

3.5 Plants and Animals

3.5.1 Affected Environment

Current Plan Area

Vegetation

Existing plant communities include a variety of habitat types including riparian wetland, agricultural, landscaping, and terrestrial-ruderal.

Riparian corridors along rivers and streams in the current plan area are generally affected by the presence of revetments and dikes and the proximity of residential, industrial, commercial, and agricultural land uses that reduce riparian forest cover and limit riparian/stream interactions. Stream banks and river channels have been cleared, straightened, confined, and simplified. Channelization and dikes have eliminated connections with side- and off-channel aquatic habitats, decreased the contribution of prey organisms to the rivers by precluding functioning riparian vegetation habitats, and precluded the recruitment of small and large wood from riparian corridors (City of Sumner 2003; ESA Adolfson 2010).

Wetlands in the current plan area are ponds 20 acres or less in size and those lands defined as wetlands under the federal Clean Water Act (33 USC [United States Code] 1251 et seq.). Regulated wetlands generally include swamps, marshes, bogs, and similar areas, but do not include artificial wetlands such as irrigation and drainage ditches, grass-lined swales, canals, detention facilities, farm ponds, and landscape amenities. Wetlands provide functions in wildlife habitat, stormwater retention and floodwater abatement, water quality improvement, groundwater recharge, recreational/educational opportunities, and shoreline protection.

Figure 3.4-2 shows the location of wetlands in the current plan area. Several large wetlands occur along the Puyallup and White (Stuck) rivers. These wetlands receive floodwaters from the river and from adjacent areas. A large wetland west of State Route 167 in the vicinity of 32nd Street East provides a number of important wetland functions, including habitat for breeding and migratory waterfowl. Another large wetland in the northern end of the current plan area near the White (Stuck) River provides important wildlife habitat and flood control functions.

Agricultural vegetation types commonly found in the current plan area include crops, pasture land, sod farms, fallow fields, bulb growing, and nurseries. Vegetation in the residential areas in the current plan area includes grass, gardens, landscaping, and trees. Trees are generally younger in areas that have recently been converted from agricultural uses than those in the older, more established residential areas. The steeper hillsides around the plan area are mostly covered with mixed forests of coniferous and deciduous trees, with some areas of shrubs and small trees.

The current plan area is urbanized for the most part and contains landscaped areas. The landscaped areas are predominantly terrestrial, although they include landscaped areas along streams and the margins of wetlands. Species in these areas are predominantly nonnative trees and shrubs, ornamental herbs, and grass (lawns). Such areas are environmentally important because they constitute pervious surfaces where stormwater can infiltrate. However, they represent nonpoint pollutant sources because of the chemicals

commonly applied during landscape management and because of the presence of pet feces. Landscaped areas may support a variety of wildlife species, some of which may be socially undesirable (e.g., rats).

Terrestrial-ruderal areas are very similar to landscaped areas, except that they are not actively managed. Such areas can be found in outdoor storage areas, vacant lots, unused portions of commercial lots, etc. Terrestrial-ruderal areas tend to be dominated by nonnative herbs and shrubs such as cat's-ear (*Hypochaeris radicata*) and Himalayan blackberry, sometimes with fast-growing native trees such as red alder (*Alnus rubra*). The environmental importance of such areas is similar to that of landscaped areas.

Wildlife and Fisheries

Sumner has several large and significant natural open space areas that provide a variety of wildlife habitats. These open space areas are home to many wildlife species typically found near urban areas. Mammals include raccoon, opossum, Douglas and western grey squirrel, striped skunk, and small rodents such as mice, voles, and shrews. Birds in the area include red-tailed hawk, great blue heron, woodpecker, flicker, crows, rufous-sided towhee, and many passerine species (City of Sumner 2004). Several species of anadromous and resident fish, including Chinook, coho, chum, pink, and sockeye salmon, as well as cutthroat, steelhead, and bull trout are found in the Puyallup and White (Stuck) rivers and local streams (Kerwin 1999; WDFW 2010).

The Washington Department of Fish and Wildlife (WDFW) maintains the Priority Habitat and Species database to inventory potentially significant and endangered species. Figure 3.5-1 shows priority habitat areas within the study area (current plan area and Orton Junction expansion area) including urban natural open space, waterfowl concentrations, and riparian zones. Documented priority species near Sumner, in Edgewood and Bonney Lake, or in the eastern portion of the Sumner urban growth area (UGA) are the bald eagle and great blue heron. The U.S. Fish and Wildlife Service identifies several species listed under the federal Endangered Species Act (ESA) as endangered, threatened, candidate, and species of concern as potentially occurring in Pierce County (USFWS 2007). These species and potential habitat in the current plan area are listed in Table 3.5-1.

