3.9 Land and Shoreline Use

This Programmatic Environmental Impact Statement (EIS) considers the adverse environmental impacts on land and shoreline use 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 3.9.1 identifies regulatory, siting, and design considerations.
- Section 3.9.2 describes the affected environment.
- Section 3.9.3 describes the adverse environmental impacts.
- Section 3.9.4 describes Mitigation Measures.
- Section 3.9.5 identifies probable significant adverse environmental impacts on land and shoreline use.
- Section 3.9.6 provides an environmental sensitivity map and criteria weighting for the siting of transmission facilities as it relates to land and shoreline use, based on the identified considerations, adverse environmental impacts, and Mitigation Strategies.

3.9.1 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 and state laws and regulations that apply to land and shoreline use are summarized in **Table 3.9-1**. Please refer to **Appendix 3.9-1** for all relevant goals and policies identified in county comprehensive plans.

Table 3.9-1: Laws and Regulations for Land and Shoreline Use

Applicable Legislation	Agency	Summary Information
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, as well as enhancement of recreation opportunities and public access. Exchanges must be consistent with land and resource management plans. After an agreement to initiate an exchange is signed, the authorized officer shall begin an environmental analysis in accordance with the National Environmental Policy Act, Council on Environmental Quality regulations, and U.S. Forest Service environmental policies and procedures.
36 CFR 251.53 – Special Uses	U.S. Forest Service	The U.S. Forest Service has the authority to issue ROW permits for National Forest System Lands for a variety of uses. Applicants must obtain land use authorization from the U.S. Forest Service before construction can begin. Authorizations may be granted with permits or easements, depending on the project.
Public Law 94-588, National Forest Management Act 36 CFR Part 219, Subpart A, National Forest System Land and Resource Management Planning	U.S. Forest Service	This act 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. If a project is located on a National Forest System unit, it must comply with the U.S. Forest Service's National Strategic Plan, National Forest System unit plans, and requirements for activity planning established in the U.S. Forest Service directive system.
Public Law 97–98, 7 USC § 4201, Farmland Protection Policy Act	Natural Resources Conservation Service	This act requires federal agencies to examine the potentially adverse effects on "prime" and "unique" farmland resources before approving any action that would irreversibly convert farmland to non-farm uses. Applicants must complete the Farmland Conversion Impact Rating Form if there is the potential to convert important farmland[1] to non-farm use and federal funds are involved.
43 USC §1701 et seq. – Federal Land Policy and Management Act	Bureau of Land Management	This act directs management of public lands, administered by the BLM, to protect the quality of the land and preserve certain public lands in their natural conditions. Applicants must obtain land use authorization from the BLM before construction can begin. Authorizations may

[1] Important Farmland includes Prime Farmland, Unique Farmland, and Land of Statewide or Local Importance (see Section 3.9.2.5, Agriculture and Rangelands).

Applicable Legislation	Agency	Summary Information
		be granted with leases, permits, or easements, depending on the project.
43 USC 1761(a)(5) – Section 501 of the Federal Land Policy and Management Act	Bureau of Land Management	This act authorizes the BLM to issue ROW authorizations for transmission facilities on National Forest System Lands, except lands designated as wilderness. The BLM requires that a project applicant submit any plans, contracts, or other info related to the use, or intended use, of the ROW. The BLM determines, based on the information provided, whether a ROW shall be granted, issued, or renewed and the terms and conditions that should be included in the ROW. Applicants must comply with all applicable requirements of the Federal Energy Regulatory Commission under the Federal Power Act.
43 USC 1763 – Section 503 of the Federal Land Policy and Management Act	Bureau of Land Management	This act governs the issuance and management of ROW for various uses on public lands.
16 USC 1451 et seq. – Coastal Zone Management Act	Washington State Department of Ecology[a]	The federal consistency provisions of the CZMA require that federal actions, including the issuance of federal licenses and permits, be consistent with the enforceable policies of the Washington Coastal Zone Management Program. This applies to federal actions in Washington's 15 coastal counties that could have reasonably foreseeable adverse environmental impacts on state coastal resources and uses. The CZMA was enacted to protect the coastal environment from growing demands associated with residential, recreational, commercial, and industrial uses. It encourages coastal states to develop and implement coastal zone management programs to manage and balance competing uses of the coastal zone. Washington's program is discussed in the Washington Coastal Zone Management Program section of this table.
14 CFR Part 77 – Safe, Efficient Use, and Preservation of the Navigable Airspace	Federal Aviation Administration	The FAA has broad authority to regulate the safe and efficient use of navigable airspace. 14 CFR 77 outlines the regulations and standards for ensuring the safe and efficient use of the airspace. The FAA requires a notice of proposed construction for a project so that it can determine whether it would adversely affect commercial, military, or personal air navigation safety. The FAA also requires notice of a proposed project when there is any construction or alteration that is more than 200 feet in height above ground level.

Applicable Legislation	Agency	Summary Information
10 USC 183a – Military Aviation and Installation Assurance Siting Clearinghouse	Secretary of Defense	The Military Aviation and Installation Assurance Siting Clearinghouse conducts a preliminary review of applications for energy projects[2] that may have an adverse impact on military operations and readiness. The review consists of assessing the likely scope, duration, and level of risk of any adverse impact of such an energy project on military operations and readiness, and identifying any feasible and affordable actions that could be taken to mitigate the adverse impact while allowing the energy project to proceed.
32 CFR Part 211 – Mission Compatibility Evaluation Process	Department of Defense	DOD is responsible for ensuring that the robust development of renewable energy sources and the increased resiliency of the commercial electrical grid may move forward in the United States, while minimizing or mitigating any adverse environmental impacts on military operations and readiness. DOD provides two review processes for a proposed project, including a formal and informal review, both of which are processed through the Military Aviation and Installation Assurance Siting Clearinghouse. The DOD is the single point of contact for Federal agencies, State, Indian tribal, and local governments, developers, and landowners, and provides a central forum to resolve siting issues.
RCW 36.70, Planning Enabling Act	Washington State Department of Commerce[(b)]	Counties that do not meet the requirements for inclusion in the GMA and do not voluntarily choose to plan under the GMA are still required to prepare a comprehensive plan for development within the county. The comprehensive plan must only include a land use element and a circulation element. Unlike counties operating under the GMA, counties subject to RCW 36.70 must adopt development regulations that are not inconsistent with the comprehensive plan per RCW 36.70.545.
RCW 36.70A, Growth Management – Planning by Selected Counties and Cities	Washington State Department of Commerce[(b)]	RCW 36.70A is the GMA, which builds upon RCW 36.70 to provide a more comprehensive and detailed framework for planning and land use regulations. Counties that are subject to "fully plan" under the GMA are based on population thresholds or growth rates. The GMA planning requirements include completing land capacity analyses to determine where projected growth should be directed to occur and adopting comprehensive plans[3] for physical development within their jurisdictions. The comprehensive plans include a land

[2] A project that provides for the generation or transmission of electrical energy (10 USC 183a).
[3] A document that guides the land use decisions of a local government.

Applicable Legislation	Agency	Summary Information
		use element that establishes the desired pattern of appropriate land use and policies for the development of those uses. This process involves reviewing urban growth areas against the state Office of Financial Management population projections to ensure that zoning densities can accommodate the projected growth. The GMA requires that adopted development regulations be consistent with and implement the comprehensive plan. The GMA requires that all projects comply with policies outlined in the comprehensive plans of the county and/or city the project resides (RCW 36.70A.040). Furthermore, projects that propose development that is incompatible with military installations are prohibited under RCW 36.70A.530.
RCW 36.70B, Local Project Review	Washington State Department of Commerce[b]	This regulation requires a proposed project to determine its consistency with a local government's development regulations adopted under RCW 36.70A, or, in the absence of applicable development regulations, the appropriate elements of the comprehensive plan adopted under RCW 36.70A.
RCW 76.09, Forests and Forest Products	Washington State Department of Natural Resources[b]	Forestland resources are among the most valuable of all resources in the state. Projects that propose converting forestland to other uses are required to submit a Forest Practices Application/Notification form.
RCW 79.13, Land Leases	Washington State Department of Natural Resources[b]	The DNR may lease state lands for purposes it deems advisable, including, but not limited to, commercial, industrial, residential, agricultural, and recreational purposes to obtain a fair market rental return to the state or the appropriate constitutional or statutory trust, and if the lease is in the best interest of the state or affected trust. The legislation also describes the provisions for nondefault or early termination of agricultural or grazing leases. Key requirements include the following: ▪ Require advance written notice of at least one hundred eighty days by the department to the lessee prior to termination of the lease. ▪ Require the department to provide to the lessee, along with the notice under (a) of this subsection, written documentation demonstrating that the department has included the leased land in a plan for higher and better use, land exchange, or sale. ▪ Compensate the lessee based on the type of lease (e.g., agricultural, grazing, or both) and a fee schedule.

Applicable Legislation	Agency	Summary Information
RCW 79.17.200, Real property – Transfer or disposal without public auction	Washington State Department of Natural Resources[b]	With the approval of the Board of Natural Resources, the DNR may directly transfer or dispose of real property without public auction. Projects that require the transfer of real property without public auction need approval from the Board of Natural Resources.
RCW 79.36, Easements over Public Lands	Washington State Department of Natural Resources[b]	The DNR may grant easements and rights in public lands, including ROWs for roads, telephone lines, transmission lines, or drainages. An easement of rights in public lands can be granted only if they are not otherwise provided by law, and the full market value of the estate or interest granted has been ascertained and safely secured to the state (RCW 79.36.355). A ROW through, over, and across any state lands or state forestlands may be granted to an entity proposing to construct a transmission line for the purpose of generating or transmitting electricity for light, heat, or power (RCW 79.36.510). The entity proposing to construct such transmission line shall file with DNR a map, accompanied by the field notes of the survey and location, and shall make payment as provided in RCW 79.36.530. The land within the ROW shall be limited to an amount necessary for access, construction, and maintenance. The grant shall include the right to cut all standing timber, and/or reproduction within said ROW, and shall include the right to cut trees that pose a threat or danger to the operation and maintenance of the transmission line (RCW 79.36.520).
RCW 90.58, Washington Coastal Zone Management Program	Washington State Department of Ecology [b]	This law establishes a state-local partnership for managing, accessing, and protecting Washington's shorelines. This law applies to shorelines of the state, including marine waters, streams and rivers with greater than 20 cubic feet per second mean annual flow, lakes 20 acres or larger, upland areas extending 200 feet landward from the edge of these waters, biological wetlands and river deltas connected to these waterbodies, and some or all of the 100-year floodplain, including all wetlands. The law requires local governments to prepare locally tailored policies and regulations for managing shoreline use in their jurisdictions, called SMPs. Local governments review shoreline development proposals for compliance with SMP standards. Projects within a coastal zone are required to comply with the State of Washington's Coastal Zone Management Program Enforceable Policies. The Washington Coastal Zone Management Program's enforceable policies are found in the following laws, regulations, and plans:

Applicable Legislation	Agency	Summary Information
		▪ Washington Shoreline Management Act and implementing WACs ▪ Washington State Water Pollution Control Act and implementing WACs ▪ Washington Clean Air Act ▪ Washington State Ocean Resources Management Act and Ocean Management Guidelines ▪ The Marine Spatial Plan for Washington's Pacific Coast
WAC 197-11, Washington State Environmental Policy Act	Washington Energy Facility Site Evaluation Council Washington State Department of Ecology 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.
WAC 463-28, State Pre-emption	Washington Energy Facility Site Evaluation Council	When a proposed facility would be inconsistent with local land use plans and zoning ordinances, EFSEC has the authority to recommend to the governor that the state preempt local regulations. Project applicants will be required to make every effort to comply with all local land use plans, zoning ordinances, shoreline master plans, and/or other relevant plans and programs, such as habitat conservation plans and long-range plans, in effect on the date of the application filing.

Notes:

(a) Federal agencies set national standards and oversee the implementation of these acts, but states have the authority to issue permits and enforce regulations through their own programs. This system, known as cooperative federalism, allows states to tailor their programs to local conditions while maintaining consistency with federal standards.

(b) 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; **CZMA** = Coastal Zone Management Act; **DNR** = Washington State Department of Natural Resources; **DOD** = Department of Defense; **Ecology** = Washington Department of Ecology; **EFSEC** = Washington Energy Facility Site Evaluation Council; **FAA** = Federal Aviation Administration; **GMA** = Growth Management Act; **RCW** = Revised Code of Washington; **ROW** = right-of-way; **SEPA** = Washington State Environmental Policy Act; **SMP** = Shoreline Master Program; **USC** = United States Code; **WAC** = Washington Administrative Code

The siting of transmission facilities is determined by engineering, technical, environmental, and socioeconomic factors. **Table 3.9-2** summarizes guidance documents and management plans that outline the design considerations and BMPs generally used to avoid or minimize adverse environmental impacts on land and shoreline use.

Table 3.9-2: Siting and Design Considerations for Land and Shoreline Use

Siting and Design Consideration[(a)]	Description
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

Notes:
[(a)] Siting and design considerations are intended to include best management practices.

3.9.2 Affected Environment

This section describes land and shoreline use within the Study Area (see Chapter 1, Introduction). The analysis of the affected environment incorporates the following:

- Land Ownership
- Land Use Patterns
- Existing Land Use Plans
- Shoreline Master Program
- Agriculture and Rangelands
- Military Utilized Airspace and Civilian Airfields

Adverse environmental impacts related to visual quality are analyzed in Section 3.12; impacts related to noise and vibration are analyzed in Section 3.13; impacts related to recreation are analyzed in Section 3.14; and impacts related to historic and cultural resources are analyzed in Section 3.15.

As discussed in Chapter 1, Introduction, the potential use of condemnation or eminent domain is not analyzed in this Programmatic EIS. Project-specific applications that

may require right-of-way (ROW) or easement acquisitions and are unable to negotiate an agreement with the property owner are required to comply with the legal and procedural processes outlined in Title 8 Revised Code of Washington (RCW).

