City of Kenmore

City of Kenmore - 18120 68th Avenue NE - Kenmore, WA 98028
Phone: 425-398-8900 - E-mail: cityhall@kenmorewa.gov

Planning Commission Meeting
ON-SITE
Tuesday, July 30, 2024 - 7 PM
In addition, we try to provide access to the meeting virtually:
ZOOM LINK: https://kenmorewa-gov.zoom.us/j/87472449057

Or Telephone: Dial US: +1 253 215 8782 US (Tacoma)
Callers please dial *9 to Raise/Lower Hand
Webinar ID: 874 7244 9057

Technical Difficulties - If the virtual component of the meeting disconnects, and we cannot resolve technical difficulties to reconnect the virtual component, the in-person meeting will continue at City Hall if there is a quorum of the body to conduct business.

If you have technical difficulties accessing the meeting virtually, please contact the Deputy City Clerk at mkang@kenmorewa.gov.

Land Acknowledgement to Honor First Peoples

We acknowledge that the City of Kenmore is situated upon the ancestral lands of the Snohomish, Snoqualmie, Sauk-Suiattle, Duwamish, Stillaguamish, Tulalip, Suquamish, Muckleshoot, and other tribes who are part of the Coast Salish Peoples. We recognize and express our deepest respect for their enduring stewardship and profound relationship with this land, which they have cherished and protected since time immemorial. We honor the First Peoples, acknowledge their vibrant cultures, and commit ourselves to learning from their wisdom in our journey to promote justice, equity, and mutual understanding. We pledge to stand alongside these communities in acknowledging past injustices and working towards a future that respects and celebrates the diverse heritage of this land.

1. **CALL TO ORDER**

2. **LAND ACKNOWLEDGEMENT**

3. **FLAG SALUTE**

4. **PUBLIC COMMENTS**

PUBLIC COMMENTS
We welcome our community members to the Planning Commission meeting. In this forum, the Commission does not engage or dialogue with the public; the primary role is to listen. We will hear from our on-site guests first, followed by our pre-registered virtual guests. All guests must address comments to the Commission. The Clerk will acknowledge your request and call your name when it is your turn. Your time will start when we confirm that we can hear you. Please state your name and city of residence for the record and keep your comments to 3 minutes. We will not split your time with others or reset your time except by express approval of the Chair. You can submit materials to the Clerk in advance. This meeting is being recorded. Thank you for taking the time to express your comments.

VIRTUAL PARTICIPATION PROCESS: To provide public comments virtually, please fill out the Virtual Public Comment Request Form in advance of the meeting. The form closes at 12:00 Noon on the day of the meeting. You will be confirmed by the Clerk. If you are having difficulty, please reach out to the Clerk at stippleleen@kenmorewa.gov.

5. CONSENT AGENDA

Approval of Previous Meeting Minutes
07.16 Planning Commission Meeting Minutes

Planning Commissioner Excusals

6. AGENDA ITEMS

Natural Environment Element
Staff Memo
Draft Natural Environment Element
Planning Commission Comments from June 18, 2024 Meeting
Code Amendments – Chapter 18.20 KMC - Technical Terms and Land Use Definitions
Code Amendments – Chapter 18.55 KMC – Critical Areas

Surface Water Element
Draft Surface Water Element
Planning Commission Comments from June 18, 2024
Amendments to Table CF-B, Surface Water Facilities Capital Improvements

7. ADJOURNMENT

UPCOMING MEETINGS:

August 20, 2024, 7:00 p.m.

City of Kenmore
Joint Planning Commission Meeting Minutes
July 16, 2024 @ 7:00 PM

Planning Commission Members – In Attendance (the meeting was held onsite and virtually using the Zoom online platform)
Dwight Thompson, Chair
Tracy Banaszynski – partially virtual, then in person.
David Dorrian
Saad Qadri
Chris Olson
Mike Vanderlinde

Not in attendance, Derek Wyckoff

Staff
Debbie Bent, Community Development Director
Todd Hall, Principal Planner
Shannon Tipple-Leen, Planning Commission Clerk
Michelle Kang, Co-Clerk

1. CALL TO ORDER

The meeting was called to order by Chair Thompson at 7:00 PM.

2. LAND ACKNOWLEGDEMENT

The Land Acknowledgement was read.

3. FLAG SALUTE

The Flag Salute was done.

4. PUBLIC COMMENT

There was no public comment.

5. CONSENT AGENDA

Vice Chair Vanderlinde was excused from the last meeting.

Consent agenda unanimously approved.

Staff would like approval to move the Downtown Element and Natural Element to Public Hearing with the blue highlights at the next meeting.

6. AGENDA – Middle Housing Update

Debbie introduced Clay White and Nick Chen from Kimley-Horn. It was requested that questions be held until the end.

Clay began the presentation on the potential policy and code changes for Middle Housing.

Questions/Comments:

The Commissioners discussed the Middle Housing code changes and logistics at length. Issues included in that discussion were:

-Setback requirements
-Lot definition
-Community involvement
-Incentives for development
-Manufactured housing
-Tree regulations
-Ownership vs rental regulations
-Aesthetics
-Trees
-Relationship to natural environment
-Parking
-Increase cost to City due to density
-Impact fees

MOTION: Commissioner Banaszynski moved to cancel the August 6th meeting due to a conflict in Council Chambers and hold a meeting on July 30th instead. Commissioner Dorrian seconded the motion. **VOTE:** 6 For, 0 Against, 0 Abstain. Motion Carried.

Next meeting:
July 30th – Surface Water Element

7. ADJOURNMENT

Chair Thompson adjourned the meeting at 9:46 PM.

_____
Planning Commission
Approved by Planning Commission on: _____

5.Approval of Previous Meeting Minutes

City Of Kenmore, Washington

Memorandum

Date: July 30, 2024

To: Planning Commission

From: Debbie Bent, Community Development Director
Richard Sawyer, Environmental Services Director
Todd Hall, Principal Planner

Regarding: Comprehensive Plan Update: Natural Environment Element, Surface Water Element, KMC updates

At the May 7 and June 18 meetings, Planning Commission reviewed the Natural Environment Element, as well as minor amendments to Chapters 18.20 and 18.55 of the Kenmore Municipal Code. At the July 30 meeting, staff will review the final draft of the Natural Environment Element and will ask for a recommendation to schedule a public hearing on September 3.

Also at the June 18 meeting, Environmental Services Director, Richard Sawyer presented the first draft of the Surface Water Element, as well as Table CF-B of the Capital Facilities Element. At the July 30 meeting, he will be presenting a revised SW Element based on comments received from the June 18 meeting. Staff will ask for a recommendation to schedule a public hearing on September 3.

The Natural Environment and Surface Water elements will be sent together for Department of Commerce and Department of Ecology for GMA and SEPA review, respectively. Once recommended by the Commission, each element would be reviewed by City Council this summer, with adoption of the ordinance required by December 31, 2024.

Attachment 1: Draft Natural Environment Element
Attachment 2: Planning Commission Comments from June 18, 2024 Meeting
Attachment 3: Code Amendments – Chapter 18.20 KMC - Technical Terms and Land Use Definitions
Attachment 4: Code Amendments – Chapter 18.55 KMC – Critical Areas
Attachment 5: Draft Surface Water Element
Attachment 6: Planning Commission Surface Water Comments from June 18, 2024 Meeting
Attachment 7: Amendments to Table CF-B, Surface Water Facilities Capital Improvements

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~~Text~~ = deleted text
Text = new text
Text = Revised per 6/18 comments

NATURAL ENVIRONMENT ~~SUB-~~ELEMENT

INTRODUCTION

~~Natural systems play an important part in defining the City of Kenmore. The different waterways provide recreational opportunities visual amenities for the community. Some of the smaller, unnamed creeks perform an important role in surface water management by channeling runoff from impervious surfaces to the Sammamish River and/or Lake Washington. Streams and wetlands provide habitat for fish and wildlife and the tree-covered hillsides protect the slopes from erosional processes while also providing habitat. Future development will impact the natural systems and should be carefully reviewed to prevent undue adverse impacts that would lead to degradation of critical areas and to property damage.~~

Purpose

The purpose of the Natural Environment ~~Sub-~~Element is to clarify the relationship between Kenmore's ~~the~~ natural ~~environment~~ and ~~the~~ built environments, to include policies that support the City's commitment to preserving and enhancing the natural environment, and to ~~secure~~encourage a balanced approach to support ~~to~~ ~~of environmental and built future development~~environments, and support Kenmore's vision of an equitable, inclusive, sustainable, and resilient environment. ~~Sensitive~~Critical ~~Critical~~ Natural ~~areas~~environment systems ~~such as~~include Lake Washington, Sammamish River, Swamp Creek, ~~wetlands,~~plus smaller rivers/creeks and their associated wetlands ~~-~~which all provide open space and important fish and wildlife habitat. ~~open spaces, and fish and wildlife habitat contain much of the natural wealth valued by City residents.~~ Other ~~sensitive~~critical ~~-~~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 ~~T~~tree canopy, ~~and~~ 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 ~~U~~under the Growth Management Act (GMA), all jurisdictions are required to protect and ~~enhance~~ conserve the natural ecosystems through comprehensive plans and policies, and to develop regulations that reflect natural constraints and protect critical~~sensitive features~~environment~~s~~. Land use and development is ~~to be~~ 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 ~~to be~~ 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 ~~to be~~ 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 ~~animals~~wildlife. ~~for multiple beneficial uses, including flood and erosion hazard reduction, fish and wildlife habitat, agriculture,~~

~~open space, water supply, and hydropower.~~ 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 ~~jmjhj~~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~~ee~~ 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 ~~locally appropriate,~~ 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.

[1] Best Available Science (BAS) means 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.

~~Kenmore~~ Environmental Stewardship and Sustainability

Many in the Kenmore community ~~residents~~ have 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' ~~residents~~ 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 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 form a sequence of sand and gravel layers separated by finer grained layers of clay and silt or tight, well-graded soils, which are exposed in places along the steep slopes that lie between the upland plateaus and the lowland drainages. The Vashon and older deposits comprise several aquifers and aquitards within the subsurface, which control subsurface water movement from the upland to the lowland as well as to the locations of streams and creeks that occupy former outwash channels.~~

~~Lodgment till from the Vashon glaciation mantles much of the upland area but is generally absent from the steeper slopes at the edge of uplands and in the lowland. Lodgment till is an unsorted mixture of sand, gravel, silt, and clay deposited at the base of a glacier that has been compacted to a very dense state by the great weight of the overriding ice. This type of till has very low permeability and typically acts as an aquitard, restricting the downward flow of groundwater and reducing recharge of deeper aquifers. Till occurs at or very near the ground surface in the higher elevations of the watershed where north-south ridges and swales left by the passage of glacial ice cross the upland surface.~~ 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.
~~The ground surface along the upland margins and within former large outwash channels is underlain by a veneer of recessional outwash and ice contact deposits. Ice contact deposits were deposited during stagnation and melting of the ice sheet. These deposits consist of sand and gravel, similar to recessional outwash, but are more variable and often contain lenses of very silty material, till, and lacustrine silt and clay, which impede infiltration and groundwater flow.~~

~~Recent, unconsolidated deposits of alluvium, organic-rich deposits, and fill overlie the Vashon glacial soils. Recent alluvium, consisting of sand and gravel with interbeds of organic silt, peat and silty clay, exists within the floodplains of the Sammamish River and Swamp Creek. In general, the recent alluvium is poorly drained and associated with hydric soil conditions.~~

Geologically Hazardous Areas

Geologically hazardous areas in Kenmore include lands with erosion, landslide, and seismic hazards. ~~These areas pose a threat to health and safety of residents and property owners when residential and nonresidential development~~Erosion hazard areas, ~~identified on the City's Geologic Hazard Areas map,~~ occur along the northwest City limits, along 61st Avenue NE, land south of NE 170th Street, and along the shoreline in the Inglewood neighborhood and St. Edward State Park.

