITIONS

Section 6(f) of the *Land and Water Conservation Fund Act* (LWCF Act) requires that the conversion of lands or facilities acquired with LWCF Act funds shall be coordinated with the U.S. Department of the Interior (DOI). Section 6(f) is the part of the LWCF Act that requires evaluation of any project that would convert a property that was acquired or developed with LWCF Act grant assistance to a non-recreational use, and usually requires replacement in kind.

1.3 RELATED RESOURCES

The effects assessment from other resources evaluated as part of the Tier 1 EIS will contribute to the assessment of effects on Section 6(f) resources. These resources are identified in Table 1. Note that the effects assessment for those related resources will be documented within their respective Tier 1 EIS sections.

Table 1: Related Resource Input to Section 6(f) Resource Assessment

Resource	Input to Section 6(f) Assessment
Land Use	<ul style="list-style-type: none"> Review land cover assessment to identify Section 6(f) resources that occur where a “conversion” of land use may occur by the Tier 1 EIS Alternatives
Parklands and Wild and Scenic Rivers	<ul style="list-style-type: none"> Review of parklands assessment to identify Section 6(f) resources that could be directly impacted or encroached upon by the Tier 1 EIS Alternatives
Section 4(f) Resources	<ul style="list-style-type: none"> Review of Section 4(f) assessment to identify Section 6(f) resources that could result in a permanent use of Section 4(f) resource by the Tier 1 EIS Alternatives. All 6(f) resources are also 4(f) resources.

Source NEC FUTURE JV Team, 2013

1.4 AGENCY AND REGULATORY FRAMEWORK

Section 6(f) resources are subject to regulation by the DOI’s National Park Service (NPS). Applicable legislation and regulation identified in Table 2 will be considered, consistent with a Tier 1 level of

assessment, in the evaluation of Section 6(f) resources for the NEC FUTURE program. Specific regulatory compliance requirements are also addressed in Section 1.7 of this methodology.

Table 2: Management and Regulation of Section 6(f) Resources

Federal Agency	Regulatory Oversight	Description of Regulation	Regulated Resource
United States Department of Interior – National Park Service	Section 6(f) of the <i>U.S. Land and Water Conservation Fund Act of 1965</i> (16 USC Section 4601-4)	Provides federal funding for acquiring property and developing public recreational facilities; protects loss or “conversion” of the property to a non-recreational uses as a result of acquisition and change in ownership	Recreational properties that have been developed, purchased or acquired using the Land and Water Conservation Fund

Source: NEC FUTURE JV, 2013

Under the LWCF Act, if there is a conversion of a 6(f) resource to a non-recreational use, replacement of the property is required and the following requirements must be met:

- ▶ A conversion request must be made by the state liaison to the appropriate regional office of the NPS.
- ▶ All practical measures to avoid the conversion have been evaluated.
- ▶ The fair market value of the property has been established.
- ▶ The property proposed for replacement must be “reasonably equivalent” in terms of usefulness and location of the resource being converted.
- ▶ The property being converted must be evaluated to identify which recreational needs are being fulfilled and opportunities available. Likewise, it also requires that the property being proposed for replacement must be evaluated to determine if it will meet the needs of the recreation opportunities being lost.
- ▶ All other relevant agency coordination has been completed, including Section 4(f) of the *Department of Transportation Act*.
- ▶ The proposed conversion and replacement is in accordance with each state’s *Statewide Comprehensive Outdoor Recreation Plan (SCORP)*.

1.4.1 Regulatory compliance

No formal agency approvals would be requested for the Tier 1 EIS. However, the FRA will engage in dialogue with NPS on the methodology, assumptions, and findings of the Tier 1 EIS analyses. The requirements for subsequent Tier 2 evaluations, including compliance with the LWCF Act, will be described in the Tier 1 EIS. During the Tier 1 EIS process, the FRA will identify potential opportunities to streamline subsequent Tier 2 environmental reviews (see Section 1.7).

Coordination with NPS will be consistent with the NEC FUTURE *Agency Coordination Plan* and support the Statement of Principles (SOP) established between the FRA and federal regulatory agencies as part of the Council on Environmental Quality (CEQ) Pilot program.