Table 3.5-1. Species Listed as Endangered, Threatened, Candidate, or Species of Concern under the Endangered Species Act that Could Occur in the Current Plan Area

Species	Status	Potential Occurrence
Bull trout (<i>Salvelinus confluentus</i>)	FT	White River, Puyallup River
Pacific lamprey (<i>Lampetra tridentata</i>)	Fsc	White River, Puyallup River
River lamprey (<i>Lampetra ayresii</i>)	Fsc	White River, Puyallup River
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Fsc	Riparian areas
Olive-sided flycatcher (<i>Contopus cooperi</i>)	Fsc	Riparian willows
Long-eared myotis (<i>Myotis evotis</i>)	Fsc	Forest
Long-legged myotis (<i>Myotis volans</i>)	Fsc	Forest
Western gray squirrel (<i>Sciurus griseus griseus</i>)	Fsc	Forest

Notes: FT= threatened, Fsc= species of concern

Aquatic habitat refugia in the White (Stuck) and Puyallup rivers have been reduced by shoreline alterations, decreasing the suitability of habitats for salmonids, including juvenile Chinook salmon. Alteration in streamflows and water velocities has reduced habitat quality and quantity in these rivers.

Chinook salmon were listed as threatened under the ESA in 1999. Sumner is part of the larger Puyallup-White watershed planning process, in which local jurisdictions, businesses, environmental groups, and interested citizens are working to implement salmon conservation projects and develop a long-term plan for protecting and restoring salmon habitat in the watershed.

WDFW identifies the portion of the White River in the current plan area as salmonid rearing and migration habitat, but not spawning habitat (WDFW 2010). The Puyallup River is mapped as pink salmon spawning habitat upstream of the confluence with the White River and as winter steelhead spawning habitat upstream of the Orton Junction expansion area (WDFW 2010).

Orton Junction Expansion Area

The Orton Junction expansion area includes agricultural and residential areas. Several small wetlands are mapped in the south portion of the area and one stream (Salmon Creek). This creek is mapped as coho salmon habitat by WDFW (2010) and as fish bearing (Type F) by the Washington State Department of Natural Resources (WDNR 2010). In addition, because this stream is perennial, it has a gradient of less than 16%, and has no natural barriers to upstream passage, it is assumed to contain fish habitat and is, therefore, classified as a Type 3 (F) stream in the Orton Junction expansion area.

The Puyallup Tribe has documented that Salmon Creek supports runs of Chinook, pink, chum, and coho salmon from the White River upstream to 60th Street, but has not investigated the stream upstream of that point due to the lack of suitable salmon habitat (Marks pers. comm.). However, the WDNR stream classification system recognizes resident (non-anadromous) fish habitat in the stream classification system (Washington Administrative Code [WAC] 222-16-030).

Much of the Orton Junction expansion area is currently farmed for daffodil bulbs, pasture, and Christmas trees. Agricultural lands in this area have somewhat limited wildlife habitat value; however, they do provide habitat for birds and small mammals, which, in turn, provides prey for raptors and mammalian predators such as coyotes and foxes. Priority habitats mapped in this area include wetlands and Salmon Creek (Figure 3.5-1).

East Hill Reduction Area

The East Hill reduction area includes waterfowl concentration areas that are mapped in the WDFW Priority Habitat and Species database (Figure 3.5-1). One seasonal Type 5 (Ns) stream originates in this area and drains westward towards the White River. This area is currently developed as low-density residential. Habitat includes patches of forested open space and suburban landscaping that includes a mix of native and nonnative plant species. Backyard habitat supports a variety of bird species, and some suburban adapted mammals such as squirrels, moles, mice, rats, raccoons, and opossum.

3.5.2 Impacts

Impacts Common to All Alternatives

Although the territories vary with the alternatives, all alternatives would focus development and impacts to biological resources within UGA boundaries, which would reduce these impacts of outside of the UGA boundaries.

Vegetation

Under all alternatives, development could have both direct and indirect impacts on vegetation. Direct impacts would primarily involve the physical removal of vegetation. Indirect impacts would include changes in permeability to infiltrate water. Increased impervious surfaces generally result in increased peak rates and increased volumes of surface water runoff, which may impact the viability of certain vegetation types. Any increases in development could also result in both temporary and permanent impacts to vegetation communities from road construction and utility installation. Nonnative invasive plant species may invade and colonize areas where vegetation has been removed and the soils disturbed.

