City of Kenmore
Critical Areas Regulations and Shoreline Master Program Gap Analysis and Recommendations

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CITY OF KENMORE
CRITICAL AREAS REGULATIONS AND SHORELINE MASTER PROGRAM
GAP ANALYSIS AND RECOMMENDATIONS

1.0 INTRODUCTION

The City of Kenmore (City) completed a major update of its Shoreline Master Program (SMP) in 2012, which included a review of critical areas regulations in shoreline jurisdiction, and a comprehensive update of its critical areas regulations in 2006. The City is now preparing to conduct what is anticipated to be a minor, "periodic" update of its SMP as required by the Washington State Department of Ecology (Ecology). As noted in Ecology materials:

> "Local governments must review amendments to the SMA [Shoreline Management Act] and Ecology rules that have occurred since the master program was last amended, and determine if local amendments are needed to maintain compliance. Local governments must also review changes to the comprehensive plan and development regulations to determine if the shoreline master program policies and regulations remain consistent with them."

The City's SMP goals and policies are a sub-element of the City's Comprehensive Plan, and the regulations are found in Kenmore Municipal Code (KMC) Title 16, Division I (Shoreline Management).

In tandem with the SMP update, the City desires to update its critical area (Chapter 18.55 KMC) and flood damage prevention (Title 16, Division II) rules. Because the SMP adopts many of the City's critical areas regulations by reference, any changes to those regulations must also be approved as part of the periodic SMP update.

The following tables provide recommendations for revisions to the critical areas regulations and SMP based on recent court cases and advances in best available science (BAS)[1], as well as improvements to support clarity, ease of use, and general consistency with the Revised Code of

[1] Best available science is defined in KMC 18.55.110 as: The best available science is scientific information applicable to the critical area prepared by local, State or federal natural resource agencies, a qualified scientific professional or team of qualified scientific professionals, that is consistent with criteria established in WAC 365-195-900 through 365-195-925. Special consideration shall be given to conservation or protection measures necessary to preserve or enhance anadromous fish and their habitat, such as salmon and bull trout, as required by WAC 365-195-900 through 365-195-925.

Washington (RCW) and the Washington Administrative Code (WAC). Key areas of recommended change are as follows:

- Update wetland and stream rating systems;
- Provide shoreline regulations for Sammamish River piers and dock, as well as provide additional details for public and commercial piers and docks;
- Increase flexibility for existing development and uses within buffers;
- Streamline floodplain regulations; and
- Provide customized buffers for some uses on the Sammamish River.

Only a few (less than 10 percent) of the recommended changes relate to regulatory compliance issues; most recommended changes support clarity, usability, and flexibility.

2.0 METHODS

This assessment focuses on compliance with the Growth Management Act (GMA) and Shoreline Management Act (SMA), consistency with the most recent and reliable science, and consideration of local conditions and needs.

To evaluate compliance, the following state agency checklists were completed:

- The Washington Department of Commerce's Critical Areas Checklist (Appendix A),
- The Washington Department of Ecology's Shoreline Master Program Periodic Review Checklist (Appendix B).

The City provided a number of resources that helped prioritize the regulations review effort for clarity, consistency, and usability. Those resources included written code interpretations, comments from various staff, applicants, and consultants, and an inventory of permit activity since the most recent round of regulations updates. The City also provided documents pertaining to a complex project within the City that might indicate a need for code changes.

This material, combined with agency information, state and federal laws and regulations and other literature, and experience of the consultant team with City projects and projects in other jurisdictions, forms the basis for the Gap Analysis. The entire critical areas code and SMP regulations were reviewed.

A July 11 draft of this report and key recommendations was presented to and discussed with the City's Planning Commission during five meetings: June 19, July 17, July 24, August 7, and August 21, 2018. Key items which warranted specific discussion and solicitation of Planning

Commission direction were highlighted in that July draft, and remain highlighted in this final document. The discussions triggered additional analysis and refinements to the recommendations, which were also presented to the Planning Commission. The Planning Commission agreed that staff should proceed with making edits to KMC 18.55 (Critical Areas), Title 16 Division I (Shoreline Master Program), and Title 16 Division II (Flood Damage Prevention) based on those recommendations. This report has been updated to incorporate all the resulting recommendations, and key elements of the supporting rationale.

It is anticipated that continued public input through Planning Commission meetings, City Council meetings, special focus groups, and an open house will inform further refinements to staff code revisions.

3.0 CRITICAL AREAS REGULATIONS CHAPTER 18.55

Critical areas, as defined by the GMA (RCW 36.70A.030(5)), include the following:

1) Wetlands (Articles VII - IX of KMC 18.55),
2) Fish and wildlife habitat conservation areas (Articles X – XV, “Streams” and “Fish and Wildlife Habitats of Importance” of KMC 18.55),
3) Geologically hazardous areas (Articles XVI – XVIII of KMC 18.55),
4) Frequently flooded areas (Article XIX, “Flood Hazard Areas” of KMC 18.55), and
5) Critical aquifer recharge areas (TBD).

The following sections provide an evaluation of the entire Chapter 18.55 KMC.

3.1 Introductory Provisions

Table 1 reviews the general provisions that apply to all critical areas. Several of the changes, such as an updated definition for “qualified professional” and a discussion of approaches to Public Agency and Utility Exception, are in direct response to staff application of the code since 2006. Many of the other changes relate directly or indirectly to the principles and practice of mitigation sequencing.

TABLE 1
ANALYSIS OF AND RECOMMENDATIONS FOR KENMORE MUNICIPAL CODE
CHAPTER 18.55 – INTRODUCTORY PROVISIONS

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
Chapter 18.20, TECHNICAL TERMS AND LAND USE DEFINITIONS		
General	See comment.	Recognizing that there are definitions within KMC 16.10 (SMP Definitions) that are very specific to the Shoreline Master Program and Shoreline Management Act, and not eligible for revision, it may be helpful for consistency if the KMC 18.20 definitions and the non-specific shoreline definitions in KMC 16.10 are reviewed to look for opportunities to have a common definition.
18.20.2102 Practical alternative	Change the term to "practicable" in the definition and wherever it is used in Chapter 18.55.	*Practicable* overlaps with practical, but also includes the concept of feasibility that is important when determining what avoidance alternatives are appropriate to consider when the City is evaluating a project. The term "practicable alternative" accompanied by the definition provided in 18.20.2102 can be found in the Code of Federal Regulations (40 CFR 230.10(a)(2))
18.20.2205 Qualified professional	Suggest replacing current definition with the following: "Qualified professional" means a person with experience and training in the pertinent scientific discipline. A qualified professional must have obtained a B.S. or B.A. or equivalent degree and have at least two years of related work experience. A. A qualified professional for streams, fish, and wildlife habitat conservation areas must have a degree in biology, zoology, ecology, fisheries, or related academic field and professional experience evaluating these critical areas in the Puget Sound lowlands.	Feedback provided to City staff by developers, consultants, environmental agencies, etc. indicates that this definition needed to be updated, particularly to expand what education backgrounds are acceptable for stream/wetland/wildlife professionals.

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
	B. A qualified professional for geologic hazards must be a geologist, engineering geologist, or engineer licensed in the state of Washington, with experience evaluating the type of geologic hazard known or suspected to occur at the subject site. C. A qualified professional for aquifer recharge areas must be a geologist, hydrogeologist, or engineer licensed in the state of Washington, with experience in preparing hydrogeologic evaluations.	
18.20 (new)	Add the following new definition: "Seiche" means a temporary disturbance or oscillation in the water level of a lake or enclosed waterbody caused by a distant seismic event, for instance the Southern Whidbey Island Fault Zone or the Cascadia Subduction Zone.	Not previously included in the code.
18.20 (new)	Add the following new definition: "Tsunami" means a wave caused by an earthquake or landslide or other disturbance, particularly by displacement by the Seattle Fault or a seismically generated landslide into Lake Washington.	Not previously included in the code.
CHAPTER 18.55, ARTICLE I: PURPOSE AND GENERAL PROVISIONS		
18.55.090.D.3	D. Areas Adjacent to Critical Areas Subject to Regulation. Areas adjacent to critical areas shall be considered to be within the jurisdiction of these requirements and regulations to support the intent of this chapter and ensure protection of the functions and values of critical areas. "Adjacent" shall mean any activity located: 3. A distance equal to or less than 660 ~~one-half mile (2,640~~ feet~~)~~ from a bald eagle nest. 4. A distance equal to or less than 656 ~~900~~ feet from the closest nest of a heron rookery; or	A distance of 660 feet is recommended by the *National Bald Eagle Management Guidelines* as being a suitable distance to restrict most disturbance during the breeding season (U.S. Fish and Wildlife Service, 2007). A half mile is a recommended limit only for blasting and other loud noises, and only if the eagle is not accustomed to that noise. WDFW's *Management recommendations for Washington's priority species: Great Blue Heron* (Azerrad, 2012) recommends a buffer of 656 feet year-round, with a larger buffer (1,320 feet) during the breeding season only for blasting and similar activities.

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
CHAPTER 18.55, ARTICLE III: APPLICABILITY, EXEMPTIONS, AND EXCEPTIONS		
18.55.130 Mapping	Revise as shown: B. The following maps identify ~~known~~ potential critical areas located in the City:	Revise for accuracy.
18.55.130.B.1.b	Delete existing wording, and replace with "Washington State Department of Fish and Wildlife Priority Habitats and Species online mapping system." Also, add: "Washington State Department of Fish and Wildlife SalmonScape online mapping system" and "Washington State Department of Natural Resources water type maps."	Update to reflect current information sources.
18.55.130.B.2	Delete existing wording, and replace with "Washington State Department of Fish and Wildlife priority habitat and species online mapping system." Also, add: "Washington State Department of Fish and Wildlife SalmonScape online mapping system" and "Washington State Department of Natural Resources water type maps."	This provision may need further revisions depending on decisions made about what habitats, if any, to add to the list of fish and wildlife habitats of importance.
18.55.130.B.3.a	Delete existing wording, and replace with "King County's Landslide Hazards Along King County River Corridors interactive, web-based map folio"	The existing reference is no longer relevant due to new landslide maps by King County and Washington Department of Natural Resources (WDNR).
18.55.130.B.3.b	Delete existing wording, and replace with "Washington State Department of Natural Resources Geologic Information Portal"	Local, state, and county information is more up to date (state of the practice) than USGS information.
18.55.130.B.3.c	Revise to read, "Washington State Department of Natural Resources liquefaction susceptibility map for King County"	More recent resource.
18.55.140 Signs and fencing of critical areas.	Suggest revising as shown: B. Fencing. 1. The city manager shall condition any permit or authorization issued pursuant to this chapter to require the applicant to install a permanent fence at the edge of the buffer associated with a stream, wetland or habitat conservation area ~~critical area and buffer~~, when fencing will prevent future impacts to ecological function ~~the habitat conservation area~~. When the buffer is in a legally altered state and is permitted to remain in that condition, the fencing may be placed at the upland edge of any properly functioning portion of the buffer. The city manager may also waive the requirement for a fence if the applicant can	This edit responds to a citizen comment, as well as experience with inflexible fence regulations in other jurisdictions. Ecology's *Wetland Guidance for CAO Updates Western Washington Version* (Bunten and others, 2016) only requires a permanent fence around buffers to prevent intrusion by domestic grazing animals. Otherwise, installation of a barrier (either privacy fence or dense plantings) is one of a

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
	demonstrate that a fence would interfere with current, legal public access or use. 2. A required permanent fence may be: a. ~~The applicant shall be required to install a permanent~~ ~~natural~~ Untreated wood, split-rail ~~fence around the critical area and buffer~~, or b. Dense vegetation using native material appropriate for the ecoregion. Vegetation must be maintained at a minimum height of 3 feet, with thorny species incorporated to deter intrusion.	number of methods presented in the code as an option to reduce a buffer width.
18.55.160 Exception – Public agency and utility.	Based on objectives listed at right, review this section and potentially develop adjustments to criteria and consider best management practices. 18.55.160 Exception – Public agency and utility. A. If the application of this chapter would prohibit a development proposal by a public agency or public utility, the agency or utility may apply for an exception pursuant to this section, unless the project is located on lands regulated under the Kenmore Shoreline Master Program. Projects on lands regulated under the Kenmore Shoreline Master Program are regulated under the procedures of Chapter 16.75 KMC. B. Exception Request and Review Process. An application for a public agency and utility exception shall be made to the City and shall include a critical areas report, including mitigation plan, if necessary, and any other related project documents, such as permit applications to other agencies, special studies, and environmental documents prepared pursuant to the State Environmental Policy Act (SEPA). C. City Manager Review. The city manager shall review the application. The city manager shall approve, approve with conditions, or deny the request based on the proposal's ability to comply with all of the public agency and utility exception criteria in subsection D of this section. D. Public Agency and Utility Review Criteria. The criteria for review and approval of public agency and utility exceptions follow: 1. There is no other practical alternative to the proposed development with less impact on the critical areas; and	The City currently includes an exception process and criteria for public agency and utility exceptions. See current text at left. In 2016, the Central Puget Sound Growth Management Hearings Board found that the City of Kenmore's proposed amendments to its public agency and utility use exception to address both public facilities and utilities and to clarify other exception language needed to be reviewed under BAS rules. An analysis of the amendments in Ordinance 16-0418 to consider BAS rules would occur in subsequent steps of this SMP/CAR Update and meet the following objectives: • Analyze the environmental impacts to critical areas of expanding the kinds of projects that can pursue an exception. • Cite Best Available Science (BAS). • Indicate how current/proposed criteria limit risks to the functions and values of critical areas. Indicate if there are other criteria or common conditions that could be addressed.

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
	2. The application of this chapter would unreasonably restrict the ability to provide utility services to the public.	• Address nonscientific information, including legal, social, cultural, economic, and political information, requiring departures from BAS.
ARTICLE IV. CRITICAL AREAS REPORT		
18.55.190 Critical areas reports – Requirements.	As requested by City staff and others, the definition of Qualified Professional, referenced in 18.5.190.A, has been revised (see KMC 18.20.2205, above).	In response to staff questions about the differences between critical areas reports (CARs) and habitat management plans (HMPs), Section 3.1.1 of this report provides a potential framework for distinguishing CARs from HMPs. If staff concurs with this approach, then the critical areas reports requirements maintained by the City could be modified.
18.55.200 Mitigation requirements	Revise this section as shown: A. The applicant shall avoid all impacts that degrade the functions and values of critical areas unless there is no practicable alternative. Unless otherwise provided in this chapter, if alteration to the critical area is unavoidable, all adverse impacts to or from critical areas and buffers resulting from a development proposal or alteration shall be mitigated in accordance with an approved critical areas report and SEPA [State Environmental Policy Act] documents.	These proposed changes make it clear that the application of mitigation sequencing does not occur in a vacuum. The changes establish clear sideboards that appropriately limit how applications are evaluated. These changes are consistent with state and federal law.
18.55.210 Mitigation sequencing	Modify the language as shown: Applicants shall demonstrate that all reasonable efforts have been made to identify and evaluate practicable alternatives ~~examined~~ with the intent to avoid and minimize impacts to critical areas while still achieving the overall project purposes. When an alteration to a critical area is proposed, such alteration shall be avoided, minimized, or compensated for as outlined by WAC 197-11-768, in the following order of preference:	These proposed changes make it clear that the application of mitigation sequencing does not occur in a vacuum. The changes establish clear sideboards that appropriately limit how applications are evaluated. These changes are consistent with state and federal law.

3.1.1 Critical Area Reports and Habitat Management Plans

The City's current code refers applicants in each critical area section to the city manager to obtain a list of critical area report (CAR) requirements. A single, three-page document (titled *Critical Area Report Requirements Appendix A – Critical Areas Ordinance – KMC 18.55*) provides a listing of items required for each biological CAR type. There are significant overlaps between the requirements for wetland CARs, stream CARs, and fish and wildlife habitats of importance CARs (Table 2). The fish and wildlife habitats of importance regulations also include a special requirement for a habitat management plan (HMP) when a project could impact a state or federally listed threatened or endangered species. The code could be revised to remove this duplication by consolidating KMC 18.55.310 (wetlands CAR), 18.55.410 (streams CAR), 18.55.510 (fish and wildlife habitats of importance CAR), and 18.55.520 (HMP) under KMC 18.55.190. There may also be some overlaps between these biological CARs and a geologically hazardous area CAR, but there are likely more differences considering the focus of the latter CAR on effects to life and property.

TABLE 2
SUMMARY OF OVERLAPPING REPORTING REQUIREMENTS

Requirement	Wetlands CAR	Stream CAR	Fish/Wildlife CAR	HMP
Name and contact information of the applicant, a description of the proposal	X	X	X	
Name and contact information for the qualified biologist conducting the study	X	X	X	
Site condition and surrounding land use description	X	X	X	
Methodology	X			
Identification and characterization of all critical areas, wetlands, waterbodies, and buffers on and adjacent to the proposed project site	X	X		
Functions and values assessment	X	X	X	
PHS data review	X[1]	X[2]	X	
Wildlife observations	X		X	X
Regulatory requirements and rating/classification	X	X		
Impact assessment	X	X	X	X
Mitigation (as per code requirements, considering avoidance, minimization, etc.)[3]	X	X	X	X
Statement specifying the accuracy of the report and all assumptions made and relied upon	X			
Literature cited	X	X	X	
Figure to scale showing property boundaries, drainage features, roads, existing structures and other site features	X	X	X	X
Figure to scale showing critical areas	X	X	X	X
The location and description of the fish and wildlife habitats of importance on the subject property, as well as any potential fish and wildlife habitats of importance within 200				X

Requirement	Wetlands CAR	Stream CAR	Fish/Wildlife CAR	HMP
feet of the subject property as shown on maps maintained by the City.				
Prohibition or limitation of development activities within the fish and wildlife habitats of importance;				X[4]
Establishment of a buffer around the fish and wildlife habitat conservation area;				X[4]
Retention of certain vegetation or areas of vegetation critically important to the listed species;				X[4]
Limitation of access to the fish and wildlife habitats of importance and buffer;				X[4]
Seasonal restrictions on construction activities on the subject property;				X[4]
Clustering of development on the subject property; and				X[4]
The preservation or creation of a habitat area for the listed species.				X[4]

Notes:
[1] Ecology 2014 wetland rating requires review of PHS data (Question H 3.1)
[2] PHS data review is typically used to determine fish presence/species
[3] Mitigation plan requirements are identical across all critical areas
[4] These elements are all typically associated with mitigation sequencing for avoiding, minimizing, or mitigating impacts

3.2 Wetlands

Significant changes to KMC 18.55 are proposed as a result of the City shifting from a city-specific wetland rating system to the Washington State Department of Ecology's (Ecology) *Washington State Wetland Rating System for Western Washington: 2014 Update* (Hruby, 2014). The 2014 wetland rating system is an update to the 2004 wetland rating system, represents the best information available at this time, and meets the needs of "best available science" under the GMA. The rating system groups wetlands into four categories, based on their:

- Sensitivity to disturbance,
- Rarity in the landscape,
- Functions they provide,
- Importance in maintaining biodiversity, and
- Ability to replace them.

The intent of the rating categories is to provide a basis for developing standards for protecting and managing the wetlands. Some decisions that were made based on the rating include the widths of buffers needed to protect the wetland from adjacent development, permitted uses in and around the wetland, and mitigation ratios.

Currently, the City utilizes a locally tailored wetland rating system with three tiers (Adolfson 2006a, 2006b, 2010). With the proposed update, the code will utilize the 2014 wetland rating

system developed by Ecology (Hruby, 2014) rather than the City's wetland rating system. The following discussion documents how utilizing the 2014 wetland rating system rather than the current rating system provides equivalent or better protection to the City's wetlands, as mandated by the GMA.

In 2006, Adolfson Associates, Inc. (Adolfson, 2006a) compared the City's wetland rating system to Ecology's 2004 wetland rating system (Hruby, 2004) to determine if the City's wetland rating system was as protective of wetlands as the 2004 wetland rating system. Five wetlands were compared, chosen to represent a range of wetland types. Table 3 summarizes the results of the Adolfson (2006a) comparison with an update to also include a comparison to Ecology's 2014 rating system. However, switching from the current three-tiered rating system to Ecology's 2014 four-tiered rating system is not linear. According to Adolfson (2006a), no wetlands within the City would be rated as Category I wetlands under the 2004 rating system. As part of its development of the final 2014 rating system, Ecology reevaluated 91 percent of the wetlands used in the calibration of the 2004 rating system. The 2014 system resulted in slightly fewer Category I wetlands than the 2004 system (13 versus 11 of 111 total) (Hruby, 2014). Without the original Adolfson wetland ratings used in 2004 and a re-rating of those wetlands using the 2014 system, it cannot be conclusively stated that the City does not have any Category I wetlands using the new system. However, Ecology's calibration results suggest that an increase in Category I wetlands, if any, would likely be slight. Based on the Adolfson comparison, Adolfson's determination that no Category I wetlands (using the 2004 system) are present within the City, and a direct conversion of wetland category between Ecology's 2004 and 2014 rating systems:

- Class 1 wetlands per current City regulations would likely be rated as Category II wetlands in Ecology's 2014 rating system,
- Class 2 wetlands per current City regulations would likely be rated as Category II or III wetlands in Ecology's 2014 rating system, and
- Class 3 wetlands per current City regulations would likely be rated as Category IV wetlands in Ecology's 2014 rating system.

TABLE 3
SUMMARY OF WETLAND RATING COMPARISON

Wetland No. / Name	Current Kenmore Wetland Class	2004 Ecology Habitat Score/ Function	2004 Ecology Total Score	2004 Ecology Rating	Estimated[1] 2014 Ecology Habitat Score/ Function	Estimated[2] 2014 Ecology Rating
1 - Swamp Creek No. 3	Class 1	20/Medium	66	Category II	6-7/Medium	Category II
2 - E. Lake Washington Wetland	Class 1	23/Medium	59	Category II	6-7/Medium	Category II
3 - Hanks Long Plat Wetland B	Class 2	19/Low	57	Category II	3-5/Low	Category II
4 - Forested Wetland East of 80th and 192nd	Class 2	14/Low	46	Category III	3-5/Low	Category III
5 - Cattail Ditch, Tolt Pipeline ROW	Class 3	9/Low	28	Category IV	3-5/Low	Category IV

[1] Scores estimated based on assumptions of 2004 scoring. The 2004 wetland rating forms were not available to comprehensively update the scoring to the 2014 rating system. 2014 wetland rating habitat score based on Ecology's table for converting habitat scores (Ecology, 2018). For purposes of normalizing the comparison of these two systems, the estimated 2014 rating assumes that the conditions in the wetland that gave rise to the 2004 habitat score as evaluated in 2006 have not changed
[2].Based on Ecology's calibration of the 2014 system against the 2004 system, the estimated 2014 rating is likely the same as the 2004 rating.

While the 2014 version of the rating systems keeps the same four wetland categories as the 2004 version, the scale of scores has been adjusted. Therefore, Ecology (2018) developed score conversion tables to convert 2004 habitat function scores to 2014 habitat function scores (Table 4). For example, in the 2004 version, the medium score range for habitat was 20-28 points and under the 2014 rating it is 6-7 points.

TABLE 4
ECOLOGY RATING SYSTEM CONVERSION TABLE
FOR HABITAT FUNCTION

Function Score	2004 Point Range	2014 Point Range
High	29-36	8-9
Medium	20-28	6-7
Low	≤19	3-5

Ecology's guidance for wetland buffers is based on the assigned category of the wetland, as well as the scores for water quality, hydrology, and habitat functions. Each category has a broad range in buffer widths depending on the current level of function (Granger et al., 2005). As a result, the City has options for how to convert to the current Ecology system of wetland buffer requirements. One option is to establish conservative wetland buffers by incrementally increasing buffer widths based on the score of one function (i.e., water quality, hydrology, or

habitat). Since water quality and hydrology functions can be replaced through engineering (i.e., compliance with a stormwater management manual), it makes sense to incrementally increase buffer widths as the habitat score increases to protect habitat functions. Ecology (2005 and 2013) provides guidance on this concept. Table 5 shows proposed buffer widths based on habitat scores and surrounding land use.

TABLE 5
SUMMARY OF RECOMMENDED WETLAND BUFFER RANGES BASED ON HABITAT SCORES

Current Kenmore Wetland Class	Estimated 2014 Ecology Rating[1]	2014 Ecology Habitat Score Range/Function	Current Kenmore Buffer	Recommended Range of Buffer (Ecology 2005, 2013)[2]
Class 1 or 2	Category II	8-9/High	150 feet	150-300 feet
Class 2	Category II	5-7/Medium	150 feet	75-100 feet
Class 2	Category II	3-4/Low	100 feet	50-100 feet
Class 3	Category III	8-9/High	100 feet	150-300 feet
Class 2	Category III	5-7/Medium	100 feet	75-150 feet
Class 2	Category III	3-4/Low	100 feet	40-80 feet
Class 3	Category IV	3-4/Low	60 feet	25 – 75 feet

[1]Assumes no Category I wetlands are present within City of Kenmore (Adolfson, 2006a)
[2] Range is based on adjacent land use

Table 6 details the recommended changes to KMC 18.55 Part 300. Most recommended changes are a result of the City's plan to shift to Ecology's rating system. Other significant revisions include recommended changes to wetland buffers and the addition of language to allow the City to develop and use an In-Lieu Fee program.