The identification of areas susceptible to landslides~~ing~~ 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, ~~the~~ 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 ~~LU-~~NE-1~~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."

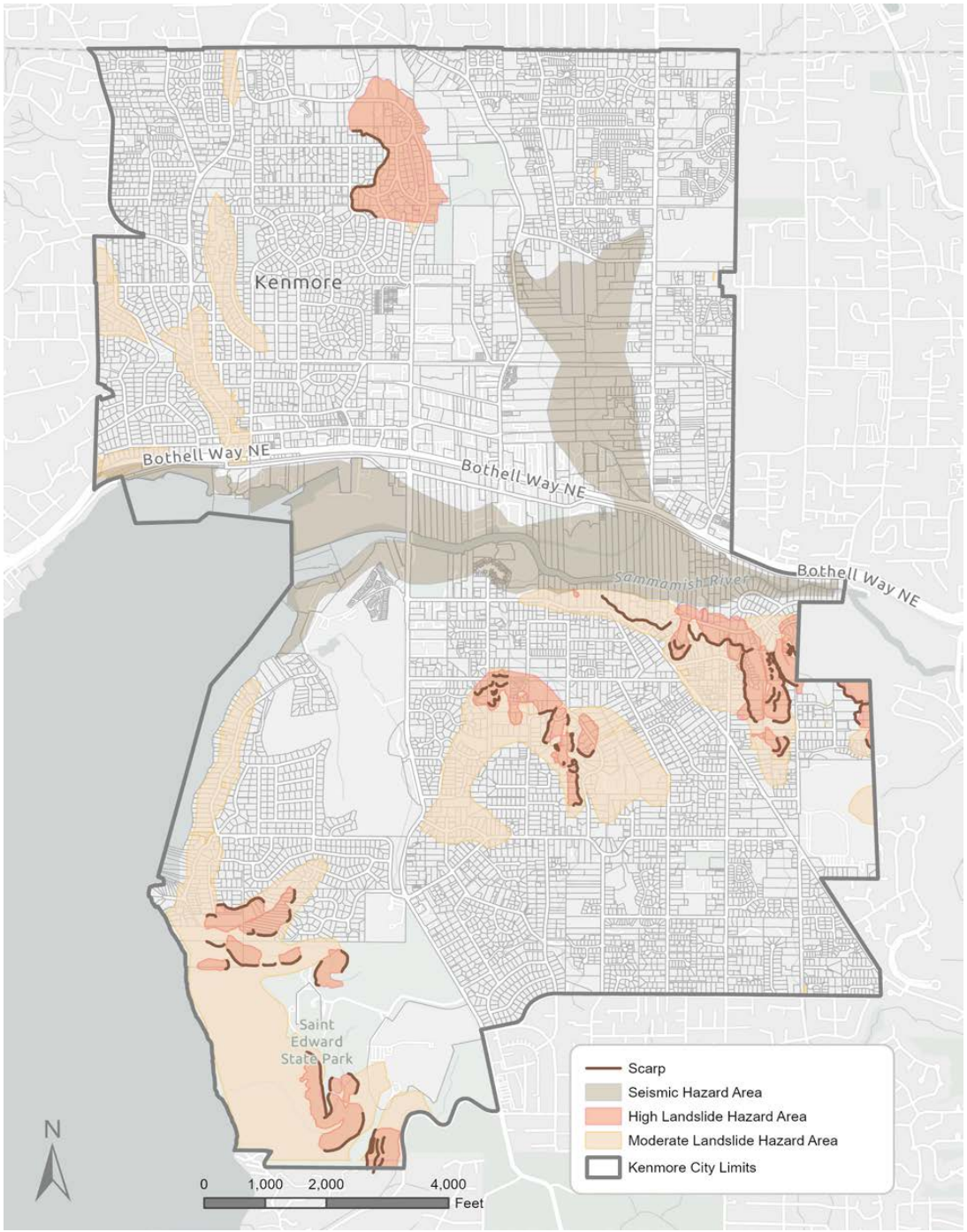
~~Future Conditions~~

Overall ~~A~~air quality in Kenmore is predicted to remain much as it is today~~. or to improve slightly~~. 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. 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.

~~This is based on continuation of the State vehicle emissions inspection and monitoring program and decreased dependence on wood as a primary heating source as newer houses replace older ones.~~

~~Additionally, i~~Implementation of zoning responsive to air quality concerns can result in air pollution benefits c~~C~~ountywide 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 c~~C~~ountywide 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 ~~11~~NE-1. Geologically Hazardous Areas



Source: City of Kenmore GIS

Water and Wetlands

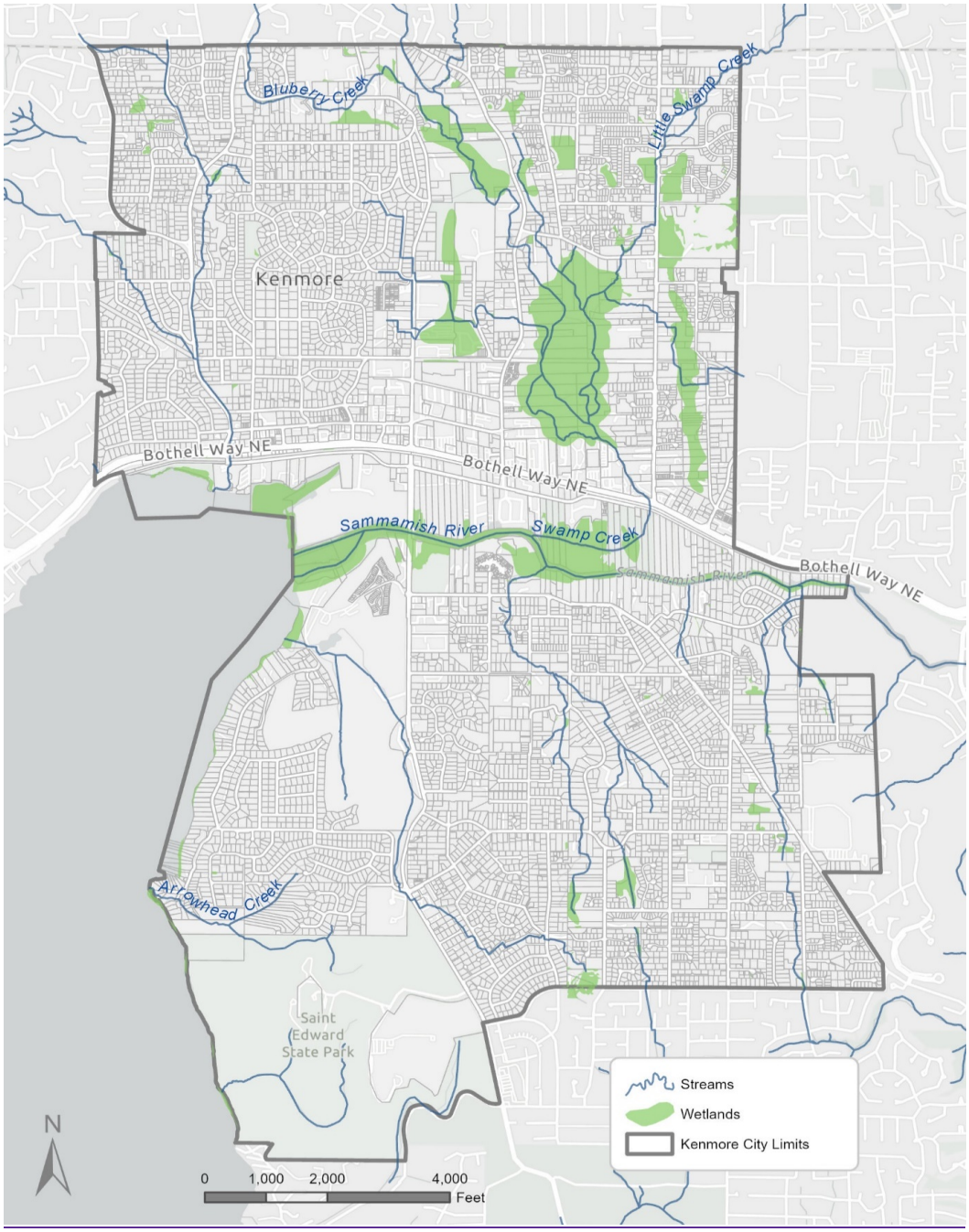
Wetlands provide habitat for a variety of aquatic and terrestrial plant and animal species. The extent to which a wetland will provide wildlife habitat will depend upon several features including the condition of the site, its size, presence of habitat features (e.g. open water, snags, islands or perches), 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 ~~N~~numerous wetlands ~~also are~~ located ~~in~~ throughout the City—many within public open spaces such as Wallace Swamp Creek Park, ƛ̓axʷadis (Tl' awh-ah-dees) ~~Squire's Landing~~ 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).