1.5 METHODOLOGY TO ASSESS EFFECTS

This effects assessment methodology identifies the approach and assumptions for describing existing conditions of Section 6(f) resources and environmental consequences of the Tier 1 EIS Alternatives on those resources. It identifies data sources, defines the Affected Environment and Context Area considered for Section 6(f) resources and the approach for evaluating potential direct effects,¹ or potential conversions of a Section 6(f) resource. Indirect effects,² such as those resulting from induced growth as a result of the Tier 1 EIS Alternatives, are assessed in a separate methodology (see *Indirect Effects Assessment Methodology*).

1.5.1 Existing Conditions

The data sources listed in Table 3 will be used to establish the existing conditions for Section 6(f) resources.

Table 3: Data Sources for the Evaluation of Section 6(f) Resources

Resource	Data Source	Data Application
6(f) resource	<ul style="list-style-type: none"> ▪ DOI LWCF Database 	<ul style="list-style-type: none"> ▪ Information will be mapped in GIS and overlain on the Affected Environment and Context Area to identify recreational properties that have been developed, purchased or acquired using the LWCF funds; data is organized by state and county.

Source: NEC FUTURE JV, 2013

The existing conditions for Section 6(f) resources will be documented in the Tier 1 EIS for an established Affected Environment and Context Area. The Affected Environment is a 2,000-foot swath centered on the Representative Route³ for each of the Tier 1 EIS Alternatives. The 2,000-foot swath is intended to:

- ▶ Encompass and account for the improvements associated with a Representative Route including infrastructure improvements (such as embankments, aerial structures, track improvements), ancillary facilities (such as stations, yards and parking structures), or service changes

¹ Direct Effects are caused by the action and occur at the same time and place (40 CFR § 1508.8)

² Indirect Effects are those that occur later in time or are further removed in distance (40 CFR § 1508.8)

³ Representative Route refers to a proposed route or potential alignment for a Tier 1 EIS Alternative. The Representative Route includes the physical footprint of the improvements associated with the Tier 1 EIS Alternatives. The horizontal and vertical dimensions of the footprint of the Representative Route are based on prototypical cross-sections for these improvements. The Representative Route is used as a proxy for estimating the potential effects of a route whose location could shift during subsequent project-level reviews.

- ▶ Account for continuous Section 6(f) resources that may extend beyond the Representative Routes

Existing Section 6(f) resources within the Affected Environments will be mapped using GIS. Section 6(f) resources will be documented by type (publicly owned parks, recreation areas, etc.). The total acres of Section 6(f) resources within the Affected Environments will be quantified and reported in tabular format for each state on a county-by-county basis.

The Context Area is 5 miles, centered on the Representative Route for each of the Tier 1 EIS Alternatives. Within the Context Area, 6(f) resources will be mapped but acreage will not be quantified in order to qualitatively characterize the resources that could be affected should the Representative Route shift. Resources within the Context Area, general characteristics of, and relative area of Section 6(f) resources will be presented; this information will be used to supplement the quantitative assessment of effects for the Affected Environment.

1.5.2 Environmental Consequences

Environmental consequences for the Tier 1 EIS Alternatives will be assessed within the Affected Environment. A qualitative assessment of resources present in the Context Area will be used to supplement the effects assessment.

For the Affected Environment, the following steps will be undertaken to evaluate the environmental consequences of each Tier 1 EIS Alternative on Section 6(f) Resources.

1. Identify and calculate total number and acreage of Section 6(f) resources for Tier 1 EIS Alternatives using GIS overlay of resources within the Affected Environment.
2. Overlay and analyze Section 6(f) resources using GIS data from related resources (see Table 1) to determine if there are additional effects on an affected Section 6(f) resource
3. Identify potential Section 6(f) conversion of a recreational properties to non-recreational use as a result of property acquisition associated with the Tier 1 EIS Alternatives
4. Identify areas where a Tier 1 EIS Alternative could potentially bisect concentrations of Section 6(f) resources

For the Context Area, Section 6(f) resources will be qualitatively discussed with regard to the potential to be affected should there be a shift in a Representative Route.

Temporary construction-related effects to Section 6(f) resources will be described as to the location, duration and type of activity. The NEC FUTURE program overall approach to assessing construction-related effects at the Tier 1 EIS level is further described in a separate *Construction Effects Assessment Approach* document. Construction methods and activities for the Tier 1 EIS Alternatives will be the basis of this assessment and will be described in Chapter 2.

1.5.3 Mitigation Strategies

A menu of potential mitigation measures would be developed on a programmatic scale for consideration in Tier 2. An example of programmatic mitigation measures would include design considerations and alternative construction methods.

