3.12 Visual Quality

This Programmatic Environmental Impact Statement (EIS) considers the adverse environmental impacts on visual quality that would result from the types of facilities described in Chapter 2, Overview of Transmission Facilities, Development Considerations, and Regulations. This section addresses the following topics related to the new construction, operation and maintenance, upgrade, and modification of high-voltage electric transmission facilities (transmission facilities) in Washington:

- Section 3.12.1 identifies regulatory, siting, and design considerations.
- Section 3.12.2 describes the affected environment.
- Section 3.12.3 describes the adverse environmental impacts.
- Section 3.12.4 describes Mitigation Measures.
- Section 3.12.5 identifies probable significant adverse environmental impacts on visual quality.
- Section 3.12.6 provides an environmental sensitivity map and criteria weighting for the siting of transmission facilities as it relates to visual quality, based on the identified considerations, adverse environmental impacts, and Mitigation Strategies.

3.12.1 Regulatory, Siting, and Design Considerations

This Programmatic EIS establishes a broad framework for compliance, outlining general laws, regulations, best management practices (BMPs), and design considerations. It is assumed that project-specific applications would be developed within this pre-established regulatory context and comply with existing laws and regulations. Any projects not complying with applicable laws and regulations or failing to adhere to design considerations or BMPs would require additional project-specific environmental analysis and mitigation. The federal, state, and local laws and regulations that apply to visual quality are summarized in **Table 3.12-1**.

Table 3.12-1: Laws and Regulations for Visual Quality

Applicable Legislation	Agency	Summary Information
16 USC Chapter 27 – National Trails System Act	National Park Service; Bureau of Land Management; and U.S. Forest Service	This act designates national scenic trails to be continuous, extended routes of outdoor recreation within protected corridors. It promotes the enjoyment and appreciation of trails while encouraging greater public access. It establishes four classes of trails: national scenic trails, national historic trails, national recreation trails, and side and connecting trails.
23 USC § 131 et seq. – Highway Beautification Act	Federal Highway Administration	This law was enacted to provide effective control of outdoor advertising and junkyards, protect public investment, promote the safety and recreational value of public travel, preserve natural beauty, and provide landscapes and roadside development reasonably necessary to accommodate the traveling public.
42 USC Chapter 55 – National Environmental Policy Act	U.S. Environmental Protection Agency	This act requires environmental analysis of federal agency actions to consider a project's impacts on urban quality, historic and cultural resources, and the design of the built environment.
43 USC Chapter 35 – Federal Land Policy and Management Act	Bureau of Land Management	The BLM has the responsibility to manage the lands it administers in a manner that will protect the quality of scenic values. Section 505 of the act requires that: "Each ROW shall: "(ii) minimize damage to scenic and aesthetic values and fish and wildlife habitat and otherwise protect the environment"
16 USC Chapter 28 – National Wild and Scenic Rivers Act	▪ Bureau of Land Management ▪ National Park Service U.S. Forest Service ▪ U.S. Fish and Wildlife Service	This act protects and enhances river values, including free-flow, water quality, and outstandingly remarkable values of designated wild, scenic, and recreational rivers.
National Forest Management Act (Public Law 94-588)	U.S. Forest Service	This regulation governs the administration of national forests and the removal of trees. It includes requirements for the consideration, treatment, and protection of intangible resources such as scenery and aesthetics.
36 CFR Part 219 – National Forest System Land and Resource Management Planning	U.S. Forest Service	This regulation involves creating and maintaining comprehensive plans for managing national forests and grasslands. Long-term management plans are created to guide the sustainable use and conservation of forest

Applicable Legislation	Agency	Summary Information
		resources, aiming to balance ecological, economic, and social needs.
36 CFR Part 254 – Landownership Adjustments	U.S. Forest Service	This regulation sets procedures for conducting exchanges of National Forest System lands and requires consideration of the public interest, including protection of fish and wildlife habitats, cultural resources, watersheds, and wilderness and aesthetic values.
USDOT Act, Section 4[(f)]	Federal Highway Administration	This act declares a national policy to make a special effort to preserve the natural beauty of the countryside and public parks and recreation sites, wildlife and waterfowl refuges, and historic sites.
Scenic and Recreational Highway Act, RCW 47.39.020, Designation of portions of existing highways and ferry routes as part of system	Washington State Department of Transportation[(a)]	The Scenic and Recreational Highways Program designates highways that could be developed to promote tourist activity and provide concurrent economic growth while protecting scenic and recreational quality.
Washington Highway Beautification Act, RCW 47.40.010, Improvement and beautification of a highway purpose	Washington State Department of Transportation[(a)]	This act declares improvement and beautification of any state highway ROW to be a "proper highway purpose." It specifically mentions the following improvements: "planting and cultivating of any shrubs, trees, hedges, or other domestic or native ornamental growth; the improvement of roadside facilities and viewpoints; and the correction of unsightly conditions."
RCW 84.34, Open Space Preservation	Washington State Legislature[(a)]	This regulation ensures the use and enjoyment of natural resources and scenic beauty for the economic and social well-being of the state and its citizens. It defines open space as including any land area that would preserve visual quality along highway, road, and street corridors or scenic vistas.
Growth Management Act, WAC 365-196-425, Rural Element	Washington State Department of Commerce[(a)]	This act describes aspects of rural character, including visual characteristics.
WAC 468-34-330, Scenic Enhancement	Washington State Legislature[(a)]	This regulation requires undergrounding of new lines within scenic areas where none currently exist and the use of existing towers for new lines where existing corridors are present. Special exemptions may be made for power lines less than 35 kilovolts when less visually impactful alternative locations are not available, or unusually difficult, or where undergrounding

Applicable Legislation	Agency	Summary Information
		would be technically infeasible or unreasonably costly.
Washington State Environmental Policy Act	▪ Washington State Agencies ▪ Local governments	This act is a process that identifies and analyzes environmental impacts that can be related to issuing permits. SEPA helps permit applicants and decision-makers understand how a proposed project will impact the environment. Certain projects, as defined in the SEPA Rules (WAC 197-11-704) and that are not exempt, are required to go through the SEPA process.
Washington Transportation Plan (WSDOT n.d.)	Washington Department of Transportation	This plan serves as a framework for the development of a statewide multimodal transportation system, in alignment with the Vision outlined in the Washington Transportation Plan. It addresses energy transmission facilities related to roadways and ROW corridors.
Various local and regional plans and guidelines addressing visual impacts	Various local and regional jurisdictions	Policies, directives, and regulations pertaining to visual impacts within local and regional environments.

Notes:

(a) The agency responsible for administering most permits or authorizations for the identified regulation. However, if EFSEC is determined to be the agency responsible for approving a proposal, EFSEC can administer several types of permits at the state and local levels. EFSEC provides a streamlined process for siting and licensing major energy facilities, including transmission facilities in Washington State. EFSEC coordinates all evaluation and licensing steps, specifies the conditions for new construction and operation, and issues a Site Certification Agreement, which assumes the responsibility for issuing individual state or local permits. By consolidating these permits into a single Site Certification Agreement, EFSEC can simplify the regulatory process for energy facility developers. While EFSEC itself does not directly administer federal permits, it works closely with federal agencies to ensure that all necessary federal requirements are met during the evaluation and licensing of energy facilities.

BLM = U.S. Department of the Interior, Bureau of Land Management; **CFR** = Code of Federal Regulations; **EFSEC** = Washington Energy Facility Site Evaluation Council; **RCW** = Revised Code of Washington; **ROW** = right-of-way; **SEPA** = State Environmental Policy Act; **USC** = United States Code; **USDOT** = U.S. Department of Transportation; **WAC** = Washington Administrative Code

The siting of transmission facilities is determined by engineering, technical, environmental, and socioeconomic factors. **Table 3.12-2** summarizes guidance documents and management plans that outline the design considerations and BMPs generally used to avoid or minimize adverse environmental impacts on visual quality.

Table 3.12-2: Siting and Design Considerations for Visual Quality

Siting and Design Consideration	Description
Federal Energy Regulatory Commission Guidelines	FERC provides comprehensive guidelines for the siting of interstate electric transmission facilities. These guidelines include considerations for visual impacts as they relate to environmental justice, tribal engagement, and public participation.
Federal Agency Visual Impact Mitigation Guidance (BLM n.d.)	This guide provides practical advice for implementing best management practices and discusses the visual characteristics and impacts associated with the construction, operation, and decommissioning of renewable energy and electric transmission facilities.
Mitigating Visual Impacts of Utility-Scale Energy Projects (Donaldson n.d.)	This document focuses on approaches, processes, and techniques for mitigating visual impacts of utility-scale energy projects, including transmission facilities. It explores the effectiveness of commonly employed mitigation techniques and addresses public concerns about changes to visual character and quality.
Guide on the Limitation of the Effects of Obtrusive Light from Outdoor Installations (CIE 2017)	This publication provides guidelines for evaluating existing lighting conditions and developing best practices for effective lighting that minimizes light pollution.
Night Sky and Dark Environments: Best Management Practices for Artificial Light at Night on BLM-Managed Lands (Sullivan et al. 2023)	This technical note provides a reference for a variety of ways the BLM can protect night skies and dark environments by reducing or avoiding sources of light pollution from BLM-managed lands to maintain visible clarity of night skies and ensure a healthy dark environment for wildlife and people.
National Policy Statement for Electricity Networks Infrastructure (Department for Energy Security and Net Zero 2023)	This policy provides the framework for decisions on applications for electricity network infrastructure in the United Kingdom. Although not a U.S. publication, the document outlines general and technology-specific assessment principles, emphasizing the need for good design, climate change adaptation, and resilience.
Recommended Siting Practices for Electric Transmission Developers (Americans for a Clean Energy Grid 2023)	This document outlines best practices for siting electric transmission facilities. Recommended practices include: ▪ Early and transparent engagement ▪ Respect and fair dealing ▪ Environmental considerations ▪ Interagency coordination ▪ Use of existing infrastructure

BLM = Bureau of Land Management; **CIE** = Commission Internationale de l'Éclairage; **FERC** = Federal Energy Regulatory Commission; **U.S.** = United States

3.12.2 Affected Environment

This section describes visual quality within the Study Area (see Chapter 1, Introduction). The analysis of the affected environment incorporates the following:

- Scenic Natural Resources
- Aesthetics
- Night-sky Environment

3.12.2.1 Scenic Natural Resources

In Washington, scenic resources and aesthetics are defined and approached differently, reflecting their unique roles in environmental and cultural preservation. This section describes the types of visual resources in Washington, as well as the types of viewing locations from which scenic resources are commonly viewed.

Scenic natural resources refer to the natural and cultural landscapes that contribute to the visual quality and character of an area. They include:

- **Protected Scenic Areas and Parks:** Crucial for preserving Washington's natural heritage, supporting biodiversity, and providing recreational opportunities for residents and visitors
- **National Wild and Scenic River Systems:** Play a vital role in maintaining the ecological integrity, cultural heritage, and recreational value of America's rivers
- **Scenic Byways:** Designated routes that highlight the state's natural beauty, cultural heritage, and recreational opportunities
- **Vistas:** Expansive views or panoramas that can be seen from a particular vantage point

Protected Scenic Areas and Parks

Protected areas often include travel routes such as trails and designated viewpoints from which scenic areas may be viewed. Additionally, protected areas may include visually prominent landscape features, such as landforms that may be viewed from nearby travel, recreational areas, routes, and communities. As such, the land surrounding protected areas may be considered visually sensitive (areas where

concern about visual quality is typically high). Washington contains various types of protected areas, such as:

- National Parks
- State Parks
- National Monuments
- Natural Resource Conservation Areas
- Columbia Gorge National Scenic Area
- National Wilderness Areas
- National Wildlife Refuges

Section 3.14, Recreation, analyzes many of these protected areas. Additionally, protected areas may include visually prominent landscape features such as landforms that may be viewed from nearby travel routes and/or communities. A unique aspect of Washington is that five massive, inactive volcanoes form distinctive, visually prominent scenic features when viewed from many locations within western Washington. The volcanoes are part of the Cascade Range, and all have protected area status (USGS n.d.). These five volcanoes are:

- Mount Baker
- Mount Rainier
- Glacier Peak
- Mount St. Helens
- Mount Adams

National Wild and Scenic Rivers System

Washington is home to several rivers designated under the National Wild and Scenic Rivers System (NWSRS), which aims to preserve rivers with outstanding natural, cultural, and recreational values. Washington has approximately 197 miles of rivers designated as wild and scenic (NWSRS n.d.). NWSRS-designated rivers in Washington are listed in **Table 3.12-3**.