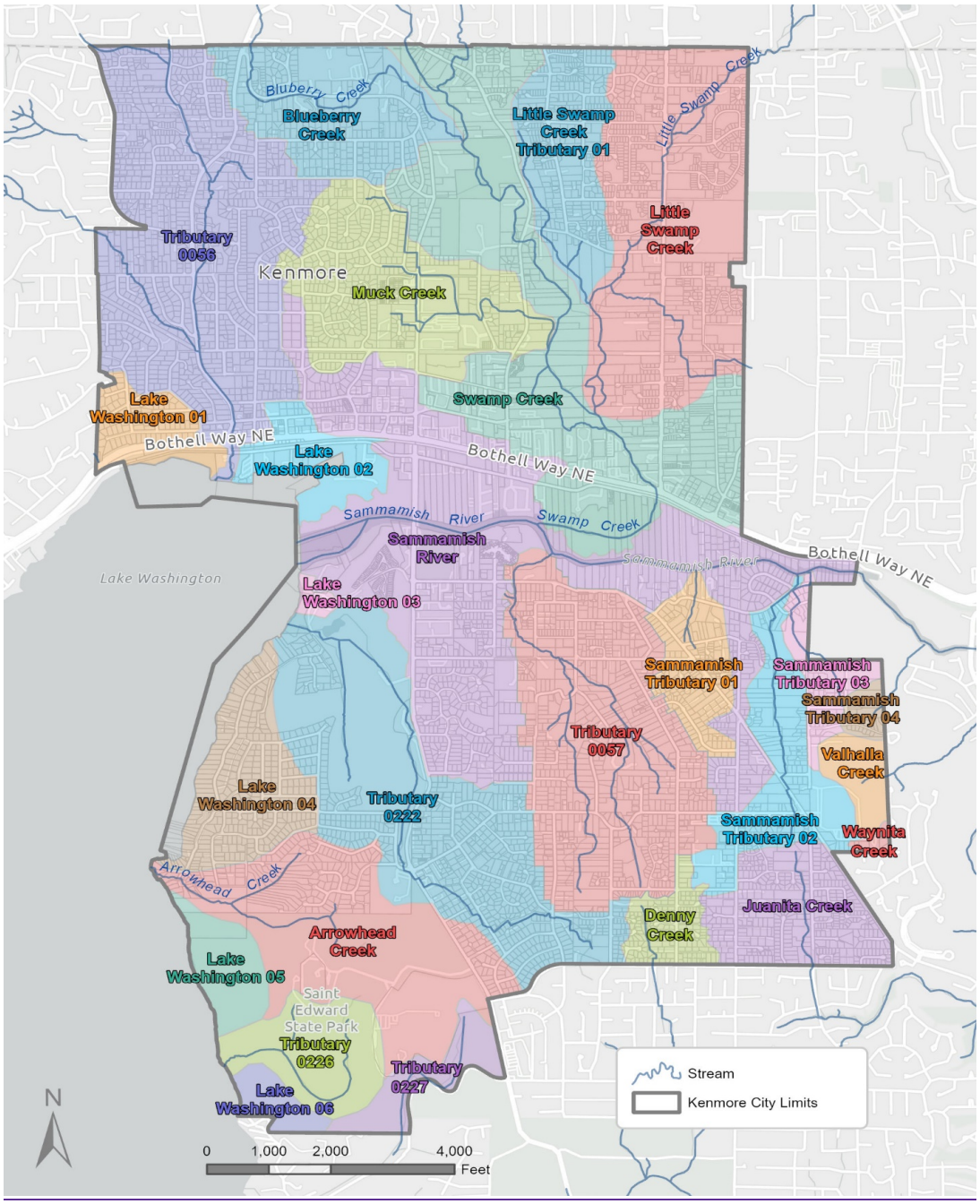
~~Wetlands provide habitat for a variety of aquatic and terrestrial plant and animal species. The extent to which a wetland will provide wildlife habitat will depend upon several features including the condition of the site, its size, presence of habitat features (e.g. open water, snags, islands or perches), the variety and complexity of the different habitat types within the wetland, and the surrounding habitat in the immediate vicinity. The ability of a wetland to provide habitat can also be linked to the degree it has been fragmented by urbanization and the level of disruption of the hydrology and vegetative continuity with other wetland systems.~~ See Figure ~~LU-11a~~ NE-2 for a map of streams and wetlands in Kenmore and Figure NE-3 for natural drainage basins~~.~~

Figure NE-2~~11~~a. Streams and Wetlands



Source: City of Kenmore GIS

Figure NE-3. Natural Drainage Basins.



Source: City of Kenmore GIS

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. ~~Topography along the stream course varies from 450 feet above sea level at the headwaters to 20 feet above sea level at the mouth of the creek. The stream has a low to moderate gradient of 1 to 6 percent.~~ ~~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. Swamp Creek has actively migrated within its floodplain.~~

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 ~~W~~water quality ~~issues include~~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 ~~the fecal coliform~~ 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 a low gradient (approximately 0.02%), dropping only 14' in elevation over its length. The volume and rate of surface water discharge from Lake Sammamish is moderated by a weir at Marymoor Park.~~

The ~~R~~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. ~~Prior to channelization, land use in the valley was predominately agricultural and spring flooding regularly caused extensive damage to seed crops.~~ To reduce ~~this~~ damage and to help regulate the level of Lake Sammamish, in the 1960s the U.S. Army Corps of Engineers~~, with King County as a local sponsor,~~ dredged a deeper and straighter channel and constructed levees along the riverbanks ~~in the 1960s, filling in the former meanders. Levees were typically placed on the riverbanks to maximize the flood protection area. Miles of streambank were lined with rip-rap and are devoid of vegetation.~~ 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 ~~community~~ restoration efforts to control invasive plants and replant native species in portions of the Rhododendron Park wetlands, portions of ƛ'ax^{w}adis (Tl' awh-ah-dees) ~~Squire's Landing~~ 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. ~~The slow~~Slow movement, while enhancing sediment deposition, also allows for development of dense stands of aquatic plants ~~and,~~ higher algal productivity~~.~~ ~~The backwater affect means that~~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.; both of these conditions are limiting for salmon. A 2015 study prepared for King County reported that "Elevated water temperatures may also adversely affect the fitness of adult Chinook salmon, delay their arrival at spawning grounds, or increase their susceptibility to disease/parasites," and have even resulted in mortality prior to spawning. 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. Temperature, dissolved oxygen, and fecal coliform are water quality parameters that currently are listed by the Washington Department of Ecology as Category 5, a level of impairment that requires development of a Total Maximum Daily Load (TMDL) or water quality improvement plan. Ecology has been conducting studies in support of temperature and dissolved oxygen TMDL development since 2014.

The King County Water Quality Index rated the river at the Kenmore monitoring station as either of high or moderate concern with respect to water quality between 2000 and 2008.

Fish Habitat

The Sammamish River remains a major migratory pathway for salmon. The mouth of the rRiver 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 flying along the River and great blue herons feeding along the river there.

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 is 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, ~~designated by National Oceanic and Atmospheric National Marine Fisheries Division (NOAA Fisheries) as Threatened in 1999 and re-confirmed in 2005;~~ bull trout~~, designated by U.S. Fish and Wildlife Service as Threatened in 1999;~~ and steelhead trout~~., designated by NOAA Fisheries as Threatened in 2007 and re-confirmed in 2014.~~

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." ~~In 2005,~~ NOAA Fisheries has designated ~~"critical habitat" for Chinook salmon, including~~ Kenmore's Lake Washington shoreline and the lower portion of the Sammamish River as "critical habitat" for Chinook salmon.

~~In 2004, t~~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.

~~In 2016,~~ 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 ~~State of~~ 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. ~~Recent~~ 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.

~~More productive colonies tend to form near large areas of high quality foraging habitat. Most colonies are within 1.9 miles of key foraging grounds, although herons can nest anywhere within 6.2 miles of where they are foraging.~~

~~Ideal nesting habitat consists of mature forest. Although most colonies are found in forests free of human disturbance, some nesting occurs in areas of persistent human activity. The birds are less tolerant of disturbance in the pre-courtship and courtship periods between mid-February and mid-April.~~

~~Bald eagles are the heron's primary predator (Azerrad, 2012).~~

A heron rookery has been established near the north end of the Kenmore Park and Ride, within Swamp Creek wetlands. ~~It housed approximately 40 nesting pairs in 2009.~~ The colony established itself after the Kenmore Park and Ride lot was developed. ~~There is a water barrier between the lot and the colony which may create a sense of safety. Other than encroaching development, factors which may cause the birds to move in the future include bald eagle intrusion, damage to nesting trees (trees can be damaged by the nesting as well as by flooding), reduction in foraging areas, and other factors (Norman 1999).~~

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. ~~The winter roosting areas have not been identified. In winter, the birds will switch from foraging in wetland areas to upland areas where they will feed, for example, on rodents (Norman 1999).~~

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).

~~The City of Kenmore's critical area regulations should require a year-round buffer around an active rookery, where unusually loud activities should be prohibited (Azerrad, 2012). Between February 1 and August 31, no clearing or grading or land disturbing activity should be allowed within the buffer unless approved by the Washington State Department of Fish and Wildlife (the SR-522 right of way is exempt from the buffer). Permits for activities within the heron rookery buffer require approval of a habitat management plan by the State and City.~~

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 use[2]

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

~~Kenmore is a community that highly values the natural environment.~~ 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:

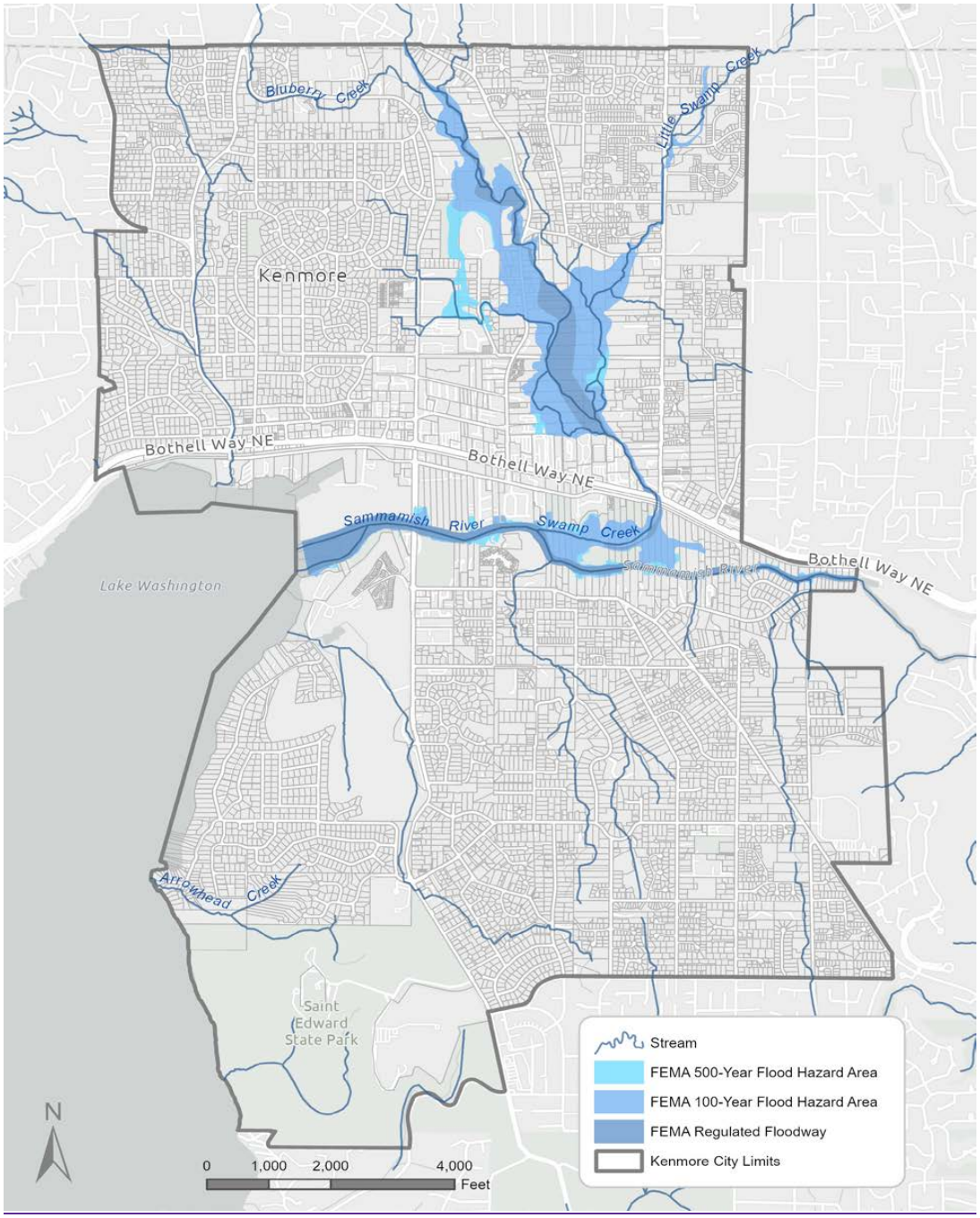
- Oxygen production
- Carbon sequestration
- Soil conservation
- Biodiversity and habitat
- Aesthetic and psychological benefits
- Economic value
- Water quality improvements
- Surface water management
- Cultural significance
- Shade and temperature regulation
- Traffic calming effects
- Air quality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

[2] 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.

