



Staff Report City of Lake Stevens Planning Commission

Planning Commission Briefing

Date: **February 3, 2016**

Subject: **Amendments to the City of Lake Stevens Critical Areas Regulations**

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SUMMARY:

Second briefing to the Planning Commission regarding proposed amendments to the City of Lake Stevens Critical Areas Regulations as mandated and outlined by RCW 36.70A.130 as part of the Comprehensive Plan update process.

ACTION REQUESTED OF PLANNING COMMISSION:

This is an informational briefing and no action is requested at this time.

BACKGROUND / DISCUSSION:

The Growth Management Act of Washington requires cities and counties review their critical area ordinances as part of their mandatory Comprehensive Plan update under RCW 36.70A.130 (1) and (5). City of Lake Stevens Planning and Community Development staff have completed a review of the entire Critical Areas regulation Chapter 14.88 LSMC and are proposing some minor updates to the full chapter in addition to modest updates for permitting process clarification and inclusion of the 2014 changes to the Wetland Rating System for Western Washington manual.

The Washington State Department of Ecology (DOE) has recently made significant changes to the Wetland Rating System for Western Washington manual which became effective January 1, 2015. The changes were based on best available science and a better understanding of wetland ecological functions after reviewing results of an analysis of 211 wetland sites in eastern and western Washington. According to DOE, the changes to the rating system offer a more accurate characterization wetland functions based on the wetland characterization and rating.

Summary of Wetland Rating System Differences:

It should be noted that DOE essentially kept the structure of the Wetland Rating System the same with the update. Wetlands are still categorized as either I, II, III, or IV based on the rating of three wetland functions:

1. Water Quality
2. Hydrologic Functions
3. Habitat Functions

Five of the original criteria for establishing categorization have also been kept:

1. Sensitivity to Disturbance
2. Rarity
3. National Heritage Wetlands
4. Ability to replace
5. Functions provided by the wetland

The presence of federal or state listed threatened or endangered (T/E) species and wetlands of local significance have been dropped from the categorization criteria, because these criteria for local significance have rarely been used in the past.

There are three major changes to the DOE Wetland Scoring System relevant to the geography of Lake Stevens. First, the scoring range has been modified from 1 – 100 to 9 – 27, which reflects the scientific accuracy of the scoring tools. The scoring system has also changed to allow the reviewer to qualitatively rate the questions into low, medium and high ranges before assigning scores. Lastly, the Opportunity section of the scoring system has been replaced with two new sections – Landscape Potential and Landscape Value. Specifying the habitat potential and value of the wetlands allow a better evaluation method.

Summary of Proposed Code Changes:

The proposed changes (**Attachment A**) constitute the general scope of the Critical Areas Regulations update, mandated as part of the scheduled Comprehensive Plan Update. Many of the proposed changes to Chapter 14.88 LSMC are designed to improve clarity. The entire Critical Areas Chapter has been reviewed for language consistency with regards to critical areas and buffers. Data criteria for Mitigation Reports have been added to include existing and proposed site conditions, critical area and buffer impacts, and Best Available Science used in the report preparation in addition to requiring applicants to provide timing, duration and location of all phases of the mitigation plan.

Staff has added language to LSMC 14.88.278 to clarify the performance bond requirements for mitigation plan completion, which now includes the cost of monitoring in addition to the mitigation activity and plant schedules. Language has also been added to ensure that all permit conditions, code requirements and the standards bonded have been met prior to the conversion to a maintenance surety at twenty percent of the performance bond.

Section LSMC 14.88.290 has been re-titled “Critical Areas Tracts and Easements – Notice on Title”. New language makes it clear that all critical areas and buffers shall be protected by establishing Native Growth Protection Areas clarifies when critical areas and buffers are to be placed in tracts versus when they should be placed in easements. Staff is proposing to delete the requirement to dedicate NGPA tracts to the city for mitigation projects as well as the option of dedicating other non-mitigation NGPA’s to the city. This is in line with other local jurisdictions such as Mill Creek, Snohomish and Everett, which require HOA or land trust ownership as opposed to dedication to the city.

Other proposed changes to the General Requirements section of Chapter 14.88 LSMC include removing the five acre threshold for on-site density transfers as staff could not find a scientific basis for the lot size trigger. Research was performed on BAS documents and other local jurisdiction codes to determine whether the lot size threshold should remain, or if it could be removed. Staff is proposing to remove the five acre minimum lot size, and have added Category II, III and IV wetlands, Fish and Wildlife Conservation areas and geologically hazardous areas not approved for alteration to the areas allowed for density transfer. Density and dimension requirements have also

been added to assist in processing and permitting the density transfer. Planning Commission can consider other options for the dimensions applied to density transfers. Staff has provided examples of other local jurisdictions' density transfer allowances for critical areas in **Attachment B**.

Innovative Design criteria has been added to Fish and Wildlife Conservation areas mitigation subsection LSMC 14.88.440. Staff researched BAS documents to draft innovative design guidelines based on the habitat and hydrology functions of streams and their buffers. Providing specific desired goals for the innovative design gives staff specific goals to base approval decisions in the review process. Innovative Design criteria has also been added to the Wetland mitigation subsection LSMC 14.88.840, and like the Fish and Wildlife Conservation criteria they are based on BAS and require the applicant to show improvement to the functions and values of the wetland and buffer areas for approval.

Updates to Chapter 14.88 LSMC - Part VII Wetlands have been made to adopt and reference the new Wetland Rating System manual and DOE publication number. Table 14.88-II has been updated to reflect the new DOE scoring changes and the requirements in LSMC 14.88.830 have been changed to accommodate the new scoring system. This section has been fully reviewed to remove and correct references to the old scoring system and DOE publications.

DOE provided quantitative data from 111 wetlands originally used to calibrate scoring in the 2004 manual, which compared the distribution of their determined categories in 2004 to their distribution under the 2014 scoring system (**Attachment C**). In order to better understand the local impacts of the new scoring system buffer widths compared to the 2004 system, staff contacted consultants to perform wetland scoring on five recent projects that used the 2004 system (**Attachment D**). With only fourteen wetlands reviewed, there is not enough data to produce quantitative or conclusive results, but the results do reflect trends consistent with the DOE analysis. Buffer widths that were reduced by the 2014 scoring system are shown in red, while buffer widths that were increased by the 2014 scoring system are shown in blue. The increased widths resulted from higher habitat scores that warrant more protection according to the DOE.

Project	Wetland ID	Size (Acres)	2004 Habitat Score	2004 Total Score	2004 Rating	2004 Buffer Width	2014 Habitat Score	2014 Total Score	2014 Rating	2014 Buffer Width
Grade Road	A	0.18	14	28	Category IV	35	5	14	Category IV	35
	B	0.61	10	38	Category III	50	4	15	Category IV	35
	C/D	2.16	12	32	Category III	50	5	15	Category IV	35
	E	1.59	13	33	Category III	50	5	15	Category IV	35
	F	0.31	13	27	Category IV	35	5	13	Category IV	35
	H	0.17	13	33	Category III	50	5	15	Category IV	35
20th Street SE Phase II	3	3.23	14	36	Category III	50	7	18	Category III	95
	4	0.56	15	43	Category III	50	6	17	Category III	95
	5	0.11	12	35	Category III	50	5	17	Category III	95
	7	0.09	12	37	Category III	50	5	17	Category III	95
Trestle Station	A	2.7	17	37	Category III	50	6	19	Category III	95
	B	0.05	14	18	Category IV	35	5	15	Category IV	35
McKay Subdivision	A	1.25	20	35	Category III	95	8	15	Category IV	35
S & G Plat	A	0.06	14	31	Category III	50	5	14	Category IV	35

Sources: Pertteet Inc., Wetland Resources

One wetland was re-categorized from a Category III to a Category IV and buffer width was reduced from 95 feet to 35 feet. Five wetlands were re-categorized from Category III's to Category IV's and buffer widths were reduced from 50 feet to 35 feet. Five Category III wetlands required wider buffers under the 2014 system due to the increased habitat scores. DOE has provided conversion tables for jurisdictions to use when updating their critical areas regulations to the 2014 system.

Tables for converting category scores

2004	Western WA	2014		2004	Eastern WA	2014
≥ 70	Category I	23-27		≥ 70	Category I	22-27
51-69	Category II	20-22		51-69	Category II	19-21
30-50	Category III	16-19		30-50	Category III	16-18
<30	Category IV	9-15		<30	Category IV	9-15

Tables for converting function scores

2004	Final Habitat Score	2014		2004	Final Water Quality Score	2014
29-36	High	8-9		24-32	High	8-9
20-28	Medium	5-7				
≤ 19	Low	3-4				

Source: Department of Ecology (<http://www.ecy.wa.gov/programs/sea/wetlands/ratingsystems/2014updates.html>)

DOE is also recommending wider buffer widths under the 2014 rating system and higher mitigation ratios for forested Category I wetlands and other Category II wetlands. Staff is not proposing to increase buffer widths or mitigation ratios at this time, but will provide this information to City Council for direction prior to Planning Commission's final briefing.

Staff is seeking feedback on the proposed changes to the Critical Areas Chapter 14.88 LSMC and will be returning for a 3rd briefing on February 17th. The drafted code changes fall under the scope presented to the Planning Commission on December 5, 2015, and will bring the City into compliance with RCW 37.70A.130 (1) and (5).

STAFF RECOMMENDATION:

No recommendation at this time as this is only a briefing to familiarize Planning Commissioners with the proposed code changes.

ACTION REQUESTED OF PLANNING COMMISSION:

No action at this time as this is only a briefing. Staff is scheduled to return for a third briefing on February 17, 2016.

ATTACHMENTS:

A – Proposed Code Changes to Chapter 14.88 LSMC

B – Density Transfer Allowance Comparison

C – DOE Distribution of Wetland Categories 2004 v. 2014

D – Pertteet Wetland Scoring Memo January 15, 2016

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Draft Changes to LSMC 14.88 Critical Areas

Part I. Purpose and Intent

14.88.010 Purpose and Intent.

The purpose of this chapter is to designate, classify, and protect the critical areas of the Lake Stevens community by establishing regulations and standards for development and use of properties which contain or adjoin critical areas for protection of the public health, safety, and welfare. The purpose and intent of this chapter is also to ensure that there is no net loss of the acreage or functions and values of critical areas regulated by this chapter.