3.9.2.1 Land Ownership

The total land area in Washington, including inland perennial waters, is estimated to be approximately 43.6 million acres (U.S. Census Bureau 2010). Land ownership in the state is classified into four main categories: private, federal, state, and Tribal.

Private Land

Approximately 50 percent of the land in the state is privately owned (NRSIG 2014). Private land includes small and large parcels or holdings by individual landowners. Most private land in the state falls into the land use categories of developed lands, agricultural farms, and forest and timber lands.

Federal Land

The federal government manages a variety of land types and uses in Washington, including military bases, national wildlife refuges, national forests, national parks, monuments, historic sites, the Pacific Northwest National Laboratory, wilderness areas, national conservation lands, water projects, and dams. The federal government owns approximately 28 percent of the land in Washington, which amounts to about 12.2 million acres (Congressional Research Service 2020). Five federal agencies manage the majority of federal lands throughout the state, as outlined in **Table 3.9-3**.

Table 3.9-3: Federal Government Land Ownership

Agency	Acres	Percentage of Federal Land Owned
U.S. Forest Service	9,335,431	76.6%
U.S. National Park Service	1,834,616	15.0%
U.S. Bureau of Land Management	437,342	3.6%
U.S. Department of Defense	421,675	3.5%
U.S. Fish and Wildlife Service	163,791	1.3%
Total	**12,192,855**	

Source: Congressional Research Service 2020

The majority of this land is managed by the U.S. Forest Service (USFS). Other federal land managers include the National Park Service (NPS), Bureau of Land Management

(BLM), Department of Defense (DOD), and U.S. Fish and Wildlife Service (USFWS). Federal agency land ownership in Washington is described in more detail below:

- The NPS, BLM, USFWS, and USFS manage 31 designated wilderness areas in Washington (Washington Wild n.d.[a], USFWS n.d.).
- The USFS manages approximately 9 million acres of land in Washington, including seven national forests, four national scenic areas, and one national volcanic monument (USFS 2023a, 2023b, 2023c).
- The NPS manages approximately 1.8 million acres of land in Washington, including 17 officially designated NPS units. These units include three national parks, two national recreation areas, and 12 national historic trails, parks, reserves, and sites (NPS n.d.).
- The USFWS manages approximately 164,000 acres of land in Washington, including 23 national wildlife refuges, 10 national fish hatcheries, and one national monument (USFWS n.d.).
- The BLM manages approximately 422,000 acres of land in Washington, including one national monument and two national scenic trails (Washington Wild n.d.[b]).
- The DOD owns and operates various military installations across the state, including, but not limited to,14 armory centers; eight readiness centers; and seven training centers, support facilities, and Air Force bases (Washington National Guard n.d.).

State Land

The Washington State government owns approximately 6,500,000 acres of land comprising state parks, wildlife areas, state forests, trust lands, and natural areas, as shown in **Table 3.9-4**.

Table 3.9-4: Summary of State Land Ownership

Agency	Acres	Percentage of State Land Owned
Washington State Parks and Recreation Commission	142,400	2.2%
Washington Department of Fish and Wildlife	614,300	9.5%

Agency	Acres	Percentage of State Land Owned
Washington State Department of Natural Resources	5,700,000	88.2%
Total	**6,456,700**	

Source: NRSIG 2014

State land ownership is discussed in more detail below:

- The Washington State Parks and Recreation Commission manages approximately 124 state parks, including historic sites, trails, and marine parks (Washington Governor Jay Inslee n.d.).
- The Washington Department of Fish and Wildlife manages over 1,000,000 acres of land, divided into 33 wildlife management areas (WDFW 2024).
- The Washington State Department of Natural Resources (DNR) manages over 5.6 million acres of state land that fall into three categories: state trust lands, state-owned aquatic lands, and state natural areas (DNR n.d.[a]).
    - The DNR manages approximately 3 million acres of state trust lands that generate revenue for specific trust beneficiaries. About 80 percent of these lands were granted to Washington by the federal government as Federal Grant Lands at statehood, and an additional 20 percent were acquired from the counties in the 1920s and 1930s as State Forest Lands. Revenue-producing activities include timber harvesting, agriculture and grazing, renewable energy generation, commercial real estate, communication sites, and mining (DNR n.d.[b]).
    - The DNR's Aquatic Resources Division manages approximately 2.6 million acres of state-owned aquatic lands as a public trust for residents of Washington. Aquatic lands include navigable lakes, rivers, streams, and marine waters such as Puget Sound and many beaches and tidelands. Revenue from aquatic land leases is reinvested to restore aquatic ecosystems, protect the health and productivity of aquatic resources, and fund local projects that create public access to aquatic lands, ensuring the sustainability of these aquatic lands for generations to come, including the state's aquatic reserves.

- The DNR manages two distinct types of natural areas. The first type is known as Natural Area Preserves, which protect the best remaining examples of many ecological communities, including rare plant and animal habitats. These areas account for approximately 41,483 acres. The second type of natural areas is Natural Resource Conservation Areas, which protect outstanding examples of native ecosystems, habitat for endangered, threatened and sensitive plants and animals, and scenic landscapes. These Natural Resource Conservation Areas total over 127,981 acres in 39 different locations (DNR n.d.[c]).

Tribal Lands

Twenty-nine federally recognized Native American Tribes are located on reservations throughout Washington (President of the Washington State Senate n.d.). **Table 3.9-5** identifies all Tribal reservations and the total acreage associated with each reservation. For additional information regarding Tribal lands (see Section 3.15, Historic and Cultural Resources).

Table 3.9-5: Native American Tribal Lands

Tribe Name	Reservation Name	Acres
Confederated Tribes of the Chehalis Reservation	Chehalis Reservation	4,400
Confederated Tribes of the Colville Reservation	Colville Reservation	1,400,000
Cowlitz Indian Tribe	Cowlitz Indian Tribe	152
Hoh Tribe	Hoh Reservation	447
Jamestown S'Klallam Tribe	Jamestown S'Klallam Reservation	13.5
Kalispel Tribe of Indians	Kalispel Reservation	4,557
Lower Elwha Klallam Tribe	Lower Elwha Reservation	1,000
Lummi Nation	Lummi Reservation	13,000
Makah Tribe	Makah Reservation (including Ozette)	27,000
Muckleshoot Indian Tribe	Muckleshoot Reservation	4,000
Nisqually Indian Tribe	Nisqually Reservation	5,000
Nooksack Indian Tribe	Nooksack Reservation	444
Port Gamble S'Klallam Tribe	Port Gamble Reservation	1,234
Puyallup Tribe of Indians	Puyallup Reservation	18,500
Quileute Tribe	Quileute Reservation	2,172
Quinault Indian Nation	Quinault Reservation	208,150
Samish Indian Nation	Samish Indian Tribe, Washington	380
Sauk-Suiattle Indian Tribe	Sauk-Suiattle Reservation	34
Shoalwater Bay Indian Tribe	Shoalwater Reservation	355

Tribe Name	Reservation Name	Acres
Skokomish Indian Tribe	Skokomish Reservation	5,000
Snoqualmie Indian Tribe	Snoqualmie Tribe	12,000
Spokane Tribe of Indians	Spokane Reservation	159,000
Squaxin Island Tribe	Squaxin Island Reservation	1,449
Stillaguamish Tribe	Stillaguamish Reservation	64
Suquamish Tribe	Port Madison Reservation	7,657
Swinomish Indian Tribal Community	Swinomish Reservation	10,400
Tulalip Tribes	Tulalip Reservation	22,000
Upper Skagit Indian Tribe	Upper Skagit Reservation	110
Confederated Tribes and Bands of the Yakama Nation	Yakama Reservation and Trust Land	1,200,000
Total		**3,108,519**

Sources: Columbia River Inter-Tribal Fish Commission 2024; DOI 2010; Puyallup Tribe of Indians 2017; Stillaguamish Tribe of Indians 2023; Muckleshoot Indian Tribe 2024; Nisqually Indian Tribe 2024; Port Gamble S'Klallam Tribe 2024; Suquamish Tribe 2024; EPA n.d.; Renker n.d.; Samish Indian Nation n.d.; Shoalwater Bay Indian Tribe n.d.; Snoqualmie Tribe 2022; National Congress of American Indians n.d.; President of the Washington State Senate n.d.

3.9.2.2 Land Use Patterns

For this analysis, Washington is classified into primary land use groups based on coverage type as forest and woodlands, agricultural, developed land, and public land/surface water/other land covers. **Table 3.9-6** shows the estimated total land area by cover type in Washington.

Table 3.9-6: Land Cover by Type

Land Use	Acres[(a)]	Percent of Land
Forest and Woodlands	18,110,875	39.7%
Agricultural	11,469,995	25.2%
Developed Land	2,603,331	5.7%
Scrub, Grassland, and Vegetation	10,037,762	22.0%
Waters	3,002,483	6.6%
Other Land Covers	345,841	0.8%
Total	**45,570,287**	

Source: USGS 2019.
Notes:
(a) Values are approximate.

3.9.2.3 Existing Land Use Plans

Under the Washington State Growth Management Act (GMA), certain counties and the cities within those counties are required to follow specific actions and processes to

plan for future population growth. Counties that are subject to the GMA requirements are based on the following:

> *"Each county that has both a population of fifty thousand or more, and until May 16, 1995, has had its population increase by more than ten percent in the previous ten years, or on or after May 16, 1995, has had its population increase by more than seventeen percent in the previous ten years, and the cities located within such county, and any other county regardless of its population that has had its population increase by more than twenty percent in the previous ten years."*

Once a county meets either of these sets of criteria, the requirement to conform with all the requirements of RCW 36.70A remains in effect, even if the county no longer meets one of these sets of criteria. The counties and cities in those counties that are required to plan under the GMA can be considered "Fully Planning Counties" and include the following:

1. King
2. Kitsap
3. Pierce
4. Snohomish
5. Clallam
6. Clark
7. Island
8. Jefferson
9. Lewis
10. Mason
11. San Juan
12. Skagit
13. Thurston
14. Whatcom
15. Yakima
16. Grant
17. Spokane
18. Chelan

A county that does not meet either of the sets of criteria outlined above may adopt a resolution indicating its intention to apply the requirements of 36.70A to the county. Each city located in a county that chooses to plan under the GMA must conform to the requirements as well. The counties and cities within these counties that choose to be a Fully Planning County under the GMA include the following:

1. Pacific
2. Kittitas
3. Douglas
4. Stevens
5. Pend Orielle
6. Franklin
7. Benton
8. Walla Walla
9. Columbia
10. Garfield

Counties that do meet the requirements to fully plan under the GMA are subject to the requirements of RCW 36.70, Planning Enabling Act. These counties can be identified as "Partially Planning Counties" and include the following:

1. Grays Harbor
2. Wahkiakum
3. Cowlitz
4. Skamania
5. Klickitat
6. Okanogan
7. Ferry
8. Lincoln
9. Adams
10. Whitman
11. Asotin

Comprehensive Plans

All counties must develop countywide planning policies to manage growth over a 20-year period. These planning policies are developed in comprehensive plans. Comprehensive plans are the centerpiece of local planning efforts and outline long-term land use goals and policies for physical development within a jurisdiction. In most cases, the preparation of comprehensive plans involves a robust public participation process through a variety of means, such as workshops, open houses, and online surveys. Once the plans are finalized, they are approved by publicly elected officials. This process is intended to capture local values and attitudes toward future development. RCW 36.70A.020 establishes a set of goals that are intended to be the basis of development for all comprehensive plans. Below is the list of those goals with a summary description (MRSC 2025):

- **Urban Growth.** Encourage development in urban areas.
- **Reduce sprawl.** Reduce the inappropriate conversion of undeveloped land.
- **Transportation.** Encourage efficient multimodal transportation systems.
- **Housing.** Plan for and accommodate housing affordable to all economic segments.
- **Economic development.** Encourage economic development throughout the state.
- **Property rights.** Private property shall not be taken for public use without just compensation having been made.
- **Permits.** Applications should be processed in a timely and fair manner.

- **Natural resource industries.** Maintain and enhance natural resource-based industries.
- **Open space and recreation.** Retain open space, enhance recreational opportunities.
- **Environment.** Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.
- **Citizen participation and coordination**. Encourage the involvement of citizens.
- **Public facilities and services.** Ensure that those public facilities and services necessary to support development shall be adequate.
- **Historic preservation.** Identify and encourage preservation.
- **Climate change and resiliency.** Ensure that comprehensive plans, development regulations, and regional policies, plans, and strategies adapt to and mitigate the effects of a changing climate.
- **Shorelines of the state.** The goals and policies of the shoreline management act as set forth in RCW 90.58.020 shall be considered an element of the county's or city's comprehensive plan.

Fully Planning Counties are required to include the following nine elements in their comprehensive plan as outlined in RCW 36.70A.070:

- Land Use
- Housing
- Transportation
- Economic Development
- Parks and Recreation
- Capital Facilities
- Utilities
- Rural Element
- Climate Change and Resiliency

Partially Planning Counties are required to include two elements: a land use element and a circulation (transportation and utilities) element; however, additional elements can be included.

All counties must identify and designate critical areas and resource areas. Additionally, all counties must adopt development regulations. The adopted development regulations for Partially Planning Counties must not be inconsistent with the comprehensive plan per RCW 36.70.545. The adopted development regulations for Fully Planning Counties must be consistent with and implement the comprehensive plan; not just avoid inconsistency (RCW 36.70A.040).

Project-specific applications should demonstrate consistency with the applicable jurisdiction's comprehensive plan goals and policies. All county-level comprehensive plan goals and policies related to transmission facility development can be found in **Appendix 3.9-1**.

Zoning Ordinance Analyses

In addition to the goals and policies within a jurisdiction's comprehensive plan, land use regulations and zoning ordinances are adopted to implement the land use element of a comprehensive plan. Land use regulations may include, but are not limited to, zoning codes or ordinances, subdivision codes, Critical Areas Ordinances, Shoreline Master Programs (SMP), and permit review processes.