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.

An urban tree canopy (UTC) assessment, funded by King Conservation District, was conducted in 2023 (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 Areas



Source: City of Kenmore GIS

~~Shoreline Master Program~~
~~The 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, also are 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.~~

STRENGTHS, CHALLENGES, OPPORTUNITES & 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 cities 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 ~~and overall quality of life.~~

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. ~~, with several manufacturing operations and the air harbor. While these businesses provide a significant economic benefit to the city, there are issues aging in-water infrastructure such as docks and piers, industrial warehouses containing industrial chemicals, and other air and noise pollutants.~~ ~~As a result of~~ Past and ongoing industrial activities raise concerns about ~~these activities, there are~~ 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 ~~or~~ 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 ~~has been and should~~ 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-42.3.1).

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 ~~other~~state and special-purpose agencies to monitor air quality within the planning area, such as Department of Ecology and Puget Sound Clean Air Agency.

~~e.~~f. Creating a urban forest management plan that benchmarks progress towards tree preservation and maintenance.

Policy NE-1.1.2 Reduce air pollution ~~I~~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~~s~~ 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 ~~Implement~~ 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, ~~s~~ 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 ~~Allow development that~~ Prohibit development that does not support~~s~~ continued ecological and hydrologic functioning of water resources. Development should not have a significant adverse impact on water quality or water quantity.

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 To ensure safe and healthy water resources, all Kenmore water sources may be subject to strict monitoring, pollution source identification, and best management practices to control 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 ~~Adopt an urban forestry strategy to encourage the preservation and planting of trees on public and private property~~.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 Lake Washington, Sammamish River, and Swamp Creek's riparian and shoreline habitat. Ensure these waterbodies are top priority to protect the city's water quality, capitalize on ecosystem services, and protect fish and wildlife Pof the State~~ 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 ~~Work~~Encourage ~~with~~ and work with private property owners, ~~particularly those containing highly industrialized uses, to clean up polluted shorelines and~~ to restore ~~ecological conditions.~~degraded shorelines.

Policy NE-1.7.3 ~~In the City's Shoreline Sub-Element and Shoreline Master Program, b~~Balance the need to provide for shoreline protection, and public access, with the need ~~to~~ 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 ~~while increased densities~~ when development ~~are to~~ occurs ~~within~~ 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.

~~Policy Balance private property rights with the need for public physical and visual access to shorelines.~~

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 ~~sensitive~~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 ~~Strive to p~~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 ~~Best Management Practices~~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.

~~Policy LU-14.2.6 Limit development in Landslide Hazard Areas 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 ~~Strive to achieve~~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 ~~Best Management Practices~~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 Control future public access trails and ensure, where allowed, ~~recreational use, and traditional cultural use where public access trails~~they are carefully sited, ~~sensitive~~ critical habitats and species are protected, and hydrologic 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.

~~Policy .1 Apply appropriate penalties for current as well as previous wetland alteration violations, such as requiring wetland restoration, through code enforcement and stricter standards for development on sites where wetlands have been illegally filled.~~

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

Policy NE-3.2.1 ~~River and stream channels should be preserved, protected, and enhanced for their hydraulic, ecological, and aesthetic functions.~~ 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~~ing~~ natural drainage channels and remove~~ing~~ fish barriers ~~where feasible~~ 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 Areas of river will be cool enough to support Chinook salmon migration and survival (increase riparian cover ~~by at least 10%~~ and add ~~two~~ thermal refugia) 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 ~~a~~regional biodiversity ~~of~~ 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. ~~Provide incentives for u~~Use~~ing~~ 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 ~~sensitive~~critical by the state or federal government.

Policy NE-3.3.6 Designate and protect natural resources having a primary association with ~~Fish and Wildlife Habitats of Importance~~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. Habitat for bald eagles;~~

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 .3.8 Provide a mechanism for nomination and consideration of additional Fish and Wildlife Habitats of Importance.~~

Policy NE-3.3.7 Identify species which need protection during the development review process.

~~Policy .3.10 Stream and wetland buffer requirements may be increased to protect Fish and Wildlife Habitats of Importance. Whenever possible, density transfers and/or buffer averaging should be allowed.~~

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~~12~~ 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~~3~~ Integrate fish and wildlife habitats into capital improvement projects whenever feasible.

~~Policy .3.14 Promote voluntary fish and wildlife habitat enhancement projects by private individuals and businesses through educational and incentive programs.~~

~~Policy .3.15 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 sensitive 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, or sensitive species such as Chinook salmon, steelhead trout and bull trout.~~

Policy NE-3.3.11~~6~~ Regularly review the City's capital projects, and planning and regulatory efforts to ensure consistency with the Federal 4(d) rule.

Policy NE-3.3.12 Develop a citywide and regional connected network of open spaces, public trails, parks, and recreation facilities proximate to all residential neighborhoods.

Policy NE-3.3.13 Organize and site housing, commercial space, public infrastructure, and multi-family residential buildings to create usable and connected open spaces.

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 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 STRATEGIES

The Natural Environment ~~Sub-~~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.

~~New programs, rules, or regulations would be needed to address:~~

- Air quality. lighting, and noise analyses as required by environmental review~~for major new developments~~
- Urban forestry strategies – continuation of periodic tree canopy assessments
- Habitat enhancement and education~~al -~~, 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

~~A review of existing programs, rules and regulations would be needed to ensure they meet the policies, including:~~

- ~~Control of air emissions from construction and land clearing activities as required by environmental review.~~

- Erosion control ~~Best Management Practices~~BMPs continue implementation and periodic review and update of regulations and practices
- ~~Increased surface water management requirements on steep and erosive slopes~~
- 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 aquatic weed prevention and invasive plant prevention -~~
- 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.

~~Additional or c~~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
- 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.

REFERENCES

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King County (1990). Wetlands Inventory. Seattle, WA.

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~~Norman, Don (November 23, 1999). Personal Communication, phone call from Don Norman, consulting biologist to Lisa Grueter, Bucher, Willis & Ratliff Corporation.~~

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Planning Commission Comments 6/18/24
Natural Environment Element

Natural Environment Element	
Planning Commission Issues	Staff Response
Pg 4D-5, Change “air particulates” to particular matter.”	Revised.
Pg. 4D-10, after “accomplished” include “and ongoing.”	Revised.
Pg. 4D-13, change "recent information" to "Previous" . Also, what was the source that purple martins are nesting?	Revised. WDFW added “purple martins” per their review.
Pg. 4D-20, NE-1.2.1, can we expand to not just new developments but also roadway work? (CO) DW suggested "new development projects)	Revised.
Pg. 4D-26, consider splitting NE-3.1.8 into two policies.	Revised.
Pg. 4D-27, NE-3.2.4, delete “by at least 10%” and “two”.	Revised.
Pg. 29, move Policies NE 3.3.14 and 15 under Goal 4.	Revised.
Pg. 4D-31, add “as required by environmental review.”	Revised

AMENDMENTS TO CHAPTER 18.20 KMC

TECHNICAL TERMS AND LAND USE DEFINITIONS

18.20.040 Agricultural activities, existing and ongoing.
Those activities conducted on lands defined in RCW 84-34-020(2), and those activities involved in the production of crops and livestock, including but not limited to operation, maintenance and conservation measures of farm and stock ponds or drainage ditches, irrigation systems, changes between agricultural activities, and normal operation, maintenance or repair of existing serviceable structures, facilities or improved areas. Activities that bring an area into agricultural use are not part of an ongoing activity. An operation ceases to be ongoing when the area in which it was conducted is proposed for conversion to a nonagricultural use or has lain idle for a period of longer than five years, unless the idle land is registered in a federal or state soils conservation program.

18.20.230 Base flood.
"Base flood" means the flood having a one percent chance of being equaled or exceeded in any given year, often referred to as the "100-year flood." The base flood can be the effective FEMA flow or best available data as approved by the City. Designation on the FIRM always includes the letter "A" or "V."

18.20.240 Base flood elevation.
"Base flood elevation" means the water surface elevation of the base flood. It shall be referenced to the effective FIRM datum.

18.20.330 Buffer or Buffer Area.
For purposes of critical areas regulations, "buffer" or "buffer area" means an area surrounding a critical area, is contiguous to a critical area, ~~that~~and is required for the protection of the critical area from adverse impacts to its integrity, functions, and values. The buffer shall consist of a naturally vegetated and undisturbed, enhanced, or revegetated area for streams, wetlands, and top of slope for landslide hazard areas. The buffer area shall require continued maintenance, functioning, and/or structural stability of the critical area.

18.20.480 Clearing.
"Clearing", either for the purposes of administering KMC 18.55 Critical Areas or 18,57 Tree Management and Protection, means the limbing, pruning, trimming, topping, cutting or removal of trees or vegetation ~~or other organic plant matter~~, such as brush, grass, ground cover or other organic plant matter, which exposes the earth's surface by physical, mechanical, chemical or other means.

18.20.697 Designation, critical area.
"Designation, critical area" means assigning critical areas into established categories and specifying their general distribution, location, and extent. Designation can be made by maps (which are useful for public awareness and for identifying if a proposal may affect a critical area) and by performance standards or definitions (which allow for specific identification and site-scale delineation during permit review). WDFW's Priority Habitats and Species (PHS) program provides the agency's recommended designation maps and performance

standards/definitions for Fish and Wildlife Habitat Conservation Areas. Designation occurs after classification in counties and cities efforts to protect critical areas. See WAC 365-190-040(5).

18.20.765 Disturbance.
"Disturbance" means a pronounced, temporary change in environmental conditions within an ecosystem. Disturbances often act quickly and can alter ecosystem composition, structure, and function.

18.20.910 Enhancement.
"Enhancement" means actions taken to improve habitat or water quality function and/or wildlife use in an existing viable wetland, stream, or habitat area or established buffers, by planting native species, removing nonnative species, installing habitat structures, installing environmentally compatible erosion controls, and any other measures approved by the City. Enhancement also includes actions performed to improve the quality of an existing degraded wetland, stream, or habitat area or buffer.

18.20.940. Erosion hazard areas.
"Erosion hazard areas" means those areas identified by the United States ~~Department of Agriculture Natural Resources~~ Soil Conservation Service Soil Classification System, or identified by a special study, as having a ~~"moderate to severe" or "very severe"~~significant erosion~~erosion potential~~. Erosion hazard areas also include channel migration zones.

18.20.1056 Fish and Wildlife Habitat Conservation Areas.
"Fish and wildlife habitat conservation areas" mean areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. These areas may include but are not limited to rare and vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors, and areas with high relative population density or species richness.

18.20.1180 Frequently flooded areas.
"Frequently flood areas" means lands in the floodplain subject to at least a one percent or greater chance of flooding in any given year. These areas include, but are not limited to, streams, rivers, lakes, coastal areas, wetlands, and areas where high groundwater forms ponds on the ground surface.

18.32.312 Habitat management.
"Habitat management" means management of land to maintain species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. This does not imply maintaining all habitat or individuals of all species in all cases.

18.32.314 Habitats of local importance.
"Habitats of local importance" includes seasonal range or habitat element with which a given species has a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over time. These might include areas of high relative density or species richness, breeding habitats, winter range, and movement corridors. These might also include habitats that are of limited availability or high vulnerability to alterations, such as cliffs, talus, and wetlands.