TABLE 6
ANALYSIS OF AND RECOMMENDATIONS FOR KENMORE MUNICIPAL CODE CHAPTER 18.55 – WETLANDS

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
ARTICLE VII. WETLANDS – DESIGNATION AND RATING		
18.55.300.A – Designating Wetlands	All areas within the City meeting the wetland designation criteria ~~in the Washington State Identification and Delineation Manual (1997)~~, 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.	Per WAC 173-22-035 - Identification of wetlands and delineation of their boundaries pursuant to this chapter shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements. The applicable approved federal manual is (Corps, 1987) and regional supplement (Corps, 2010). Per the Ecology website, the Washington State Identification and delineation Manual (Ecology, 1997) is obsolete and no longer used.
18.55.300.B – Wetland Ratings	Amend as follows: 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 #14-06-029 (Hruby, 2014 or latest edition), which contains the definitions and methods for determining whether the criteria below are met. 1. Category I. Category I wetlands are: (1) wetlands of high conservation value that are identified by scientists of the Washington Natural Heritage Program/DNR; (2) bogs; (3) mature and old-growth forested wetlands larger than 1 acre; and (4) wetlands that perform many functions well (scoring 23 points or more). These wetlands: (1) represent unique or rare wetland types, (2) are more sensitive to disturbance than most wetlands, (3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime, or (4) provide a high level of functions.	The 2014 *Wetland Rating System for Western Washington* was designed to differentiate among wetlands based on their sensitivity to disturbance, their significance, their rarity, our ability to replace them, and the functions they provide. This rating represents the current Best Available Science under the Growth Management Act. See description above for an explanation of how the Kenmore wetland rating system generally converts to the Ecology rating system.

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
	2. Category II. Category II wetlands are wetlands larger than 1 acre or those found in a mosaic of wetlands, or wetlands with a moderately high level of functions (scoring between 20 and 22 points). 3. Category III. Category III wetlands have a moderate level of functions (scoring between 16 and 19 points) and can often be adequately replaced with a well-planned mitigation project. Wetlands scoring between 16 and 19 points generally have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands. 4. Category IV. Category IV wetlands have the lowest levels of functions (scoring fewer than 16 points) and are often heavily disturbed. These are wetlands that can often be adequately replaced with a well-planned mitigation project, or in some cases to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions, and should be protected to some degree. ~~using criteria outlined below:~~ ~~1. Wetlands Classification. Wetlands, as defined by this chapter, shall be designated Class 1, Class 2, and Class 3 according to the criteria below.~~ ~~a. Class 1 wetlands are those wetlands that meet any of the following criteria:~~ ~~(1) Documented habitat for federal or State listed endangered or threatened fish, animal, or plant species; or~~ ~~(2) Wetlands listed as high quality habitats in the Natural Heritage Information System; or~~ ~~(3) Wetlands with irreplaceable ecological functions, including sphagnum bogs and fens or natural forested swamps; or~~ ~~(4) Wetlands of exceptional local significance, specifically those wetlands proximal to and influenced by the main stem of Swamp Creek, the Sammamish River, or Lake Washington.~~ ~~b. Class 2 wetlands are those wetlands which are not Class 1 wetlands and meet any of the following criteria:~~ ~~(1) Wetlands that have significant functions that may not be adequately replicated through creation or restoration; or~~ ~~(2) Wetlands associated with Type 2 or 3 streams; or~~ ~~(3) Wetlands greater than one acre in size; or~~	

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
	~~(4) Wetlands equal to or less than one acre having three or more classes of wetland vegetation (as defined in Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al., 1979)); or~~ ~~(5) Wetlands containing a forested wetland class.~~ ~~c. Class 3 wetlands are those wetlands not rated as Class 1 or 2 wetlands, but greater than 1,000 square feet in size.~~	
18.55.300.C Buffer Areas	No amendments	If buffers are discussed in this section, it makes sense to move 18.55.320(F)1-3 to this section and only discuss allowed alterations to buffers in 18.55.320.
ARTICLE IX. WETLANDS – PERFORMANCE STANDARDS		
Article IX. Wetlands – Performance Standards	Suggested renaming this section.	Suggest renaming "Performance Standards" to "General Standards and Requirements" or "Allowed Alterations and Uses" (depending on what happens to 18.55.320(F)1). Performance Standards have a very specific meaning when dealing with critical areas and this section of code does not reflect that.
18.55.320.A	Revise as shown: A. Unless otherwise allowed by this chapter, a~~A~~ctivities may only be permitted in a wetland or wetland buffer after demonstration of mitigation sequencing, and if the applicant can show that the proposed activity will not degrade the functions and values of the wetland and other critical areas and no other feasible site design exists that results in less encroachment or impact to the wetland or wetland buffer.	Change made to emphasize the need for mitigation sequencing.
18.55.320.C	Amend as follows: ~~Class 1~~ Category I and II Wetlands. Activities and uses shall be prohibited from ~~Class 1~~ Category I and II wetlands, except as provided for in the public agency and utility exception or reasonable use exception sections of this chapter. Add provision allowing for limited boardwalk trails through wetlands as part of a public project, without requiring a PAUE or RUE. Boardwalk trails could also be	Amendments made to address wetland rating classification changes. Incorporating an allowance for public/quasi-public boardwalk trails in wetlands is consistent with community objectives to provide for and allow passive recreation (including wildlife viewing) and

<table>
<tr><th>Section of the Kenmore Municipal Code</th><th>Recommendation</th><th>Comment/Science Reference</th></tr>
<tr><td></td><td>allowed in quasi-public community areas if the developer provides assurances through signage and formal recording on title that the trails are publicly accessible.</td><td>environmental education. All projects would still be subject to mitigation sequencing, and other code provisions intended to protect the resource.</td></tr>
<tr><td>18.55.320.D</td><td>Amend as follows: ~~Class 2 and 3~~ Category III and IV Wetlands. Activities may be permitted, if the city manager …</td><td>Amendments made to address wetland rating classification changes.</td></tr>
<tr><td>18.55.320.E</td><td>Replace the existing exemption language as follows:
Limited Exemption. ~~Class 3 wetlands less than 1,000 square feet may be exempted from the provisions of KMC 18.55.300 to 18.55.330 and may be altered by filling or dredging if the City determines that the cumulative impacts do not unduly counteract the purposes of this chapter and are mitigated pursuant to an approved mitigation plan.~~ All isolated Category III and Category IV wetlands less than 1,000 square feet are exempt from the buffer provisions contained in this chapter and the normal mitigation sequencing process in KMC 18.55.210 if they meet the following criteria as documented in a critical areas report:
1. Are not associated with riparian areas or buffers
2. Are not part of a wetland mosaic
3. Do not contain fish and wildlife habitats of importance identified in KMC 18.55.500.
They may be filled if impacts are fully mitigated based on provisions in KMC 18.55.330. If available, impacts should be mitigated through the purchase of credits from an in-lieu fee program or mitigation bank, consistent with the terms and conditions of the program or bank.</td><td>Amendments made to address wetland rating classification changes and to add additional sideboards to circumstances when small wetlands may be filled. The proposed language is adapted from Wetlands & CAO Updates: Guidance for Small Cities Western Washington Version (Bunten and others, 2010). As noted in Bunten and others (2010), “The scientific literature does not support exempting wetlands that are below a certain size. While we recognize an administrative desire to place size thresholds on wetlands that are to be regulated, you need to be aware that it is not possible to conclude from size alone what functions a particular wetland may be providing. Ecology has developed a strategy for exempting small wetlands when additional criteria are considered.”</td></tr>
<tr><td>18.55.320.F.1</td><td>Amend as follows:
F. Wetland Buffers.
1. Wetland buffers shall be established as follows:
<table>
<tr><th>Wetland Category ~~Type~~</th><th>Buffer Width (Feet)</th></tr>
<tr><td>~~Class 1~~ Category I</td><td>150</td></tr>
</table></td><td>Amendments to buffer table based on keeping the same buffer widths in code. Used the wetlands previously identified as Class 1, 2, or 3 wetlands by Adolfson (2006a) that were also rated using the 2004 wetland rating system. Then the habitat scores for these wetlands were converted into the 2014 habitat scores using the conversion table provided by Ecology (2018).</td></tr>
</table>

<table>
<tr><th>Section of the Kenmore Municipal Code</th><th>Recommendation</th><th>Comment/Science Reference</th></tr>
<tr><td></td><td>
<table>
<tr><td>Category II Wetlands with habitat score of 6-9 points</td><td>150</td></tr>
<tr><td>~~Class 2~~ Category II wetlands with habitat score of 3-5 points</td><td>100</td></tr>
<tr><td>Category III wetlands with habitat score of 6-9 points</td><td>100</td></tr>
<tr><td>~~Class 3~~Category III wetlands with habitat score of 3-5 points</td><td>60</td></tr>
<tr><td>Category IV wetlands</td><td>40</td></tr>
</table>
</td><td>This section of code could be moved to 18.55.310.C.</td></tr>
<tr><td>18.55.320.F.4</td><td>Amend as follows:
a. Wetland Buffer Width Averaging. …
(5) ~~For Class 1 and 2 wetlands, t~~The buffer width shall not be reduced by more than 25~~0~~ percent in any one place. ~~For standard buffers of Class 3 wetlands, the buffer width shall not be reduced to less than 50 feet in any one place.~~

b. Buffer Reduction with Enhancement. Standard buffer widths for degraded wetland buffers may be reduced up to 25 percent 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. ~~Buffers may be reduced in the following manner according to wetland type:~~
<table>
<tr><th>~~Category~~</th><th>~~Maximum *Buffer* Reduction~~</th><th>~~Minimum *Buffer* Width (Feet)~~</th></tr>
<tr><td>~~1~~</td><td>~~25 percent~~</td><td>~~112.5 feet~~</td></tr>
<tr><td>~~2~~</td><td>~~25 percent~~</td><td>~~75 feet~~</td></tr>
</table>
</td><td>Revisions based on switch from City wetland classification to Ecology classification. Also, increased the amount of reduction that is allowed to 25% of the standard buffer, consistent with Ecology’s model ordinances.

It is typically the applicant’s burden to demonstrate that a given roadway is a meaningful barrier to buffer function. Some additional guidelines could be included in the code, however, such as minimum road width or other criteria. The City may also wish to consider having an administrative process to reduce other property setbacks that enable minimization of wetland buffer reductions.</td></tr>
</table>

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
	~~3~~ | ~~25 percent~~ | ~~45 feet~~ Additional recommended language to recognize where legal development has the effect of breaking the otherwise required buffer into functional and non-functional components: e. The City may approve a modification of the minimum required buffer width to the edge of a legally established roadway, if the roadway transects a wetland buffer, and meets the following criteria: (1) Does not provide additional protection of the proposed development or the wetland; and (2) Provides insignificant biological, geological or hydrological buffer functions relating to the other portion of the buffer adjacent to the wetland. f. The City may approve a modification of the minimum required buffer width, where proposed development or use is isolated from the critical area and its contiguous buffer by an existing legally established building, detached garage, accessory dwelling unit, driveway, commercial parking area, or retaining wall over six (6) feet in height. For the buffer modification to be approved, the applicant must demonstrate conclusively in a critical area report that all of the following criteria are met. (1) The modification may not be requested for such improvements as fences, sheds, patios, decks or other similar structures and impervious surfaces. (2) The City may modify the buffer width if the request is found to meet the following criteria: (a) The existing legal improvement between the proposed development or use creates a substantial barrier to buffer function; (b) The isolated section of buffer does not provide additional protection of the critical area from the proposed development; and (c) The isolated section of buffer does not provide significant hydrological, water quality, and wildlife buffer functions relating to the portion of the buffer adjacent to the critical area.	
18.55.320.F.6.b	Suggested modification to distinguish private from public trails, and to support implementation of the City's Walkways & Waterways initiative.	KMC 18.55.320.F.6.b identifies that walkways and trails are allowed in the outer 25% of a buffer. However, for trails to

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
	6. Buffer Uses. The following uses may be permitted within a 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: b. Passive Recreation. Passive recreation facilities designed in accordance with an approved critical areas report, including: (1) Private walkways and trails; provided, that those pathways that are generally parallel to the perimeter of the wetland shall be located in the outer 25 percent of the buffer area; (2) Public walkways and trails; provided, that those pathways are located and designed based on existing conditions to prevent net degradation of the buffer and wetland. The trail proposal shall be accompanied by a plan demonstrating that the ecological functions of the overall required buffer area on a project site would be substantially improved. When practicable, trails should be located at least 50 feet from the wetland edge, but trails may extend closer to the wetland if necessary to reduce impacts on critical areas or adjacent properties or to access a viewing platform or a pedestrian bridge over an associated waterbody. Spur trails may be extended to the wetland's edge, but such access areas should be limited in order to protect ecological functions of the buffer and wetland.	connect to Bothell and Burke Gilman, consistent with the City's Walkways & Waterways initiative, trails may need to be closer to river-, stream- or lake-associated wetlands than the outer 25% of a 150- or 100-foot buffer. The suggested new (2) is adapted from language currently included in the City's SMP 16.60.020.B.1 (and suggested for removal if that concept is incorporated here instead for application to all wetland buffer environments, not just in shoreline jurisdiction). These provisions, or similar, could also be allowed in quasi-public community areas if the developer provides assurances through signage and formal recording on title that the trails are publicly accessible.
18.55.330 Performance standards – Mitigation requirements.	Suggest revising as shown: Buffers for Mitigation Shall Be Consistent. When mitigation for a wetland impact includes creation of new wetland area, that new area shall be provided with a functioning ~~All mitigation sites shall have~~ buffer~~s~~ consistent with the buffer requirements of this chapter, unless determined by the city manager through a variance or a reasonable use exemption that a different buffer would provide adequate protection to the critical area.	In urban areas, wetland mitigation more often consists of enhancement or rehabilitation of existing wetland features. A requirement to provide a buffer on existing features is often not feasible without removing public infrastructure (such as roads) or private developments owned by others and would preclude enhancement or rehabilitation of those wetland areas as mitigation.
18.55.330.G Mitigation Ratios	Amend as follows: 1. Acreage Replacement Ratios. The following ratios shall apply to creation or restoration that is in-kind, on-site, the same category ~~class~~, timed prior to or concurrent with alteration, and has a high probability of success. These ratios do	• After this update, mitigation ratios will no longer be different between KMC 18.55 and 16.65.

<table>
<tr><th>Section of the Kenmore Municipal Code</th><th>Recommendation</th><th>Comment/Science Reference</th></tr>
<tr><td></td><td>
not apply to remedial actions resulting from unauthorized alterations; greater ratios shall apply on a case-by-case basis. These ratios do not apply to the use of credits from a State-certified wetland mitigation bank. The first number specifies the acreage of replacement wetlands and the second specifies the acreage of wetlands altered.
~~Class 1 - 3 to 1~~
~~Class 2 - 2 to 1~~
~~Class 3 - 1 to 1~~
Standard Wetland Mitigation Ratios
<table>
<tr><th>Category and Type of Wetland</th><th>Creation or Reestablishment (C/R)</th><th>Creation (C) or Reestablishment (R) plus Enhancement (E)</th><th>Enhancement (E) Only</th></tr>
<tr><td>Category I</td><td>4:1</td><td>1:1 C/R plus 6:1 E</td><td>16:1</td></tr>
<tr><td>Category I (Mature Forested)</td><td>6:1</td><td>1:1 C/R plus 10:1 E</td><td>24:1</td></tr>
<tr><td>Category II</td><td>3:1</td><td>1:1 C/R plus 4:1 E</td><td>12:1</td></tr>
<tr><td>Category III</td><td>2:1</td><td>1:1 C/R plus 2:1 E</td><td>8:1</td></tr>
<tr><td>Category IV</td><td>1.5:1</td><td>1:1 C/R plus 1:1 E</td><td>6:1</td></tr>
<tr><td>Buffer</td><td>1:1</td><td>1:1</td><td>1:1</td></tr>
</table>
~~The required acreage replacement ratios for wetlands within the jurisdiction of the Kenmore shoreline master program are different from these standards. See KMC 16.65.010(C) for required wetland mitigation ratios in the shoreline jurisdiction.~~

3. Decreased Replacement Ratio.
a. The city manager may decrease the creation/reestablishment ~~replacement~~ ratios required for ~~Class 1 and 2~~ Category II and III wetlands to 2:1 and 1.5:1, respectively, under the following circumstances:
4. Credit/Debit Method. As an alternative to the standard mitigation ratios, the City may allow mitigation based on the “credit/debit” method developed by the Department of Ecology, and documented in *Calculating Credits and Debits for*
</td><td>
• Ratios were based on Ecology et al., 2006 – The main difference between code and Ecology et al., 2006 is the creation ratio for Category IV/Class 3 wetlands increasing from 1:1 to 1.5:1.
</td></tr>
</table>

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
	Compensatory Mitigation in Wetlands of Western Washington, Final Report, March 2012 (Hruby, 2012 or as revised).	
18.55.330.H	Amend as follows: ~~2. At a minimum, enhancement acreage shall be double the acreage required for creation or restoration.~~	No longer needed with the addition of an Enhancement column to the mitigation ratio table above.
18.55.330.J (new)	Suggest adding the following mitigation strategy: In Lieu Fee Programs. To aid in the implementation of off-site mitigation, the City may develop an in-lieu fee (ILF) program or allow participation in an ILF program. ILF programs shall be developed and approved through a public process and be consistent with federal rules, state policy on in-lieu fee mitigation, and state water quality regulations. An approved ILF program sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor, a governmental or non-profit natural resource management entity. Credits from an approved in-lieu-fee program may be used when paragraphs 1-6 below apply: 1. The city manager determines that it would provide environmentally appropriate compensation for the proposed impacts. 2. The mitigation will occur on a site identified using the site selection and prioritization process in the approved ILF program instrument. 3. The proposed use of credits is consistent with the terms and conditions of the approved ILF program instrument. 4. Land acquisition and initial physical and biological improvements of the mitigation site must be completed within three years of the credit sale. 5. Projects using ILF credits shall have debits associated with the proposed impacts calculated by the applicant's qualified wetland scientist using the method consistent with the credit assessment method specified in the approved instrument for the ILF program. 6. Credits from an approved ILF program may be used to compensate for impacts located within the service area specified in the approved ILF instrument.	A 2008 federal rule titled "Compensatory Mitigation for Losses of Aquatic Resources; Final Rule (Federal Rule) 33 CFR Section 332.3(b)" establishes preferences for wetland compensation in the following order: • Wetland mitigation banks, • In-lieu fee programs, • Permittee-responsible mitigation under a watershed approach, • Permittee-responsible mitigation through on-site and in-kind mitigation, and lastly • Permittee-responsible mitigation through off-site and/or out-of-kind mitigation. Accordingly, it is useful, particularly in urban areas where good options for permittee-responsible mitigation are rarer, to allow applicants a full range of scientifically supported mitigation mechanisms. KMC 18.55.330.I allows for use of mitigation banks. While there are no approved mitigation banks that have a service area that includes Kenmore, King County does have an in-lieu-fee program that could be available to Kenmore residents if allowed by code. The County's program can be used as

Section of the Kenmore Municipal Code	Recommendation	Comment/Science Reference
		compensation for unavoidable wetland, river, stream, and buffer impacts. Similar language could be added to the Streams This ILF language was taken mostly from *Wetlands & CAO Updates: Guidance for Small Cities Western Washington Version* (Bunten and others, 2010).
18.55.330.K and L (new)	Suggest adding the following: K. Advance Mitigation. Mitigation for projects with pre-identified impacts to wetlands may be constructed in advance of the impacts if the mitigation is implemented according to federal rules, state policy on advance mitigation, and state water quality regulations. L. Alternative Mitigation Plans. The city manager may approve alternative critical areas mitigation plans that are based on best available science, such as priority restoration plans that achieve restoration goals identified in the SMP. Alternative mitigation proposals must provide an equivalent or better level of protection of critical area functions and values than would be provided by the strict application of this chapter and must contain all the standard components of a mitigation plan. The city manager shall consider the following for approval of an alternative mitigation proposal: 1. The proposal uses a watershed approach consistent with *Selecting Wetland Mitigation Sites Using a Watershed Approach (Western Washington)* (Ecology Publication #09-06-32, Olympia, WA, December 2009). 2. Creation or enhancement of a larger system of natural areas and open space is preferable to the preservation of many individual habitat areas. 4. There is clear potential for success of the proposed mitigation at the proposed mitigation site. 5. A wetland of a different type is justified based on regional needs or functions and values; the replacement ratios may not be reduced or eliminated unless the reduction results in a preferred environmental alternative.	For the same reasons as KMC 18.55.330.J is recommended, the addition of these two strategies may help applicants meet City requirements, as well as satisfy state and federal guidance. While not likely used often, these two mechanisms can provide flexibility to applicants when needed and justified.

3.3 Streams

The majority of recommended changes to KMC 18.55 Part 400 are a result of updating to the stream classification system developed by Washington Department of Natural Resources (WDNR) in WAC 222-16-030. The stream typing changes from a numerical classification (e.g., Type 1) to an alphabetical classification (e.g., Type S) (Table 7). WDNR's classification is based on presence of suitable fish habitat, not the actual presence of fish. Fish habitat is also defined explicitly to include potential habitat which could be used by fish following restoration and removal of any unnatural downstream fish blockages. WDNR has developed a Forest Practices Application Mapping Tool (https://fpamt.dnr.wa.gov/default.aspx) that provides a preliminary classification of a number of streams in Kenmore using its typing system.

TABLE 7
SUMMARY OF STREAM RATING COMPARISON

Current Kenmore Stream Type	Key Features	WDNR Water Type	Key Features	Comment
1	Shorelines of the State	S	Shorelines of the State	The change in typing systems does not have any substantive implications.
2	Salmonid-bearing, perennial or intermittent	F	Fish habitat	All City-classified Type 2 and Type 3 streams would be in a single category of Type F. A key difference between the City's and WDNR's typing systems is that WDNR's classification is based on presence of suitable fish habitat, not the actual presence of fish. Fish habitat is also defined explicitly to include *potential* habitat which could be used by fish following restoration and removal of any unnatural downstream fish blockages.
3	Non-salmonid-bearing, perennial or intermittent			
4	Non-fish, perennial or intermittent	Np	Non-fish habitat, perennial	Some waterbodies that may be classified as Type 4 under the City's current system could be upgraded to Type F if habitat is present.
		Ns	Non-fish habitat, seasonal	

Other changes include recommendations to provide code clarification, and to add flexibility to reporting and buffer management requirements (Table 8). To maintain some consistency between the City's current buffers assigned to streams and the proposed new typing system, WDNR's Type F is sub-divided for buffer application purposes into streams with salmonid habitat and stream with non-salmonid fish habitat.

TABLE 8
ANALYSIS OF AND RECOMMENDATIONS FOR KENMORE MUNICIPAL CODE CHAPTER 18.55 – STREAMS

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
ARTICLE X. STREAMS – DESIGNATION AND RATING		
18.55.400 Designation and rating of streams	Amend as follows: A. Stream Classification. Streams shall be designated Type ~~1~~S, Type ~~2~~F, Type ~~3~~ Np, and Type ~~4~~ Ns according to the criteria ~~in this section identified in WAC 222-16-030~~. 1. Type ~~1~~ S Waters ~~streams~~ are those segments of natural waters ~~streams~~ identified as "shorelines of the State" under Chapter 90.58 RCW, including the Sammamish River and the main stem of Swamp Creek, as well as Lake Washington. 2. ~~Type 2 streams are those streams that are:~~ ~~a. Natural streams that have perennial (year-round) flow and are used by salmonid fish; or~~ ~~b. Natural streams that have intermittent flow and are used by salmonid fish.~~ ~~3. Type 3 streams are those streams that are:~~ ~~a. Natural streams that have perennial flow and are used by fish other than salmonids; or~~ ~~b. Natural streams that have intermittent flow and are used by fish other than salmonids.~~ ~~4. Type 4 streams are those natural streams with perennial or intermittent flow that are not used by fish.~~ 2. Type F Water means segments of natural waters other than Type S Waters, which are within the bankfull widths of defined channels and periodically inundated areas of their associated wetlands, or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and which in any case contain fish habitat 3. Type Np Water means all segments of natural waters within the bankfull width of defined channels that are perennial nonfish habitat streams. Perennial streams are flowing waters that do not go dry any time of a year of normal rainfall and	Recommended stream typing gets updated to most current water typing system (WAC 222-16-030). Note: Suggest replacing "streams" globally when it is a general term with "waters" or "waterbodies" (or even "streams and other waterbodies") so that it also captures lakes/ponds.

