4.3 WATER RESOURCES

This section provides a project-level analysis of potential impacts on water resources in the study area including streams, rivers, wetlands, and groundwater. The study area for water resources includes areas within about 300 feet of the project. This encompasses the area where water quality and critical areas permits would be required. It also allows for consideration of impacts such as sedimentation or contamination of off-site water resources. The major water resources in the study area are shown in Figure 4.3-1. More detailed maps of the streams, rivers, and wetlands in the study area are included in Section 4.3.5. Impacts on fish and aquatic resources are discussed in Section 4.4, *Plants and Animals*.

Water resources within the study area were assessed primarily using the critical areas delineation reports for the Redmond, Bellevue North, Bellevue Central, and Renton Segments prepared by The Watershed Company for PSE for the Energize Eastside project (The Watershed Company, 2016, 2017). Water resources information for the Richards Creek substation site and the Bellevue South and Newcastle Segments are based on permit applications submitted to the cities of Bellevue and Newcastle (PSE, 2017b and 2017c).

Key Changes from the Phase 2 Draft EIS

- Updated the analysis to reflect PSE's Proposed Alignment.
- Added analysis of the new Newcastle Option 2 route.
- Revised information for the Richards Creek substation site based on new site data.
- Revised and clarified some of the mitigation measures, based on comments received.
- Revised the analysis of potential impacts on water resources based on refined design details, such as pole placement.
- Made minor clarifications throughout based on comments received (such as information on wetland and stream categories).

Additional sources of information on water resources in the study area consulted to describe the affected environment include the following:

- Washington State Department of Ecology (Ecology) Water Quality Assessment and *303(d) List.*
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data.
- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil maps.
- Washington Department of Fish and Wildlife (WDFW) interactive mapping programs (Priority Habitats and Species [PHS] on the Web and SalmonScape) (WDFW, 2016, 2017).
- Washington Department of Natural Resources (WDNR) Forest Practices Application Review System.
- King County's GIS mapping website (iMAP).
- City of Bellevue, Storm and Surface Water System Plan (City of Bellevue, 2016a).
- Critical areas GIS datasets and mapping websites and aerial imagery for the study area.

The resource protection policies and requirements of the municipalities within the study area, identified in the Phase 1 Draft EIS (Chapter 5, Water Resources), were reviewed for completeness and current relevance. Information sources are primarily from the appropriate community comprehensive plans, and regulations and codes for critical areas and shoreline management.

Source: King County, 2015; Ecology, 2014; FEMA, 2016; Kirkland, 2015; Redmond, 2015; Sammamish, 2015; Issaquah, 2015; Newcastle, 2015; Renton, 2015; Bellevue, 2015.

Figure 4.3-1. Water Resources in the Study Area

4.3.1 Relevant Plans, Policies, and Regulations

Water resources in the study area are managed by the City of Bellevue, City of Newcastle, City of Redmond, and City of Renton. Although the study area includes unincorporated land within the jurisdiction of King County, no water resources are in such areas. Federal and state regulations also apply. The applicable plans, policies, and regulations are described generally in the Phase 1 Draft EIS (see Section 5.2). No new state or federal regulations have been adopted since publication of the Phase 1 Draft EIS. The City of Newcastle adopted an update to its critical areas regulations in May 2016 (Newcastle Municipal Code Chapter 18.24).

Methods for Studying the Affected Environment

The EIS Consultant Team collected maps and other information available from the Partner Cities, King County, and Washington State to describe existing water resources. Technical reports for critical areas were reviewed to characterize resources in the study area.

Any impacts on streams or wetlands must comply with critical areas ordinances of the Partner Cities and King County. Critical areas ordinances typically restrict activities in streams and wetlands, require buffers around streams and wetlands to protect their functions and values, and prescribe mitigation for impacts. Appendix D summarizes the critical area requirements for the Partner Cities and King County.

The City of Redmond and the City of Renton have designated *wellhead protection areas* to protect aquifers that provide their drinking water. The wellhead protection requirements are similar for both cities and generally restrict the type of activity or land use that can occur in a wellhead protection area and place limits on the type and amount of *hazardous materials* that can be stored in those areas (RZC 21.64.050 and RMC 4-3-050). The City of Bellevue and the City of Newcastle do not have critical aquifer recharge or wellhead protection areas.

4.3.2 Existing Water Resources in the Study Area

Existing water resources in the study area include streams and rivers, wetlands, and groundwater, as described below by project component for PSE's Proposed Alignment. Some of the streams and the Cedar River have Federal Emergency Management Agency designated floodplains. However, any poles placed in the floodplain would not obstruct flood flows or alter drainage, so impacts on floodplains are not described further.

4.3.2.1 Streams and Rivers

The study area includes several streams and the Cedar River. Most major streams, including Kelsey Creek, Coal Creek, and May Creek, flow generally from east to west and drain to Lake Washington. Streams in the Redmond and Bellevue North area, including Willows Creek, drain to Lake Sammamish or the Sammamish River. Streams in the study area fall under the jurisdiction of the City of Bellevue, City of Newcastle, City of Redmond, or City of Renton. Kelsey Creek in the City of Bellevue and Cedar River in the City of Renton are Shorelines of the State and regulated under each jurisdiction's Shoreline Master Program (see Section 4.1 and Appendix B-3 for additional discussion of the Shoreline Master Programs).

Table 4.3-1 summarizes the streams within the existing corridor for PSE's Proposed Alignment, including information on the stream classification and required stream buffer according to the Partner Cities' critical areas requirements (see Appendix D). Information about stream crossings is based on data collected by The Watershed Company (2016 and 2017), as well as the permit applications for

Bellevue and Newcastle (PSE, 2017b, 2017c). The table uses the same naming convention as The Watershed Company reports for unnamed tributaries. Additional streams may be identified as part of the permitting process. For all streams, PSE would comply with mitigation requirements in accordance with applicable critical area regulations.