1.6 TIER 1 EIS OUTCOMES

The Tier 1 EIS Section 6(f) assessment will:

- ▶ Quantify the number of Section 6(f) resources and acres of Section 6(f) lands with the Affected Environment.
- ▶ Map the distribution of Section 6(f) resources in the Affected Environment and Context Area.
- ▶ Overlay potential areas of land use conversions or 4(f) use that may affect Section 6(f) resources as identified in Table 1.
- ▶ Identify amount of Section 6(f) land that has the potential to be converted to non-recreational use or bisected by the implementation of the Tier 1 EIS Alternatives.
- ▶ Identify a menu of potential mitigation measures
- ▶ Describe regulatory compliance requirements for subsequent Tier 2 evaluations

1.7 APPLICABILITY TO TIER 2 ASSESSMENTS

The Tier 1 analysis will identify areas where there is potential for effects on Section 6(f) lands. Tier 2 analyses would further define if a conversion of a Section 6(f) land would occur as well as include the development of mitigation measures and designs that would avoid or minimize effects on Section 6(f) lands.

Additionally, the FRA will identify ways in which agency coordination during the Tier 1 process could create efficiencies and help streamline subsequent Tier 2 reviews and approvals. For example, if a particular portion or element of a Tier 1 EIS Alternative avoids direct and/or indirect effects on Section 6(f) lands, the FRA may coordinate with the NPS to determine whether or not those portions need further evaluation.

Application of Effects-Assessment Methodology

4.1 SECTION 4(f) AND SECTION 6(f) RESOURCES: APPLICATION OF EFFECTS-ASSESSMENT METHODOLOGY

4.1.1 Variations to Effects-Assessment Methodology

There were five variations to the Effects-Assessment Methodology during the Tier 1 Draft EIS analysis:

- ▶ The analysis did not identify areas where the representative routes would bisect concentrations of Section 4(f) resources. This type of analysis would relate to the discussion of potential avoidance alternatives. Rather, the analysis described what could occur should the representative route shift.
- ▶ Constructive use was addressed qualitatively. The analysis qualitatively assessed how proximity effects could substantially diminish the activities, features or attributes that qualify the property for Section 4(f) protection. The discussion was not detailed for each Action Alternative.
- ▶ As part of the Tier 1 EIS process, the acreages of NRHP-listed sites and NHLs were not identified.
- ▶ The information available in this Tier 1 process allowed for the identification of potential effects on known historic properties, but the assessment of effects at Tier 1 was constrained by the limitations of existing records, which did not comprehensively identify all historic properties that may be eligible for listing in the NRHP.
- ▶ As part of the Tier 1 EIS process, FRA will not make a Section 4(f) determination.

4.1.2 Data Variations

There were no updates from the identified data sources in the Effects-Assessment Methodology during the development of the Tier 1 Draft EIS analysis.

1. Section 4(f) and Section 6(f) Resources

Appendix materials for Parklands and Wild and Scenic Rivers are located in Appendix E.04.

Appendix materials for Cultural Resources and Historic Properties are located in Appendix E.09.