Typically, zoning ordinances include the applicable zoning map, development restrictions, and associated definitions. Furthermore, zoning ordinances contain details about building controls, grading requirements, and regulations for the design and improvement of private and county lands. Project-specific applications should demonstrate consistency with the applicable jurisdiction's land use regulations and zoning ordinances.

Permitting Processes

The following sections outline the two pathways critical to the planning and development of transmission facilities in relation to land use and zoning consistency analyses.

Local Government Permitting Processes

Future transmission facility projects that are proposed through local governmental processes are required to be consistent with the applicable jurisdiction's development

regulations. These include, but are not limited to, the zoning code and ordinances, subdivision codes, Critical Areas Ordinance, SMP, and permit review processes.

EFSEC Permitting Processes

As described in Chapter 1, Introduction, of this Programmatic EIS, certain projects are required to participate in the Washington Energy Facility Site Evaluation Council's (EFSEC's) permitting process, and some may elect to participate. Should a future transmission facility project utilize EFSEC's permitting process, Washington Administrative Code (WAC) 463-28 requires that EFSEC determine whether the proposed project is consistent with local land use plans and applicable zoning ordinances. If EFSEC finds that any aspect of the proposed project is not consistent with applicable development regulations, EFSEC may consider recommending that the state preempt local land use plans or zoning ordinances for a site or portions of a site.

The proposed project must first meet the requirements of RCW 80.50. Second, an applicant must make every effort, including changes to the project design, to comply with all local land use plans, zoning ordinances, and shoreline management plans in effect on the date of the application filing. An applicant who is unable to resolve the issue of noncompliance related to consistency with land use and zoning regulations may file a written request for state preemption of those regulations (WAC 463-28-020).

If preemption is requested, and EFSEC approves the request, EFSEC must make a recommendation to the governor. The recommendation must include conditions that give due consideration to state or local governmental or community interests affected by the proposed activity, as well as to the purposes of laws, ordinances, rules, or regulations that would be superseded (WAC 463-28-070).

EFSEC's permitting process provides a streamlined approach for large energy projects, including high-voltage transmission facilities. This process can simplify the evaluation and licensing steps, making it more efficient than navigating multiple local and state agencies. EFSEC takes the lead responsibility in coordinating with various state and federal agencies to ensure that all environmental, safety, and community impacts are thoroughly reviewed. Furthermore, EFSEC is the only agency with the authority to preempt local zoning ordinances and regulations for large energy projects. With this authority, EFSEC can issue a Site Certification Agreement that supersedes any other state or local permits, thereby streamlining the process for developers.

3.9.2.4 Shoreline Master Program

Per RCW 90.58, local governments with shorelines are required to adopt and implement an SMP that includes local land-use policies and regulations that guide the use of Washington shorelines. SMPs apply to both public and private uses for Washington's more than 28,000 miles of lake, stream, and marine shorelines. They protect natural resources, provide public access to waters and shores, and plan for water-dependent uses. SMPs are both planning and regulatory documents, designed to carry out the policies of the Shoreline Management Act on local shorelines. An SMP consists of a comprehensive use plan, use regulations, maps, diagrams, or other descriptive material, and a statement of desired goals and standards. SMPs are based on state laws and rules and are tailored to local geographic and environmental conditions and existing development patterns.

In addition to applicable land use and zoning ordinances outlined in city and county comprehensive plans, future transmission facility projects are required to comply with the policies and regulations outlined in SMPs. The local governments that have adopted and implemented an SMP are outlined in **Table 3.9-7**.

Table 3.9-7: Local Governments with a Shoreline Master Program

County	Local Government With an SMP
Adams	Adams County
Asotin	Asotin County, City of Clarkston
Benton	Benton County, City of Benton, City of Kennewick, City of Pasco, City of Prosser, City of Richland, City of West Richland
Chelan	Chelan County, City of Cashmere, City of Chelan, City of Entiat, City of Leavenworth, City of Wenatchee
Clallam	Clallam County, City of Forks, City of Port Angeles, City of Sequim
Clark	Clark County, City of Battle Ground, City of Camas, City of La Center, City of Ridgefield, City of Vancouver, City of Washougal
Columbia	Columbia County, City of Dayton, Town of Starbuck
Cowlitz	Cowlitz County, City of Castle Rock, City of Kalama, City of Kelso, City of Longview, City of Woodland
Douglas	Douglas County, City of Bridgeport, City of East Wenatchee, City of Rock Island
Ferry	Ferry County, City of Republic
Franklin	Franklin County, City of Pasco
Garfield	Garfield County
Grant	Grant County, City of Coulee, City of Electric, City of Grand Coulee, Town of Krupp, City of Moses Lake, City of Soap Lake, Town of Wilson Creek

County	Local Government With an SMP
Grays Harbor	Grays Harbor County, City of Aberdeen, City of Cosmopolis, City of Elma, City of Hoquiam, City of McCleary, City of Montesano, City of Ocean Shores, City of Westport
Island	Island County, Town of Coupeville, City of Langley, City of Oak Harbor
Jefferson	Jefferson County, City of Port Townsend
King	King County, City of Auburn, Town of Beaux Arts Village, City of Bellevue, City of Black Diamond, City of Burien, City of Carnation, City of Covington, City of Des Moines, City of Duvall, City of Enumclaw, City of Federal Way, Town of Hunts Point, City of Issaquah, City of Kenmore, City of Kent, City of Kirkland, City of Lake Forest, City of Maple Valley, City of Medina, City of Mercer Island, City of Normandy Park, City of North Bend, City of Pacific, City of Redmond, City of Renton, City of Sammamish, City of SeaTac, City of Seattle, City of Shoreline, Town of Skykomish, City of Snoqualmie, City of Tukwila, City of Woodinville, Town of Yarrow Point
Kitsap	Kitsap County, City of Bainbridge Island, City of Bremerton, City of Poulsbo, City of Port Orchard
Kittitas	Kittitas County, City of Cle Elum, City of Ellensburg, Town of South Cle Elum
Klickitat	Klickitat County, City of Bingen, City of Goldendale, City of White Salmon
Lewis	Lewis County, City of Centralia, City of Chehalis, City of Morton, City of Napavine, Town of Pe Ell, City of Toledo, City of Vader, City of Winlock
Lincoln	Lincoln County, Town of Odessa, Town of Reardan
Mason	Mason County, City of Shelton
Okanogan	Okanogan County, City of Brewster, Town of Conconully, Town of Coulee Dam, City of Okanogan, City of Omak, City of Orville, City of Pateros, Town of Riverside, City of Tonasket, Town of Twisp, Town of Winthrop
Pacific	Pacific County, City of Ilwaco, City of Long Beach, City of Raymond, City of South Bend
Pend Oreille	Pend Oreille County, Town of Cusick, Town of Ione, Town of Metaline, Town of Metaline Falls, City of Newport
Pierce	Peirce County, City of Bonney Lake, City of Buckley, City of DuPont, Town of Eatonville, City of Fife, City of Gig Harbor, City of Lakewood, City of Milton, City of Orting, City of Puyallup, City of Roy, City of Ruston, Town of South Prairie, Town of Steilacoom, City of Sumner, City of Tacoma, City of University Place, Town of Wilkeson
San Juan	San Juan County, Town of Friday Harbor
Skagit	Skagit County, City of Anacortes, City of Burlington, Town of Concrete, Town of Hamilton, Town of La Conner, Town of Lyman, City of Mount Vernon, City of Sedro Woolley
Skamania	Skamania County, City of North Bonneville, City of Stevenson
Snohomish	Snohomish County, City of Arlington, City of Bothell, City of Brier, Town of Darrington, City of Edmonds, City of Everett, City of Gold Bar, City of Granite Falls, Town of Index, City of Lake Stevens, City of Lynnwood, City of Marysville, City of Monroe, City of Mountlake Terrace, City of Mukilteo, City of Snohomish, City of Stanwood, City of Sultan, Town of Woodway

County	Local Government With an SMP
Spokane	Spokane County, Town of Latah, City of Medical Lake, City of Millwood, Town of Rockford, City of Spokane, City of Spokane Valley, Town of Waverly
Stevens	Stevens County, City of Chewelah, City of Kettle Falls, Town of Marcus, Town of Northport
Thurston	Thurston County, Town of Bucoda, City of Lacey, City of Olympia, City of Tenino, City of Tumwater
Wahkiakum	Wahkiakum County, Town of Cathlamet
Walla Walla	Walla Walla County, City of Prescott, City of Waitsburg, City of Walla Walla
Whatcom	Whatcom County, City of Bellingham, City of Blaine, City of Everson, City of Ferndale, City of Lynden, City of Nooksack, City of Sumas
Whitman	Whitman County, Town of Albion, City of Colfax, Town of Malden, City of Palouse, City of Pullman, Town of Rosalia, City of Tekoa
Yakima	Yakima County, City of Grandview, City of Granger, City of Mabton, Town of Naches, City of Selah, City of Toppenish, City of Union Gap, Town of Wapato, City of Yakima, City of Zillah

Source: Ecology n.d.
SMP = Shoreline Master Program

3.9.2.5 Agriculture and Rangelands

The Farmland Protection Policy Act (FPPA) is intended to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It ensures that, to the extent possible, federal programs are administered to be compatible with state and local units of government, and private programs and policies to protect farmland. Projects that may irreversibly convert farmland (directly or indirectly) to nonagricultural uses and are completed by or with assistance from a federal agency are subject to FPPA requirements (USDA 2024a).

For the purpose of the FPPA, Important Farmland includes Prime Farmland, Unique Farmland, and Farmland of Statewide or Local Importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban built-up land (USDA 2024b). Below is a description of all lands included in the classification "Important Farmland."

- **Prime Farmland:** Land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion, as determined by the Secretary of

Agriculture. Prime farmland includes land that possesses the above characteristics but is currently being used to produce livestock and timber. It does not include land already in use for or committed to urban development or water storage.

- **Unique Farmland:** Land other than Prime Farmland that is used for the production of specific high-value food and fiber crops, as determined by the Secretary of Agriculture. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high-quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include citrus, tree nuts, olives, cranberries, fruits, and vegetables.
- **Farmland of Statewide or Local Importance:** Farmland, other than Prime or Unique Farmland, that is of statewide or local importance for the production of food feed, fiber, forage, or oilseed crops, as determined by the appropriate state or unit of local government agency or agencies, and that the Secretary of Agriculture determines should be considered as farmland for this subtitle.

Washington's farms power a diverse agricultural economy, led by the state's apple industry, which produces 70 percent of the apples grown in the United States (WSDA n.d.). The state's agricultural production, food processing, and trade are significant factors in Washington's economy. Washington's 2022 agricultural production totaled $12.8 billion, which was higher than the previous record high of $10.4 billion in 2015 and up 27 percent from the 2021 value of $10.1 billion (USDA 2023). The value of Washington's crop production in 2022 was $8.60 billion, up 22 percent from 2021. The value of livestock production in 2022 totaled $4.18 billion, up 38 percent from the previous year. Both crop and livestock production values were at record highs in 2022 (USDA 2023). **Table 3.9-8** identifies the top 10 agricultural products and their total value for Washington in 2022.

Table 3.9-8: Top 10 Agricultural Product Values for Washington State in 2022

Product	Total Value
Apples	$2,067,829,000
Milk	$1,678,291,000
Wheat	$1,171,388,000
Cattle and Calves	$1,018,952,000
Potatoes	$942,651,000
Hay	$882,595,000
Eggs	$459,994,000

Product	Total Value
Hops	$434,460,000
Cherries	$407,727,000
Grapes	$394,865,000

Source: USDA 2023

Table 3.9-9 outlines the total number of acres of agricultural land and the top three crops produced in each county in 2023.

Table 3.9-9: Total Agricultural Lands and Top Three Crops by County in Washington (2023)

County	Total Acres of Agricultural Lands	Top Three Crops (Total Acres)
Adams	872,439	▪ Wheat (288,049) ▪ Wheat Fallow (250,334) ▪ CRP/Conservation (171,866)
Asotin	175,490	▪ Pasture (52,215) ▪ Pasture, Forest (42,110) ▪ CRP/Conservation (24,983)
Benton	503,268	▪ Wheat (114,897) ▪ Wheat Fallow (89,180) ▪ CRP/Conservation (69,710)
Chelan	260,777	▪ Pasture, Forest (213,456) ▪ Pasture (16,990) ▪ Pear (7,264)
Clallam	34,971	▪ Shellfish (23,245) ▪ Pasture (4,370) ▪ Grass Hay (4,172)
Clark	39,923	▪ Pasture (14,622) ▪ Grass Hay (12,445) ▪ Developed (3,167)
Columbia	224,324	▪ Wheat (104,774) ▪ CRP/Conservation (30,238) ▪ Wheat Fallow (27,131)
Cowlitz	9,963	▪ Grass Seed (2,725) ▪ Grass Hay (2,505) ▪ Pasture (2,277)
Douglas	608,843	▪ CRP/Conservation (186,511) ▪ Wheat Fallow (171,225) ▪ Wheat (153,891)
Ferry	485,643	▪ Pasture, Forest (460,659) ▪ Pasture (14,746)

