



NATURAL ENVIRONMENT ELEMENT



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INTRODUCTION

Purpose

The purpose of the Natural Environment Element is to clarify the relationship between Kenmore's natural and built environments, to include policies that support the City's commitment to preserving and enhancing the natural environment, and to encourage a balanced approach to support Kenmore's vision of an equitable, inclusive, sustainable, and resilient environment. Natural environment systems include Lake Washington, Sammamish River, Swamp Creek, plus smaller rivers/creeks and their associated wetlands which all provide open space and important fish and wildlife habitat. Other natural areas, such as land prone to flooding and geologically hazardous areas (e.g. steep slopes and landslide hazards) are important because of the risk to lives and property posed by developing them. Citywide tree canopy, native vegetation within natural areas, and water quality treatment are all important to support fish and wildlife habitat, and to mitigate the effects of climate change.

Federal and State Requirements

While the Natural Environment Element is not a requirement under the Growth Management Act (GMA), all jurisdictions are required to protect and conserve the natural ecosystems through comprehensive plans and policies, and to develop regulations that reflect natural constraints and protect critical environments. Land use and development is regulated through a variety of management recommendations as established by state and federal agencies in a manner that respects fish and wildlife habitat in conjunction with natural features and functions, including air and water quality. Natural resources and the built environment are managed to protect, improve, and sustain environmental quality.

Additionally, under the federal Clean Water Act, administered by the Washington Department of Ecology, local jurisdictional waterways are managed to prevent and reduce water pollution, clean up polluted waters, and protect and restore water quality to support recreation, business activities, supply drinking water, and protect fish and other aquatic wildlife. Use of water resources for one purpose should, to the fullest extent possible, preserve and promote opportunities for other uses.

Environmentally Critical Areas and Shoreline Master Program

The Critical Areas chapter of the Kenmore Municipal Code designates and classifies environmentally critical, geologic, and flood hazard areas in order to protect these areas to protect life and property from hazards, while also allowing for reasonable use of public and private property. The Critical Areas chapter also includes regulations on fish and wildlife habitats of importance.

The City's Shoreline Master Program applies to "shorelines of the State." In Kenmore, these include Lake Washington, the Sammamish River, and the main stem of Swamp Creek. In addition, wetlands considered "associated" with State Shorelines, such as Swamp Creek No. 3, are also regulated by the Shoreline Master Program. The Shoreline Master Program regulations include Environment designations of Downtown Waterfront, Shoreline Residential, Urban Conservancy, Natural, and Aquatic. The Downtown Waterfront environment is more permissive in terms of uses and development standards than the other designations. The most restrictive environment

designation is the Natural environment. The Shoreline Sub-Element of the Land Use Element addresses shoreline goals, objectives, and policies. The shoreline management chapter of the Kenmore Municipal Code includes regulations implementing the Shoreline Master Program and goals and policies of the Shoreline Sub-Element of the Comprehensive Plan.

Science supported by the State of Washington and partnering agencies play a large role in defining critical areas, identifying functions and values, and identifying protection strategies. The State's Best Available Science (BAS)¹ rule requires integration of science into the establishment and update of the critical area and shoreline regulations.

Countywide Planning Policies

The King County Countywide Planning Policies (CPP) seek to restore the quality of the natural environment and to protect it for future generations. The policies require all jurisdictions to manage natural drainage systems to improve water quality and habitat functions, minimize erosion and sedimentation, protect public health, reduce flood risks, and moderate peak storm water runoff rates. Jurisdictions in shared basins are to coordinate approaches and standards. Jurisdictions also are directed to encourage low-impact development approaches appropriate in Kenmore and to plan for land use patterns and transportation systems that minimize air pollution and greenhouse gas emissions.

All jurisdictions are to collaborate with the Puget Sound Partnership to implement the Puget Sound Action Agenda for the benefit of Puget Sound and its watersheds.

Environmental Stewardship and Sustainability

The Kenmore community has a high awareness of and greatly value environmental protection. There are many City-sponsored events and nonprofit groups that encourage community involvement and volunteering in stewardship activities that increases community understanding and awareness of the natural environment, promoting sustainable land use activities and low-impact development practices, and how to avoid adverse environmental impacts. The City of Kenmore and its environmental stewards strive to lead by example in the conservation of natural resources, sustainability, and environmental equity.

This element, as well as the Climate Action Element, provide a variety of policies that support environmental stewardship and sustainability.

EXISTING CONDITIONS

Geology

Much of the City of Kenmore is comprised of undulating uplands formed as a result of different glacial depositional processes. Stream erosion, subsequent to glaciation, carved gullies and ravines in the uplands. Drift plains and alternating valleys create a north-south trending "ridge and valley" regional topography, with one major east-west lowland bisecting Kenmore – the Sammamish River Valley where the river empties into Lake Washington. The general topography

¹ Best Available Science (BAS) means current scientific information derived from a valid scientific process, including that used in the process to designate, protect, or restore *critical areas* as defined by WAC [365-195-900](#) through [365-195-925](#). See. KMC 18.20.272.

of Kenmore is varied, ranging from hills up to 500 feet in elevation to the Lake Washington shoreline at 20 feet above sea level.

The Vashon glaciation left a layer of till and recessional sand and gravel deposits that mantle the upland plateaus north and east of Lake Washington. The till and recessional deposits overlie Vashon outwash sand and gravel, and older glacial and nonglacial deposits that overlie bedrock at great depths.

The Vashon and older deposits in the Kenmore area consist of sand and gravel layers interspersed with finer-grained clay and silt layers. These deposits form aquifers and aquitards within the subsurface, controlling water movement from upland to lowland areas and influencing the locations of streams and creeks. Additionally, lodgment till from the Vashon glaciation covers much of the upland but is absent from steeper slopes. Lodgment till, a mixture of sand, gravel, silt, and clay, has low permeability and acts as an aquitard, limiting groundwater flow and recharge of deeper aquifers. It occurs near the ground surface in higher elevations where glacial ridges and swales intersect.

The ground surface in upland margins and former large outwash channels is covered by a veneer of recessional outwash and ice contact deposits. These deposits form during the stagnation and melting of ice sheets. They primarily consist of sand and gravel, similar to recessional outwash, but with added variability. Ice contact deposits often contain lenses of very silty material, till, and lacustrine silt and clay, which can hinder infiltration and groundwater flow.

Over the Vashon glacial soils, we find recent, unconsolidated deposits. These include alluvium, organic-rich materials, and fill. The recent alluvium consists of sand and gravel, with interbeds of organic silt, peat, and silty clay. These deposits are poorly drained and associated with hydric soil conditions, particularly within the floodplains of the Sammamish River and Swamp Creek.

Geologically Hazardous Areas

Geologically hazardous areas in Kenmore include lands with erosion, landslide, and seismic hazards.

The identification of areas susceptible to landslides is necessary in the assessment of grading, building, foundation design, housing density, and other land development regulations. Steeply sloping unconsolidated glacial deposits are highly susceptible to landslides. Landslide hazard areas are found along 61st and 68th Avenues NE, areas south of NE 170th Street, north of Simonds Road, and the Inglewood/St. Edward State Park area along Lake Washington.

Seismic hazard areas are those areas subject to severe risk of earthquake damage as a result of seismically induced settlement or soil liquefaction. The City's Geologic Hazard Areas map identifies the region of Swamp Creek, the Sammamish River basin and the northern end of Lake Washington north of NE 166th Place as a seismic hazard area primarily due to the potential of soil liquefaction during times of seismic activity. Refer to **Figure NE-1** for the map indicating geologic hazard areas in Kenmore. Also refer to the Washington State Department of Natural Resources (DNR) Washington Geologic Survey (WGS) Geologic Information Portal.

Erosion hazard areas are those areas identified by a special study as having "moderate to severe," "severe," or "very severe" erosion potential and include areas likely to become unstable, such as bluffs, steep slopes, and areas of unconsolidated soils. Erosion hazard areas should be protected

by limiting areas allowed to be disturbed, limiting work during the wet season, increasing erosion and sediment controls during construction, minimizing to the greatest extent possible the removal of any vegetation, requiring post-construction revegetation, and creating penalties for lack of sediment/erosion containment during construction.