Table 3.12-3: Rivers Designated Under the National Wild and Scenic Rivers System

River	Designation Year	Length (Miles)	Outstandingly Remarkable Values	Classification
Skagit River System	1978	158.5	Fish, Scenery, Wildlife,	Recreational – 58.5 miles Scenic – 100 miles
Klickitat River	1986	10.8	Culture, Fish, Geology, Hydrology	Recreational – 10.8 miles
White Salmon River	1986	27.7	Culture, Fish, Geology, Hydrology, Recreation, Scenery,	Scenic – 21 miles Wild – 6.7 miles
Middle Fork Snoqualmie River	2014	627.4	Scenic Fish, Recreation, Wildlife	Scenic – 21 miles Wild – 6.4 miles
Illabot Creek	2014	14.3	Fish, Wildlife	Recreational – 10 miles Wild – 4.3 miles
Pratt River	2014	9.5	Fish, Wildlife	Wild – 9.5 miles

Source: NWSRS n.d.

The NWSRS is crucial for several reasons:

- **Preservation of Natural Beauty:** The NWSRS helps protect rivers that possess outstanding natural, cultural, and recreational values and maintain them in a free-flowing condition for the enjoyment of present and future generations.
- **Environmental Protection:** By designating rivers as wild, scenic, or recreational, the NWSRS ensures the conservation of water quality, wildlife habitats (see Section 3.6, Habitat, Wildlife, and Fish), and overall health of river ecosystems.
- **Cultural and Historical Significance:** Many rivers in the NWSRS have substantial cultural and historical importance. Protecting these rivers helps preserve the heritage and stories associated with them.
- **Recreational Opportunities:** The NWSRS provides numerous recreational opportunities, such as fishing, boating, hiking, and camping (see Section 3.14, Recreation), which contribute to the well-being and quality of life for many people.
- **Economic Benefits:** Protected rivers often attract tourism, which can boost local economies through activities like guided tours, lodging, and related services.

State and National Scenic Byways in Washington

Washington is home to numerous scenic byways and natural resources that showcase its natural beauty. These routes often pass through diverse terrains, including mountains, forests, and coastlines, offering travelers picturesque views and access to various attractions. Examples of scenic byways include the Cascade Loop, Pacific Coast Scenic Byway, Chinook Scenic Byway, and Columbia River Gorge. Highways in this system are developed and maintained in accordance with the criteria developed by the Washington State Department of Transportation under Revised Code of Washington (RCW) 47.39.020. Byway logo signing is used to identify and guide travelers along state-designated scenic byways.

The Washington State Department of Transportation participates with local communities to develop a Corridor Management Plan (CMP) for each scenic byway. A CMP includes a strategy for maintaining and enhancing the byway's intrinsic scenic qualities. The level of protection for different parts of a National Scenic Byway or All-American Road can vary, with the highest level of protection provided to the parts that most reflect their intrinsic values. All nationally recognized scenic byways should, however, be maintained with particularly high standards for preserving the highest levels of visual integrity and attractiveness. Each CMP is designed to respond to new applications and developments along the byway corridor (USDOT 2002). **Table 3.12-4** lists the scenic byways in Washington, and **Figure 3.12-1** shows their location.

Table 3.12-4: Washington State Scenic Byways

Byway	Location	Intrinsic Qualities
All-American Roads		
Chinook Scenic Byway	SR-410 from Enumclaw to Naches (84 miles)	Scenic and natural
International Selkirk Loop (All-American Road)	SR-20 and SR-31 between Newport and Nelway in British Columbia, Canada	Natural, historic, recreational, and scenic
National Scenic Byways		
Cascade Loop	440-mile loop in northwestern Washington following US-97 on the east, US-2 on the south, SR-20 on the north, and SR-525 on the west	Natural, recreational, and scenic
Coulee Corridor Scenic Byway	150-mile byway following SR-155 and SR-17 from Omak to east of Othello	Scenic and natural

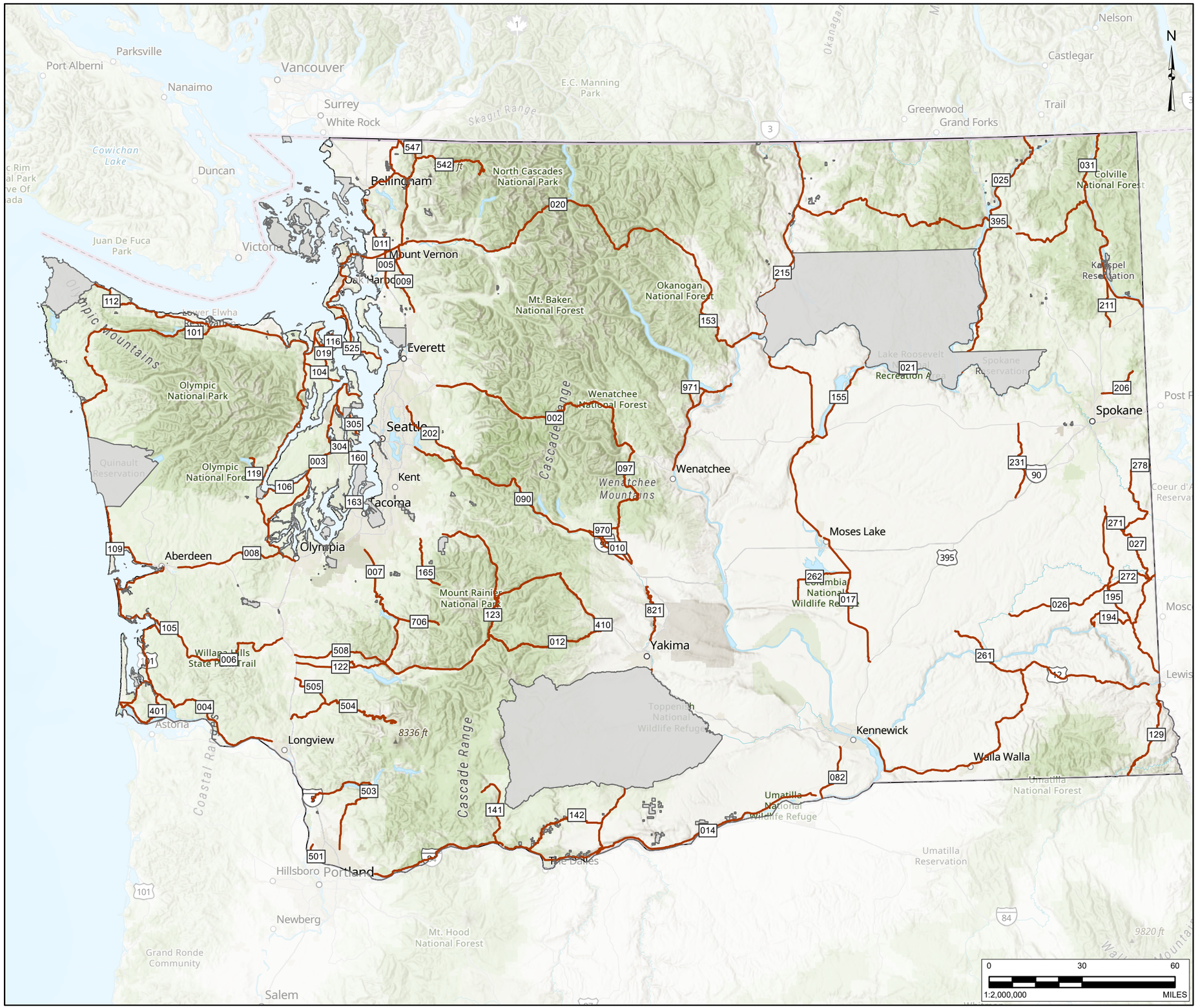
Byway	Location	Intrinsic Qualities
Mountains to Sound Greenway	I-90 from Seattle to Thorp	Historic, recreational, and scenic
Stevens Pass Greenway	US-2 from Cashmere to west of Monroe	Historic, natural, and scenic
Strait of San Juan de Fuca Highway	SR-112 from US-101 to Sea Stacks	Natural, recreational, and scenic
White Pass Scenic Byway	US-12 from Naches to Lewis and Clark State Park	Recreational and scenic
State Scenic Byways		
Cape Flattery Tribal Scenic Byway	SR-112 between the eastern boundary of the Makah Indian Reservation and Cape Flattery	Archaeological, cultural, recreational, and scenic
Cascade Valley Heritage Corridor	Snoqualmie River Valley (SR-202) between Woodinville and North Bend	Historic and scenic
Chuckanut Drive	SR-11 from Bellingham to near Burlington	Historic and scenic
Columbia River Gorge Scenic Byway	136-mile loop in southern Washington and northern Oregon following SR-14 on the north and US-84 on the south	Historic and scenic
Cranberry Coast Scenic Byway	SR-105 from Aberdeen to Raymond	Historic and scenic
Hidden Coast Scenic Byway	SR-109 from Taholah to Hoquiam	Historic, recreational, and scenic
Mount Baker Scenic Byway	Bellingham to the base of Mount Baker	Recreational, natural, and scenic
North Pend Oreille Scenic Byway	Located within Colville National Forest	Recreational, natural, historic, and scenic
Okanogan Trails Scenic Byway	SR-97 from the Canadian border to Pateros	Recreational, historic, and scenic
Pacific Coast Scenic Byway	SR-101 from Olympia to Ilwaco	Recreational, historic, and scenic
Palouse Scenic Byway	The Palouse region in southeastern Washington, between Uniontown, Hooper, and Rockford	Natural, historic, and scenic
San Juan Islands Scenic Byway	Three segments: the 30 miles along the Washington State Ferries routes, a route around San Juan Island, and a route on Orcas Island	Natural, historic, and scenic
Sherman Pass Scenic Byway	US-2, SR-20, SR-21, and SR-24 in and around Lake Roosevelt	Natural, historic, and scenic

Byway	Location	Intrinsic Qualities
Spirit Lake Memorial Highway	SR-504 from Longview to Spirit Lake (Mount St. Helens crater)	Natural, historic, and scenic
Swiftwater Corridor	Vantage Highway and SR-903 from Vantage to north of Roslyn	Natural, historic, and scenic
Thurston Bountiful Byway	60-mile loop from Nisqually Valley, south to Yelm, west to Capital Forest, north to the intersection of Mud Bay Road and Delphi Road Southwest	Recreational, natural, historic, and scenic
Whidbey Island Scenic Byway	Whidbey Island from Clinton to Deception Pass	Natural, historic, and scenic
Yakama Scenic Byway	US-97 from Yakima to near Goldendale	Natural, historic, and scenic
Yakima River Canyon Scenic Byway	SR-821 from south of Ellensburg to I-82	Recreational, natural, historic, and scenic

Source: Experience Olympia and Beyond 2025; State of Washington 2025; FHWA n.d.; Scott n.d.

I = Interstate; **SR** = State Route; **US** = US Highway; **WA** = Washington

This Page Intentionally Left Blank



LEGEND

- Study Area
- Exclusion Areas
- Scenic Byway (WSDOT, 2024)

REFERENCES AND NOTES

1. SERVICE LAYER CREDITS: SOURCES: ESRI, TOMTOM, GARMIN, FAO, NOAA, USGS, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, ESRI, USGS
2. WSDOT (WASHINGTON DEPARTMENT OF TRANSPORTATION). 2024. SCENIC BYWAYS. ACCESSED JULY 15, 2024. HTTPS://GEO.WA.GOV/DATASETS/WSDOT::WSDOT-SCENIC-BYWAYS/ABOUT

Washington State Energy Facility Site Evaluation Council

PROJECT

PROGRAMMATIC EIS
HIGH-VOLTAGE TRANSMISSION

TITLE

SCENIC BYWAYS

YYYY-MM-DD 2025-09-18 CONSULTANT wsp FIGURE 3.12-1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

PATH: G:\EnergyFacilitySiteEvaluationCouncil\WA PEIS\99_PROJECTS\31405435.7302_PEIS\04_Report\02_PRODUCTION\FINAL_EFSEC_Report_Figures_04_2025\Rev0\Final_EFSEC_Report_Figures_04_2025 - 1st Half.aprx PRINTED: 9/18/2025 at 3:39 PM BY: USKS093903

DESIGNED MK PREPARED BM REVIEWED KO APPROVED SCH PROJECT NO. 31405435.7302 PHASE 04 REV 0

This Page Intentionally Left Blank

Vistas

Vistas, or scenic views, often showcase expansive and visually appealing scenes that highlight natural resources, unique landmarks, and notable geographical features. They can range from large panoramic views to smaller, intimate glimpses of specific elements within the landscape. Examples of popular vistas in Washington include Hurricane Ridge in Olympic National Park, Diablo Lake in the North Cascades, and Palouse Falls.

3.12.2.2 Aesthetics

Aesthetics generally pertain to the principles of beauty and artistic taste, often applied in various fields such as urban planning and architecture. Aesthetics can refer to the visual and sensory qualities of environments and objects, including the design and appearance of buildings and public spaces. The focus of aesthetics in design is on creating visually pleasing and harmonious environments that enhance the quality of life and the well-being of residents and visitors.