- (a) A project proponent shall make all reasonable efforts to avoid and minimize impacts to critical areas and buffers in the following sequential order of preference:
- (1) Avoiding impacts altogether by not taking a certain action or parts of an action; or
 - (2) When avoidance is not possible, minimizing impacts by limiting the degree or magnitude of the action and its implementation, using appropriate technology, or by taking affirmative steps, such as project redesign, relocations, or timing, to avoid or reduce impacts and mitigating for the affected functions and values of the critical area; and
 - (3) Reducing or eliminating impacts over time by preservation and maintenance operations during the life of the action.
 - (4) Compensating for unavoidable impacts by replacing, enhancing or providing substitute resources or environments.
- (b) Protect the public from personal injury, loss of life, or property damage due to flooding, erosion, landslides, seismic events, or soil subsidence.
- (c) Protect against publicly financed expenditures due to the misuse of critical areas which cause:
- (1) Unnecessary maintenance and replacement of public facilities;
 - (2) Publicly funded mitigation of avoidable impacts;
 - (3) Cost for public emergency rescue and relief operations where the causes are avoidable;
 - (4) Degradation of the natural environment.
- (d) Protect aquatic resources.
- (e) Protect unique, fragile, and valuable elements of the environment, including wildlife and its habitat.
- (f) Alert appraisers, assessors, owners, potential buyers, or lessees to the development limitations of critical areas.
- (g) Provide City officials with sufficient information to adequately protect critical areas when approving, conditioning, or denying public or private development proposals.
- (h) Give guidance to the development of Comprehensive Plan policies in regard to the natural systems and environment of the Lake Stevens Watershed.

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(i) Provide property owners and developers with succinct information regarding the City's requirements for property development. (Ord. 903, Sec. 51, 2013; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

Part II. Definitions

14.88.100 Definitions.

The definitions related to critical areas are included in Chapter [14.08](#). (Ord. 855, Secs. 3, 23, 2011; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007; Ord. 590, 1998; Ord. 468, 1995)

Part III. General Provisions

14.88.200 Applicability.

The provisions of this chapter apply to all lands, land uses and development activity within the City. No action shall be taken by any person which results in any alteration of any critical areas except as consistent with the purposes, objectives, and goals of this chapter. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.210 Regulated Activities.

(a) All land use and/or development activities on lands containing critical areas are subject to this chapter and are prohibited unless:

- (1) The use or activity is found to be exempt by the Planning and Community Development Director per the "allowed activities" sections of this chapter; or
- (2) The use or activity meets the performance standards found in the "requirements" sections of this chapter; or
- (3) It can be demonstrated that the denial of authorization of such an activity would deny all reasonable economic uses, as demonstrated per Section [14.88.310](#). In such a case, approval in writing shall be issued by the Planning and Community Development Director. Approval of a reasonable economic use must be attached to another type of development permit obtained from the City of Lake Stevens prior to undertaking the regulated activity in the critical area or its buffer.

(b) Land use and development activities include, but are not limited to, the following activities:

- (1) The removal, excavation, grading, or dredging of soil, sand, gravel, minerals, organic matter, or material of any kind.
- (2) The dumping, discharging, or filling with any material.
- (3) The draining, flooding, or disturbing of the water level or water table.
- (4) The driving of pilings.
- (5) The placing of obstructions.
- (6) The construction, reconstruction, demolition, or expansion of any structure.

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(7) The destruction or alteration of vegetation in a critical area through clearing, harvesting, shading, intentional burning, or planting of vegetation that would alter the character of a critical area; provided, that these activities are not part of a forest practice governed under Chapter [76.09](#) RCW and its rules.

(8) Activities that result in a significant change of water temperature, a significant change of physical or chemical characteristics of water sources, including quantity, or the introduction of pollutants. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.220 Allowed Activities.

Unless specifically prohibited elsewhere in this chapter, the following uses are allowed in any critical area or buffer; provided, that site/resource-specific reports prepared to describe the environmental limitations of and proposed mitigation for the site shall be submitted, reviewed, and approved by the City prior to permit issuance or land use approval:

(a) Education, scientific research, and construction and use of nature trails; provided, that they are proposed only within the outer 25 percent of the ~~wetland~~ critical area buffers, except that trails may be located within the remainder of the critical area buffer when it is demonstrated through the site/resource-specific report that:

(1) No other alternative for the trail location exists which would provide the same educational and/or scientific research opportunities; and

(2) The critical area functions and values will not be diminished as a result of the trail; and

(3) The materials used to construct the trail will not harm the critical area; and

(4) Land disturbance is minimized to the greatest extent possible; and

(5) Where possible, the number of trails allowed in critical area buffers shall be limited.

(b) Navigation aids and boundary markers.

(c) Site investigative work necessary for land use application submittals such as surveys, soil logs, percolation tests and other related activities. In every case, impacts shall be minimized and disturbed areas shall be immediately restored.

(d) Normal maintenance, repair, or operation of existing structures, facilities, or improved areas.

(e) Installation or construction of City road right-of-way; or installation, replacement, operation, repair, alteration, or relocation of all water, natural gas, cable communication, telephone, or other utility lines, pipes, mains, equipment or appurtenances, not including substations or other buildings, only when required by the City and approved by the Planning and Community Development Director and when avoidance of critical areas and impact minimization has been addressed during the siting of roads and other utilities and a detailed report/mitigation plan is submitted, reviewed, and approved by the City prior to permit issuance or land use approval.

(f) Minor expansion of uses or structures existing at the time of adoption of this code, and which are in compliance with all other chapters of this title; provided, that the applicant obtains all required local, State, and Federal permits, including but not limited to a Department of Fish and Wildlife Hydraulic Permit and a Clean Water Act 404 Permit and the expansion does not create a loss of ~~wetland~~ critical

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area and functions nor pose a significant threat to water quality. A site/resource-specific report and mitigation plan shall be prepared to describe the ~~wetland~~ critical area, function, and water quality and submitted to the City for review and approval prior to permit issuance. For the purposes of this subsection, “minor expansion” refers to an addition to or alteration of a use or structure and shall be limited to a maximum of 1,000 square feet of impervious area.

(g) Stormwater Management Facilities. Where buffers and setbacks are larger than 50 feet and slopes are less than 15 percent, stormwater management facilities, limited to stormwater dispersion outfalls and bioswales, may be allowed within the outer 25 percent of the buffer, when location of such facilities will not degrade the function or values of the ~~wetland~~ critical area.

(h) Emergency Activities. Those activities that are necessary to prevent an immediate threat to public health, safety, or welfare or pose an immediate risk of damage to private property, and that require remedial or preventative action in a time frame too short to allow for compliance with the requirements of this chapter. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.230 Compliance.

All land uses or development applications shall be reviewed to determine whether or not a critical area exists on the property for which the application is filed, what the action’s impacts to any existing critical area would be, and what actions are required for compliance with this chapter. No construction activity, including land clearing or grading, shall be permitted until the information required by this section is reviewed and a plan is approved by the City. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.235 Best Available Science.

(a) Criteria for Best Available Science. The best available science is that 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](#).

(b) Protection of Functions and Values and Fish Usage. Critical area studies and decisions to alter critical areas shall rely on the best available science to protect the functions and values of critical areas and must give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fish and their habitat, such as salmon and bull trout.

(c) Lack of Scientific Information. Where there is an absence of valid scientific information or incomplete scientific information relating to a critical area leading to uncertainty about the risk to critical area function or permitting an alteration of or impact to the critical area, the City shall:

(1) Take a precautionary or no-risk approach that strictly limits development and land use activities until the uncertainty is sufficiently resolved; and

(2) Require application of an effective adaptive management program that relies on scientific methods to evaluate how well regulatory and nonregulatory actions protect the critical area. An adaptive management program is a formal and deliberative scientific approach to taking action and obtaining information in the face of uncertainty. To effectively implement an adaptive management program, the City hereby commits to:

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- (i) Address funding for the research component of the adaptive management program;
- (ii) Change course based on the results and interpretation of new information that resolves uncertainties; and
- (iii) Commit to the appropriate time frame and scale necessary to reliably evaluate regulatory and nonregulatory actions affecting protection of critical areas and anadromous fisheries. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.240 Classification as a Critical Area.

Criteria for classification as a critical area will be listed under the applicable sections of this chapter. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.250 Procedures.

Prior to fulfilling the requirements of this chapter, the City of Lake Stevens shall not grant any approval or permission to conduct development or use in a critical area. The Planning and Community Development Director is authorized to adopt administrative procedures for the purpose of carrying out the provisions of this chapter. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.260 Submittal Requirements.

To enable the City to determine compliance with this chapter, at the time of application submittal, the applicant shall file a SEPA Environmental Checklist (if use is subject to SEPA), site/resource-specific reports as specified in Section [14.88.270](#), and any other pertinent information requested by the Department of Planning and Community Development. Any of these submittal requirements may be waived by the Planning and Community Development Director if it is deemed unnecessary to make a compliance determination. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.270 Site/Resource-Specific Reports.

Unless waived per Section [14.88.260](#), all applications for land use or development permits proposed on properties containing or adjacent to critical areas or their defined setbacks or buffers shall include site/resource-specific reports prepared to describe the environmental limitations of the site. These reports shall conform in format and content to guidelines prepared by the Department of Planning and Community Development, which is hereby authorized to do so. The report shall be prepared by a qualified professional who is a biologist or a geotechnical engineer as applicable with experience preparing reports for the relevant type of critical area. The report and conclusions present in the critical area report shall be based on best available science. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.275 Mitigation/Enhancement Plan Requirements.