Air Quality

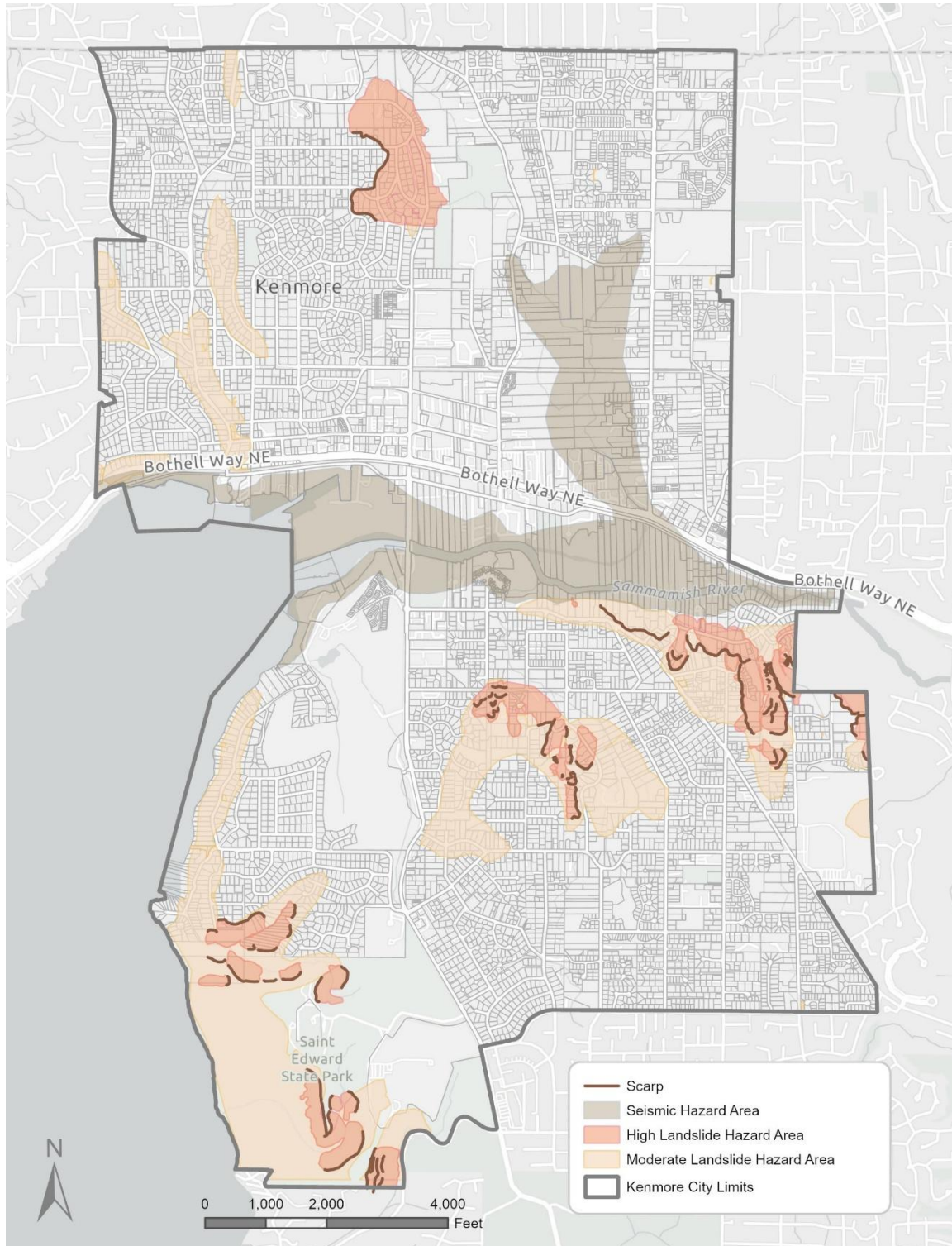
Air quality is generally assessed in terms of concentrations of air-borne pollutants being higher or lower than ambient air quality standards set to protect human health and welfare. To measure existing air quality, the Washington State Department of Ecology, and the Puget Sound Clean Air Agency (PSCAA) maintain a network of monitoring stations throughout the Puget Sound region. Based on monitoring information collected over time, state (Ecology) and federal (U.S. Environmental Protection Agency) agencies designate regions as being “attainment” or “nonattainment” areas for particulate air pollutants. Attainment is a measure of whether National Ambient Air Quality Standards (NAAQS) are being met.

King County was designated as a nonattainment area in 1989. This designation brought about maintenance measures to bring the area back into attainment. The county now meets air quality standards and has a long-term plan for continuing to meet and maintain these standards and other requirements of the Clean Air Act. The county presently is designated as a “maintenance area.”

While overall air quality in Kenmore is predicted to remain much as it is today, there are some contributing factors that affect both local and regional air quality. There are several industries located along Kenmore’s industrial waterfront that contribute to particulate matter. Wood burning, as a primary heating source, also contributes to air quality degradation. Additionally, in recent years, Kenmore has experienced air quality degradation due to seasonal wildfire smoke, particularly during the summer months. Kenmore’s Climate Action Element has policies that seek to mitigate negative impacts from all of these sources of air pollution.

Implementation of zoning responsive to air quality concerns can result in air pollution benefits countywide and regionally. Decreased air pollution can be expected from zoning and development patterns that result in a reduction in vehicle miles traveled. Concentrated development and higher density development allows transit to serve people more efficiently and generally reduces the number of cars on the road. Although regional or countywide emissions can be reduced with efficient land use patterns, air pollutant emissions would still occur in more populated areas and may affect more people. Policies in the Climate Action, Land Use and Transportation elements support compact and transit-oriented development that help reduce vehicular trips and lower emissions.

FIGURE NE-1 GEOLOGICALLY HAZARDOUS AREAS²



Source: City of Kenmore GIS

² The information included on this map has been compiled by City of Kenmore staff from a variety of sources and is subject to change without notice. This map is not intended as a survey product. For accurate boundaries, a professional specializing in geotechnical surveys must be consulted.

Water and Wetlands

Wetlands provide habitat for a variety of aquatic and terrestrial plant and animal species. The extent to which a wetland will provide wildlife habitat will depend upon several features including the condition of the site, its size, presence of habitat features (e.g. open water, snags, islands or perches), the variety and complexity of the different habitat types within the wetland, and the surrounding habitat in the immediate vicinity. Predominant water features in the City include Swamp Creek as well as its tributaries and associated wetlands, the Sammamish River, and Lake Washington. In addition to these major water bodies, numerous small unnamed streams drain into these features. Kenmore is located in the Water Resources Inventory Area (WRIA) 8, which represents the salmon recovery planning area of the Lake Washington/Cedar/Sammamish watershed. With the joint cooperation of residents, businesses, scientists, environmentalists, and governments, the protection and restoration of salmon water bodies in WRIA 8 is achieved through science-based conservation planning. Funding for salmon conservation is provided by 29 local governments, including Kenmore, in the WRIA 8 watershed.

There are numerous wetlands located throughout the City—many within public open spaces such as Wallace Swamp Creek Park, Ḵʷaxʷadis (Tl' awh-ah-dees) Park, and Inglewood Wetlands. Wetlands are transitional areas between aquatic and upland habitats and are identified based upon three parameters: hydrology, soils and vegetation. Through a no net loss policy, wetlands are either preserved or replaced. Mitigation sequencing, or avoidance, is used to the best extent possible to ensure impact to wetlands are avoided. Wetlands are formally identified and delineated in accordance with the approved federal wetland delineation manual and applicable regional supplements. Under normal circumstances, wetlands include the following three components:

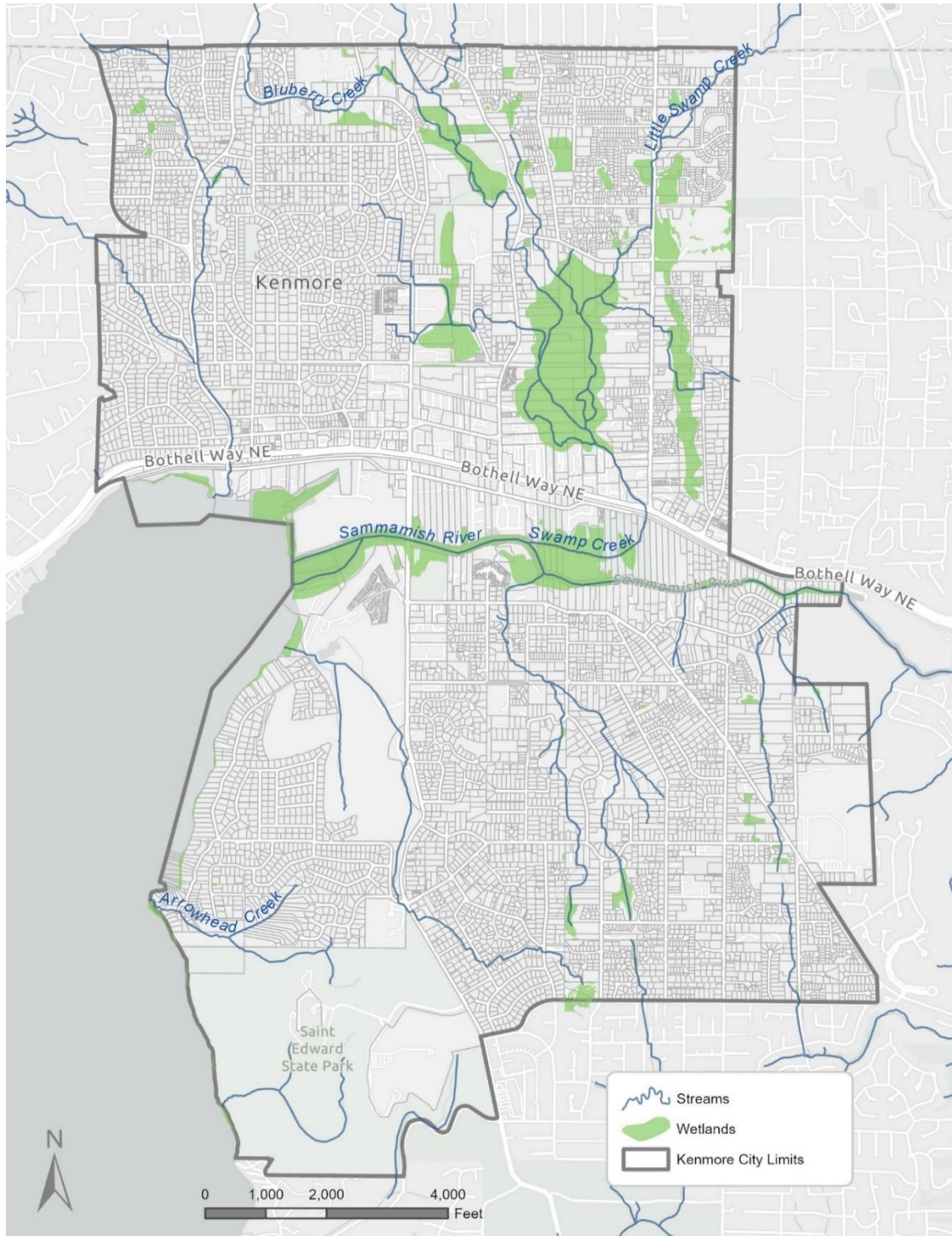
Presence of water (hydrology) or an indication of at least the seasonal presence of water on the surface or in the soils;

Unique soils (hydric soils) that differ from upland soils due to anaerobic conditions resulting from prolonged or frequent saturation or flooding; and

A dominance of plants adapted to growing in wet conditions (hydrophytic vegetation).

See Figure NE-2 for a map of streams and wetlands in Kenmore and Figure NE-3 for natural drainage basins

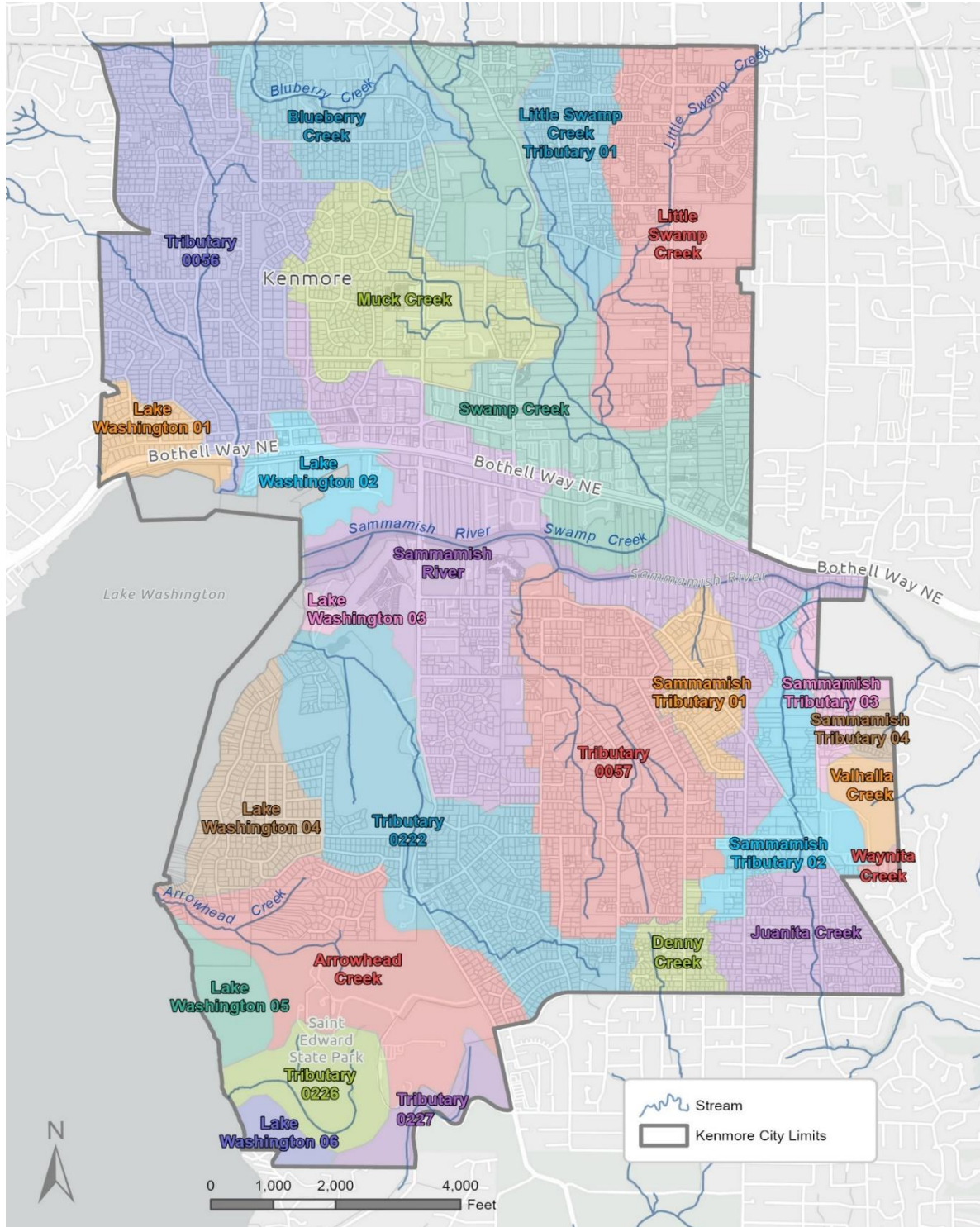
FIGURE NE-2 STREAMS AND WETLANDS³



Source: City of Kenmore GIS

³ The information included on this map has been compiled by City of Kenmore staff from a variety of sources and is subject to change without notice. This map is not intended as a survey product. For accurate boundaries, a professional specializing in wetland and stream surveys must be consulted.

FIGURE NE-3 NATURAL DRAINAGE BASINS⁴



Source: City of Kenmore GIS

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Swamp Creek

The main stem of Swamp Creek is approximately 14.6 miles long, extending from headwaters wetlands in south Everett, through portions of Everett, Lynnwood, Brier, Mountlake Terrace, Bothell, unincorporated Snohomish County, and Kenmore to the Sammamish River. Within the city of Kenmore, there are 2.5 miles of shoreline along the stream. Swamp Creek is typical of Puget Sound lowland streams. It originates in upland areas with gently sloping hillsides and eventually flows through a broad valley to the mouth.

Little Swamp Creek and Muck Creek join with Swamp Creek in Kenmore, along with a third, unnamed tributary.

Water Quality

Site and vegetation clearing and grading, increased impervious surfaces, inadequate storm detention and other factors, particularly with development in the watershed upstream from Kenmore, have increased flood frequencies and severity. Despite these changes, the Swamp Creek floodplain contains some of the largest and highest quality wetlands and wildlife habitat in the City.

The increase in development in Kenmore's watersheds must be managed to maintain water quality and reduce sedimentation and pollution associated with stormwater runoff. Temperature and dissolved oxygen exceed the water quality standards for most of the summer and early fall. There also are frequent exceedances of state bacteria standard. Swamp Creek has been rated over time as either "moderate concern" or "high concern" since King County began monitoring water quality parameters in 2000.

To capture gravel and sediments, an in-stream sediment pond was created and is maintained in Wallace Swamp Creek Park. The City also acquired several parcels in the Swamp Creek watershed that are susceptible to flooding. These parcels have been added to the City's open space preserve.

While sedimentation ponds are currently being used in the Swamp Creek watershed, they have their limitations, such as sediment accumulation, nutrient buildup which create algae blooms, and nuisance and invasive vegetation. All of which decrease the effectiveness in managing stormwater. Proper mechanical and biological treatments are necessary to reduce impacts.