County	Total Acres of Agricultural Lands	Top Three Crops (Total Acres)
		▪ Grass Hay (2,991)
Franklin	498,318	▪ CRP/Conservation (101,262) ▪ Wheat (72,611) ▪ Alfalfa Hay (61,419)
Garfield	258,139	▪ Wheat (87,899) ▪ Wheat Fallow (56,874) ▪ Pasture (38,717)
Grant	863,419	▪ Wheat (136,414) ▪ Alfalfa Hay (101,844) ▪ Wheat Fallow (96,023)
Grays Harbor	80,683	▪ Shellfish (56,458) ▪ Grass Hay (9,768) ▪ Pasture (9,335)
Island	35,348	▪ Shellfish (22,285) ▪ Grass Hay (3,793) ▪ Pasture (3,736)
Jefferson	29,350	▪ Wheat (24,280) ▪ Pasture (2,389) ▪ Grass Hay (1,938)
King	40,881	▪ Pasture (15,692) ▪ Grass Hay (7,723) ▪ Shellfish (5,834)
Kitsap	34,433	▪ Shellfish (30,444) ▪ Pasture (1,958) ▪ Golf Course (881)
Kittitas	322,559	▪ Pasture, Forest (199,788) ▪ Pasture (59,501) ▪ Timothy (20,695)
Klickitat	249,164	▪ Pasture (73,735) ▪ Wheat (50,720) ▪ CRP/Conservation (35,354)
Lewis	75,243	▪ Grass Hay (31,529) ▪ Pasture (26,243) ▪ Christmas Tree (4,180)
Lincoln	917,993	▪ Wheat (354,942) ▪ Wheat Fallow (251,450) ▪ CRP/Conservation (114,900)
Mason	30,937	▪ Shellfish (24,878) ▪ Grass Hay (2,212) ▪ Pasture (2,182)

County	Total Acres of Agricultural Lands	Top Three Crops (Total Acres)
Okanogan	979,784	▪ Pasture, Forest (763,518) ▪ Pasture (125,163) ▪ Apple (18,832)
Pacific	73,197	▪ Shellfish (61,176) ▪ Pasture (5,915) ▪ Grass Hay (3,543)
Pend Oreille	147,069	▪ Pasture, Forest (122,391) ▪ Grass Hay (8,973) ▪ Pasture (8,560)
Pierce	41,501	▪ Pasture (14,443) ▪ Shellfish (12,330) ▪ Grass Hay (5,521)
San Juan	13,520	▪ Pasture (4,862) ▪ Grass Hay (3,549) ▪ Shellfish (3,180)
Skagit	84,287	▪ Grass Hay (18,187) ▪ Pasture (11,541) ▪ Shellfish (9,936)
Skamania	19,442	▪ Pasture, Forest (16,218) ▪ Pasture (1,285) ▪ Grass Hay (825)
Snohomish	55,072	▪ Pasture (14,428) ▪ Grass Hay (12,369) ▪ Shellfish (5,899)
Spokane	380,850	▪ Wheat (143,725) ▪ Pasture (23,988) ▪ Canola (21,668)
Stevens	313,764	▪ Pasture, Forest (203,608) ▪ Pasture (39,717) ▪ Grass Hay (16,584)
Thurston	50,537	▪ Pasture (16,909) ▪ Shellfish (16,896) ▪ Grass Hay (9,603)
Wahkiakum	8,934	▪ Pasture (5,016) ▪ Grass Hay (2,464) ▪ Wildlife Feed (660)
Walla Walla	595,690	▪ Wheat (201,376) ▪ Wheat Fallow (131,697) ▪ CRP/Conservation (117,799)
Whatcom	99,638	▪ Grass Hay (32,119)

County	Total Acres of Agricultural Lands	Top Three Crops (Total Acres)
		▪ Shellfish (17,465) ▪ Corn, Field (14,027)
Whitman	1,159,436	▪ Wheat (538,410) ▪ Wheat Fallow (157,171) ▪ Pasture (133,752)
Yakima	596,455	▪ Pasture, Forest (178,261) ▪ Pasture (98,366) ▪ Corn, Field (50,570)
Total	**11,271,284**[(a)]	

Source: WSDA 2023
Notes:
[(a)] The source provides 11,271,282 acres, while the independent calculation provides 11,271,284 acres.
CRP = Conservation Reserve Program[4]

Despite the increase in agricultural product value, Washington's agricultural areas face an increase in pressure to convert productive farmland to non-farmland uses. In 2022, there were 32,076 farms and ranches in Washington (down 10 percent from 2017), with an average size of 432 acres (up 5 percent) on 13.9 million acres of farmland (down 6 percent) (USDA 2024c).

3.9.2.6 Military Utilized Airspace and Civilian Airfields

The nation's global defense infrastructure comprises various types of military installations[5] and critical testing, training, and operating areas. Every military installation has its own unique mission and role (DOC 2022a). The military and defense community is the second largest public employer in Washington, which is home to 95,079 active duty, reserve, guard, and civilian personnel. It supports over $15 billion in annual procurement, working with nearly 1,900 businesses across the state of Washington (REPI 2023). **Table 3.9-10,** below, lists the major military installations in Washington, with the addition of the Coast Guard's base in King County and the Yakima Training Center in Yakima County. In addition to these major installations, Washington has several other ground-based military and defense facilities not listed here, as well as the Northwest Training Range Complex (NWTRC), including Naval

[4] A program administered by the Farm Service Agency, in which farmers receive a yearly payment in exchange for removing environmentally sensitive land from agricultural production.
[5] A base, camp, post, station, center, or homeport facility for any ship or other activity under the jurisdiction of the U.S. Department of Defense, including any leased facility (Title 10 USC).

Weapons Systems Training Facility Boardman in Oregon, which serves training units from Washington (DOC 2022a).

Table 3.9-10: Military Installations in Washington

County	Military Facility Name	Service Branch	Location
Island County	Naval Air Station Whidbey Island	Navy Active	2853 Langley Blvd. Oak Harbor, WA 98278
	NASWI Seaplane Base	Navy Active	2110 Coral Sea Ave. Oak Harbor, WA 98278
	Navy Outlying Field - Coupeville	Navy Active	18025 State Route 20. Coupeville, WA 98239
Jefferson County	Naval Magazine Indian Island	Navy Active	100 Indian Is Anx Rd. Port Hadlock-Irondale, WA 98339
King County	US Coast Guard District 13	U.S. Coast Guard	915 2nd Ave. Seattle, WA 98174
Kitsap County	National Guard Bremerton	Army Guard	1211 Carver St. Bremerton, WA 98312
	Naval Base Kitsap	Navy Active	120 S Dewey St. Bremerton, WA 98314
	Naval Base Kitsap Bangor	Navy Active	USN Bangor Main Gate Visitor Control Center Silverdale, WA 98315
	Naval Base Kitsap Bremerton	Navy Active	1 Boone Rd. Bremerton, WA 98312
	Naval Base Kitsap Keyport	Navy Active	610 Dowell Rd. Keyport, WA 98345
	Puget Sound Naval Shipyard & Intermediate Maintenance Facility	Navy Active	1400 Farragut St, Bremerton, WA 98314
	Manchester Fuel Depot	Navy Active	Olympic Dr, Port Orchard, WA 98366
Pend Oreille County	Cusick Survival Training Area	Air Force	Coordinates: 48.541577, -117.3763441
Pierce County	Joint Base Lewis-McChord	Army Active	2140 Liggett Ave., JBLM, WA 98433
Snohomish County	Naval Station Everett	Navy Active	2000 W Marine View Dr. Everett, WA 98207
Spokane County	Fairchild Air Force Base	Air Force	Fairchild Air Force Base, WA 99011
	White Bluff	Air Force	11604 W. Newkirk Road Spokane, WA 99224
Yakima County	Yakima Training Center	Army	1221 Firing Center Rd. Yakima, WA 98901

Source: DOD 2023; DOC 2022a, 2022b
JBLM = Joint Base Lewis-McChord; **US** = United States; **USN** = United States Navy

Military testing, training, and operating areas are actively used by military personnel to properly carry out their missions. Military installations may include waterways, offshore areas, airspace routes, and ranges on land. The unique locations, geographies, and resources of each training and operating area mean they cannot be easily moved or replaced once the ability to use them is lost (DOC 2022a). Military utilized airspace and civilian airports are considered in this analysis, with a primary focus on military utilized airspace. Greater detail on civilian airports is provided in Section 3.10, Transportation.

The Federal Aviation Administration (FAA) categorizes airspace into two areas: regulatory and nonregulatory. Within these two categories, there are four types of airspace or airspace areas: controlled, uncontrolled, special use, and other airspace. These classifications are determined by the complexity or density of aircraft movements, the nature of the operations conducted within the airspace, the level of safety required, and national and public interest (FAA n.d.[a]). Below is a description of some of the special airspace designations that support military testing and training:

- **Special Use Airspace (SUA)** – SUAs may consist of military operations, prohibited, restricted, warning, and alert areas "wherein activities must be confined because of their nature, or wherein limitations are imposed upon aircraft operations that are not part of those activities, or both." (FAA n.d.[b]). SUAs in Washington have floor elevations[6] ranging from the surface to 1,000 feet above ground level (AGL) (DOC 2022a).
- **Military Operations Area (MOA)** – MOAs are SUAs designated for routine nonhazardous military flight training, including, but not limited to, "air combat tactics, air intercepts, aerobatics, formation training, and low altitude tactics" (FAA n.d.[b], n.d.[c]). This airspace area segregates non-participating Instrument Flight Rules (IFR) aircraft[7] from participating in military operations and to inform the Visual Flight Rules (VFR) pilot[8] when such activity is being conducted (DOD 2016).
- **Military Training Route (MTR)** – MTRs are other airspace areas used by military aircraft to train a wide range of tactical flying, including "low level" combat tactics. The required maneuvers and high speeds of these low-level combat

[6] In a military context, a "floor" refers to a minimum safe altitude, or the lowest altitude an aircraft is permitted to fly under specific operational conditions.
[7] IFR Aircrafts are considered civilian aircrafts equipped to fly in low visibility conditions, such as clouds or fog, using instruments and electronic signals instead of visual reference.
[8] A VFR pilot is a pilot who operates an aircraft in clear weather conditions, using visual cues to navigate and avoid other aircraft.

tactics can occasionally compromise safety for all flight operations; therefore, the MTR program was created. MTRs are mutually developed by the FAA and DOD for low-altitude military training (as low as 100 feet AGL) at airspeeds that can exceed 250 knots (over 287 miles per hour) (FAA n.d.[d]). MTRs in Washington have floor elevations ranging from 200 feet to 1,000 feet AGL (DOC 2022a).

- **Geographic Area of Concern (GAOC)** – GAOCs are designated areas where an energy development project could have an adverse environmental impact on military operations and readiness. GAOCs are a tool that raises public awareness by describing where a future energy project or energy-related project could have an adverse effect on military activities (DOD 2022). If a project is proposed for or located in a designated GAOC, it does not always result in an unacceptable risk. Rather, this would indicate an adverse environmental impact and require further review by the Military Aviation and Installation Assurance Siting Clearinghouse to assess potential risks (DOD 2018).

As presented in **Figure 3.9-1**, military installations and special airspace designations that support military missions are widespread across Washington.

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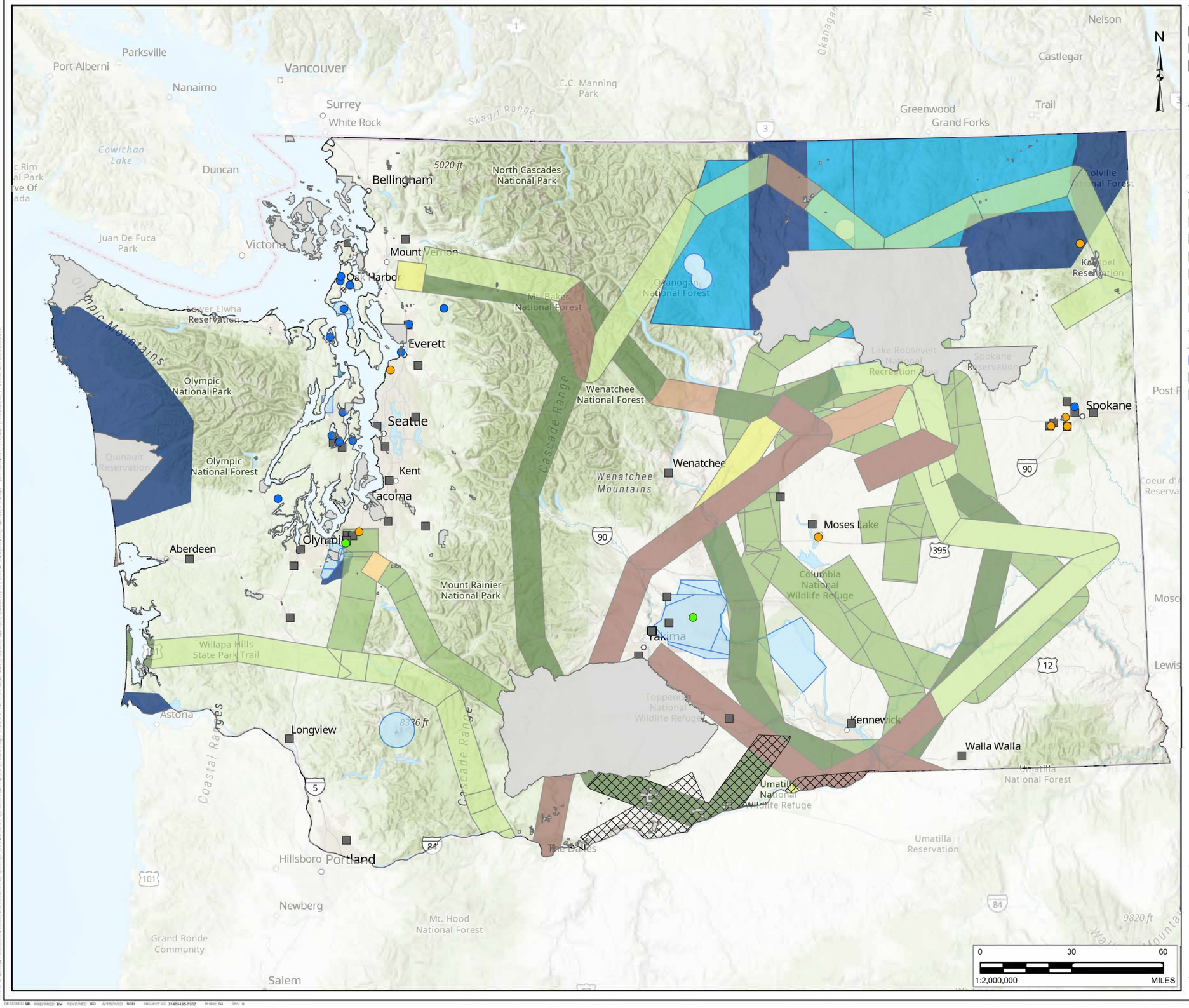