In the event that mitigation and/or enhancement is required, the Department of Planning and Community Development shall require the applicant to provide a mitigation plan for approval and a performance and maintenance bond in a form and amount acceptable to the City in accordance with Section [14.88.278](#). The plan shall provide information on land acquisition, construction, maintenance and monitoring of the replaced critical area that creates a no-net-loss area in function of the original area in terms of acreage, function, habitat, geographic location and setting. ~~The plan shall also include critical areas and buffer impacts and critical areas and proposed buffer areas.~~ All mitigation plans shall

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include the following items, which shall be submitted by the applicant or a qualified biologist, civil or geotechnical engineer:

- (a) Data collected and synthesized for the critical area and/or the newly restored site:
 - (1) Description of existing site conditions, critical areas and proposed buffers;
 - (2) Description of proposed impacts to critical areas and buffers and proposed plans to mitigate those impacts;
 - (3) Documentation of Best Available Science or site criteria supporting the proposed mitigation plan.
- (b) Specific goals and objectives describing site function, target species, selection criteria and measures to avoid and minimize impacts which shall include:
 - (1) Reducing or eliminating the impact over time by preservation and maintenance operations.
 - (2) Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.
 - (3) Enhancing significantly degraded ~~wetlands~~ critical areas and buffers in combination with restoration or creation. Such enhancement should be part of a mitigation package that includes replacing the impacted area by meeting appropriate ratio requirements.
 - (4) Unless it is demonstrated that a higher level of ecological functioning would result from an alternate approach, compensatory mitigation for ecological functions shall be either in-kind and on site, or in-kind and within the same stream reach, subbasin, or drift cell. Mitigation actions shall be conducted within the same subdrainage basin and on the same site as the alteration except as specifically provided for in Sections [14.88.440](#) and [14.88.840](#);
- (c) Performance standards which shall include criteria for assessing project specific goals and objectives and whether or not the requirements of this chapter have been met;
- (d) Contingency plans which clearly define the course of action or corrective measures needed if performance standards are not met;
- (e) A legal description and a survey prepared by a licensed surveyor of the proposed development site and location of the critical area(s) on the site;
- (f) A scaled plot plan that indicates the proposed timing, duration and location of construction in relation to zoning setback requirements and sequence of construction phases including cross-sectional details, topographic survey data (~~including showing~~ percent slope, existing and finished grade elevations noted at two-foot intervals or less), mitigation area, and water table elevation with sufficient detail to explain, illustrate and provide for:
 - (1) Soil and substrate conditions, topographic elevations, scope of grading and excavation proposal, erosion and sediment treatment and source controls needed for critical area construction and maintenance;

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- (2) Planting plans specifying plant species, types, quantities, location, size, spacing, or density. The planting season or timing, watering schedule, and nutrient requirements for planting, and where appropriate, measures to protect plants from destruction; and
- (3) Contingency or mid-course corrections plan and a minimum five-year monitoring and replacement plan establishing responsibility for removal of exotic and nuisance vegetation and permanent establishment of the critical area and all component parts. The monitoring plan is subject to the provisions of Sections [14.88.277](#) and [14.88.278](#);
- (g) A clearly defined approach to assess progress of the project, including the measurement of the success of a mitigation project by the presence of native species and an increase in the coverage of native plants over the course of the monitoring period;
- (h) The plan must indicate ownership, size, type, and complete ecological assessment including flora, fauna, hydrology, functions, etc., of the critical area being restored or created; and
- (i) The plan must also provide information on the natural suitability of the proposed site for establishing the replaced critical area, including water source and drainage patterns, topographic position, wildlife habitat opportunities, and value of existing area to be converted. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.277 Mitigation Monitoring.

- (a) All compensatory mitigation projects shall be monitored for the period necessary to establish that performance standards have been met, but in no event for a period less than five years following the acceptance of the installation/construction by the Planning and Community Development Director.
- (b) Monitoring reports on the current status of the mitigation project shall be submitted to the Planning Department. The reports shall be prepared by a qualified consultant and shall include monitoring information on wildlife, vegetation, water quality, water flow, stormwater storage and conveyance, and existing or potential degradation. Reports shall be submitted in accordance with the following schedule:
 - (1) At the time of construction;
 - (2) Thirty days after planting;
 - (3) Early in the growing season of the first year;
 - (4) End of the growing season of the first year;
 - (5) Twice the second year (at the beginning and end of the growing season); and
 - (6) Annually thereafter, to cover a total monitoring period of at least five growing seasons.
- (c) The Planning and Community Development Director shall have the authority to extend the monitoring and surety period and require additional monitoring reports and maintenance activities beyond the initial five-year monitoring period for any project that involves one or a combination of the following factors:
 - (1) Creation or restoration of forested wetland or buffer communities;

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- (2) ~~does not~~ Failure to meet the performance standards identified in the mitigation plan;
- (3) ~~does not~~ Failure to provide adequate replacement for the functions and values of the impacted critical area; or
- (4) ~~otherwise warrants additional monitoring~~ Additional monitoring is warranted.

(Ord. 773, Sec. 2, 2008)

14.88.278 Bonding (Security Mechanism).

- (a) If the development proposal is subject to compensatory mitigation, the applicant shall enter into an agreement with the City to complete the mitigation plan approved by the City and shall post a mitigation performance surety to ensure mitigation is fully functional.
- (b) The surety shall be in the amount of 150 percent of the estimated cost of the uncompleted actions or the estimated cost of restoring the functions and values of the critical area that are at risk, whichever is greater. The surety shall be based on a detailed, itemized cost estimate of the mitigation activity including clearing and grading, plant materials, plant installation, irrigation, weed management, monitoring and all other costs.
- (c) The surety shall be in the form of an assignment of funds, bond, security device, or other means acceptable to the City Finance Director in consultation with the City Attorney.
- (d) The performance surety authorized by this section shall remain in effect until the City determines, in writing, that the permit conditions, code requirements and/or standards bonded for have been met. Once the mitigation installation has been accepted by the Planning Director or Public Works Director, the bond may be reduced to 20 percent of the original mitigation cost estimate and shall become a maintenance surety. Said maintenance surety shall generally be held by the City for a period of five years to ensure that the required mitigation has been fully implemented and demonstrated to function, and may be held for longer periods under Section [14.88.277\(c\)](#).
- (e) Depletion, failure, or collection of surety funds shall not discharge the obligation of an applicant to complete required mitigation, maintenance, monitoring, or restoration.
- (f) Public development proposals shall be relieved from having to comply with the bonding requirements of this section if public funds have previously been committed for mitigation, maintenance, monitoring, or restoration.
- (g) Any failure to satisfy critical area requirements established by law or condition including, but not limited to, the failure to provide a monitoring report within 30 days after it is due or comply with other provisions of an approved mitigation plan shall constitute a default. Upon notice of any default, the City may demand immediate payment of any financial guarantees or require other action authorized by the City code or any other law.
- (h) Any funds paid or recovered pursuant to this section shall be used to complete the required mitigation or other authorized action.
- (i) The Director may authorize a one-time temporary delay, up to 120 days, in completing mitigation activities when environmental conditions could produce a high probability of failure or significant

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construction difficulties. The delay shall not create or perpetuate hazardous conditions or environmental damage or degradation. The request for the temporary delay shall include a written justification documenting the environmental constraints that preclude implementation of the mitigation plan and shall include a financial guarantee. The justification shall be verified by the City before approval of any delay.

(j) The provisions of Section [14.16A.180](#) (Security Mechanisms) shall also apply if necessary to ensure adequate protection of the public interest. (Ord. 811, Sec. 73, 2010; Ord. 773, Sec. 2, 2008)

14.88.280 Maps and Inventory.

The approximate location and extent of critical areas in the City are displayed on various inventory maps available at the Department of Planning and Community Development. More data will be included as inventories are completed in compliance with the requirements of the Growth Management Act. Maps and inventory lists are guides to the general location and extent of critical areas. Critical areas not shown are presumed to exist in the City and are protected under all the provisions of this chapter. In the event that any of the designations shown on the maps or inventory lists conflict with the criteria set forth in this chapter, the criteria and site-specific conditions shall control. Other mapping sources may include:

- (a) Washington Department of Fish and Wildlife Priority Habitat and Species maps.
- (b) Washington State Department of Natural Resources official water type reference maps, as amended.
- (c) Anadromous and resident salmonid distribution maps contained in the Habitat Limiting Factors reports published by the Washington Conservation Commission.
- (d) Washington State Department of Natural Resources State Natural Area Preserves and Natural Resource Conservation Area maps.
- (e) Washington State Department of Natural Resources Natural Heritage Program mapping data.
- (f) Lake Stevens and/or Snohomish County maps. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.283 Pesticide Management.

Pesticide use is not allowed in critical areas, including critical area buffers, unless it is determined by the Planning and Community Development Director that there is no alternative to controlling invasive species. If pest control is being proposed as mitigation measures to control invasive species, a pesticide management plan must be submitted to the Planning Department. The pesticide management plan must be part of the critical areas report required in Section [14.88.270](#) for any development proposal, and shall include why there is no other alternative to pesticide use, mitigation of pesticide use, planned application schedules, types of pesticides proposed for use, and a means to prevent or reduce pesticide movement to groundwater and surface water. The report shall be prepared by a qualified specialist. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.285 Building Setbacks.

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Unless otherwise provided, buildings and other structures shall be set back a distance of 10 feet from the edges of all critical area buffers or from the edges of all critical areas, if no buffers are required. The following may be allowed in the building setback area:

- (a) Uncovered decks;
- (b) Building overhangs, if such overhangs do not extend more than 18 inches into the setback area; and
- (c) Impervious ground surfaces, such as driveways and patios; provided, that such improvements may be subject to water quality regulations as adopted. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.287 Fencing and Signage.

Wetland Critical Area fencing and signage adjacent to a regulated wetland or stream corridor shall be required. Permanent signage may be required for geologically hazardous areas and setback buffers not approved for alteration under Section 14.88.670.

- (a) Fencing shall be smooth wire or an alternative approved by the Planning and Community Development Director.
 - (1) Fencing must be a permanent structure installed in a manner that allows continuous wildlife habitat corridors along critical fish and wildlife areas with a minimum gap of one and one-half feet at the bottom of the fence, and maximum height of three and one-half feet at the top;
 - (2) The fence shall be designed and constructed to clearly demarcate the buffer from the developed portion of the site and to limit access of landscaping equipment, vehicles, or other human disturbances; and
 - (3) No pressure treated posts and rails will be used for signage or fencing.
- (b) Signs designating the presence of a critical area shall be posted along the buffer boundary. The signs shall be posted at a minimum rate of one every 100 lineal feet. Standard details for signage shall be kept on file at the Planning and Community Development Department. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.290 Critical Areas Tracts and Easements – Notice on Title.

- (a) Unless otherwise required in this chapter, native growth protection areas shall be used in all development proposals to delineate and protect the following critical areas and buffers:
 - (1) All geologically hazardous areas not approved for alteration and associated setback buffers;
 - (2) All wetlands and buffers; and
 - (3) All fish and wildlife habitat conservation areas and buffers.
- (b) Native growth protection areas created pursuant to this Chapter shall be designated on the face of the plat or recorded drawing pursuant to Sections 14.16C.105 and 14.18.040 LSMC and shall be protected by one of the following methods:

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(1) Development proposals for subdivisions, short subdivisions, Binding Site Plans and Planned Neighborhood Developments shall use separate critical area tracts to delineate and protect native growth protection areas. The critical area tract shall be held by each lot owner in the development in an undivided interest or held by a Homeowner's Association or other legal entity which assures the ownership, maintenance, and protection of the tract, unless dedicated to the City pursuant to Section 14.88.293; or

(2) For development proposals that do not segregate lots as described above, the permit holder shall record a native growth protection area easement with the Snohomish County Auditor stating the location of and the limitations associated with all of the critical areas and associated buffers or mitigation sites on the property. Restrictions and limitations shall be stated on the face of the deed applicable to the property and recorded with the Snohomish County auditor.