Table 4.3-1. Streams in the Study Area

Stream	Stream Type[1]	Required Buffer (feet)
Richards Creek Substation Site – Two streams are on or adjacent to the Richards Creek substation site. Stream A is a seasonal stream that flows through Wetland C and into Wetland A. Stream C flows along the west edge of the site and is crossed by the existing access road.		
Stream A	Type N	50
Stream C	Type F	100
Redmond Segment – The transmission line crosses Willows Creek and several of its tributaries at the north end of the Redmond Segment. Willows Creek flows east to the Sammamish River. (Note: PSE has proposed a project to improve flow and habitat conditions in Willows Creek, south of the Sammamish substation.)		
Willows Creek (three crossings)	II	150
Three Willows Creek tributaries	II (fish access blocked by culverts)	150
Other Willows Creek tributaries	III	100
Bellevue North Segment – The transmission line crosses one unnamed tributary of Valley Creek.		
Unnamed tributary of Valley Creek	Type N	50
Bellevue Central Segment, Revised Existing Corridor Option - The Bellevue Central Segment is located mostly in the Kelsey Creek drainage, with a small portion in the Richards Creek drainage. Richards Creek flows into Kelsey Creek just south of the Lake Hills Connector. Kelsey Creek is a Shoreline of the State, but this segment is not located in the shoreline jurisdiction.		
Kelsey Creek	Type F	100
Kelsey Creek tributaries EB02 to EB05, EB10, EB11	Type F	25
Kelsey Creek tributaries EB9, EB12 to EB14	Type N	50
East Creek	Type F	100
Other Richards Creek tributaries	Type F	100

Stream	Stream Type[1]	Required Buffer (feet)
Bellevue South Segment, Revised Willow 1 Option – The Bellevue South Segment crosses the East Creek, Sunset Creek, and Coal Creek drainages.		
Unnamed streams MB01, MB03	Type N	50
Unnamed stream MB01	Type N	25
Unnamed streams JB02, JB04, JB05 (Coal Creek), MB02	Type F	100
Newcastle Segment – The Newcastle Segment crosses May Creek and a small seasonal drainage that flows to Lake Boren.		
Unnamed streams MN01, MB01	Type Ns	25
May Creek	Type F	100
Renton Segment – The Renton Segment crosses four stream reaches, including the Cedar River, Honey Creek, Ginger Creek, and an unnamed tributary to the Cedar River. The Cedar River is a Shoreline of the State.		
Cedar River	Type S, Shoreline	100
Honey Creek	Type F	115
Ginger Creek	Type Np	75
Unnamed tributary of Cedar River	Type Ns	50

[1] Stream types are based on fish use and are classified by the Partner Cities in their critical areas ordinances. Redmond classifies streams as Class I, II, II, and IV. The other cities use the Washington Department of Natural Resources system of Type S, F, N, and O. See Appendix D for additional information on stream types and buffer requirements.

Source: The Watershed Company, 2016 and 2017.

4.3.2.2 Wetlands

Wetlands in the study area were delineated as part of the critical areas assessments conducted by The Watershed Company in 2016 and 2017, as well as the permit applications for Bellevue and Newcastle (PSE, 2017b, 2017c). The Watershed Company delineated wetlands generally 25 feet on either side of the existing corridor. In some areas, a wider study area was used based on conditions at the site.

Table 4.3-2 summarizes the wetlands within PSE's Proposed Alignment, including information on the wetland classification and required wetland buffer according to the Partner Cities' critical areas requirements (Appendix D). Information in the table is based on data collected by The Watershed Company (2016 and 2017), as well as the permit applications for Bellevue and Newcastle (PSE, 2017b, 2017c). The table uses the same naming convention for wetlands as The Watershed Company reports. Note that the 2017 report changed the names of the wetlands at Richards Creek; the table shows the 2017 name and notes the former name in parenthesis. Additional wetlands may be identified as part of the permitting process. For all wetlands, PSE would comply with mitigation requirements in accordance with applicable critical area regulations.

Table 4.3-2. Wetlands in the Study Area

Wetland	Wetland Category[1]	Required Buffer (feet)
Richards Creek Substation – Five wetlands are on or adjacent to the Richards Creek substation site[3].		
Wetland A (formerly Wetland BC)	Category III	110
Wetland B (formerly Wetland E)	Category III	60
Wetland C (formerly Wetland A)	Category III	110
Wetland D (formerly Wetland FG)	Category II	110
Wetland H (formerly Wetland JB01)	Category II	110
Redmond Segment – Wetlands in the Redmond Segment are all north of Redmond Way. The wetlands are adjacent to Willows Creek and several of its tributary streams, although wetland hydrology is provided primarily by groundwater seeps.		
Wetland ARDE8 (Sammamish Substation)	Category II	300
Wetlands CR01, CR02, CR03, CR04	Category III	150
Bellevue North Segment – Two wetlands were identified in the Bellevue North Segment. One is adjacent to Valley Creek, between Bellevue Golf Course and Bridle Trails State Park. The other wetland is near the south end of the segment, adjacent to SR 520, and is primarily supported by groundwater seeps.		
Wetland A (Overlake Farms)	Category III	60
CB01	Category III	60
Bellevue Central Segment, Revised Existing Corridor Option – Twenty-three wetlands were identified along the Existing Corridor Option, including a large wetland complex along both sides of the Lake Hills Connector roadway. The ten wetlands north of the Lake Hills Connector are small, disturbed wetlands, frequently associated with small streams and typically supported by groundwater seeps. Most of the wetlands south of the Lake Hills Connector are small, disturbed wetlands in depressions, swales, or breaks in slopes; some are associated with small stream channels in the area.		
Wetlands EB17, BC, FG	Category III	110
Wetlands EB01, EB02, EB03, EB04, EB06, EB08, EB09, EB10, EB13, EB15, EB16, EB19, EB20, EE	Category III	60
Wetlands EB05, EB11, EB12	Category IV	40
Wetlands EB07, EB14, EB18	Category IV	--[2]

Wetland	Wetland Category[1]	Required Buffer (feet)
Bellevue South Segment, Revised Willow 1 Option – Thirteen wetlands were identified along the Bellevue South Segment. These wetlands are associated with small streams crossing the existing corridor, as well as several larger wetland complexes associated with East and Coal creeks.		
Wetland JB08	Category III	110
Wetland MB01	Category III	60
Wetlands MB04, JB04, A (Somerset), D (Somerset), E (Somerset)	Category IV	40
Wetlands JB02, JB03, JB05, MB02, MB03, C (Somerset)	Category IV	--[2]
Newcastle Segment – Two small wetlands were identified in the Newcastle Segment. One is a depressional wetland west of 129th Avenue SE and is supported by groundwater. The other is north of SE 95th Way and is supported by groundwater and surface water.		
Wetland MN01	Category III	60
Wetland MN02	Category III	60
Renton Segment – One wetland was delineated in the Renton Segment, near its south end. It is primarily supported by groundwater, supplemented by surface water and precipitation.		
Wetland NR01	Category III	100

[1] Wetlands were rated using either Ecology's 2014 Wetland Rating System (Hruby, 2014) or the 2004 rating system (Hruby, 2004). The categories are defined by the Partner Cities in their critical areas ordinances. See Appendix D for additional information on wetland categories.

[2] Category IV wetlands less than 2,500 square feet are not regulated by the City of Bellevue.

[3] For this Final EIS, the wetland descriptions have been updated based on the delineation report prepared by The Watershed Company in June 2017. The delineation report used different names for the wetlands than were used for the 2016 reconnaissance-level report.

Source: The Watershed Company, 2016 and 2017.

4.3.2.3 Groundwater

Geotechnical studies found groundwater along the existing corridor at depths ranging from less than 10 feet to approximately 60 feet (GeoEngineers, 2016). Groundwater was found at or near the surface on the Redmond Segment in the wetland area south of the Sammamish substation and in the vicinity of the Richards Creek substation.