As shown in **Figure 3.12-2** below, long linear rights-of-way (ROW) are often designed to incorporate natural vegetation characteristics to create more harmony between built and natural environments.

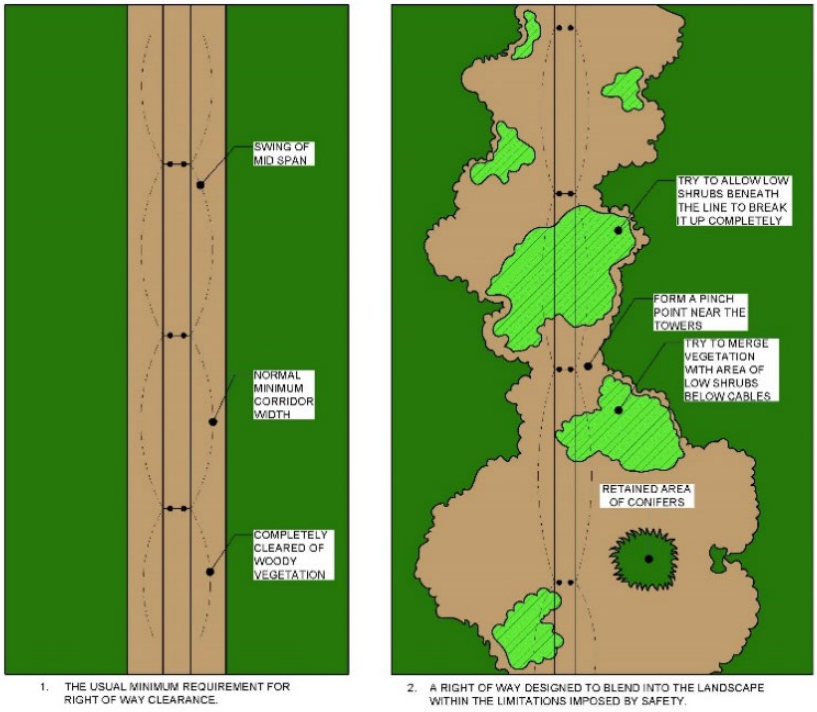


Figure 3.12-2: Visual Appeal of Rights of Way

The aesthetic environment refers to the character of the built environment, such as housing and transportation systems, in population centers as well as in rural communities. Washington's Growth Management Act (Washington Administrative Code 365-196-425) identifies rural character as:

> *...patterns of land use and development that:*
>
> *(i) Allow open space, the natural landscape, and vegetation to predominate over the built environment;*
>
> *(ii) Foster traditional rural lifestyles, rural-based economies, and opportunities to both live and work in rural areas; and*
>
> *(iii) Provide visual landscapes that are traditionally found in rural areas and communities...*

Aesthetics encompasses not only the visual principles of beauty and harmony but also the symbols, colors, and patterns that define cultural identity. These elements shape how individuals interpret their surroundings and influence collective preferences about what is considered visually appealing. In any given landscape, aesthetics can be seen as a dialogue between human development and the natural environment.

Within the study area, there exists a broad spectrum of urban, suburban, and rural developments, each contributing distinct characteristics to the overall visual experience. Urban environments are characterized by a dense concentration of human-made features—such as concrete pavements, asphalt roads, architectural structures, street lighting, and the constant motion of vehicles and pedestrians. This concentration of activity and infrastructure often creates a vibrant, energetic atmosphere, though it can also result in a visually cluttered or overwhelming streetscape. In these segments, the aesthetic identity is shaped predominantly by design choices in buildings, public spaces, and the integration of art, signage, and landscaping.

Conversely, rural areas offer a markedly different visual context. Here, the influence of human development diminishes, allowing open spaces, natural vegetation, and the organic contours of the land to take precedence. The rural aesthetic is typically defined by unobstructed vistas, the rhythm of agricultural activity, and the subtle interplay of light and shadow across fields, forests, and waterways. In such settings, the presence of infrastructure—like transmission lines or isolated buildings—creates a sharper contrast against the predominantly natural backdrop. Residents and visitors alike often value and seek out these natural visual qualities, which evoke a sense of tranquility, tradition, and regional character.

Both urban and rural zones may also contain culturally significant sites, including historic landmarks, civic centers, educational institutions, and commercial hubs. These locations often serve as focal points for community pride and are especially sensitive to changes in their visual surroundings. Careful attention to aesthetic design in these areas can enhance the sense of place, reinforce local heritage, and support community well-being. Ultimately, the aesthetic environment of an area not only shapes the way spaces are experienced but also plays a pivotal role in fostering a sense of belonging and satisfaction among those who live, work, and visit there.

3.12.2.3 Night-sky Environment

Use of an area for night-based recreation and tourism, astronomical activities (both professional and amateur), or other darkness-dependent activities may be identified through research and/or public consultation. Organizations like DarkSky International and local astronomy clubs may conduct educational programs and outreach to raise awareness about the importance of dark skies and how to protect them. Existing lighting conditions may be classified based on definitions and descriptions from Commission Internationale de l'Eclairage (CIE) guidelines, which consist of a set of

established Environmental Light Zones for classifying exterior light levels (CIE 2017). These zones range from areas that are intrinsically dark to areas of high ambient brightness. **Table 3.12-5** presents the CIE environmental lighting zone and descriptions.

Table 3.12-5: Environmental Light Zones for Classifying Exterior Light Levels

Zone	Surrounding	Environmental Light Level	Examples
E0	Protected	Intrinsically dark	The United Nations Educational, Scientific and Cultural Organization Starlight Reserves; DarkSky International Dark Sky Parks; major optical observatories
E1	Natural	Dark	Relatively uninhabited rural areas, National Parks, Areas of Outstanding Natural Beauty, and International Dark-Sky Association buffer zones
E2	Rural	Low district brightness	Sparsely inhabited rural areas, villages, or relatively dark outer suburban locations
E3	Suburban	Medium district brightness	Well-inhabited rural and urban settlements, small town centers in suburban locations
E4	Urban	High district brightness	Town and city centers and other commercial areas

Source: CIE 2017

Two widely used indicators for describing existing light conditions are light trespass and sky glow, described below:

- **Light Trespass:** The effect of light or illuminance that strays from its intended purpose onto neighboring areas, illuminating areas where lighting may be undesirable
- **Sky Glow:** Stray light being scattered in the atmosphere due to a project, resulting in a brightening of the natural sky background level and a reduction in star visibility

Several locations in Washington are recognized for their efforts to minimize light pollution and preserve dark skies, including:

- Brooks Memorial State Park
- Colville National Forest
- Mount Rainier National Park
- Olympic National Park

- North Cascades National Park

The International Dark Sky Places Program, managed by DarkSky International, works with communities, parks, and other entities to certify and protect areas with exceptional night skies. Washington has several areas that participate in the program (GO ASTRONOMY 2025).

Many communities in Washington have adopted lighting ordinances to reduce light pollution. These regulations often include guidelines for outdoor lighting to ensure that it is shielded and directed downward to minimize skyglow and preserve the natural night environment.

3.12.3 Impacts

For this Programmatic EIS, adverse environmental impacts were assessed for the new construction, operation and maintenance, upgrade, and modification of transmission facilities within the Study Area.

3.12.3.1 Method of Analysis

The study area for a project-specific application would typically encompass several key regions and features, such as the following:

- **Project Site and Immediate Vicinity:** This includes the specific location of the project and the surrounding area that might be directly affected by new construction, and operation and maintenance activities.
- **Assessment Zone:** The assessment zone establishes an area surrounding the proposed transmission facilities within which the applicant would assess the visual adverse environmental impacts that may be found within that zone.
- **Viewshed:** This includes the total landscape seen or potentially seen from a point, or from all or a logical part of a travel route, use area, or waterbody. Viewshed analysis is a geographic information system (GIS)-based procedure that determines what locations within the assessment zone will have an uninterrupted line-of-sight to the project features. Viewshed analysis is an important part of a visual impact assessment and is a useful tool to help determine key observation points (KOPs).[1]

[1] A typical or sensitive viewing location that represents a critical place from which the public would view a project; used to assess visual impacts.

This Programmatic EIS analyzes the affected environment and adverse environmental impacts on visual quality within the Study Area (see Chapter 1, Introduction). Four project stages for each transmission facility type (overhead or underground) were considered: new construction, operation and maintenance, upgrade, and modification.

This evaluation considers both overhead and underground transmission facilities for each stage. Overhead transmission facilities consist of transmission lines, substations, and ancillary infrastructure. Overhead and underground transmission facilities may involve similar above-ground infrastructure. Underground transmission facilities consist of underground transmission lines, underground access vaults, and other infrastructure located below the ground surface. The new construction of underground transmission facilities could include both open-trench and trenchless construction methods.

Impact Determination

The discussion of adverse environmental impacts is qualitative, given the high-level nature of a Programmatic EIS; quantification would require project-specific details to analyze. **Table 3.12-6** describes the criteria used to evaluate adverse environmental impacts from the Action Alternative and No Action Alternative. Information reviewed to identify adverse environmental impacts on visual quality in the Study Area was obtained from federal agencies, state agencies, local planning documents, and public scoping.

Table 3.12-6: Criteria for Assessing the Impact Determination on Visual Quality

Impact Determination	Description
Nil	No foreseeable adverse environmental impacts are expected. A project would not adversely affect visual quality, including the existing aesthetic or scenic character of the landscape.
Negligible	A project would result in minimal adverse environmental impacts on visual quality. Changes would either be non-detectable or, if detected, would have only slight effects. A project would result in the following: ▪ **Aesthetic and scenic character**: No visual contrasts, but very minor changes in scale/size to existing views. ▪ **Night sky**: Sky glow and/or light trespass are imperceptible. Negligible impacts would be short-term in duration. BMPs and design considerations are expected to be effective.

Impact Determination	Description
Low	A project would result in noticeable adverse environmental impacts on visual quality, even with the implementation of BMPs and design considerations. These adverse environmental impacts may include: ▪ **Aesthetic and scenic character**: Minor visual contrasts and small changes in scale/size to existing views. ▪ **Night sky**: Sky glow and/or light trespass that may be perceptible but are within applicable CIE zone criteria. These adverse environmental impacts would be limited and controlled, as well as localized. Adverse environmental impacts may be short or long-term in duration.
Medium	A project would result in adverse environmental impacts on visual quality, even with the implementation of BMPs and design considerations. A project would result in the following: ▪ **Aesthetic and scenic character**: Medium visual contrasts, and medium changes in scale/size to existing views. ▪ **Night sky**: Evident sky glow and/or light trespass that are within applicable CIE zone criteria. These adverse environmental impacts would be noticeable and result in distinct changes to the existing aesthetic and scenic character. Medium adverse environmental impacts may be short or long-term in duration.
High	A project would result in adverse and potentially severe environmental impacts on visual quality, even with the implementation of BMPs and design considerations. A project would cause: ▪ **Aesthetic and scenic character**: Strong visual contrast and large changes in scale/size to existing views. ▪ **Night sky**: Obvious sky glow and/or light trespass that may exceed applicable CIE zone criteria. These adverse environmental impacts would be uncharacteristic and result in extensive changes to the existing aesthetic and/or scenic character. Adverse environmental impacts on visual quality may affect a larger area, not just localized to the construction site. High impacts may be short or long-term.

BMP = best management practice; **CIE** = Commission Internationale de I'Éclairage

To clearly understand the potential severity of adverse environmental impacts without any interventions, the following impact determinations exclude the use of Avoidance Criteria and Mitigation Measures. The ratings assume compliance with all federal, state, and local laws and regulations, as well as standardized BMPs and design considerations. Assessing adverse environmental impacts without Avoidance Criteria or Mitigation Measures offers a baseline understanding of potential environmental effects, helping to identify the true extent of these impacts. Environmental laws often require that initial impact assessments be conducted without considering mitigation to maintain the integrity of the environmental review process.

When impact determinations are identified as medium or high, then either the applicant would adopt applicable Mitigation Measures from this Programmatic EIS, or the State Environmental Policy Act (SEPA) Lead Agency may require applicable mitigation measures to be implemented to reduce project-specific adverse environmental impacts. When impact determinations are low, applicable Mitigation Measures should still be considered by the applicant and the SEPA Lead Agency, as these measures would help to further reduce adverse environmental impacts, including the project's contribution to cumulative impacts. These Mitigation Measures would be implemented in addition to compliance with laws, regulations, environmental permits, plans, and design considerations required for transmission facilities.