<table>
<tr><th>Section of the Kenmore Municipal Code</th><th>Recommendation</th><th>Comment / Science Reference</th></tr>
<tr><td></td><td>include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.
4. Type Ns Water means all segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np Waters. These are seasonal, nonfish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from any stream reach that is a Type Np Water. Ns Waters must be physically connected by an above-ground channel system to Type S, F, or Np Waters.</td><td></td></tr>
<tr><td>18.55.400.C</td><td>See comment</td><td>If buffers are discussed in this section, it makes sense to move 18.55.420.A-B to this section and only discuss allowed alterations to buffers in 18.55.420.</td></tr>
<tr><td colspan="3">ARTICLE XII. STREAMS – PERFORMANCE STANDARDS</td></tr>
<tr><td>18.55.420 Performance standards – General.</td><td>Suggested renaming this section.</td><td>Suggest renaming “Performance Standards” to “General Standards and Requirements” or “Allowed Alterations and Uses” (depending on what happens to 18.55.420.A-B). Performance Standards has a very specific meaning when dealing with critical areas and this section of code does not reflect that.</td></tr>
<tr><td>18.55.420.B.1</td><td>Amend as follows:
1. The following buffers are established for streams to protect functions and values~~, including heron habitat~~:
<table>
<tr><th>Stream Type</th><th>Buffer Width (Feet)</th></tr>
<tr><td>Type ~~1~~ S – Swamp Creek, Lake Washington and Sammamish River~~ and Little Swamp Creek~~</td><td>See KMC 16.65.020 ~~150~~</td></tr>
<tr><td>Type F - Little Swamp Creek</td><td>150</td></tr>
</table></td><td>Amendments made to address stream rating classification changes and refer to KMC 16.65.020 for shoreline-specific buffers.
Added a minimal buffer to minimize the disincentive for “daylighting” of streams (similar to Mercer Island). The City could also require a larger buffer but provide other incentives to owners to encourage daylighting. Prior to daylighting, the City could ensure there’s a setback from the pipe to allow adequate access and maintenance.</td></tr>
</table>

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	Type ~~2~~F (other waterbodies used by or suitable for salmonid fish) — 100 Type ~~3~~F (waterbodies used by or suitable for fish other than salmonids) — 50 Type ~~4~~Np or Ns — 25 Any type stream restored from a pipe — 25	Some incentives that could be considered by the City (for streams and wetlands) include: • Fast-track permitting for projects that include restoration above the minimum required to mitigate for impacts. • Permit fee reductions for projects that include restoration above the minimum required to mitigate for impacts. • Simple processes to allow for increased heights, density, or some other desirable development standard to offset voluntary restoration. • Adjustments to buffer requirements when a restoration action would otherwise increase buffer encumbrances on a site. • Educate property owners about the use of King County's Public Benefit Rating System, which provides some tax benefits for preservation of on-site resources. Note: A 50-foot buffer for a fish-bearing stream has minimal support in the literature. However, in Kenmore, most streams suitable for and/or used by fish would be occupied by some species of salmonid, such as cutthroat trout or coho salmon. Few waterbodies would be suitable *only* for non-salmonids.
18.55.420.B.4	Buffer Reduction with Enhancement. Standard buffer widths for degraded buffers 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	Amendments made to eliminate an unnecessary table consistent with wetland regulations format.

<table>
<tr><th>Section of the Kenmore Municipal Code</th><th>Recommendation</th><th>Comment / Science Reference</th></tr>
<tr><td></td><td>reduced buffer will function at a higher level than the standard buffer. ~~Buffers may be reduced in the following manner according to stream type:~~
<table>
<tr><th>~~*Stream* Type~~</th><th>~~Maximum *Buffer* Reduction~~</th><th>~~Minimum *Buffer* Width (Feet)~~</th></tr>
<tr><td>~~Type 1 and Little Swamp Creek~~</td><td>~~25 percent~~</td><td>~~112.50 feet~~</td></tr>
<tr><td>~~Type 2~~</td><td>~~25 percent~~</td><td>~~75.00 feet~~</td></tr>
<tr><td>~~Type 3~~</td><td>~~25 percent~~</td><td>~~37.50 feet~~</td></tr>
<tr><td>~~Type 4~~</td><td>~~25 percent~~</td><td>~~18.75 feet~~</td></tr>
</table></td><td></td></tr>
<tr><td>18.55.420.B.5 (new)</td><td>5. Reduction of Standard Buffer. The City may approve a modification of the minimum required buffer width to the edge of a legally established roadway, if the roadway transects a stream buffer, and meets the following criteria:
(1) Does not provide additional protection of the proposed development or the stream; and
(2) Provides insignificant biological, geological or hydrological buffer functions relating to the other portion of the buffer adjacent to the stream.
f. The City may approve a modification of the minimum required buffer width, where proposed development or use is isolated from the critical area and its contiguous buffer by an existing legally established building, detached garage, accessory dwelling unit, driveway, commercial parking area, retaining wall over six (6) feet in height, or similar structure. For the buffer modification to be approved, the applicant must demonstrate conclusively in a critical area report that all of the following criteria are met.
(1) The modification may not be requested for such improvements as fences, sheds, patios, decks or other similar structures and impervious surfaces.
(2) The City may modify the buffer width if the request is found to meet the following criteria:
(a) The existing legal improvement between the proposed development or use creates a substantial barrier to buffer function;
(b) The isolated section of buffer does not provide additional protection of the critical area from the proposed development; and</td><td>It is typically the applicant’s burden to demonstrate that a given roadway is a meaningful barrier to buffer function. Some additional guidelines could be included in the code, however, such as minimum road width or other criteria.</td></tr>
</table>

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	(c) The isolated section of buffer does not provide significant hydrological, water quality, and wildlife buffer functions relating to the portion of the buffer adjacent to the critical area.	
18.55.420.B.6.b	Suggested modification to distinguish private from public trails, and to support implementation of the City's Walkways & Waterways initiative. 6. Buffer Uses. The following uses may be permitted within a stream 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 stream: b. Passive Recreation. Passive recreation facilities designed in accordance with an approved critical areas report, including: (1) Private walkways and trails; provided, that those pathways that are generally parallel to the perimeter of the stream or lake shall be located in the outer 25 percent of the buffer area; (2) Public walkways and trails; provided, that those pathways are located and designed based on existing conditions to prevent net degradation of the buffer and stream or lake. The trail proposal shall be accompanied by a plan demonstrating that the ecological functions of the overall required buffer area on a project site would be substantially improved. (a) When practicable, trails should be located at least 50 feet from the stream or lake edge, but trails may extend closer to the waterbody if necessary to reduce impacts on critical areas or adjacent properties or to access a viewing platform or a pedestrian bridge. (b) Spur trails may be extended to the water's edge, but such access areas should be limited in order to protect ecological functions of the buffer and waterbody. (c) In order to allow for a waterfront promenade area along the inner harbor area of the Downtown Waterfront shoreline environment on Lake Washington, public access improvements may extend to the water's edge.	KMC 18.55.420.B.6(b) identifies that walkways and trails are allowed in the outer 25% of a buffer. However, for trails to connect to Bothell and Burke Gilman, consistent with the City's Walkways & Waterways initiative, trails may need to be closer to river, stream, or lake than the outer 25% of a buffer. The suggested new (2) is adapted from language included in the City's SMP 16.60.020.B.1 and 16.65.020.B.4.b (and suggested for removal if that concept is incorporated here instead for application to all buffer environments, not just in shoreline jurisdiction). These provisions, or similar, could also be allowed in quasi-public community areas if the developer provides assurances through signage and formal recording on title that the trails are publicly accessible.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
18.55.420.C.1	Amend as follows: C. Stream Crossings. Stream crossings may be allowed and may encroach on the otherwise required stream buffer if: 1. All crossings must be designed using the most recent version of Washington Department of Fish and Wildlife's *Water Crossing Design Guidelines* (Barnard and others, 2013, or as revised), prioritizing ~~use~~ bridges or other construction techniques which do not disturb the stream bed or bank, except that bottomless culverts or other appropriate methods demonstrated to provide fisheries protection may be used for Type ~~2 or 3~~F streams if the applicant demonstrates that such methods and their implementation will pose no harm to the stream nor inhibit migration of fish;	Amendments made to address stream rating classification changes and require the use of WDFW design standards (Barnard and others, 2013).
18.55.420.D	Amend as follows: 1. Stream relocations may be allowed only for: a. All stream types as part of a public project for which a public agency and utility exception is granted pursuant to this chapter; or b. Type ~~3 or 4~~ F streams with fish use other than salmonids, Np, and Ns streams for the purpose of enhancing resources in the stream if: 2. For any relocation allowed by this section, the *applicant* shall base the design on the most recent version of the multi-agency *Stream Habitat Restoration Guidelines* (Cramer, 2012 or as revised), and demonstrate, based on information provided by a civil engineer and a qualified *biologist*, that:	Amendments made to address stream rating classification changes and reference the latest scientific design standards (Cramer, 2012). Added restoration as an allowed reason for stream relocation of salmonid-bearing streams.
18.55.420.E	Amend as follows: E. Stream Enhancement. Stream enhancement not associated with any other development proposal may be allowed if accomplished according to a plan consistent with the most recent version of the multi-agency *Stream Habitat Restoration Guidelines* (Cramer, 2012 or as revised) for its design, implementation, maintenance and monitoring prepared by a civil engineer and a qualified biologist and carried out under the direction of a qualified biologist.	Amendments made to reference the latest scientific design standards (Cramer, 2012).

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
18.55.420.F	See comment. F. Minor Stream Restoration. A minor stream restoration project for fish habitat enhancement may be allowed if:	Unclear what the purpose of this provision is. Appears to be a variation on E (Stream Enhancement), but does not specifically require engagement of a qualified engineer or biologist? For some activities, that would likely be okay, but placement of some materials in the stream, such as grade controls, should include an engineer and/or a biologist.
18.55.430 Performance standards – Mitigation requirements	Alter mitigation requirements for stream buffers to mirror wetland buffer requirements.	For consistency.

3.5 Fish and Wildlife Habitats of Importance

Table 9 details the recommended changes to KMC 18.55 Part 500. The majority of recommended changes are a result of updating references to old wetland and stream classifications or to provide clarification.

TABLE 9
ANALYSIS OF AND RECOMMENDATIONS FOR KENMORE MUNICIPAL CODE CHAPTER 18.55 – FISH AND WILDLIFE HABITATS OF IMPORTANCE

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
ARTICLE XIII. FISH AND WILDLIFE HABITATS OF IMPORTANCE – DESIGNATION		
18.55.500.A Designation of fish and wildlife habitats of importance.	Amend as follows: A. Fish and wildlife habitats of importance are those habitat 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. In the City, habitats of importance meet any of the following criteria: 1. Documented presence of species listed by the federal government or the State of Washington as endangered, ~~or~~ threatened, or sensitive; or 2. Great blue ~~H~~heron rookeries or active nesting trees; or 3. Pileated woodpecker breeding habitat as mapped by Washington Department of Fish and Wildlife in its Priority Habitats and Species Program; or 4. Biodiversity areas and corridor as mapped by Washington Department of Fish and Wildlife in its Priority Habitats and Species Program; or ~~3. Class 1Category I wetlands as defined in these regulations; or~~ ~~4. Type 1S waters streams as defined in these regulations.~~	The functional portion of the WAC definition of "fish and wildlife habitat conservation area" is added to the designation. Revisions to this provision were also made to update language with revised wetland ratings and stream typing. Language also added to cover any additional habitats designated as fish and wildlife habitats of importance through the nomination process. • Great blue heron: In spite of their presence in an urban area, herons are still highly sensitive to disturbance. They are also a priority species, as well as having clear value to the community (noting the use of the heron in the City's formal logo, its designation as the official city bird, its graphic mascot, the number of local and as an advertised Eastside Audubon birding trip, and even a number of apartment complexes bearing the bird's name). • Anadromous fish: There are already three species of anadromous fish that are federally listed (bull trout, Chinook and steelhead), but other anadromous fish are also found in City streams and the lake (e.g., coho, sockeye). RCW 36.70A.172.1 requires the City to "give special consideration to conservation or protection

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	5. Bald eagle habitat shall be protected pursuant to the federal Bald and Golden Eagle Protection Act; or ~~Washington State Bald Eagle Protection Rules (WAC 232-12-292).~~ 6. Anadromous fish; or 7. Habitat for species nominated and approved by the City per KMC 18.55.500.C. • Retain the great blue heron rookeries and active nesting trees. • Do not add purple martin, which is a priority species mapped by WDFW within the City of Kenmore. • Remove Class I (Category I) wetlands from the list. • Remove Type 1 (Type S) waterbodies from the list. • Do not add naturally occurring freshwater ponds under 20 acres to the list. The City's current code allows nomination of habitats of local importance, but does not fully specify the criteria or process, only that it is determined administratively by the City Manager. A nomination process is recommended to be added to the code that allows the City to consider: • Rationale for nomination based on best available science, including the viability of the population in Kenmore and contribution to biodiversity; • What regulatory gaps there may be in regulations regarding protection of the habitat or species; • Proposed geographic boundaries, specific list of species, specific list of functions, etc.; • Causes for vulnerability, including a description of activities that compromise these areas, as well as a list of proposed management and protection measures; and • Environmental and non-environmental impacts (e.g. legal, cultural, recreational, and economic significance).	measures necessary to preserve or enhance anadromous fisheries." • Pileated woodpecker: The only area in Kenmore mapped as priority breeding habitat by WDFW is the St. Edwards State Park forest and some adjoining forest lands in undeveloped parts of residential and public properties (overlapping with geohazard areas in most cases). However, this species is also found in "lightly and moderately urbanized areas" with suitable large trees. A recent study by a University of Washington professor and graduate student of pileated woodpecker use of suburban areas (study areas included Bellevue and Redmond) stated that: "…suburban areas could and should be incorporated into management and conservation plans for Pileated Woodpeckers. Our results indicate that areas with less than 20% forest (heavily urbanized areas) were used significantly less than areas with higher forest cover. Retaining greater than 20% forest cover over large suburban areas may help to sustain this species (and maybe others tied to it). This forest will be better suited for woodpeckers if dead trees are retained in green spaces. Early-successional species, such as bigleaf maple, red alder, and Douglas-fir, are easy to include in green space management. These species are used by Pileated Woodpeckers for nesting, roosting, foraging, drumming, and calling. By increasing the sustainability of snags and other resources used by large cavity-nesting species, such as the Pileated Woodpecker, cities can play an important role in the conservation of biodiversity." (Tomasevic and Marzluff, 2018)

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
		WDFW's Management Recommendations include specific measures for urban and suburban areas with an emphasis on retention of remaining larger patches of trees that contain large trees and snags. These habitat types not only provide habitat for the woodpecker, but the woodpecker's activity on those trees creates habitat and foraging opportunities for a wide variety of wildlife. Some of these tree retention objectives are met by regulations in KMC 18.57 (Tree Management and Protection). Other areas of the City that are larger tracts of forest that could provide suitable pileated woodpecker breeding habitat appear to overlap with other designated critical areas, such as wetlands and wetland buffers, stream buffers, and/or geologically hazardous areas and buffers. For ease of implementation, and because the potential biodiversity areas and corridors outside of the WDFW-mapped lands are already protected by other regulations, limiting the designation to those features mapped by WDFW is recommended. • Biodiversity areas and corridor[2]: The WDFW-mapped biodiversity area and corridor in Kenmore is the same as for the pileated woodpecker. WDFW's PHS on the Web application states that the area contains "old second growth stands with remnant old growth. Excellent forest

[2] Biodiversity area: The area is within a city or an urban growth area (UGA) and contains habitat that is valuable to fish or wildlife and is mostly comprised of native vegetation. Relative to other vegetated areas in the same city or UGA, the mapped area is vertically diverse (e.g., multiple canopy layers, snags, or downed wood), horizontally diverse (e.g., contains a mosaic of native habitats), or supports a diverse community of species as identified by a qualified professional who has a degree in biology or closely related field and professional experience related to the habitats or species occurring in the biodiversity area. These areas may have more limited wildlife functions than other priority habitat areas due to the general nature and constraints of these sites in that they are often isolated or surrounded by highly urbanized lands.
Corridor: Corridors are areas of relatively undisturbed and unbroken tracts of vegetation that connect fish and wildlife habitat conservation areas, priority habitats, …or valuable habitats within a city or UGA...

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
		habitat in an urban area." The Swamp Creek stream/wetland complex along the river and farther upstream also meets the WDFW definition of a biodiversity area/corridor, although it's not mapped. For ease of implementation, and because the potential biodiversity areas and corridors outside of the WDFW-mapped lands are already protected by other regulations, limiting the designation to those features mapped by WDFW is recommended. • The bald eagle is no longer state or federally listed under the Endangered Species Act nor is it designated or managed by the State as a priority species. Bald eagles in the Lake Washington watershed are a thriving population and have adapted well to urban areas. WAC 232-12-292 was replaced with WAC 220-610-100. The latter WAC was written so that it is only in effect when the species is listed by state or federal government as threatened or endangered. However, it is still protected under the federal Bald and Golden Eagle Protection Act. • Purple martin: Although there is a PHS on the Web record (dating from 2005) of a purple martin breeding site in Kenmore, no purple martin nest structures were observed during a site visit on July 30, 2018, at or near the location shown on PHS on the Web. No other purple martin locations are mapped by WDFW. Based on the absence of suitable nest features at or near the mapped and described location, it is not recommended that the martin be added to the list of fish and wildlife habitats of importance. • WAC requires consideration of including "Naturally occurring ponds under twenty acres and their submerged aquatic beds that provide fish or wildlife habitat" and "Waters of the state" as fish and wildlife habitat

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
		conservation areas. Waters of the state are "lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the State of Washington." The naturally occurring ponds known in Kenmore appear to be fringed by wetlands or contained within larger wetland complexes. Designation specifically as a "fish and wildlife habitat of importance" and requiring a Habitat Management Plan in addition to the standard wetland critical areas study does not seem to add any value. • Class 1 (Category I) Wetlands: these are already sufficiently covered by the wetlands regulations, which include an emphasis on the habitat values of wetlands. Designation of any category of wetland specifically as a "fish and wildlife habitat of importance" and requiring a Habitat Management Plan in addition to the standard wetland critical areas study does not seem to add any value. • Type 1 (Type 2) waters are comprehensively governed by the Shoreline Master Program and any applicable stream regulations. This is also redundant with the designation of habitats containing listed species and anadromous fish.
ARTICLE XIV. FISH AND WILDLIFE HABITATS OF IMPORTANCE – REPORT REQUIREMENTS		
18.55.510 Critical areas report	See comment.	From Appendix A *Critical Area Report Requirements Appendix A – Critical Areas Ordinance – KMC 18.55,* remove "priority species, or endangered, threatened, sensitive, or candidate species" from II.4.C because priority, sensitive, and candidate *species* are not designated as fish and wildlife habitats of importance and therefore should not be included in report. The *habitat* of threatened and endangered species is a fish and wildlife habitat of local importance, but the species itself is not.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
ARTICLE XV. FISH AND WILDLIFE HABITATS OF IMPORTANCE – PERFORMANCE STANDARDS		
18.55.520.A	Amend as follows: Habitat Management Plan. A habitat management plan is required when available maps ~~the priority habitats and species maps or natural heritage program maps provided by the City~~, or other information, indicate the presence of fish and wildlife habitats of importance ~~areas with which critical species listed as endangered or threatened under federal or State law have a primary association~~. 1. All habitat management plans ~~shall~~ are encouraged to be prepared in consultation with the State Department of Fish and Wildlife. ~~Habitat management plans for critical species listed as endangered or threatened shall be approved by the Department of Fish and Wildlife.~~ 2. Habitat Management Plan Content Requirements. Based on the characteristics of the site and information submitted by the applicant, the city manager may require that all or a portion of the following be included in a habitat management plan: … e. Discussion of how the project complies with published Washington Department of Fish and Wildlife management recommendations for the species' habitat, if available. 3. The applicant may combine a habitat management plan with any studies required by other laws and regulations (e.g. a Biological Assessment or Biological Evaluation). 4. In lieu of a habitat management plan when the bald eagle is the only potential fish and wildlife habitat of importance, applicants may self-certify that they are in compliance with the Bald and Golden Eagle Protection Act by submitting a document generated online through the U.S. Fish and Wildlife Service's *Bald and Golden Eagle Permit Recommendation Tool*.[3] WDFW no longer	Amended to remove the word "critical" of "critical species." "Critical species" is not defined in the code nor is it a designation of species listed. The word critical adds confusion to the code, because it indicates that there could be species listed as threatened or endangered that are not critical. Modified 18.55.520.A.1, because it codifies responsibilities to a state agency to which it appears not to have agreed. Other technical documents prepared for other regulating agencies (e.g., Biological Assessment or Biological Evaluation) could contain the same information as habitat management plans (HMP). If an applicant has to prepare a technical document for another regulating agency and it contains all of the information required in an HMP, then the City should accept that report in lieu of an HMP. After reviewing requirements for critical area report for fish and wildlife habitats of importance and an HMP, they appear to be essentially the same requirements with only a few items specific to the HMP. Unlike the other CARs, however, the HMP contents are included in code. This section could be relocated to 18.55.510 and made broadly applicable to all fish and wildlife habitats of importance, not just listed species.

[3] https://www.fws.gov/pacific/eagle/permit_types/do_i_need_a_permit.html

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	maps bald eagle nest sites, so applicants would complete the certification based on their knowledge of their site and local conditions.	
18.55.520.B	Suggest revising as shown: B. Alterations shall not degrade the functions and values of habitat. ~~Fish and~~ W~~w~~ildlife habitat areas of importance may be altered only if the proposed alteration of the habitat or the mitigation proposed does not degrade the quantitative and qualitative functions and values of the habitat. Fish habitat areas of importance may be altered only when necessary to install water-dependent developments that are mitigated consistent with this chapter and the SMP, when applicable. ~~if the proposed alteration of the habitat or the mitigation proposed does not degrade the quantitative and qualitative functions and values of the habitat~~. All new structures and land alterations shall be prohibited from habitat areas of importance, except in accordance with this chapter and the SMP, when applicable.	Staff noted that this provision is not clear, particularly with respect to in-water structures in Lake Washington or the Sammamish River.
18.55.520.B-G	No amendments to C-G. See note.	Suggest reordering B-G, so that buffers (G) becomes (B). We recommend this so that 18.55.520 has parallel structure with 18.55.320 and 18.55.420, both of which discuss buffers before mitigation.
18.55.530.A	Delete A. Endangered, Threatened, and Sensitive Species: ~~1. No development shall be allowed within a fish and wildlife habitat of importance or buffer with which State or federally endangered, threatened, or sensitive species have a primary association except as otherwise approved through this chapter. For fish habitat of importance on lands regulated under the Kenmore shoreline master program (KMC 16), development also must meet the use and development requirements of the Kenmore shoreline master program (KMC 16.45).~~	The language in A.1 and A.2 is essentially redundant with 18.55.510 and -.520. Unless it is City practice to require direct engagement with WDFW and federal agencies when applicants propose developments within *buffers* of areas containing listed species (which in Kenmore would be the lake, river, and streams), that requirement should be removed. Any project within listed species habitats would already require permits from WDFW and federal agency (the U.S. Army Corps of Engineers).

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	~~2. Whenever activities are proposed adjacent to a fish and wildlife habitat of importance with which State or federally endangered, threatened, or sensitive species have a primary association, such area shall be protected through the application of protection measures in accordance with a critical areas report prepared by a qualified professional and approved by the City. Approval for alteration of land adjacent to the fish and wildlife habitat of importance or its buffer shall not occur prior to consultation with the Washington Department of Fish and Wildlife and the appropriate federal agency.~~ 3. ~~Bald eagle habitat shall be protected pursuant to the Washington State Bald Eagle Protection Rules (WAC 232-12-292). Whenever activities are proposed adjacent to a verified nest territory or communal roost, a habitat management plan shall be developed by a qualified professional. Activities are adjacent to bald eagle sites when they are within 800 feet of an active nest, or within a quarter mile (2,640 feet) of an active nest and in a shoreline foraging area. The City shall verify the location of eagle management areas for each proposed activity. Approval of the activity shall not occur prior to approval of the habitat management plan by the City and the Washington State Department of Fish and Wildlife.~~	18.55.530.A.3 - bald eagles are no longer state or federally listed as endangered, threatened, or sensitive (WDFW, 2018); therefore, removed from 18.55.530.A.
18.55.530.B.1	Amend as follows: 1. A buffer equal to the distance of a ~~900-foot~~ <u>656-foot</u> radius measured from the outermost nest tree in the rookery will be established around an active rookery. This area will be maintained in native vegetation. For the Kenmore heron rookery located adjacent to the Kenmore park-and-ride lot, the buffer excludes the area south of the north edge of the State Route 522 right-of-way and west of the east edge of the 73rd Avenue NE right-of-way.	Amend 900-foot buffer to 656-foot buffer per Azerrad (2012) recommended buffer for suburban/rural settings, like Kenmore.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
18.55.530.C	Amend as follows: C. Anadromous Fish 1. All activities, uses, and alterations proposed to be located in waterbodies used by anadromous fish or in areas that affect such waterbodies shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to, adhering to the following standards: a. Activities shall be timed to occur only during the allowable work window as designated by the Washington State Department of Fish and Wildlife for the applicable species; b. Applicant must demonstrate that a~~A~~n alternative alignment or location for the activity is not feasible; c. The activity is designed so that it will ~~provide an overall improvement in~~ not degrade the functions or values of the fish habitat or other critical areas; and d. Any impacts to the functions or values of the anadromous fish habitat ~~conservation area~~ are mitigated in accordance with an approved critical areas report. …. ~~3. Fills, when authorized by the City's shoreline management master program, shall not adversely impact anadromous fish or their habitat or shall mitigate any unavoidable impacts, and shall only be allowed for a water-dependent use.~~	Minor edits to provide consistent terminology and eliminate a potential conflict/redundancy with the City's SMP.

3.6 Geologically Hazardous Areas

The City of Kenmore contains several geologic hazards that need to be addressed in the construction of structures, residential development, and the building of infrastructure. Code provisions for such potential hazards are necessary to protect public health and safety and to reduce the potential for property damage. Landslide hazards abound on the steep slopes of the lakefronts and creek

slopes left by the last glaciers to inhabit the Puget Lowland and by the diverse geologic layers in the slopes. Such hazards are identifiable with LiDAR technology and geologic investigation and can be mitigated in many cases by prudent siting and construction.

Erosion hazards are present throughout much of the City owing to the silty/clayey soils at the ground surface and ubiquitous sloping ground. This hazard is commonly mitigated by the design and installation of erosion control measures.

Seismic hazards include ground shaking, slope failure, ground settlement, soil liquefaction, lateral spreading, surface faulting, seiches, and tsunamis. All or a combination of them are the result of Kenmore's position between the Seattle Fault Zone and the Southern Whidbey Island Fault Zone, and the Cascadia Subduction Zone offshore of Washington.