Within the study area, Redmond and Renton utilize groundwater for a portion of their water supply. The north end of the corridor is within Redmond's Wellhead Protection Zone 4 (RZC 21.64.050). Development within Wellhead Protection Zone 4 must comply with BMPs for water quality and quantity approved by Redmond's Technical Committee (RZC 21.64.050D.4.b). The south end of the corridor is in Zone 2 of the City of Renton's Wellhead Protection Area (RMC 4-3-050). The City of Renton regulates the storage, handling, treatment, use, or production of hazardous materials in this zone. Construction within Zone 2 must comply with additional construction requirements in the City of Renton Municipal Code 4-4-030.C8. The proposed transmission line is not in a King County Groundwater Management Area (King County, 2016). Bellevue maintains four wells used for emergency supply. These wells are all located east of 148th Avenue NE and would not be affected by the transmission line (City of Bellevue, 2016b). Bellevue also has several other wells that are held in reserve for emergency use. These wells are also well outside the transmission line corridor.

4.3.3 Long-term (Operation) Impacts Considered

Potential long-term impacts on water resources include increased stormwater runoff from new impervious surfaces or permanently cleared areas, soil compaction that could reduce groundwater infiltration, contamination of surface water or groundwater from hazardous materials, and loss of stream function or wetland or buffer acreage and function. The scale and proximity of water resources determined the intensity of potential impacts. The analysis considers potential mitigation measures to minimize or eliminate project impacts on water resources. For this analysis, the magnitude of project-related impacts is classified as being either less-than-significant or significant, as described below.

- **Less-than-Significant** - Impacts on water resources are considered less-than-significant if project activities would:
    - Cause minor permanent alterations to or disturbances of water resources;
    - Allow minimization or full mitigation of impacts;
    - Be in compliance with permit requirements; or
    - Be largely avoided by the implementation of BMPs.

  This would also include moderate and temporary changes in water quality conditions in adjacent water bodies or groundwater.

Methods for Analyzing Long-term Impacts

The analysis of potential long-term or operational impacts on water resources in the study area is based primarily on long-term or ongoing activities, such as vegetation management, facility maintenance, and other potential ground- or water-disturbing events that would occur during operation of the project. The analysis also includes the potential effects of permanent changes in the study area on adjacent water resources. The analysis considers stormwater runoff from impervious and/or disturbed surfaces, leaks or spills from heavy equipment needed for corridor maintenance activities, and the potential use of chemicals for invasive plant species management.

- **Significant** – Impacts on water resources are considered significant where project activities cannot be reduced through mitigation and would cause any of the following:
    - Permanent or long-term alteration of aquatic habitat;
    - Adverse changes to the quality or quantity of surface water or groundwater resources; or
    - Long-term impairment of the ecological functions of supporting fish, wildlife, or wetland plant species in the study area.

4.3.4 Long-term Impacts: No Action Alternative

Under the No Action Alternative, PSE's existing maintenance activities and programs would continue as described in Chapter 2, with a potential for only periodic and small-scale impacts on water resources. Environmental requirements regarding the protection of these resources would apply to PSE's activities. Activities under the No Action Alternative would be limited in scale and frequency, typically consisting of maintenance of the transmission facilities, such as pole replacement and periodic vegetation maintenance activities along the existing transmission line corridor. Any pole replacement would occur in place and with similar poles. Vegetation maintenance activities would include vegetation removal, but would not typically require ground clearing that would expose soils and increase erosion. Therefore, nearby water resource features (rivers, streams, and wetlands) would not be affected. None of these activities would have a significant impact on stormwater runoff, surface water quality or quantity, or groundwater.

4.3.5 Long-term Impacts: PSE's Proposed Alignment

4.3.5.1 Impacts Common to all Components

Similar to the analysis presented in the Phase 2 Draft EIS, in general, long-term impacts on water resources would be less-than-significant under PSE's Proposed Alignment. All impacts would be minor and could be fully mitigated through compliance with applicable regulations and implementation of BMPs. The types of impacts associated with the transmission line and poles would be similar for all segments.

The installation of poles, permanent access roads, or other transmission facilities in wetlands, streams, or their buffers could lead to a loss of acreage or function. PSE has the flexibility to move the poles by up to 25 feet in either direction along the corridor and would not place new poles directly in streams. Similarly, PSE would avoid locating poles in wetlands to the extent feasible. However, in some places it may not be possible to avoid putting new poles in wetlands or wetland buffers. PSE would not locate permanent access roads in wetlands. Any poles in wetlands or buffers would require compliance with the Partner Cities' critical areas ordinance, which require avoidance and mitigation. Placement of overhead lines crossing the Cedar River would require compliance with the shoreline management ordinance. The size of disturbance and the permanent reduction in wetland or buffer acreage would be small (generally less than 25 square feet per pole). In some locations, replacement poles may require larger footings than the existing poles, resulting in a small net increase in disturbance within wetland buffers. The impacts would be minor and could be fully mitigated through compliance with applicable regulations. Therefore, impacts would be less-than-significant. Impacts from vegetation clearing in floodplains, wetlands, and in buffers for wetlands and streams are described in more detail in Section 4.4, *Plants and Animals*.

The new 230 kV transmission lines would require tree removal along the existing corridor as described in Section 4.4.1.1, *Plants and Animals.* PSE's vegetation management plan (described in detail in Section 4.4.1.1) would prevent tall trees and noxious weeds from growing in the new and existing corridors. Low vegetation would be allowed to grow in the corridor, and there would be no areas of exposed soil following construction. Therefore, erosion and sedimentation would not increase, and no long-term impacts on water quality are expected; impacts would be less-than-significant.

Permanent access roads for the maintenance of poles and transmission lines (and the access road to the new substation, as described below) would create increased pollution-generating impervious surfaces. Runoff from these surfaces could affect water quality; however, PSE will rely on existing roads to access the corridor to the extent possible, and any new permanent roads would be short segments connecting to existing roads. New roads would include stormwater treatment systems that meet state and local requirements. Therefore, impacts of these roads on stormwater runoff and water quality would be less-than-significant.

Maintenance of poles would be limited to regular upkeep and replacement. Poles would be replaced in the same location with a similar type of pole. Access roads to poles and transmission lines would also be maintained. These maintenance activities would likely include grading and pavement repair, which would comply with applicable regulations. Therefore, they would have a less-than-significant impact on water resources.

The presence of maintenance vehicles and equipment in the vicinity of streams and wetlands could result in accidental spills of fuel, oil, hydraulic fluid, and other chemicals. These fluids could reach wetlands, streams, or groundwater if spills are not controlled. Maintenance contractors would be required to develop *spill prevention and control plans* prior to issuance of the clearing and grading permit, that would be implemented to minimize impacts, so these impacts would be less-than-significant.