The City's Surface Water Element's goals and policies, the Surface Water Management Plan, the National Pollution Discharge Elimination Systems (NPDES) permit program and regulations in the Kenmore Municipal Code all serve to develop, maintain, manage, and improve a surface water system that serves the community, enhances quality of life, and protects the environment.

Fish Habitat

Swamp Creek supports several salmonid fish species including coho salmon (federal species of concern), Chinook salmon (federally listed, threatened), coastal cutthroat trout (sea-run and resident), sockeye salmon, and steelhead trout (federally listed, threatened). Resident cutthroat trout are the dominant salmon species that spawn in the Swamp Creek basin. Swamp Creek also supports coho spawning and Little Swamp Creek is documented to support coho rearing. There is no designated critical habitat for any salmonid species in Swamp Creek or its tributaries.

Wildlife Habitat

Wildlife species are concentrated in small forested and wetland areas of the Swamp Creek watershed. The Swamp Creek wetland complex provides excellent forage and nesting habitat for birds and good forage and shelter habitat for amphibians, reptiles and small mammals. Ponded areas in the wetland provide resting sites for waterfowl. Of particular interest is the great blue heron rookery, described further below. To improve habitat areas, invasives species removal and restoration of native habitats have been accomplished and ongoing at Wallace Swamp Creek Park and in other targeted areas in the watershed.

Sammamish River

The Sammamish River begins at the outlet of Lake Sammamish and ends at its confluence with Lake Washington. The total length of the river mainstem is approximately 14 miles. Within the City limits, the shoreline extends approximately 1.8 miles.

The river has been altered over time to control flooding. The natural Sammamish River floodplain historically covered a very large area as the river meandered extensively across the valley floor. To reduce damage and to help regulate the level of Lake Sammamish, in the 1960s the U.S. Army Corps of Engineers dredged a deeper and straighter channel and constructed levees along the riverbanks. In the 1980s and 1990s, dredging at the mouth of the river was undertaken for navigational purposes.

Consequences of the flood control projects include reduced frequency of overbank flooding, reduced riparian habitat, and elimination of extensive wetland areas. In Kenmore, approximately 35.3 acres of wetlands are mapped on the Sammamish River shoreline. The City has undertaken restoration efforts to control invasive plants and replant native species in portions of the Rhododendron Park wetlands, portions of ʔaxʔadis (TI' awh-ah-dees) Park wetlands, Log Boom Park Wetlands, and in wetlands near the Wildcliffe Shores community.

Water Quality

The water quality of the Sammamish River is largely influenced by the slow-moving nature of this lowland system and by the backwater effect from Lake Washington. Slow movement, while enhancing sediment deposition, also allows for development of dense stands of aquatic plants, higher algal productivity, and warmer lake water with lower dissolved oxygen concentrations which is significantly influencing the conditions in the lower reach of the river, especially during summer months. Swamp Creek's cooler temperatures create an important thermal refuge for fish where the creek joins the river. Fecal coliform bacteria and various pollutants are additional water quality issues.

Fish Habitat

The Sammamish River remains a major migratory pathway for salmon. The mouth of the river provides salmon rearing habitat, and it is believed that out-migrating juvenile salmon may hold in the shallow beach area near the river mouth before moving into the lake. The basin supports rainbow trout, coho salmon (federal species of concern), Chinook salmon (federally listed, threatened), coastal cutthroat trout, kokanee salmon, sockeye salmon, and steelhead trout (federally listed, threatened).

Wildlife Habitat

Historically, the Sammamish River with its broad, shallow channels and numerous backwater sloughs and meanders provided prime habitat for a wide variety of animal species. This diversity

of wildlife has been reduced and birds are the most visible form of wildlife along the river. Bald eagles, other raptors and cormorants have been observed, as well as great blue herons feeding along the river .

Lake Washington

Lake Washington has a surface area of approximately 35 square miles. Kenmore's shoreline along the north end of Lake Washington is approximately 3.5 miles in length. The shoreline has little natural vegetation or habitat left due to urbanization. An exception is the waterfront along St. Edward State Park, which is roughly 3,000 feet in length and the longest undeveloped stretch of Lake Washington shoreline.

Construction of the Ship Canal in 1916 created the connection between Lake Washington and Puget Sound, causing the lake water surface elevation to drop approximately 9 feet. Currently the U.S. Army Corps of Engineers maintains the water level in the lake within a 2-foot range between 20 and 22 feet. The minimum water elevation is maintained during winter to allow for annual maintenance of docks and other structures, minimize damage during winter storms, and provide flood storage volume.

Water Quality

Water quality in Lake Washington has improved tremendously in the last 50 years. However, there is a continued community concern regarding Kenmore's shoreline area, most notably localized areas of eutrophication, wherein nutrients (particularly phosphorus) and bacteria from the watershed are transported to the lake, resulting in excessive plant growth including floating and attached algae and nuisance plants. Water quality concerns around increased water temperature, fecal coliform bacteria and chemical contaminants also are present.

Fish Habitat

Lake Washington supports over 30 fish species of which 12 are non-native and introduced to the lake. Native species of salmonids use the lake for migratory passage, rearing of juveniles, and foraging. No salmonid spawning typically occurs in Lake Washington. Salmonid species include Chinook (federally listed, threatened), coho (federal species of concern), sockeye salmon, steelhead trout (federally listed, threatened), resident rainbow trout, cutthroat trout, Dolly Varden/bull trout (federally listed, threatened) and kokanee salmon.

Wildlife Habitat

Mapped bald eagle nest sites are located on the east shore of Lake Washington and documented perch trees, including large black cottonwoods, are located along the lakeshore. Pileated woodpecker breeding (state candidate species) occurs in the forests of St. Edward State Park and extending onto forested portions of adjacent private and public properties. Other priority habitats associated with the lake include wetlands and biodiversity areas and corridors.

Endangered, Threatened, Sensitive and Priority Species

Federally Listed Species

Several federally listed species are known to occur or could potentially occur within the City's shorelines. Federally listed species that have been documented include Chinook salmon, bull trout and steelhead trout.

As defined in the Endangered Species Act, critical habitat is “specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection.” NOAA Fisheries has designated Kenmore’s Lake Washington shoreline and the lower portion of the Sammamish River as “critical habitat” for Chinook salmon.

The U.S. Fish and Wildlife Service has designated “critical habitat” for the Puget Sound Distinct Population Segment (DPS) of bull trout, including Kenmore’s Lake Washington shoreline.

NOAA Fisheries designated “critical habitat” for the Puget Sound DPS steelhead which excludes all waters in the Lake Washington watershed, including in Kenmore.

State Priority Habitat and Species Program

The Washington Department of Fish and Wildlife (WDFW) has a Priority Habitat and Species (PHS) program which includes a catalog of habitats and species considered to be priorities for both conservation and management. Priority habitats are “habitat types or elements with unique or significant value to a diverse assemblage of species.” In Kenmore priority habitats include wetlands, biodiversity areas and corridors, freshwater forested/shrub wetlands, freshwater emergent wetlands, and freshwater ponds.

The State lists designate *Endangered*, *Threatened*, *Sensitive*, and *Candidate* species. Priority species include those designations, as well as “animal aggregations (e.g. heron colonies, bat colonies) considered vulnerable; and species of recreational, commercial, or tribal importance that are vulnerable.” Priority species documented in Kenmore include Chinook salmon, bull trout, coho salmon, sockeye salmon, kokanee salmon, steelhead trout, coastal cutthroat trout, pileated woodpecker, purple martin, little brown bat, and great blue heron. Previous information indicates that the purple martin is no longer nesting in Kenmore.

The bald eagle’s population status has improved to levels that resulted in the removal of the eagle from both federal and state listing. However, the eagle is still protected by the federal Golden and Bald Eagle Protection Act.

Due to the importance and size of Kenmore’s great blue heron colony, the great blue heron is addressed below.

Great Blue Heron

Great blue herons are a permanent resident in all of Washington except the higher Cascade and Olympic ranges. They are highly vulnerable to human disturbance, predation, and competition for nesting habitat.

A heron rookery has been established near the north end of the Kenmore Park and Ride, within Swamp Creek wetlands. The colony established itself after the Kenmore Park and Ride lot was developed.

The birds are colonial during the breeding season but are noncolonial in the winter when they stay in the immediate area but separate into smaller groups. Colonies usually exist at the same location for many years, and productivity (the number of fledglings/nesting herons) may be positively related to the number of years colonies have been in use. The herons may relocate their colonies in response to increased predation on eggs and young by mammals and birds such

as eagles, declines in food availability, or human disturbance (State of Washington Department of Fish and Wildlife 1999).