TABLE 10
ANALYSIS OF AND RECOMMENDATIONS FOR KENMORE MUNICIPAL CODE CHAPTER 18.55 – GEOLOGICALLY HAZARDOUS AREAS

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
ARTICLE XVI. GEOLOGICALLY HAZARDOUS AREAS – DESIGNATION		
18.55.610 Designation of geologically hazardous areas	Line 1: change sliding to landsliding. Line 2: delete "of significant hazard" and add "hazard" before "areas."	Clearer intent.
18.55.610.C	Delete "mass wasting" and "rock falls"	Mass wasting is far too general a term, and there is no bedrock in Kenmore.
18.55.620.B.1.b	Add King County to list of map producers	King County's 2017 map of unstable slopes is relevant.
18.55.620.B.3	Reword sentence as shown: 3. Areas that have shown movement during the post-glacial period ~~Holocene epoch~~ (from 16~~0~~,000 years ago to the present) or that are underlain or covered by mass wastage debris of that ~~epoch~~ time period, as shown in U.S. Geological Survey, Washington Department of Natural Resources, or King County maps.	More precise geologic terminology and reflects new mapping resources.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
18.55.620.B.4	Possibly delete this section	This pertains to bedrock and there is none in Kenmore.
18.55.620.C	Add the following: Seismic hazard areas include liquefaction-prone areas and a strand of the Southern Whidbey Island Fault Zone known as the Kenmore Lineament as designated by the Washington Department of Natural Resources.	Available information that can be put on a map, based on BAS.
18.55.620.C	Add tsunami to the list	This is a real potential hazard at the northern end of Lake Washington, but studies have not been done to show the potential inundation in the City.
18.55.620.C	Revise last paragraph, as follows: Settlement, ~~and~~ soil liquefaction, and lateral spreading ~~conditions~~ occur in areas underlain by cohesionless, loose, or soft-saturated soils of low density, typically in association with ~~a~~ shallow ground water ~~table~~. Tsunami or seiche waves triggered by an earthquake or seismically induced landslides can inundate shoreline-adjacent land.	Need to include new terms in KMC 18.20 (Definitions) to accommodate the types of potential geologic hazards not previously in the code. Need to consider how to represent tsunami/seiches.
ARTICLE XVII. GEOLOGICALLY HAZARDOUS AREAS – REPORT REQUIREMENTS		
18.55.630 Critical areas report	See comment.	Recommend a review of the City's geohazard areas report guidelines.
ARTICLE XVIII. GEOLOGICALLY HAZARDOUS AREAS – PERFORMANCE STANDARDS		
18.55.640.A.4	Reword as follows: Are ~~certified as~~ determined to be safe as sited and designed and under anticipated conditions by a qualified civil engineer, ~~or~~ geologist, or engineering geologist, as appropriate, licensed in the State of Washington.	Engineers and geologists do not certify anything. Need to take into account that engineering geologists are also capable and allowed under the law to perform certain geologic functions.
18.55.640.B	Insert at the end of the existing sentence: If so sited, the design shall be adequate to mitigate the effects of the hazard.	Must overcome the hazard by structural or ground engineering mitigation.
18.650.A.1	Add: BMPs for sediment and erosion control shall be implemented in such area.	BMPs still need to be enforced in erosion-prone areas.
18.55.650.A.2.b	Modify as follows:	Events over the past several decades have shown that unanticipated instability can engulf the slope by 25 to 50 feet. If a

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	b. Buffer Reduction. The buffer may be reduced to a minimum of ~~10~~ 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.	reduction to something less than 25 feet is necessary, it could still be pursued through a Variance process.
18.55.650.A.3	Modify as follows: 3. Alterations. Alterations of an erosion hazard area or a landslide hazard area and/or its buffer may only occur for activities for which a special study is submitted and ~~certifies~~ demonstrates that: a. The alteration will not increase surface water discharge or sedimentation to adjacent properties beyond predevelopment conditions; b. The alteration will not decrease slope stability on adjacent properties; and c. Such alterations will not adversely impact other critical areas. At its discretion, the City may require applicants to fund a third-party review by a qualified professional selected by the City and shall make substantive changes to the proposed alteration or provide additional analysis as directed by the third-party reviewer.	Engineers do not certify anything. A provision is suggested to enable the City to obtain additional technical expert opinion of applicant-provided documents. This is an important addition in jurisdictions that have geologic hazards, but no staff that are specifically trained in engineering geology or geotechnical engineering.
18.55.650.A.6	Add the following: An exception may be granted for emergency repair of structures or landslides when waiting for the clearing window will (1) create a life-threatening risk, (2) do additional damage to the structure, or (3) damage adjacent property or structures.	Mid-winter emergencies sometimes need to be dealt with immediately.
18.55.650.A.8.a	Add landslide areas to this sentence.	It is not suitable to discharge if there are landslide areas downslope.
18.55.650.A.9.b	Add the following: Such roads and utilities will be designed by qualified professionals to resist ground movement and erosion.	Common sense.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
18.55.650.A.11	Add the following: Previously graded slopes meeting the criteria of steep or landslide hazard that were not permitted or were created prior to the advent of these critical areas regulations (date) will be treated as steep slopes or landslide hazards.	This suggestion is a response to a staff question; language adapted from Seattle DPD code.
18.55.650.B	Add to the end of the sentence: and the International Building Code.	For structural integrity of the structures located in the seismic zone.

3.7 Flood Hazard Areas / Flood Damage Prevention

The City of Kenmore flood hazard regulations currently fall into two code chapters: 16.90 Flood Damage Prevention and the Critical Areas Chapter 18.55.700 Flood Hazard Areas. The historical reason for having two separate ordinances is that there are two separate legal authorities. Flood damage prevention ordinances have their basis in RCW Chapter 86.16, which includes the minimum standards set by the Federal Emergency Management Agency (FEMA), National Flood Insurance Program (NFIP). This section of the code is generally concerned with regulating development in the mapped, regulatory floodplains along the Sammamish River and Swamp Creek in the Flood Insurance Study of King County, Washington and Incorporated Areas, April 19, 2005 (FEMA, 2005). Critical areas, including frequently flooded areas, are required to be regulated by the RCW 36.70A.060 Growth Management Act.

The City is interested in combining these code chapters and has provided an initial draft that will require additional editing based on this data gap analysis, and other comments.

Other code-related issues have been identified that will need to be incorporated into the revised code (Table 11). These topics include the following:

- FEMA floodplain map inaccuracies have been identified by the City and a process for revising / updating the maps needs to be referred to in the code.
- FEMA has performed an audit of the City floodplain administration records. The audit information has been requested from John Graves at FEMA. The audit results and findings may trigger additional adjustments to the code.
- In 2008, the NOAA National Marine Fisheries Service issued a biological opinion (Bi-Op) through Endangered Species Act, Section 7 consultation indicating adverse impacts from FEMA administering the National Flood Insurance Program (NFIP) in the Puget Sound. FEMA Region X has put together an implementation plan that allows communities to apply the performance standards contained in the NFIP BiOp by implementing one of the following three processes (doors): (1) a Model Ordinance, (2) a Programmatic Checklist, or (3) on a permit-by-permit basis as long as it can be demonstrated that there is no adverse effect to listed species. Kenmore has selected door number three to review each permit on a case-by-case basis. The floodplain codes should link to an appropriate section in the critical areas regulations (Chapter 18.55) or State Environmental Policy Act (SEPA) regulations (Chapter 19.35), and describe this process.

TABLE 11
ANALYSIS OF AND RECOMMENDATIONS FOR KENMORE MUNICIPAL CODE CHAPTER 16.90 - FLOOD DAMAGE PREVENTION AND CHAPTER 18.55, ARTICLE XIX – FLOOD HAZARD AREAS

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
KMC 16.90 FLOOD DAMAGE PREVENTION		
16.90.020 Statement of Purpose	Recommend including statement: to encourage adoption of more effective measures that protect natural and beneficial floodplain functions.	Federal statutory code Section 1315 [42 U.S.C. § 4022]] for the federal flood insurance program states that the purpose of the floodplain regulations is to protect natural and beneficial functions. *The Natural and Beneficial Functions of Floodplains, Reducing Flood Losses by Protecting and Restoring the Environment* (The Task Force for Natural and Beneficial Floodplain Functions, 2002) was prepared under the National Flood Insurance Reform Act 1994, with objectives to: 1) Identify the natural and beneficial functions of floodplains that reduce flood losses, and 2) Recommend how the nation can further reduce flood losses through protection and restoration of the natural and beneficial functions of the floodplain. Washington State Dept. of Ecology, Critical Areas Update web page: https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Guidance-for-floodplains-Critical-Areas-Ordinanc States: Increasingly there is recognition of the importance of floodplains as vital habitat to support salmon and other species… These protections may be

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
		addressed under the frequently flooded areas provisions or within the Fish and Wildlife Habitat Conservation Area provisions of a CAO.
16.90.040 Definitions	See comment.	All definitions should be reviewed to conform to the NFIP regulations. Also – unless all terms used in KMC 16.90 are included in KMC 16.90.040, this definitions section should refer readers to the definitions in KMC 18.20 to find floodplain, flood fringe, special flood hazard area, etc.
16.90.040.G	Remove the definition of "Coastal high hazard area."	Not applicable in City of Kenmore.
16.90.040.H	Revise as shown: H. "Critical facility" means a facility for which even a slight chance of flood~~ing~~ risks might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency response installations, or installations which produce, use or store hazardous materials or hazardous waste.	Suggested edits.
16.90.040.O	Revise as shown: O. "Flood insurance study" means the official report provided by the Federal Emergency Management Agency ~~Insurance Administration~~ that includes flooding sources and hydrology, flood water surface profiles, the floodplain boundary and floodway boundary map, and the base flood water surface elevations ~~of the base flood~~.	Suggested edits.
16.90.050 Lands to which this chapter applies	See comment.	As currently stated, the chapter applies to *all areas of special flood hazards* within the City. By definition, special flood hazard areas are mapped. This brings up the topic of unmapped flood hazards. Many agencies have language that discusses unmapped flood hazards. This can apply to smaller streams

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
		and watercourses that may have flooding and need floodway protections, but are not included in the King County flood maps.
16.90.060 Basis for establishing the areas of special flood hazard	Revise as shown: The areas of special flood hazard identified by the ~~Federal Insurance Administration~~ Federal Emergency Management Agency (FEMA) in a scientific and engineering report entitled "The Flood Insurance Study of King County, Washington and Incorporated Areas," dated April 19 ~~9~~, 2005, with an accompanying flood insurance maps (FIRM), dated November 8, 1999, and May 16, 1995, and any revisions thereto, are hereby adopted by reference and declared to be a part of this chapter. The flood insurance study is on file at Kenmore City Hall. The best available information for flood hazard area identification as outlined in KMC 16.90.130(B) shall be the basis for regulation until a new FIRM is issued which incorporates the data utilized under KMC 16.90.130(B).	Suggested edits to address agency name changes and other corrections.
16.90.100 Warnings and disclaimer of liability	Revise as shown: The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. ~~Larger~~ Floods larger than the regulatory base flood can and will occur ~~on rare occasions~~. Flooding may occur in unmapped areas. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the City of Kenmore, any officer or employee thereof, or the Federal Insurance Administration for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.	Suggested edits for accuracy.
16.90.110-B.1 and 2	Revise as shown: 1. Elevation in relation to ~~mean sea level~~ the current flood study base flood elevation survey datum of the lowest floor (including basement) of all structures;	Elevations should be referenced to the current flood study base flood elevation survey datum, not mean sea level. The 2005 flood study uses NGVD29, and the preliminary flood studies to be approved will use NAVD88. It is the developer's, landowner's,

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	2. Elevation in relation to ~~mean sea level~~ the current flood study base flood elevation survey datum to which any structure has been floodproofed;	and proponent's responsibility to confirm the project datum.
16.90.130 Duties and responsibilities of the local administrator	Revise as shown: C. Information to Be Obtained and Maintained. 1. Where base flood elevation data is provided through the flood insurance study or required as in subsection B of this section, obtain and record the actual elevation (in relation to the base flood elevation datum ~~mean sea level~~) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.	Suggested edits.
16.90.130 Duties and responsibilities of the local administrator	Revise as shown: D. Alteration of Watercourses. 1. Notify adjacent communities and the Department of Ecology, or federal resource agencies where required, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA ~~the Federal Insurance Administration.~~	Suggested edits.
16.90.140 Variance procedure	Revise as shown: A. Appeal to Hearing Examiner. j. The expected depths, heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and	Suggested edits.
16.90.170 Floodways	Revise as shown: Located within areas of special flood hazard established in KMC 16.90.060 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity and depth of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:	Suggested edits. Also, need to be clear about the FEMA floodway versus a Zero-Rise floodway. A Zero-Rise floodway would likely have portions along the floodplain (fringe) that are not considered "extremely" hazardous.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
KMC 18.55.700 FLOOD HAZARD AREAS		
18.55.700.A Flood hazard areas	See comment.	KMC 18.55.700.A lists the components of the flood hazard area. Chapter 18.20 contains these definitions, except it is not clear from the Floodway definition whether that is identical to the FEMA floodway. The Zero-rise Floodway definition indicates that the FEMA Floodway may be a sub-set of the zero-rise floodway.
18.55.700.B Flood hazard areas	Revise as shown: B. … In areas where the flood insurance study for the City includes detailed base flood elevation calculations, those calculations may be used until projections of future flows are completed and approved by the City.	Suggested edits.
18.55.710 Flood fringe – Development standards and permitted alterations	A. Development proposals shall not reduce the effective base flood storage volume of the floodplain. Grading or other activity which would reduce the effective storage volume shall be mitigated by creating compensatory storage on the site or off the site if legal arrangements can be made to assure that the effective compensatory storage volume will be preserved over time. Grading for construction of livestock manure storage facilities to control nonpoint source water pollution, and fish habitat restoration projects that meet an allowed rise limitation of 0.1 feet, that are designed to the standards of and approved by the City ~~is~~ are exempt from this compensatory storage requirement.	Suggested edits. Adding for fish habitat restoration allows would link to the natural and beneficial floodplain functions described above.
18.55.720 Zero-rise floodway – Development standards and permitted alterations	J. Structures and installations which are dependent upon the Zero-rise floodway may be located in the Zero-rise floodway if the development proposal is approved by all agencies with jurisdiction. Such structures include, but are not limited to: …	Suggested edits for clarity.

3.8 Critical Aquifer Recharge Areas

As defined in WAC 365-190-030, "'Critical aquifer recharge areas' are areas with a critical recharging effect on aquifers used for potable water, including areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water, or is susceptible to reduced recharge." The City receives its drinking water supply from the South Fork Tolt River Reservoir through the Northshore Utility District. Groundwater is not utilized as a drinking water source for the City, although some domestic exempt water wells are reportedly operating in the northern portion of the City. The City has not designated any critical aquifer recharge areas (CARAs) within the City limits. However, the City understands the importance of groundwater and will assess proposed projects on a case-by-case basis to determine potential risks to groundwater within the City limits.

3.8.1 Review of Neighboring Community Codes

To better understand groundwater resources in use in the area around Kenmore, groundwater-related information for neighboring communities was reviewed. This included CARA regulations for the City of Bothell, City of Brier, City of Lake Forest Park, City of Kirkland, and unincorporated Snohomish County. Information regarding each city's groundwater use and related regulations is discussed in the following sections.

3.8.1.1 City of Bothell

The City of Bothell obtains their drinking water through Seattle Public Utilities from the South Fork Tolt River Reservoir and Cedar River Reservoir and does not currently use groundwater as a source of drinking water. The City of Bothell discusses the importance of groundwater and preventing groundwater contamination in Bothell Municipal Code (BMC) 13.13.030 Critical aquifer recharge areas. No critical aquifer recharge areas are defined within the City of Bothell boundaries. BMC 13.13.030 explains that, depending on the location and contamination potential of a proposed project, the City of Bothell may require additional investigation.

3.8.1.2 City of Brier

The City of Brier is serviced by the Alderwood Water District (AWD). The AWD obtains its drinking water from the Spada Reservoir and does not use groundwater as a source of drinking water. However, the AWD maintains a flowing artesian well that is open to the public to obtain untreated well water at the source. The flowing artesian well is north

of the City of Brier and over five miles northwest of the City of Kenmore's northern boundary.

Chapter 18.30 of the Brier Municipal Code provides information regarding CARAs, including CARA designation, allowed activities, additional report requirements, performance standards, and prohibited uses. No information or references regarding the location or existence of CARAs within the City of Brier was found in their municipal code. However, wellhead protection areas (WHPAs) from the City of Lake Forest Park, adjacent to the City of Brier's southern boundary, extend northward into the City of Brier and are discussed in further detail in subsequent sections.

3.8.1.3 City of Lake Forest Park

Three separate water utility districts operate within the City of Lake Forest boundary (Mundall Engineering & Consulting, 2016) and include

- Lake Forest Park Water District
- Northshore Utility District
- North City Water District

The Northshore Utility District (NUD) provides water service in the northeast portion of Lake Forest Park and extends through the City of Kenmore. The NUD water is obtained from the South Fork Tolt River Reservoir. No groundwater is utilized by NUD. The North City Water District (NCWD) provides water service in the western portion of Lake Forest Park. The NCWD water is obtained from the South Fork Tolt River Reservoir and Cedar River Reservoir. No groundwater is utilized by NCWD. The Lake Forest Park Water District (LFPWD) operates in the southeast portion of the City of Lake Forest Park. Drinking water for the LFPWD is obtained through a combination of groundwater (McKinnon Creek and Horizon View Wellfields) and connections to the South Fork Tolt River Reservoir.

The City of Lake Forest Park Municipal Code (LFPMC) 16.16.410 designates CARAs as those areas within the 10-year time of travel zones for Group A public water supply wells. LFPMC 16.16.050 Maps and Study – Adoption references the LFPWD's *Map of Critical Aquifer Recharge Area Susceptibility Zones* dated 2017. A version of the susceptibility map was included in the LFPWD *Comprehensive Water System Plan 2015* (Mundall Engineering & Consulting, 2016), but a 2017 version of the map was not found. LFPMC 16.16.420 provides development standards that include the potential need for a hydrogeologic assessment prior to approval of a proposed project.

The LFPWD *Comprehensive Water System Plan 2015* (Mundall Engineering & Consulting, 2016) includes a section on aquifer susceptibility that provides designations for the wells within the wellfields. The McKinnon Creek Wellfield has both shallow and deep wells that are rated as highly susceptible and moderately susceptible, respectively. The McKinnon Creek Wellfield is located about 0.3 mile from the City of Kenmore boundary. The Horizon View Wellfield has deep wells rated as low susceptibility and is located about 0.45 mile from the City of Kenmore boundary.

The *Lake Forest Park Water District Revised Draft Critical Aquifer Recharge Area Delineation* report (AESI, 2016) indicates that the McKinnon Creek Wellfield obtains groundwater for its shallow wells from the Qva Aquifer and groundwater for the deep wells comes from the LFP Aquifer; the Horizon View Wellfield obtains groundwater for its wells from the LFP Aquifer. WHPAs (1-, 5-, and 10-year time of travel) for wells in the McKinnon Creek and Horizon View Wellfields are provided as figures in the LFPWD CARA Delineation report and extend northward within the City of Lake Forest Park and, in the case of the Horizon View Wellfield WHPAs, extend out of the City of Lake Forest Park and into the City of Brier; the WHPAs do not extend into the City of Kenmore.

3.8.1.4 City of Kirkland

The City of Kirkland obtains its drinking water through Seattle Public Utilities, NUD, and Woodinville Water District. These districts are supplied by the South Fork Tolt River Reservoir and Cedar River Reservoir and do not use groundwater as a source of drinking water.

The City's code does not designate CARAs or contain other groundwater regulations. Scattered references to groundwater are found in other sections of the critical areas regulations, but only as it has the potential to affect or be affected by critical areas such as wetlands and other surface waterbodies.

3.8.1.5 Unincorporated Snohomish County

The area of unincorporated Snohomish County that shares a boundary with the north side of the City of Kenmore is serviced by the AWD. The AWD obtains its drinking water from the Spada Reservoir and does not use treated groundwater as a source of drinking water. However, the AWD maintains a flowing artesian well as mentioned previously.

Snohomish County Unified Development Code Chapter 30.62C provides information regarding CARAs. Topics covered in this chapter include general information, process requirements, designation and classification, and standards and requirements.

A map designating aquifer recharge/wellhead protection (Snohomish County, 2007) indicates low to moderate aquifer sensitivity at the northern boundary of the City of Kenmore and extending more than 3 miles north from the boundary. A map of the Qva Aquifer (AESI, 2016) indicates that groundwater at the boundary between Snohomish County and the City of Kenmore generally flows to the south.

3.8.1.6 Conclusions

Groundwater is not used as a source of drinking water for the City of Kenmore or neighboring communities with the exception of Lake Forest Park. Lake Forest Park's WHPAs do not extend into the City of Kenmore, which suggests that activities within the City of Kenmore will not affect groundwater that recharges the Lake Forest Park wellfields. The City of Bothell, City of Brier, and City of Kirkland do not use groundwater as a drinking water source and no WHPAs or CARAs are designated. Available hydrogeologic maps of the area were reviewed to determine if activities in the City of Kenmore could affect groundwater resources in neighboring communities. A map indicating groundwater flow direction and gradient (AESI, 2016) indicates that the City of Kenmore is either downgradient or crossgradient at the boundaries with the City of Brier and the City of Bothell.

Although a groundwater flow map was not found for the boundary between the City of Kenmore and the City of Kirkland, the general topography of the area suggests that groundwater in any shallow aquifers, that would be most susceptible to contamination, flows northward toward the Sammamish River, and activities within the City of Kenmore boundaries are unlikely to affect groundwater quality within the City of Kirkland.

Unincorporated Snohomish County (County), within 3 miles of the City of Kenmore, does not use groundwater as a drinking water source and no WHPAs or CARAs are designated. A groundwater flow map (AESI, 2016) shows groundwater flowing generally to the south from Snohomish County to the City of Kenmore. This flow direction would indicate that the City of Kenmore is downgradient of Snohomish County, and activities within the City of Kenmore boundaries would not affect groundwater quality in Snohomish County.

Based on existing information, the City of Kenmore does not use groundwater as a drinking water source and groundwater quality in neighboring communities would not be

affected by activities within the City of Kenmore. A Critical Aquifer Recharge Area study and designation is not required.

3.8.2 Recommendations

Although the City of Kenmore does not use groundwater as a drinking water source, the City would benefit from including a groundwater resources section within its Municipal Code. The City has a responsibility to protect groundwater quality as mandated under Washington State water quality regulations. Many activities under the City's jurisdiction, such as construction projects, land use, and stormwater management, could impact groundwater quality.

According to Ecology's *Critical Aquifer Recharge Areas Guidance Document* (Morgan, 2005):

> "Federal and state laws and rules do not replace local planning, ordinances, and programs. Local jurisdictions should maintain the ability to protect ground water under their own authority. Local government can focus on local conditions in a way that the state cannot.
>
> The Department of Ecology through RCWs, WACs, and permits, sets minimum operating standards for many types of potentially polluting facilities. If a permitted facility is poorly managed or experiences some sort of engineering failure (which may happen even with good management), contamination may be released into the environment.
>
> Local government planning can influence the types of future developments that occur in various areas and may be able to encourage potentially contaminating facilities to locate in areas where the aquifer has a lower susceptibility if contaminants are released. In this way, the potential for aquifer pollution is lowered and the public is protected. Land use planning at the local level is the most effective way to influence where facilities choose to locate.
>
> - Counties and cities.
> - Regulate land use through comprehensive planning, zoning, and ordinances.
> - Have authority to ensure a landowner does not pollute the public drinking water supply.
> - Are more able to track conditions and adapt to local concerns much more readily than the state.

- Federal and state laws, rules, and programs are often targeted toward larger facilities. For example, pollution prevention plans are required by the state if a facility generates 2,640 pounds of hazardous waste a year. A much smaller quantity of hazardous chemicals can cause contamination, especially if improper disposal into a septic system or a dry well occurs. The local jurisdiction should consider requiring pollution prevention plans where needed and not already required.
- Compliance depends on state resources to enforce. The state covers a large area and a large number of facilities, and therefore illegal activities may occur that are not detected by the state until contamination has occurred. Local attention can prevent the creation of new cleanup sites."

In addition to regulations that provide the City with tools to consider a development's potential for groundwater contamination, the City could also develop a groundwater susceptibility map which would be used to help identify when a hydrogeologic assessment is necessary. Tiered hydrogeologic assessments that are typically required for CARAs, with appropriate modifications, could be required in specified circumstances. Generally, a simple Level 1 assessment would be adequate because of the lack of CARAs and wellhead protection areas within the City. Level 1 assessments typically include the following items:

- Available information regarding geology and hydrogeology of the site, including permeability of the unsaturated zone;
- Groundwater depth, flow direction, and gradient based on available information;
- Available data on any wells and springs within 1,300 feet;
- Location of other critical areas, including surface waters, within 1,300 feet; and
- Best management practices proposed to be utilized.

Higher risk facilities (e.g. fuel or chemical storage/production facility) or other facility that could affect groundwater could require a Level 2 assessment. A Level 2 assessment typically includes the following:

- Historic water quality data for the area to be affected by the proposed development;
- Groundwater monitoring plan;
- Potential effects on water quality and quantity of nearby wells and waterbodies; and
- Analysis of equipment or structures that could fail and regular inspection, repair, and replacement necessary to prevent failure.