Once installed, poles would not affect stormwater runoff, groundwater infiltration, or shallow groundwater flow. The new poles would be steel and would not generate substances that could contaminate surface or groundwater. Where old poles treated with a wood preservative are removed and replaced with steel poles, a potential source of groundwater and water contamination would be removed.

The completed transmission line would not generate any pollutants that would affect existing Ecology 303(d) listings for streams and rivers along the new and existing corridors. The project would not generate sediment that would increase *turbidity*. Tree removal in riparian areas could increase stream temperatures and affect 303(d) listings. Avoiding tree removal by pruning or topping trees in compliance with critical areas regulations would help maintain shading and reduce temperature increases.

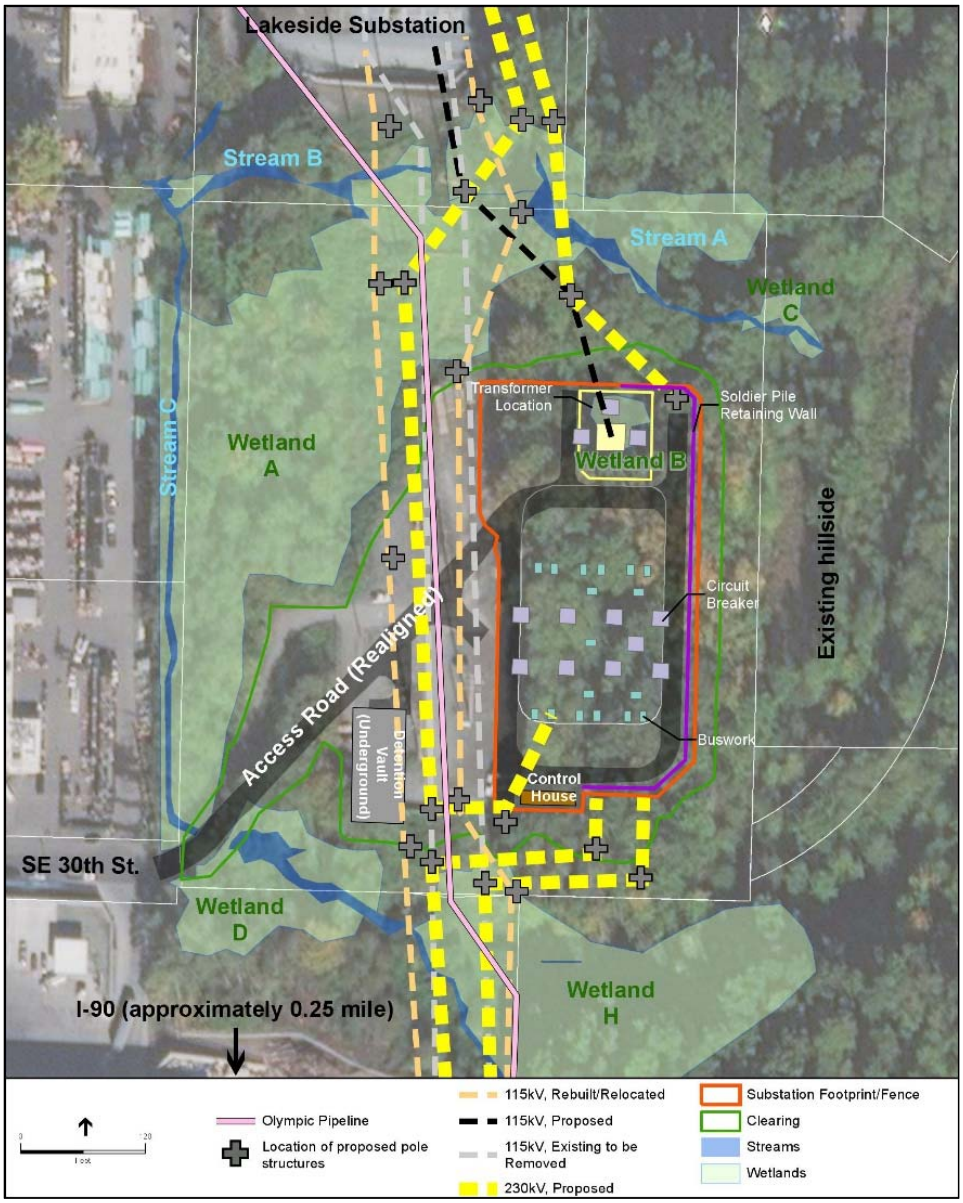
The following pages summarize the potential impacts on water resources for PSE's Proposed Alignment, presented for the Richards Creek substation and by segment. For the Redmond, Bellevue North, Bellevue Central, and Renton Segments, the analysis included a review of refined project design details for PSE's Proposed Alignment, with results revised relative to the Phase 2 Draft EIS to reflect the new information. For these segments, the new information and analysis have not altered the conclusions presented in the Phase 2 Draft EIS regarding significant impacts on water resources.

For the Richards Creek substation site and the Bellevue South and Newcastle Segments, the analysis included a review of the project design as presented in the permit applications submitted to Bellevue and Newcastle (PSE, 2017b and 2017c, respectively). The results below have been revised relative to the Phase 2 Draft EIS, incorporating the more detailed information in the permit applications on pole locations and critical areas (including wetlands, streams, and their buffers). The conclusions regarding significant impacts on water resources, however, are the same as presented in the Phase 2 Draft EIS.

4.3.5.2 New Richards Creek Substation

New facilities at the Richards Creek substation would be sited to avoid the wetlands and streams on-site to the extent possible. A large wetland (Wetland A) is on the north and west sides of the site, and Wetland B is on the site. Three smaller wetlands (Wetlands C, D, and H) are outside the property boundary. Stream C is west and south of the site and Stream A is north of the site.

The fenced portion of the main substation facility would not be in Wetland A or D, but the realigned access road and the north portion of the substation (including a large cleared area) would be within their 110-foot buffers (see Figure 2-1). Wetland B would be filled to accommodate the substation facilities. Ten poles would be located in Wetland A or its buffer, and approximately six poles would be in Wetland H or its buffer. No impacts would occur to Wetland C or its buffer. Impacts on the wetlands and buffers would be mitigated in compliance with City of Bellevue requirements, which include on-site buffer enhancement.