Frequently Flooded Areas

Frequently Flooded Areas are defined as open channel and overbank areas that together constitute a floodplain. These floodplains, which are generally flat, low-lying areas adjacent to rivers or streams, are frequently inundated with water and periodically flood during storm events. During such events, large volumes of water and debris flow downstream which may sometime cause land erosion and property damage.

The Federal Emergency Management Agency (FEMA) delineates flood hazards along all major river and stream corridors in the county. Kenmore has two waterways, Sammamish River and Swamp Creek, that are at risk from floodwater. Figure NE-4, Frequently Flooded Areas, shows the areas that are at risk from floodwater.

Frequently flooded areas and critical areas can experience increased flooding due to human activities, such as increased urbanization, drainage systems, channelization, and land use changes. Some examples of these include increased impervious surfaces causing runoff, inadequate drainage structures, watercourse channelization, and alterations of wetlands, forests, and other natural areas. Through state and city regulations, new structures are either significantly minimized or prohibited, unless there is a case for reasonable use⁵

While flood events do cause human- and property-related damage, it's important to note that floodplains provide critical functions for riparian habitat, habitat formation, connectivity to wetlands, store and convey stormwater and floodwater, and recharge groundwater.

More discussion and policy regarding the protection of floodplains and frequently flooded areas may be found in the Land Use and Climate Action elements.

Tree Preservation and Canopy Protection

Tree preservation and canopy protection is one of the ways that helps maintain and improve quality of life. Trees provide a number of benefits, including:

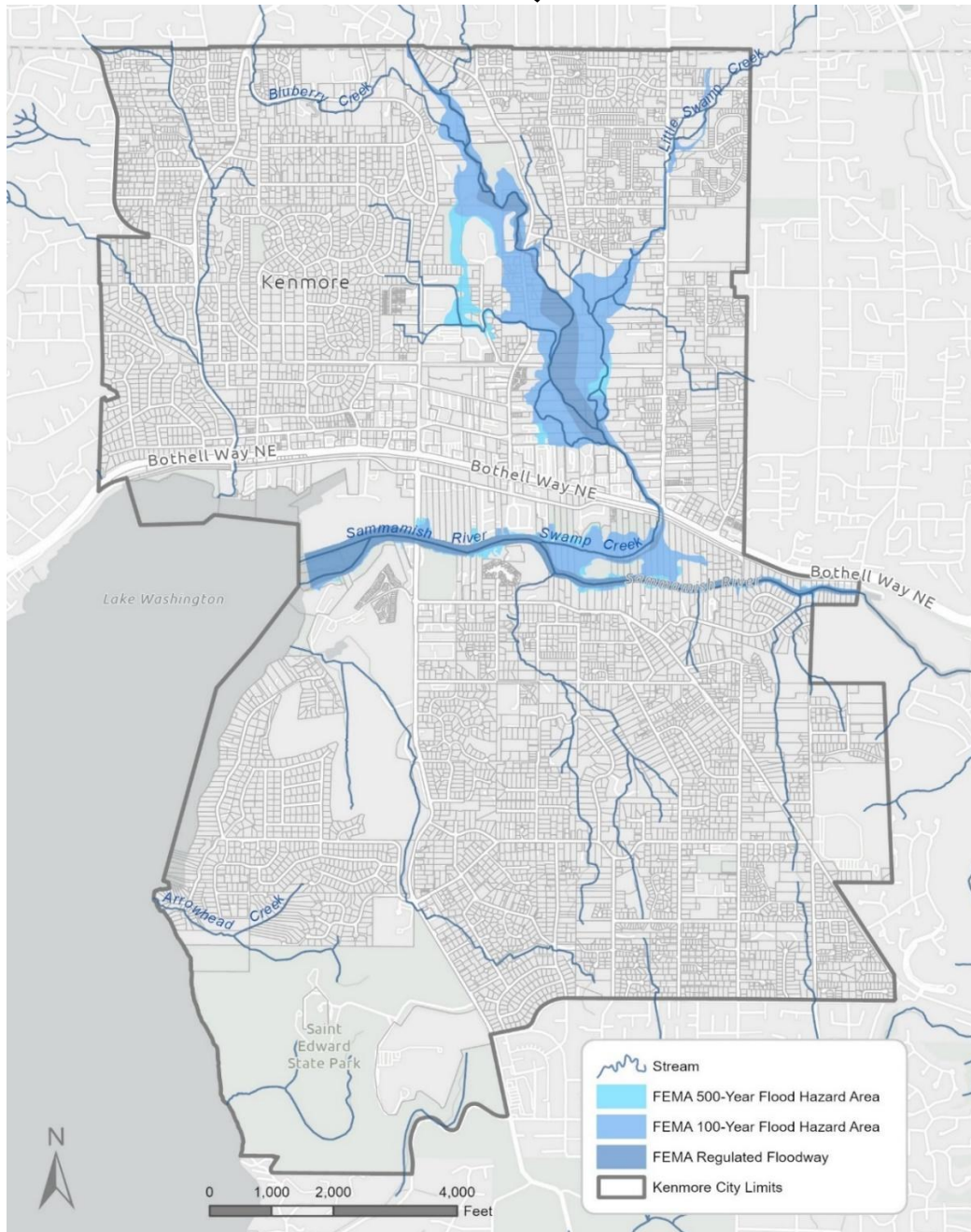
- Oxygen production
- Carbon sequestration
- Soil conservation
- Biodiversity and habitat
- Aesthetic and psychological benefits
- Economic value
- Water quality improvements
- Surface water management
- Cultural significance
- Shade and temperature regulation
- Traffic calming effects
- Air quality
- Recreational opportunities
- Safety

Trees are regulated by Kenmore Municipal Code (KMC) via Tree Management and Protection chapter, commonly referred to as the "tree code." The tree code sets limitations on tree removal and establishes standards for tree protection.

⁵ KMC. 18.20.2220 Reasonable Use. A legal concept articulated by federal and State courts in regulatory takings cases. See Chapter 18.55 KMC for specifics regarding reasonable use.

An urban tree canopy (UTC) assessment, funded by King Conservation District, was conducted in 2023 using 2021 data. The results of this assessment showed that out of 3,900 land acres, the city of Kenmore has an UTC of approximately 1,790 acres (46%). Of this area, St. Edward St. Park attributes to an estimated 25% of the city's tree canopy. Urban tree canopy is the percentage of ground area that is covered by tree crowns and relates to the branching spread of trees in an urban forest.

FIGURE NE-4 FREQUENTLY FLOODED AREAS⁶



Source: City of Kenmore GIS

⁶ The information included on this map has been compiled by City of Kenmore staff from a variety of sources and is subject to change without notice. This document is not intended for use as a survey product.

STRENGTHS, CHALLENGES, OPPORTUNITIES & THREATS (SCOT)

The city of Kenmore has many amazing natural environment assets, including lakeshore, rivers, creeks, small streams, forests, wetlands, and other natural open spaces. Along with these assets comes a variety of strengths, challenges, opportunities, and threats (SCOT). This section briefly describes each of them.

Strengths

Lake Washington/Sammamish River/Swamp Creek

Kenmore is located on the north end of Lake Washington, a lake of statewide significance and a major natural and recreational resource. The Sammamish River and Swamp Creek are also significant natural features in the community. Each of these waterways provide critical fish and wildlife habitat, including wetlands, riparian, and forest habitats along their shorelines.

Swamp Creek Wetlands

As noted above, Swamp Creek is a waterway of key importance. The creek is also flanked by significant wetlands, which provide an abundance of habitat for aquatic and terrestrial wildlife. These wetlands are described in detail in the sections above.

St. Edward State Park

St. Edward State Park is a 326-acre day-use park that is comprised of both active and passive recreational amenities, as well as The Lodge at St. Edward, a converted seminary turned hotel. The park, with its lush century-old second-growth forests and over 3,000 lineal feet of undeveloped shoreline, is a crown jewel along the northern Lake Washington shoreline. As noted above, the Park contributes to a large percentage of the city's tree canopy and provides a significant amount of natural habitat.

Challenges

Increase in Development

Kenmore is expected to steadily increase in population and in development density, which creates pressure on the city's natural environment

Industrial Waterfront

Kenmore has long had an industrial waterfront on portions of Lake Washington from the logging and timber mills of the past to ongoing heavy industrial uses such as the asphalt and concrete batch plants. Existing heavy industrial uses are considered existing legal non-conforming uses. New heavy industrial uses are prohibited. Past and ongoing industrial activities raise concerns about water contaminants, air, and noise pollutants along the shoreline.

SR-522 (Bothell Way) Traffic

SR-522 carries thousands of vehicle trips per day and is one of the region's busiest highways. While the highway provides a significant link for commerce and daily commuters, it also is a major contributor to air, noise, and surface water pollutants.