Data Matrices

Geography		Section 6(f) Lands								Section 6(f) Lands								Section 6(f) Lands								Section 6(f) Lands							
		Environmental Consequences (Acres)								Environmental Consequences (Percent of Total Section 6 (f) Lands)								Affected Environment (Acres)								Affected Environment (Percent of Total Section 6 (f) Lands)							
State	County	Existing NEC	Alternative 1	Alternative 2	Alternative 3				Existing NEC	Alternative 1	Alternative 2	Alternative 3				Existing NEC	Alternative 1	Alternative 2	Alternative 3				Existing NEC	Alternative 1	Alternative 2	Alternative 3							
					via CC and PVD (3.1)	via LI and PVD (3.2)	via LI and WOR (3.3)	via CC and WOR (3.4)				via CC and PVD (3.1)	via LI and PVD (3.2)	via LI and WOR (3.3)	via CC and WOR (3.4)				via CC and PVD (3.1)	via LI and PVD (3.2)	via LI and WOR (3.3)	via CC and WOR (3.4)				via CC and PVD (3.1)	via LI and PVD (3.2)	via LI and WOR (3.3)	via CC and WOR (3.4)				
DC	District of Columbia	5	5	5	17	17	17	17	0%	0%	0%	2%	2%	2%	2%	165	165	165	174	174	174	174	16%	16%	16%	17%	17%	17%	17%				
MD	Prince George's	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%	2	2	2	2	2	2	2	0%	0%	0%	0%	0%	0%	0%				
MD	Anne Arundel	2	2	2	86	86	86	86	0%	0%	0%	0%	0%	0%	453	453	453	576	576	576	576	2%	2%	2%	2%	2%	2%	2%					
MD	Howard	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	7	7	7	8	8	8	8	0%	0%	0%	0%	0%	0%	0%					
MD	Baltimore County	0	0	0	40	40	40	40	0%	0%	0%	0%	0%	0%	28	28	28	362	362	362	362	0%	0%	0%	0%	0%	0%	0%					
MD	Baltimore City	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	5	5	6	6	6	6	0%	66%	66%	82%	82%	82%	82%					
MD	Harford	0	0	0	2	2	2	2	0%	0%	0%	0%	0%	0%	4	4	4	37	37	37	37	0%	0%	0%	0%	0%	0%	0%					
MD	Cecil	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
DE	New Castle	2	2	2	11	11	11	11	2%	2%	2%	12%	12%	12%	91	91	91	91	91	91	91	100%	100%	100%	100%	100%	100%	100%					
PA	Delaware	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
PA	Montgomery	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
PA	Philadelphia	9	9	18	12	12	12	12	0%	0%	0%	0%	0%	0%	165	165	209	278	278	278	278	4%	4%	5%	7%	7%	7%	7%					
PA	Bucks	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NJ	Salem	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NJ	Gloucester	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NJ	Camden	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NJ	Burlington	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NJ	Mercer	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NJ	Middlesex	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NJ	Somerset	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NJ	Union	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NJ	Essex	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	1	1	4	4	4	4	4	0%	0%	1%	1%	1%	1%	1%					
NJ	Bergen	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NJ	Hudson	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	39	39	39	39	39	39	39	38%	38%	38%	38%	38%	38%	38%					
NY	New York	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	1	1	3	3	3	3	2%	31%	31%	100%	100%	100%	100%					
NY	Richmond	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NY	Queens	0	0	0	0	24	24	0	0%	0%	0%	0%	4%	4%	0	0	0	0	173	173	0	0%	0%	0%	0%	32%	32%						
NY	Kings	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NY	Bronx	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NY	Westchester	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NY	Putnam	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NY	Nassau	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
NY	Suffolk	0	0	0	0	6	6	0	0%	0%	0%	0%	0%	0%	0	0	0	103	103	0	0	0%	0%	0%	0%	3%	3%	0%					
CT	Fairfield	1	1	1	1	1	1	1	0%	0%	0%	0%	0%	0%	32	32	32	32	32	32	32	12%	12%	12%	12%	12%	12%	12%					
CT	Litchfield	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
CT	New Haven	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	28	28	28	28	28	28	28	0%	0%	0%	0%	0%	0%	0%					
CT	Hartford	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	2	2	0	0	0%	0%	0%	6%	6%	0%	0%					
CT	Tolland	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	40	40	0	0%	0%	0%	0%	0%	4%	4%					
CT	Windham	0	0	25	25	25	0	0	0%	0%	0%	0%	0%	0%	0	0	1,031	1,031	1,031	0	0	0%	0%	8%	8%	8%	0%	0%					
CT	Middlesex	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
CT	New London	24	24	24	24	24	24	24	1%	1%	1%	1%	1%	1%	309	309	309	309	309	309	309	18%	18%	18%	18%	18%	18%	18%					
RI	Washington	8	16	8	8	8	8	8	0%	1%	0%	0%	0%	0%	321	366	321	321	321	321	321	18%	21%	18%	18%	18%	18%	18%					
RI	Kent	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
RI	Providence	0	0	14	14	14	0	0	0%	0%	2%	2%	2%	0%	0	0	184	184	184	0	0	0%	0%	24%	24%	24%	0%	0%					
MA	Hampden	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
MA	Worcester	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
MA	Middlesex	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
MA	Bristol	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
MA	Norfolk	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
MA	Suffolk	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
DC	Total	5	5	5	17	17	17	17	0%	0%	0%	2%	2%	2%	2%	165	165	165	174	174	174	174	16%	16%	16%	17%	17%	17%	17%				
MD	Total	3	3	3	127	127	127	127	0%	0%	0%	0%	0%	0%	493	498	498	991	991	991	991	0%	0%	0%	1%	1%	1%	1%					
DE	Total	2	2	2	11	11	11	11	2%	2%	2%	12%	12%	12%	91	91	91	91	91	91	91	100%	100%	100%	100%	100%	100%	100%					
PA	Total	9	9	18	12	12	12	12	0%	0%	0%	0%	0%	0%	165	165	209	278	278	278	278	4%	4%	5%	6%	6%	6%	6%					
NJ	Total	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	40	40	42	42	42	42	42	10%	10%	10%	10%	10%	10%	10%					
NY	Total	0	0	0	0	30	30	0	0%	0%	0%	0%	1%	1%	0	1	1	3	279	279	3	0%	0%	0%	0%	7%	7%	0%					
CT	Total	25	25	50	50	50	25	25	0%	0%	0%	0%	0%	0%	369	369	1,399	1,401	1,401	409	409	1%	1%	4%	4%	4%	1%	1%					
RI	Total	8	16	22	22	22	8	8	0%	1%	1%	1%	1%	0%	321	366	505	505	505	321	321	13%	14%	20%	20%	20%	13%	13%					
MA	Total	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0	0	0	0	0	0	0	0%	0%	0%	0%	0%	0%	0%					
Grand Total		53	61	100	238	268	229	199	0%	0%	0%	0%	0%	0%	1,645	1,695	2,911	3,486	3,761	2,586	2,310	1%	1%	2%	2%	3%	2%	2%					