3.9 On-Site and Off-Site Density Transfer

Because the City calculates allowable units based on gross acres, there is effectively an on-site density transfer allowed provided lot standards can be met. Lot sizes in the R-1 zone are small at 2,500 square feet minimum to promote clustering. Clustering is required in the R-1 zone on no greater than 50 percent of the site.

Lot sizes in the R-6 zone are 5,400 square feet minimum. Lot sizes in the R-4 zone are 7,200 square feet minimum. Some lots may be smaller where there are critical area or topographic constraints:

> For properties with critical areas or topographic constraints, up to 20 percent of the number of lots in a subdivision or a short subdivision of more than four lots, and one of the lots in a short plat of four lots or less, may contain an area less than the prescribed minimum for this zoning district. In no case shall any lots be created which contain an area more than 10 percent less than the prescribed minimum for this zoning district. These smaller lots shall be located so as to have the least impact on surrounding properties in terms of consistency of street frontages and privacy of abutting properties.

Split zone properties can transfer densities (e.g., R-1 to R-8) per KMC 18.30.100.

Due to greater interest in development of geologically hazardous areas in recent years, the City is considering whether to adjust density or subdivision standards in areas with geologic hazards. The cities of Woodinville and Chelan each have regulations that may contain options suitable for adaptation in Kenmore (see Appendix C for those cities' regulations).

- The City of Woodinville allows a site with greater than 50 percent critical area constraints to transfer up to 50 percent of the allowed density in the constrained area to the unconstrained area. The City varies minimum lot sizes in unconstrained areas to be lower to allow for some efficiencies when density is transferred at either 100 percent or less.
- The City of Chelan establishes clearing limits on steep slopes in erosion hazard areas. While clearing limits are not the same as density limits, it could reduce the area altered in these areas and effectively limit density depending on the configuration of developable areas and necessary access.
- Marin County, California has a sliding scale minimum lot size that increases as slope increases.

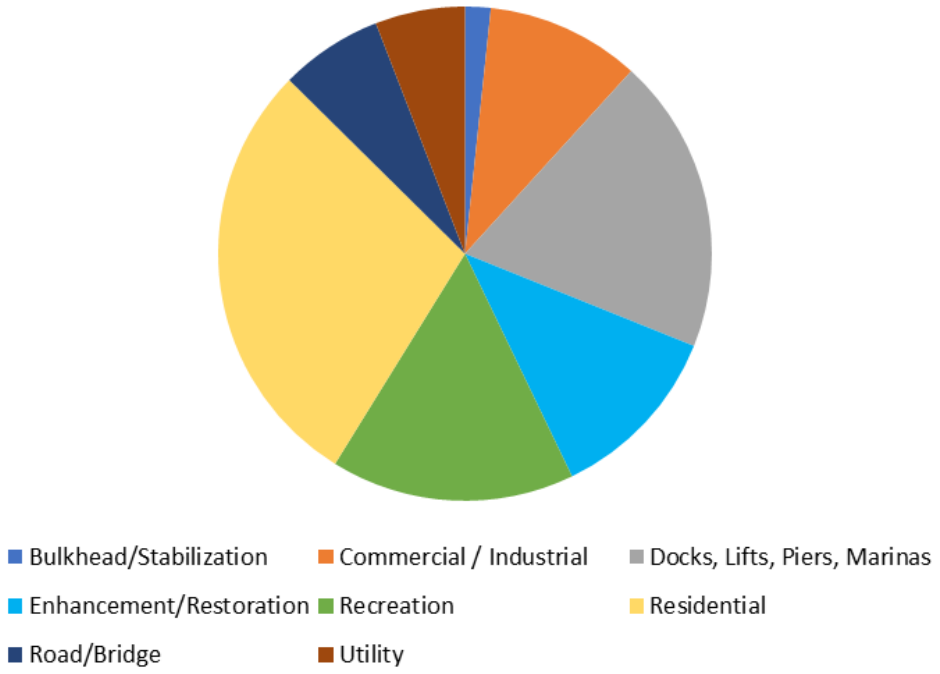
The City of Kenmore allows off-site density transfers in KMC 18.80.090. If the City restricts how much density can be transferred on-site, it could more clearly incentivize off-site density transfer for sites that are highly constrained to more developable sites. The City includes off-site density transfer rules in KMC 18.80.090. Some of the cross-references in KMC 18.80.090.B do not provide the direction intended. For example, Chapter 18.30 does not contain text addressing how sending areas are declared unbuildable due to critical areas, and Chapter 18.55 does not identify how to determine a density credit. For reference, the text of KMC 18.80.090 is included in Appendix C.

Determining appropriate densities and subdivision standards in areas with geologic hazards and potential interest in density transfers to receiving areas would be potential topics for stakeholder outreach.

4.0 SHORELINE MANAGEMENT TITLE 16, DIVISION 1

The entire code was reviewed, but special attention was paid to topics that were raised by staff, public comment, and direct experience with permitting shoreline projects in the City. Table 12 combined with Appendix B provide both required and recommended changes to the Shoreline Master Program. Exhibit 1 shows the types of activities that required either a shoreline permit or shoreline exemption from 2007 through April 2018.

EXHIBIT 1
ACTIVITY DISTRIBUTION OF SHORELINE PERMITS, 2007 – APRIL 2018



According to the City's permit history, there have been five Shoreline Conditional Use Permits processed, three of which were for public over-water structures, one for a bridge replacement, and one for an after-the-fact residential dock permit. There were also efforts made to ensure that provisions in the SMP are consistent with and either support or are supported by the critical areas regulations. As a result, many of the recommendations included in the table relate to buffers and buffer management, park and trail development, and over-water structures.

TABLE 12
ANALYSIS OF AND RECOMMENDATIONS FOR KENMORE MUNICIPAL CODE TITLE 16, DIVISION 1: SHORELINE MANAGEMENT

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
CHAPTER 16.05: SHORELINE MANAGEMENT CODE – PURPOSE AND SCOPE		
16.05.030.C	Amend as follows: C. Development proposed on property in or adjacent to waterbodies or wetlands under the jurisdiction of the Shoreline Management Act shall be evaluated in terms of the goals and policies of the City of Kenmore comprehensive plan shoreline sub-element.	Clarifies that adjacency is not the only trigger for a shoreline sub-element consistency analysis.
16.05.060 Relationship to other Kenmore programs.	Delete B.5. ~~KMC 18.55.150 – Exemptions (as codified from Ordinance No. 06-0244 and set forth in Appendix 1 to Exhibit 1 of Ordinance 12-0334).~~	The exemptions included in the City's critical areas regulations are inconsistent with the SMA, which has its own specific list of exemptions that can be used in shoreline jurisdiction. See Department of Ecology's Shoreline Master Program Handbook, https://fortress.wa.gov/ecy/publications/parts/1106010part18.pdf
CHAPTER 16.10: DEFINITIONS		
16.10.035	Replace 16.10.035 definition of Accessory Use with the definition used in KMC 18.20.035 (shown below with the underlined modification): ~~"Accessory use" means a use that is incidental to a principal use.~~ "Accessory use" means a use typically subordinate in size to the principal use; that would not contribute significantly to traffic generation, noise, or nuisance; and that supports the primary use operation without displacing it. An accessory use may appear as an otherwise permitted, conditional or prohibited use in the use allowances for a given ~~zone~~ designation. Accessory uses are typically located upon the same lot occupied by a principal use. Examples of accessory uses include: equipment rental (bikes or skis) at a retail bike and ski shop, a secure facility required at an airport, and boat parking at a marina.	A City interpretation related to whether a seaplane qualified as an accessory residential use indicates that a more detailed definition within the SMP could be helpful.
new	Suggest adding the following definition:	WAC 173-27-030(3) and (11)

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	"Average grade level" means the average of the natural or existing topography of the portion of the lot, parcel, or tract of real property which will be directly under the proposed building or structure: In the case of structures to be built over water, average grade level shall be the elevation of the ordinary high water mark. The "natural or existing topography" means the topography of the lot, parcel, or tract of real property immediately prior to any site preparation or grading, including excavation or filling. Calculation of the average grade level shall be made by averaging the ground elevations at the midpoint of all exterior walls of the proposed building or structure;	The City's use of "average finished grade" to measure height per KMC 16.10.260 is in conflict with the WAC.
new	Suggest adding the following definition: "Boating facilities" means developments and uses that support access to shoreline waters for purposes of boating, including marinas; community docks serving more than four single-family residences or multi-family units; public piers and docks; and community, commercial or public boat launch facilities.	Based on WAC 173-26-241(3)(c).
16.10.130 Development	Suggest including the definition from RCW 90.58.030 rather than referring the public to the RCW.	This is an important definition that is unlikely to change.
new	Suggest adding the following definition: "Ecosystem-wide processes" means the suite of naturally occurring physical and geologic processes of erosion, transport, and deposition; and specific chemical processes that shape landforms within a specific shoreline ecosystem and determine both the types of habitat and the associated ecological functions.	WAC 173-26-020(14)
new	Suggest adding the following definition: "Feasible" means, for the purpose of this chapter, that an action, such as a development project, mitigation, or preservation requirement, meets all of the following conditions:	WAC 173-26-020(15) There are several regulations that require an analysis of "feasibility" – providing a clear definition would assist applicants and staff.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	A. The action can be accomplished with technologies and methods that have been used in the past in similar circumstances, or studies or tests have demonstrated in similar circumstances that such approaches are currently available and likely to achieve the intended results; B. The action provides a reasonable likelihood of achieving its intended purpose; and C. The action does not physically preclude achieving the project's primary intended legal use. In cases where this title requires certain actions unless they are infeasible, the burden of proving infeasibility is on the applicant. In determining an action's infeasibility, the department may weigh the action's relative public costs and public benefits, considered in the short- and long-term time frames.	
16.10.185 Fish and wildlife habitat area of importance	Amend as follows: C. ~~Class 1~~ Category I wetlands as defined in KMC 18.55.300; or D. Type ~~1~~ S waters ~~streams~~ as defined in KMC 18.55.400; or E. Bald eagle habitat ~~protected pursuant to the Washington State Bald Eagle Protection Rules (WAC 232-12-292)~~.	Changes to C and D are recommended for consistency with changes recommended elsewhere in this report to the classifications of streams and wetlands. Change to E is recommended because of the replacement of WAC 232-12-292 with WAC 220-610-100. The latter WAC was written so that it is only in effect when the species is listed by state or federal government as threatened or endangered. That is no longer the case. Assuming the City wishes to continue designating bald eagle habitat as an area of importance, it could leave the provision as edited or add a reference to the federal Bald and Golden Eagle Protection Act.
16.10.200 Floating home	Suggest replacing this definition with WAC 173-26-020(17): "Floating home" means a single-family dwelling unit constructed on a float, that is moored, anchored, or otherwise secured in waters, and is not a vessel, even though it may be capable of being towed.	WAC 173-26-020(17)

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
16.10.210 Floodplain	Suggest replacing this definition with WAC 173-26-020(19): "Floodplain" is synonymous with one hundred-year floodplain and means that land area susceptible to inundation with a one percent chance of being equaled or exceeded in any given year. The limit of this area shall be based upon flood ordinance regulation, maps, or a reasonable method which meets the objectives of the act.	WAC 173-26-020(19)
new	Suggest adding the following definition: "Geotechnical report" or "geotechnical analysis" means a scientific study or evaluation conducted by a qualified expert that includes a description of the ground and surface hydrology and geology, the affected land form and its susceptibility to mass wasting, erosion, and other geologic hazards or processes, conclusions and recommendations regarding the effect of the proposed development on geologic conditions, the adequacy of the site to be developed, the impacts of the proposed development, alternative approaches to the proposed development, and measures to mitigate potential site-specific and cumulative geological and hydrological impacts of the proposed development, including the potential adverse impacts to adjacent and down-current properties. Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified professional engineers or geologists who have professional expertise about the regional and local shoreline geology and processes.	WAC 173-26-020(21)
16.10.260 Height	Suggest replacing the current definition with WAC 173-27-030(9) as shown below: "Height" ~~shall be measured from the average finished grade to the highest point of the roof. The average finished grade shall be determined by first delineating the smallest square or rectangle which can enclose the building and then averaging the elevations taken at the midpoint of each side of the square or rectangle; provided, that the~~	The difference between "average finished grade" in the City's current definition and the WAC requirement to measure height from the "average grade level," which is the original grade, can be quite significant, particularly from the perspective of properties upland of the final structure which could have substantial view impacts.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	~~measured elevations do not include berms.~~ is measured from average grade level to the highest point of a structure: Provided, That television antennas, chimneys, and similar appurtenances shall not be used in calculating height, except where such appurtenances obstruct the view of the shoreline of a substantial number of residences on areas adjoining such shorelines, or the applicable master program specifically requires that such appurtenances be included: Provided further, That temporary construction equipment is excluded in this calculation.	
16.10.350 Ordinary high water mark	Suggest including the definition from RCW 90.58.030 rather than referring the public to the RCW.	This is an important definition that is unlikely to change.
Various new and replacement definitions	Suggest replacing or supplementing water access structure terms for consistency as follows: 16.10.150 "Dock" means a landing and moorage facility for watercraft that abuts the shoreline. On the Sammamish River, a dock is the term which collectively applies to a ramp extending from the shoreline to a float ~~all platform structures or anchored devices in or floating upon water bodies to provide moorage for pleasure craft or landing for water-dependent recreation including, but not limited to, floats, swim floats, float plane moorages, and water ski jumps. Excluded are launch ramps.~~ "Ell" means a terminal pier section oriented perpendicular to the pier walkway. [new] "Finger pier" means a narrow pier section projecting from the pier walkway, typically perpendicular to the walkway and located landward of an ell in order to form the nearshore side of a boatslip. [new] 16.10.190 "Float" means a structure or device which floats on the surface of the water ~~is not a breakwater~~ and which is moored, anchored, or otherwise secured in the waters of the City of Kenmore and which is not connected to the shoreline.	There are a variety of terms used in the regulations which are inconsistent with how they are defined – they are linked to use (e.g., public/residential vs. commercial), rather than the actual structure. Further, the differences between a typical Sammamish River design and a Lake Washington design make it more critical to use clear terms and use them consistently.

<table>
<tr><th>Section of the Kenmore Municipal Code</th><th>Recommendation</th><th>Comment / Science Reference</th></tr>
<tr><td></td><td>16.10.360 “Pier” means an over-water, fixed, pile-supported structure that does not float on the water’s surface and provides a location for boat moorage or other water-oriented or water-dependent use ~~any platform structure, fill, or anchored device in or floating upon water bodies to provide moorage for watercraft engaged in commerce~~.</td><td></td></tr>
<tr><td colspan="3">CHAPTER 16.50: GENERAL SHORELINE USES</td></tr>
<tr><td>16.50.020 Interpretation of shoreline use table</td><td>Address unlisted uses and how City may interpret in such cases.</td><td>Per 173-27-040(1)(b), a development or use that is listed as a conditional use pursuant to the local master program or is an unlisted use, must obtain a conditional use permit even though the development or use does not require a substantial development permit.</td></tr>
<tr><td>16.55.030.A Shoreline modifications table and conditions</td><td>See comment.</td><td>In general, there is opportunity and benefit to further subdividing the different categories of uses and modifications to provide a little more specificity, without abandoning flexibility. As suggested by staff, the City’s defined zoning uses may provide some framework.</td></tr>
<tr><td>16.50.030.A</td><td>See comment.
<table>
<tr><th>KEY
P – Permitted Use
C – Shoreline Conditional Use</th><th>DW</th><th>SR</th><th>UC</th><th>N</th><th>A</th></tr>
<tr><td colspan="6">Park/Recreation</td></tr>
<tr><td>Recreational/cultural</td><td>P5</td><td>P6</td><td>P6</td><td>P7</td><td>C5</td></tr>
</table>
5. In Downtown Waterfront and Aquatic Environments, water-oriented recreational uses including parks and public access trails and facilities may be allowed <u>together with accessory recreation facilities that provide water enjoyment for substantial numbers of persons.</u>~~; provided, that in the Downtown Waterfront minor non-~~</td><td>The items considered non-water-oriented may be water-oriented if they are open to the public or allow for a substantial number of people to use them.

Picnic tables and outdoor exercise circuit equipment are often part of linear parks/trails. Seems overly specific to limit it unless the intent is to allow small private facilities and not restrict them from the public facilities.</td></tr>
</table>

<table>
<tr><th>Section of the Kenmore Municipal Code</th><th>Recommendation</th><th>Comment / Science Reference</th></tr>
<tr><td></td><td>~~water-oriented accessory uses such as children's play equipment, picnic tables, or outdoor exercise course equipment may also be allowed if they meet the other requirements of this chapter~~. ~~All other recreational uses shall be prohibited.~~</td><td></td></tr>
<tr><td>16.50.030.A</td><td>Suggest modifying as shown.
<table>
<tr><th>KEY
P – Permitted Use
C – Shoreline Conditional Use</th><th>DW</th><th>SR</th><th>UC</th><th>N</th><th>A</th></tr>
<tr><td colspan="6">Regional Land Uses</td></tr>
<tr><td>New or expanded h~~H~~ighway and street, except for in-water uses</td><td>C11</td><td>C11</td><td>C11</td><td>C11</td><td>C11</td></tr>
<tr><td>Repair and replacement of existing highway and street</td><td>P11</td><td>P11</td><td>P11</td><td>P11</td><td>P11</td></tr>
</table>
11. New and expanded highway and street construction is allowed only if:
a. There is no feasible alternate location;
b. Pedestrian, bicycle and public transport needs are addressed; and
c. When located in the Natural Environment, the use is low-intensity transportation infrastructure; parking facilities are prohibited in the Natural Environment unless supporting a water-dependent use.</td><td>Repairs and replacement are more common than new features and should not require a conditional use permit. Similarly, a set of criteria are proposed for which expansions would not require a conditional use permit. A similar approach could be used for many uses and modifications in the SMP matrices to minimize unnecessary conditional use permits (which require demonstration that special criteria are met, an expanded public process and a hearing, and Ecology approval).</td></tr>
</table>

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	Also, add notation that expanded highways and streets could be allowed without a conditional use permit if the following criteria (or similar) are met: 1. The expansion is included in the Transportation Element of the Comprehensive Plan, Neighborhood Transportation Plan, Transportation Improvement Program, ADA Compliance Plan, or Target Zero strategy implementation. 2. The expansion does not require acquisition of private property that was unanticipated in the plans under #1. 3. The expansion is located within existing right-of-way or other City-managed land. 4. Minimum alteration and/or fill is needed to construct such facilities to meet established safety standards and all applicable SMP standards can be met. Disturbed areas are restored during and immediately after the use of construction equipment.	
16.50.030 Shoreline use table and conditions	Suggest adding a line for "Boating Facilities" that refers to KMC 16.55.030. Remove marina and boat launch items from "Park/Recreation" category, and relocate to KMC 16.55.030. Remove the associated table notes from KMC 16.50.030.B.	For ease of use by applicants and staff, it would be helpful to have all of the dock/launch design standards in a single location to minimize redundancy. These types of in- and over-water structures have a lot of common standards.
16.50.050 Public boat launching facilities and marinas	Suggest renaming for clarity as "Boating Facilities Use." Add a reference to KMC 16.55.050 for specific standards governing the physical modifications associated with this use.	This chapter is for shoreline uses, and this particular use in the SMP Guidelines (WAC 173-26-241.3.c) is called Boating Facilities.
16.50.060	Add flexibility: ▪ Allow a public access plan as an alternative to a site-by-site requirement. As part of the City's Walkways and Waterways initiative or a future Parks, Recreation, and Open Space Plan, the city could develop a public access plan to provide flexibility. The City could allow a private entity to develop one according to WAC standards.	Per SMP Handbook, Chapter 9, Shoreline Public Access, the City can provide for flexibility and unique conditions, that may be important in an urban environment with variable conditions.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	▪ Allow off-site public access or by payment of a fee in lieu. ▪ Clarify when visual access is allowed instead of physical access.	
16.50.030 A. Shoreline Use Table, and 16.50.070	Allow Recreation Management Plans similar to the allowance for Recreational/cultural.	Along trails and within parks there will be a combination of exempt and substantial development permits needed over time for park and trail maintenance and rehabilitation that can be addressed comprehensively in a multi-year management plan. These management plans could be developed with new park master plans created under the Walkways and Waterways program. Recreation management plans are included in example SMPs for City of Chelan and City of Yakima. See example from Chelan in Appendix D.
16.50.030 A. Shoreline Use Table, 16.50.080, and 16.50.085	Under Regional Land Uses and Utilities: allow multi-year maintenance plans similar to the allowances for utilities and streets.	Road and utility maintenance activities may be appropriate to consider over a multi-year span. WSDOT has developed a programmatic set of road maintenance standards designed to minimize environmental impacts, as has King County. The Cities of Yakima and Chelan allow such management plans in their SMPs.
CHAPTER 16.55: SHORELINE MODIFICATIONS		
16.55.020 Interpretation of shoreline modifications table and conditions	Suggest editing as follows: The shoreline environment is located on the vertical column and the specific modification ~~use~~ is located on the horizontal row of the table. Suggest adding the following: E. If the letter "X" appears in the box at the intersection of the column and the row, the modification is prohibited in that shoreline environment.	Correction of a minor error. Suggested changes to the modifications table under Water Access Structures include prohibition of some modifications in some environments.
16.55.030.A Shoreline modifications	See comment.	In general, there is opportunity and benefit to further subdividing the different categories of uses and modifications to provide a little more specificity, without abandoning flexibility.

<table>
<tr><th>Section of the Kenmore Municipal Code</th><th>Recommendation</th><th>Comment / Science Reference</th></tr>
<tr><td>table and conditions</td><td></td><td>As suggested by staff, the City’s defined zoning uses may provide some framework.</td></tr>
<tr><td>16.55.030.A Shoreline modifications table and conditions</td><td>Suggest expanding the shoreline modifications table to break down the different types of water access structures.
<table>
<tr><th>KEY
<u>X - Prohibited</u></th><th>DW</th><th>SR</th><th>UC</th><th>N</th><th>A</th></tr>
<tr><td colspan="6"><u>~~Piers and Docks~~ Water Access Structures</u></td></tr>
<tr><td><u>~~Docks, piers, moorage, buoys, floats or launching facilities~~</u></td><td><u>~~P4~~</u></td><td><u>~~P4~~</u></td><td><u>~~C4~~</u></td><td><u>~~C4~~</u></td><td><u>~~C4, P4~~</u></td></tr>
<tr><td><u>Dock or Pier – Residential (including community)</u></td><td><u>P</u></td><td><u>P</u></td><td><u>C</u></td><td><u>X</u></td><td><u>4</u></td></tr>
<tr><td><u>Dock or Pier – Public</u></td><td><u>P</u></td><td><u>P</u></td><td><u>P</u></td><td><u>C</u></td><td><u>4</u></td></tr>
<tr><td><u>Dock or Pier – Commercial</u></td><td><u>P</u></td><td><u>X</u></td><td><u>X</u></td><td><u>X</u></td><td><u>4</u></td></tr>
<tr><td><u>Public or Commercial Boat Launch - nonmotorized</u></td><td><u>P</u></td><td><u>X</u></td><td><u>P</u></td><td><u>C</u></td><td><u>4</u></td></tr>
<tr><td><u>Public or Commercial Boat Launch - motorized</u></td><td><u>P</u></td><td><u>X</u></td><td><u>C</u></td><td><u>X</u></td><td><u>4</u></td></tr>
<tr><td><u>Private Boat Launch</u></td><td><u>C</u></td><td><u>C</u></td><td><u>X</u></td><td><u>X</u></td><td><u>4</u></td></tr>
<tr><td><u>Watercraft Lifts</u></td><td><u>P</u></td><td><u>P</u></td><td><u>X</u></td><td><u>X</u></td><td><u>4</u></td></tr>
<tr><td><u>Other floats and moorage buoys</u></td><td><u>P</u></td><td><u>P</u></td><td><u>P</u></td><td><u>X</u></td><td><u>4</u></td></tr>
</table></td><td>The intended net effect of the proposed changes to the table is to reduce the number of unnecessary conditional uses, and provide a greater distinction between different modifications which have different degrees of impact and desirability in different designations.</td></tr>
</table>

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<tr><th>Section of the Kenmore Municipal Code</th><th>Recommendation</th><th>Comment / Science Reference</th></tr>
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<table>
<tr><td>Minor repair of existing water access structures</td><td>P</td><td>P</td><td>P</td><td>P</td><td>P</td></tr>
</table>
</td><td></td></tr>
<tr><td>16.55.030 (B)(4)</td><td>In the Aquatic Environment, the modification is subject to the permit required for the adjacent upland environment designation. These facilities are not allowed in Swamp Creek. ~~docks, piers, moorage, buoys, floats and/or launching facilities require conditional use approval, unless located adjacent to a Downtown Waterfront or Shoreline Residential Environment.~~</td><td>Changes made to reflect the altered permit assignment in the modifications table.</td></tr>
<tr><td>16.55.030.A Shoreline modifications table and conditions</td><td>Suggest expanding the shoreline modifications table to break down the different types/locations of fill and dredging/dredge disposal.
<table>
<tr><td>KEY
X - Prohibited</td><td>DW</td><td>SR</td><td>UC</td><td>N</td><td>A</td></tr>
<tr><td colspan="6">Fill</td></tr>
<tr><td>~~Filling~~</td><td>~~P5, C5~~</td><td>~~P5, C5~~</td><td>~~P5, C5~~</td><td>~~C5~~</td><td>~~C5~~</td></tr>
<tr><td>Upland outside of floodplain</td><td>P</td><td>P</td><td>P</td><td>P</td><td>NA</td></tr>
<tr><td>Upland inside of floodplain</td><td>P</td><td>C</td><td>C</td><td>C</td><td>NA</td></tr>
<tr><td>In-water restoration</td><td>NA</td><td>P</td><td>P</td><td>P</td><td>P</td></tr>
<tr><td>In-water non-restoration</td><td>C</td><td>C</td><td>C</td><td>C</td><td>C</td></tr>
<tr><td colspan="6">Grading and dredging</td></tr>
<tr><td>~~Grading, dredging, dredge material disposal~~</td><td>~~P5, C5~~</td><td>~~P5, C5~~</td><td>~~P5, C5~~</td><td>~~C5~~</td><td>~~C5~~</td></tr>
</table>
</td><td>The intended net effect of the proposed changes to the table is to reduce the number of unnecessary conditional uses, and provide a greater distinction between different modifications which have different degrees of impact and desirability in different designations.</td></tr>
</table>