LEGEND

- Study Area
- Exclusion Areas
- Boardman Geographic Area of Concern (DOC 2022G)
- Washington Military Department Facility (DOC 2022C)

Military Installation (DOC 2022B)

- U.S. Air Force
- U.S. Army
- U.S. Navy

Military Training Route (DOC 2022E)

Floor Elevation

- 200'
- 300'
- 500'
- 1,000'
- 1,200'
- 1,500'
- > 1,500'

Special Use Airspace (DOC 2022F)

Floor Elevation

- Surface
- 300'
- > 1,000'

REFERENCES AND NOTES

1. SERVICE LAYER CREDITS: SOURCES: ESRI, TOMTOM, GARMIN, FAO, NOAA, USGS, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY, ESRI, USGS
2. REFERS TO THE EXCLUSION AREAS NOT ANALYZED IN THIS PROGRAMMATIC EIS
3. DOC (WASHINGTON STATE DEPARTMENT OF COMMERCE). 2022G. CESA – BOARDMAN GEOGRAPHIC AREA OF CONCERN. ACCESSED AUGUST 20, 2024. HTTPS://CESA-WACOMMERCE.HUB.ARCGIS.COM/DATASETS/070DA3DCE31E49CF8B5257D84E0DA582_5/ABOUT
4. DOC. 2022C. WA MILITARY DEPARTMENT FACILITIES. ACCESSED AUGUST 20, 2022. HTTPS://CESA-WACOMMERCE.HUB.ARCGIS.COM/DATASETS/070DA3DCE31E49CF8B5257D84E0DA582?LAYER=0
5. DOC (WASHINGTON STATE DEPARTMENT OF COMMERCE). 2022B. MILITARY INSTALLATIONS AND RANGES. ACCESSED OCTOBER 30, 2024. HTTPS://CESA-WACOMMERCE.HUB.ARCGIS.COM/DATASETS/070DA3DCE31E49CF8B5257D84E0DA582_1/EXPLORE?SHOWTABLE=TRUE
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Washington State Energy Facility Site Evaluation Council

PROJECT

PROGRAMMATIC EIS
HIGH-VOLTAGE TRANSMISSION

TITLE

MILITARY INSTALLATIONS AND UTILIZED AIRSPACE

YYYY-MM-DD 2025-09-19 CONSULTANT wsp FIGURE 3.9-1

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3.9.3 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.

3.9.3.1 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, operation and maintenance, upgrade, and modification activities.
- **Agriculture and Rangelands:** The study area would be large enough to determine if there were any adverse environmental impacts on agricultural lands and rangelands.
- **Shorelines:** The study area would be large enough to determine if there were any adverse environmental impacts on shorelines.
- **Military Utilized Airspace and Civilian Airfields:** The study area would be large enough to determine if there were any adverse environmental impacts on military utilized airspace and civilian airfields.

This Programmatic EIS analyzes the affected environment and adverse environmental impacts on land and shoreline use 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 transmission facilities may involve similar aboveground 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.

Each county's comprehensive land use plan in Washington was reviewed as part of the land and shoreline analysis (**Appendix 3.9-1**). **Appendix 3.9-1** identifies goals, policies,

and considerations related to transmission facility development. The appendix also includes policies that align with or support transmission facilities, particularly where such infrastructure is consistent with land use designations. However, there may be additional goals and policies that further support transmission facility development as it relates to economic development, improved utility service reliability, and decarbonization that may not be captured in the appendix. Goals and policies that do not apply to transmission facilities are not addressed in **Appendix 3.9-1**.

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 3.9-11** 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 land and shoreline use in the Study Area was obtained from federal agencies, state agencies, local planning documents, and public scoping.

Table 3.9-11: Criteria for Assessing the Impact Determination on Land and Shoreline Use

Impact Determination	Description
Nil	No foreseeable adverse environmental impacts on land and shoreline uses are expected. A project would not adversely impact land and shoreline uses.
Negligible	A project would result in minimal adverse environmental impacts on land and shoreline uses. Changes would either be non-detectable or, if detected, would have only slight effects. A project would have minor conflicts with the existing land or shoreline use, or relevant goals and policies. There would be no conflicts with, reduction of, or impacts on agricultural lands, agricultural production, military utilized airspace, or civilian airfield operations. Negligible impacts would be short term in duration. BMPs and design considerations are expected to be effective.
Low	A project would result in noticeable adverse environmental impacts on land and shoreline use, even with the implementation of BMPs and design considerations. These adverse environmental impacts may include minor conflicts with the existing land or shoreline uses, slight reductions in agricultural production, or the loss of some agricultural lands. However, such impacts would be limited and controlled. Impacts on agricultural production or lands would not permanently affect the ability of a farm to remain profitable or continue its operations. While there may be impacts on military utilized airspace or civilian airfields, these impacts would not adversely affect their short or long-term operations. Adverse impacts on land and shoreline uses would be localized. Adverse environmental impacts may be short or long term in duration.

Impact Determination	Description
Medium	A project would result in adverse environmental impacts on land and shoreline uses, even with the implementation of BMPs and design considerations. A project would result in considerable conflicts with existing land or shoreline uses, as well as relevant goals and policies. The conflicts and loss of agricultural lands would have a substantial effect on production, profitability, and operation. A project may interfere with military utilized airspaces or civilian airfields, jeopardizing its short or long-term use and operations. Medium impacts may be short or long term in duration.
High	A project would result in adverse and potentially severe environmental impacts on land and shoreline uses, even after implementation of BMPs and design considerations. A project would cause extensive conflicts with the existing land or shoreline uses, as well as relevant goals and policies. The conflicts and loss of agricultural lands would drastically affect agricultural production, leading to the inability to remain profitable and requiring the closure of operations. Additionally, a project may interfere with military utilized airspaces or civilian airfields, jeopardizing their continued use for flight training or long-term operations. High adverse environmental impacts may be short or long term.

BMPs = best management practices

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.

3.9.3.2 Action Alternative

New Construction

Overhead Transmission Facilities

Activities for the 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 the 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 related to land and shoreline use during new construction:

- Incompatibility with Land Use
- Conflict with Relevant Goals and Policies
- Loss of Function and Value of Shorelines
- Loss of Function and Value of Agricultural Land and Rangelands
- Conflict with Military Utilized Airspace and Civilian Airfield Operations

Incompatibility with Land Use

New construction activities associated with the installation of overhead transmission facilities could result in direct and indirect adverse environmental impacts on existing land uses. New construction activities could require obtaining new ROWs through easements or land acquisitions from private property owners or public land administrators. For the purposes of this analysis, it is assumed that all required permitting and approval processes for obtaining ROWs would be met. However, even when complying with all regulatory requirements, the siting and new construction of an overhead transmission facility could create a land use incompatibility. For example, if an overhead transmission facility is designed and constructed using outdated parcel, ROW, and easement boundaries, the site conditions at the start of new construction may differ from what was originally intended when designing the project. What once was undeveloped land may have new infrastructure, be planned for another use, or may not reflect current safety, clearance, and access standards. This could require encroachments into incompatible land uses, like residences or protected natural areas.

New construction of overhead transmission facilities within new ROWs could result in a loss of the existing land use and substantially reduce the overall land use type. The

overall reduction and severity of the adverse environmental impact may depend on the given abundance of the land use type or total disturbance in the city or county. This could be particularly important in counties and cities within those counties that are considered Fully Planning under the GMA and are required to accommodate future growth within Urban Growth Areas. If the new easement is within an Urban Growth Area and requires rezoning residential land to another use, but the county cannot accommodate the projected growth over the next 20 years, there would be a land use incompatibility.

New construction requiring ROWs could impact the land use compatibility for adjacent or nearby property owners, including residents, visitors, and businesses. An example of this could include acquiring easements on state trust lands managed by the DNR that are currently being used for agriculture or grazing. The conversion of agricultural land to a non-agricultural use could reduce the overall land use classification below a county's established baseline or target.[9] The requirement for new ROWs could also limit the desirability and productivity of the land, as well as restrict allowable uses for future development of the subject parcel and adjacent properties, particularly in areas with ongoing agricultural or grazing operations. These adverse environmental impacts would begin during new construction and continue through the life of the project. See Section 3.16, Socioeconomics, for a discussion regarding impacts on the underlying lease holder and beneficiaries.

As described in Section 3.14, Recreation, overhead transmission facilities constructed within or adjacent to a designated wilderness area, national park, or state park could result in an adverse environmental impact on this land use.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from incompatibility with land use 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 negligible to high.

Conflict with Relevant Goals and Policies

New construction of overhead transmission facilities could conflict with the goals and policies outlined in relevant land use planning documents, such as county or citywide

[9] Fully Planning Counties are more likely to have programs or initiatives that help to implement the policies in their comprehensive plan. These programs may establish target goals or baselines for certain land use types. For example, King County created the Local Food Initiative, which identifies a target of adding 400 net new acres in food production per year in King County for the next 10 year (King County 2015).

comprehensive plans, SMPs, habitat conservation plans, and active transportation plans. Conflicts with relevant goals and policies could result in a variety of adverse environmental impacts, such as impeding upon planned development areas, special designated areas, or within restricted setback areas. These impacts would likely begin during new construction and continue through the life of the project.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from conflicts with relevant goals and policies 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 negligible to high.

Loss of Function and Value of Shorelines

New construction activities within or adjacent to shorelines could degrade sensitive habitat, ecological processes, and the ecological qualities of the shoreline. Vegetation clearing, foundation construction, and material laydown could cause substantial erosion of soils and sediment to be deposited into waters. Furthermore, new construction activities could limit public access and recreational opportunities and impact the visual character of the shoreline. Adverse environmental impacts could begin during new construction and continue through the life of the project.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from the loss of function and value of shorelines 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 negligible to high.

Loss of Function and Value of Agriculture Land and Rangelands

New construction activities could interfere with existing agricultural and rangeland uses from equipment, laydown and staging areas, and temporary access roads. New construction activities may damage agricultural crops, productivity, and soils. The new construction of overhead transmission facilities could also restrict allowable crop types, such as orchards, hops, and tree farms. Certain farming equipment and irrigation systems, and their maneuverability, could be restricted due to conflicts with overhead lines and towers. Other farming activities, such as aerial spraying via aircraft or field surveying using drones, could also be impacted by the new construction of overhead transmission facilities. These activities could have adverse environmental impacts on the function and value of the land, ultimately affecting its viability for ongoing agricultural or grazing operations.

Adverse environmental impacts on rangelands could also include disrupting the movement of livestock and limiting areas for livestock grazing. Adverse environmental impacts from the new construction of overhead transmission facilities could begin during construction and continue through the life of the project.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from the loss of function and value of agricultural land and rangelands 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.

Conflict with Military Utilized Airspace and Civilian Airfield Operations

The new construction of overhead transmission facilities could interfere with or degrade military utilized airspaces and civilian airfield operations. Military utilized airspace and civilian airfields are located throughout the state and have varying requirements and regulations. Generally, safety regulations specify that all aircraft must operate at least 500 feet away from the tallest structure.[10] Therefore, siting and constructing overhead transmission facilities near lower-altitude military utilized airspaces or civilian airports could create a vertical obstruction that limits an aircraft's maneuverability or military training route boundaries. These adverse environmental impacts could begin during new construction and continue for the life of the project.

New construction activities could require the use of helicopters to access the site, deliver materials, and place structures or wires. New construction of overhead transmission facilities and the use of helicopters could interfere with civilian airport operations, military readiness, and low-altitude aircraft training across the state.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from conflicts with military utilized airspace and civilian airfield operations 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.

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),

[10] CFR 91.119 Minimum Safe Altitudes: General.

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 land and shoreline use during new construction:

- Incompatibility with Land Use
- Conflict with Relevant Goals and Policies
- Loss of Function and Value of Shorelines
- Loss of Function and Value of Agricultural Land and Rangelands

Incompatibility with Land Use

Similar to the new construction of overhead transmission facilities, underground transmission facilities could result in direct and indirect adverse environmental impacts on existing land uses. New construction of underground transmission facilities could include ROW clearing, trenching/blasting, material laydown, duct bank and vault installation, backfilling, cable installation, and site restoration. Easements could be required from private property owners or public land administrators, which could result in a land use conflict. The use of outdated parcel, ROW, and easement boundaries could require encroachment on land uses that are incompatible with transmission facilities. As described in Section 3.14, Recreation, transmission facilities constructed within designated wilderness areas would violate the Wilderness Act, thereby resulting in an adverse environmental impact on this land use.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from incompatibilities with land use 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 negligible to high.

Conflict with Relevant Goals and Policies

New construction of underground transmission facilities could conflict with the goals and policies outlined in relevant land use planning documents, such as county or citywide comprehensive plans, SMPs, habitat conservation plans, and active transportation plans. Conflicts with relevant goals and policies could result in a variety of adverse environmental impacts, such as impeding upon planned development areas, special designated areas, or restricted setback areas. It is expected that these

impacts would begin during new construction and continue through the life of the project.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from conflicts with relevant goals and policies 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 negligible to high.

Loss of Function and Value of Shorelines

New construction of underground transmission facilities within or adjacent to shorelines could degrade sensitive habitat, ecological processes, and ecological qualities of the area. The use of horizontal directional drilling is preferred over open trenching, as it generally causes less surface disruption, making it ideal for environmentally sensitive locations. Regardless of the construction method used, visual impacts and public access to shorelines could be impaired.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from the loss of function and value of shorelines 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 negligible to high.