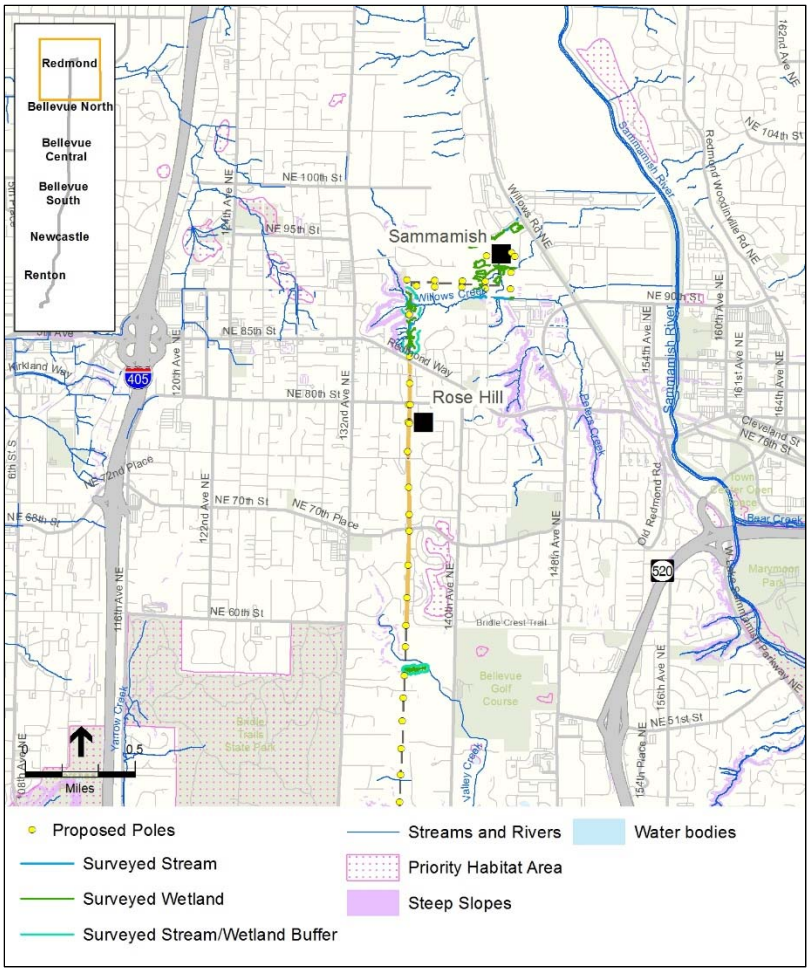
The realigned access road would cross Stream C. As part of the mitigation proposed at the Richards Creek substation site, PSE would realign upstream and downstream sections of the stream and replace the existing culverts at the road crossing. The stream realignment, larger culverts, and stream enhancement (channel improvements, installation of woody debris, and vegetation planting) would increase streamflow conveyance capacity, improve sediment transport, reduce flooding on adjacent properties, improve fish passage, and improve habitat conditions. Additional mitigation for impacts on Stream C would need to comply with City of Bellevue Critical Areas Ordinance standards for stream crossings and restoration (see Appendix D). A stormwater detention vault would be constructed within the buffers for Wetland A and Stream C.

Some of the site is currently covered with gravel, which is typically considered an impervious surface by regulatory agencies. The majority of the 2-acre site would be covered with gravel to prevent water from ponding near the transformers and other facilities. The gravel areas would not be pollution-generating surfaces. The realigned access road (approximately 24 feet wide and 500 feet long) would be paved with asphalt and would be a new pollution-generating surface. Runoff from the site would be controlled with a new stormwater treatment system, including the detention vault, that would meet the City of Bellevue stormwater and clearing and grading codes (LUC 24.06 and LUC 23.76). Impacts of the new substation on water resources would be minor because PSE would comply with applicable federal, state, and local regulations to protect water resources and would implement appropriate BMPs to protect nearby water bodies.

- **Stormwater Runoff.** Increased impervious surface could increase runoff from the site, but all runoff would be treated and detained in compliance with City of Bellevue requirements, so impacts on water resources would be less-than-significant.
- **Groundwater Infiltration.** The amount of increased impervious surface would not affect groundwater infiltration because the area of impervious surface is relatively small and is not likely to reduce infiltration. Impacts would be less-than-significant.
- **Streams and Buffers**. The access road would cross Stream C, and some facilities would be located within its buffer. Impacts would be less-than-significant because required mitigation would protect the stream from instream work associated with the culvert replacement. The new culvert at Stream C and stream enhancement would increase streamflow capacity.
- **Wetlands and Buffers**. The new substation and associated facilities would impact the buffers of Wetlands A, D, and H, and Wetland B would be filled. Poles would be installed in Wetlands A and H. Required mitigation would protect the wetland functions and values. Impacts would be less-than-significant.

4.3.5.3 Redmond Segment

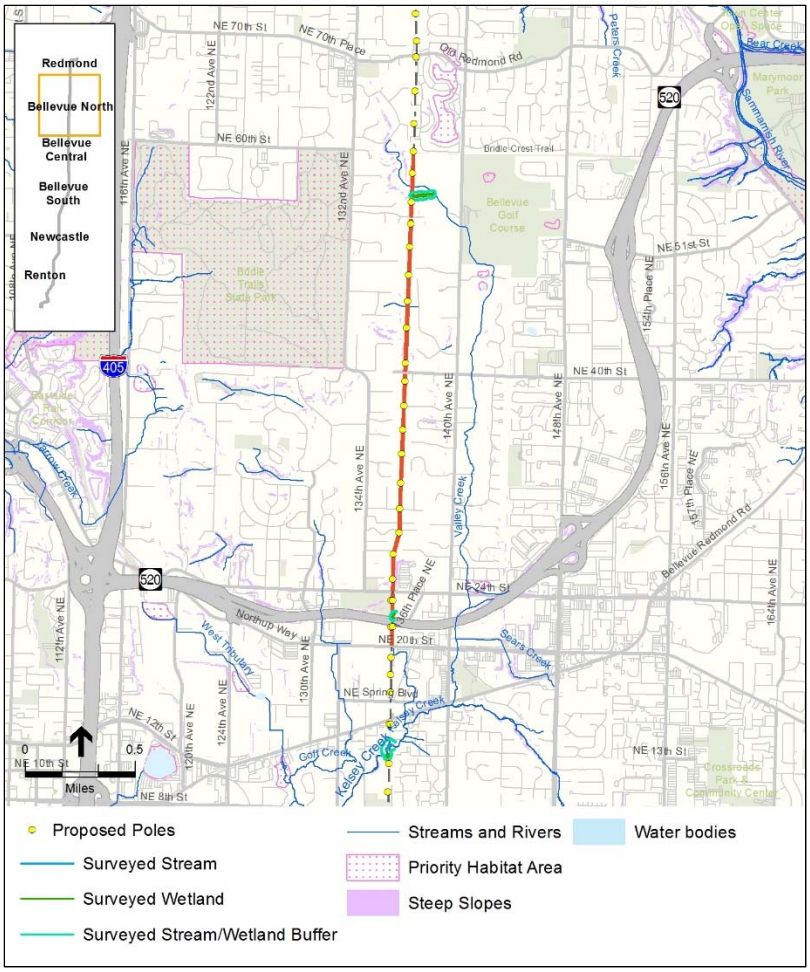
In general, impacts on water resources would be less-than-significant along this segment because it follows the existing corridor and would cause only minor alterations to or disturbances of water resources.