18.20.1301 Headwater stream.
"Headwater stream" means stream that is in the uppermost regions of a watershed or catchment area that flows into a larger stream, main stem river, or lake. Also synonymous with "tributary to."

18.20.1437 Intentionally created stream.
"Intentionally created stream" means streams created through purposeful human action, such as irrigation and drainage ditches, grass-lined swales, and canals.

18.20.1438 Intermittent stream.
"Intermittent stream" means a stream that flows only part of the year after precipitation events and receives some water during that time from groundwater sources.

18.20.1570 Landslide hazard areas.
"Landslide hazard areas" means areas ~~that are potentially subject to~~ at risk of mass movement resulting from a combination of geologic, topographic, and hydrologic factors including: bedrock, soil, slope gradient, slope aspect, geologic structure, groundwater, or other factors.

18.20.1572 Large woody debris (LWD).
"Large woody debris (LWD)" means dead woody material (i.e., fallen trees and branches) in various stages of decomposition that have fallen into a stream or have been placed in a stream, stabilizes the streambed, and provides habitat for fish and aquatic insects. LWD includes any piece of wood that is at least 4 inches (10 centimeters) in diameter (midpoint) and is at least 6 feet (2 meters) in length.

18.20.2104 Priority habitat/species or Priority wildlife habitat/species.
"Priority habitat/species or Priority wildlife habitat/species" means a habitat type or elements ~~with unique or significant value to~~ one or more species or habitats of local importance and concern in urban areas as classified by the Washington State Department of Fish and Wildlife Priority Habitat and Species (PHS) program. "Priority species" are wildlife species of concern due to their population status and their sensitivity to habitat alteration. ~~A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural event. (WAC 173-26-020(34)).~~ "Priority habitats" are areas with one or more of the following attributes: comparatively high wildlife density, high wildlife species richness, significant wildlife breeding habitat, significant wildlife seasonal ranges, significant movement corridors for wildlife, limited availability, or high vulnerability. General types of priority habitat identified in the PHS program potentially found in Kenmore include meadows, oak woodlands, old-growth/mature forests, riparian areas, snag-rich areas, urban natural open space, and wetlands.

18.20.2205 Qualified professional.
"Qualified professional" means a person with experience and training in the pertinent scientific discipline, and who is a qualified scientific expert with expertise appropriate for the relevant critical area subject in accordance with WAC 365-195-905(4). A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, engineering, environmental

studies, fisheries, geology, hydrogeology, geomorphology, or a related field, and have two years of related work experience.

A. A qualified professional for habitats or wetlands must have a degree in biology and professional experience related to the subject species;

B. A qualified professional for a geological hazard must be a professional engineer or geologist licensed in the State of Washington.

18.20.2208 Quality habitat areas.
"Quality habitat areas" means areas that provide significant wildlife value by virtue of their characteristics. These characteristics include several parameters indicative of quality habitat, including size, community diversity, interspersion (spatial patterns), continuity, forest vegetation layers, forest age, and lack of invasive plants. Also referred to as a primary habitat.

18.20.2232 Reconstruction.
"Reconstruction" means to build, repair, or restore a structure to its original form after it has been damaged or destroyed.

18.20.22332 Recreational/cultural land uses.
For purposes of Chapters 18.35 and 18.40 KMC, "recreational/cultural land uses" means adult entertainment business, arts, entertainment, indoor; arts, entertainment, outdoor; park; recreational facility, indoor; recreational facility, outdoor; and trail.

18.20.2292 Rehabilitation.
"Rehabilitation" means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural or historic functions of a degraded critical area. Rehabilitation is a type of restoration. For wetlands, rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain.

18.20.2375 Riparian stream corridor.
"Riparian stream corridor" means areas adjacent to aquatic systems with flowing water that contain both aquatic and terrestrial ecosystems that mutually influence each other. The width of these areas extends to that portion of the terrestrial landscape that directly influences the aquatic ecosystem by providing shade, fine or large woody material, nutrients, organic and inorganic debris, terrestrial insects, or habitat for riparian-associated wildlife. Widths shall be measured from the ordinary high water mark or from the top of bank if the ordinary high water mark cannot be identified. It includes the entire extent of the floodplain and the extent of vegetation adapted to wet conditions as well as adjacent upland plant communities that directly influence the aquatic system. Riparian habitat areas include those riparian areas severely altered or damaged due to human development activities.

18.20.2380 Riparian management zone (RMZ).
"Riparian management zone (RMZ) means an area often synonymous with riparian buffer. The RMZ is the area that has the potential to provide full riparian functions.

18.20.2385 Riparian zone.
"Riparian zone" means the area of vegetation adjacent to a body of water that influences (and is influenced by) the water; an area typically used by more species of wildlife than other land areas.

18.20.2823 Species, candidate.
"Species, candidate" means fish and wildlife species that the Washington State Department of Fish and Wildlife will review for possible listing as endangered, threatened, or sensitive.

18.20.2825 Species of concern.
"Species of concern" means those species listed an endangered, state threatened, state sensitive, or state candidate, as well as species listed or proposed for listing by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service.

18.20.2900 Stream.
"Stream" means an area where open surface water produces a defined channel or bed. A defined channel or bed is an area which demonstrates clear evidence of the passage of water and includes, but is not limited to, bedrock, channels, gravel beds, sand and silt beds, and defined-channel swales. This includes watercourses where there is some component of natural flow (groundwater, spring, etc.) or when an artificial stormwater system is incorporated within a natural stream. A watercourse also includes all surface water connected wetlands that provide or maintain habitat that supports fish. This definition is not meant to include artificially created~~,~~ ~~not including~~ irrigation ditches, canals, storm or surface water runoff facilities or other wholly artificial watercourses~~,~~ unless they are used by salmonids, created for the purposes of stream mitigation, or are used to convey a watercourse naturally occurring prior to construction. A channel or bed need not contain water year-round, provided there is evidence of at least intermittent flow during years of normal rainfall.

18.20.2905 Stream reconnaissance report.
"Stream reconnaissance report" means a report prepared by an applicant's qualified consultant to describe a stream and to characterize its conditions, wildlife, habitat values, and water quality.

18.20.2935 Structural diversity.
"Structural diversity" means the relative degree of diversity or complexity of vegetation in a wildlife habitat area as indicated by the stratification or layering of different plan communities (e.g., ground cover, shrub layer, and tree canopy), the variety of plant species, and the spacing or patter of vegetation.

18.20.3245 Wetland, establishment (creation).
"Establishment or creation" of a wetland means the manipulation of the physical, chemical, or biological characteristics present to develop a wetland on an upland or deepwater site, where a wetland did not previously exist. Activities typically involve excavation of upland soils to elevations that will produce a wetland hydroperiod, create hydric soils, and support the growth of hydrophytic plant species.

18.20.3280 Wetlands.

"Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of wetlands. For identifying and delineating a wetland, local governments shall use the most recently adopted ~~Washington State Wetland Identification and Delineation Manual (1997).~~Wetland Rating System for Western Washington.

18.20.3282 Wetland class.
"Wetland class" means a hierarchy of systems, subsystems, classes, and subclasses used by the U.S. Fish and Wildlife Service wetland classification scheme to describe wetland types (refer to USFWS, December 1979, Classification of Wetlands and Deepwater Habitats of the United States, for a complete explanation of the wetland classification scheme). Eleven class names are used to describe wetland and deepwater habitat types. These include the following examples which may be found in Kenmore forested wetland, scrub-shrub wetland, emergent wetland, moss-lichen wetland, unconsolidated shore, and aquatic bed.

18.20.3284 Wetland determination.
"Wetland determination" means a report prepared by a qualified consultant that identifies, characterizes, and analyzes potential impacts to wetlands consistent with applicable provisions of these regulations.

18.20.3286 Wetland delineation manual.
"Wetland delineation manual" means a guideline document used to identify and delineate wetland boundaries. This is the approved federal wetland delineation manual and applicable regional supplements.

18.20.3288 Wetland mitigation banking
"Wetland mitigation banking" means the act of restoring, establishing, or enhancing a wetland, stream, or other aquatic resource for the purpose of providing compensation in advance for unavoidable impacts to similar aquatic resources.

18.20.3295 Wildlife report
"Wildlife report" means a report, prepared by a qualified consultant, that evaluates plan communities and wildlife functions and values on a site.

18.20.3350 Zero-rise floodway.
"Zero-rise floodway" means the channel of the stream and that portion of the adjoining floodplain which is necessary to contain and discharge the base flood flow without increasing the base flood elevation. The zero-rise floodway will always include the FEMA floodway.

6.Natural Environment Element

AMENDMENTS TO CHAPTER 18.55 KMC

CRITICAL AREAS

18.55.010 Purpose and Goals.

B. The City finds that critical areas provide a variety of valuable and beneficial biological and physical functions that benefit the City and its residents.~~,~~ Identification, regulation, and protection of critical areas are necessary to protect the public health, safety, and general welfare. ~~and/or~~ Some types may pose a threat to human safety or to public and private property.

C. By limiting development within and alteration of critical areas, this chapter seeks to:

1. Strive to protect lives and public and private property and facilities from injury, loss of life, or property damage due to landslides and steep slope failures, erosion, liquefaction and seismic hazards, or ~~from~~ flooding.

~~4.~~2. Protect unique, fragile, and valuable elements of the environment, including ground and surface waters, wetlands, streams, and fish and wildlife and their habitats from encroachment and degradation, and encourage wetland and stream restoration;

~~6.~~3. Maintain and promote a diversity of species and habitat within the City;

4. Direct activities not dependent on critical area resources to less ecologically sensitive sites and mitigate unavoidable impacts to critical areas by regulating alternations in and adjacent to critical areas;

5. Provide standards, guidelines, and criteria to guide application of these critical areas goals and policies when considered with other goals and policies of the KMC, including those pertaining to natural features and environmental protection; and,

~~2. Strive to protect slopes from erosion and sliding;~~

~~3. Minimize the potential for damage due to liquefaction and seismic hazards;~~

~~5. Protect streams from encroachment and degradation and encourage stream restoration;~~

~~7.Address critical aquifer recharge areas and protect groundwater.~~

6. Coordinate environmental review and permitting of proposals to avoid duplication and delay.

18.55.610 Designation of geologically hazardous areas.
Geologically hazardous areas include areas susceptible to erosion, landsliding, earthquake, or other geological events. These areas are further defined in WAC 360-190-

120. They poset a threat to health and safety of citizens when incompatible development is sited in hazard areas. Such incompatible development may not only place itself at risk, but also may increase the hazard to surrounding development and use. Areas susceptible to one or more of the following types of hazards shall be designated as geologically hazardous areas:

A. *Erosion* hazard;

B. *Landslide* hazard;

C. Seismic hazard; and

D. Other geological events including *debris flows* and *differential settlement.*

18.55.150 Exemptions.

A. Exempt Activities

2. Normal and routine maintenance, operation and reconstruction of existing ~~roads,~~ public streets, utilities and associated rights-of-way and structures; provided~~, that~~ reconstruction of any structures may not increase the impervious surface area or remove flood storage capacity;

3. Normal maintenance~~, and~~ repair, and ~~reconstruction or~~ remodeling of residential or commercial structures, ~~or legal preexisting and ongoing uses of the site;~~ provided~~,~~ that there is no expansion of the structure and no increase to the existing nonconforming condition of the structure relative to the critical area or its buffer based on a current delineation ~~reconstruction of any structures may not increase the previously approved building footprint~~;

4. Reconstruction of a structure that has been fully or partially destroyed by fire, explosion, or other unforeseen circumstances not caused by the owner subject to KMC Chapter 18.100 KMC.