Wetlands

Potential impacts on wetlands include increasing sedimentation from adjacent land use activities. Sediment reduces storage volume and limits opportunities for flood moderation, groundwater exchange, and sediment stabilization. Direct impacts on wetlands from increased development could be avoided by implementation of the federal, state, and local rules and ordinances that regulate the filling of wetlands. Alterations consistent with those allowed by these regulations could occur under all alternatives, although no-net-loss of functions and values must be demonstrated. Additional losses could still occur if required efforts to restore, enhance, or create wetlands as mitigation are not fully successful and corrective action is not taken. Increased development could also result in direct temporary impacts from road or utility construction.

Wildlife Habitat

Under all alternatives, ongoing development activities could reduce the amount of wildlife habitat. Impacts could be both direct and indirect, with direct impacts including loss or conversion of habitat to either unsuitable or less suitable types for many wildlife species currently occupying those habitats. Development of currently vacant or underdeveloped parcels could lead to fragmentation of wildlife habitat, potentially altering habitat connectivity. Indirect effects could include a reduction in wildlife habitat quality and function due to increased human disturbance and associated factors in areas adjacent to areas of wildlife habitat. Alterations in habitat due to introduction of nonnative plant species could also occur, either through landscaping or the inadvertent spread of nonnative, invasive species. All of these factors lead to a decrease in biodiversity and habitat.

Aquatic Habitat

All alternatives could result in a reduction in the quality and quantity of aquatic habitat. Development puts greater pressure on the aquatic ecosystems that support fish populations by causing higher water temperatures, sedimentation, increased peak flows, reduced low flows, reduced groundwater, erosion, scour, pollution, streambank armoring, channelization, and reduced riparian and wetland areas. Salmonid fish species are very sensitive to any change in the stream environment. Development activities can pollute water, degrade instream and riparian habitat, and alter the natural flow regime of rivers and streams. Direct impacts (e.g., loss or conversion of aquatic habitat to either unsuitable or less suitable types) on fish and fish habitat are expected to be minimal because of current buffer requirements for salmon-bearing streams and the timing of instream work window periods, which protect fish, streams, and/or adjacent vegetation. Additional regulations are in place to provide fish passage, work restrictions near surface waters, and protection of fish and fish habitat.

Indirect impacts on aquatic habitats could result from increased stormwater runoff from impervious surfaces (e.g., roads, parking lots, and roofs) associated with development. Impervious surfaces prevent water from soaking into the ground and as impervious surfaces increase, so do the volume, peak flows, and velocity of stormwater runoff into rivers and streams. Increased stream volume, peak flows, and velocity cause greater erosion and sedimentation, disrupt spawning and resting areas, scour out redds, and increase velocities through culverts making fish passage more difficult. Increased water volumes and velocities could displace juvenile salmonids and/or their habitats, particularly in simplified channels that lack low-velocity habitats. Current state and City regulations require the inclusion of stormwater treatment facilities in most projects that create new or expand existing impervious surface area. These regulations require that stormwater be treated or detained before it is released to local streams to help minimize its detrimental effects on aquatic species and their habitats. Additional discussion of mitigation measures and impacts can be found in Section 3.5.3.

Impacts Specific to UGA Expansion (Orton Junction) Alternative

Impacts on plants and animals would be the same as those described under “Impacts Common to All Alternatives,” but would occur over a larger area. New commercial and residential development in the Orton Junction expansion area would reduce agricultural land use and associated habitat in this area. Although the habitat of much of this area is subject to frequent disturbance through standard agricultural practices, several animal species, primarily birds and small mammals, would lose habitat as farmland is converted to commercial and residential land uses.

Impacts Specific to UGA Modification Alternative

Impacts on plants and animals would be the same as those described under “Impacts Common to All Alternatives.” However, removing the East Hill reduction area from the UGA would reduce the future density of residential development in this area and result in an incrementally smaller loss of backyard habitat for birds and other suburban adapted wildlife.

New commercial development in the Orton Junction expansion area would reduce agricultural land use and associated wildlife habitat in this area, as described for the UGA Expansion Alternative, but over a smaller area.

Impacts Specific to the No Action Alternative

The UGA under the No Action alternative would be larger than under UGA Modification Alternative and a smaller area than under the UGA Expansion Alternative. However, because the UGA would not be expanded to include the Orton Junction expansion area, no agricultural habitat would be lost.

3.5.3 Mitigation Measures

Incorporated Plan Features

The Washington State Growth Management Act (GMA) requires that critical areas, natural resource lands, and the environment be protected as part of compliance. The City of Sumner (City) has adopted a comprehensive plan and development regulations that comply with these GMA requirements and will apply to any development activity in its planning area. The concepts identified below are included in the environment, shoreline, and parks and open space elements of

the *City of Sumner Comprehensive Plan* and are intended to satisfy statutory and regional policy directives and to address the environmental impacts of the plan (City of Sumner 2009).