3.12.3.2 Visual Contrast

Visual adverse environmental impacts on scenic natural resources occur when a project results in visual contrast. The degree to which an industrial facility affects the visual quality of a landscape depends on the visual contrast created between the project and the existing landscape (BLM 1986). Visual contrast can be measured by comparing the project features with the major features in the existing landscape. The basic design elements of form, line, color, and texture are used to make this comparison and to describe the visual contrast created by the project. This assessment process provides a means for determining visual impacts and for identifying measures to mitigate these impacts (BLM 1986).

The degree of visual contrast of project components at key viewpoints may be determined by characterizing the design elements of each of the project features' interactions related to landform, vegetation, and built structures, and comparing these to the existing landscape conditions. The degree of contrast may be characterized using the following descriptive categories (BLM 1986):

- **None:** The element contrast is not visible or perceived.
- **Weak:** The element contrast can be seen but does not attract attention.
- **Moderate:** The element contrast begins to attract attention and begins to dominate the characteristic landscape.
- **Strong:** The element contrast demands attention, will not be overlooked, and is dominant in the landscape.

3.12.3.3 Action Alternative

New Construction

Overhead Transmission Facilities

Activities for new construction of overhead transmission facilities would vary and depend on the scale of the facility and site characteristics. New construction could include a relatively short site preparation period (e.g., a few months), followed by a longer construction and start-up period. It is assumed that new construction of overhead transmission, per mile, would have a shorter duration than underground construction. Overhead transmission facilities could have the following adverse environmental impacts during new construction:

- Degradation of Scenic Natural Resources
- Degradation in Aesthetics
- Degradation of Night Sky

Degradation of Scenic Natural Resources

During new construction, site preparation may include vegetation clearing and grubbing, as well as earthworks and grading, which may alter natural topographic variations. The adverse environmental impact of natural vegetation removal may be visually prominent, especially in forested areas where the clearing of a ROW corridor may be conspicuous. Site preparation and new access road construction require the presence of vehicles and equipment. Construction vehicles and equipment, which may include excavators, loaders, lifts, backhoes, bulldozers, compactors, mixers, pump trucks, cranes, helicopters, and other equipment, are often brightly colored to promote visibility and safety.

Impact Determination: Adverse environmental impacts on visual quality resulting from the degradation of scenic natural resources during the new construction of overhead transmission facilities are expected to vary depending on the scale of the project and site-specific conditions. In the absence of mitigation, these adverse environmental impacts could range from low to high.

Degradation in Aesthetics

The assembly of overhead transmission facilities (foundation and structure assembly) and the assembly of substations could create visual contrast. Similarly, the new construction of infrastructure (e.g., access roads, fencing, bridges, temporary laydown

areas, turnaround areas, watercourse crossings, and construction camps) could potentially contrast with landscape character.[2] Dust may result in visual impacts in some areas.

It should be emphasized that current visual conditions, including existing infrastructure, form an integral component of the baseline in visual impact assessments. As noted above, visual adverse environmental impacts are largely based on the contrast between the existing visual environment and the resulting visual environment. This contrast is greater in less developed areas, such as rural or scenic areas; thus, visual impacts are generally higher in these areas; however, visual impacts are context sensitive, and not all rural landscapes and viewers are sensitive. Project-specific visual impact assessments will consider site-specific conditions, including existing land use, viewer groups, and visual expectations.

Siting transmission facilities within established corridors or ROWs can reduce these visual contrasts and help to minimize potential visual impacts. Project-specific siting decisions should consider opportunities to co-locate with existing infrastructure to reduce environmental and visual impacts where feasible.

Impact Determination: Adverse environmental impacts on visual quality resulting from the degradation of aesthetics during the new construction of overhead transmission facilities are expected to vary depending on the scale of the project and site-specific conditions. In the absence of mitigation, these adverse environmental impacts could range from low to high.

Degradation of Night Sky

New construction has the potential to temporarily introduce nighttime lighting related to the transportation of materials and equipment to the project site. Construction safety lighting is required if work is to proceed at night and may result in light trespass[3] and glare.[4]

Impact Determination: Adverse environmental impacts on visual quality resulting from the degradation of the night sky during the new construction of overhead transmission facilities are expected to vary depending on the scale of the project and site-specific conditions. In the absence of mitigation, these adverse environmental impacts could range from low to high.

[2] The overall visual appearance of a given landscape, including both natural features and human-created modifications.
[3] Light falling where it is not intended or needed.
[4] Light reflected off of a stationary object.

Underground Transmission Facilities

Activities for the new construction of underground transmission facilities would vary and depend on the scale of the facility and site characteristics. New construction could include a site preparation period of relatively short duration (e.g., a few months), followed by a longer construction and start-up period. It is assumed that the new construction of overhead transmission, per mile, would have a shorter duration than underground construction. Underground transmission facilities could have the following adverse environmental impacts on visual quality during new construction:

- Degradation of Scenic Natural Resources
- Degradation in Aesthetics
- Degradation of Night Sky

Degradation of Scenic Natural Resources

Activities that could contribute to visual contrast during new construction include vegetation clearing and grubbing, corridor grading, open trenching, installation of pre-formed concrete sections and conduit, as well as the development of access roads, laydown areas, and construction camps. The delivery of equipment and materials, along with trench backfilling, may also play a role. Additionally, the presence of stockpiled construction equipment and vehicles, as well as potential fugitive dust—depending on site conditions—may further degrade visual quality through increased visual contrast.

Impact Determination: Adverse environmental impacts on visual quality resulting from the degradation of scenic natural resources during the new construction of underground transmission facilities are expected to vary depending on the scale of the project and site-specific conditions. In the absence of mitigation, these adverse environmental impacts could range from low to high.

Degradation in Aesthetics

After trenching is complete, color contrast may result from exposed soils placed during backfilling. Re-establishment of vegetation may take several years, particularly in drier climates where vegetation can take longer to establish. Furthermore, the contrast in soil and vegetation color and texture with the adjacent landscape may be visually apparent even after establishment.

Impact Determination: Adverse environmental impacts on visual quality resulting from the degradation of aesthetics during the new construction of underground

transmission facilities are expected to vary depending on the scale of the project and site-specific conditions. In the absence of mitigation, these adverse environmental impacts could range from low to high.

Degradation of Night Sky

New construction has the potential to temporarily introduce nighttime lighting related to the transportation of materials and equipment to the project site. Construction safety lighting is required if work is to proceed at night and may result in light trespass and glare.

Impact Determination: Adverse environmental impacts on visual quality resulting from the degradation of the night sky during the new construction of underground transmission facilities are expected to vary depending on the scale of the project and site-specific conditions. In the absence of mitigation, these adverse environmental impacts could range from low to high.

Operation and Maintenance

Overhead Transmission Facilities

Activities for the operation and maintenance stage of overhead transmission facilities would vary based on the type of facility, scale, and site characteristics. Facilities are not expected to have staff on site daily, but maintenance crews are anticipated to be regularly deployed. Transmission facilities require ongoing maintenance for equipment and ROWs. Overhead transmission facilities could have the following adverse environmental impacts during the operation and maintenance stage:

- Degradation of Scenic Natural Resources
- Degradation in Aesthetics
- Degradation of Night Sky

Degradation in Scenic Natural Resources

Both overhead and underground transmission facilities generally require large, permanently cleared corridors through forests, fields, and other natural areas, typically 125 to 250 feet in width. This can disrupt the visual continuity of the landscape, creating a detraction from the natural character of the area. The presence of tall towers and extensive wiring from overhead transmission facilities can also alter

the scenic quality of previously undisturbed or minimally impacted areas. The following design factors can influence the visual contrast of transmission towers:

- Tower type, as shown in **Figure 3.12-3**, including the following:
    - **Galvanized Lattice:** Lattice or guyed towers are less visually obtrusive on the rural landscape than monopoles (BLM 2013). Height typically ranges between 90 and 180 feet.
    - **Monopole:** The solid surfaces of monopoles can be highly reflective if the surfaces are light in color and do not employ low-reflectivity coatings (BLM 2013). Height typically ranges between 50 and 150 feet.
    - **H-Frame:** Typically, smaller and used for lower-voltage lines. Height typically ranges between 60 and 90 feet.
- Tower scale and height affect visual prominence (how easy it is to see a project element in the landscape).
- Materials influence reflectivity, color, and textural contrast.

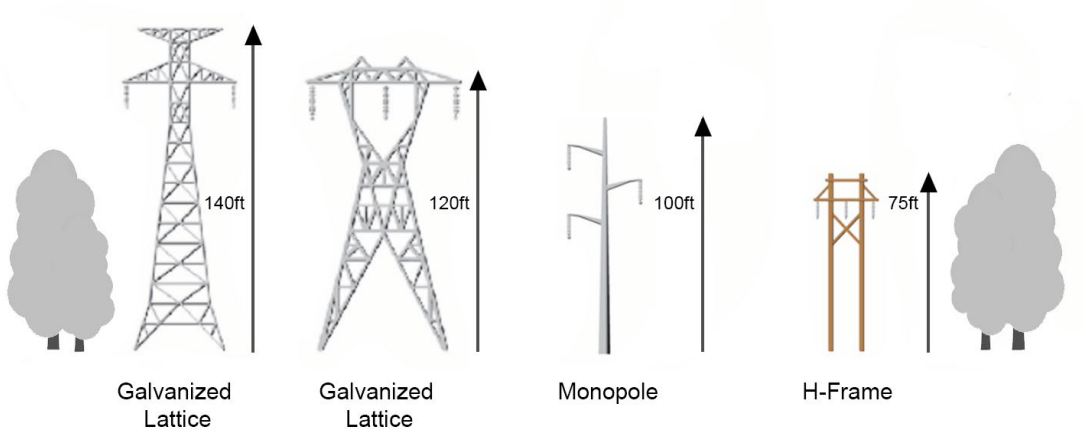


Figure 3.12-3: Tower Types

Many factors may influence the visual perception of scenic landscapes, including viewer characteristics, lighting, atmospheric conditions, viewing angle, and, especially, viewing distance. For example: "In general, visual contrasts are greater when objects are seen at close range. If other visibility factors are held constant, the greater the distance, the less detail is observable and the more difficult it will be for an observer to distinguish individual features" (Landscape Institute 2002). Additionally, to lessen visual clutter from the potential introduction of different structure types into the landscape, the type of proposed transmission structure (i.e., H-frame or monopole)

should be used that best matches any adjacent transmission facilities. Routing decisions commonly prioritize minimizing impacts to visual resources by aligning transmission facilities with existing infrastructure corridors or locating them in areas of lower visual sensitivity. This approach is widely used across the industry to reduce visual disruption and streamline permitting. Because routing decisions are also influenced by other factors, such as engineering constraints, land ownership, cost, and environmental considerations, there is typically a wide range of potential visual impact outcomes, which supports the need for flexible and project-specific impact determinations.

Impact Determination: Adverse environmental impacts on visual quality resulting from the degradation of scenic natural resources during the operation and maintenance of overhead transmission facilities are expected to vary depending on the scale of the project and site-specific conditions. In the absence of mitigation, these impacts could range from low to high.

Degradation in Aesthetics

The aesthetic character of settlements and rural communities may be affected by the visual contrast created by transmission facilities, especially at close viewing range. Transmission facilities are visually conspicuous linear features that can extend for many miles across open rural landscapes. The large size of transmission towers, combined with their strongly vertical form and their angular geometry, may contrast sharply with the character of nearby rural landscapes, as well as residential communities. Depending on site-specific conditions, the requirement for clear zones that are free of vegetation may create views of the transmission facilities and/or other industrial development.

Scenic areas often hold cultural and recreational value for local communities (see Section 3.15, Historic and Cultural Resources). Transmission facilities can diminish these values by altering the landscape in ways that reduce its attractiveness for activities like hiking, birdwatching, photography, or, in some cases, driving. In these locations, due to the generally elevated level of public interest in landscape visual quality, the area is regarded as possessing a high degree of visual sensitivity.

The existence of a cleared linear ROW corridor through forested areas or other natural vegetation communities can result in a strong line that may be visible for many miles (BLM 2013). Rugged terrain and areas with more subtle topographic variation, such as forested rolling hills, could be impacted due to their visual prominence. In open areas,

the field of view may be wide and expansive from elevated KOPs, resulting in a conspicuous line created by the cleared ROW and transmission facilities.

Reflectivity and glare may result from the presence of the conductor and towers. This adverse environmental impact may be limited to certain times of the day when the angle of the sun results in reflectivity. Substation and tower infrastructure results in visual contrast due to the angular geometric forms, color, and reflectivity of the materials.

Visibility of towers from river corridors and bodies of water, as well as visibility from scenic byways, may contrast with the scenic character that is valued by recreational viewers. Where once there may have been a continuous line of trees or the gentle undulation of natural terrain, angular structures and abrupt clearings introduce strong, unnatural lines and geometric shapes. They can disrupt the natural forms and patterns that our eyes expect to see in a scenic landscape.