(c) Such easements or tracts shall cover the critical area as delineated by its defined boundaries and buffers.

~~14.88.290 Dedication of Open Space/Native Growth Protection Area.~~

~~(a) In order to protect critical areas, open space easements or tracts, referred to as a native growth protection area areas, where proposed as mitigation, shall be dedicated to the City.~~

~~(b) Anyone may offer to dedicate a critical area easement or tract and its buffer to the City even if not proposed as mitigation. The Planning and Community Development Director shall make a determination regarding the City's acceptance of such a dedication, based on consistency with the goals and policies of the adopted Comprehensive Plan.~~

~~(c) Such easements or tracts shall cover the critical area as delineated by its defined boundaries and buffers. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)~~

14.88.295 Permanent Protection for Streams, Wetlands and Buffers.

All streams and wetlands under this chapter and their required buffers shall be permanently protected by designating them as native growth protection areas (NGPAs) in accordance with Section [14.88.290](#). NGPAs are to be left permanently undisturbed in a substantially or environmentally enhanced natural state. No clearing, grading, filling, building construction or placement, or road construction is allowed except the following:

(a) On a case by case basis when supported by a critical areas assessment study, crossings for underground utility lines which utilize the shortest alignment possible and for which no alignment that would avoid such a crossing is feasible;

(b) Removal of hazardous trees by the property owner, when based on a recommendation by a qualified arborist and an assessment of hazardous tree risk study and when approved by the City.

Existing legally (on-going) established structures, and non-native or ornamental landscaping, including, but not necessarily limited to, gardens, yards, pastures, and orchards, are not required to be designated as NGPAs. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

~~14.88.297 Density Transfers on Sites Less than Five Acres~~ On-site Density Transfer for Critical Areas.

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On-site density transfers ~~on sites less than five acres~~ may be permitted when critical areas are located on the property subject to the following provisions:

(a) Only the area contained in the following critical area areas and their associated buffers of the following wetlands is/are eligible to be used in the density transfer calculation:

(1) ~~Category II, and III, and IV wetlands with a habitat score of less than 20; and~~

(2) ~~Category IV wetlands. Fish and Wildlife Conservation areas; and~~

(3) Geologically hazardous areas not approved for alteration.

(b) The development must be proposed to connect to sewer service and sewer service must be available.

(c) The base density shall be consistent with the densities set forth in Chapter [14.36](#) for the zoning districts. The site density shall be calculated using the area of the subject property divided by the minimum lot size of the applicable zone.

(d) The overall density of the proposed site may be transferred from the undevelopable portion to the developable part of the site.

(e) The development shall meet applicable policies, setbacks and other standards of the City except:

(1) Lot sizes may be modified to not less than 5,000 square feet in the WR and SR zones, not less than 4,000 square feet in the UR zone and not less than 3,000 square feet in the HUR zone; Lot widths of Chapter [14.48](#) Table V may be modified to not less than 40 feet in the SR and UR zones and not less than 30 feet in the HUR zone;

(2) Lot widths of Chapter [14.48](#) Table I may be modified to not less than 50 feet in the WR and SR zones, and not less than 40 feet in the UR and HUR zones Lot sizes may be modified to not less than 4,000 square feet in the SR and UR zones and not less than 3,000 square feet in the HUR zone;

(3) Setbacks of the zone as specified in Chapter [14.48](#) Table V ~~I~~ may ~~not~~ be modified when using the density transfer provision as follows:

(i) In WR and SR zones, the front setback requirements of the UR zoning classification as specified in Chapter [14.48](#) Table I may be utilized to accommodate the density transfer;

(ii) In the UR and HUR zones, the front setback may be reduced by 5 feet;

(iii) In no instance may the garage setback be less than 19 feet.

(4) The proposed development must be compatible with the character of the area and adjacent uses; and

(5) The area to which density is transferred must not be constrained by other critical areas. (Ord. 773, Sec. 2, 2008)

14.88.298 Innovative Development Design.

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A project permit applicant may request approval of an innovative design, which addresses wetland, fish and wildlife habitat conservation area or buffer treatment in a manner that deviates from the standards set forth in Sections [14.88.400](#) through [14.88.440](#), Fish and Wildlife Conservation Areas, and Sections [14.88.800](#) through [14.88.840](#), Wetlands.

(a) An innovative development design will be considered in conjunction with the primary land use project approval or building permit approval. The Planning and Community Development Director shall develop and adopt administrative procedures as authorized in Section [14.88.250](#) for review and approval of innovative development design that are consistent with subsection (b) of this section. An applicant may include the innovative development design proposal in the project pre-application review packet for review. The Planning and Community Development Director shall give preliminary findings on the preapplication and shall only issue a final decision for the design with the project or building permit approval, whichever occurs first.

(b) The applicant shall demonstrate in a site/resource-specific report required pursuant to Section [14.88.270](#) how the innovative development design complies with the following requirements:

(1) The innovative development design will achieve protection equivalent to or better than the treatment of the functions and values of the critical areas that would be obtained by applying the standard prescriptive measures contained in this chapter;

(2) Applicants for innovative development design are encouraged to consider measures prescribed in guidance documents, such as watershed conservation plans or other similar conservation plans, and low impact stormwater management strategies which address wetlands, fish and wildlife habitat conservation areas or buffer protection consistent with this chapter;

(3) The innovative development design will not be materially detrimental to the public health, safety or welfare or injurious to other properties or improvements located outside of the subject property; and

(4) Applicants for innovative development design are encouraged to consider measures prescribed in the Puget Sound Action Team ~~2005~~[2012](#) Technical Guidance Manual for Low Impact Development. (Ord. 773, Sec. 2, 2008)

14.88.300 Dedication of Land and/or Easements in Lieu of Park Mitigation.

The dedication of critical areas and their buffers as open space may not be used for satisfying park mitigation requirements. Park land must be dedicated or fees in lieu of dedication must be paid as set forth in this title. However, if an applicant provides recreation amenities in buffers as allowed under this chapter, the cost of those amenities may be subtracted from the total park mitigation calculated for a given project with prior approval of the Planning and Community Development Director. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.310 Demonstration of Denial of All Reasonable Economic Uses.

In order to conduct a regulated activity in a critical area where the applicant is claiming that denial of authorization of such an activity would deny all reasonable economic uses of the property, the applicant must demonstrate that such is the case. If a regulated activity is allowed within a critical area it must minimize impacts per the "requirements" sections, below. If the Planning and Community Development Director determines that alteration of a critical area is necessary and unavoidable, written findings

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addressing each of the items listed in this section shall be placed in the official project file. Demonstration of denial of all reasonable economic uses shall be accomplished as follows:

- (a) An applicant must demonstrate that denial of the permit would impose an extraordinary hardship on the part of the applicant brought about by circumstances peculiar to the subject property.
- (b) For water-dependent activities, unavoidable and necessary impact can be demonstrated where there are no practicable alternatives which would not involve a wetland critical area or which would not have less adverse impact on a wetland critical area, and would not have other significant adverse environmental consequences.
- (c) Where non-water-dependent activities are proposed, it shall be presumed that adverse impacts are avoidable. This presumption may be rebutted upon a demonstration that:
 - (1) The basic project purpose cannot reasonably be accomplished utilizing one or more other sites in the general region that would avoid, or result in less, adverse impact on regulated critical areas; and
 - (2) A reduction in the size, scope, configuration, or density of the project as proposed and all alternative designs of the project as proposed that would avoid, or result in less, adverse impact on a critical area or its buffer will not accomplish the basic purpose of the project; and
 - (3) In cases where the applicant has rejected alternatives to the project as proposed due to constraints such as zoning, deficiencies of infrastructure, or parcel size, the applicant has made reasonable attempt to remove or accommodate such constraints. (Ord. 903, Sec. 52, 2013; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.320 Allowance of Regulated Use in a Critical Area Where Denial of All Economic Use is Demonstrated.

If an applicant for an activity or development proposal demonstrates to the satisfaction of the Planning and Community Development Director that application of these standards would deny all reasonable economic use of the property as provided by Section [14.88.220](#), development, as may be conditioned, shall be allowed if the applicant also demonstrates all of the following to the satisfaction of the Director:

- (a) If proposed in a wetland, stream, creek, river, lake or other surface water, that the proposed project is water-dependent or requires access to the wetland as a central element of its basic function; or
- (b) If proposed in a critical area not listed in subsection (a) of this section, that it is not water-dependent but has no practicable alternative; and
- (c) That no reasonable use with less impact on the critical area and its buffer is possible (e.g., agriculture, aquaculture, transfer or sale of development rights or credits, sale of open space easements, etc.);
- (d) That there is no feasible on-site alternative to the proposed activities, including reduction in density, phasing of project implementation, change in timing of activities, revision of road and lot layout, and/or related site planning considerations, that would allow a reasonable economic use with less adverse impacts to the critical area and its buffer;

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- (e) That the proposed activities will result in minimum feasible alteration or impairment to the functional characteristics of the critical area and its existing contours, vegetation, fish and wildlife resources, hydrological, and geologic conditions;
- (f) That disturbance of the critical area has been minimized by locating any necessary alteration in buffers to the extent possible;
- (g) That the proposed activities will not jeopardize the continued existence of endangered, threatened, or sensitive species as listed by the Federal Government or the State of Washington. An applicant is required to confirm with the State of Washington that special conditions or recommendations are not required for candidate or monitor species;
- (h) That the proposed activities will not cause significant degradation of groundwater or surface water quality;
- (i) That the proposed activities comply with all State, local and Federal laws, including those related to sediment control, pollution control, floodplain restrictions, and on-site wastewater disposal;
- (j) That any and all alterations to critical areas and their buffers will be adequately mitigated;
- (k) That there will be no damage to nearby public or private property and no threat to the health or safety of people on or off the property;
- (l) That the inability to derive reasonable economic use of the property is not the result of actions by the applicant in segregating or dividing the property and creating the undevelopable condition after the effective date of this chapter; and
- (m) That deliberate measures have been taken to minimize the impacts. Minimizing impacts shall include but not be limited to:
 - (1) Limiting the degree or magnitude of the prohibited activity;
 - (2) Limiting the implementation of the prohibited activity;
 - (3) Using appropriate and best available technology;
 - (4) Taking affirmative steps to avoid or reduce impacts;
 - (5) Sensitive site design and siting of facilities and construction staging areas away from critical areas and their buffers;
 - (6) Involving resource agencies early in site planning;
 - (7) Providing protective measures such as siltation curtains, hay bales and other siltation prevention measures; and
 - (8) Scheduling the prohibited activity to avoid interference with wildlife and fisheries rearing, resting, nesting or spawning activities. (Ord. 903, Sec. 53, 2013; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.330 Nonconforming Activities.