- **Streams and Buffers.** The transmission line would continue to cross Willows Creek and its tributaries, but the crossings would not cause long-term impacts on the streams or buffers. No poles would be located in streams or buffers. The Energize Eastside project would not interfere with PSE's proposed Willows Creek habitat improvement project, south of the Sammamish substation.
- **Wetlands and Buffers.** There is one Category II and three Category III wetlands along this segment with relatively large buffers. There are currently four poles in the wetland complex along Willows Creek, and that number would remain the same. Therefore, there would be no additional long-term impact on wetlands. The number of poles in buffers would be reduced from eight to seven and the buffer would be enhanced, resulting in a beneficial impact.

4.3.5.4 Bellevue North Segment

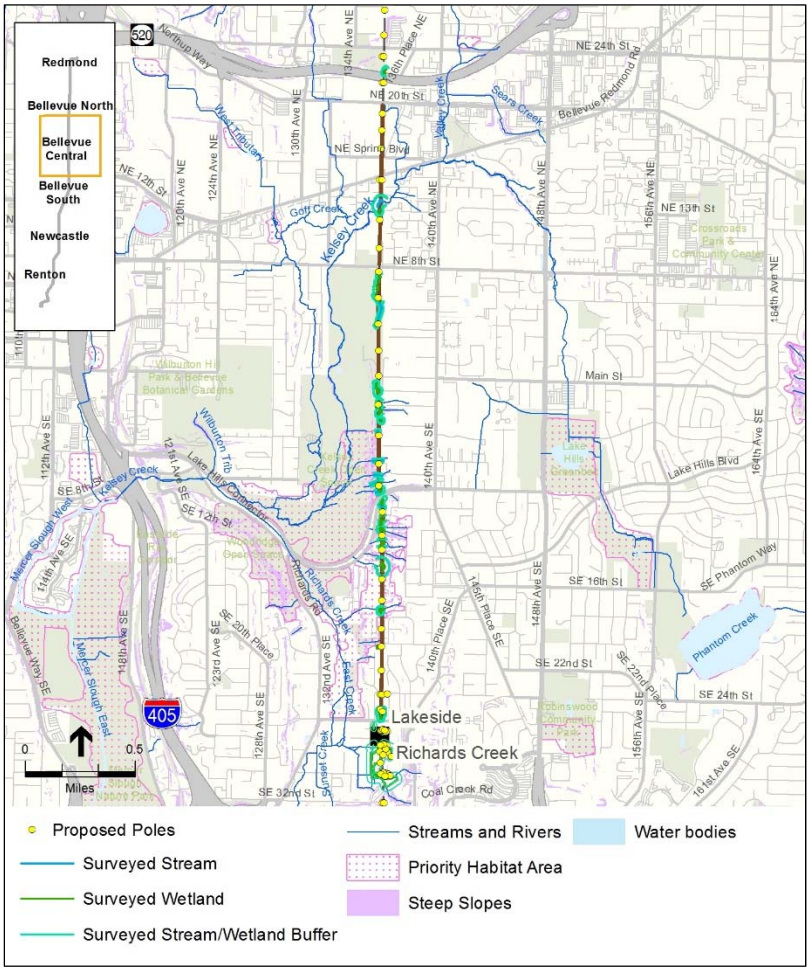
In general, impacts on water resources would be less-than-significant along this segment because it follows the existing corridor and would cause only minor alterations to or disturbances of water resources.



- **Streams and Buffers.** None of the poles would be in streams or stream buffers, so no impacts would occur.
- **Wetlands and Buffers**. None of the poles would be in wetlands or buffers; therefore, no impacts would occur.

4.3.5.5 Bellevue Central Segment (Revised Existing Corridor Option)

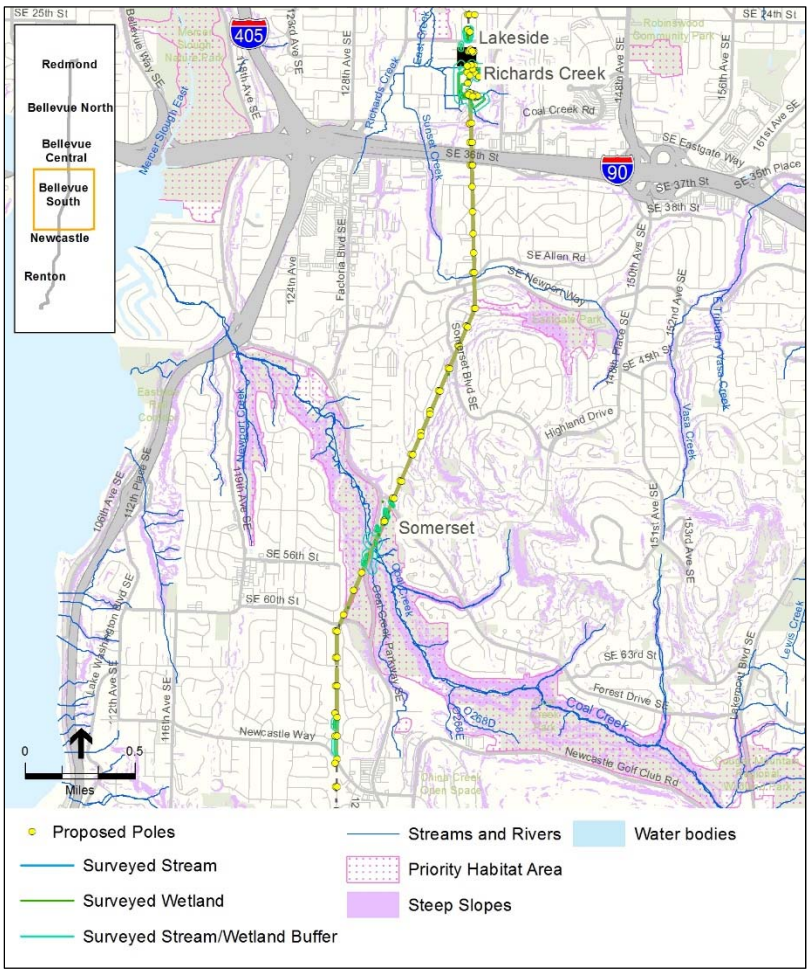
PSE's Proposed Alignment for the Bellevue Central Segment follows the route of the Existing Corridor Option as described in the Phase 2 Draft EIS, with refined design details for pole types and placement. Impacts on water resources would be less-than-significant along this segment because it follows the existing corridor and would cause only minor alterations to or disturbances of water resources.



- **Streams and Buffers.** None of the poles would be in streams or stream buffers, so no impacts would occur.
- **Wetlands and Buffers**. All of the wetlands along this segment are Category III or IV with relatively small buffers. Some of the Category IV wetlands are too small to be regulated by the City of Bellevue. The existing three poles in wetlands would be reduced to zero with this segment. Removing the poles would cause a minor reduction in wetland acreage that would be mitigated in accordance with critical area requirements. Therefore, there would be no long-term impact on wetlands. The number of poles in buffers would be reduced from 14 to nine, resulting in beneficial impacts.
- **Shorelines.** The Bellevue Central Segment is outside the Kelsey Creek shoreline jurisdiction, so no impacts would occur.