The visibility of towers and cleared vegetation against the skyline can be one of the most visually intrusive impacts because these elements are silhouetted by the sky, making them difficult to ignore. The contrast in color, texture, and reflectivity between the industrial features and their surroundings amplifies this effect, diminishing the sense of harmony and continuity that characterizes natural aesthetics.

Degradation of community and rural character may result if infrastructure is sited near settlements and residential areas. The adverse environmental impact is generally lessened as viewing distance increases. Visual prominence results from the large scale of transmission towers, especially when they are visible in the foreground at viewing distances up to approximately 0.5 miles. Residential viewers are sensitive to changes in the visual character of the landscape as viewed from their property.

Impact Determinations: Adverse environmental impacts on visual quality resulting from the degradation of aesthetics during the operation and maintenance of overhead transmission facilities are expected to vary depending on the scale of the project and site-specific conditions. In the absence of mitigation, these impacts could range from low to high.

Degradation of Night Sky

Quantification of changes to sky glow and light trespass is based on the CIE environmental lighting zones described in **Table 3.12-5** (CIE 2017). One metric used to characterize sky glow is the change in sky brightness compared to a natural dark sky

(percentage of brightness above the natural dark sky background). Another closely related metric is sky quality: the brighter the night sky, the lower its sky quality. Sky quality can be measured in magnitudes per square arcsecond and converted into units of luminance, from which the measure of sky glow is obtained. Illuminance[5] (measured in lux[6]) may be used as an indicator to represent light trespass levels.

Operational lighting at substations for security and safety has the potential to contribute to sky glow, light trespass, and glare. Substations are not universally required to have lights on at night when unattended; however, the National Electrical Safety Code recommends certain illumination levels for safety and security, depending on the facility. For example, general horizontal illumination should be around 22 lux, and specific vertical illumination should be around 2.2 lux.

Additionally, the Federal Aviation Administration (FAA) has specific requirements for marking and lighting transmission towers to ensure they are visible to aircraft and do not pose a hazard to air navigation. Any structure exceeding 200 feet above ground level must be marked and/or lighted according to FAA standards. New regulations require marking for towers between 50 and 200 feet if they are located in rural areas and could pose a hazard to low-flying aircraft. Light specifications include the following:

- **Red Lights:** Typically used for nighttime marking. These lights are steady-burning or flashing and are often combined with paint for daytime visibility.
- **White Lights:** High-intensity white lights can be used both day and night. These are often used as an alternative to red lights and paint, especially in urban areas, to reduce visual clutter.

The Federal Communications Commission requires an FAA determination of "no hazard" before granting construction permits for transmission towers. This ensures that the proposed tower meets all FAA safety standards.

Impact Determination: Adverse environmental impacts on visual quality resulting from the degradation of the night sky during the operation and maintenance of overhead transmission facilities are expected to vary depending on the scale of the project and site-specific conditions. In the absence of mitigation, these impacts could range from negligible to high.

[5] Measurement of the amount of light falling onto and spreading over a given surface area.
[6] A unit of measurement for illuminance, which indicates how much light is received on a surface. One lux is equal to one lumen per square meter.

Underground Transmission Facilities

Similar to overhead transmission facilities, activities for the operation and maintenance of underground transmission facilities would vary based on the type of facility, scale, and site characteristics. Facilities are not expected to have staff on site daily, but maintenance crews are anticipated to be regularly deployed. Transmission facilities require ongoing maintenance for equipment and ROWs, similar to any other linear industrial facility. Underground transmission facilities could have the following adverse environmental impacts during the operation and maintenance stage:

- Degradation of Scenic Natural Resources
- Degradation in Aesthetics

Degradation in Scenic Natural Resources

Degradation of visual quality may result from linear corridors that contrast in soil and vegetation color and texture with the surrounding landscape character. Because of the strongly linear nature of transmission facility ROWs, they may detract from the surrounding landscape, especially in valued undisturbed or largely natural areas. In rural or residential areas, the linear corridor may be visually apparent and may contrast with the aesthetic characteristics of the landscape. The contrast may be highest in open landscapes where the linear ROW may occupy a wide field of view.

Impact Determination: Adverse environmental impacts on visual quality resulting from the degradation of scenic and natural resources during the operation and maintenance of underground transmission facilities are expected to vary depending on the scale of the project and site-specific conditions. In the absence of mitigation, these adverse environmental impacts could range from negligible to high.

Degradation in Aesthetics

In forested landscapes, the removal of mature trees in the ROW for maintenance access clear zones can result in a sharply contrasting parallel-sided corridor that dissects the landscape. The effect can be visually intrusive, especially along visually prominent skylines and ridgetops or in rugged, mountainous terrain.

Due to the spatial requirements for equipment placement underground, the total ROW width may be greater for undergrounding than for overhead transmission. The transmission facilities would be located underground and would not have visual adverse environmental impacts; however, ROW clearing would still be required, and

conductor sections and substations would require above-ground vault structures at each end to provide access points for maintenance and repairs.

Impact Determination: Adverse environmental impacts on visual quality resulting from the degradation in aesthetics during the operation and maintenance of underground transmission facilities are expected to vary depending on the scale of the project and site-specific conditions. In the absence of mitigation, these adverse environmental impacts could range from negligible to high.

Upgrade

Overhead Transmission Facilities

Upgrades to overhead transmission facilities would occur within existing ROWs without expanding the existing facility footprint or causing new ground disturbance. However, these upgrades may result in adverse environmental impacts on visual quality, including:

- Degradation of Scenic Natural Resources
- Degradation in Aesthetics
- Degradation of Night Sky

The adverse environmental impacts from upgrading overhead transmission facilities are often comparable to those of maintaining overhead transmission facilities. These adverse environmental impacts are generally anticipated to be lower than those for modifying or constructing a new transmission facility due to several factors. Table 2.3-1 highlights how upgrading existing transmission facilities would generally result in fewer or less impactful adverse environmental impacts.

Underground Transmission Facilities

Upgrades to underground transmission facilities would occur within existing ROWs, without expanding the facility footprint or causing new ground disturbance. However, these upgrades may result in adverse environmental impacts on visual quality, including:

- Degradation of Scenic Natural Resources
- Degradation in Aesthetics

The adverse environmental impacts from upgrading underground transmission facilities are often comparable to those of maintaining underground transmission

facilities. These adverse environmental impacts are generally anticipated to be lower than those for modifying or constructing a new transmission facility due to several factors. Table 2.3-1 highlights how upgrading existing transmission facilities would generally result in fewer or less impactful adverse environmental impacts.

Modification

Overhead Transmission Facilities

Modifying existing overhead transmission facilities typically involves several key steps, each with specific requirements, timelines, and settings, as outlined in Chapter 2, Overview of Transmission Facilities, Development Considerations, and Regulations. The adverse environmental impacts of modifying existing transmission facilities would vary depending on the scale of the project-specific application. Overhead transmission facilities could have the following adverse environmental impacts on visual quality during the modification stage:

- Degradation of Scenic Natural Resources
- Degradation in Aesthetics
- Degradation of Night Sky

Adverse environmental impacts of modifying overhead transmission facilities could be similar to those of new construction, but are anticipated to be lower. Table 2.3-2 highlights how modifying existing transmission facilities would generally result in fewer or less impactful adverse environmental impacts.

Underground Transmission Facilities

Modifying existing underground transmission facilities typically involves several key steps, each with specific requirements, timelines, and settings, as outlined in Chapter 2, Overview of Transmission Facilities, Development Considerations, and Regulations. The adverse environmental impacts of modifying existing transmission facilities would vary depending on the scale of the project-specific application. Underground transmission facilities could have the following adverse environmental impacts on visual quality during the modification stage:

- Degradation of Scenic Natural Resources
- Degradation in Aesthetics

Adverse environmental impacts of modifying underground transmission facilities could be similar to those of new construction but are anticipated to be lower.

Table 2.3-2 highlights how modifying existing transmission facilities would generally result in fewer or less impactful adverse environmental impacts.

3.12.3.4 No Action Alternative

Under the No Action Alternative, the Programmatic EIS would not be adopted as a planning or analytical framework. Instead, transmission facility siting and development would continue under existing state and local regulatory processes, with each project evaluated for environmental compliance without the benefit of the environmental review provided in this document. This approach would lack the advanced notice of potential serious environmental concerns for those planning transmission facilities, as well as Mitigation Strategies developed under the Programmatic EIS. As a result, environmental outcomes could be less predictable and consistent, and adverse environmental impacts could be greater.

3.12.4 Mitigation Measures

Under SEPA, there are six recognized forms of mitigation that agencies can apply to reduce or address adverse environmental impacts:

- **Avoiding the adverse environmental impact** altogether by not taking a certain action or parts of an action.
- **Minimizing adverse environmental impacts** by limiting the degree or magnitude of the action and its implementation.
- **Rectifying the adverse environmental impact** by repairing, rehabilitating, or restoring the affected environment.
- **Reducing or eliminating the adverse environmental impact** over time by preservation and maintenance operations during the life of the action.
- **Compensating for the adverse environmental impact** by replacing or providing substitute resources or environments.
- **Monitoring the adverse environmental impact** and taking appropriate corrective measures.

This section describes the Avoidance Criteria and Mitigation Measures that could apply to adverse environmental impacts from new construction, operation and maintenance, upgrade, and modification of transmission facilities.

All General Measures adopted for this Programmatic EIS (see Section 3.1 of Chapter 3, Affected Environment, Significant Impacts, and Mitigation) are relevant to this resource section. Applicants would be responsible for providing information within their application materials documenting their implementation of the General Measures.

Avoidance Criteria[7] that are relevant to this resource section are described below:

AVOID-6 – Old-Growth and Mature Forests: Avoid old-growth forests, which include forests older than 200 years in western Washington and greater than 150 years in eastern Washington, and mature forests, which include forests greater than 80 years.

Rationale: This Avoidance Criterion would reduce direct loss of old-growth and mature forests, which have already lost the majority of their historical extent. Old-growth and mature forests are particularly susceptible to long-term adverse environmental impacts due to the time lag to reestablish current ecological functions if clearing occurs. In addition, linear features through old and mature forest stands increase the adverse environmental impacts from edge effects, such as the spread of invasive plants.

AVOID-13 – Land Use and Zoning Incompatibilities: Avoid incompatible land uses and adhere to all applicable zoning and development regulations. Demonstrate that there are no direct or indirect adverse land use incompatibilities with private property owners or public land administrators.

Rationale: This Avoidance Criterion aims to avoid conflicts associated with land use and zoning designations. Avoiding land use and zoning conflicts will also help reduce adverse environmental impacts on property owners, agricultural landowners, noise, neighboring viewers, and socioeconomics.

AVOID-17 – Night Sky: Avoid the installation of overhead transmission facilities that require lighting in areas where night sky preservation is a documented resource concern and managed for the protection of the night sky.

Rationale: This Avoidance Criterion aims to protect designated night sky areas.

[7] The complete list of Avoidance Criteria and their rationales can be found in Section 3.1 and Appendix 3.1-1.

AVOID-18 – Exceptional Recreation Assets: Avoid having equipment or infrastructure near or within the viewshed of exceptional recreation assets, as defined by the Washington State Recreation and Conservation Office (RCO) and listed in Appendix 3.1-1.

Rationale: This Avoidance Criterion aims to guide early transmission facility planning efforts to protect exceptional recreational assets. These places provide a unique experience or activity that may not be available in all areas of the state, such as rock climbing, whitewater rafting, and backcountry horseback riding.

AVOID-19 – Wilderness Areas: Avoid having equipment or infrastructure near or within the viewshed of designated wilderness areas.

Rationale: This Avoidance Criterion aims to protect the scenic integrity of wilderness areas. Wilderness areas are valued for their untouched natural beauty. The Wilderness Act of 1964 mandates the preservation of the natural conditions of designated wilderness areas.

AVOID-22 – Visual Impacts on Historic and Cultural Resources: Avoid having equipment or infrastructure near or within the viewshed of historic and cultural resources.

Rationale: Visual impacts may be considered an adverse effect if the integrity of the historic or cultural property's setting and feeling are important to its significance. Avoiding visual intrusions or alterations to the viewshed of the property would maintain the integrity of its significant historic features.

AVOID-24 – Visual Impacts on Tribal Resources and TCPs: Avoid visual adverse environmental impacts on Tribal resources and Tribal Cultural Places (TCPs).

Rationale: The significant setting, feeling, and association of Tribal resources make them susceptible to adverse visual impacts. Avoiding visual intrusions or alterations to the viewshed of these resources would maintain their integrity and physical features within the property's setting that contribute to its historic significance.