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A regulated activity that was approved prior to the passage of this chapter and to which significant economic resources have been committed pursuant to such approval but which is not in conformity with the provisions of this chapter may be continued subject to the following:

- (a) No such activity shall be expanded, modified, or substituted in any way that increases the extent of its nonconformity without a permit issued pursuant to the provisions of this chapter;
- (b) Except for cases of discontinuance as part of normal agricultural practices, if a nonconforming activity is discontinued for 180 days, any resumption of the activity shall conform to this chapter;
- (c) If a nonconforming use or activity is destroyed by human activities or a natural occurrence, it shall not be resumed except in conformity with the provisions of this chapter;
- (d) Activities or adjuncts thereof that are or become nuisances shall not be entitled to continue as nonconforming activities. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.340 Assessment Relief.

The Snohomish County Assessor's office considers critical area regulations in determining the fair market value of land. Any owner of an undeveloped critical area who has dedicated an easement or entered into a perpetual conservation restriction with the City of Lake Stevens or a nonprofit organization to permanently control some or all regulated activities in that portion of land assessed consistent with these restrictions shall be considered for exemption from special assessments to defray the cost of municipal improvements such as sanitary sewers, storm sewers, and water mains. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

Part IV. Fish and Wildlife Conservation Areas

14.88.400 Classification.

Fish and wildlife conservation areas include:

- (a) Lands containing priority habitats and species, including plant and/or animal species listed on Federal or State threatened or endangered species lists.
- (b) Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish or wildlife habitat. These do not include ponds deliberately designed and created from dry sites such as canals, detention facilities, waste-water treatment facilities, farm ponds, temporary construction ponds (of less than three years' duration), and landscape amenities. However, naturally occurring ponds may include those artificial ponds intentionally created from dry areas in order to mitigate conversion of ponds, if permitted by a regulatory authority.
- (c) Waters of the State, as defined in WAC Title [222](#), Forest Practices Rules and Regulations. Waters of the State shall be classified using the system in WAC [222-16-030](#). In classifying waters of the State as fish and wildlife habitats the following shall be used:
 - (1) Species are present which are endangered, threatened or sensitive;
 - (2) Existing surrounding land uses are incompatible with salmonid and other game fish habitat;
 - (3) Presence and size of riparian ecosystem;

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(4) Existing water rights.

(d) Lakes, ponds, and streams planted with game fish (defined at RCW [77.08.020](#)), including those planted under the auspices of Federal, State, local, or tribal programs, or which support priority fish species as identified by the Department of Fish and Wildlife.

(e) State natural area preserves and natural resource conservation areas.

(f) Habitats or species of local importance. Such habitats or species may be locally listed per the process elucidated in Section [14.88.415](#).

(g) Streams shall be classified according to the stream type system as provided in WAC [222-16-030](#), Stream Classification System, as amended.

(1) Type S Stream. Those streams, within their ordinary high water mark, as inventoried as shorelines of the State under Chapter [90.58](#) RCW and the rules promulgated pursuant thereto.

(2) Type F Stream. Those stream segments within the ordinary high water mark that are not Type S streams, and which are demonstrated or provisionally presumed to be used by fish. Stream segments which have a width of two feet or greater at the ordinary high water mark and have a gradient of 16 percent or less for basins less than or equal to 50 acres in size, or have a gradient of 20 percent or less for basins greater than 50 acres in size, are provisionally presumed to be used by fish. A provisional presumption of fish use may be refuted at the discretion of the Planning and Community Development Director where any of the following conditions are met:

(i) It is demonstrated to the satisfaction of the City that the stream segment in question is upstream of a complete, permanent, natural fish passage barrier, above which no stream section exhibits perennial flow;

(ii) It is demonstrated to the satisfaction of the City that the stream segment in question has confirmed, long-term, naturally occurring water quality parameters incapable of supporting fish;

(iii) Sufficient information about a geomorphic region is available to support a departure from the characteristics described above for the presumption of fish use, as determined in consultation with the Washington Department of Fish and Wildlife, the Department of Ecology, affected tribes, or others;

(iv) The Washington Department of Fish and Wildlife has issued a hydraulic project approval, pursuant to RCW [77.55.100](#), which includes a determination that the stream segment in question is not used by fish;

(v) No fish are discovered in the stream segment in question during a stream survey conducted according to the protocol provided in the Washington Forest Practices Board Manual, Section 13, Guidelines for Determining Fish Use for the Purpose of Typing waters under WAC [222-16-031](#); provided, that no unnatural fish passage barriers have been present downstream of said stream segment over a period of at least two years.

(3) Type Np Stream. Those stream segments within the ordinary high water mark that are perennial and are not Type S or Type F streams. However, for the purpose of classification, Type Np streams include intermittent dry portions of the channel below the uppermost point of perennial flow. If the uppermost point of perennial flow cannot be identified with simple, nontechnical observations (see

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Washington Forest Practices Board Manual, Section 23), then said point shall be determined by a qualified professional selected or approved by the City.

(4) Type Ns Stream. Those stream segments within the ordinary high water mark that are not Type S, Type F, or Type Np streams. These include seasonal streams in which surface flow is not present for at least some portion of a year of normal rainfall that are not located downstream from any Type Np stream segment. (Ord. 903, Sec. 54, 2013; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.410 Determination of Boundary.

(a) The boundaries of fish and wildlife conservation areas shall be determined by the Planning and Community Development Director, who may rely on a Departmental approved biological resources survey prepared by a qualified wildlife biologist per the Department's Biological Resources Survey Guidelines. Such a report would be supplied by the applicant of a permit.

(b) The boundary of the creek, stream, river, lake, or other surface water shall be determined by the Planning and Community Development Director, relying on a delineation by a licensed surveyor or other comparable expert. Such boundary shall be contiguous with the 100-year floodplain designations as adopted by the City, or where such a designation has not been adopted by the City, the 100-year floodplain designation of the Federal Emergency Management Agency (FEMA) and the National Flood Insurance Program where it has been delineated (shown on Flood Insurance Rate Maps (FIRM)). Where this information does not exist, the boundary determination shall be made by a licensed surveyor and based upon the same criteria used by FEMA. This determination shall be confirmed by the City Engineer. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.415 Species/Habitats of Local Importance.

(a) Species or habitats may be listed as a species or habitat of local importance by the City Council according to the following process:

(1) An individual or organization must:

(i) Demonstrate a need for special consideration based on:

- a. Declining populations;
- b. Sensitivity to habitat manipulation; or
- c. Commercial or game value or other special value, such as public appeal.

(ii) Propose relevant management strategies considered effective and within the scope of this chapter.

(iii) Provide species or habitat location(s) on a map.

(2) Submitted proposals will be reviewed by the Planning and Community Development Director and forwarded to the Departments of Fish and Wildlife and Natural Resources, and/or other local, State, Federal, or tribal agencies or experts for comment and recommendation regarding accuracy of data and effectiveness of proposed management strategies.

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(3) The City Council will hold a public hearing for proposals found to be complete, accurate, potentially effective, and within the scope of this chapter. Approved nominations will become designated a species or habitat of local importance and will be subject to the provisions of this chapter.

(b) Species or habitats of local importance include:

(1) [None adopted as of May 1, 1995] (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.420 Allowed Activities.

Except where regulated by other sections of this or any other title or law, the following uses shall be allowed within fish and wildlife conservation areas when the requirements of Section [14.88.430](#) have been met and mitigation adequate to alleviate any other impacts has been proposed:

(a) Those activities listed in Section [14.88.220](#).

(b) Activities consistent with the species located there and all applicable State and Federal regulations regarding the species, as determined by the Planning and Community Development Director, who may consult with other resource agencies as to their recommendations.

(c) Bridges and other crossings over streams for public and private rights-of-way. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.430 Requirements.

(a) Except as provided in this subsection, a 50-foot buffer shall be required for all regulated activities adjacent to fish and wildlife conservation areas. All buffers shall be measured from the fish and wildlife conservation area boundary as surveyed in the field. The width of the buffer may be increased depending on the habitat value and the proposed land use.

(b) Buffer widths may be increased based on recommendations by the Department of Fish and Wildlife based on their Management Recommendations for Priority Habitats and Species.

(c) To retain the natural functions of streams and stream corridors, the following streamside buffers shall be maintained:

(1) For ravines with banks greater than 10 feet in depth, maintain the existing or native vegetation within the ravine and a strip 25 feet from the top of the bank;

(2) Where there is no ravine or the bank is less than 10 feet in depth, maintain existing or native vegetation on both sides of the stream as measured from the ordinary high water mark (OHWM), in accordance with Table 14.88-I, which sets forth the required buffer widths based on classification of stream types:

Table 14.88-I: Stream Buffer Width

Stream Type	Buffer
S	150 feet

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F	100 feet
Np	50 feet
Ns	50 feet

(d) Widths shall be measured outward in each direction, on the horizontal plane, from the ordinary high water mark, or from the top of the bank if the ordinary high water mark cannot be identified, or from the outer edge of the channel migration zone when present.

(e) The Planning and Community Development Director may modify the buffer widths in the above table in accordance with the following:

(1) Buffer widths may be increased as necessary to fully protect riparian functions. For example, the buffer may be extended to the outer edge of the floodplain or windward into an area of high tree blow-down potential as determined by an arborist.

(2) Buffer widths may be reduced in exchange for restoration and enhancement of degraded areas in accordance with an approved plan, or for buffer averaging in accordance with Section [14.88.275](#) and subsection (e)(4) of this section.

(3) If the stream enters an underground culvert or pipe, and is unlikely to ever be restored aboveground, the Planning and Community Development Director may waive the buffer along the undergrounded stream; provided, that where the stream enters and emerges from the pipe the opposite outer edges of the buffer shall be joined by a radius equal to the buffer width, with said radius projecting over the piped stream.

(4) Stream buffer widths may be modified by averaging. In no instance shall the buffer width be reduced by more than 25 percent of the standard buffer. Stream buffer width averaging shall only be allowed when the applicant demonstrates the following:

(i) A site-specific evaluation and documentation of buffer adequacy is based on consideration of the best available science as described in Section [14.88.235](#); and

(ii) A buffer enhancement plan is proposed that would significantly improve the functions and values of the stream buffer(s); and

(iii) The averaging will not impair or reduce the habitat, water quality purification and enhancement, stormwater detention, groundwater recharge, shoreline protection and erosion and other functions and values of the stream and buffer.