State	County	Resource Name	Resource Identification				Affected Environment (Acres of Section 6(f) Resource in Affected Environment)								Affected Environment (% of Section 6(f) Resource in Affected Environment)							
			Resource Type	Ownership	Total Acreage of Section 6(f) Resource	LWCF	Existing NEC	Alternative 1	Alternative 2	D.C. to NYC	Alternative 3				Existing NEC	Alternative 1	Alternative 2	D.C. to NYC	Alternative 3			
											New York City to Hartford		Hartford to Boston						New York City to Hartford		Hartford to Boston	
											via Central Connecticut	via Long Island	via Providence	via Worcester					via Central Connecticut	via Long Island	via Providence	via Worcester
DC	District of Columbia	Anacostia Park, Section G	PARK	DC	572	Y	78	78	78	82					14%	14%	14%	14%				
DC	District of Columbia	Arboretum/Rec Center Grounds	RECREATION	DC	454	Y	76	76	76	81					17%	17%	17%	18%				
DC	District of Columbia	Brentwood Park (Patterson Tract)	PARK	DC	11	Y	11	11	11	11					100%	100%	100%	100%				
DC	District of Columbia	Brentwood Park/Park	PARK	DC	5	Y	0	0	0	0					0%	0%	0%	0%				
MD	Prince George's	Patuxent Research Refuge	FOREST_FW_CONSERVE	Federal (USFWS)	12,822	Y	2	2	2	2					0%	0%	0%	0%				
MD	Anne Arundel	Patapsco Valley State Park	PARK	State (PS)	13,952	Y	173	173	173	185					1%	1%	1%	1%				
MD	Anne Arundel	Patuxent Research Refuge	FOREST_FW_CONSERVE	Federal (USFWS)	12,822	Y	267	267	267	379					2%	2%	2%	3%				
MD	Anne Arundel	Patuxent River Greenway	PARK	County (Anne Arundel)	182	Y	13	13	13	13					7%	7%	7%	7%				
MD	Howard	Patapsco Valley State Park	PARK	State (PS)	13,952	Y	7	7	7	8					0%	0%	0%	0%				
MD	Baltimore County	Eastern Regional Park	PARK	County	80	Y	23	23	23	23					29%	29%	29%	29%				
MD	Baltimore County	Gunpowder Falls State Park	PARK	State (PS)	15,951	Y	--	--	--	333					0%	0%	0%	2%				
MD	Baltimore County	Patapsco Valley State Park	PARK	State (PS)	13,952	Y	5	5	5	5					0%	0%	0%	0%				
MD	Baltimore City	Cumberland & Carey Park	PARK	County (Baltimore City)	1	Y	--	0	0	0					--	24%	24%	24%				
MD	Baltimore City	John E. Howard Park	PARK	County (Baltimore City)	5	Y	--	4	4	4					--	96%	96%	96%				
MD	Baltimore City	McKim Park	PARK	County (Baltimore City)	1	Y	--	--	--	1					--	--	--	81%				
MD	Harford	Bush Declaration Natural Resources Management	FOREST_FW_CONSERVE	State (PS)	267	Y	--	--	--	28					--	--	--	10%				
MD	Harford	Gunpowder Falls State Park	PARK	State (PS)	15,951	Y	--	--	--	5					--	--	--	0%				
MD	Harford	Havre De Grace Activity Center	RECREATION	County (Harford)	4	Y	4	4	4	4					100%	100%	100%	100%				
DE	New Castle	Fox Point State Park	PARK	State	91	Y	91	91	91	91					100%	100%	100%	100%				
PA	Delaware	Cobbs Creek South/Cobbs Creek Park	PARK	County	273	Y	0	0	0.0	0					0%	0%	0%	0%				
PA	Philadelphia	12th & Cambria Playground	RECREATION	County (Philadelphia)	2	Y	2	2	2	2					98%	98%	98%	98%				