~~4.~~ 5. Site investigative work and studies necessary for preparing site development or modification plans, including soils tests, water quality studies, wildlife studies and similar tests and investigations, where such activities do not require construction of new roads or significant amounts of excavation; and provided, that any disturbance of the critical area shall be the minimum necessary to carry out the work or studies and disturbed areas shall be immediately restored;

~~5.~~6. Educational activities, scientific research, and passive outdoor recreational activities, including but not limited to interpretive field trips and birdwatching, that will not have a significant adverse effect on the critical area;

~~6.~~ 7. Emergency activities necessary to prevent an immediate threat to public health, safety, property or welfare; provided, that the critical areas shall be restored, rehabilitated, or replaced

at the responsible party's expense to prior condition or better within one year of the activity. The restoration, rehabilitation, and/or replacement of the critical area is limited to that area impacted by the prevention effort; this section does not require the responsible party to restore, rehabilitate or replace critical areas damaged by natural disaster;

~~7.~~8. Minor activities not mentioned above and determined by the city manager to have minimal impacts to a critical area; and

~~8.~~ 9. Existing and ongoing agricultural activities, including farm pond maintenance; provided, that they implement applicable best management practices (BMPs) and minimize their effects on water quality, riparian ecology, salmonid populations, and wildlife habitat.

18.55.130 Mapping.

A. The approximate location and extent of critical areas are shown on the City's critical area maps. These maps ~~are to~~shall be used only as a general guide for the assistance of property owners and other interested parties and may be updated as new critical areas are identified. They are ~~a~~ for reference only and do not provide a final critical area designation. The type, extent, and exact boundaries ~~location of a~~ critical areas ~~and its boundary~~ shall be determined on site through a field investigation by a qualified professional according to the procedures, definitions, and criteria established by this chapter. In the event of any conflict between the critical area location and designation shown on the City's map and the criteria or standards of this chapter, the criteria and standards shall prevail.

18.55.030 Relationship to other regulations.

A. These critical areas regulations shall be in addition to zoning, land use, and other regulations adopted by the City. Compliance with other regulations does not exempt the applicant from critical areas regulations.

B. The critical area regulations shall apply to all critical areas located within the jurisdiction of the Kenmore Shoreline Master Program (KMC Title 16).

C. These critical areas regulations shall apply concurrently with review conducted under the State Environmental Policy Act (SEPA) (Chapter 19.35 KMC).

D. Any individual critical area adjoined by another type of critical area shall have the buffer and meet the requirements that provide the most protection to the critical areas involved. When any provision of this chapter or any existing regulation, easement, covenant, or deed restriction conflicts with this chapter, that which provides more protection to the critical areas shall apply.

E. Areas characterized by particular critical areas may also be subject to other regulations established by this chapter due to the overlap or multiple functions of some sensitive or critical areas. In the event of any conflict between regulations for particular critical areas in this chapter, the regulations which provide greater protection to environmentally critical areas shall apply.

FE. Compliance with the provisions of this chapter does not constitute compliance with other federal, State, and local regulations and permit requirements that may be required (for example, shoreline substantial development or conditional use permits, shoreline variances, the Washington State Department of Fish and Wildlife hydraulic project approval (HPA), U.S. Army Corps of Engineers Section 404 permits, and National Pollutant Discharge Elimination System (NPDES) permits). The applicant is responsible for complying with these requirements, apart from the process established in this chapter.

18.55.300 Designation and rating of wetlands.

C. Buffer Areas

1. The establishment of buffer areas shall be required for all development proposals and activities in or adjacent to wetland areas. The purpose of the buffer shall be to protect the integrity, function, and value of the critical area, and/or to protect life, property and resources from risks associated with development on unstable or critical lands. Lawns, walkways, driveways, paved areas, and mowed or developed areas will not be considered wetland or stream buffers included in buffer area calculations when assessing whether adequate compensatory mitigation buffers have been provided. If the site has previously been disturbed, the buffer area shall be revegetated pursuant to an approved planting plan.

18.55.520 Performance standards – General requirements.

A. Establishment of Buffers. The city manager shall require the establishment of buffer areas for activities in, or adjacent to, fish and wildlife habitats of importance when needed to protect fish and wildlife habitats of importance. Buffers shall consist of an undisturbed area of native vegetation, or areas identified for restoration, established to protect the integrity, functions and values of the affected habitat. Buffer enhancement may be required. Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity and site design proposed to be conducted ~~nearby~~on or near the critical area, and shall be consistent with the management recommendations issued by the Washington State Department of Fish and Wildlife.

18.55.140 Signs and fencing of critical areas

C. Maintenance. To ensure long-term maintenance of signs and fencing, the owner of the property or homeowners association of a subdivision shall file a maintenance agreement as directed by the City. This agreement shall be recorded and run with the land.

18.55.300 Designation and rating of wetlands.

A. Designating Wetlands. All areas within the City meeting the wetland designation criteria, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter. Identification of wetlands and delineation of their boundaries shall be done in accordance with the Corps of Engineers wetlands delineation manual (Corps, 1987) and applicable regional supplement (Corps, 2010), as revised or as may be revised in WAC 173-22-035 and 173-22-080. All areas within the City meeting the wetland designation criteria in that procedure are hereby designated critical areas and are subject to the provisions of this chapter.

Wetland delineations shall be documented on a ground verified map using either professional surveying methods or an equivalent professional method using GPS with sub-meter accuracy.

B. Wetland Ratings. Wetlands, as defined by this chapter, shall be classified and scored using the 2014 Department of Ecology Washington State Wetland Rating System for Western Washington, Publication No. ~~14-06-029~~ 23-06-009 (Hruby, 2014 or latest edition), which contains the definitions and methods determining whether the criteria below are met.

18.55.320 Allowed uses.

E. Wetland and Buffer Uses. The following uses may be permitted within a wetland and wetland buffer in accordance with the review procedures of this chapter, provided they are not prohibited by any other applicable law, and they are conducted in a manner so as to minimize impacts to the buffer and adjacent wetland:

2. Passive Recreation. Passive recreation facilities designed in accordance with an approved critical areas report, including:

b. Public walkways and trails; provided that those pathways are located and designed based on existing site-specific conditions to minimize native vegetation removal and are part of an approved public park or trail plan. The trail proposal shall be accompanied by a plan demonstrating that the existing ecological functions of the wetland or required buffer area on a project site would be improved. ~~Trails may extend in or across a wetland if necessary to access viewing platforms or other viewpoints, access pedestrian bridges over an associated waterbody, or provide some other public purpose.~~ Walkways and trails, provided that they are limited to minor crossings having no adverse impact on water quality. They should be generally parallel to the perimeter of the wetland, located only in the outer twenty-five percent (25%) of the wetland buffer area, and located to avoid removal of significant [as defined in ordinance], old growth, or mature trees. They should be limited to pervious surfaces no more than five (5) feet in width and designed for pedestrian use only. Raised boardwalks utilizing nontreated pilings may be acceptable. Walkway and trail surfaces in buffers shall be made of pervious materials except that public multipurpose trails may be of impervious materials if they meet all other requirements, including water quality. Gravel is considered impermeable. Trail segments in wetlands must be a raised boardwalk supported by piles that allow free movement of water beneath the structure but should be limited to protect ecological functions of the buffer and wetland.

c. Walkways and trails proposed in wetlands and buffers by private parties as part of subdivisions, multifamily development, or commercial or institutional uses may be allowed, subject to subsection (E)(2)(b) of this section, if they will be accessible to the general public, identified with visible signage, and are recorded on title. Providing connectivity to existing City or regional trail systems or completing or contributing to a trail linkage identified in the City's Parks, Recreation and Open Space Plan or Walkways and Waterways Plan is encouraged;

d. Wildlife viewing structures;

e. Fishing access areas; and

f. Interpretive and other signs, benches, railings, and similar accessories to passive recreation that do not require significant ground disturbance, vegetation clearing, or concrete foundations;

3. Stormwater Management Facilities. Stormwater dispersion outfalls and bioswales may be located in the outer 25 percent of the buffer area of Category III and IV wetlands only. All other surface water management facilities are not allowed within the buffer area.

4. Subdivisions. The subdivision and/or short subdivision of land where wetlands and/or associated buffers are present are subject to the following:

a. Land that is located wholly within a wetland and/or wetland buffer may not be subdivided;
b. Land that is located partially within a wetland and/or wetland buffer may be subdivided provided that an accessible and continuous portion of each new lot is:
i. Located outside of the wetland and buffer; and
ii. Meets the minimum lot size requirements of the zone.

18.55.420 Alterations.

B. Buffer Reduction with Enhancement. Standard buffer widths for degraded buffers of Type F, Ns, or Np waters may be reduced a maximum of 25 percent of the standard width through a combination of buffer enhancement and low impact development strategies. The applicant shall demonstrate that through enhancing the buffer and use of low impact development strategies the reduced buffer will function at a higher level than the standard buffer. Type S buffers and setbacks may only be reduced as outlined in KMC 16.60.030 or under the shoreline variance requirements of KMC 16.75.030.

The following table describes the maximum buffer reduction and minimum buffer width when a degraded buffer is enhanced:

Stream Type	Maximum Buffer Reduction	Minimum Buffer Width (Feet)
Type S – Swamp Creek, Lake Washington and Sammamish River	See KMC 16.60.030 or 16.75.030	
Type F – Little Swamp Creek	25 percent	112.5 feet
Type F (other water bodies used by or containing habitat suitable for salmonid fish)	25 percent	75 feet
Type F (water bodies used by or containing habitat suitable for fish other than salmonids)	25 percent	37.5 feet
Type Np or Ns	25 percent	18.75 feet
Any type stream restored from a pipe	25 percent	18.75 feet

1. Prior to approval of a reduced buffer, a critical areas application shall meet all of the decisional criteria listed below. A reduced buffer will be approved in a degraded stream or lake buffer only if:

a. It will provide an overall improvement in water quality;
b. It will provide an overall enhancement to fish, wildlife, or their habitat;
c. It will provide a net improvement in drainage and/or stormwater detention capabilities;
d. It will not lead to unstable earth conditions or create an erosion hazard;
e. It will not be materially detrimental to any other property or the City as a whole; and
f. All exposed areas are stabilized with native vegetation, as appropriate.
g. The use of stream buffer averaging does not expand the buffer further onto any adjoining property not a part of the subject land development application.

2. As part of the buffer reduction request, the applicant shall submit a buffer enhancement plan prepared by a qualified professional and fund a review of the plan by the City's critical areas consultant. The plan shall assess the habitat, water quality, stormwater detention, groundwater recharge, shoreline protection, and erosion protection functions of the buffer; assess the effects of the proposed modification on those functions; and address the six criteria listed in subsection (B)(1) of this section.