4.3.5.6 Bellevue South Segment (Revised Willow 1 Option)

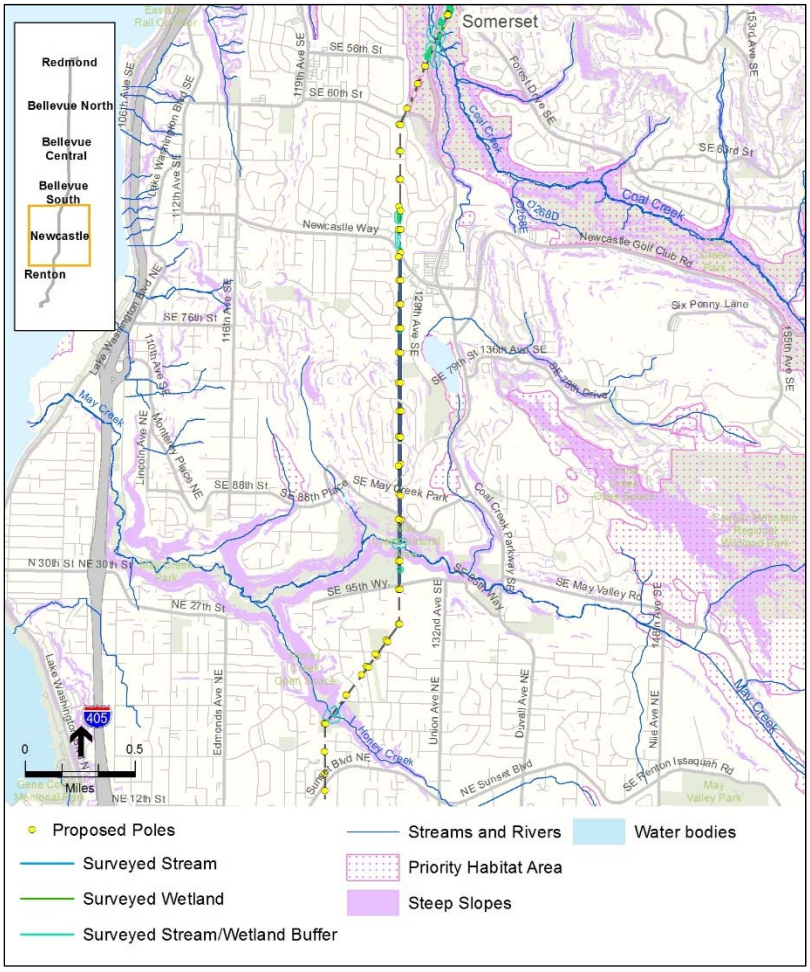
PSE's Proposed Alignment for the Bellevue South Segment follows the route of the Willow 1 Option as described in the Phase 2 Draft EIS, with refined design details for pole types and placement. The Bellevue South Segment is within the existing corridor. Impacts on water resources would be less-than-significant along this segment because it would cause only minor alterations to or disturbances of water resources that could be mitigated.



- **Streams and Buffers.** The transmission line crosses unnamed tributaries of East, Sunset, and Coal creeks. The crossings would not cause long-term impacts on streams and no poles would be located in streams or buffers. Impacts on buffers would be minor and mitigated in accordance with applicable critical area requirements. Therefore, impacts would be less-than-significant.
- **Wetlands and Buffers**. All of the wetlands along this segment are Category III or IV with relatively small buffers. The number of poles in wetlands would remain the same, but the number located in buffers would decrease from seven to one, resulting in beneficial impacts.

4.3.5.7 Newcastle Segment – Option 1 (No Code Variance)

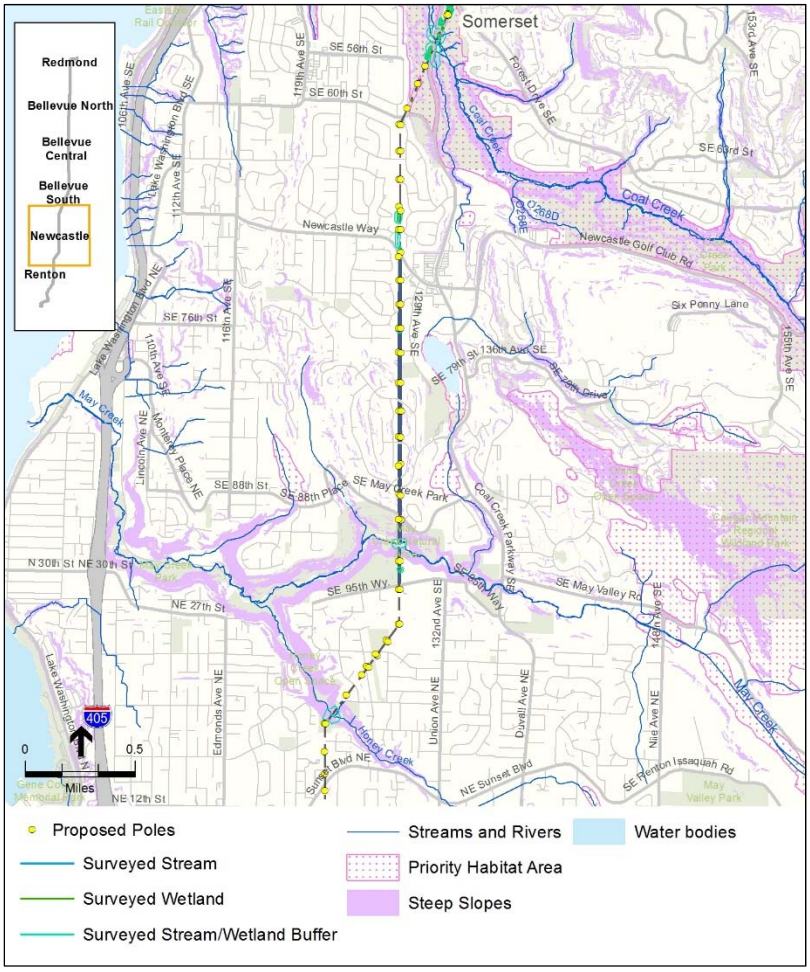
Impacts on water resources would be slightly greater than for Option 2 because the larger pole size requirement requires larger footings. Impacts on water resources would be less-than-significant along this segment because it would cause only minor alterations to or disturbances of water resources that could be mitigated.