Loss of Function and Value of Agricultural Land and Rangelands

New construction of underground transmission facilities could interfere with agricultural and rangeland uses. Open trenching requires surface disruption and could damage agricultural crops, productivity, and soils. Open trenching could also present an obstacle to farming activities such as seeding, spraying, and harvesting. Using backfill materials or soils from greater depths to restore construction sites could alter the composition of surface soils and lead to less productive crops in the future. Planting deep-rooted shrubs or trees would not be allowed within the ROW of underground transmission facilities, which could restrict allowable crop types. Adverse environmental impacts from the new construction of underground transmission facilities could begin during new construction and continue through the life of the project. Additionally, adverse environmental impacts on rangelands could include disrupting the movement of livestock and limiting areas for livestock grazing.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from the loss of function and value of agricultural land and rangelands

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:

- Loss of Function and Value of Shorelines
- Loss of Function and Value of Agricultural Land and Rangelands
- Conflict with Military Utilized Airspace and Civilian Airfield Operations

Loss of Function and Value of Shorelines

Degradation of sensitive habitat and ecological processes of the shoreline could generally persist throughout operation and maintenance; however, the overall footprint could be reduced to areas only supporting the permanent features of the transmission facility. Periodic maintenance activities within shoreline areas could result in adverse environmental impacts similar to new construction. However, impacts are expected to occur for a shorter duration and be of less severity.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from the loss of function and value of shorelines 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 adverse environmental impacts could range from negligible to medium.

Loss of Function and Value of Agricultural Land and Rangelands

Maintenance of the ROW and access roads could require vegetation removal using a variety of methods, including mechanical removal, hand cutting, and herbicide application. These maintenance activities could interfere with farming operations or activities and livestock grazing. Furthermore, the use of herbicides to control

vegetation along the ROW could impact nearby crop production and interfere with organic farms or other herbicides used by farm workers.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from the loss of function and value of agricultural land and rangelands 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 adverse environmental impacts could range from low to medium.

Conflict with Military Utilized Airspace and Civilian Airfield Operations

Overhead transmission facilities could produce electromagnetic energy that interferes with radar and communication frequencies. The height, angle, type, and number of transmission facilities may influence the loss of radar detection or signal (Jiangong et al. 2018). Other potential conflicts with military utilized airspace and civilian airfields could arise if helicopters are required for maintenance activities, such as routine inspections, vegetation removal, or repairs.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from conflicts with military utilized airspace and civilian airfield operations 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 adverse environmental impacts could range from low to medium.

Underground Transmission Facilities

Similar to overhead transmission facilities, activities for the operation and maintenance of underground transmission facilities would vary based on 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:

- Loss of Function and Value of Shorelines
- Loss of Function and Value of Agricultural Land and Rangelands

Loss of Function and Value of Shorelines

Generally, it is not expected that the normal operation and maintenance of underground transmission facilities to have a permanent adverse environmental impact on shoreline activities. However, if repairs are required, they could have adverse environmental impacts similar to those of new construction. These impacts are expected to be less severe and for a shorter duration.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from the loss of function and value of shorelines 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 medium.

Loss of Function and Value of Agricultural Land and Rangelands

Maintaining the underground transmission facility ROW and access roads could require vegetation removal using a variety of methods, including mechanical removal, hand cutting, and herbicide application. These maintenance activities could interfere with farming operations or activities and livestock grazing. Furthermore, the use of herbicides to control vegetation along the ROW could impact nearby crop production and interfere with organic farms or other herbicides used by farm workers.

Impact Determination: Adverse environmental impacts on land and shoreline use resulting from the loss of function and value of agricultural land and rangelands 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 low to medium.

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 land and shoreline use, including:

- Loss of Function and Value of Shorelines
- Loss of Function and Value of Agricultural Land and Rangelands

- Conflict with Military Utilized Airspace and Civilian Airfield Operations

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 land and shoreline use, including:

- Loss of Function and Value of Shorelines
- Loss of Function and Value of Agricultural Land and Rangelands

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 land and shoreline use during the modification stage:

- Incompatibility with Land Use
- Conflict with Relevant Goals and Policies
- Loss of Function and Value of Shorelines

- Loss of Function and Value of Agricultural Land and Rangelands
- Conflict with Military Utilized Airspace and Civilian Airfield Operations

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 would involve 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 land and shoreline use during the modification stage:

- Incompatibility with Land Use
- Conflict with Relevant Goals and Policies
- Loss of Function and Value of Shorelines
- Loss of Function and Value of Agricultural Land and Rangelands

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.

3.9.3.3 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.

3.9.4 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[11] that are relevant to this resource section are described below:

AVOID-3 – Sensitive Water Features: Avoid impacting areas sensitive to degradation, including adjusting the layout of new transmission facilities to steer clear of sensitive water features.

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

Rationale: Avoiding sensitive water features that are susceptible to degradation from new construction activities, including changes to the water features' physical characteristics (e.g., banks, bathymetry, and substrate[12]), as well as chemical properties. Avoiding these areas helps preserve their structure and function.

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 to reduce adverse environmental impacts on property owners, agricultural landowners, noise, neighboring viewers, and socioeconomics.

AVOID-14 – Civilian Airports and Military Installations: Avoid having equipment or infrastructure near civilian airports, surrounding runway protection zones, special-use airspaces that have a surface-level floor elevation, and the Boardman Geographic Area of Concern.

Rationale: This Avoidance Criterion aims to avoid adverse environmental impacts on designated areas within which some forms of transmission facility development could have an adverse environmental impact on airport and military operations and/or readiness.

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.

[12] A layer of material or surface where an organism could live.

Rationale: This Avoidance Criterion aims to protect 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-20 – Limit Closure of Recreation Resources: Consider closure and restrictions only after other mitigation strategies and alternatives have been explored. Avoid long-term closure and restriction of recreation resources lasting more than 24 months.

Rationale: This Avoidance Criterion establishes the definition of "long-term closure" in relation to adverse environmental impacts on recreation resources from the new construction, operation and maintenance, upgrade, and modification of transmission facilities.

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 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 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:

LSU-1 – Property, ROW, and Easement Verification: All potentially impacted rights-of-way, property boundaries, or easements that haven't been surveyed within five (5) years of project planning, design, or implementation would be reviewed and re-surveyed by a licensed land surveyor.

Rationale: This Mitigation Measure aims to accurately reflect current land tenure and minimize potential conflicts with property owners.

LSU-2 – Coordinate with DNR: Conduct early and ongoing consultation with the Washington Department of Natural Resources (DNR) to address any potential conflicts with DNR-administered lands, including state trust lands.

Rationale: This Mitigation Measure aims to minimize adverse environmental impacts on DNR-administered lands, as some forms of development could have an impact on natural resource areas and socioeconomics.

LSU-3 – Construction Schedule: Develop and distribute a schedule of construction activities to potentially affected farm operators at least three months in advance of ground disturbance.

Rationale: This Mitigation Measure aims to allow sufficient time for agricultural landowners to plan planting, harvesting, or maintenance activities in advance of construction activities.

LSU-4 – Livestock: Coordinate with property owners to keep livestock out of construction areas.

Rationale: This Mitigation Measure aims to reduce mortality to livestock. During new project construction and maintenance activities, it may be necessary to remove cattle or livestock from areas where blasting or heavy equipment operations are taking place.

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

Rationale: This Mitigation Measure aims to restore rangelands to the pre-construction conditions or better.

LSU-6 – Consult with the Northwest DOD Regional Coordination Team: Conduct early and ongoing consultation with the Northwest Department of Defense (DOD) Regional Coordination Team to address any potential conflicts with military utilized airspaces or land uses.

Rationale: This Mitigation Measure aims to mitigate adverse environmental impacts on military operations and testing facilities while fostering the viability of a project-specific application. Coordination with military representatives from the Northwest DOD Regional Coordination Team is a crucial step in the planning and development of transmission facilities and may identify land use conflicts, rules that govern development, and land use concepts specific to the area.

In addition to the above Mitigation Measures, the following Mitigation Measures[13] developed for other resources may be applicable:

H&S-2 – Risk Management Strategy: Develop and apply an electromagnetic field (EMF) and electromagnetic interference (EMI) risk management strategy that regularly considers the consequence, likelihood, and significance of EMF and EMI on public health and existing infrastructure, such as transportation systems, based on emerging research studies and guidelines.

TR-1 – Coordination with Aviation Groups: Work closely with aviation groups and authorities to ensure that transmission facilities are marked on aviation maps and that pilots, both commercial and recreational, are aware of their locations.

TR-2 – Planning Coordination: Consult local authorities regarding planned construction activity near or crossing roads, waterways, railways, and airports.

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

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

Rec-1 – Stakeholder and Agency Coordination: Coordinate with potentially affected federal, state, and local agencies, communities, and recreation-based organizations to mitigate adverse environmental impacts on recreational facilities and during seasonal activities.

Rec-2 – Public Notification of Temporary Closure: Notify appropriate stakeholders of temporary closures at least six months prior to the start of the closure.

Rec-3 – Trail Detours: Consider phased closures or explore alternative solutions such as rerouting trails, creating temporary access points, or scheduling work during off-peak times to minimize disruption.

Rec-4 – Informational Signage and Precautionary Safety Measures: Place informational signage, placards, safety fencing, and other precautionary indicators in areas where transmission facilities are within or adjacent to existing recreational facilities.

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

Rec-5 – Notice to Air Missions: Coordinate with the appropriate aviation authorities, such as the Federal Aviation Administration, to determine the necessity and content of a Notice to Air Missions (NOTAM).

These measures would be implemented in addition to compliance with environmental permits, plans, and authorizations required for transmission facilities.

3.9.5 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 land and shoreline resources that would result from transmission facilities after considering the application of laws and regulations; siting and design considerations, including agency guidance and BMPs; and mitigation and makes a resulting determination of significance for each impact. **Table 3.9-12** summarizes the adverse environmental impacts anticipated for the new construction, operation and maintenance, upgrade, and modification of transmission facilities.

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Table 3.9-12: Summary of Adverse Environmental Impacts, Mitigation Strategies, and Significance Rating for Land and Shoreline Use

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
Land and Shoreline Use – Incompatibility with Land Use	New Construction	New construction activities associated with the development of overhead and underground transmission facilities could require obtaining easements or acquiring land from private property owners or public land administrators. These new easements could restrict a jurisdiction that is Fully Planning under the GMA from being able to meet its projected growth over the next 20 years. These new easements could also reduce the overall land use classification below established baselines or targets for specific land use designations. Using outdated property, ROW, or easement boundaries could lead to encroachments on incompatible land uses, like residences or protected natural areas. The new construction of transmission facilities within new ROWs could limit the desirability and productivity of the land, as well as restrict allowable uses for future development of the subject parcel and adjacent properties, particularly in areas with ongoing agricultural or grazing operations. The adverse environmental impacts could begin during new construction and continue through the life of the project.	**Overhead:** negligible to high **Underground:** negligible to high	▪ **AVOID-13:** Land Use and Zoning Incompatibilities ▪ **AVOID-18:** Exceptional Recreation Assets ▪ **AVOID-19:** Wilderness Areas ▪ **AVOID-20:** Limit Closure of Recreation Resources ▪ **LSU-1:** Property, ROW, and Easement Verification ▪ **LSU-2:** Coordinate with DNR ▪ **LSU-6:** Consult with the Northwest DOD Regional Coordination Team ▪ **Rec-1:** Stakeholder and Agency Coordination ▪ **Rec-2:** Public Notification of Temporary Closure ▪ **Rec-3:** Trail Detours ▪ **Rec-4:** Informational Signage and Precautionary Safety Placards	Less than Significant	Adverse environmental impacts would be addressed through early and ongoing coordination, land use consistency determinations, approval of conditional use permits[14], and site restoration plans. Significant adverse environmental impacts would be reduced to less than significant with the implementation of and compliance with standard BMPS, General Measures, Avoidance Criteria, and Mitigation Measures.
	Operation and Maintenance	Adverse environmental impacts on land and shoreline use resulting from land use conflicts are not anticipated to occur during the operation and maintenance of overhead or underground transmission facilities. The impact is expected to begin during new construction and continue through the life of the project.	**Overhead:** N/A **Underground:** N/A			
	Upgrade	Adverse environmental impacts on land and shoreline use resulting from land use conflicts are not anticipated to occur during the upgrade of existing overhead or underground transmission facilities. The impact is expected to begin during new construction and continue through the life of the project.	**Overhead:** N/A **Underground:** N/A			
	Modification	Modification of overhead or underground transmission facilities could result in expanding or widening an existing ROW or easement to accommodate the facility modification. This could result in adverse environmental impacts on land and shoreline uses similar to those described above for new construction, including incompatibility with land or shoreline uses, reducing the overall land use type, and impacting adjacent property owners. However, it is expected that these impacts could be less for overhead transmission facilities due to shorter construction durations. Similarly, adverse environmental impacts could be less for underground transmission facilities due to the utilization of existing infrastructure.	**Overhead:** negligible to high **Underground:** negligible to high			

[14] A permit that allows the use of land that does not conform to the standard zoning regulations for a given area.