Opportunities

Future Redevelopment of Shoreline

Kenmore is fortunate to have several miles of Lake Washington waterfront. While much of the shoreline is either in a natural state or is developed with residential uses, there is redevelopment potential in the downtown area. Current underutilized or industrial uses could possibly be considered for future mixed-use and also an opportunity for shoreline restoration.

Innovative Development Techniques

With climate change, there is an increasing need for more thoughtful approaches to development, both in terms of land use and structures. The use of innovative development techniques, such as green buildings, low-impact development, and other sustainable design measures are key issues for the City to consider. Implementation of strategies and implementation measures from the Climate Action Plan and the Surface Water Management Plan and other regulations will guide these efforts.

Culvert Replacements

Kenmore has several fish-bearing creeks and streams throughout the community. To improve the resiliency of salmon and other fish species, the City continues to actively replace old and degraded culverts.

Invasive Species Removal

Kenmore has several wetland and stream habitats that are heavily impacted by invasive species. Through active invasive species removal and native revegetation, ecosystem restoration will have a greater impact against climate and other environmental impacts.

Reforestation of Open Spaces

Kenmore is fortunate to have a significant amount of tree canopy as compared to many neighboring cities. Through implementation of an Urban Forest Management Plan, preservation and reforestation efforts will improve.

Education and Awareness

With climate change and other threats to the natural environment, there continues to be rising awareness about environmental issues. This can certainly be an advantage to help protect and improve critical habitat and reduce carbon emissions. Along with many local agencies and partners, the City can be a leader in environmental protection.

Threats

Climate Change

Climate change poses a significant threat to the local environment in many ways, such as heat waves, droughts, increased flooding, and risk of forest fires. Each of these pose a risk to not only to humans, but also natural ecosystems and habitats. Climate change may also lead to an increased threat of pests and diseases, spread of invasive species, and increased loss of biodiversity.

Loss of Critical Habitat

Loss of critical habitat may occur from a variety of human, weather-, and natural disaster-induced factors including but not limited to increased urbanization, deforestation, wildlife displacement, air and water pollution, flooding, and landslides.

Air/Water/Noise Pollution

Air, water, and noise pollution all pose significant threats to the environment and human health in various ways, including respiratory and cardiovascular disease to both human and animals, sleep and stress disorders, and water contamination.

GOALS, OBJECTIVES, AND POLICIES

Following are the natural environment goals, objectives, and policies. In some cases, policies are cross-referenced in more than one Element or Sub-Element, and this is noted by a policy reference in italics (e.g., *Policy SW-4.3.1*).

GOAL NE-1 *PRACTICE ENVIRONMENTAL STEWARDSHIP BY PROTECTING, ENHANCING, AND PROMOTING THE NATURAL ENVIRONMENT IN AND AROUND THE CITY OF KENMORE.*

OBJECTIVE NE-1.1 Cooperate regionally and strive locally to improve air quality.

- Policy NE-1.1.1 Protect air quality from adverse impacts through the following measures:
- a. Encourage alternative modes of transportation to reduce reliance on the automobile as the primary method of transportation.
 - b. Promote mixed-use and compact development forms, particularly in the Downtown, to help reduce the need for automobile use.
 - c. Require air quality impact analysis for major new developments, which could adversely impact the air quality levels in the vicinity. Determined through environmental review.
 - d. Work with other agencies to educate the public about air quality impacts due to vehicular travel and due to improper use of woodstoves and fireplaces.
 - e. Work with state and special-purpose agencies to monitor air quality within the planning area, such as Department of Ecology and Puget Sound Clean Air Agency.
 - f. Creating an urban forest management plan that benchmarks progress towards tree preservation and maintenance.
- Policy NE-1.1.2 Reduce air pollution through development standards that regulate and, reduce air pollution emissions from construction, and land clearing activities.

Policy NE-1.1.3 Shift all City fleet vehicles, where practical, from combustible engine to electric.

OBJECTIVE NE-1.2 Encourage a reduction in overall noise levels throughout the community.

Policy NE-1.2.1 Require new development projects which could generate substantial levels of noise or could expose people to substantial levels of noise from existing noise generators to submit an analysis of potential noise impacts and propose mitigation. Determined through environmental review.

Policy NE-1.2.2 Enforce city noise and nuisance ordinances to address various noise sources and require cessation or mitigation of noise.

Policy NE-1.2.3 Encourage residential or other noise-sensitive development proposed for location in noise-impacted areas to be oriented away from noise source, or to be constructed with materials that will maximize noise reductions, or to incorporate fencing, landscaping, or other noise-reducing features, appropriate to the situation. Noise impacted areas may include the vicinity of SR-522, or the vicinity of the Air Harbor, or other areas that may be determined through environmental review.

Policy NE-1.2.4 Require buffering or other noise reduction and mitigation measures for development adjacent to or within the immediate vicinity of environmentally critical areas to protect habitat areas.

OBJECTIVE NE-1.3 Encourage a reduction in light and glare impacts throughout the community.

Policy NE-1.3.1 Through design standards or educational opportunities, discourage the use of building materials or signage materials that cause glare impacts to substantial numbers of motorists or surrounding neighborhoods.

Policy NE-1.3.2 Require low-intensity lighting with appropriate illumination levels and light shields for lighting standards along streets, pedestrian lighting, and in public open spaces and parks.

Policy NE-1.3.3 Encourage residents to provide exterior lighting for security purposes which does not unduly impact their neighbors.

Policy NE-1.3.4 Restrict lights pointing up to avoid artificial light spillage, affecting the view of the night sky.

Policy NE-1.3.5 Manage lighting levels to protect Kenmore's ecological systems and public health while ensuring public safety and equitable lighting.

Policy NE-1.3.6 Minimize overhead lighting that would shine on the water surface of Lake Washington, the Sammamish River, or the city's various streams.

Policy NE-1.3.7 Encourage the use of pedestrian level or shaded lighting when providing lighting along Kenmore's waterbodies.

Policy NE-1.3.8 Encourage the use of low-intensity lights that are located and shielded to prevent light from reaching the water surface of water bodies.

OBJECTIVE NE-1.4 Cooperate regionally and strive locally to protect surface and ground water quality and quantity from degradation.

Policy NE-1.4.1 Actively work with communities upstream from Kenmore to develop and implement appropriate surface water regulations to adequately retain and detain surface water so as to minimize the adverse effects upon the environment in Kenmore.

Policy NE-1.4.2 Use incentives, regulations, and programs to manage Kenmore's water resources (rivers, streams, lakes, wetlands, and ground water) and to protect and enhance their multiple beneficial uses including fish and wildlife habitat, flood and erosion control, water supply, energy production, transportation, recreational opportunities and scenic beauty. Use of water resources for one purpose should, to the fullest extent practicable, preserve opportunities for other uses.

Policy NE-1.4.3 Carefully plan development to ensure that it maintains the ecological and hydrologic functions of water resources. Any proposed development should undergo a thorough evaluation to determine its potential impact on water quality and quantity, and appropriate measures should be taken to minimize negative effects.

Policy NE-1.4.4 Participate in the development of watershed plans integrating surface water, ground water, drinking water and wastewater planning to provide efficient water resource management.

Policy NE-1.4.5 Actively encourage the use of environmentally safe methods of vegetation control.

Policy NE-1.4.6 Support awareness and education to improve and protect surface and ground water quality. This may be achieved through the following examples:

- Promoting the use of safe, less toxic lawn and gardening products;
- Proper recycling and disposal of chemicals;
- Educate businesses on surface and groundwater protecting using Best Management Practices (BMPs);
- Educate the public on reducing pollution generating practices and activities, such as encouraging the use of electric vehicles and equipment.

Policy NE-1.4.7 Emphasize the use of stormwater management techniques, including low impact development techniques, to maximize water quality and infiltration where appropriate. New developments located near water bodies or generating runoff flowing into waterways must implement low impact development techniques as a requirement.