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	<table><tr><td>Dredging</td><td>NA</td><td>P</td><td>P</td><td>P</td><td>P</td></tr><tr><td>In-water disposal</td><td>NA</td><td>X</td><td>X</td><td>X</td><td>P</td></tr><tr><td>Upland disposal outside of floodplain or channel migration zone</td><td>P</td><td>P</td><td>P</td><td>C</td><td>NA</td></tr><tr><td>Upland disposal inside of floodplain or channel migration zone</td><td>C</td><td>C</td><td>C</td><td>C</td><td>NA</td></tr></table>	
16.55.030 (B)(5)	Suggest deleting this provision.	The note that accompanied the fill/grading modification is no longer necessary with the proposed changes.
16.55.050 Docks, piers, moorage, buoys, floats or launching facilities.	General note: Suggest retitling this section to "Water Access Structures" which is more encompassing than resorting to a list. General note: In all instances where moorage is separated from buoy by a comma, suggest removing the comma. See Appendix E for proposed comprehensive changes to KMC 16.55.050.	"Moorage" alone is not a modification that requires a permit. Assume the comma is an error. Proposed changes to this section (see Appendix E) include providing separate dock standards for the Sammamish River, which is a unique environment that requires an entirely different design strategy than Lake Washington; adding some clear design standards for non-residential docks and piers; adding some clear standards for boat launches (distinguishing between motorized and nonmotorized); and adding some general guidance on mitigation that applies to all new or expanded structures (not just commercial).
CHAPTER 16.60: VEGETATION CONSERVATION		
16.60.020 Vegetation management	Amend as follows: 16.60.020 Vegetation management within critical areas <u>and buffers</u>.	Revisions suggested above to KMC 18.55.320.F.6.b and -.420.B.6.b eliminate the need for B in KMC 16.60.020.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
within critical areas.	A. Vegetation management standards established in KMC 18.55.150(A)~~(5)~~ and (E), 18.55.320(F)(5) and (6), 18.55.420(B)(5) and (6), 18.55.520(A)(2)(d) and (G), 18.55.530, and 18.55.650(A)(5) for critical areas and their buffers shall apply within all shorelines. ~~B. Vegetation management standards established in KMC 18.55.420 for streams and their buffers shall apply within Sammamish River and Swamp Creek shorelines. In addition to provisions for recreational uses in KMC 16.65.020 allowing limited modifications to critical area buffers for the purposes of public access improvements, the following standards shall apply in shorelines:~~ ~~1. In Swamp Creek Park, public access trails may be located within critical areas and required buffers, when planned along with a habitat restoration project and it is demonstrated that the ecological functions of the overall standard stream buffer area would be substantially improved. Trails in Swamp Creek Park roughly paralleling the shoreline of the Sammamish River or Swamp Creek shall generally be located at least 50 feet from the ordinary high water mark, but trails may extend closer to the water if necessary to reduce impacts on critical areas or adjacent properties, or access a pedestrian bridge across Swamp Creek. Spur trails may be extended to the water's edge but such access areas should be limited in order to protect ecological functions of the stream buffer and wetlands.~~ ~~2. When public access is being provided as a part of mixed use development allowed in the Urban Conservancy Environment under KMC 16.50.030(B)(2)(a)(2), the director may allow public access trail development within the buffer in order to link with adjacent shoreline access, provided any new trail is farther from the shoreline than the waterward extent of existing development on the site and the proposed trail plan is~~	A new B could be developed that references ability to implement approved public access plans and recreation maintenance plans.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	~~accompanied by a plan demonstrating that the ecological functions of the overall required buffer area on a project site would be substantially improved.~~	
16.60.030 Vegetation management within Lake Washington shoreline buffers.	Amend as shown: A. Vegetation removal within ~~lake~~ shoreline buffers is prohibited ~~in the Shoreline Residential, Urban Conservancy, and Natural Shoreline Environments along Lake Washington~~ unless the activity is part of a permitted shoreline restoration or enhancement project, an allowed water-dependent or water-enjoyment use or modification, public access or recreation maintenance plan implementation, or the vegetation removal is otherwise specifically allowed under Chapter 16.50 or 16.55 KMC. Such vegetation clearing must occur only in the minimum shoreline area that is necessary to support the permitted use, and must be mitigated. B. Implementation of approved public access plans and recreation maintenance plans is allowed. ~~B. Vegetation clearing for permitted water-dependent uses is allowed in the Downtown Waterfront Environment. Such vegetation clearing must occur only in the minimum shoreline area that is necessary to support the permitted use.~~	Shift A and suggested B into 16.60.020; remove 16.60.030. The need for existing B has been eliminated by making revised A more broadly applicable. Reference ability to implement approved public access plans and recreation maintenance plans.
CHAPTER 16.65: SHORELINE DENSITY AND DIMENSIONS		
16.65.010 Interpretation of shoreline density and dimensions table	Delete this entire section. ~~C. For development in critical areas and critical area buffers, the applicable provisions of Chapter 18.55 KMC apply unless a specific exception is provided in the shoreline code.~~ ~~1. Because Lake Washington, the Sammamish River, and Swamp Creek are all fish and wildlife habitats of importance, a habitat management plan is required for any in-water or overwater development or activity, per KMC 18.55.520.~~	This section is now redundant with 18.55.330.G, which is adopted into this SMP by reference.

<table>
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<tr><td></td><td>~~2. Within the shoreline jurisdiction, the required acreage replacement ratios for wetlands shall be as follows:~~
~~**Wetland Mitigation Ratios**~~
<table>
<tr><th>~~Category and Type of Wetland~~</th><th>~~Creation or Reestablishment (C/R)~~</th><th>~~Creation (C) or Reestablishment (R) plus Enhancement (E)~~</th><th>~~Enhancement (E) Only~~</th></tr>
<tr><td>~~Class 1~~</td><td>~~3:1~~</td><td>~~1:1 C/R plus 6:1 E~~</td><td>~~Not Allowed~~</td></tr>
<tr><td>~~Class 1 (Mature Forested)~~</td><td>~~6:1~~</td><td>~~1:1 C/R plus 20:1 E~~</td><td>~~Not Allowed~~</td></tr>
<tr><td>~~Class 2~~</td><td>~~2:1~~</td><td>~~1:1 C/R plus 4:1 E~~</td><td>~~Not Allowed~~</td></tr>
<tr><td>~~Class 3~~</td><td>~~1.5:1~~</td><td>~~1:1 C/R plus 2:1 E~~</td><td>~~6:1~~</td></tr>
</table></td><td></td></tr>
<tr><td>**16.65.020.A**</td><td>Suggest adding a new section for Sammamish River and Swamp Creek buffers:
<table>
<tr><th>Use</th><th>DW</th><th>SR</th><th>UC</th><th>N</th><th>A</th></tr>
<tr><td colspan="6">**Shoreline Buffers from OHWM on Sammamish River**</td></tr>
<tr><td>Residential development – R12 and denser</td><td>Z</td><td>20 (2)</td><td>150</td><td>150</td><td>Z</td></tr>
<tr><td>Residential development – R6 and less dense</td><td>Z</td><td>35 (2)</td><td>150</td><td>150</td><td>Z</td></tr>
</table></td><td>KMC 16.65.020.A contains designation- and use-specific buffers for Lake Washington. Based on the existing conditions of the Sammamish River (and to a lesser degree Swamp Creek), it is consistent with the SMA to develop designation- and use-specific buffers for these waterbodies, particularly for residential areas. The suggestion provided is just one possible approach, and should be further explored in a Focus Group.</td></tr>
</table>

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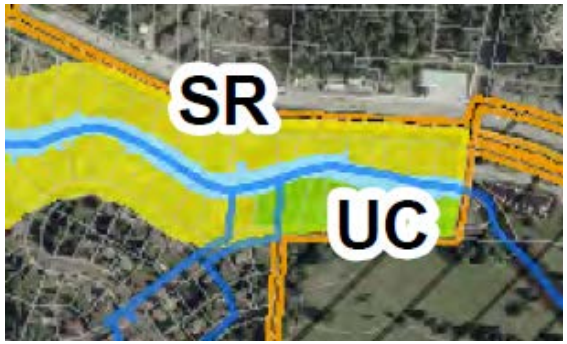
<tr><td></td><td>
<table>
<tr><td>Water-oriented parks and recreation</td><td>Z (4)</td><td>50 (4)</td><td>50 (4)</td><td>50 (4)</td><td>0</td></tr>
<tr><td>Nonwater-oriented parks and recreation</td><td>Z</td><td>75</td><td>100</td><td>150</td><td>Z</td></tr>
<tr><td>All other uses</td><td>150</td><td>150</td><td>150</td><td>150</td><td>Z</td></tr>
<tr><td colspan="6">Shoreline Buffers from OHWM on Swamp Creek</td></tr>
<tr><td>Residential development</td><td>NA</td><td>50 (2)</td><td>150</td><td>Z</td><td>NA</td></tr>
<tr><td>All other uses</td><td>NA</td><td>150</td><td>150</td><td>150</td><td>NA</td></tr>
</table>
</td><td></td></tr>
<tr><td>16.65.020.B.2</td><td>Suggest adding or revised the following as shown:

d. On Sammamish River in high-density Shoreline Residential areas:
(1) A minimum shoreline buffer of 20 feet from the ordinary high water mark shall be provided as a vegetation conservation area.
(2) The minimum building setback of 25 feet from the shoreline buffer may be reduced to five feet if vegetation in the required buffer is reestablished or enhanced, according to the standards in KMC 16.60.010(G).
e. On Sammamish River in low-density Shoreline Residential areas:
(1) A minimum shoreline buffer of 35 feet from the ordinary high water mark shall be provided as a vegetation conservation area.
(2) The minimum building setback of 25 feet from the shoreline buffer may be reduced to five feet if vegetation in the required buffer is reestablished or enhanced, according to the standards in KMC 16.60.010(G).</td><td>The proposed language provides consistency with the flexibility included for the residential areas on Lake Washington.</td></tr>
</table>

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	f. On Swamp Creek in Shoreline Residential areas: (1) A minimum shoreline buffer of 50 feet from the ordinary high water mark shall be provided as a vegetation conservation area. (2) The minimum building setback of 25 feet from the shoreline buffer may be reduced to five feet if vegetation in the required buffer is reestablished or enhanced, according to the standards in KMC 16.60.010(G). g~~d~~. On all other shorelines, single-family development shall provide a buffer as required by the provisions of KMC 16.65.020 and Chapter 18.55 KMC. Buffers may be reduced to the specified minimum setbacks in this table only if the reduced buffers are allowed by the provisions of Chapter 18.55 KMC.	
16.65.020.B.4	4. Public trails in critical areas and buffers are specifically addressed in Chapter 18.55 KMC. Other n~~N~~ew public access improvements in shoreline buffers shall comply with the requirements of Chapter 18.55 KMC; provided, that new public access improvements may be allowed within critical areas, or shoreline or critical area buffers, if impacts are mitigated consistent with the requirements in KMC 18.55.190 through 18.55.220, 18.55.330 and 18.55.430 such that there is no net loss of shoreline ecological processes or functions.~~, and the public access improvements meet the following standards:~~ ~~a. In order to encourage public access improvements and improved shoreline habitat in the Downtown Waterfront shoreline, a public access trail may be located within the stream buffer required in KMC 18.55.420, when accompanied by a plan demonstrating that the ecological functions of the overall required buffer area on a project site would be substantially improved. Trails paralleling the shoreline of the Sammamish River in the Downtown Waterfront Environment shall be located at least 50 feet from the ordinary high water mark. Spur trails may be extended to the water's edge but such access areas should be limited in order to protect ecological functions of the buffer.~~	Trail-specific regulations that apply to all critical areas and buffers, including shoreline buffers, are proposed to be included in Chapter 18.55 KMC (see Sections 3.2 and 3.3 above). This provision has been modified to address *other* public access improvements specifically within shoreline buffers.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
	~~b.~~ In order to allow for a waterfront promenade area along the inner harbor area of the Downtown Waterfront Environment, public access improvements may extend to the water's edge when accompanied by a plan demonstrating that the ecological functions of the overall required buffer area on a project site would be substantially improved.	
CHAPTER 16.75: PROCEDURES		
Global	See comment.	The SMP assigns authority to the director. Suggest changing to city manager consistent with other sections of code, including KMC 18.55.
16.75 Procedures	Add a section on administrative decisions and interpretations. Example language: The City shall make administrative decisions and interpretations of the policies and regulations of this SMP and the Act in accordance with Chapter 18.10 KMC. The City shall consult with Ecology to ensure that any formal written interpretations are consistent with the purpose and intent of Chapter 90.58 RCW and 173-26 WAC.	Because the SMP is jointly implemented by the City and Ecology, it would be appropriate to identify when such interpretations should be in writing and when formal interpretations need consultation with Ecology.

Section of the Kenmore Municipal Code	Recommendation	Comment / Science Reference
SHORELINE ENVIRONMENT DESIGNATION MAP		
Designations Map	Suggest extending Shoreline Residential on the south side of the Sammamish River to the east end of NE 170th Street (City limits). 	This area currently has an Urban Conservancy designation although it is zoned and fully developed for residential use.

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APPENDIX A

WASHINGTON DEPARTMENT OF COMMERCE'S CRITICAL AREAS CHECKLIST

Department of Commerce
Innovation is in our nature.

CRITICAL AREAS CHECKLIST

A Technical Assistance Tool From Growth Management Services – updated February 2018

Name of city or county: City of Kenmore

Staff contact, phone, and e-mail address: Lauri Anderson, Senior Planner, 425.398.8900, landerson@kenmorewa.gov

INSTRUCTIONS

This checklist is intended to help local governments update their development regulations, as required by **RCW 36.70A.130(4)** (updated in 2012). **We strongly encourage but do not require jurisdictions to complete the checklist and return it to Growth Management Services (GMS), along with their updates.** This checklist may be used by all jurisdictions, including those local governments planning for resource lands and critical areas only. For general information on update requirements, refer to *Keeping your Comprehensive Plan and Development Regulations Current: A Guide to the Periodic Update Process under the Growth Management Act*, August, 2016 and WAC 365-196-610 (updated in 2015)

Bold items are a GMA requirement or may be related requirements of other state or federal laws.

Commerce WAC provisions are advisory under Commerce's statutory mandate to provide technical assistance, RCW 43.330.120 which states that the Department of Commerce "*…shall help local officials interpret and implement the different requirements of the act through workshops, model ordinances, and information materials*." **Bold** and underlined items are links to Internet sites and may include best practices or other ideas to consider. If you have questions, call GMS at (360) 725-3066.

Updates to Commerce WAC – Revisions to the Commerce WAC relating to critical areas have been provided in a table with dates of changes on the Growth Management Act Periodic Update web site. The table can be used with this checklist to determine what changes have been made since the last update of your critical areas regulations.

How to fill out the checklist

Using the current version of your critical areas regulations, fill out each item in the checklist. Select the check box or type in text fields, answering the following question:

Is this item addressed in your current Critical Areas Ordinance (CAO)? If YES, fill in the form with citation(s) to where in the plan or code the item is addressed. We recommend using citations rather than page numbers because they stay the same regardless of how the document is printed. If you have questions about the requirement, follow the hyperlinks to the relevant statutory provision or rules. If you still have questions, visit the Commerce Growth Management Services Web page or contact one of the Commerce planners assigned to your region.

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CRITICAL AREAS

Regulations protecting critical areas are required by **RCW 36.70A.060(2)** and **RCW 36.70A.172(1)** and WAC 365-195-900 through 925 provide guidelines**.** Guidance can also be found in Commerce's *Critical Areas Assistance Handbook* (January, 2007, currently being updated); the Minimum Guidelines WAC 365-190-080 – 130; Best Available Science, Chapter 365-195 WAC; and Procedural Criteria, WAC 365-196-485 and WAC 365-196-830, and on Growth Management's Critical Areas and Best Available Science webpage.

Regulations required to protect critical areas	Addressed in current plan or regulations? If yes, note where
OVERALL REQUIREMENTS **The CAO includes best available science to clearly designate and protect all critical areas that might be found within the jurisdiction.** **1. Designation of Critical Areas** **RCW 36.70A.170(1)(d)** required all counties and cities to designate critical areas. **RCW 36.70A.170(2)** requires that counties and cities consider the Commerce Minimum Guidelines pursuant to RCW 36.70A.050. **RCW 36.70A.050** directed Commerce to adopt the Minimum Guidelines to classify critical areas. WAC 365-190-080 through 130 (updated in 2010) provide guidance on defining or "designating" each of the five critical areas. WAC 365-190-040 (updated in 2010) outlines the process to classify and designate natural resource lands and critical areas. **2. Definition of Critical Areas** **RCW 36.70A.030** provides definitions for each type of critical area. Sections (5) regarding fish and wildlife habitat conservation areas; (9) regarding geologically hazardous areas; and (21) regarding wetlands were updated in 2010. WAC 365-190-030 (updated 2010) provides definitions in the Minimum Guidelines. **3. Protection of Critical Areas** **RCW 36.70A.060 (2)** required counties and cities to adopt development regulations that protect the critical areas required to be designated under RCW 36.70A.170. **RCW 36.70A.172(1)** requires the inclusion of best available science in developing policies and development regulations to protect the functions and values of critical areas. In addition, counties and cities must give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries. **4. Inclusion of Best Available Science** **RCW 36.70A.172**(1) requires inclusion of the best available science (BAS). Chapter 365-195 WAC outlines recommended criteria for determining which information is the BAS, for obtaining the BAS, for including BAS in policies and regulations, for addressing inadequate scientific information, and for demonstrating "special consideration" to conservation or protection measures necessary to preserve or enhance anadromous fisheries.	Was inclusion of BAS documented in the record for the review and any updates to the critical areas regulations? ☒ Yes ☐ No Location in Text: The City's last major update of its critical areas regulations in 2006 relied on ESA's (then dba Adolfson Associates) *Wetlands, Streams, and Geologically Hazardous Areas - Best Available Science Technical Memorandum* (draft dated December 8, 2003 and final draft dated March 24, 2004). In the City's 2012 update of its Shoreline Master Program, the 2006 critical areas regulations were largely incorporated by reference, and at that time were determined by Washington Department of Ecology to be consistent with best available science. This update will amend the regulations as needed to maintain compliance with state law. Edits to the regulations that are science-based are noted in the gap analysis accompanying this update.

Regulations required to protect critical areas	Addressed in current plan or regulations? If yes, note where
WAC 365-195-915 provides criteria for including BAS in the record.	
WETLANDS DEFINITION **The definition of wetlands is consistent with RCW 36.70A.030(21)** (updated in 2012).	Is the wetland definition consistent with RCW 36.70A.030(23)? ☒ Yes ☐ No ☐ N/A Location in Text: The City's definition in 18.20.3280 is identical to the RCW definition, except for the addition of a sentence about the delineation method, referencing the State manual, which will be deleted as part of this update.
WETLANDS DELINEATION **Wetlands are delineated using the 1987 Federal Wetland Delineation Manual and Regional Supplements** in accordance with WAC 173-22-035 (updated in 2011). See Ecology's Wetland Delineation page and WAC 365-190-090 (updated in 2010) for additional assistance.	Are wetlands delineated using the 1987 Federal Wetland Delineation Manual and Regional Supplements? ☐ Yes ☒ No ☐ N/A Location in Text: KMC 18.55.300.A references the State manual. That reference will be corrected as part of this update.
WETLANDS PROTECTION **Policies and regulations protect the functions and values of wetlands. RCW 36.70A.172** **(1)** Counties and cities are encouraged to make their actions consistent with the intent and goals of "protection of wetlands", Executive Order 89-10 as it existed on September 1, 1990. WAC 365-190-090(3) recommends using a wetlands rating system that evaluates the existing wetland functions and values to determine what functions must be protected. Ecology updated its recommended wetlands rating systems effective January 2015. For information on the rating system, see: • 2014 Updates to the Washington State Wetland Rating Systems • Washington State Wetland Rating System for Western Washington • Washington State Wetland Rating System for Eastern Washington	Do the regulations use a rating system to determine wetlands protection? ☒ Yes ☐ No ☐ N/A Location in Text KMC 18.55.300.B contains the City's locally developed wetland rating system. This update will include a switch to Ecology's 2014 wetland rating system.

Regulations required to protect critical areas	Addressed in current plan or regulations? If yes, note where
For other resources and guidance on protecting wetlands, go to Ecology's Local wetland regulations: Growth Management Act technical assistance.	
CRITICAL AQUIFER RECHARGE AREAS **Policies and regulations protect the functions and values of critical aquifer recharge areas. RCW 36.70A.172(1).** **Policies and regulations protect the quality and quantity of groundwater used for public water supplies. RCW 36.70A.070(1)** and WAC 365-196-485(1)(d). (Required if groundwater is used for potable water.) The following references also relate to protection of groundwater resources: **RCW 90.44** – Regulation of Public Groundwaters **RCW 90.48** – Water Pollution Control (1971) **RCW 90.54** – Water Resources Act of 1971 **RCW 36.36.020** - Creation of aquifer protection area (1988) WAC 365-190-100 Critical Aquifer Recharge Areas (2010) WAC 173-100 Groundwater Management Areas and Programs (1988) WAC 173-200 Water Quality Standards for Groundwaters of the State of Washington (1990) WAC 365-196-735 Consideration of state and regional planning provisions (list) (2010) The Critical Aquifer Recharge Areas Guidance Document (2005) provides information on protecting functions and values of critical aquifer recharge areas, best available science, how to work with state and local regulations and adaptive management. Also, consider the following: • Prohibiting or strictly regulating hazardous uses in critical aquifer recharge areas (CARAs) and designating and protecting wellhead areas. See Ecology's guidance on Critical Aquifer Recharge Areas. • Limiting impervious surfaces to reduce stormwater runoff, as required under Phase I and II municipal stormwater permits. Ecology's Stormwater Manual for Western Washington (updated in 2012) includes low impact development (LID) related definitions, requirements, and an LID performance standard. See Stormwater Management and Design Manuals on Ecology's web page. • See Stormwater Drainage and Water Quality on page 7 of this checklist for additional LID resources.	If groundwater is used for potable water, do regulations protect the quality and quantity of ground water? ☐ Yes ☐ No ☒ N/A Location in text: The City does not contain any critical aquifer recharge areas as defined in the RCW and WAC. Are the critical aquifer recharge regulations consistent with current mapping of these critical areas? ☐ Yes ☐ No ☒ N/A Location in text: N/A
FREQUENTLY FLOODED AREAS **Regulations protect the functions and values of frequently flooded areas and safeguard the public from hazards to health and safety. RCW 36.70A.172(1)** WAC 365-196-830 provides:" "Protection" in this context means preservation of the functions and values of the natural environment, or to safeguard the public from hazards to health and safety."	Are frequently flooded areas designated and regulated using FEMA and Ecology guidance? ☒ Yes ☐ No

Regulations required to protect critical areas	Addressed in current plan or regulations? If yes, note where
WAC 365-190-110 (updated in 2010) directs counties and cities to consider the following when designating and classifying frequently flooded areas: (a) Effects of flooding on human health and safety, and to public facilities and services; (b) Available documentation including federal, state, and local laws, regulations, and programs, local studies and maps, and federal flood insurance programs, including the provisions for urban growth areas in **RCW 36.70A.110**; (c) The future flow flood plain, defined as the channel of the stream and that portion of the adjoining flood plain that is necessary to contain and discharge the base flood flow at build out; (d) The potential effects of tsunami, high tides with strong winds, sea level rise, and extreme weather events, including those potentially resulting from global climate change; (e) Greater surface runoff caused by increasing impervious surfaces. Classification of and regulations for frequently flooded areas should not conflict with the Federal Emergency Management Agency (FEMA) requirements for the National Flood Insurance Program. See Ecology's Floods & Floodplain Planning, **86.16 RCW**, 173-158 WAC, and **44 CFR 60**. Communities that are located on Puget Sound or the Strait of San Juan de Fuca, or have lakes, rivers or streams that directly or indirectly drain to those water bodies, are subject to the National Flood Insurance Program Biological Opinion (BiOp) for Puget Sound (https://www.fema.gov/media-library/assets/documents/30021). The biological opinion required changes to the implementation of the National Flood Insurance Program in order to meet the requirements of the Endangered Species Act (ESA) in the Puget Sound watershed. FEMA Region X has developed an implementation plan that allows communities to apply the performance standards contained in the Biological Opinion by implementing: 1) a model ordinance (https://www.fema.gov/media- library/assets/documents/85339); 2) a programmatic Checklist (https://www.fema.gov/media-library/assets/documents/85336); or 3) on a permit by permit basis (https://www.fema.gov/media-library/assets/documents/85343) as long as it can be demonstrated that there is no adverse effect to listed species. Communities have the option of utilizing their CAOs as part of a programmatic response to address the requirements of the biological opinion. FEMA must approve a community's biological opinion compliance strategy. Additional resources: **RCW 86.12** Flood Control by Counties **RCW 86.16** Floodplain Management **RCW 86.26** State Participation in Flood Control Maintenance **RCW 86.16.041** Floodplain Management Ordinance and Amendments WAC 173-158-070 Requirements for construction in Special Flood Hazard Areas	☐ N/A Location in Text: See KMC 16.90 and 18.55.700-750, and the comments and suggested incorporated into the Gap Analysis. The regulations some minor updates and clarification. Are you utilizing your CAO as part of a programmatic response to the BiOp? ☐ Yes ☐ No ☐ N/A Location in Text: The City's mechanism for responding to the BiOp is not clear in the code, but is being implemented by staff through "Door 3." This update will provide a clear linkage and direction for applicants.