(5) Buffer widths may be modified if the subject property is separated from the stream channel by pre-existing, intervening, and lawfully created structures, public roads, or other substantial pre-existing intervening improvements. The intervening structures, public roads, or other substantial improvements must separate the subject upland property from the stream channel by height or width, preventing or impairing the delivery of buffer functions to the stream channel. In such cases, the reduced buffer width shall reflect the buffer functions that can be delivered to the stream channel.

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(f) Development in the shorelines of State-wide significance is regulated under Appendix B of the City's State-approved Shoreline Master Program (SMP).

(g) To protect the natural functions and aesthetic qualities of a stream and stream buffer, a detailed temporary erosion control plan which identifies the specific mitigating measures to be implemented during construction to protect the water from erosion, siltation, landslides and hazardous construction materials shall be required. The City shall review the plan with the appropriate State, Federal and tribal agencies and any adjacent jurisdiction. (Ord. 898, Sec. 8, 2013; Ord. 811, Sec. 92, 2010; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.440 Mitigation.

In order to avoid significant environmental impacts, the applicant for a land use or development permit may consider performing the following actions, listed in order of preference. What is considered adequate mitigation will depend on the nature and magnitude of the potential impact as determined in accordance with Section [14.88.275](#).

(a) Dedicate an exclusive open space easement for the protection of wildlife and/or habitat, creeks, streams, rivers, lakes, or other surface water over the creeks, streams, rivers, lakes, or other surface water and a buffer consistent with the standards listed in Section [14.88.430](#). Where such mitigation leads to, or would in the opinion of the Planning and Community Development Director lead to a court finding of a taking, the below listed mitigation may be considered.

(b) Where on-site protection is not possible, dedicate an exclusive easement for the protection of an equivalent (in type and value) waterway over the waterway and a 50-foot buffer on an off-site waterway at a 2:1 ratio. The location of any off-site waterway shall be located as near to the site as possible, in accordance with the following preferred order:

- (1) Contiguous to the impacted waterway;
- (2) Within the same drainage basin;
- (3) Elsewhere within the City;
- (4) Within the Lake Stevens UGA;
- (5) Within the region.

(c) The applicant may propose innovative site design based on the best available science and pursuant to Section 14.88.298 if the innovative development design will achieve protection equivalent to or better than the standard provisions of this Chapter. Approval of the innovative site design will be considered in combination with criteria listed in Section 14.88.298 if the design achieves the following:

- (1) The site design avoids all impacts to the critical area and minimizes buffer impacts; or
- (2) The site design increases the functions and/or values of the stream channel and buffer with a combination of the following measures:

(i) Increasing canopy-cover shade in the riparian zone to maintain cool stream temperatures and regulate micro-climates in the stream-riparian corridor;

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- (ii) Reducing fine sediment input in the stream system through hydrologic retention, filtration and streambank protection;
- (iii) Stabilizing stream banks, and minimizing stream bank erosion;
- (iv) Filtering and reducing potential of impact pollutants from groundwater and surface water runoff;
- (v) Increasing large woody debris and coarse particulate matter into the stream channel for habitat and to moderate stream flow;
- (vi) Increasing critical wildlife habitat along stream-associated migration corridors;
- (vii) Increasing in-stream habitat for aquatic, amphibian, invertebrate and resident and/or anadromous fish species. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

Part V. Frequently Flooded Areas

14.88.500 Classification.

Classification for flood zones shall be consistent with the regulatory floodplain designations as adopted by the City per Chapter [14.64](#), Part I, or where such a designation has not been adopted by the City, by the special flood hazard area designations of the Federal Emergency Management Agency and the National Flood Insurance Program. Any such designations adopted by the City shall consider the following criteria if and when designating and classifying these areas:

- (a) Flooding impact to human health, safety, and welfare and to public facilities and services; and
- (b) Documentation including Federal, State and local laws, regulations and programs, local maps and federally subsidized flood insurance programs. (Ord. 860, Sec. 5 (Exh. 3), 2011; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.510 Determination of Boundary.

The boundary of a flood zone shall be contiguous with the regulatory floodplain as adopted by the City, per Chapter [14.64](#), Part I, or where such a designation has not been adopted by the City, the special flood hazard area designations of the Federal Emergency Management Agency (FEMA) and the National Flood Insurance Program where it has been delineated [shown on Flood Insurance Rate Maps (FIRM)]. Where this information does not exist, the boundary determination shall be made by a licensed engineer and based upon the same criteria used by FEMA. The Planning and Community Development Director or designee shall confirm this determination. (Ord. 860, Sec. 5 (Exh. 3), 2011; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.520 Allowed Activities.

Except where regulated by other sections of this or any other title or law, the following uses shall be allowed within the regulatory floodplain when the requirements of Section [14.88.530](#) have been met and mitigation adequate to alleviate any other impacts has been proposed:

- (a) Those activities allowed per Section [14.88.220](#).

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(b) Those activities allowed per Section [14.64.025](#). (Ord. 860, Sec. 5 (Exh. 3), 2011; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.530 Requirements.

All land uses and development proposals shall comply with the applicable provisions of the Lake Stevens Municipal Code for general and specific flood hazard protection (see Chapter [14.64](#), Special Flood Hazard Areas, Drainage, and Erosion).

(a) Development shall not reduce the effective flood storage volume. Reduction of the floodwater storage capacity due to grading, construction, or other regulated activities shall provide compensatory storage per Section [14.64.055](#)(b).

(b) The final recorded subdivision plat or site plan shall include a notice that the property contains land within the regulatory floodplain including special flood hazard areas and protected areas, as applicable. (Ord. 860, Sec. 5 (Exh. 3), 2011; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.540 Mitigation.

If potential flooding impacts from development cannot be avoided by design or if the use is not an allowed or exempt use, the applicant shall provide a habitat impact assessment and/or habitat mitigation plan to mitigate impacts on federal, state or locally protected species and habitat, water quality and aquatic and riparian habitat, per Section [14.64.055](#)(c) and (d). (Ord. 860, Sec. 5 (Exh. 3), 2011; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

Part VI. Geologically Hazardous Areas

14.88.600 Classification.

(a) Geologically hazardous areas include areas susceptible to erosion, sliding, earthquakes, liquefaction, or other geological events. Geologically hazardous areas shall be classified based upon the history or existence of landslides, unstable soils, steep slopes, high erosion potential or seismic hazards. In determining the significance of a geologically hazardous area the following criteria shall be used:

- (1) Potential economic, health, and safety impact related to construction in the area;
- (2) Soil type, slope, vegetative cover, and climate of the area;
- (3) Available documentation of history of soil movement, the presence of mass wastage, debris flow, rapid stream incision, stream bank erosion or undercutting by wave action, or the presence of an alluvial fan which may be subject to inundation, debris flows, or deposition of stream-transported sediments.

(b) The different types of geologically hazardous areas are defined as follows:

(1) Erosion hazard areas are as defined by the USDA Soil Conservation Service, United States Geologic Survey, or by the Department of Ecology Coastal Zone Atlas. The following classes are high erosion hazard areas.

(i) Class 3, class U (unstable) includes severe erosion hazards and rapid surface runoff areas;

(ii) Class 4, class UOS (unstable old slides) includes areas having severe limitations due to slope; and

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(iii) Class 5, class URS (unstable recent slides).

(2) Landslide hazard areas shall include areas subject to severe risk of landslide based on a combination of geologic, topographic and hydrologic factors. Some of these areas may be identified in the Department of Ecology Coastal Zone Atlas, or through site-specific criteria. Landslide hazard areas include the following:

(i) Areas characterized by slopes greater than 15 percent; and impermeable soils (typically silt and clay) frequently interbedded with permeable granular soils (predominantly sand and gravel) or impermeable soils overlain with permeable soils; and springs or groundwater seepage;

(ii) Any area which has exhibited movement during the Holocene epoch (from 10,000 years ago to present) or which is underlain by mass wastage debris of that epoch;

(iii) Any area potentially unstable due to rapid stream incision, stream bank erosion or undercutting by wave action;

(iv) Any area located on an alluvial fan presently subject to or potentially subject to inundation by debris flows or deposition of stream-transported sediments;

(v) Any area with a slope of 40 percent or greater and with a vertical relief of 10 or more feet except areas composed of consolidated rock;

(vi) Any area with slope defined by the United States Department of Agriculture Soil Conservation Service as having a severe limitation for building site development; and

(vii) Any shoreline designated or mapped as class U, UOS, or URS by the Department of Ecology Coastal Zone Atlas.

(3) Slopes.

(i) Moderate slopes shall include any slope greater than or equal to 15 percent and less than 40 percent.

(ii) Steep slopes shall include any slope greater than or equal to 40 percent.

(4) Seismic hazard areas shall include areas subject to severe risk of earthquake damage as a result of seismic induced settlement, shaking, slope failure or soil liquefaction. These conditions occur in areas underlain by cohesionless soils of low density usually in association with a shallow groundwater table. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.610 Determination of Boundary.

Determination of a boundary of a geologically hazardous area shall be made by the Planning and Community Development Director, relying on a geotechnical or similar technical report and other information where available and pertinent. Such reports or information shall be provided by an applicant for an activity or permit at the request of the City. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.620 Allowed Activities.

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Except where regulated by other sections of this or any other title or law, the following uses shall be allowed within geologically hazardous areas when the requirements of Section [14.88.630](#) have been met and mitigation adequate to alleviate any other impacts has been proposed:

- (a) Those activities allowed per Section [14.88.220](#).
- (b) Any other use allowed per the zone; provided, that it meets the requirements of Section [14.88.630](#) and will not have a detrimental impact on the health, safety, and welfare of the public, or will not negatively impact neighboring properties. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.630 Geological Assessment Requirements.

Development proposals on or within 200 feet of any areas which are designated as geologically hazardous, or which the City has reason to believe are geologically hazardous based on site-specific field investigation, shall be required to submit a geological assessment.

- (a) The geological assessment shall be submitted with the minimum required content as set forth in subsection (d) of this section and in the format established by the Planning and Community Development Director, and shall be consistent with the following:
 - (1) A geotechnical letter is required when the geologist finds that no active geological hazard area exists on or within 200 feet of the site.
 - (2) A geotechnical report is required when the geologist finds that an active geological hazard area exists on or within 200 feet of the proposed project area.
- (b) The Department shall review the geological assessment and either accept or reject the assessment and require revisions or additional information. When the geological assessment has been accepted, the Department shall issue a decision on the land use permit application.
- (c) A geological assessment for a specific site may be valid for a period of up to five years when the proposed land use activity and site conditions affecting the site are unchanged. However, if any surface and subsurface conditions associated with the site change during the five-year period or if there is new information about a geological hazard, the applicant may be required to submit an amendment to the geological assessment.
- (d) A geological assessment shall include the following minimum information and analysis:
 - (1) A field investigation that may include the use of historical air photo analysis, review of public records and documentation, and interviews with adjacent property owners or others knowledgeable about the area, etc.
 - (2) An evaluation of any areas on the site or within 200 feet of the site that are geologically hazardous as set forth in Section [14.88.600](#).
 - (3) An analysis of the potential impacts of the proposed development activity on any potential geological hazard that could result from the proposed development either on site or off site. For landslide hazard areas, the analysis shall consider the run-out hazard of landslide debris to the proposed development that starts upslope whether the slope is part of the subject property or starts off site.