The Programmatic EIS is intended to support more efficient and effective siting and permitting of transmission facilities, consistent with the legislative direction in RCW 43.21C.408, by streamlining environmental review where projects incorporate the recommended planning and Mitigation Strategies. Applicants would be responsible for providing information within their application materials documenting the project's

compliance with the above Avoidance Criteria. While total avoidance of all adverse environmental impacts is not required in order to use the Programmatic EIS, applicants are expected to demonstrate how their project aligns with the intent of the Avoidance Criteria to the extent practicable. If specific Avoidance Criteria are not met, the applicant would provide an explanation and supporting information. Additional environmental analyses would be required as part of the documentation for SEPA for the Project. Additional mitigation could be required, depending on the nature of the deviation and its potential to result in probable significant adverse environmental impacts.

Mitigation Measures have been identified to minimize adverse environmental impacts from transmission facility projects. These measures are intended to be broad so that they can be applied to most projects that would be covered under this Programmatic EIS. However, project-specific plans would be needed to adapt the measures for project-specific applications. The inclusion of a Mitigation Measure in this Programmatic EIS does not imply that a given adverse environmental impact is presumed to occur. Rather, the measures are provided to support early planning and the avoidance of adverse environmental impacts, streamlining project-specific environmental reviews when adverse environmental impacts are identified. Mitigation Measures are intended to serve as a set of potential strategies that the SEPA Lead Agency and applicants can draw from, depending on the specific environmental context and project footprint. Applicants and the SEPA Lead Agency retain discretion to:

- Propose additional and/or alternative mitigation strategies that achieve equivalent or better outcomes.
- Demonstrate that certain Mitigation Measures are not applicable due to the absence of relevant adverse environmental impacts.

When impact determinations are identified as medium or high, then either the applicant would adopt applicable Mitigation Measures from this Programmatic EIS or the SEPA Lead Agency may require applicable mitigation to be implemented to reduce project-specific adverse environmental impacts. When impact determinations are low, applicable Mitigation Measures should still be considered by the applicant and the SEPA Lead Agency, as these Mitigation Measures would help to further reduce adverse environmental impacts, including the project's contribution to cumulative impacts. These Mitigation Measures would be implemented in addition to compliance with laws,

regulations, environmental permits, plans, and design considerations required for transmission facilities.

The following Mitigation Measures could be adopted to mitigate adverse environmental impacts:

Vis-1 – Selection of Finishes: Use dull and/or dark painted surfaces, textured surfaces, and low-reflectivity finishes on transmission facilities.

Rationale: This Mitigation Measure is intended to mitigate adverse environmental impacts from surface glare.

Vis-2 – Visual Appeal of ROWs: Create varied, feathered vegetation edges for cleared areas and linear rights-of-way (ROWs) that are sinuous horizontally and layered vertically. Strategically retain or plant native vegetation within the ROW where practicable in visually sensitive areas.

Rationale: This Mitigation Measure aims to reduce the visual contrast resulting from straight ROW corridors by emulating natural vegetation character using curvilinear edges.

Vis-3 – Underground Construction: Use underground construction methods in areas with high scenic quality and/or open rural areas, depending on geologic conditions.

Rationale: This Mitigation Measure aims to mitigate surface visual, adverse environmental impacts on visually sensitive areas by using underground construction methods.

Vis-4 – Visual Screening: Use techniques such as berms, fencing, or vegetative screening to conceal or improve the appearance of distribution substations, above-ground vaults, and other facilities.

Rationale: Depending on site conditions and the scale of facilities, visual screening can be an effective method to reduce visual contrast resulting from transmission facilities.

Vis-5 – Span Length: Maximize the span length when using overhead lines crossing highways and other linear viewing locations.

Rationale: This Mitigation Measure aims to decrease visual contrast at highway crossings by moving the tower structures as far from the road as possible.

In addition to the above Mitigation Measures, the following Mitigation Measures[8] developed for other resources may be applicable:

Geo-1 – Minimize Soil Disturbance: Minimize soil disturbance, including footprints related to access roads and permanent structures, to the greatest extent practicable. Minimize the use of construction techniques that would be harmful to topsoil composition, where feasible.

W-2 – Clear Spanning or Trenchless Methods for Water Crossings: When feasible, use clear spanning for new overhead transmission or trenchless construction for underground transmission to minimize disturbance to riparian areas, wetlands and wetland buffers, and surface waters.

Veg-1 – Site Transmission Facilities in Existing ROW or Disturbed Areas: Site transmission facilities in existing right-of-way (ROW) or disturbed areas, to the greatest extent practicable.

Hab-2 – Minimize Transmission Line Crossings at Canyons and Riparian Habitat and Parallel to Rivers and Ridge Lines: Minimize transmission line crossings of canyons and draws, along ridge lines, parallel to rivers.

Hab-4 – Woody Debris Salvage and Restoration: Salvage and retain large, coarse, woody debris during construction and in-stream works. The post-construction revegetation and restoration plan would include planting native shrubs and replacing woody debris unless prohibited by a state authority due to fire risk. Post-construction revegetation and restoration plans would be provided to the Washington Department of Fish and Wildlife for review prior to approval by the State Environmental Policy Act Lead Agency.

Wild-2 – Construction Occurs during Daylight Hours: Schedule construction activities during daylight hours, when feasible, to reduce the disturbance to nocturnal species and reduce the risk of wildlife-vehicle collisions.

Fish-14 – Removal of Riparian Vegetation: Minimize disturbance to low-growing shrubs and grass species in riparian areas, or tree removal in steep gulches.

LSU-5 – Reseed Disturbed Rangelands: Coordinate with rangeland property owners to determine the appropriate seed mix used in revegetation actions.

[8] The rationales for the identified Mitigation Measures are provided in their respective resource sections.

3.12.5 Probable Significant Adverse Environmental Impacts

Determining the significance of an adverse environmental impact involves consideration of context and intensity, which, in turn, depend on the magnitude and duration of the impact. "Significant" in SEPA means a reasonable likelihood of more than a moderate adverse environmental impact on environmental quality. An adverse environmental impact may also be significant if its chance of occurrence is not great, but the resulting impact would be severe if it occurred (WAC 197-11-794).

Identification of adverse environmental impacts and assignment of discipline-specific ratings are based on a structured evaluation consistent with the criteria outlined in WAC 197-11-330. Significance determinations consider the context and intensity of potential adverse environmental impacts, using both quantitative and qualitative information where appropriate. Professional expertise does not substitute for regulatory compliance. Regulatory requirements establish the baseline for environmental analysis and mitigation. Professional experience is used to supplement this baseline, providing additional insight to identify whether Mitigation Measures beyond those required by regulation may be warranted. In cases where data are incomplete or unavailable, a conservative approach has been applied to ensure that potential adverse environmental impacts are not underestimated.

This Programmatic EIS weighs the adverse environmental impacts on visual quality that could result from transmission facilities after considering the application of laws and regulations; siting and design considerations, including agency guidance and best management practices; and Mitigation Strategies, and makes a resulting determination of significance for each impact. **Table 3.12-7** summarizes the adverse environmental impacts anticipated for the new construction, operation and maintenance, upgrade, and modification of transmission facilities.

Table 3.12-7: Summary of Adverse Environmental Impacts, Mitigation Strategies, and Significance Rating for Visual Quality

Adverse Environmental Impact	Project Stage	Description of Impact	Impact Determination Before Applying Mitigation	Mitigation Strategy Applied[a]	Significance After Applying Mitigation Strategy	Rationale for Significance Rating
Visual Quality – Degradation of Scenic Natural Resources	New Construction	Vegetation clearing and grading associated with overhead and underground transmission facilities could be visually prominent and contrast with the natural landscape character, especially in forested areas. Installing overhead transmission facilities, specifically towers and substations, could create a visual obstruction that degrades scenic natural resources. Trenching or other trenchless construction methods used for underground transmission facilities could create surface disturbance that alters the natural landscape character.	**Overhead:** low to high **Underground:** low to high	▪ **AVOID-6:** Old-Growth and Mature Forests ▪ **AVOID-13:** Land Use and Zoning Incompatibilities ▪ **AVOID-17:** Night Sky ▪ **AVOID-18:** Exceptional Recreation Assets ▪ **AVOID-19:** Wilderness Areas ▪ **AVOID-22**: Visual Impacts on Historic and Cultural Resources ▪ **AVOID-24**: Visual Impacts on Tribal Resources and TCPs ▪ **Vis-1:** Selection of Finishes ▪ **Vis-2:** Visual Appeal of ROWs ▪ **Vis-3:** Underground Construction ▪ **Vis-4:** Visual Screening ▪ **Vis-5:** Span length ▪ **Geo-1:** Minimize Soil Disturbance ▪ **W-2:** Clear Spanning or Trenchless Methods for Water Crossings ▪ **Veg-1:** Site Transmission Facilities in Existing ROW or Disturbed Areas ▪ **Hab-2:** Minimize Transmission Line Crossings at Canyons and Riparian Habitat	Less than Significant	Although a project may result in degradation of scenic natural resources, particularly from vegetation clearing, grading, and infrastructure installation, these effects are expected to be reduced to less than significant levels through the implementation of Mitigation Strategies. These include avoiding sensitive areas, minimizing soil disturbance, and applying visual screening techniques. Preparing a visual impact assessment and coordinating with the SEPA Lead Agency or stakeholders could also inform additional project-specific mitigation. Implementing these Mitigation Strategies where medium or high impacts are anticipated would minimize adverse environmental impacts on visual quality to a less than significant level.
	Operation and Maintenance	Both overhead and underground transmission facilities generally require large, permanently cleared ROW corridors, which could be through forests, fields, or other natural areas. This can disrupt the visual continuity of the landscape, which detracts from the natural character of the area. The long-term presence of tall towers and extensive wiring from overhead transmission facilities can alter the scenic quality of previously undisturbed or minimally impacted areas. When underground transmission facilities need repairing, trenching activities similar to those described for new construction could be required. These activities may alter the natural landscape character. However, reclamation and revegetation during operation and maintenance activities would result in a lesser visual impact compared to overhead transmission facilities.	**Overhead:** low to high **Underground:** negligible to high			
	Upgrade	Upgrades to transmission facilities may result in visual impacts similar to those experienced during maintenance activities. These impacts may include vegetation clearing, grading, and surface disturbance that contrasts with the surrounding natural landscape. However, because upgrades utilize existing infrastructure and previously disturbed areas, the overall footprint and visibility of changes are generally reduced. The installation of new components or enhancements to existing overhead or underground transmission facilities may still introduce visual elements that alter the scenic quality, but these are often mitigated through minimized disturbance and potential integration with existing visual patterns.	**Overhead:** low to high **Underground:** negligible to high			

Adverse Environmental Impact	Project Stage	Description of Impact	Impact Determination Before Applying Mitigation	Mitigation Strategy Applied[a]	Significance After Applying Mitigation Strategy	Rationale for Significance Rating
	Modification	Adverse environmental impacts related to the degradation of scenic natural resources from the modification of overhead and underground transmission facilities could be similar to those expected for new construction. However, these impacts could be less due to the minimized disturbance footprints and the use of existing infrastructure.	**Overhead:** low to high **Underground:** low to high	and Parallel to Rivers and Ridge Lines ▪ **Hab-4:** Woody Debris Salvage and Restoration ▪ **Fish-14:** Removal of Riparian Vegetation ▪ **LSU-5:** Reseed Disturbed Rangelands		
Visual Quality – Degradation in Aesthetics	New Construction	Degradation in aesthetics could result from the new construction of overhead and underground transmission facilities. Vegetation clearing, grading, temporary laydown areas, and constructing access roads could contrast with the landscape character and degrade the area's aesthetics. Since the ROW would need to be maintained for the duration of a project, this adverse environmental impact could begin in new construction and continue through operation and maintenance. The assembly of overhead transmission facilities could create a visual contrast with rural or community character. These impacts could begin in new construction and continue through operation and maintenance.	**Overhead:** low to high **Underground:** low to high	▪ **AVOID-6:** Old-Growth and Mature Forests ▪ **AVOID-13:** Land Use and Zoning Incompatibilities ▪ **AVOID-17:** Night Sky ▪ **AVOID-18:** Exceptional Recreation Assets ▪ **AVOID-19:** Wilderness Areas ▪ **Vis-1:** Selection of Finishes ▪ **Vis-2:** Visual Appeal of ROWs ▪ **Vis-3:** Underground Construction ▪ **Vis-4:** Visual Screening ▪ **Vis-5:** Span length ▪ **Geo-1:** Minimize Soil Disturbance ▪ **W-2:** Clear Spanning or Trenchless Methods for Water Crossings ▪ **Veg-1:** Site Transmission Facilities in Existing ROW or Disturbed Areas ▪ **Hab-2:** Minimize Transmission Line Crossings at Canyons and Riparian Habitat and Parallel to Rivers and Ridge Lines	Less than Significant	Although a project may result in the degradation of aesthetics, particularly from vegetation clearing, grading, and infrastructure installation, these effects are expected to be reduced to less than significant levels through the implementation of Mitigation Strategies. These include avoiding sensitive areas, minimizing soil disturbance, and applying visual screening techniques. Preparing a visual impact assessment and coordinating with the SEPA Lead Agency or stakeholders could also inform additional project-specific mitigation. Implementing these Mitigation Strategies where medium or high impacts are anticipated would minimize adverse environmental impacts on visual quality to a less than significant level.
	Operation and Maintenance	The large size of overhead transmission towers, combined with their strongly vertical form and their angular geometry, may contrast strongly with the character of nearby rural landscapes and residential communities. Overhead transmission facilities can diminish the cultural and recreational value of scenic areas for local communities. Reflectivity and glare could also result from overhead transmission facilities. Cleared ROW corridors for overhead and underground transmission facilities, especially through forested areas or other natural vegetation communities, can result in a sharply contrasting parallel-sided corridor that dissects the landscape. However, reclamation and revegetation after new construction, during operation, or after maintenance activities would provide less of a visual impact than overhead transmission facilities.	**Overhead:** low to high **Underground:** negligible to high			
	Upgrade	Upgrades to overhead and underground transmission facilities may result in aesthetic degradation similar to that experienced during maintenance activities. These adverse environmental impacts may include vegetation clearing, grading, and temporary surface disturbance that contrasts with the surrounding landscape. Because upgrades often occur within existing ROWs and utilize established infrastructure, the visual disruption is generally reduced. Reclamation and revegetation efforts following upgrade activities can help mitigate these impacts, particularly for underground facilities, which tend to have a lower long-term visual footprint.	**Overhead:** low to high **Underground:** negligible to high			