Regulations required to protect critical areas	Addressed in current plan or regulations? If yes, note where
DEFINITION OF GEOLOGICALLY HAZARDOUS AREAS **The definition of geologically hazardous areas is consistent with RCW 36.70A.030(9)** (updated 2012). "Geologically hazardous areas" means areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.	Is the geologically hazardous areas definition consistent with RCW 36.70A.030(10)? ☒ Yes ☐ No ☐ N/A Location in Text: KMC 18.20.105 contains a definition that is consistent, but not identical, to the RCW.

PROTECTION OF GEOLOGICALLY HAZARDOUS AREAS
Regulations protect the functions and values of frequently flooded areas and safeguard the public from hazards to health and safety. RCW 36.70A.172(1) WAC 365-196-830 (2010) provides:" "Protection" in this context means preservation of the functions and values of the natural environment, or to safeguard the public from hazards to health and safety."
 	
Geologically hazardous areas are designated, and their use is regulated or limited consistent with public health and safety concerns. **RCW 36.70A.030(9)** provides a definition (updated in 2012) and WAC 365-190-120 describes the different types of hazardous areas (2010):
• Geologically hazardous areas include:
  • seismic hazards
  • tsunami hazards
  • landslide hazards,
  • areas prone to erosion hazards
  • volcanic hazards
  • channel migration zones
  • areas subject to differential settlement from coal mines or other subterranean voids.
 	
• Critical facilities, such as hospitals and emergency response centers, hazardous materials storage, etc. should be restricted in hazard zones.
The Department of Natural Resource's *Geologic Hazards and the Environment* website includes information on earthquakes and faults, landslides, volcanoes and lahars, tsunamis, hazardous minerals, emergency preparedness and includes geologic hazard maps.
	Are uses in geologically hazardous areas designated and regulated or limited consistent with public health and safety?
	☒ Yes
	☐ No
	☐ N/A
	Location in Text:
	KMC 18.55.640 and -.650.

DEFINITION OF FISH AND WILDLIFE HABITAT CONSERVATION AREAS **The definition of fish and wildlife habitat conservation areas is consistent with RCW 36.70A.030(5)** (updated 2012) and WAC 365-190-030 (updated in 2015). The definition of fish and wildlife habitat conservation areas was amended to state that they do not include: "*such artificial features or*	Is the FWHCA definition consistent with RCW 36.70A.030(5)? ☐ Yes ☒ No ☐ N/A

Regulations required to protect critical areas	Addressed in current plan or regulations? If yes, note where
constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district or company".	Location in Text: Kenmore's code uses the term "fish and wildlife habitats of importance" in lieu of "fish and wildlife habitat conservation areas." The code doesn't provide a true definition of the term, but does list what constitutes a habitat of importance. That list represents the WAC definition's intent. Nevertheless, this code update includes a recommendation to more formally incorporate a definition of "fish and wildlife habitat of importance" in KMC 18.55.500 consistent with WAC. The language regarding ports and irrigation districts is not necessary, as those entities are not present in Kenmore.

PROTECTION OF FISH AND WILDLIFE HABITAT AND CONSERVATION AREAS
Policies and regulations protect the functions and values of fish and wildlife habitat conservation areas. RCW 36.70A.172(1) and **RCW 36.70A.030(5)** (updated 2012).
WAC 365-190-130(4) encourages to local jurisdictions consult WDFW's Priority Habitat and Species web site. Recent updates include:
• Priority Habitat and Species maps (updated daily)
• Priority Habitats and Species List (updated June 2016)
  • Mazama Pocket Gopher (2011, 2016)
  • Great Blue Heron (2012)
  • Western Gray Squirrel (2010)
• Water Crossing Design Guidelines (2013)
• Stream Habitat Restoration Guidelines (2012)
• Shrub-Steppe (2011)
• Land Use Planning for Salmon, Steelhead and Trout (2011)
• Landscape Planning for Washington's Wildlife (2009)
• Aquatic Habitat Guidelines (2010, 2010, 2014)
• Riparian Management recommendations (expected September 2017)
Areas "with a primary association with listed species" should be considered per WAC 365-190-130(2)(a). Recent uplistings and delistings are:
	Have you reviewed your regulations regarding any applicable changes in management recommendations for priority habitats and species?
	☐ Yes
	☒ No
	☐ N/A
	Location in Text
	As part of this update, revisions are recommended based on updates to heron guidance. The delisting of bald eagle is also recognized via other changes in this code section.
	See KMC 18.55.090.D.3 and -.4 and 18.55.530.A and -.B.
	References to stream crossing guidelines are also recommended to be incorporated into KMC

Regulations required to protect critical areas	Addressed in current plan or regulations? If yes, note where
• Uplisting of marbled murrelet to State Endangered – February 4, 2017 • Uplisting of Canada lynx to State Endangered – February 4, 2017 • Peregrine falcon delisted from State Sensitive – February 4, 2017 a. The peregrine will remain classified as "protected wildlife" under state law (WAC 232-12-011) and will continue to be protected under the federal Migratory Bird Treaty Act. • Bald Eagle delisted from State Sensitive - February 4, 2017 a. 2011: Downlisted from State Threatened to Sensitive (this ended the requirement to develop Bald Eagle Protection Plans per WAC 232-12-292—a change which many CAOs still don't reflect). b. 2007: Delisted from federal Threatened (but still covered by the federal Bald and Golden Eagle Protection Act) Also see the Puget Sound Partnership's Salmon Recovery web site for WRIA Plans in Puget Sound.	18.55.420.C.1. Have you reviewed your regulations regarding any changes in species listings? ☐ Yes ☒ No ☐ N/A Location in Text See response to previous question.
ANADROMOUS FISHERIES **Policies and regulations for protecting critical areas give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries. RCW 36.70A.172(1)** is the requirement and WAC 365-195-925 (updated in 2000) lists criteria involved. This requirement applies to all five types of critical areas. WAC 365-190-130(4)(i) recommends sources and methods for protecting fish and wildlife habitat conservation areas, including salmonid habitat. Counties and cities may use information prepared by the United States Department of the Interior Fish and Wildlife Service, National Marine Fisheries Service, the Washington State Department of Fish and Wildlife, the State Recreation and Conservation Office, and the Puget Sound Partnership to designate, protect and restore salmonid habitat. Counties and cities should consider recommendations found in the regional and watershed specific salmon recovery plans (see the Governor's Salmon Recovery Office webpage and the Puget Sound Partnership's Salmon Recovery webpage). Land Use Planning for Salmon, Steelhead and Trout: A land use planner's guide to salmonid habitat protection and recovery (October 2009) is an excellent resource. The Washington State Recreation and Conservation Office (RCO) website includes information on salmon recovery efforts.	Do your regulations give special consideration for anadromous fisheries? ☒ Yes ☐ No ☐ N/A Location in Text: Numerous regulations in KMC 18.55.400 to -.530 directly or indirectly give special consideration to anadromous fish and their habitat. The update will provide additional certainty by referencing agency guidance documents for design of crossings and other stream modifications.
REASONABLE USE EXCEPTIONS **The Critical Areas Ordinance (CAO) allows for "reasonable use" if the CAO would otherwise deny all reasonable use of property.** Reasonable use provisions should limit intrusions into critical areas to the greatest extent possible. **RCW 36.70A.370** (1991). Common exemptions include emergencies, remodels that do not further extend into critical areas, surveying, walking, and development that has already been completed with critical areas review under a previous	Do you have reasonable use provisions? ☒ Yes ☐ No Location in Text: KMC 18.55.180

Regulations required to protect critical areas	Addressed in current plan or regulations? If yes, note where
AGRICULTURAL ACTIVITIES NOT UNDER VSP (COUNTIES ONLY) **Critical areas regulations as they specifically apply to agricultural activities in counties or watersheds not participating in the Voluntary Stewardship Program (VSP) have been reviewed, and if needed, revised pursuant to RCW 36.70A.130.** RCW 36.70A.710(6) "Agricultural activities" means all agricultural uses and practices as defined in RCW 90.58.065.	Did you review your regulations as they apply to agricultural activities? ☐ Yes ☐ No ☒ N/A
FOREST PRACTICES APPLICATION REGULATIONS ***If applicable*, regulations for forest practices have been adopted: RCW 36.70A.570** (adopted in 2007). **RCW 76.09.240**, amended in 2011, requires many counties over 100,000 in population, and the cities and towns within those counties to adopt regulations for forest practices. These are often included in clearing and grading ordinances.	Have you adopted forest practices regulations? ☐ Yes ☒ No ☐ N/A Location in Text: [confirm with City]
STORMWATER DRAINAGE AND WATER QUALITY Regulations protect water quality and implement actions to mitigate or cleanse drainage, flooding, and storm water run-off that pollute waters of the state, including Puget Sound or waters entering Puget Sound. RCW 36.70A.070(1) Regulations may include : a) Adoption of a stormwater manual consistent with Ecology's latest manuals for Eastern or Western Washington. b) Adoption of a clearing and grading ordinance – See Municipal Research and Services Center's Erosion and Sediment Control: Land Clearing and Grading webpage. c) Adoption of a low impact development (LID) ordinance. Available LID resources include: • Ecology's Stormwater Manual for Western Washington (updated in 2012) includes low impact development (LID) related definitions, requirements, and an LID performance standard. See Stormwater Management and Design Manuals on Ecology's web page. • Puget Sound Partnership resource for Information on integrating LID into local codes, July 2012. • Ecology's Stormwater Manual webpage has a number of manuals for stormwater management and design, including low impact development. • Washington Stormwater Center webpage: http://www.wastormwatercenter.org/low-impact/ includes additional suggestions and resources. d) Provisions for corrective action for failing septic systems that pollute waters	Do you have regulations that protect water quality? ☒ Yes ☐ No Location in Text KMC 13.35 (Surface Water Runoff Policy), 13.45 (Water Quality), and 15.25 (Land Alterations) If required, have you incorporated low impact development standards into your regulations? ☒ Yes ☐ No ☐ N/A Location in text: Ordinance 16-0428 updated several chapters of Kenmore Municipal Code and adopted the 2016 King County Surface Water Design Manual in KMC 13.35.030 to integrate low impact development principles and standards into the City's existing development processes.

Regulations required to protect critical areas	Addressed in current plan or regulations? If yes, note where
REGULATIONS FOR PROTECTING WATERS OF THE STATE **RCW 90.48.020** defines waters of the state. WAC 365-190-130(2) (updated in 2010) – recommends considering designation of all waters of the state, including naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat. Stream types are classified in WAC 222-16-030 (updated in 2006); with field verification, or an alternate system that considers factors listed in WAC 365-190-130(4)(f)(iii) (updated 2010). See http://www.dnr.wa.gov/forest-practices-water-typing to use Washington State Department of Natural Resources (DNR)'s stream typing system. Protect waters of the state by protecting riparian areas by establishing buffers to maintain no net loss of riparian ecosystem functions. Designating areas that risk contaminating or harming shoreline resources including tidelands and bedland suitable for shellfish harvest, kelp and eelgrass beds, forage fish spawning areas.	Do your regulations protect waters of the state? ☒ Yes ☐ No ☐ N/A Location in Text All streams are currently protected in KMC 18.55.400-.430 and all wetlands are generally protected in KMC 18.55.300-.330. Shoreline lakes are protected by the SMP in Title 16, Division I. Smaller lakes and ponds are not currently protected, except when they are fringed by protected wetlands or meet some other criteria for a fish and wildlife habitat of importance. The proposed revisions to the Streams sections, which will expand to cover other waters, would help fill that gap.
GOOD IDEAS **Non-regulatory measures** to protect or enhance functions and values of critical areas may be used to complement regulatory methods. These may include: • public education • stewardship programs • pursuing grant opportunities • water conservation • joint planning with other jurisdictions and non-profit organizations • stream and wetland restoration activities • transfer of development rights **No net loss** of critical area functions and values is a recommended approach for development regulations in WAC 365-196-830(4). If development regulations allow harm to critical areas, they should require compensatory mitigation of the harm. **Monitoring and adaptive management** is encouraged in WAC 365-195-905(6) to improve implementation of your regulations. Commerce will have a Monitoring chapter in the update to the Critical Areas Assistance Handbook. A draft for public review was made available in June 2017. Go to the project web page at Commerce Update to Critical Areas Guidance to view the draft chapter.	Are you using non-regulatory measures to protect critical areas? ☒ Yes ☐ No Location in Text: Do your regulations address no net loss and require compensatory mitigation? ☒ Yes ☐ No Location in Text: KMC 18.55.100, 18.55.200, 18.55.210, and others. Do you have a monitoring and adaptive management program for your CAO? ☐ Yes ☒ No Location in Text:

APPENDIX B

WASHINGTON DEPARTMENT OF ECOLOGY'S SHORELINE MASTER PROGRAM PERIODIC REVIEW CHECKLIST

Periodic Review Checklist

Introduction

This document is intended for use by counties, cities and towns conducting the "periodic review" of their Shoreline Master Programs (SMPs). This review is intended to keep SMPs current with amendments to state laws or rules, changes to local plans and regulations, and changes to address local circumstances, new information or improved data. The review is required under the Shoreline Management Act (SMA) at RCW 90.58.080(4). Ecology's rule outlining procedures for conducting these reviews is at WAC 173-26-090.

This checklist summarizes amendments to state law, rules and applicable updated guidance adopted between 2007 and 2017 that may trigger the need for local SMP amendments during periodic reviews.

How to use this checklist

See Section 2 of Ecology's *Periodic Review Checklist Guidance* document for a description of each item, relevant links, review considerations, and example language.

At the beginning: Use the review column to document review considerations and determine if local amendments are needed to maintain compliance. See WAC 173-26-090(3)(b)(i).

At the end: Use the checklist as a final summary identifying your final action, indicating where the SMP addresses applicable amended laws, or indicate where no action is needed. See WAC 173-26-090(3)(d)(ii)(D), and WAC 173-26-110(9)(b).

Local governments should coordinate with their assigned Ecology regional planner for more information on how to use this checklist and conduct the periodic review.

Row	Summary of change	Review	Action
2017			
a.	OFM adjusted the **cost threshold for substantial development** to $7,047.	No change required. KMC 16.75.010 links to RCW and WAC and does not specifically state exemptions.	None
b.	Ecology amended rules to clarify that the **definition of "development"** does not include dismantling or removing structures.	KMC 16.10.130 Development links to RCW 90.58 as hereafter amended. It should also link to definitions in WAC 173-27-030 and WAC 173-26-020.	Amend to reference rules.
c.	Ecology adopted rules that clarify **exceptions to local review under the SMA.**	KMC 16.75.010.C references WAC 173-27-050 regarding exceptions. The text should also reference new rules about exceptions and development not subject to the Shoreline Management Act per WAC 173-27-044 and WAC 173-27-045. Ecology provides example language for consideration.	Amend to reference exception rules or consider adding example Ecology language.
d.	Ecology amended rules that clarify **permit filing procedures** consistent with a 2011 statute.	Terms such as date of filing replace date of receipt (see KMC 16.75.080 for two references). Address concurrent filing requirements for SDP, CUP, Variance.	Amend to address new terminology and clarify permit process and submittal requirements.
e.	Ecology amended **forestry use regulations** to clarify that forest practices that only involves timber cutting are not SMA "developments" and do not require SDPs.	Forest Practices appear to be referenced in Critical Area Regulations but do not appear to be addressed in the SMP, potentially because of the urban condition of the shoreline and lack of applicability. Ecology has sample language. The reference to new WAC rules is optional.	Not applicable to shoreline conditions in Kenmore.
f.	Ecology clarified the SMA does not apply to lands under **exclusive federal jurisdiction**	Lands in exclusive federal jurisdiction include national parks or military bases.	Not applicable to shoreline conditions in Kenmore.

Row	Summary of change	Review	Action
g.	Ecology clarified "default" provisions for **nonconforming uses and development**.	Kenmore has adopted its own nonconforming rules at 16.75.050, and the Ecology clarifications do not apply. To the extent that Kenmore revisits its nonconforming rules it can consider the Ecology rules as a source of ideas.	No change required.
h.	Ecology adopted rule amendments to clarify the scope and process for conducting **periodic reviews**.	It is optional to reference the WAC rule on periodic reviews. Ecology has example language.	No change required.
i.	Ecology adopted a new rule creating an **optional SMP amendment process** that allows for a shared local/state public comment period.	It does not appear that the City's SMP regulations limit the potential for the joint review by the City and Ecology.	No change required.
j.	**Submittal** to Ecology of proposed SMP amendments.	It does not appear that the City's SMP regulations address submittal of SMP amendments to Ecology; consider whether to add reference to how Ecology defines the effective date of an SMP if helpful in interpretation.	No change required.
2016			
a.	The Legislature created a new shoreline permit exemption for retrofitting existing structures to comply with the **Americans with Disabilities Act**.	No change required. KMC 16.75.010 links to RCW and WAC and does not specifically state exemptions.	No change required.
b.	Ecology updated **wetlands critical areas guidance** including implementation guidance for the 2014 wetlands rating system.	Address changes in CAR and SMP.	Consider updated wetland guidance.
2015			
a.	The Legislature adopted a **90-day target** for local review of Washington State Department of Transportation (WSDOT) projects.	Optional to include permit review target. Ecology has example language.	Voluntary to address.

Row	Summary of change	Review	Action
2014			
a.	The Legislature raised the cost threshold for requiring a Substantial Development Permit (SDP) for **replacement docks on lakes and rivers** to $20,000 (from $10,000).	No change required. KMC 16.75.010 links to RCW and WAC and does not specifically state exemptions.	No change required.
b.	The Legislature created a new definition and policy for **floating on-water residences** legally established before 7/1/2014.	Confirm no existing floating residences; then not applicable.	To be confirmed no floating residences are found. If so then implement example Ecology language.
2012			
a.	The Legislature amended the SMA to clarify **SMP appeal procedures**.	Not applicable. SMP does not address appeal of the post-Ecology SMP deliberation.	No change required.
2011			
a.	Ecology adopted a rule requiring that wetlands be delineated in accordance with the approved **federal wetland delineation manual**.	Applicable rule to CAR; not specified in SMP.	Address in CAR Update.
b.	Ecology adopted rules for new commercial **geoduck aquaculture**.	Not applicable. No marine aquaculture.	None.
c.	The Legislature created a new definition and policy for **floating homes** permitted or legally established prior to January 1, 2011.	Amend definition of floating home in 16.10.200 to match definition. Confirm no existing floating homes; then other rules not applicable.	Amend definition. To be confirmed no floating homes are found.
d.	The Legislature authorized a new **option to classify existing structures as conforming**.	Consider whether revisions to nonconforming rules are desired. Optional approach.	Consider as part of review of nonconforming rules.
2010			
a.	The Legislature adopted **Growth Management Act – Shoreline Management Act clarifications**.	Not applicable. SMP adopted after 2010.	No action needed.
2009			
a.	The Legislature created new "relief" procedures for instances in which a **shoreline restoration project within a UGA** creates a shift in Ordinary High Water Mark.	Consider adding. It applies whether stated in SMP or not.	Add language optionally to encourage restoration.

Row	Summary of change	Review	Action
b.	Ecology adopted a rule for certifying **wetland mitigation banks**.	Addressed already in 18.55.330.I.	No action needed.
c.	The Legislature added **moratoria authority** and procedures to the SMA.	Procedures on moratoria are not required to be in an SMP.	No action needed.
2007			
a.	The Legislature clarified **options for defining "floodway"** as either the area that has been established in FEMA maps, or the floodway criteria set in the SMA.	KMC 16.10.220 Floodway appears to be similar to Option 2 in Ecology guidance but not identical.	Affirm that definition is appropriate.
b.	Ecology amended rules to clarify that comprehensively updated SMPs shall include a **list and map of streams and lakes** that are in shoreline jurisdiction.	List and Map is provided in Shoreline Element of Comprehensive Plan. List is not in municipal code.	No change required.
c.	Ecology's rule listing statutory exemptions from the requirement for an SDP was amended to include **fish habitat enhancement projects** that conform to the provisions of RCW 77.55.181.	KMC 16.75.010 links to RCW and WAC and does not specifically state exemptions.	No change required.

APPENDIX C

DENSITY TRANSFER CODE – KENMORE, WOODINVILLE, AND CHELAN

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C.1 KENMORE MUNICIPAL CODE 18.80.090 TRANSFER RULES

A. The number of density credits that a sending site is eligible to send to a receiving site shall be determined by applying the base density of the zone the sending site is located in to the total sending site area, less any portion of the sending site already in a conservation easement or other encumbrance, or any land area already used to calculate residential density for other development. A plot plan showing critical areas and buffers, conservation easements or other encumbrances shall be submitted as part of the development application to demonstrate compliance with the density calculation rules set forth in Chapter 18.30 KMC.

B. Sending sites with critical areas that have been declared unbuildable under Chapter 18.30 KMC shall be considered to have a base density calculated in accordance with that chapter, except that the areas of the sending and receiving sites shall be combined to calculate the overall site percentage of critical areas and buffers necessary for determining the allowable density credit as set forth in Chapter 18.55 KMC.

C. Density credits from one sending site may be allocated to more than one receiving site. The credit from each segment shall be allocated to a specified receiving site.

D. When the sending site consists only of a portion(s) of an unsubdivided parcel, said portion(s) shall be segregated from the remainder of the lot pursuant to KMC Title 17 or deed restrictions documenting the density credit transfers shall be recorded with the title to both the sending and receiving sites. A parcel need not segregate a sending site from the remainder of the parcel when the entire parcel is subject to a conservation easement pursuant to subsection E of this section.

E. Conservation easements shall be required for land contained in the sending site, whether or not such land is dedicated, as follows: a conservation easement as defined in the open space plan shall be recorded on the sending site to indicate development limitations on the sending site.

F. Upon submitting an application to develop a receiving site under the provisions of this chapter, the applicant shall provide evidence of ownership or full legal control of all sending sites proposed to be used in calculating total density on the receiving site. It shall be the applicant's responsibility, prior to application, to ascertain what form of permanent protection of the sending site will be acceptable to the City.

G. Density credits from a sending site shall be considered transferred to a receiving site when the sending site is permanently protected by a completed and recorded land dedication or conservation easement.

H. TDC developments shall comply with dimensional standards of the zone with a base density most closely comparable to the total approved density of the TDC development.

C.2 WOODINVILLE – CONSTRAINED SITE DENSITY TRANSFER

21.51.080 Subdivisions and density calculations within critical areas.

(1) Intent. The intent of this section is to provide for the preservation of critical areas and their buffers, flexibility in design, and consistent treatment of different types of development proposals.

(2) Subdivisions in Critical Areas. The subdivision and short subdivision of land including landslide and erosion hazard areas, frequently flooded areas, wetlands, streams, and fish or wildlife habitat conservation areas shall be subject to the following:

(a) Land that is located wholly within a critical area or its buffer may not be divided.

(b) Land that is located partially within a critical area or its buffer may be divided; provided, that the developable portion of each new lot and its access is located outside of the critical area or its buffer. Each resulting lot shall meet the minimum lot size and have sufficient buildable area outside of, and will not affect, the critical area or its buffer; and

(c) Access roads and utilities serving the proposed subdivision or short subdivision may only be permitted within the critical area and its buffers if the City determines that no other feasible alternative exists and when consistent with this chapter.

(3) On-Site Density Credits. For single-family residential subdivisions and short subdivisions on sites with critical areas or buffers, on-site density credits may be transferred from the critical area to a developable site area. In some cases, the maximum density credits may not be attainable due to other site constraints including, but not limited to, acreage constraints of the developable site area.

(a) For sites where up to 50 percent of the site is constrained by critical areas, up to 100 percent of the density that could be achieved on the constrained area portion of the site can be transferred to the developable portion of the property.

(b) For sites that are over 50 percent constrained by critical areas, up to 50 percent of the density that could be achieved on the constrained area portion of the site can be transferred to the developable portion of the property.

(4) Density Transfer. On-site density transfer is subject to the following:

(a) The density credit can only be transferred within the development proposal site. The on-site density transfer provided for in this section shall not be applied to allow density from a constrained site to be transferred to an unconstrained parcel, lot, or site when combined with a constrained site by subdivision, binding site plan, boundary line adjustment, or other means of land assemblage or arrangement for development.

(b) No additional density is allowed over the base density of the underlying zone.

(c) The minimum lot size and other dimensional requirements of the underlying zoning classification may be reduced to accommodate the transfers in densities per the following table:

Table 21.51.080(4)(c) – Reduced Dimensional Standards

Zone	Minimum Lot Size	Maximum Building Coverage	Minimum Landscape Coverage	Lot Width at Street
R-1	31,000 sf	15%	75%	100 ft/ 75 ft on cul-de-sac
R-4	7,200 sf	35%	50%	60 ft
R-6	5,000 sf	50%	25%	50 ft
R-8	4,600 sf	55%	20%	30 ft

(d) All other applicable dimensional requirements pursuant to WMC 21.22.030 shall be met.