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(4) Identification of any mitigation measures required to eliminate potentially significant geological hazards both on the proposed development site and any potentially impacted off-site properties. When hazard mitigation is required, the mitigation plan shall specifically address how the proposed activity maintains or reduces the pre-existing level of risk to the site and adjacent properties on a long term basis. The mitigation plan shall include recommendations regarding any long term maintenance activities that may be required to mitigate potential hazards.

(5) The geological assessment shall document the field investigations, published data and references, data and conclusions from past geological assessments, or geotechnical investigations of the site, site-specific measurements, tests, investigations, or studies, as well as the methods of data analysis and calculations that support the results, conclusions, and recommendations.

(6) The geological assessment shall contain a summary of any other information the geologist identifies as relevant to the assessment and mitigation of geological hazards.

(e) Geological assessments shall be prepared under the responsible charge of a geologist, and shall be signed, sealed, and dated by the geologist. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.640 Setback Buffer Requirements.

(a) The setback buffer width shall be based upon information contained in a geological assessment, and shall be measured on a horizontal plane from a vertical line established at the edge of the geologically hazardous area limits (both from the top and toe of slope). In the event that a specific setback buffer is not included in the recommendation of the geological assessment, the setback buffer shall be based upon the standards contained in Chapter 18 of the International Building Code (IBC), or as the IBC is updated and amended.

(1) If the geological assessment recommends setback buffers that are less than the standard buffers that would result from application of Chapter 18 of the IBC, the specific rationale and basis for the reduced buffers shall be clearly articulated in the geological assessment.

(2) The City may require increased setback buffer widths under any of the following circumstances:

(i) The land is susceptible to severe erosion and erosion control measures will not effectively prevent adverse impacts.

(ii) The area has a severe risk of slope failure or downslope stormwater drainage impacts.

(iii) The increased buffer is necessary to protect public health, safety and welfare based upon findings and recommendations of geological assessment.

(b) Unless otherwise permitted as part of an approved alteration, the setback buffers required by this subsection shall be maintained in native vegetation to provide additional soil stability and erosion control. If the buffer area has been cleared, it shall be replanted with native vegetation in conjunction with any proposed development activity.

(c) The City may impose seasonal restrictions on clearing and grading within 200 feet of any geologically hazardous areas. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.650 Allowed Alterations.

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Unless associated with another critical area, the Planning and Community Development Director may allow alterations of an area identified as a geologically hazardous area or the setback buffers specified in the IBC if an approved geotechnical report demonstrates that:

- (a) The proposed development will not create a hazard to the subject property, surrounding properties or rights-of-way, or erosion or sedimentation to off-site properties or bodies of water;
- (b) The proposal addresses the existing geological constraints of the site, including an assessment of soils and hydrology;
- (c) The proposed method of construction will reduce erosion potential, landslide and seismic hazard potential, and will improve or not adversely affect the stability of slopes;
- (d) The proposal uses construction techniques which minimize disruption of existing topography and natural vegetation;
- (e) The proposal is consistent with the purposes and provisions of this chapter and mitigates any permitted impacts to critical areas in the vicinity of the proposal;
- (f) The proposal mitigates all impacts identified in the geotechnical letter or geotechnical report;
- (g) All utilities and access roads or driveways to and within the site are located so as to require the minimum amount of modification to slopes, vegetation or geologically hazardous areas; and
- (h) The improvements are certified as safe as designed and under anticipated conditions by a geologist. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.660 Prohibited Alterations.

Modification of geologically hazardous areas shall be prohibited under the following circumstances:

- (a) Where geologically hazardous slopes are located in a stream, wetland, and/or a fish and wildlife habitat conservation area or their required buffers, alterations of the slopes are not permitted, except as allowed in Section [14.88.220](#). The required buffer for such slopes shall be determined through the site-specific geological assessment, but in no case shall be less than 25 feet from the top of slopes of 25 percent and greater.
- (b) Any proposed alteration that would result in the creation of, or which would increase or exacerbate existing geological hazards, or which would result in substantial unmitigated geological hazards either on or off site shall be prohibited. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.670 Mitigation.

- (a) In addition to the other requirements of this chapter, as part of any approval of development on or adjacent to geologically hazardous areas or within the setback buffers required by this section:
 - (1) The City shall require:
 - (i) Geologically hazardous areas not approved for alteration and their setback buffers shall be placed in a native growth protection area as set forth in Sections [14.88.290](#).

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(ii) Any geologically hazardous area or required setback buffer that is allowed to be altered subject to the provisions of this chapter shall be subject to a covenant of notification and indemnification/hold harmless agreement in a form acceptable to the City Attorney. Such document shall identify any limitation placed on the approved alterations.

(2) The City may require:

(i) The presence of a geologist on the site to supervise during clearing, grading, filling, and construction activities which may affect geologically hazardous areas, and provide the City with certification that the construction is in compliance with the geologist's recommendations and has met approval of the geologist, and other relevant information concerning the geologically hazardous conditions of the site.

(ii) Vegetation and other soil stabilizing structures or materials be retained or provided.

(iii) Long term maintenance of slopes and on-site drainage systems.

(b) If potential geologic impacts cannot be avoided by adhering to the above requirements and the other requirements of this chapter, other forms of mitigation may be considered. Applicants must provide mitigation plans exploring and analyzing any proposed mitigation measures. What is considered adequate mitigation will depend on the nature and magnitude of the potential impact. For example, some potential risk due to construction in geologically hazardous areas may be reduced through structural engineering design. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

Part VII. Streams, Creeks, Rivers, Lakes and Other Surface Water

14.88.700 Classification.

Repealed by Ord. 741.

14.88.710 Allowed Activities.

Repealed by Ord. 741.

14.88.720 Requirements.

Repealed by Ord. 741.

14.88.730 Determination of Boundary.

Repealed by Ord. 741.

14.88.740 Mitigation.

Repealed by Ord. 741.

Part VIII. Wetlands

14.88.800 Classification.

Wetlands shall be classified as Category I, II, III, or IV using the Washington State Department of Ecology's Wetland Rating System for Western Washington, Publication No. ~~04-06-025~~14-06-029, or as amended hereafter. Wetland delineations shall be determined in accordance with WAC [173-22-035](#).

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- (a) Sources used to identify designated wetlands include, but are not limited to:
 - (1) United States Department of the Interior, Fish and Wildlife Service, National Wetlands Inventory.
 - (2) Areas identified as hydric soils, soils with significant soil inclusions and wet spots with the United States Department of Agriculture/Soil Conservation Service Soil Survey for Snohomish County.
 - (3) Washington State Department of Natural Resources, Geographic Information System, Hydrography and Soils Survey Layers.
 - (4) City of Lake Stevens Critical Areas Inventory Maps.
- (b) Category I Criteria.
 - (1) Wetlands that represent a unique or rare wetland type; or
 - (2) Are more sensitive to disturbance than most wetlands; or
 - (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.
- (5) Category I wetlands include:
 - (i) Estuarine wetlands which are larger than one acre in size.
 - (ii) Natural heritage wetlands as identified by the Natural Heritage Program of the Washington Department of Natural Resources.
 - (iii) Bogs.
 - (iv) Mature and old-growth forested wetlands over one acre in area.
 - (v) Wetlands that score ~~70 or more~~ 23 - 27 points out of ~~100~~ 27 using the Western Washington Rating System.
- (c) Category II Criteria.
 - (1) Category II wetlands are difficult though not impossible to replace and provide high levels of some functions.
 - (2) Category II wetlands include:
 - (i) Estuarine wetlands under one acre in area.
 - (ii) Wetlands that score between ~~51 and 69~~ 20 – 22 points out of ~~100~~ 27 on the Western Washington Rating System.
- (d) Category III Criteria. Wetlands with a moderate level of functions and with rating system scores between ~~30 and 50~~ 16 – 19 points out of ~~100~~ 27.
- (e) Category IV Criteria. Wetlands with a low level of functions and with rating system scores ~~less than 30~~ 9 – 15 points out of ~~100~~ 27. (Ord. 855, Sec. 24, 2011; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

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14.88.810 Determination of Boundary.

(a) The Planning and Community Development Director, relying on a field investigation supplied by an applicant and applying the wetland definition provided in this chapter, shall determine the location of the wetland boundary. Qualified professional and technical scientists shall perform wetland delineations as part of a wetland identification report in accordance with WAC [173-22-035](#). Criteria to be included in a required wetland identification report may be found in Section [14.88.275](#), Mitigation/Enhancement Plan Requirements. The applicant is required to show the location of the wetland boundary on a scaled drawing as a part of the permit application.

(b) When the applicant has provided a delineation of the wetland boundary, the Planning and Community Development Director shall verify the accuracy of, and may render adjustments to, the boundary delineation. In the event the adjusted boundary delineation is contested by the applicant, the Planning and Community Development Director shall, at the applicant's expense, obtain expert services to render a final delineation.

(c) The Planning and Community Development Director, when requested by the applicant, may waive the delineation of boundary requirement for the applicant and, in lieu of delineation by the applicant, perform the delineation. The Planning and Community Development Director shall consult with qualified professional scientists and technical experts or other experts as needed to perform the delineation. The applicant will be charged for the costs incurred. Where the Planning and Community Development Director performs a wetland delineation at the request of the applicant, such delineation shall be considered a final determination. (Ord. 855, Sec. 25, 2011; Ord. 797, Sec. 6, 2009; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.820 Allowed Activities.

Except where regulated by other sections of this or any other title or law, and provided they are conducted using best management practices, the following uses and activities shall be allowed and regulated within wetlands and their buffers when the requirements of Sections [14.88.830](#) and [14.88.840](#) have been met and mitigation adequate to alleviate any other impacts has been proposed:

(a) Those uses listed in Section [14.88.220](#).

(b) In Category IV wetlands only, access to developable portions of legal lots where:

(1) There is no other reasonable method of accessing the property;

(2) Altering the terrain would not cause drainage impacts to neighboring properties; and

(3) Not more than 2,500 square feet of wetland is impacted. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.830 Requirements.