Adverse Environmental Impact	Project Stage	Description of Impact	Impact Determination Before Applying Mitigation	Mitigation Strategy Applied[a]	Significance After Applying Mitigation Strategy	Rationale for Significance Rating
	Modification	The degradation in aesthetics from the modification of both overhead and underground transmission facilities could result in adverse environmental impacts similar to those expected for new construction. However, these impacts could be less due to the minimized disturbance footprints and the use of existing infrastructure.	**Overhead:** low to high **Underground:** low to high	▪ **Hab-4:** Woody Debris Salvage and Restoration ▪ **Fish-14:** Removal of Riparian Vegetation ▪ **LSU-5:** Reseed Disturbed Rangelands		
Visual Quality – Degradation of Night Sky	New Construction	New construction of overhead and underground transmission facilities could introduce nighttime lighting related to the transportation of materials and equipment to the project site. Construction safety lighting is required if work occurs at night, which could result in light trespass, sky glow, or glare.	**Overhead:** low to high **Underground:** low to high	▪ **AVOID-17**: Night Sky ▪ **Wild-2:** Construction Occurs during Daylight Hours	Less than Significant	Adverse environmental impacts on the night sky are unlikely to occur with the implementation of Avoidance Criteria and Mitigation Measures. Construction activities are considered temporary, and any light pollution they cause is usually limited to the duration of the construction. Additionally, avoiding areas managed for the protection of night skies would minimize adverse environmental impacts on the night sky.
	Operation and Maintenance	Operational lighting associated with overhead transmission facilities could result in sky glow and/or light trespass and glare. Particularly, these impacts could result from safety and security lighting on substations and FAA requirements for marking and lighting transmission towers. This impact is not anticipated to occur during the operation and maintenance of underground transmission facilities.	**Overhead:** negligible to high **Underground:** N/A			
	Upgrade	Upgrades to overhead transmission facilities may introduce nighttime lighting impacts similar to those observed during maintenance activities, including light trespass, glare, and sky glow. These adverse environmental impacts are typically associated with safety and security lighting, particularly at substations or on transmission towers requiring FAA-compliant lighting. However, because upgrades often utilize existing infrastructure and previously disturbed areas, the extent of new lighting installations is generally reduced, resulting in less overall impact on night sky visibility. Upgrades to underground transmission facilities are unlikely to contribute to night sky degradation, as operational lighting is typically not required.	**Overhead:** negligible to high **Underground:** N/A			
	Modification	The degradation of the night sky from the modification of overhead and underground transmission facilities could result in adverse environmental impacts similar to those expected for new construction. However, these impacts could be less due to using existing infrastructure.	**Overhead:** low to high **Underground:** low to high			

Notes:

[a] Appendix 3.1-1 provides a detailed listing of each Mitigation Strategy. This appendix serves as a reference section that can be consulted independently of the main text. This is particularly useful for detailed guidance and technical specifications that may be referred to multiple times. Additionally, including this information in an appendix allows for easier updates and revisions. If Mitigation Strategies or guidance changes, the appendix can be updated without altering the main content.

BMP = best management practice; **FAA** = Federal Aviation Administration; **ROW** = right-of-way; **SEPA** = State Environmental Policy Act; **TCP**s = Tribal Cultural Places

This Page Intentionally Left Blank

3.12.6 Environmental Sensitivity Map

Project-specific applications require a comprehensive analysis to identify the site-specific adverse environmental impacts on resources and determine the suitability of this Programmatic EIS. Environmental review may be phased by incorporating relevant information from this Programmatic EIS by reference while evaluating site-specific adverse environmental impacts of individual project applications. For more information on phased reviews, please refer to Chapter 1, Introduction.

Each project-specific application would include details about the proposal's location and site-specific conditions. This Programmatic EIS provides environmental sensitivity maps that, when used alongside project-specific data, could support more informative and efficient environmental planning. An online mapping tool has also been developed to provide public access to the most current data used in creating these environmental sensitivity maps.

Figure 3.12-4 presents the environmental sensitivity map for visual resources, identifying areas of varying sensitivity based on the siting criteria described in the following sections.

This Page Intentionally Left Blank

LEGEND

Sensitivity Score

Low Sensitivity

Very High Sensitivity

Nanaimo
Richmond
Surrey
White Rock
Abbotsford
SKAGIT RANGE
2582 m
Greenwood
Grand Forks
Trail
Cowichan Lake
Duncan
5020 ft
10762 ft
Bellingham
Victoria
Skagit River
Mount Vernon
Salish Sea
Oak Harbor
Sandpoint
OLYMPIC MOUNTAINS
6027 ft
7967 ft
Everett
Lake Chelan
Franklin D Roosevelt Lake
Post Falls
Spokane
Seattle
CASCADE RANGE
Wenatchee
WENATCHEE MOUNTAINS
Harrison Creek
Kent
Tacoma
Moses Lake
Aberdeen
Olympia
14411 ft
Yakima River
Yakima
Moscow
Lewiston
Astoria
COASTAL RANGES
8336 ft
Longview
Kennewick
Walla Walla
4680 ft
Columbia River
The Dalles
Hillsboro
Portland
11215 ft
Newberg

Washington State Energy Facility Site Evaluation Council

PROJECT
PROGRAMMATIC EIS
HIGH-VOLTAGE TRANSMISSION

TITLE
SENSITIVITY MAP
VISUAL QUALITY

YYYY-MM-DD 2025-09-02 CONSULTANT WSP FIGURE 3.12-4

N

0 30 60
1:1,700,000 MILES

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

DESIGNED MK PREPARED MK REVIEWED SHUP APPROVED AH/SG/ZA

This Page Intentionally Left Blank

3.12.6.1 Environmental Sensitivity Map Criteria Cards

The environmental sensitivity map evaluates various siting criteria and assigns sensitivity levels to geographic areas based on their potential for adverse environmental impacts, as analyzed in this Programmatic EIS. Each criterion was assigned a sensitivity level (1, 2, or 3), with Level 3 representing the highest sensitivity. Criteria cards illustrate the spatial extent of the siting criteria chosen. A summary of the criteria cards is provided below. Appendix 3.1-2 details the data preparation process for the criteria cards.

Scenic Natural Resources – Sensitivity Level 3

Figure 3.12-5 illustrates the spatial extent of scenic natural resources designated for high scenic value or recreational use. This includes the Columbia River Gorge National Scenic Area, National Park Service lands, Washington State Parks, and all active volcanoes known for their scenic visual prominence (DNR 2016; USFS 2016; NPS Land Resource Division 2025; WSPRC 2025).

Scenic Natural Resources – Sensitivity Level 2

Figure 3.12-6 illustrates the spatial extent of 5 miles (8 kilometers [km]) of land surrounding Columbia River Gorge National Scenic Area Administrative Boundary, 5 miles (8 km) of land surrounding National Park Service Lands, 5 miles (8 km) of land surrounding Washington State Parks, 5 miles (8 km) of land surrounding visually prominent scenic volcanoes, 5 miles (8 km) of land surrounding State Scenic Byways, 5 miles (8 km) of land surrounding National Scenic Byways and All-American Roads, and 5 miles (8 km) of land surrounding the National Wild and Scenic Rivers System (DNR 2016; FHWA 2022; USFS 2016, 2022; WSDOT 2024; NPS Land Resource Division 2025; WSPRC 2025).

Aesthetics – Sensitivity Level 2

Figure 3.12-7 illustrates the spatial extent of population centers and the immediate surrounding area within 5 miles (8 km) (WSDOT 2025).

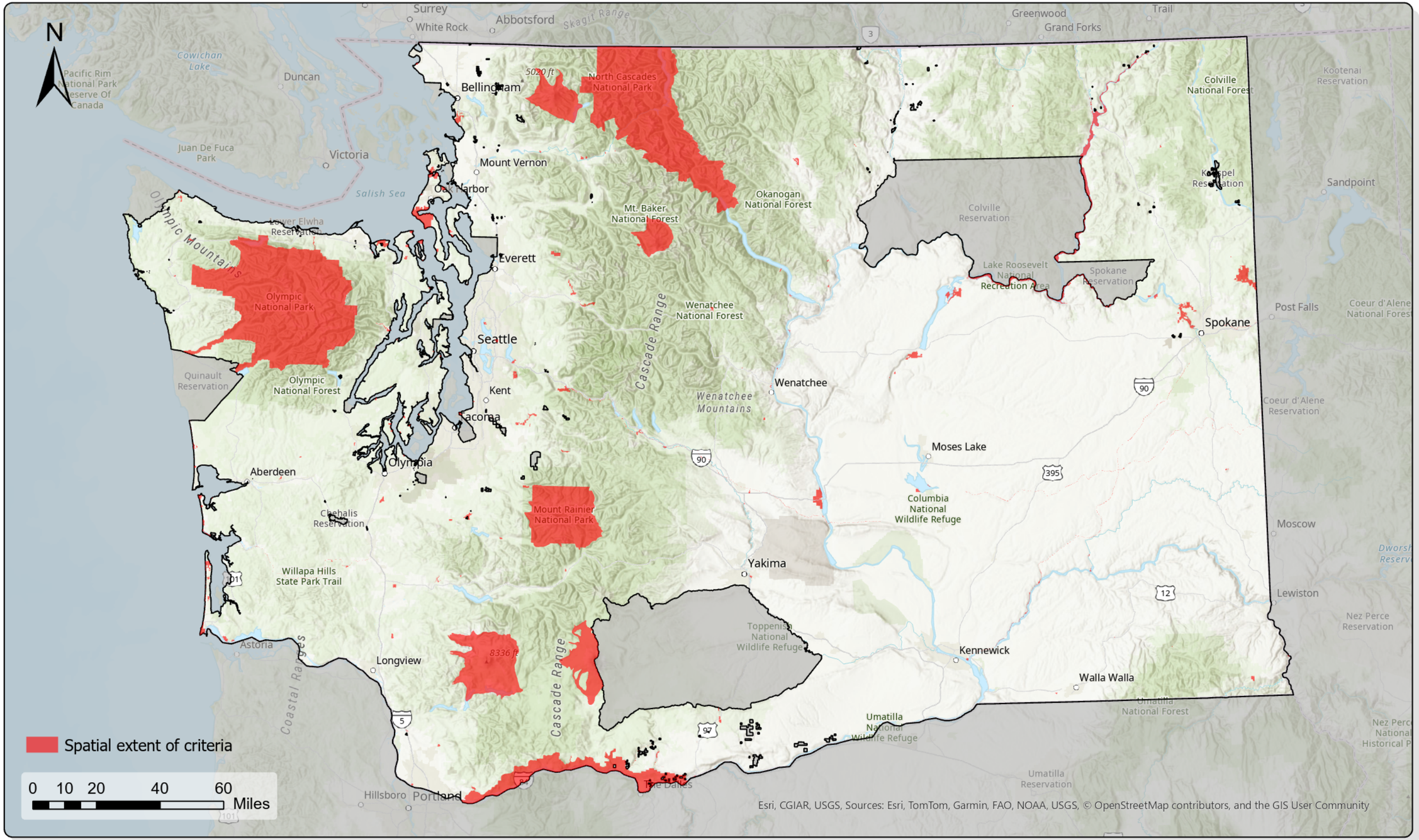
Note that population centers are defined as incorporated cities and towns, including their urban growth areas, and census-designated places in Washington, per RCW 47.04.010.