(e) The area to which the density is transferred shall not be constrained by another critical area regulation.

(f) No portion of the critical area shall be included as part of the minimum lot size.

(g) The lot sizes shall not be averaged pursuant to WMC 21.22.170.

(h) No panhandle lots are permitted.

(5) Except as allowed by WMC 21.34.100, in no event shall a lot be less in size than specified by subsection (4) of this section.

C.3 CHELAN GEOLOGICALLY HAZARDOUS AREAS – STEEP SLOPES CLEARING LIMITS

CMC 14.10.060D.3.b.

v. Development may occur in steep slope areas only after the following standards have been met:

(A) Development must be located to minimize disturbance and removal of vegetation and also to protect the most sensitive areas (including areas of erosive soils, areas at risk of erosion by wind or water, and areas of dense vegetation) and retain open space. The use of continuous greenbelt areas shall be encouraged; and

(B) Structures must be clustered where possible to reduce disturbance and maintain natural topographic character. Common access driveways shall be considered as a means of reducing construction disturbances; and

(C) Where possible, structures must conform to the natural contour of the slope and foundations must be tiered to conform to existing topography of the site.

vi. Unless a grading plan prepared by a licensed civil engineer is provided and approved by the administrator, disturbance of a development site shall generally not exceed the following for the slope categories indicated:

Table 2: Maximum Amount of Slope That May Be Disturbed

Slope Category	Factor
Slopes 30 – 40% (60% of the site or more)	0.60
Slopes 40% + (also see landslide hazard area)	0.30

The overall amount of disturbance allowed on development sites which have any combination of the above slope categories shall be determined by the following formula:

[Square footage of the area within the slope category x slope factor] =
Total amount of allowable disturbance for that slope classification.

The total amount of allowable disturbance for the site is the sum of all the allowable disturbance totals for each slope category.

APPENDIX D

EXAMPLE RECREATION MANAGEMENT PLAN STANDARDS – CITY OF CHELAN

EXAMPLE RECREATION MANAGEMENT PLAN STANDARDS – CITY OF CHELAN

Along trails and within parks there will be a combination of exempt and substantial development permits needed over time for park and trail maintenance and rehabilitation that can be addressed comprehensively in a multi-year management plan. These management plans could be developed with new park master plans created under the Walkways and Waterways program. Recreation management plans are included in example SMPs for City of Chelan and City of Yakima. An example below illustrates Chelan's Recreation Management Plan requirements. It is processed as a Shoreline Substantial Development Permit:

> Management Plans. In order to simplify the future review of exempt and non-exempt activities that are or will be ongoing in association with new or redeveloped public parks and recreation proposals, the City shall develop and review five-year recreation management plans addressing public recreation facility operations and maintenance, use of best management practices, and other measures to assure no net loss of shoreline ecological function. Management plans are optional for existing public parks and recreation facilities or expansions of existing parks and recreation facilities. The City may require applicants for special event or temporary activities that have the potential to interfere with shoreline use or adversely alter shoreline ecological conditions to prepare a management plan.
>
> 1. New recreation proposals or redevelopment of park areas, or special events/temporary activities when required by the City, shall prepare a plan that shall minimally contain the following categories when applicable:
>
> a. Description of in-stream or in-lake habitat protection measures, and commitment to implement mitigation for any new or expanded development that has adverse impacts;
>
> b. Description of riparian and wetland protection measures, and commitment to implement mitigation for any new or expanded development that has adverse impacts;
>
> c. Description of site-appropriate water use management activities, including use of less water-dependent landscaping, maximizing the efficiency of the application system, and reducing the area irrigated;

d. Description of stormwater management practices to treat stormwater runoff to reduce both water quantity and water quality impacts, including maximizing use of infiltration, bio-filtration, and detention;

e. Description of erosion and sediment control practices that prevent off-site movement of sediment for new construction, stored soils, and potential surface erosion areas; and

f. Description of chemical and nutrient use and containment practices that demonstrate minimization of overall inputs of these contaminants, restrict the type of inputs, and develop an acceptable method of application through a comprehensive management program, such as Integrated Pest Management (IPM).

2. Each category specified in 1 above shall be comprised of one to several standards. Each standard should describe the management objective or desired outcome for habitat conditions, specific performance requirements for each standard, and corrective actions that would be implemented if the performance requirement(s) is not met.

APPENDIX E

SUGGESTED KMC 16.55.050 - DOCKS, PIERS, MOORAGE BUOYS, OR LAUNCHING FACILITIES.

~~16.55.050 DOCKS, PIERS, MOORAGE, BUOYS, FLOATS OR LAUNCHING FACILITIES~~ WATER ACCESS STRUCTURES.

A. All water access structures, including docks, piers, moorage buoys, floats or launching facilities, authorized by this chapter shall comply with the following general standards.

1~~A~~. Any water access structure ~~dock, pier, moorage, buoy, float or launching facility~~ authorized by this chapter shall not interfere with navigation.

2~~10~~. Existing habitat features (e.g., large and small woody debris, substrate material, etc.) shall be retained and new or expanded water access structures ~~moorage facilities and boat launches~~ placed to avoid disturbance of such features.

3~~11~~. Invasive aquatic weeds may be removed with nonchemical means only, except that milfoil may be removed using chemicals; provided, that the chemicals are applied by a licensed applicator and approved for aquatic use.

4~~12~~. In order to mitigate the impacts of new or expanded water access structures ~~commercial moorage facilities~~, the applicant shall develop a mitigation plan that contains one or more of the following measures as necessary to demonstrate no net loss of ecological functions:

a. Removal of any additional legal existing over-water and/or in-water structures that are not the subject of the application or are not otherwise required to be removed because they are not legal.

b. Planting of native vegetation along the shoreline immediately landward of the ordinary high water mark consisting of trees and/or shrubs native to Puget Sound lowlands.

c. Removal or ecological improvement of hardened shoreline, including existing launch ramps or hard structural shoreline stabilization. Improvements may consist of softening the face and toe of the stabilization with soil, gravel and/or cobbles and incorporating vegetation or large woody debris.

d. Removal of man-made debris or other material waterward of the ordinary high water mark that is detrimental to ecological functions and ecosystem-wide processes.

e. Participation in an approved mitigation banking or in-lieu-fee program.

~~may contain plant emergent vegetation (if site-appropriate) and a buffer of vegetation a minimum of 10 feet wide along the entire length of the lot immediately landward of the ordinary high water mark. Planting shall consist of native shrubs and trees and, when possible, emergent vegetation. At least five native trees will be~~

~~included in a planting plan containing one or more evergreen trees and two or more trees that like wet roots (e.g., willow species) per every 100 lineal feet of shoreline. Such planting shall be monitored for a period of five years according to an approved monitoring plan. This subsection is not intended to prevent reasonable access through the shoreline critical area buffer to the shoreline, or to prevent recreational use of the shoreline critical area. This requirement may be waived or reduced for water-dependent transportation uses where it is demonstrated that vegetation could result in safety or navigation hazards.~~

5~~13~~. No ~~private or public moorage facility or other~~ water access structure waterward of the ordinary high water mark, including structures attached thereto, shall be closer than 12 feet to any adjacent property line except when there is a mutual agreement of adjoining property owners. Excepted from the requirements of this section are boat lifts or portions of boat lifts that do not exceed 30 inches in height measured from the ordinary high water mark.

6~~15~~. No covered ~~boat lift, dock, pier, covered moorage, covered float, or other~~ covered water access structure is permitted waterward of the ordinary high water mark, except as provided below:

a. Submerged, free-standing mechanical boat lifts associated with single detached residential docks or piers and recreational watercraft may be covered with a canopy, provided:

(1) No canopy shall be more than 25 feet in length or wider than 15 feet;

(2) No portion of the canopy shall exceed a height of 12 feet above the ordinary high water mark;

(3) The canopy shall at no time have any side partly or wholly enclosed;

(4) The highest portion of the canopy shall be located below the lowest grade point on the waterward side of the existing homes on surrounding properties;

(5) Canopies shall be made out of ~~canvas or other such~~ nontoxic materials that allow light transmission;

~~(6) Canopies shall be of a translucent material to;~~

(6~~7~~) The total overwater coverage of the piers, floats, ramps, ells, and canopy for a single-family residence with a single-use moorage shall not exceed 600 square feet; and

(7~~8~~) Only one boat lift canopy per single detached residence shall be allowed.

b. Covered moorage may be provided for commercial boat repair facilities.

7~~14~~. Proposals to repair existing legally established ~~moorage facilities~~ water access structures which disturb less than 75 percent of the structure ~~where the nature of the repair is not described in KMC 16.55.030~~ shall be considered minor repairs and are permitted, consistent with any applicable standards of this title, KMC Title 18 and any other applicable codes or regulations. Proposals to repair existing legally established water access structures which disturb 75 percent or more of the structure shall be reviewed as a new structure which must comply with all standards in this chapter. **[NOTE: there is no mention of moorage repair threshold in 15.55.030]**

8~~16~~. No dwelling unit may be constructed on a dock or pier.

B. Any ~~dock, pier, moorage, buoy, float or launching~~ moorage facility authorized by this chapter shall be subject to the following requirements:

Element	**Overwater Structure Dimensional and Design Standards**	
	Lake Washington	**Sammamish River**
General	• No skirting is allowed on any structure. • When steel piles are installed, approved sound attenuation measures must be used. • Only one ~~boat lift,~~ dock~~,~~ or pier~~, moorage, buoy, float and launching facility~~ may be permitted for each parcel developed with a single detached residential unit and only if the applicant demonstrates there is no other feasible option for shared use facilities. • Only joint-use docks or piers are allowed on lots with less than 50 feet of waterfront except when lots abutting both sides of the subject lot already have a dock or pier. • Only joint use boat lift, dock, pier, moorage~~,~~ buoys, float or launching facilities may be permitted for multiple-family dwelling unit development proposals. • Docks~~,~~ or piers~~, moorage, buoy, float or launching facility~~ serving more than four single-family residences must also meet the standards in KMC 16.50.050. • Docks~~,~~ or piers~~, moorage, buoy, float or launching facility~~ shall not exceed the minimum size necessary to serve the use for which they are designed. • An alternative design in lieu of meeting these requirements may be allowed without a Shoreline Variance if approved by other state and federal agencies, provided any impacts are appropriately mitigated and the facility does not interfere with public use of the shoreline.	
Maximum Area: surface coverage of over-water structures, not including the ramp	• Docks~~,~~ or piers~~, moorage, buoy, float or launching facility~~ shall not exceed the minimum size necessary to serve the use for which they are designed • 480 sq. ft. for single residential unit • 700 sq. ft. for joint-use facility used by 2 residential units • 1,000 sq. ft. for joint-use facility used by 3 or more residential units	• Docks~~,~~ or piers~~, moorage, buoy, float or launching facility~~ shall not exceed the minimum size necessary to serve the use for which they are designed • 120 sq. ft. for single residential unit • 240 sq. ft. for joint-use facility used by 2 residential units • 360 sq. ft. for joint-use facility used by 3 residential units • 480 sq. ft. for joint-use facility used by 4 residential units
Maximum Width	Residential up to 4 Units • 4 ft. for pier	Residential up to 4 Units • 4 ft. for ramp

Element	**Overwater Structure Dimensional and Design Standards**	
	Lake Washington	**Sammamish River**
	• 4 ~~3~~ ft. for ramp • 6 ft. for ell and float Public, Commercial or More than 4 Units • 6 ft. for main walkway, 4 ft. for perpendicular fingers • 5 ft. for ramp • 8 ft. for ell and float.	• 6 ft. for float Public, Commercial or More than 4 Units • 4 ft. for ramp • 6 ft. for float
Maximum Length	• ~~20 ft. for ells with a 2-foot-wide strip of grating down the center; or~~ 26 ft. for ells ~~with grating over the entire ell~~ • 20 ft. for floats ~~with a 2-foot-wide strip of grating down the center.~~ • In no case may any moorage facility extend more than 150 feet waterward of the ordinary high water mark.	• 20 ft. per float per residential unit, and laid end-to-end. The maximum length is thus 20 ft., 40 ft., 60 ft., and 80 ft. for facilities serving 1, 2, 3 and 4 residential units, respectively. Floats may be perpendicular to shore only within existing embayments off of the main river channel. • Minimum length necessary for ramp to provide safe access to the float. The length of the ramp and the distance between the float and the OHWM are determined by the height of the bank above the OHWM and the distance waterward of the OHWM needed to place the float and a boat at a depth that does not result in grounding of the float or boat on the substrate or disturbance of the substrate by boat propeller action.
Decking and Material Standards	• Ramps shall be fully grated. • Piers and docks, including ells and perpendicular fingers, shall be fully grated.	• Floats shall be fully grated on all deck surfaces not underlain by float tubs, with a maximum area of float tub of 70 percent of the total float area. The number and area of float tubs shall be minimized to the amount necessary based on design and engineering considerations. • Ramps shall be fully grated. • All float tubs shall be fully encapsulated.
	• The grating must be either multi-directional grating with a minimum of 40% open space or square grating with a minimum of 60% open space. Provide documentation to show amount of % open area. • Grating openings should be oriented lengthwise in the east-west direction to the maximum extent practicable.	
Location	• The only structures permitted in the first 30 feet waterward of the ordinary high water mark are piers and ramps.	• Floats shall be located no less than 5 feet and no more than 10 feet from the ordinary high water mark measured from the landward edge of the float. To avoid interfering with river navigation and public use of the

Element	**Overwater Structure Dimensional and Design Standards**	
	Lake Washington	**Sammamish River**
	• All floats and ells must be at least 30 feet waterward of the ordinary high water mark.	water, private moorage facilities may extend no farther waterward than one-third the width of the river in the location of the proposed structure. • The Shoreline Administrator may allow floats to be positioned up to an additional 10 feet waterward from the ordinary high water mark as needed to reach a sufficient boat moorage depth (greater than 3 feet). • Floats shall be located at least 50 feet from the mouth of any named or numbered tributary entering the Sammamish River. • Private moorage facilities shall be located at least ten feet from the extended side property lines, except for joint-use structures, which may abut property lines provided that adjacent property owners have mutually agreed to the structure location.
Piles	• The first (nearest shore) piling shall be steel, 4-inch-diameter ~~piling,~~ or the smallest diameter necessary to serve the specific structure as demonstrated by an engineer, and at least 18 feet waterward of the ordinary high water mark. • Piling sets beyond the first are not required to be steel, shall be spaced at least 18 feet apart and shall not be greater than 12 inches in diameter unless required per project-specific engineering analysis.	• No more than two anchor piles shall be allowed per private moorage facility (joint-use, public or commercial facilities may have two piles per 20 feet of float length, but the number of piling for such facilities shall be the minimum number given site-specific engineering and design considerations). • Anchor piles shall be the minimum size feasible given site-specific engineering and design considerations, but in no case shall anchor piles be greater than 12 inches in diameter.
Materials	• Any paint, stain or preservative applied to components of the overwater structure must be leach-resistant, completely dried or cured prior to installation. • Materials shall not be treated with pentachlorophenol, creosote, chromated copper arsenate (CCA) or comparably toxic compounds as outlined in the latest edition of the Western Wood Preservers Institute Best Management Practices for the Use of Treated Wood in Aquatic and Sensitive Areas. • If ACZA piling are proposed, the applicant will meet all of the Best Management Practices, including a post-treatment procedure, as outlined in the amended Best Management Practices of the Western Wood Preservers.	
Boatlifts	• One free-standing or floating boatlift with a canopy is allowed per detached dwelling unit.	• One free-standing or floating boatlift is allowed per detached dwelling unit OR

Element	**Overwater Structure Dimensional and Design Standards**	
	Lake Washington	**Sammamish River**
	• Additional watercraft lifts, without a canopy, at a single residential use waterfront structure is allowed, not to exceed three and only two can be ground-based; all other lift(s) must be floating or suspended lift(s).	• 2 jet ski lifts or 1 fully grated platform lift is allowed per detached dwelling unit • Boatlift-mounted canopies are prohibited. • Boatlifts shall be located on the waterward side of the dock. • A maximum of 2 cubic yards of fill are permitted to anchor a boatlift, subject to the following requirements: – May only be used if the substrate prevents the use of anchoring devices that can be embedded into the substrate – Must be clean – Must consist of rock or pre-cast concrete blocks – Must only be used to anchor the boatlift – Minimum amount of fill is utilized to anchor the boatlift
Mooring Buoys	• No more than one (1) mooring buoy is permitted per detached dwelling unit, in lieu of a dock. • Mooring buoys may not interfere with navigation. • The use of buoys for moorage of recreational and commercial vessels is preferred over pilings or float structures. • Buoys shall be located and managed in a manner that minimizes impacts to aquatic habitat. • No more than four buoys per acre are allowed.	

C. Any boat launch authorized by this chapter shall be subject to the following requirements:

1. Location Standards

a. Boat launches shall be sited so that they do not significantly damage fish and wildlife habitats and shall not occur in areas with native emergent vegetation. Removal of native upland vegetation shall be minimized to the greatest extent feasible.

b. Boat launches shall not be approved in cases when it can be reasonably foreseen that the development or use would require maintenance dredging during the life of the development or use.

c. Motorized boat launches shall be separated from existing designated swimming areas and other water access structures on adjacent properties by a minimum of 25 feet.

d. Motorized boat launches shall be located only at sites with suitable transportation access. The applicant must demonstrate that the streets serving the boat launch can safely handle traffic generated by such a facility, and that parking for vehicles and attached trails is sufficient.

e. Motorized boat launches shall be located farther than 50 feet from the outlet of a stream, including piped streams.

2. Size – The applicant shall demonstrate that the proposed size of the boat launch is the minimum necessary to safely launch the intended craft.

3. Design Standards

a. Nonmotorized boat launches shall be constructed of gravel or other similar natural material.

b. Motorized boat launch designs, in order of preference, are:

(1) Open grid with minimum coverage of substrate.

(2) Seasonal ramps that can be removed and stored upland.

(3) Structures with segmented pads and flexible connections that leave space for natural beach substrate and can adapt to changes in shoreline profile.

4. Boat launches shall provide trailer spaces, at least 10 feet by 40 feet, commensurate with projected demand.

[NOTE: the following text 1 – 9 and 17, with amendments, incorporated into new table above. 10-16 is incorporated, with amendments, into 16.55.050 above]

~~1. Docks, piers, moorage, buoys, floats or launching facilities shall not exceed the minimum size necessary to serve the use for which they are designed (see KMC 16.55.030(B)(4)).~~

~~2. Docks, piers, moorage, buoys, floats or launching facilities serving more than four single-family residences must also meet the standards in KMC 16.50.050.~~

~~3. Only joint use boat lift, dock, pier, moorage, buoys, float or launching facilities may be permitted for multiple-family dwelling unit development proposals.~~

~~4. Only one boat lift, dock, pier, moorage, buoy, float and launching facility may be permitted for each parcel developed with a single detached residential unit and only if the applicant demonstrates there is no other feasible option for shared use facilities. However, installation or retention of additional watercraft lifts beyond one, without a~~

~~canopy, at a single residential use waterfront structure is allowed. A maximum of three lifts are allowed at a single residential use overwater structure. However, only two lifts can be ground-based; all other lift(s) must be floating or suspended lift(s).~~

~~5. Only joint use docks or piers are allowed on lots with less than 50 feet of waterfront except when lots abutting both sides of the subject lot already have a dock or pier.~~

~~6. The only structures permitted in the first 30 feet waterward of the ordinary high water mark are piers and ramps. All floats and ells must be at least 30 feet waterward of the ordinary high water mark.~~

~~7. No skirting is allowed on any structure.~~

~~8. Surface coverage (includes all overwater portions of the floats, ramps, and ells) shall be limited as follows:~~

~~a. Moorage facilities serving only one residential waterfront lot shall not exceed 480 square feet;~~

~~b. Moorage facilities serving two residential waterfront lots shall not exceed 700 square feet; and~~

~~c. Moorage facilities serving three or more residential waterfront lots shall not exceed 1,000 square feet.~~

~~9. To protect anadromous salmon habitat, the following shall apply:~~

~~a. Docks with configurations that do not include any or all of the following elements shall be subject to the overall length and square footage limitations of this section and no portion of the dock shall exceed four feet in width, unless allowed in this subsection;~~

~~b. Piers shall not exceed four feet wide and shall be fully grated;~~

~~c. Ramps shall not exceed three feet wide and shall be fully grated;~~

~~d. Ells are allowed only over water with depths of nine feet or greater at the landward end of the ell; ells may be up to six feet wide by 20 feet long with a two-foot-wide strip of grating down the center; or ells may be up to six feet wide by 26 feet long with grating over the entire ell;~~

~~e. Floats are allowed only over water with depths of 10 feet or greater at the landward end of the float; and floats may be up to six feet wide by 20 feet long with a two-foot-wide strip of grating down the center;~~

~~f. In no case may any moorage facility extend more than 150 feet waterward of the ordinary high water mark;~~

~~g. The first (nearest shore) piling shall be steel, four-inch piling and at least 18 feet waterward of the ordinary high water mark. Piling sets beyond the first are not required to be steel, shall be spaced at least 18 feet apart and shall not be greater than 12 inches in diameter;~~

~~h. Piles shall not be treated with pentachlorophenol, creosote, chromated copper arsenate or comparably toxic compounds. If ammoniacal copper zinc arsenate pilings are proposed, the applicant will meet all of the best management practices, including a post-treatment procedure, as outlined in the amended Best Management Practices of the Western Wood Preservers; and~~

~~i. When steel piles are installed, approved sound attenuation measures must be used.~~

~~10. Existing habitat features (e.g., large and small woody debris, substrate material, etc.) shall be retained and new or expanded moorage facilities and boat launches placed to avoid disturbance of such features.~~

~~11. Invasive aquatic weeds may be removed with nonchemical means only, except that milfoil may be removed using chemicals; provided, that the chemicals are applied by a licensed applicator and approved for aquatic use.~~

~~12. In order to mitigate the impacts of new or expanded commercial moorage facilities, the applicant shall plant emergent vegetation (if site-appropriate) and a buffer of vegetation a minimum of 10 feet wide along the entire length of the lot immediately landward of the ordinary high water mark. Planting shall consist of native shrubs and trees and, when possible, emergent vegetation. At least five native trees will be included in a planting plan containing one or more evergreen trees and two or more trees that like wet roots (e.g., willow species) per every 100 lineal feet of shoreline. Such planting shall be monitored for a period of five years according to an approved monitoring plan. This subsection is not intended to prevent reasonable access through the shoreline critical area buffer to the shoreline, or to prevent recreational use of the shoreline critical area. This requirement may be waived or reduced for water-dependent transportation uses where it is demonstrated that vegetation could result in safety or navigation hazards.~~

~~13. No private or public moorage facility or other structure waterward of the ordinary high water mark, including structures attached thereto, shall be closer than 12 feet to any adjacent property line except when there is a mutual agreement of adjoining property owners. Excepted from the requirements of this section are boat lifts or portions of boat lifts that do not exceed 30 inches in height measured from the ordinary high water mark.~~

~~14. Proposals to repair existing legally established moorage facilities where the nature of the repair is not described in KMC 16.55.030 shall be considered minor repairs and are permitted, consistent with any applicable standards of this title, KMC Title 18 and any other applicable codes or regulations.~~

~~15. No covered boat lift, dock, pier, covered moorage, covered float, or other covered structure is permitted waterward of the ordinary high water mark, except as provided below:~~

~~a. Submerged, free-standing mechanical boat lifts associated with single detached residential docks or piers and recreational watercraft may be covered with a canopy, provided:~~

~~(1) No canopy shall be more than 25 feet in length or wider than 15 feet;~~

~~(2) No portion of the canopy shall exceed a height of 12 feet above the ordinary high water mark;~~

~~(3) The canopy shall at no time have any side partly or wholly enclosed;~~

~~(4) The highest portion of the canopy shall be located below the lowest grade point on the waterward side of the existing homes on surrounding properties;~~

~~(5) Canopies shall be made out of canvas or other such nontoxic materials;~~

~~(6) Canopies shall be of a translucent material to allow light transmission;~~

~~(7) The total overwater coverage of the piers, floats, ramps, ells, and canopy for a single-family residence with a single-use moorage shall not exceed 600 square feet; and~~

~~(8) Only one boat lift canopy per single detached residence shall be allowed.~~

~~b. Covered moorage may be provided for commercial boat repair facilities.~~

~~16. No dwelling unit may be constructed on a dock or pier.~~

~~17. Buoys shall meet the following conditions:~~

~~a. Buoys shall not impede navigation;~~

~~b. The use of buoys for moorage of recreational and commercial vessels is preferred over pilings or float structures;~~

~~c. Buoys shall be located and managed in a manner that minimizes impacts to aquatic habitat;~~

~~d. No more than four buoys per acre are allowed.~~ [this text incorporated into new table above]

D~~C~~. Proposals that do not meet the requirements of ~~subsection (B)(6), (B)(8), (B)(9) or (B)(15) of~~ this section and that are designed to support a commercial or manufacturing water-dependent use, ~~or~~ to provide public access, or to serve residential uses, may be considered by the director. For any alternative proposal, the applicant must demonstrate that the proposed deviation is the minimum necessary to meet the needs of the specific use proposed, and provides an equal or greater degree of protection of ecological functions and anadromous species habitat than would strict adherence to the standards. For purposes of meeting this requirement, the director will review the required habitat management plan to determine whether the project is adequately protective. **[NOTE: unclear – is this process intended to avoid a Variance?]**