- Practice environmental stewardship by protecting, enhancing, and promoting the natural environments in and around the City of Sumner.
- Protect and enhance unique, valuable and critical plant and wildlife habitat.
- Preserve, protect, and restore to the greatest extent feasible the physical, biological, and visual attributes of the shoreline environment.
- Preserve, protect, and enhance significant open space.
- Provide for open space and recreation and protect sensitive areas from degradation.

Low impact development (LID) is an innovative approach to controlling stormwater quantity and quality that mimics the predeveloped hydrology of a project site by using site design techniques that store, infiltrate, evaporate, and detain stormwater runoff. With an LID approach and best management practices, receiving surface water bodies may experience fewer negative impacts in the volume, frequency, and quality of runoff to maintain base flows and more closely approximate predevelopment runoff conditions. Over time, this could improve habitat conditions for aquatic life. In 2009, the City adopted policies in the Comprehensive Plan to encourage LID through incentives and evaluation of its code for opportunities to facilitate LID (City of Sumner 2009). All alternatives retain these policies.

Applicable Regulations and Commitments

Sumner Municipal Code

The Sumner Municipal Code (SMC), Chapters 16.08–16.32, Shoreline Management, establishes regulations for land use activity and development according to the Shoreline Management Act of 1971. These regulations are applicable to the shoreline areas of the Puyallup and White (Stuck) rivers, extending 200 feet from the ordinary high water mark of the rivers; shoreline jurisdiction also includes associated wetlands. This plan is currently under revision and is expected to be complete by 2012.

SMC Title 16, Division III, Critical Areas, has provisions for protecting wetlands and sensitive areas along local rivers and streams.

SMC Chapter 16.46, Wetlands Protection, establishes the following development standards for regulated wetlands within the city limits:

- Category I wetlands require a 150-foot buffer.
- Category II wetlands require a 100 to 125-foot buffer (depending on habitat score).
- Category III wetlands require a 75-foot buffer.
- Category IV wetlands require a 35-foot buffer.

Chapter 16.56, Wildlife Habitat Area, requires the following buffers, consisting of undisturbed native vegetation, along all streams, lakes, and ponds as classified by the former DNR water typing classification system. The equivalent current state stream types (WAC 222-16-030) are included in parentheses.

- DNR type 3 (F) waters require a 100-foot buffer.
- DNR type 4 (Np) waters require a 50-foot buffer.
- DNR type 5 (Ns) waters require a 25-foot buffer.

Chapter 16.56 also requires that a habitat assessment and management plan be completed when a nonexempt development occurs within 1,000 feet of a priority habitat area. This includes the Puyallup and White rivers.

Stormwater Regulations

- The City has adopted the Washington State Department of Ecology *Stormwater Management Manual for Western Washington* (Ecology 2005) as the minimum for stormwater protection (City of Sumner 2010). This manual includes minimum requirements for managing stormwater for the protection of instream flows and water quality. Through Chapter 13.48 SMC, the City applies 2005 Ecology stormwater standards to new development of public and private improvements. The City states that stormwater site plans shall be prepared with a preference for LID practices over standard retention/detention facilities. The City requires documentation of LID practices in each project subject to stormwater requirements.