PA	Philadelphia	Bartram's Garden	RECREATION	County	46	Y	--	--	45	--					--	--	99%	--				
PA	Philadelphia	Cobbs Creek South/Cobbs Creek Park	PARK	County	273	Y	2	2	--	2					1%	1%	1%	1%				
PA	Philadelphia	East Park	PARK	County	608	Y	71	71	86	71					12%	12%	14%	12%				
PA	Philadelphia	Franklin D. Roosevelt Park	PARK	County	345	Y	--	--	--	111					--	--	--	32%				
PA	Philadelphia	Pennypack Creek Park	PARK	County	1,331	Y	27	27	25	27					2%	2%	2%	2%				
PA	Philadelphia	Pennypack On The Delaware	PARK	County	225	Y	10	10	10	11					4%	4%	4%	5%				
PA	Philadelphia	Pennypack Trail	Trail	County (Montgomery)	44	Y	3	3	2	3					7%	7%	5%	7%				
PA	Philadelphia	West Park	PARK	County	1,295	Y	50	50	38	50					4%	4%	3%	4%				
NJ	Essex	Weequahic Park	PARK	County (Essex)	306	Y	1	1	4	4					0%	0%	1%	1%				
NJ	Hudson	Laurel Hill Park	PARK	County (Hudson)	102	Y	39	39	39	39					38%	38%	38%	38%				
NY	New York	Chelsea Park	PARK	County (NYC)	3	Y	0	1	1		3	3			2%	31%	31%		100%	100%		
NY	Queens	Forest Park	PARK	County (NYC)	543	Y	--	--	--	--		173			0%	0%	0%	0%				
NY	Suffolk	Connetquot River State Park Preserve	PARK	State	3,471	Y	--	--	--	--		103			0%	0%	0%	0%				3%
CT	Fairfield	Sherwood Island State Park	PARK	State	276	Y	32	32	32		32	32			12%	12%	12%		12%	12%		
CT	New Haven	Cockaponset State Forest	FOREST_FW_CONSERVE	State	16,475	Y	28	28	28		28	28			0%	0%	0%	0%				
CT	New London	Bluff Point State Park	PARK	State	805	Y	119	119	119		119	119			15%	15%	15%		15%	15%		
CT	New London	Haley Farm State Park	PARK	State	276	Y	85	85	85		85	85			31%	31%	31%		31%	31%		
CT	New London	Rocky Neck State Park	PARK	State	679	Y	105	105	105		105	105			15%	15%	15%		15%	15%		
CT	Hartford	Quinnipiac River Water Access	COAST_WATER	State	26	Y	--	--	--						--	--	--				6%	0%
CT	Tolland	Kollar Wildlife	Wildlife & Conservation	State	916	Y								40	0%	0%	0%				0%	4%
CT	Windham	Natchaug State Forest	FOREST_FW_CONSERVE	State	12,604	Y	--	--	1,031						0%	0%	8%				8%	0%
RI	Washington	Burlingame Management /Burlingame Management *	FOREST_FW_CONSERVE	State	989	Y	--	11	--						--	1%	--				0%	0%
RI	Washington	Burlingame Management /Cary	FOREST_FW_CONSERVE	State	45	Y	2	2	2						4%	4%	4%				4%	4%
RI	Washington	Burlingame Management /Drew	FOREST_FW_CONSERVE	State	210	Y	64	86	64						31%	41%	31%				31%	31%
RI	Washington	Burlingame Management /Gardiner	FOREST_FW_CONSERVE	State	112	Y	74	74	74						67%	67%	67%				67%	67%
RI	Washington	Burlingame Management /Holley	FOREST_FW_CONSERVE	State	165	Y	92	103	92						55%	62%	55%				55%	55%
RI	Washington	Burlingame Management /Phantom Bog	FOREST_FW_CONSERVE	State	256	Y	89	89	89						35%	35%	35%				35%	35%
RI	Providence	Snake Den State Park/Johnston Historical	PARK	State	0	Y	--	--	0						--	--	100%				100%	0%
RI	Providence	Snake Den State Park/Snake Den	PARK	State	781	Y	--	--	184						--	--	24%				24%	0%