- **Streams and Buffers**. The Newcastle Segment, Option 1 crosses May Creek and two unnamed streams along the existing corridor. No poles would be placed in streams or stream buffers. The crossings would not cause long-term impacts on streams. Therefore, impacts would be less-than-significant.
- **Wetlands and Buffers**. The number of poles in wetland buffers would be reduced as compared to existing conditions, resulting in beneficial impacts. The larger footings for the poles required for Option 1 would result in a small net increase in fill in the wetland buffer.

4.3.5.8 Newcastle Segment – Option 2 (Code Variance)

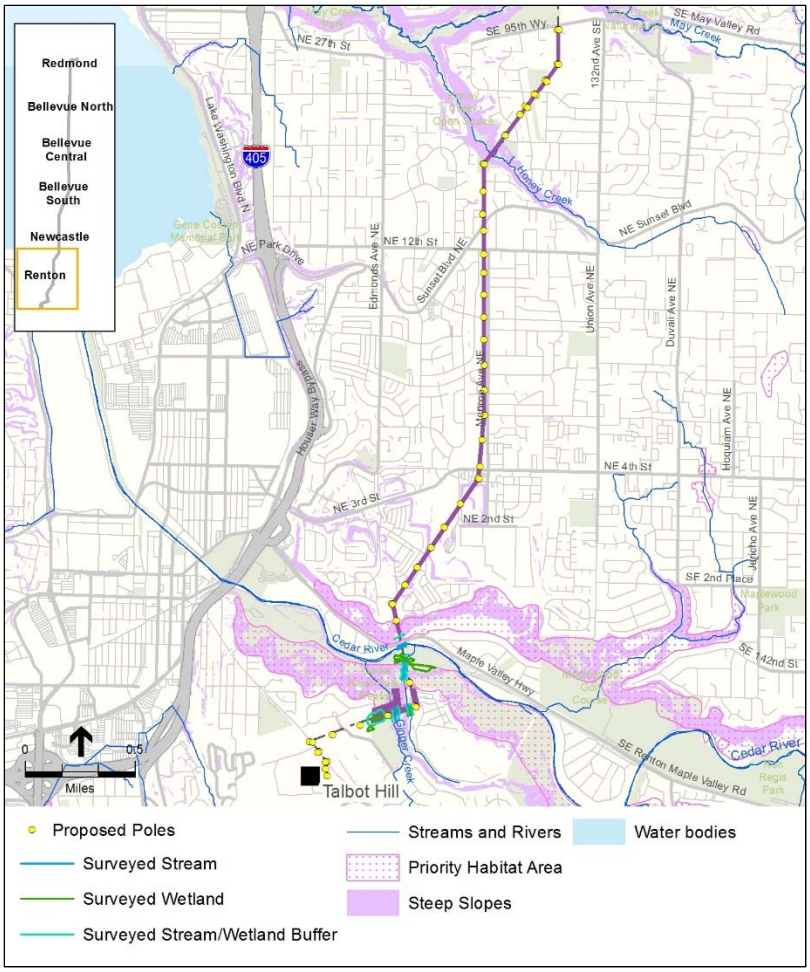
Impacts on water resources would be slightly less for Option 2 of the Newcastle Segment because of the smaller footings for the poles. Impacts on water resources would be less-than-significant along this segment because it would cause only minor alterations to or disturbances of water resources that could be mitigated.



- **Streams and Buffers**. Same as Option 1.
- **Wetlands and Buffers**. The number of poles in wetland buffers would be reduced relative to existing conditions, resulting in beneficial impacts. The smaller footings for poles for Option 2 would result in a net reduction in fill in the wetland buffer.

4.3.5.9 Renton Segment

The Renton Segment would be within the existing corridor. Impacts on water resources would be less-than-significant along this segment because it would cause only minor alterations to or disturbances of water resources that could be mitigated.



- **Streams and Buffers**. The transmission line would cross three creeks—May, Honey, and an unnamed tributary—and the Cedar River in the existing corridor, the same as existing conditions. No poles would be placed in streams or stream buffers. The crossings would not cause long-term impacts on streams, and no impacts on buffers would occur. Therefore, impacts would be less-than-significant.
- **Wetlands and Buffers.** The one wetland in this segment identified in the critical areas delineation reports for the Renton Segment is Category III with a 100-foot buffer (The Watershed Company, 2016, 2017). No poles would be placed in the wetland or buffer. Any impacts to wetlands or buffers would be minor and mitigated in accordance with applicable critical area requirements, so impacts would be less-than-significant.
- **Shorelines**. Although the wires would pass over the Cedar River (as they do at present), no poles would be within the City of Renton's shoreline jurisdiction for the Cedar River, so no impacts would occur.

4.3.6 Mitigation Measures

For water resources, regulations established in stormwater regulations, shoreline management programs, and critical area ordinances were reviewed to identify mitigation measures. Because all of the mitigation measures are specified by code, they would all be required for project development. The required mitigation measures would fully mitigate adverse impacts; therefore, no mitigation measures are proposed in addition to code requirements

4.3.6.1 Regulatory Requirements

The project would need to comply with applicable federal, state, and local regulations, some of which would mitigate the potential for long-term adverse impacts on water resources. Mitigation measures required for compliance with such regulations are not appealable. The applicable regulations are presented below based on the stage at which they would be applied.

Prior to Construction

The wetlands within PSE's Proposed Alignment are waters of the state subject to the applicable requirements of state law (see RCW 90.48 and WAC 173.201A). Some are also waters of the U.S. and subject to Section 404 and Section 401 of the Clean Water Act (33 United States Code [USC] §1341) and 40 Code of Federal Regulations (CFR) Section 121.2. Before any direct wetland impacts occur, PSE would obtain the necessary state and federal authorizations. To obtain state and federal authorization, PSE must provide:

- A jurisdictional determination from the U.S. Army Corps of Engineers stating whether the delineated wetlands are under federal jurisdiction.
- An application and report presenting impacts on jurisdictional wetlands.
- A mitigation plan for unavoidable wetland impacts following the standards in *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance* (Ecology, 2006).

The project would also need to comply with the following regulations of the Partner Cities:

- Stormwater regulations of the Partner Cities, which are based on the standards set by Ecology's *Stormwater Management Manual for Western Washington* (Ecology, 2014).
- Requirements of Shoreline Master Programs for Renton in crossing the Cedar River (see Appendix B-3).
- Requirements of each applicable Partner City's critical areas ordinance (see Appendix D). Typical mitigation measures suggested in the ordinances include:
    - Replacement of wetland acreage based on replacement ratios in critical areas ordinances.
    - Replacement of lost buffer area.
    - Enhancement or restoration of buffers.
- Avoid locating poles in wetlands and wetland buffers to the extent possible. It should be possible to avoid most wetlands by raising the height of poles, allowing for a longer stretch of transmission line over the wetland.

During Operation

- Implement Spill Prevention Control and Countermeasures Plans during maintenance activities (for poles, the transmission corridor, and access roads) to prevent spills or leaks of hazardous materials, paving materials, or chemicals from contaminating surface or groundwater.