Other Potential Mitigation Measures

Best Management Practices

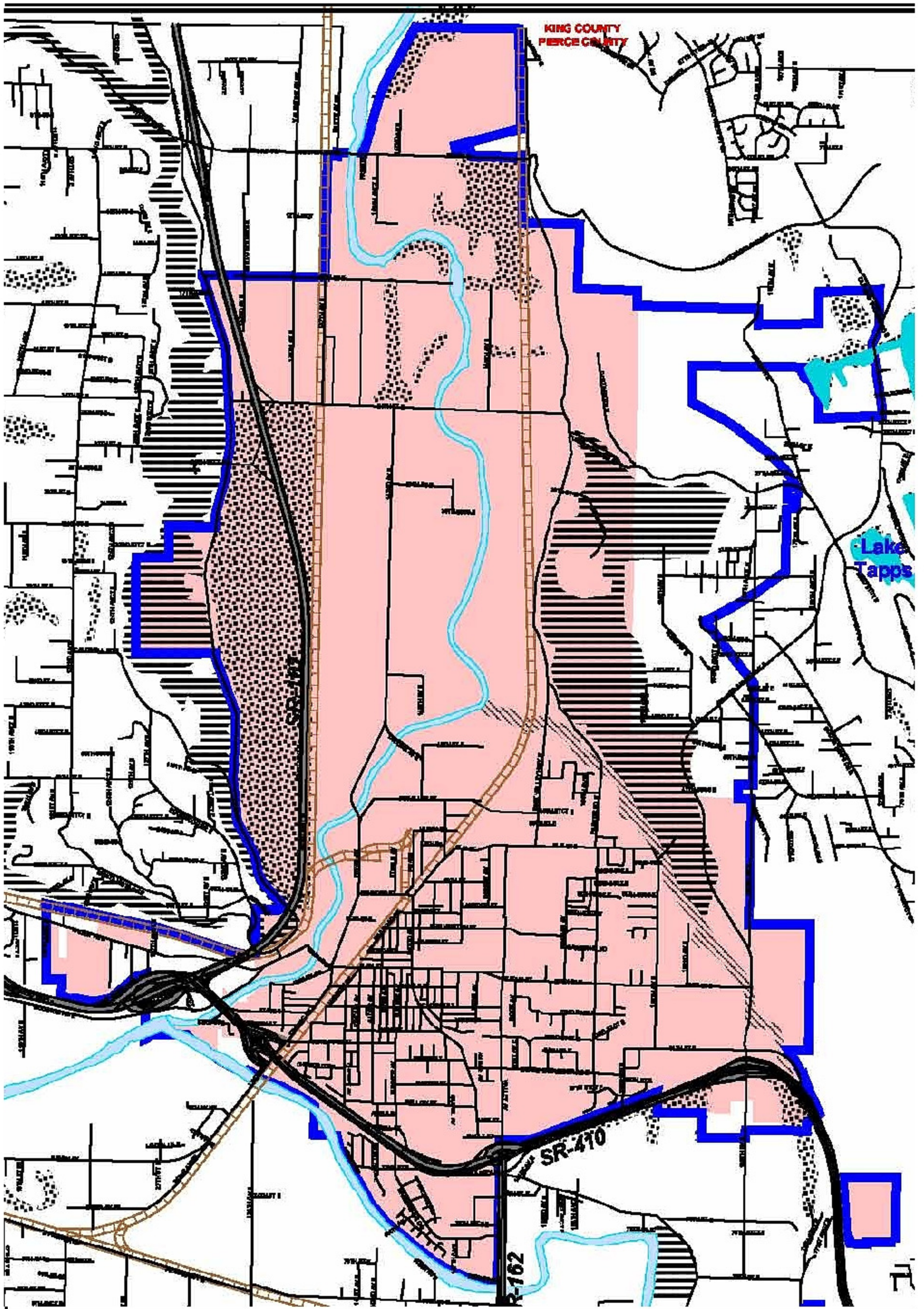
- Temporary impacts can be reduced through the use of appropriate best management practices. Permanent conversions can be mitigated through the planting of native plant species and control of invasive, nonnative species.

Habitat and Shoreline Protection or Restoration

- The City could use the WDFW Priority Habitat and Species map and habitat management recommendations to identify and protect habitat networks. This could be accomplished in conjunction with neighboring communities such as Edgewood and Bonney Lake, which border area hillsides, and Puyallup, which shares a shoreline.
- The City could participate in ongoing regional watershed planning and implementing activities such as the *Lower Puyallup Watershed Action Plan* and the Shared Strategy for Puget Sound. The *Lower Puyallup Watershed Action Plan* contains recommendations for reducing non-point sources of pollution. According to the Shared Strategy for Puget Sound, major policy or physical changes needed to recover salmon in the Puyallup and White rivers include improving access to high quality habitat, as well as protection and restoration of floodplain habitat. Major recovery projects completed and slated for action include levee setbacks and oxbow restoration while simultaneously continuing to provide for flood control.
- The City could continue to implement shoreline and stream restoration projects as recommended in its Shoreline Master Program (City of Sumner 2003), which is currently undergoing revisions, and its Stream Inventory (ESA Adolfson 2010). This involves acquiring, protecting, or enhancing properties of value for fish and wildlife habitat as well as evaluating enhancement actions and making adjustments, as necessary, to achieve intended habitat gains.

3.5.4 Significant Unavoidable Adverse Impacts

In the context of the existing biological conditions and with the implementation of mitigation measures identified, no significant unavoidable adverse impacts on plants and animals are anticipated as a result of any of the alternatives.



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SR-410

R-162



Comprehensive Plan Update and Amendments
Environmental Impact Statement

LEGEND:

- Sumner City Limits
- Urban Natural Open Space
- Waterfowl Concentrations
- Riparian Zones



Figure 3.5-1 Priority Habitat & Species