State	County	Resource Name	Resource Identification				Environmental Consequences (Acres of Section 6(f) Resource in Representative Route Footprint)								Environmental Consequences (% of Section 6(f) Resource in Representative Route Footprint)							
			Resource Type	Ownership	Total Acreage of Section 6(f) Resource	LWCF	Existing NEC	Alternative 1	Alternative 2	D.C. to NYC	Alternative 3				Existing NEC	Alternative 1	Alternative 2	D.C. to NYC	Alternative 3			
											New York City to Hartford		Hartford to Boston						New York City to Hartford		Hartford to Boston	
											via Central Connecticut	via Long Island	via Providence	via Worcester					via Central Connecticut	via Long Island	via Providence	via Worcester
DC	District of Columbia	Anacostia Park, Section G	PARK	DC	572	Y	5	5	5	16					1%	1%	1%	3%				
DC	District of Columbia	Arboretum/Rec Center Grounds	RECREATION	DC	454	Y	0	0	0	1					0%	0%	0%	0%				
DC	District of Columbia	Brentwood Park (Patterson Tract)	PARK	DC	11	Y	--	--	--	--					--	--	--	--				
DC	District of Columbia	Brentwood Park/Park	PARK	DC	5	Y	--	--	--	--					--	--	--	--				
MD	Prince George's	Patuxent Research Refuge	FOREST_FW_CONSERVE	Federal (USFWS)	12,822	Y	--	--	--	0					--	--	--	0%				
MD	Anne Arundel	Patapsco Valley State Park	PARK	State (PS)	13,952	Y	1	1	1	26					0%	0%	0%	0%				
MD	Anne Arundel	Patuxent Research Refuge	FOREST_FW_CONSERVE	Federal (USFWS)	12,822	Y	1	1	1	59					0%	0%	0%	0%				
MD	Anne Arundel	Patuxent River Greenway	PARK	County (Anne Arundel)	182	Y	--	--	--	--					--	--	--	--				
MD	Howard	Patapsco Valley State Park	PARK	State (PS)	13,952	Y	--	--	--	--					--	--	--	--				
MD	Baltimore County	Eastern Regional Park	PARK	County	80	Y	--	--	--	--					--	--	--	--				
MD	Baltimore County	Gunpowder Falls State Park	PARK	State (PS)	15,951	Y	--	--	--	39					--	--	--	--				
MD	Baltimore County	Patapsco Valley State Park	PARK	State (PS)	13,952	Y	0	0	0	1					0%	0%	0%	0%				
MD	Baltimore City	Cumberland & Carey Park	PARK	County (Baltimore City)	1	Y	--	--	--	--					--	--	--	--				
MD	Baltimore City	John E. Howard Park	PARK	County (Baltimore City)	5	Y	--	--	--	--					--	--	--	--				
MD	Baltimore City	McKim Park	PARK	County (Baltimore City)	1	Y	--	--	--	--					--	--	--	--				
MD	Harford	Bush Declaration Natural Resources Management	FOREST_FW_CONSERVE	State (PS)	267	Y	--	--	--	1					--	--	--	0%				
MD	Harford	Gunpowder Falls State Park	PARK	State (PS)	15,951	Y	--	--	--	--					--	--	--	--				
MD	Harford	Havre De Grace Activity Center	RECREATION	County (Harford)	4	Y	0	0	0	1					4%	4%	4%	21%				
DE	New Castle	Fox Point State Park	PARK	State	91	Y	2	2	2	11					2%	2%	2%	13%				
PA	Delaware	Cobbs Creek South/Cobbs Creek Park	PARK	County	273	Y	--	--	--	--					--	--	--	--				
PA	Philadelphia	12th & Cambria Playground	RECREATION	County (Philadelphia)	2	Y	--	--	--	--					--	--	--	--				