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
Land and Shoreline Use – Conflict with Relevant Goals and Policies	New Construction	New construction of overhead and underground transmission facilities could result in inconsistencies with the goals and policies outlined in relevant county and citywide comprehensive plans, shoreline management programs, or other land use plans and programs. Conflicts with relevant goals and policies could result in a variety of adverse environmental impacts, such as impeding upon planned development areas, special designated areas, or restricted setback areas. Impacts would likely begin during new construction and continue through the life of the project.	**Overhead:** negligible to high **Underground:** negligible to high	▪ **AVOID-13:** Land Use and Zoning Incompatibilities ▪ **LSU-1:** Property, ROW, and Easement Verification ▪ **LSU-2:** Coordinate with DNR ▪ **LSU-6:** Consult with the Northwest DOD Regional Coordination Team	Less than Significant	Relevant county-level comprehensive plan goals and policies are outlined in **Appendix 3.9-1**. With the implementation and compliance with General Measures, such as Gen-3 – Consistency with Policies and Ordinances, probable significant adverse environmental impacts would be reduced to a less-than-significant level.
	Operation and Maintenance	This adverse environmental impact is not anticipated to occur during the operation and maintenance of overhead or underground transmission facilities. The adverse environmental impact is expected to begin during new construction and continue through the life of the project.	**Overhead:** N/A **Underground:** N/A			
	Upgrade	Adverse environmental impacts on land and shoreline use resulting from conflicts with relevant goals and policies are not anticipated to occur during the upgrade of existing overhead or underground transmission facilities. The impact is expected to begin during new construction and continue through the life of the project.	**Overhead:** N/A **Underground:** N/A			
	Modification	Modification of overhead or underground transmission facilities could result in expanding or widening an existing ROW or easement to accommodate the facility modification. This could result in conflicts with relevant planning goals and policies similar to those described above for new construction. Conflicts with planning goals and policies could result in land use adverse environmental impacts, such as impeding upon planned development areas, special designated areas, or within restricted setback areas. However, it is expected that these impacts could be less for overhead transmission facilities due to shorter construction durations. Similarly, adverse environmental impacts could be less for underground transmission facilities due to the utilization of existing infrastructure.	**Overhead:** negligible to high **Underground:** negligible to high			
Land and Shoreline Use – Loss of Function and Value of Shorelines	New Construction	Vegetation clearing associated with the new construction of both overhead and underground transmission facilities could impact sensitive habitats, ecological processes, and the ecological qualities of shoreline areas. Construction equipment and staging areas could degrade visual impacts and limit public access to shorelines.	**Overhead:** negligible to high **Underground:** negligible to high	▪ **AVOID-3:** Sensitive Water Features ▪ **AVOID-13:** Land Use and Zoning Incompatibilities ▪ **AVOID-18:** Exceptional Recreation Assets ▪ **AVOID-19:** Wilderness Areas ▪ **AVOID-20:** Limit Closure of Recreation Resources ▪ **LSU-1:** Property, ROW, and Easement Verification ▪ **LSU-2:** Coordinate with DNR	Less than Significant	With the implementation and compliance with standard BMPs, General Measures, Avoidance Criteria, and Mitigation Measures, probable significant adverse environmental impacts on shorelines would be reduced to a less-than-significant level.
	Operation and Maintenance	Permanent overhead or underground transmission facility features could continue to degrade sensitive habitat and ecological processes of a shoreline through operation and maintenance. Periodic or ongoing maintenance activities could limit public access and recreational opportunities of a shoreline throughout the life of the transmission facility. Overhead transmission facilities within a shoreline area could also have a permanent adverse environmental impact on scenic views.	**Overhead:** negligible to medium **Underground:** negligible to medium			

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
	Upgrade	Upgrades to existing overhead and underground transmission facilities may result in adverse environmental impacts related to the loss of function and value of shorelines similar to those experienced during maintenance activities. These impacts may include the degradation of sensitive habitats, ecological processes, and visual resources. However, because upgrades utilize existing infrastructure and previously disturbed areas, the overall footprint and visibility of changes are generally reduced. Additionally, upgrades could have shorter construction durations because existing infrastructure is being utilized. Therefore, the installation of components or enhancements to existing overhead or underground transmission facilities may still have short term changes to the function or value of shorelines.	**Overhead:** negligible to medium **Underground:** negligible to medium	▪ **Rec-1:** Stakeholder and Agency Coordination ▪ **Rec-2:** Public Notification of Temporary Closure ▪ **Rec-3:** Trail Detours ▪ **Rec-4:** Informational Signage and Precautionary Safety Placards ▪ **Vis-1:** Selection of Finishes ▪ **Vis-3:** Underground Construction		
	Modification	Modification of overhead or underground transmission facilities could result in expanding or widening an existing ROW or easement to accommodate the facility modification. This could result in adverse environmental impacts similar to those expected for new construction. However, it is expected that these impacts could be less for overhead transmission facilities due to shorter construction durations. Similarly, adverse environmental impacts could be less for underground transmission facilities due to the utilization of existing infrastructure.	**Overhead:** negligible to high **Underground:** negligible to high			
Land and Shoreline Use – Loss of Function and Value of Agricultural Land and Rangelands	New Construction	The loss of function and value of agricultural land and rangelands could result from the new construction of overhead and underground transmission facilities. The use of construction equipment and machinery, creating laydown and staging areas, and developing temporary access roads could damage crops, productivity, and soils. New construction activities could also present obstacles for agricultural operations. The maneuverability of farming equipment and irrigation systems could be restricted due to conflicts with overhead lines and towers. Other farming activities, such as aerial spraying via aircraft or field surveying using drones, could also be impacted by overhead transmission facilities. Adverse environmental impacts on rangelands could also include disrupting the movement of livestock and limiting areas for livestock grazing. The new construction of overhead transmission facilities could restrict allowable crop types from growing within the ROW, such as orchards, hops, and tree farms, while underground transmission facilities could restrict deep-rooted vegetation and trees. Adverse environmental impacts from the new construction of overhead transmission facilities could begin during construction and continue through the life of the project.	**Overhead:** low to high **Underground:** low to high	▪ **AVOID-13:** Land Use and Zoning Incompatibilities ▪ **LSU-1:** Property, ROW, and Easement Verification ▪ **LSU-2:** Coordinate with DNR ▪ **LSU-3:** Construction Schedule ▪ **LSU-4:** Remove Livestock ▪ **LSU-5:** Reseed Disturbed Rangelands ▪ **Vis-3:** Underground Construction	Less than Significant	With the implementation of and compliance with standard BMPs, General Measures, Avoidance Criteria, and Mitigation Measures, probable significant adverse environmental impacts would be reduced to a less-than-significant level.

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
	Operation and Maintenance	Routine maintenance of the ROW is expected to keep a clear and accessible area. Maintaining the ROW and access roads could require vegetation removal using a variety of methods. The use of herbicides to control vegetation along the ROW could impact nearby crop production and rangeland grasses and interfere with organic farms or other herbicides used by farmers.	**Overhead:** low to medium **Underground:** low to medium			
	Upgrade	Upgrades to overhead and underground transmission facilities may result in adverse environmental impacts on agricultural and rangelands similar to those experienced during maintenance activities. These impacts may include vegetation clearing, using a variety of methods, such as mechanical removal, hand cutting, and herbicide application. Because upgrades often occur within existing ROWs and utilize established infrastructure, the adverse environmental impacts are generally reduced.	**Overhead:** low to medium **Underground:** low to medium			
	Modification	The degradation in function and value of agricultural and rangelands from the modification of existing overhead and underground transmission facilities could result in adverse environmental impacts similar to those expected for new construction. However, it is expected that these impacts could be less for the modification of overhead transmission facilities due to shorter construction durations. Similarly, adverse environmental impacts could be less for underground transmission facilities due to the utilization of existing infrastructure.	**Overhead:** low to high **Underground:** low to high			
Land and Shoreline Use – Conflict with Military Utilized Airspace and Civilian Airfield Operations	New Construction	Constructing overhead transmission facilities near low-altitude, military utilized airspaces or civilian airfields could create a vertical obstruction that limits an aircraft's maneuverability or its training route boundaries. Additionally, new construction activities could require the use of helicopters to access the construction location to transport crews, deliver materials, and place structures or wires. The use of helicopters for the new construction of overhead transmission facilities could interfere with civilian airport operations, military readiness, and low-altitude aircraft training across the state.	**Overhead:** low to high **Underground:** N/A	▪ **AVOID-14:** Civilian Airports and Military Installations ▪ **LSU-2:** Coordinate with DNR ▪ **LSU-6:** Consult with the Northwest DOD Regional Coordination Team ▪ **Rec-5:** Notice to Air Missions ▪ **H&S-2:** Risk Management Strategy ▪ **TR-1:** Coordination with Aviation Groups ▪ **TR-2:** Planning Coordination	Less than Significant	All transmission facility projects would be required to adhere to FAA regulations. Additionally, with the implementation of and compliance with standard BMPs, General Measures, Avoidance Criteria, and Mitigation Measures, probable significant adverse environmental impacts on military utilized airspace or civilian airfield operations would be reduced to a less-than-significant level.
	Operation and Maintenance	Overhead transmission facilities could produce electromagnetic energy that interferes with radar and communication frequencies. Other potential conflicts could arise if helicopters are required for maintenance activities, such as routine inspections, vegetation removal, or repairs. Adverse environmental impacts on military utilized airspace and civilian airfield operations are not expected to occur during the operation and maintenance of underground transmission facilities.	**Overhead:** low to medium **Underground:** N/A			

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
	Upgrade	Upgrades to overhead transmission facilities may result in adverse environmental impacts on military utilized airspace and civilian airfield operations similar to those experienced during maintenance activities. Conflicts may occur if helicopters are needed to access the site, deliver materials, and place structures or wires. Because upgrades often occur within existing ROWs and utilize established infrastructure, the adverse environmental impacts are generally reduced. Adverse environmental impacts on military utilized airspace and civilian airfield operations are not expected to occur during the upgrade of underground transmission facilities.	**Overhead:** low to medium **Underground:** N/A			
	Modification	Conflicts with military utilized airspace and civilian airfield operations from the modification of overhead transmission facilities could result in adverse environmental impacts similar to those expected for new construction. However, it is expected that these impacts could be less for the modification of overhead transmission facilities due to shorter construction durations. Adverse environmental impacts on military utilized airspace and civilian airfield operations are not expected to occur during the modification of underground transmission facilities.	**Overhead:** low to high **Underground:** N/A			

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.

DNR = Washington Department of Natural Resources; **DOD** = Washington State Department of Defense; **BMPs** = best management practices; **FAA** = Federal Aviation Administration; **GMA** = Growth Management Act**; LSU** = land and shoreline use; **ROW** = right-of-way

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3.9.6 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 3.9-2 presents the environmental sensitivity map for land and shoreline use, identifying areas of varying sensitivity based on the siting criteria described in the following sections.

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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
Victoria
Salish Sea
Bellingham
5020 ft
10762 ft
Skagit River
Mount Vernon
Oak Harbor
Sandpoint
OLYMPIC MOUNTAINS
6027 ft
7967 ft
Everett
Lake Chelan
Franklin D. Roosevelt Lake
Post Falls
Spokane
Seattle
CASCADE RANGE
Kent
Wenatchee
WENATCHEE MOUNTAINS
Hangman Creek
Tacoma
Moses Lake
Olympia
Aberdeen
14411 ft
Yakima River
Yakima
Moscow
Lewiston
Astoria
COASTAL RANGES
Longview
8336 ft
CASCADE RANGE
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
LAND AND SHORELINE USE

YYYY-MM-DD 2025-09-11 CONSULTANT wsp FIGURE 3.9-2

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 SHJP APPROVED AH/SG/ZA

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3.9.6.1 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.

Land Use – Sensitivity Level 2

Figure 3.9-3 illustrates the spatial extent of NPS lands, Washington State parks, DNR-administered lands, soils in the Gridded Soil Survey Geographic (gSSURGO) Database that are designated as prime farmland or have the potential to be prime farmland, and state trust lands managed by the DNR (DNR 2023; NPS 2025; USDA NRCS 2025; WSPRC 2025).

Military Operations – Sensitivity Level 2

Figure 3.9-4 illustrates the spatial extent of military installations listed in **Table 3.9-10** and military bases (DOC 2022d; USDOT 2024). A 0.5-mile buffer was provided around the military installation point dataset. This figure also includes military training routes and special-use airspaces that have a floor elevation ranging from 200 to 500 feet (DOC 2022d, 2022e, 2022f).

Land Use – Sensitivity Level 3

Figure 3.9-5 illustrates the spatial extent of non-military airport locations, non-military airport runways, and federally designated wilderness areas (WSDOT 2024; USFS 2025). A 2-mile buffer was provided around airport point features and runway line features in accordance with runway protection zones.

Military Operations – Sensitivity Level 3

Figure 3.9-6 illustrates the spatial extent of the Boardman Geographic Area of Concern and special-use airspaces that have a surface-level floor elevation (DOC 2022f, 2022g).