18.55.620 Designation of specific hazard areas.

A. Erosion Hazard Areas. Erosion hazard areas are those areas containing soils which, identified by the U.S. Department of Agriculture's Natural Resources Conservation Service or identified by a special study, as having a "moderate to severe," "severe," or "very severe" erosion potential. Erosion Hazard Areas include areas likely to become unstable, such as steep slopes, areas with unconsolidated soils, and channel migration zones.

B. High Landslide Hazard Areas. High landslide hazard areas are areas at high risk of landslides based on a combination of geologic, topographic, and hydrologic factors. They include areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. Examples of these may include, but are not limited to, the following:

1. Areas of historic failures, such as:

a. Those areas delineated by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a ~~"severe"~~significant limitation for building site development; or

18.55.650 Performance standards – Specific hazards.

B. Landslide Hazard Areas. In addition to meeting the requirements in KMC 18.55.640, activities on sites containing landslide hazards shall meet the following requirements:

1. General Standards. The following standards shall apply in all landslide hazard areas:

a. (2) Buffer Reduction. The buffer may be reduced to a minimum of 25 feet when a qualified professional demonstrates to the city manager's satisfaction based upon review of a special

study that the reduction will adequately protect the proposed development, adjacent developments and uses and the subject critical area through slope stability improvements or structural means.

c.(3) Dispersed discharge upslope of the steep slope onto a low-gradient undisturbed buffer having a width of at least 50 feet and demonstrated to be adequate to infiltrate all surface and stormwater runoff, and where it can be demonstrated that such discharge will not increase the saturation of the slope.

SURFACE WATER ELEMENT

INTRODUCTION

Purpose

The purpose of the Surface Water Element is to provide goals, objectives and policies relevant to the management of the City's municipal separate storm sewer system (MS4), private stormwater systems and natural surface water systems (i.e. streams, wetlands, groundwater and shoreline), on both public and privately owned land. Surface Water Management is an interdisciplinary practice and many of the policies and programs discussed in this element compliment and build upon the policies of other Comprehensive Plan Elements, particularly those in the Natural Environment, Shoreline and Climate Action Elements. The intent of this Element is to remain consistent with other Elements, but provide additional clarity in regards to the City's management of surface water.

Growth Management Act

The Growth Management Act (GMA) does not require a Surface Water Element for comprehensive plans (RCW 36.70A.070). However, components of surface water and stormwater management are referenced in several other Element and state regulations allow the city to include this as an optional element because it deals with environmental protection, natural resource lands, design and natural hazard reduction and supports the implementation of other elements.

King County Countywide Planning Policies

The GMA requires that cities and counties develop county-wide planning policies to ensure consistency between regionally connected comprehensive plans. King County Countywide Planning Policies (CPP) identify policies relevant to surface and storm water management and the City is committed to aligning with these regional goals, including:

- Incorporate protection and restoration efforts into plans to ensure the quality of the natural environment is sustained for future generations.
- Require appropriate low-impact development practices in development regulations.
- Work cooperatively to manage floodplain development.
- Protect wetlands, emphasizing preservation and enhancement of the highest quality wetlands and wetland systems.
- Collaborate with the Puget Sound Partnership to implement the Puget Sound Action Agenda.
- Manage natural drainage systems to improve water quality and habitat functions, minimize erosion and sedimentation, protect public health, reduce flood risks, and moderate peak stormwater runoff rates. Work cooperatively among local, regional, state, national, and tribal jurisdictions to establish, monitor, and enforce consistent standards for managing streams and wetlands throughout drainage basins.

- Support and incentivize environmental stewardship on private and public lands to protect and enhance habitat, water quality, and other ecosystem services.
- Identify and preserve open space.

Clean Water Act

The Federal Water Pollution Control act, originating in 1948 and expanded in 1972, became known as the "Clean Water Act" or CWA. Under the CWA, the United States Environmental Protection Agency (EPA) implements programs to control the discharge of pollutants into Waters of the United States. The National Pollutant Discharge Elimination System (NPDES) program issue permits to regulate the discharge of pollutants into Waters of the United States. The EPA delegates authority to the Washington State Department of Ecology (Ecology) to implement NPDES programs in Washington State.

Beginning in 2007, the city has been required to obtain an NPDES permit (Permit) from Ecology to discharge stormwater into local receiving water bodies from its municipal separate storm sewer system (MS4). An MS4 includes the network of pipes, ditches, curbs, catch basins, ponds, vaults and other stormwater infrastructure needed to collect, convey and treat stormwater runoff. As of 2024, the Permit requires the city to implement a variety of programs to comply with the CWA, including:

- Stormwater Planning
- Public Education and Outreach
- Public Involvement and Participation
- MS4 Mapping and Documentation
- Illicit Discharge Detection and Elimination
- Controlling Runoff from New Development, Redevelopment and Construction Sites
- Stormwater Management for Existing Development
- Operations and Maintenance
- Source Control Program for Existing Development
- Compliance with Total Maximum Daily Load Requirements
- Monitoring and Assessment
- Reporting

Ecology issues other types of NPDES permits, in addition to the municipal stormwater permit, which include categories such as industrial activities, construction activities, aquatic plant and algae management, and others.

The goals, objectives and policies in this Element are intended to be consistent with NPDES Permit requirements and maintain compliance with the Clean Water Act and the State of Washington Water Pollution Control Law Chapter 90.48 Revised Code of Washington.

Water Resource Inventory Area (WRIA) 8

Water Resource Inventory Area (WRIA) 8 includes Lake Washington, Cedar River, and Lake Sammamish watersheds. To facilitate the recovery of Chinook Salmon, which are listed as threatened under the Endangered Species Act, local governments within WRIA 8 formed a Salmon Recovery Council, developed the Chinook Salmon Conservation Plan and continue to

implement that Plan as of 2024. The City of Kenmore is a participating and voting member of the Salmon Recovery Council and the goals, objectives and policies in this Element are intended to be consistent with the WRIA 8 Chinook Salmon Conservation Plan.

BACKGROUND

The City of Kenmore is shaped by surface water, from the shorelines of Lake Washington and the Sammamish River dividing the City's landscape, to the numerous streams converging from all directions on these two larger waterbodies with all connected through a network of wetlands, springs, groundwater pathways, and floodplains.

The Kenmore area developed long before it incorporated as a city in 1998 with many of the existing major roads already in place at the turn of the 20th century providing access to the logging industry active in the area. By 1980, many of the City's neighborhoods were developed without the benefit of adequate surface water management resulting in little to no management of runoff from these older developments. The results of unmitigated clearing, grading, compaction, and removal of native soils, plants and trees coupled with the filling or modification of wetlands, floodplains, shorelines and streams began contributing to issues such as erosion, flooding, degradation of water quality, and habitat loss. Additionally, most drainage basins within the City extend far beyond its municipal boundaries and upstream runoff makes its way down to the City, adding to the challenge of managing not only the City's surface water, but runoff from neighboring jurisdictions.

To manage surface water more effectively, the City drafted its first Surface Water Element of the Comprehensive Plan in March of 2001, which was updated in 2008 and 2014. The Surface Water Element provides long range goals, policies and objectives that guide City Council and staff when making decisions related to the management of the City's surface water environment and stormwater system (MS4). The City's first Surface Water Management Plan, which was also developed in 2001, provides more detail on the implementation of surface water management in the City. The Surface Water Management Plan was updated in 2008 and 2015 and was renamed to the Surface Water Master Plan to avoid confusion with the Stormwater Management Program Plan required by Ecology as part of the City's NPDES permit. The Surface Water Master Plan includes, but is not limited to: an analysis of current and emerging issues, compliance strategies for existing and new regulatory requirements, evaluation and update of policies, update of strategies to improve water quality, update of development management strategies, review and update of surface water related operations and maintenance programs, review of flooding issues, basin planning, review of capital projects, and other topics relevant to surface water management. The Surface Water Master Plan is intended to be consistent with the goals, policies and objectives of the Surface Water Element and is often updated concurrent with or soon after a Surface Water Element update.

As the City's surface water management program matures, many of the same issues continue to challenge the City today as they did at the City's incorporation in 1998. High volumes of polluted runoff continue to flood streams and lakes resulting in localized flooding issues and degraded aquatic systems. Through the objectives and policies stated in this element, and the programs referenced therein, the City's goal is to develop, maintain, manage and improve a

surface water system that serves the community, enhances the quality of life and protects the environment.

GOALS, OBJECTIVES AND POLICIES

GOAL 1. FUND SURFACE WATER MANAGEMENT.

OBJECTIVE 1.1 Establish a sustainable and equitable surface water management funding structure that supports all capital and operating expenditures.

Policy 1.1.1 The City ~~shall~~ should implement annual rates and charges for all developed parcels within the city to fund surface water management activities. Additionally, the City ~~shall~~should implement one-time capital facility charges for all new development.

Policy 1.1.2 The City's biennium budget ~~shall~~should include a Surface Water Management Fund that is updated with each City budget. The Surface Water Management Fund ~~shall~~should provide adequate revenue for forecasted operating and capital expenditures while maintaining an appropriate fund balance to minimize impacts due to year-to-year expenditure or revenue variances.

Policy 1.1.3 The Surface Water Management Fund ~~shall~~should conduct periodic analysis of its funding structure to ensure that it is adequate to meet near and long-term capital and operating expenditures.

Policy 1.1.4 The Surface Water Management Fund ~~shall~~should consider issuing debt to fund activities consistent with surface water management goals, if necessary. The Cith should manage debt, if any, to ensure continued high credit quality, access to credit markets, and financial flexibility.

Policy 1.1.5 The City should apply for grants that support implementation of activities consistent with surface water management goals.

GOAL 2. EFFECTIVELY MANAGE THE CITY'S MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) AND PRIVATE SURFACE WATER SYSTEMS IN A MANNER THAT REDUCES FLOODING, ENHANCES WATER QUALITY AND PROTECTS THE NATURAL ENVIRONMENT.

OBJECTIVE 2.1 Comply with the current Western Washington Phase II Municipal Stormwater Permit (National Pollutant Discharge Elimination System and State Waste Discharge General Permit).

Policy SW 2.1.1 The City ~~shall~~should implement the requirements of the Permit. As of 2024, this includes obtaining coverage under the Permit, implementing a

Stormwater Management Program, submitting an annual Stormwater Management Program Plan, complying with Total Maximum Daily Load (TMDL) requirements, complying with Monitoring and Assessment requirements, and complying with Reporting and Recordkeeping requirements, including submittal of an annual report. Ecology may modify or add program elements to the Permit over time and the City ~~shall~~should maintain compliance with any future changes.

OBJECTIVE 2.2 Utilize Best Available Science to manage Development, Redevelopment, Construction, and City Projects to mitigate flooding and reduce the discharge of pollutants to the maximum extent practicable.

Policy SW 2.2.1 The City ~~shall~~should adopt and implement an approved Surface Water Design Manual, which is equivalent to the current Washington State Department of Ecology Stormwater Management Manual for Western Washington. As of 2024, the City has adopted the King County Surface Water Design Manual and Stormwater Pollution Prevention Manual.

Policy SW 2.2.2 Where feasible, the City ~~shall~~should make low impact development (LID) the preferred and commonly-used approach to site development. LID is a stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration by emphasizing conservation, use of on-site natural features, site planning and distributed stormwater management practices that are integrated into a project design.

OBJECTIVE 2.3 Inspect, maintain and operate the City's MS4 to protect public infrastructure and the natural environment, improve water quality and reduce flooding.