PA	Philadelphia	Bartram's Garden	RECREATION	County	46	Y	--	--	4	--					--	--	8%	--				
PA	Philadelphia	Cobbs Creek South/Cobbs Creek Park	PARK	County	273	Y	--	--	--	--					--	--	--	--				
PA	Philadelphia	East Park	PARK	County	608	Y	5	5	6	5					1%	1%	1%	1%				
PA	Philadelphia	Franklin D. Roosevelt Park	PARK	County	345	Y	--	--	--	--					--	--	--	--				
PA	Philadelphia	Pennypack Creek Park	PARK	County	1,331	Y	1	1	1	3					0%	0%	0%	0%				
PA	Philadelphia	Pennypack On The Delaware	PARK	County	225	Y	--	--	--	--					--	--	--	--				
PA	Philadelphia	Pennypack Trail	Trail	County (Montgomery)	44	Y	0	0	0	0					0%	0%	0%	1%				
PA	Philadelphia	West Park	PARK	County	1,295	Y	3	3	7	3					0%	0%	1%	0%				
NJ	Essex	Weequahic Park	PARK	County (Essex)	306	Y	--	--	--	--					--	--	--	--				
NJ	Hudson	Laurel Hill Park	PARK	County (Hudson)	102	Y	--	--	--	--					--	--	--	--				
NY	New York	Chelsea Park	PARK	County (NYC)	3	Y	--	--	--	--					--	--	--	--				
NY	Queens	Forest Park	PARK	County (NYC)	543	Y	--	--	--	--					--	--	--	--			0%	4%
NY	Suffolk	Connetquot River State Park Preserve	PARK	State	3,471	Y	--	--	--	--					--	--	--	--			--	0%
CT	Fairfield	Sherwood Island State Park	PARK	State	276	Y	1	1	1	1					0%	0%	0%	0%			0%	0%
CT	New Haven	Cockaponset State Forest	FOREST_FW_CONSERVE	State	16,475	Y	0	0	0	0					0%	0%	0%	0%			0%	0%
CT	New London	Bluff Point State Park	PARK	State	805	Y	9	9	9	9					1%	1%	1%	1%			0%	1%
CT	New London	Haley Farm State Park	PARK	State	276	Y	5	5	5	5					2%	2%	2%	2%			0%	2%
CT	New London	Rocky Neck State Park	PARK	State	679	Y	10	10	10	10					1%	1%	1%	1%			0%	1%
CT	Hartford	Quinnipiac River Water Access	COAST_WATER	State	26	Y	--	--	--	--					--	--	--	--			--	--
CT	Tolland	Kollar Wildlife	Wildlife & Conservation	State	916	Y	--	--	--	--					--	--	--	--			--	0%
CT	Windham	Natchaug State Forest	FOREST_FW_CONSERVE	State	12,604	Y	--	--	25	--					--	--	--	0%			--	0%
RI	Washington	Burlingame Management /Burlingame Management *	FOREST_FW_CONSERVE	State	989	Y	--	0	--	--					--	--	--	--			--	--
RI	Washington	Burlingame Management /Cary	FOREST_FW_CONSERVE	State	45	Y	--	--	--	--					--	--	--	--			--	--
RI	Washington	Burlingame Management /Drew	FOREST_FW_CONSERVE	State	210	Y	1	7	1	--					1%	3%	1%	1%			1%	1%
RI	Washington	Burlingame Management /Gardiner	FOREST_FW_CONSERVE	State	112	Y	0	0	0	--					0%	0%	0%	0%			0%	0%
RI	Washington	Burlingame Management /Holley	FOREST_FW_CONSERVE	State	165	Y	4	5	4	--					3%	3%	3%	3%			3%	3%
RI	Washington	Burlingame Management /Phantom Bog	FOREST_FW_CONSERVE	State	256	Y	2	4	2	--					1%	1%	1%	1%			1%	1%
RI	Providence	Snake Den State Park/Johnston Historical	PARK	State	0	Y	--	--	--	--					--	--	--	--			--	--
RI	Providence	Snake Den State Park/Snake Den	PARK	State	781	Y	--	--	14	--					--	--	2%	--			--	2%