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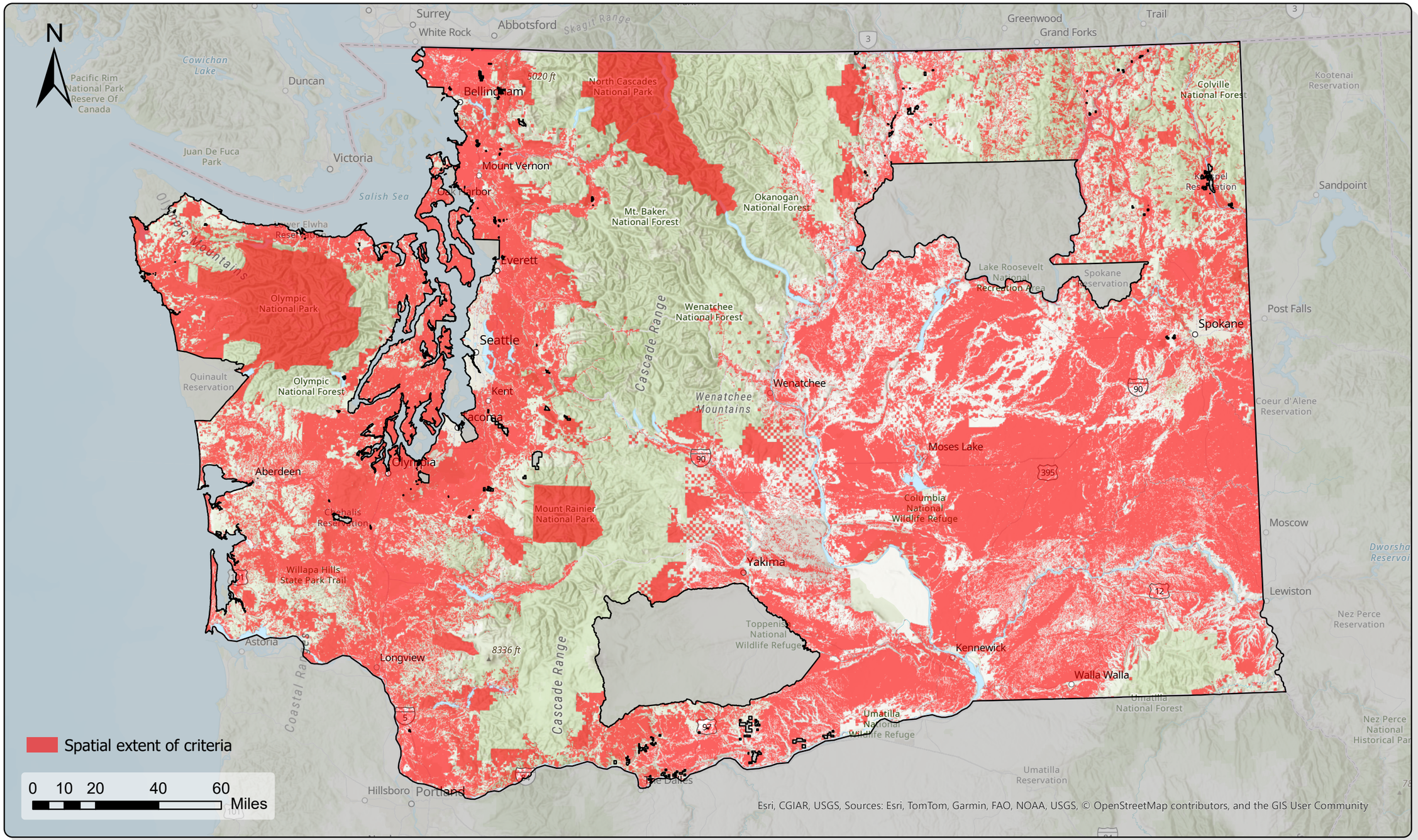
Land Use - Sensitivity Level 2

Washington State Energy Facility Site Evaluation Council



LAND AND SHORELINE USE

Figure 3.9-3

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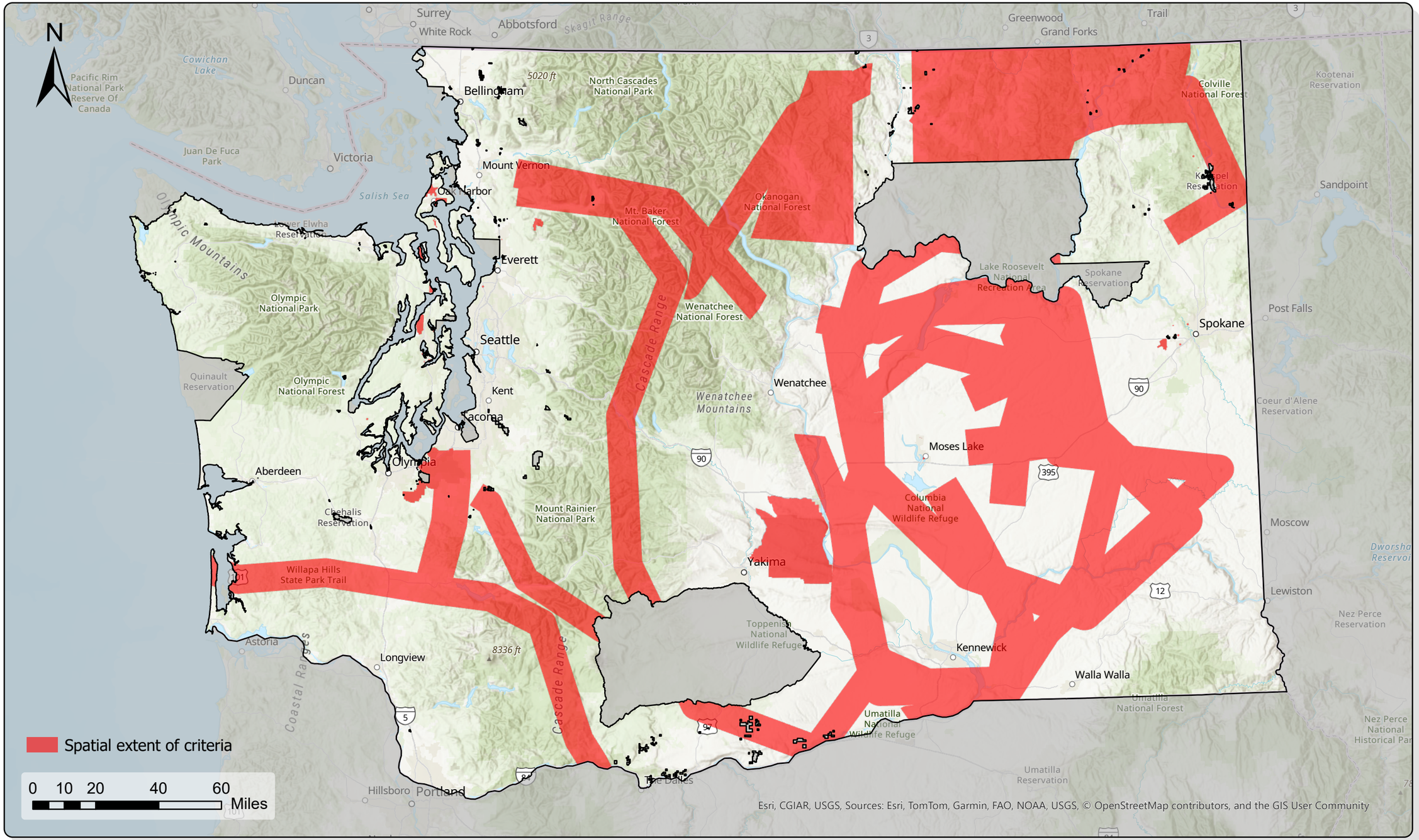
Military Operations - Sensitivity Level 2

Washington State Energy Facility Site Evaluation Council



LAND AND SHORELINE USE

wsp

Figure 3.9-4

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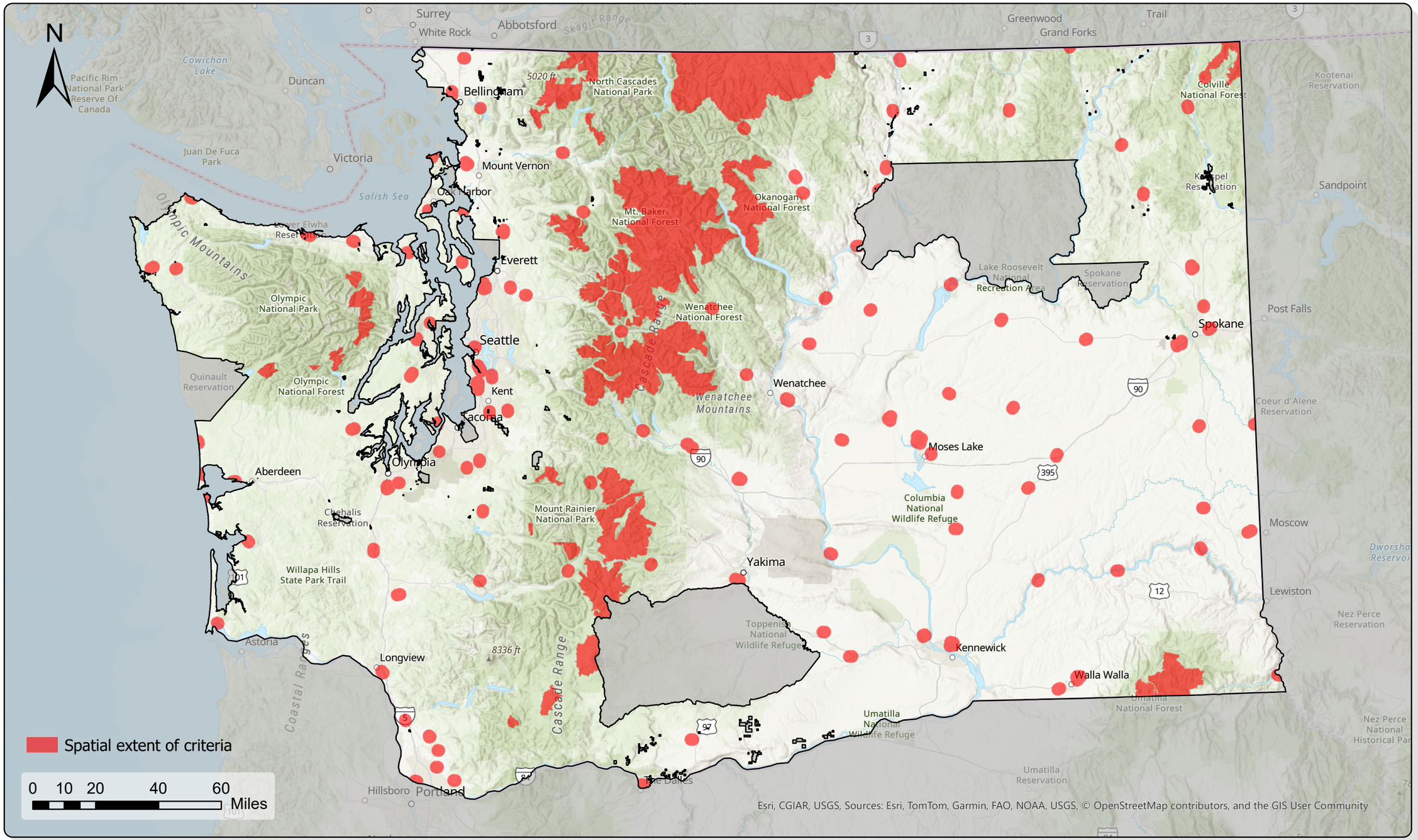
Land Use - Sensitivity Level 3

Washington State Energy Facility Site Evaluation Council



LAND AND SHORELINE USE

Figure 3.9-5

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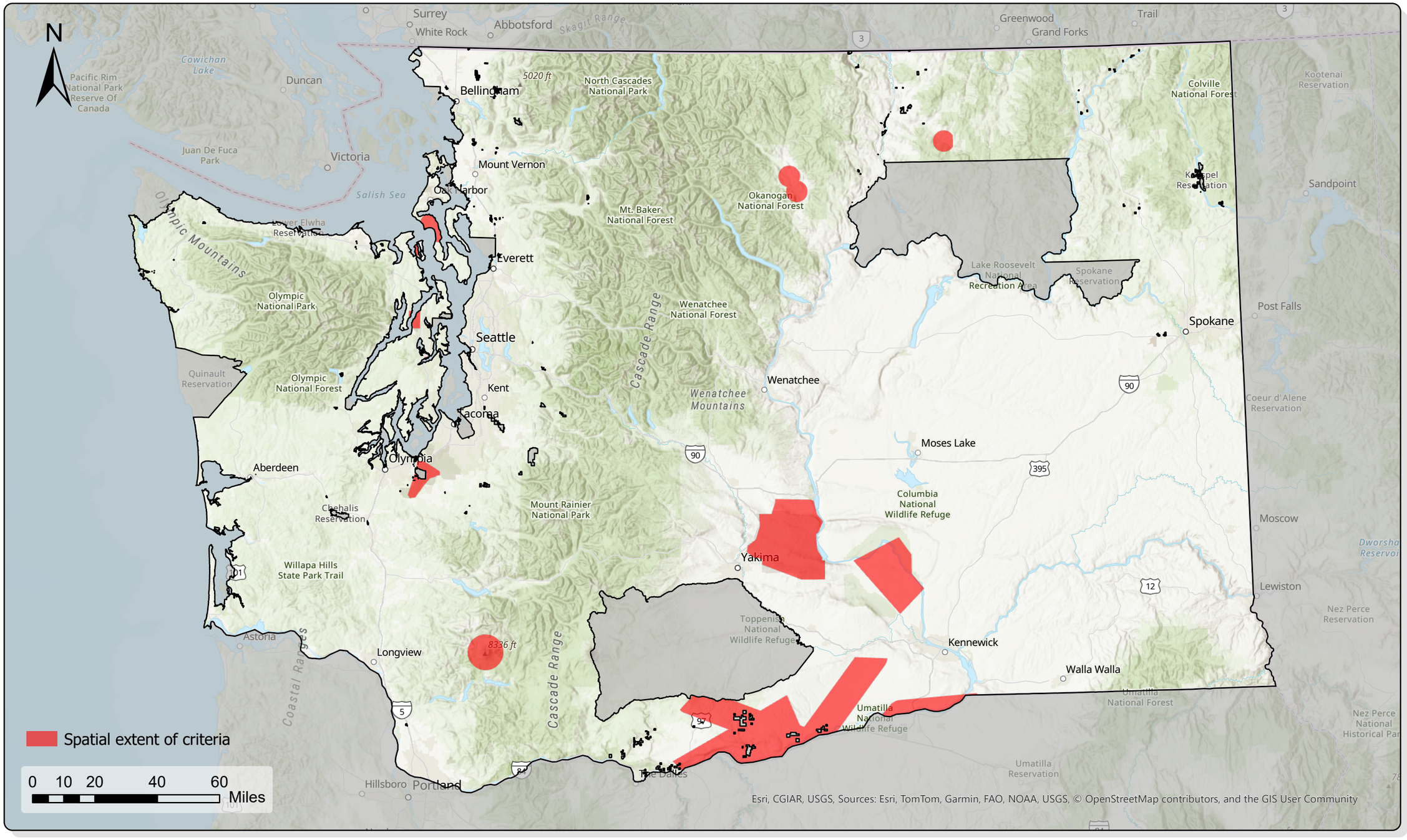
Military Operations - Sensitivity Level 3

Washington State Energy Facility Site Evaluation Council



LAND AND SHORELINE USE

wsp

Figure 3.9-6

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