Scenic Natural Resources – Sensitivity Level 1

Figure 3.12-8 illustrates the spatial extent of U.S. Forest Service Lands plus a 5-mile (8-km) buffer, lands surrounding visually prominent scenic volcanoes within a minimum of 5 miles (8 km) and a maximum of 10 miles (16 km), and waterbodies or watercourses designated as "Outstanding Resource Waters" plus a 5-mile (8-km) buffer (DNR 2016, 2021; USFS 2025).

Scenic Natural Resources – Sensitivity Level 3

Washington State Energy Facility Site Evaluation Council



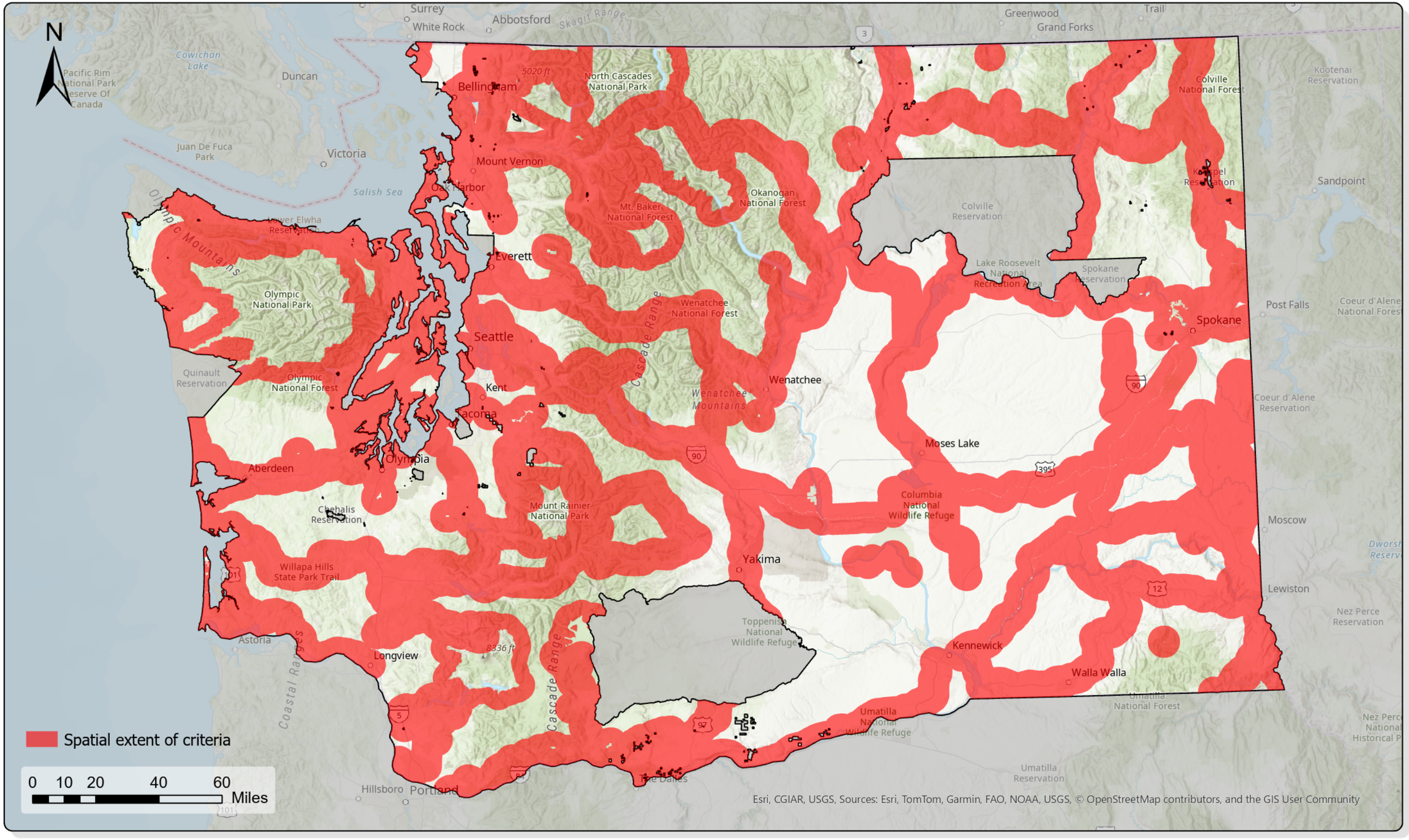
VISUAL QUALITY

Figure 3.12-5

This Page Intentionally Left Blank

Scenic Natural Resources – Sensitivity Level 2

Washington State Energy Facility Site Evaluation Council



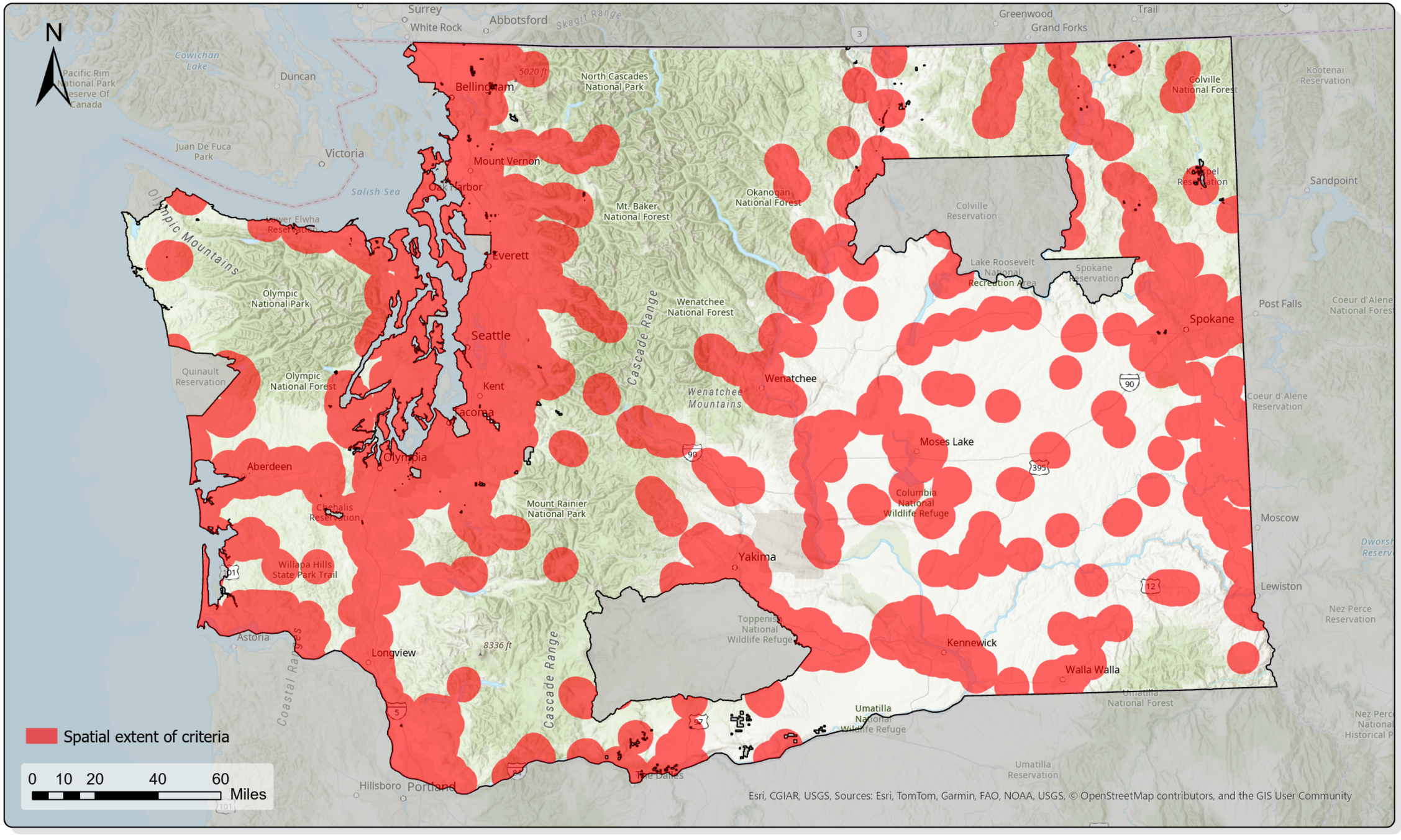
VISUAL QUALITY

Figure 3.12-6

This Page Intentionally Left Blank

Aesthetics – Sensitivity Level 2

Washington State Energy Facility Site Evaluation Council



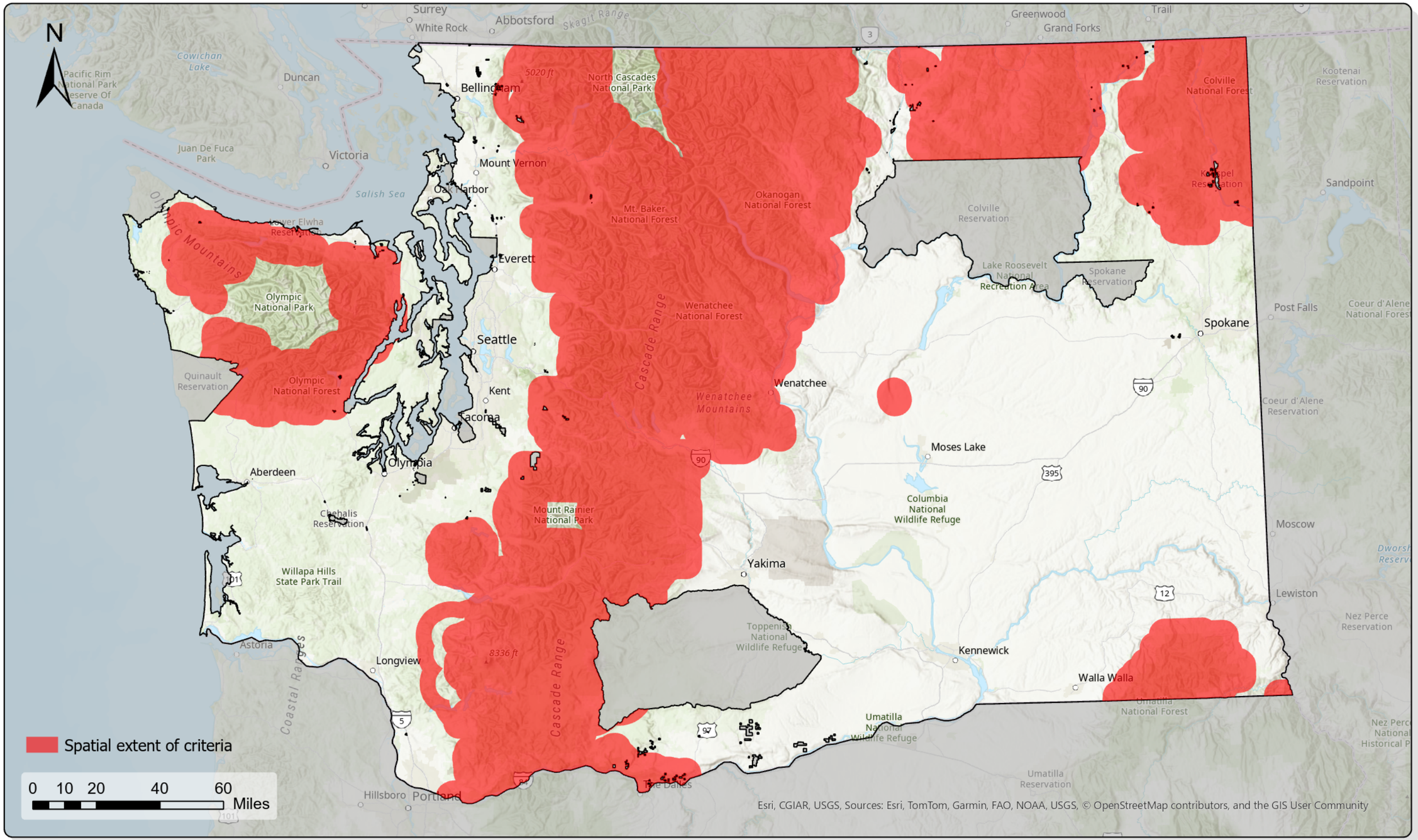
VISUAL QUALITY

Figure 3.12-7

This Page Intentionally Left Blank

Scenic Natural Resources – Sensitivity Level 1

Washington State Energy Facility Site Evaluation Council



VISUAL QUALITY

Figure 3.12-8

This Page Intentionally Left Blank