- Policy NE-1.4.8 Collaborate with WSDOT, King County, and neighboring jurisdictions to plan and prioritize public and private culvert upgrades to ensure fish passage barrier removal, adequate projected stormwater passage, and continued climate-related adaptations to handle water passage in the future.
- Policy NE-1.4.9 Implement strict monitoring programs and regulations that protect the safety and health of our water resources, such as identifying sources of pollution and implementing best management practices to reduce fecal coliform bacteria and various pollutants.
- Policy NE-1.4.10 Maintain surface water quality necessary to support the protection of native fish and wildlife meeting state and federal standards over the long term.
- Policy NE-1.4.11 Control the flow of nutrients (especially phosphorus), heavy metals, and other emerging pollutants (such as 6PPD-quinone) into streams, rivers, Lake Washington, and natural wetlands. Require treatment measures where development results in discharges to surface or groundwaters.
- OBJECTIVE NE-1.5 Educate the public and business community about the importance and benefits of trees in Kenmore.**
- Policy NE-1.5.1 Foster partnerships with agencies and nonprofits that support and educate about the importance of urban forestry, such as King Conservation District.
- Policy NE-1.5.2 Continue the support tree canopy preservation and foster tree appreciation in the community.
- Policy NE-1.5.3 Encourage public involvement in urban forestry stewardship at public events, and through volunteer events and workshops.
- OBJECTIVE NE-1.6 Adopt an urban forestry strategy which encourages the preservation and protection of trees on public and private properties.**
- Policy NE-1.6.1 Through urban forestry, street design standards and parks programs, encourage the planting of street trees throughout the City.
- Policy NE-1.6.2 Ensure the tree canopy management plan monitors the success of municipal tree-related ordinances in achieving tree canopy goals and provides insights for code changes.
- OBJECTIVE NE-1.7 Protect the natural, environmental, ecological, public access, aesthetic, and economic aspects of Lake Washington, the Sammamish River, and Swamp Creek.**
- Policy NE-1.7.1 Protect, enhance, and restore rivers, streams, and lakes, including riparian and shoreline habitat, to protect water quality, reduce public costs, protect

fish and wildlife habitat, and prevent environmental degradation. Protect both perennial and intermittent streams to preserve natural hydraulic and ecological functions, fish and wildlife habitat, recreational resources, and aesthetics.

Policy NE-1.7.2 Encourage and work with private property owners, to restore degraded shorelines.

Policy NE-1.7.3 Balance the need to provide for shoreline protection, and public access, with the need for public and visual access to shorelines, allowing for water-oriented uses and economic development, and balancing private property rights.

Policy NE-1.7.4 Allow development within the shoreline jurisdiction that preserves the resources and ecology of the water and shorelines; avoids natural hazards; promotes visual and physical access to the water; and preserves archeological resources, traditional cultural resources, and navigation rights. Protection of critical areas should be balanced with visual values and physical access as long as there is no net adverse impact to regulated shoreline ecological processes and functions.

Policy NE-1.7.5 Ensure that when development occurs in close proximity to Kenmore's key waterbodies (e.g., Lake Washington, Sammamish River, Swamp Creek), that special consideration is given to protect and enhance these waters and their associated habitat areas.

Policy NE-1.7.6 Maintain natural hydrological functions within the city's ecosystems and watersheds and encourage their restoration to a more natural state.

Policy NE-1.7.7 Protect and restore near shore habitat of Lake Washington to encourage green shorelines by avoiding bulkheads.

GOAL NE-2 *PROTECT LIFE AND PROPERTY IN AREAS OF NATURAL HAZARDS WHILE STILL ALLOWING FOR COMPATIBLE GROWTH AND DEVELOPMENT.*

OBJECTIVE NE-2.1 *Strive to protect lives and public and private property from flooding.*

Policy NE-2.1.1 Implement the Surface Water Element goals, objectives, and policies to minimize flood hazards in the community.

Policy NE-2.1.2 Recognize the Swamp Creek basin as an environmentally critical area that has sustained repeated flooding impacts. Densities and services should reflect the environmental sensitivity of the Swamp Creek basin.

Policy NE-2.1.3 Support restoration opportunities and create a prioritization list for areas that should be considered for Transfer of Development Rights (TDR), conservation easements, or acquisition as a land use development tool to reconnect floodplain wetlands, restore natural processes, and mitigate the impacts of flooding and erosion.

Policy NE-2.1.4 Reduce the amount of effective impervious surface in floodplains and uplands contributing runoff to downstream floodplains.

Policy NE-2.1.5 Cooperate with flood hazard reduction planning carried out by King County and update policies and development regulations to incorporate appropriate recommendations from these studies.

Policy NE-2.1.6 Mimic natural systems by limiting impervious surfaces and increasing infiltration where appropriate.

OBJECTIVE NE-2.2 Protect slopes from erosion and sliding by limiting development within geologically hazardous areas.

Policy NE-2.2.1 Require land uses permitted in mapped Erosion Hazard Areas to minimize soil disturbance and maximize retention and replacement of native vegetative cover.

Policy NE-2.2.2 Require new development to protect natural vegetation coverage at levels sufficient to moderate surface water runoff and erosion and to protect the integrity of stream channels. When revegetation is required, appropriate native vegetation should be used.

Policy NE-2.2.3 Require grading and construction activities to be conducted with erosion control BMPs and other development controls as necessary to minimize sediment discharge from construction sites.

Policy NE-2.2.4 Require increased surface water management in areas draining over steep and erosive slopes.

Policy NE-2.2.5 Limit development within Landslide Hazard Areas, such as on slopes with a grade of 40 percent or more, unless the risks and adverse impacts associated with such development can be reduced to a non-significant level.

OBJECTIVE NE-2.3 Minimize the potential for damage due to liquefaction and seismic hazards.

Policy NE-2.3.1 In areas with severe seismic hazards, apply Uniform Building Code, and any other necessary special building design and construction measures to minimize the risk of structural damage, fire, and injury to occupants and to prevent post-seismic collapse.

GOAL NE-3 PROTECT AND ENHANCE UNIQUE, VALUABLE, AND CRITICAL PLANTS AND WILDLIFE.

OBJECTIVE NE-3.1 Protect wetlands from encroachment and degradation and encourage wetland restoration.

- Policy NE-3.1.1 Determine wetland boundaries in accordance with the approved federal wetland delineation manual and applicable regional supplements.
- Policy NE-3.1.2 Utilize a wetland classification system that is based on best available science.
- Policy NE-3.1.3 Use mitigation sequencing when reviewing projects to avoid or minimize impacts to environmentally critical areas, consistent with federal and State guidelines.
- Policy NE-3.1.4 Require and enforce mitigation in order to ensure no-net-loss of wetland functions or values within each drainage basin. Acquisition, enhancement, regulations, and incentive programs may be used independently or in combination with one another to protect and enhance wetlands functions.
- Policy NE-3.1.5 Require development adjacent to wetlands to be sited such that wetland functions are protected, an adequate buffer around the wetlands is provided, and significant adverse impacts to wetlands are prevented.
- Policy NE-3.1.6 Protect areas of native vegetation that connect wetland systems. Whenever effective, incentive programs such as buffer averaging, density credit transfers, or appropriate non-regulatory mechanisms should be used.
- Policy NE-3.1.7 Protect the unique hydrologic cycles, soil and water chemistries, and vegetation communities of bogs, fens and other legislatively designated unique wetland ecosystems through the use of BMPs to control and/or treat stormwater within the wetland basin.
- Policy NE-3.1.8 Allow public access to wetlands for scientific and traditional cultural use.
- Policy NE-3.1.9 Where allowed, control public access to trails, ensure critical habitats and species are protected, and ensure hydrological continuity is maintained.
- Policy NE-3.1.10 Allow enhancement or restoration of degraded wetlands to maintain or improve wetland functions, provided that all wetland functions are evaluated in a wetland management plan, and adequate monitoring, code enforcement and evaluation is provided and assured by responsible parties. Restoration or enhancement must result in a net improvement to the functions of the wetland system. Technical assistance to small property owners should be considered.
- Policy NE-3.1.11 Alterations to wetlands may be allowed, only after all wetland functions are evaluated, the least harmful and reasonable alternatives are identified, and affected significant functions are appropriately mitigated, in order to:
- a. Accomplish a public agency or utility development;
 - b. Provide necessary utility and road crossings;

- c. Enhance an ecological function; or,
- d. Avoid a denial of all reasonable use of the property.

Policy NE-3.1.12 Approve wetland mitigation proposals if they would result in improved overall wetland functions within a drainage basin. All wetland functions should be considered. Ensure mitigation sites replace or augment the functions that would be lost as a result of the project proposal. Further, mitigation sites should be located strategically to alleviate habitat fragmentation.

Policy NE-3.1.13 Promote mitigation projects that contribute to an existing wetland system or restore an area that was historically a wetland. The goal for these mitigation projects is no net loss of wetland functions per drainage basin.

Policy NE-3.1.14 Preserve land used for wetland mitigation in perpetuity. Monitoring and maintenance should be provided until the success of the site is established.

Policy NE-3.1.15 Support a cooperative multi-jurisdictional effort to develop a plan for the establishment and utilization of a wetland mitigation banking program or in lieu fee program.

OBJECTIVE NE-3.2 Protect streams from encroachment and degradation and encourage stream restoration.