Policy SW 2.3.1 The City ~~shall~~should inspect and maintain the MS4 to the maintenance standards provided in the City's adopted Surface Water Design Manual.

Policy SW 2.3.2 The City ~~shall~~should inspect the MS4 for spills, illicit discharges, and illicit connections and respond promptly when notified of spills or illicit discharges into the MS4 to prevent the discharge of pollutants to the maximum extent practicable.

OBJECTIVE 2.4 Inspect and manage privately owned stormwater systems to protect public infrastructure and the natural environment, improve water quality and reduce flooding.

Policy 2.4.1 The City does not operate or maintain privately owned surface water systems unless that system has been formally accepted by the City and is located within the right-of-way or within a tract or easement dedicated to the City for the purpose of operating and maintaining said system.

Policy 2.4.1 The City ~~shall~~should inspect, if authorized, privately owned and operated stormwater systems. When necessary, the City ~~shall~~should provide technical assistance and education to promote maintenance of private systems. If necessary, the City ~~shall~~should utilize applicable regulations to enforce maintenance.

GOAL 3 IMPLEMENT A SURFACE WATER MANAGEMENT CAPITAL IMPROVEMENT PROGRAM

OBJECTIVE 3.1 Manage surface water on City capital projects, including transportation, parks and facility projects, beyond minimal requirements, if possible.

Policy SW 3.1.1 The City ~~shall~~should implement capital improvement programs that maintain and improve the MS4 in a manner that enhances and protects the City's natural environment, mitigates flooding problems, improves water quality, promotes a reliable and safe transportation network and provides the community a safe and healthy place for living, working and recreation.

Policy SW 3.1.2 The City ~~shall~~should explore options to provide enhanced surface water management on City projects, particularly for projects adjacent to non-treated areas.

OBJECTIVE 3.2 Remove fish passage barriers on City streams.

Policy SW 3.2.1 The City ~~shall~~should evaluate and prioritize stream culverts throughout the city to create and implement a culvert replacement program to remove fish passage barrier culverts. These projects will be identified in the Surface Water Management CIP.

OBJECTIVE 3.3 Implement projects that conserve open space, restore surface water systems, and improve habitat.

Policy SW 3.3.1 The City ~~shall~~should evaluate and prioritize properties throughout the city to conserve properties with high conservation and restoration value. These projects will be identified in the Surface Water Management CIP.

Policy SW 3.3.2 The City ~~shall~~should prioritize properties for acquisition that will avoid loss of existing open space and critical areas through development (such as properties eligible for reasonable use exception).

OBJECTIVE 3.4 Implement retrofit projects that enhance existing surface water facilities and provide surface water facilities in existing developed areas that lack surface water management.

Policy 3.4.1 The City ~~shall~~should identify and prioritize retrofit project locations and include them in the Surface Water Management CIP.

Policy 3.4.2 The City ~~shall~~should seek opportunities to design and implement surface water management facilities that are functional, serve as amenities, and serve multiple purposes such as those described in the Parks Element of the City of Kenmore Comprehensive Plan.

GOAL 4 PROTECT, MAINTAIN, ENHANCE AND RESTORE NATURAL SURFACE WATER SYSTEMS

OBJECTIVE 4.1 Support City policies, regulations and standards that support the protection, enhancement and restoration of the City's extensive natural surface water environment.

Policy SW 4.1.1 Consistent with Shoreline Element of the City of Kenmore Comprehensive Plan, coordinate and support efforts which strive to preserve, protect and enhance the City's abundant shoreline habitat.

Policy SW 4.1.2 Consistent with Natural Environment Element of the City of Kenmore Comprehensive Plan, coordinate and support efforts that provide protection of wetlands, plants and wildlife, maintain and promote a diversity of species and habitat, and use low impact development best management practices.

Policy SW 4.1.3 Consistent with Climate Action Element of the City of Kenmore Comprehensive Plan, coordinate and support efforts that protect, conserve, and enhance the water resources in the City and create more climate resilient water systems.

Policy SW 4.1.3 Implement critical and sensitive area regulations that protect and enhance surface waters, which may include but are not limited to buffers, setbacks, erosion and sediment control, mitigation, State Environmental Policy Act (SEPA) compliance, Hydraulic Permit Approval (HPA) compliance and compliance with any other applicable local, state and federal requirements.

Policy SW 4.1.4 Protect, enhance and restore flood storage, conveyance functions and ecological values of floodplains, wetlands and riparian corridors through the development and implementation of CIP projects, studies and plans.

Policy SW 4.1.5 The City ~~shall~~should implement an Integrated Aquatic Vegetation Management Plan to manage aquatic plants, both native and invasive, in the City's public shoreline areas.

GOAL 5 SUPPORT REGIONAL EFFORTS THAT ALIGN WITH THE CITY'S SURFACE WATER MANAGEMENT AND CLIMATE ACTION GOALS.

OBJECTIVE 5.1 Promote and support opportunities for public involvement and participation, which may include but are not limited to stewardship groups, volunteer opportunities and grant partnerships.

Policy 5.1.1 Support regional and local community groups that seek to steward surface water environments within the city in a manner consistent with the city's surface water management goals. Examples of support may include funding, staff assistance, and providing resources.

OBJECTIVE 5.2 Promote and support opportunities for regional coordination and watershed level management of the City's natural surface water systems. Kenmore often contains only a portion, and in some cases a very small portion, of the natural surface water systems that pass through the City. The City will actively pursue coordination with upstream jurisdictions and partners to manage these natural resources and share responsibility.

~~OBJECTIVE~~Policy 5.2.1~~3~~ The City ~~shall~~should support and actively participate on the Watershed Resource Inventory Area (WRIA) 8 Salmon Recovery Council and implement actions, to the best of the City's ability, that support efforts for ~~Chinook~~ Salmon recovery.

~~OBJECTIVE~~Policy 5.2.2~~4~~ The City ~~shall~~should participate in the regional Stormwater Action Monitoring (SAM) program. SAM is a collaborative, regional monitoring program funded through a partnership of over 90 cities, counties, ports and Washington State Department of Transportation. SAM conducts stormwater management practices effectiveness monitoring, status and trends monitoring of streams and nearshore marine waters and source identification studies.

Policy 5.2.3 The City should support upstream activities of other jurisdictions and non-governmental organizations (such as Adopt-a-Stream and SnoKing Watershed Council) that conduct work consistent with the city's surface water management goals occurring outside of the city's jurisdiction.

IMPLEMENTATION

Implementation of the Surface Water Element is primarily achieved through the application of the following documents and regulations (available online):

- Western Washington Phase II Municipal Stormwater Permit issued by Washington State Department of Ecology.
  - The 2019-2024 Permit expires July 31, 2024

- The 2024-2029 Permit begins on August 1, 2029
- City Biennium Budget (constrained budget)
- Periodic analysis of surface water rates
- Surface Water Master Plan
  - Update planned summer 2024 through spring 2025
  - Includes basin plan updates
  - Includes Capital Improvement Program (CIP) updates
  - CIP includes unconstrained budgeted projects
- King County Surface Water Design Manual
  - Updated 2021
- King County Stormwater Pollution Prevention Manual
  - Updated 2021
- Kenmore Road Standards
  - Updated 2021
- Title 13 Kenmore Municipal Code (Surface and Stormwater Utility)
- Title 16 Kenmore Municipal Code (Shoreline Management)
- Title 18 Kenmore Municipal Code (Zoning, Critical Areas)
- Operations and Maintenance Practices and Policies Manual (OMPPM)
  - Updated December 31, 2022
- Integrated Aquatic Vegetation Management Plan
  - Updated 2021
- Climate Action Plan
  - Adopted 2022

June 18, 2024 Planning Commission Notes

SWM Element Review (Dir. Richard Sawyer)

INTRODUCTION

Discussion, no directed changes.

BACKGROUND

Discussion, no directed changes.

GOAL 1

Planning Commission:

Use consistent language instead of “city shall” to match with other elements and apply throughout SWM Element. Note, some Commissioners did like the stronger language “shall”.

Staff:

Upon review of other Elements, the term “should” would be more consistent. Staff have replaced “shall” with “should” and the changes are highlighted blue.

Planning Commission:

Include other revenue sources such as grants and loans.

Staff:

Policy 1.1.4 was edited and 1.1.5 was added to include language regarding grants and loans. Changes are highlighted blue.

GOAL 2

Planning Commission:

In Objective 2.2, is there a way to emphasize that MEP is not a way to take short cuts.

Staff:

In the context of development, MEP is a defined term in the city’s adopted surface water design manual as the use of best management practices that are available and capable of being designed, constructed and implemented in a reliable and effective manner including, but not limited to, consideration of site conditions and cost. The City’s NPDES Permit also states that MEP includes management practices, control

techniques, and system, design, and engineering methods, and other such provisions as the Administrator or the State determines appropriate for the control of such pollutants.

GOAL 3

Discussion, no directed changes.

GOAL 4

Discussion, no directed changes.

GOAL 5

Planning Commission:

Prefer different presentation with supporting policies instead of only objectives.

Staff:

Reorganized the goal into two objectives with supporting policies. Changes are highlighted blue.

Planning Commission:

Request to add focus on other species of concern or importance and not just Chinook Salmon.

Staff: Removed specific reference to Chinook. Change is highlighted in blue.

Planning Commission:

Request to add policies supporting upstream coordination.

Staff:

Added Policy 5.2.3 to clarify additional upstream coordination. Changes are highlighted blue.

IMPLEMENTATION

Planning Commission:

Add implementation language on funding (nothing mentioned) such as budget and fee analyses.

Staff:

Added two bullets for city budget and periodic analysis of surface water rates. Changes are highlighted blue.

Planning Commission:

Clarify unconstrained versus budgeted projects

Staff:

Added clarification on biennium budget (constrained) and CIP budget (unconstrained). Changes are highlighted blue.

TABLE CF-B

SURFACE WATER FACILITIES CAPITAL IMPROVEMENTS

CITY OF KENMORE

2025-2045 FISCALLY UNCONSTRAINED LIST

	PROJECT DETAIL	TOTAL DOLLAR AMOUNT
1	Muck Creek Restoration	$ 1,000,000
2	192nd Culvert Replacement	$ 2,300,000
3	169th Culvert Replacement (Samm Trib)	$ 2,264,100
4	175th Culvert Replacement (0056)	$ 6,320,000
5	61st 182nd Replacement Culvert (0056)	$ 7,495,000
6	74th Culvert Replacement Private (0057)	$ 2,509,000
7	74th Culvert Replacement Public (0057)	$ 2,498,300
8	76th Culvert Replacement (0057)	$ 1,957,100
9	163rd Culvert Replacement (0057)	$ 2,165,400
10	Little Swamp Creek Restoration	$ 5,716,600
11	Kenmore Lane SW Facility Retrofit	$ 1,000,000
12	Lakepointe Shoreline Restoration (Salmon Recovery)	$ 26,000,000
13	Sammamish River Restoration (Salmon Recovery)	$ 12,000,000
14	Swamp Creek Restoration (Salmon Recovery)	$ 20,000,000
15	SW Small Works (Annual)	$ 2,400,000
16	Culvert Replacements (2031-2045, Unspecified)	$ 25,000,000
17	SW Facility Retrofits (Unspecified)	$ 11,600,000
18	Restoration Projects (Unspecified)	$ 21,000,000
TOTAL		**$ 153,225,500**