Policy NE-3.2.1 Protect, enhance, and restore rivers, streams, and lakes, including riparian and shoreline habitat, and prevent environmental degradation. Protect both perennial and intermittent streams to preserve hydrologic and ecological functions, fish and wildlife habitat, recreational resources, and aesthetics.

Policy NE-3.2.2 Daylight natural drainage channels and remove fish barriers to improve and restore habitat.

Policy NE-3.2.3 In partnership with other jurisdictions and interested parties, continue restoring stream and river channels and surrounding riparian areas to enhance water quality and fish and wildlife habitat and to mitigate flooding and erosion. Of particular interest is retention of forest communities along stream and river channels that provide shade and a source of woody debris to the aquatic habitat.

Policy NE-3.2.4 Increase riparian cover and add thermal refugia so that areas of the river will be cool enough to support Chinook salmon migration and survival by 2025.

Policy NE-3.2.5 Maintain natural hydrological functions within the city's ecosystems and watersheds and encourage their restoration to a more natural state.

OBJECTIVE 3.3 Maintain and promote regional biodiversity focusing on native species and habitat within the City, while also eliminating invasive species to the extent possible.

- Policy NE-3.3.1 Protect native plant communities by encouraging management and control of non-native invasive plants, including aquatic plants. Environmentally sound methods of vegetation control, including appropriate use of approved herbicides, should be used to control noxious weeds.
- Policy NE-3.3.2 Recognize that aquatic weeds and toxic algae are a regional issue. Lobby King County to take the lead on a solution to control aquatic weeds and algae on the Sammamish River, Swamp Creek, and Lake Washington. At the same time, facilitate the use of local resources, including volunteers, to reduce aquatic weeds.
- Policy NE-3.3.3 Encourage the use of native plants in landscaping requirements, erosion control projects, and in the restoration of stream banks, lakes, shorelines, and wetlands. Use native plants, mature plantings, and higher densities of biomass when feasible to help reduce non-native species and noxious weeds.
- Policy NE-3.3.4 Maintain fish and wildlife through conservation and enhancement of terrestrial, air, and aquatic habitats.
- Policy NE-3.3.5 Preserve habitats for species which have been identified as endangered, threatened, or critical by the state or federal government.
- Policy NE-3.3.6 Designate and protect natural resources having a primary association with Species of Concern, Priority Species, and Species of Local Importance, including:
- a. Habitat for federal or state listed endangered or threatened species;
 - b. Habitat for state sensitive, and candidate species; animal aggregations considered vulnerable; and those species of recreational, commercial, or tribal importance that are vulnerable as identified and mapped by the State Priority Habitats and Species program.
 - c. Habitat for great blue herons;
 - d. Biodiversity areas and corridors designated and mapped in the Priority Habitats and Species program by the State Department of Fish and Wildlife; and,
 - e. Riparian corridors.
- Policy NE-3.3.7 Identify species which need protection during the development review process.

- Policy NE-3.3.8 Protect salmonid habitats by ensuring that land use and facility plans (transportation, water, sewer, electricity, gas) include riparian and stream habitat conservation measures developed by the County, cities, tribes, service providers, and/or state and federal agencies. Development within basins that contain fish enhancement facilities should consider and mitigate significant adverse impacts to those facilities.
- Policy NE-3.3.9 Work with adjacent jurisdictions, state and federal governments and tribes during land use plan development and site development review to identify and protect habitat networks at jurisdictional boundaries.
- Policy NE-3.3.10 Integrate fish and wildlife habitats into capital improvement projects whenever feasible.
- Policy NE-3.3.11 Regularly review the City's capital projects, and planning and regulatory efforts to ensure consistency with the Federal 4(d) rule.

GOAL NE-4 CONTINUE TO PREPARE FOR AND ADAPT TO LAND USE IMPACTS AND CLIMATE CHANGE.

OBJECTIVE NE-4.1 Consistent with the Land Use and Climate Action Elements, develop policies and strategies that address the impacts of climate change to Kenmore, including public health and safety, economy, infrastructure, water resources, and natural habitat.

- Policy NE-4.1.1 Reduce climate change impacts by:
- Promoting job and population growth within downtown and along SR-522 which supports mass transit, encourages non-motorized travel, and shortens commute distances.
 - Utilizing natural systems to lower atmospheric carbon by establishing regulations to preserve existing forests and promote forest creation on undeveloped lands.
 - Encouraging and incentivizing energy efficiency, conservation practices, and the use of sustainable energy sources in both public and private developments.
 - Collaborating with regional jurisdictions and other partners to develop a common framework for analyzing climate change impacts during environmental reviews under SEPA.
 - Participating in regional efforts to anticipate, prepare for, and adapt to the impacts of climate change on public health and safety, the economy, infrastructure, water resources, and wildlife habitats.
- Policy NE-4.1.2 Reduce greenhouse gas emissions through the following measures:

- Encouraging or incentivizing new developments to use low-emission construction practices, achieve low or zero net lifetime energy requirements, and implement “green” building techniques.
- Participating in regional programs or initiatives aimed at reducing greenhouse gas emissions.
- Promoting mass transit, non-motorized transportation, and other alternatives to single-occupant vehicle trips.
- Prioritizing initiatives that offer the most effective and cost-efficient emission reductions.
- Increasing and encouraging the use of low-emission vehicles, such as efficient electric-powered cars.

Policy NE-4.1.3	As noted in the Climate Action Element, encourage increased density near high-frequency transit, infill and redevelopment in key areas, and the development of middle housing in neighborhoods. Support these efforts with appropriately sized parking, transportation demand management strategies, multi-modal access, park amenities, and green spaces.
Policy NE-4.1.4	Mitigate the effects climate change through various measures, including implementing green building and infrastructure, encouraging solar usage, reduce heat islands through increased tree canopy, and lessening greenhouse gas emissions.
Policy NE-4.1.5	Follow best management practices recommended by state and federal agencies in Kenmore where activities or land use could result in lead contamination, especially in areas with vulnerable populations.
Policy NE-4.1.6	Promote approved voluntary fish and wildlife habitat enhancement projects by private individuals and businesses through educational and incentive programs.
Policy NE-4.1.7	Actively participate in the Watershed Resource Inventory Area (WRIA) 8 Council to ensure that the City’s planning, implementation, and enforcement efforts regarding surface and groundwater, environmentally critical areas, and development regulations are consistent with regional efforts. A central purpose of the watershed planning and implementation should be the recovery of endangered, threatened, sensitive and priority species such as Chinook salmon, steelhead trout and bull trout.

IMPLEMENTATION STRATEGIES⁷

The Natural Environment Element policies would require new, continuing or increased commitments of City resources to prepare new regulations, review/amend existing regulations, create educational or incentive programs, or coordinate with adjacent jurisdictions.

- Air quality, lighting, and noise analyses as required by environmental review
- Urban forestry strategies – continuation of periodic tree canopy assessments
- Habitat enhancement and education - continue volunteer and incentive programs, continue to work with local groups supporting ongoing stewardship and restoration efforts in City parks, shorelines and other areas
- Aquatic weed and algae control – continue to provide City resources for aquatic and invasive weed prevention, and algae control.
- As noted and consistent with the Climate Action Element, continue ongoing climate action monitoring and evaluation, including annual climate action progress to Council
- Continue to review and monitor surface and stormwater water management practices
- Erosion control BMPs continue implementation and periodic review and update of regulations and practices
- Sufficiency of wetland, stream, fish and wildlife habitat, flood hazard, seismic hazard, landslide hazard, and erosion hazard regulations – continue periodic review and update of critical area and shoreline regulations for compliance with Best Available Science.
- Sufficiency of design standards for building materials, critical area signage and lighting – continue implementation and periodic review and update.
- Sufficiency of noise standards - Continue implementation of standards and periodic review and update.
- Sufficiency of native vegetation requirements and tree management and protection requirements - Continue implementation of standards and periodic review and update.
- Sufficiency of protection against pollutants, including fertilizer, entering streams, the river and the lake. Continue compliance and periodic review of surface water standards including compliance with National Pollutant Discharge Elimination System (NPDES) permit requirements that requires local governments to manage and control stormwater runoff so that it does not pollute downstream waters.

Continuing efforts would need to be made to coordinate with adjacent jurisdictions or participate in regional programs, including:

- Working with adjacent, upstream communities on water quality and flooding issues
- Participating in the development of watershed plans

⁷ The implementation strategies above are not an exhaustive list. There are several others that are listed in other City master/action plans (e.g. Surface Water Management, Climate Action).

- Working with King County and the Sammamish River cities to control aquatic weeds and algae on the Sammamish River and Lake Washington
- Establishing a wetland mitigation banking program or in lieu fee program
- Restoring stream channels.
- Further mitigation regarding the impacts of septic systems and water quality.

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