(a) Buffers. Wetland buffers shall be required for all regulated activities adjacent to regulated wetlands as provided in Table 14.88-II, unless modified per subsection (b) or (c) of this section. Any wetland created, restored, or enhanced as compensation for approved wetland alterations shall also include the standard buffer required for the category of the created, restored, or enhanced wetland. All buffers shall be measured from the wetland boundary as surveyed in the field. The width of the wetland buffer

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zone shall be determined according to wetland category and the proposed land use. These buffers have been established to reflect the impact of low and high intensity uses on wetland functions and values.

Table 14.88-II

Category	Land Use	HS 29-36	HS 20-28	HS <20
I	High	190	95	65
	Low	125	65	45
II	High	190	95	65
	Low	125	65	45
III	High	N/A	95	50
	Low		65	35
IV	High	N/A	N/A	35
	Low			20

Table 14.88-II

Wetland Category	Land Use Intensity	Habitat Score 8-9	Habitat Score 5-7	Habitat Score 3-4
I	High	190	95	65
	Low	125	65	45
II	High	190	95	65
	Low	125	65	45
III	High	95		50
	Low	65		35
IV	High	35		
	Low	20		

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(b) Increased Wetland Buffer Widths. The Planning and Community Development Director shall require increased standard buffer zone widths on a case-by-case basis when a larger buffer is necessary to protect wetland functions and values based on local conditions. This determination shall be supported by appropriate documentation showing that it is reasonably related to protection of the functions and values of the regulated wetland. Such determination shall be attached as a permit condition and shall demonstrate that:

- (1) A larger buffer is necessary to maintain viable populations of existing species; or
- (2) The wetland is used by species proposed or listed by the Federal Government or the State as endangered, threatened, sensitive, critical or outstanding potential habitat for those species or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees. An applicant must consult with the State Department of Fish and Wildlife to confirm any special recommendations for candidate or monitor species as listed for approval by the Planning and Community Development Director; or
- (3) The adjacent land is susceptible to severe erosion and erosion control measures will not effectively prevent adverse wetland impacts, or the adjacent land has minimal vegetative cover or slopes greater than 15 percent.

(c) Wetland Buffer Width Averaging. Wetland buffer widths may be modified by averaging. In no instance shall the buffer width be reduced by more than 25 percent of the standard buffer. Wetland buffer width averaging shall be allowed only where the applicant demonstrates all of the following:

- (1) The averaging will not impair or reduce the habitat, water quality purification and enhancement, stormwater detention, groundwater recharge, shoreline protection, erosion protection, and other functions and values of the wetland and buffer; and
- (2) The total area contained within the wetland buffer after averaging is no less than that contained within the standard buffer prior to averaging.

(d) Buffer Conditions. Except as otherwise specified, wetland buffers shall be retained in their natural condition. Where buffer disturbance may or has occurred during construction, revegetation with native wetland vegetation may be required.

(e) Permitted Uses in a Wetland Buffer. Regulated activities shall not be allowed in a buffer zone except for the following:

- (1) Activities having minimal adverse impacts on buffers and no adverse impacts on regulated wetlands. These may include low intensity, passive recreational activities such as pervious trails, nonpermanent wildlife watching blinds, short-term scientific or educational activities, and sports fishing or hunting;
- (2) For Category III and IV wetlands, stormwater management facilities restricted to the outer 25 percent of the buffer around the wetland; or
- (3) For Category III and IV wetlands, development having no feasible alternative location.

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(f) Buffer Reductions. Buffer reductions may be allowed for Category III or IV wetlands, provided the applicant demonstrates the proposal meets the criteria in subsections (f)(1) through (4) of this section and either subsection (f)(5) or (6) of this section. Buffer width reduction proposals that meet the criteria as determined by the Planning and Community Development Director shall be reduced by no more than 25 percent of the required buffer and shall not be less than 25 feet in width.

- (1) The buffer area meets buffer area planting in Section [14.88.275](#) and has less than 15 percent slopes; and
- (2) A site-specific evaluation and documentation of buffer adequacy is based on consideration of the best available science as described in Section [14.88.235](#); and
- (3) Buffer width averaging as outlined in subsection (c) of this section is not being used; and
- (4) A buffer enhancement plan is proposed that would significantly improve the function and value of the wetland; and either
- (5) The subject property is separated from the wetland by pre-existing, intervening, and lawfully created structures, public roads, or other substantial improvements. The pre-existing improvements must be found to separate the subject upland property from the wetland by height or width that prevents or impairs the delivery of buffer functions to the wetland. In such cases, the reduced buffer width shall reflect the buffer functions that can be delivered to the wetland; or
- (6) The wetland scores ~~less than 20~~ 3 – 4 points for wildlife habitat in accordance with the rating system applied in Section [14.88.800](#), and mitigation is provided based on Section [14.88.840](#)(b) and Table 14.88-III, when determined appropriate based on the evaluation criteria in Section [14.88.840](#)(f).

Table 14.88-III: Disturbance Mitigation

Examples of Disturbance	Activities that May Cause Disturbance	Example Measures to Minimize Impacts
Lights	Parking lots, warehouses, manufacturing, high density residential	Direct lights away from wetland
Noise	Manufacturing, high density residential	Place activity away from wetland

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Pets and humans	Residential areas	Landscaping to delineate buffer edge and to discourage disturbance of wildlife by humans and pets
Dust	Tilled fields	Best management practices for dust control
Toxic runoff*	Parking lots, roads, manufacturing, residential areas, landscaping	<ul style="list-style-type: none"> -Route all new untreated runoff away from wetland while ensuring that wetland is not dewatered -Establish covenants governing use of pesticides within 150 feet of wetland -Apply integrated pest management
Stormwater runoff	Parking lots, roads, manufacturing, residential areas, commercial areas, landscaping	<ul style="list-style-type: none"> -Retrofit stormwater detention and treatment for roads and existing adjacent development -Prevent channelized flow from lawns

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		that directly enters buffer
*These examples are not necessarily adequate for minimizing toxic runoff if threatened or endangered species are present at the site.		

(g) Buffers may be modified when approved for the purpose of implementing innovative development design in accordance with Section [14.88.298](#). (Ord. 811, Sec. 92, 2010; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.840 Mitigation.

The mitigation sequence set forth in this section should be applied after impact avoidance and minimization measures have been taken.

(a) Location and Timing of Mitigation.

(1) Restoration, creation, or enhancement actions should be undertaken on or adjacent to the site, or, where restoration, creation, or enhancement of a former wetland is proposed, within the same watershed. In-kind replacement of the impacted wetland is preferred for creation, restoration, or enhancement actions. The City may accept or recommend restoration, creation, or enhancement which is off site and/or out-of-kind, if the applicant can demonstrate that on-site or in-kind restoration, creation, or enhancement is unfeasible due to constraints such as parcel size or wetland type, or that a wetland of a different type or location is justified based on regional needs or functions;

(2) Whether occurring on site or off site, the mitigation project shall occur near an adequate water supply with a hydrologic connection to the wetland to ensure a successful wetlands development or restoration;

(3) Any approved proposal shall be completed before initiation of other permitted activities, unless a phased or concurrent schedule has also been approved by the Planning and Community Development Department;

(4) Wetland acreage replacement ratios shall be as specified in Table 14.88-IV;

(5) Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands.

(i) This provision may be used when:

a. The bank is certified under Chapter [173-700](#) WAC;

b. The Planning and Community Development Director determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and

c. The proposed use of credits is consistent with the terms and conditions of the bank's certification.

(ii) Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the bank's certification.

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(iii) Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the bank's certification. In some cases, the service area of the bank may include portions of more than one adjacent drainage basin for specific wetland functions.

(b) Mitigation Performance Standards.

(1) All reasonable measures shall be taken to avoid and reduce impacts. When such avoidance and reduction is not reasonable, adverse impacts to wetland functions and values shall be mitigated. Mitigation actions shall be implemented in the preferred sequence identified in Section [14.88.010\(a\)](#). Proposals which include less preferred or compensatory mitigation shall demonstrate that:

- (i) All reasonable measures will be taken to reduce impacts and losses to the original wetland;
- (ii) No overall net loss will occur in wetland functions, values and acreage; and
- (iii) The restored, created or enhanced wetland will be as persistent and sustainable as the wetland it replaces.

(c) Wetland Replacement Ratios.

(1) Where wetland alterations are permitted by this chapter, the applicant shall restore or create equivalent areas of wetlands in order to compensate for wetland losses. Equivalent areas shall be determined according to size, function, category, location, timing factors, and projected success of restoration or creation.

(2) Where wetland creation is proposed, all required buffers for the creation site shall be located on the proposed creation site. Properties adjacent to or abutting wetland creation projects shall not be responsible for providing any additional buffer requirements.

(3) The following acreage replacement ratios shall be used as targets. The Planning and Community Development Director may vary these standards if the applicant can demonstrate and the Planning and Community Development Director agrees that the variation will provide adequate compensation for lost wetland area, functions and values, or if other circumstances as determined by the Planning and Community Development Department justify the variation.

(4) The qualified scientific professional in the wetlands report may, where feasible, recommend that restored or created wetlands shall be a higher wetland category than the altered wetland.

(d) The Planning and Community Development Director may increase the ratios under the following circumstances:

- (1) Uncertainty exists as to the probable success of the proposed restoration or creation; or
- (2) A significant period of time will elapse between impact and replication of wetland functions.

(e) All wetland restoration, creation and/or enhancement projects required pursuant to this chapter either as a permit condition or as the result of an enforcement action shall follow a mitigation plan prepared in conformance to the requirements of Section [14.88.275](#), Mitigation/Enhancement Plan Requirements.

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(f) Mitigation ratios for the replacement of impacted wetlands shall be as listed in Table 14.88-IV. However, Table 14.88-IV shall not apply to bogs, because it is not possible to create or restore bogs due to their unique chemistry and hydrology. Therefore, impacts to bogs are considered to be a loss of functions and shall be avoided.

Table 14.88-IV: Wetland Mitigation Ratios

Affected Wetland	Mitigation Type and Ratio			
Category	Re-establishment or Wetland Creation	Rehabilitation	Re-establishment or Creation (R/C) and Enhancement (E)	Enhancement Only
Category IV	1.5:1	3:1	1:1 R/C and 2:1 E	6:1
Category III	2:1	4:1	1:1 R/C and 2:1 E	8:1
Category II	3:1	6:1	1:1 R/C and 4:1 E	12:1
Category I – Forested	6:1	12:1	1:1 R/C and 10:1 E	24:1
Category I – Score Based	4:1	8:1	1:1 R/C and 10:1 E	16:1
Category I – Bog	Not considered possible	N/A	N/A	N/A

(Ord. 811, Sec. 92, 2010; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

(g) The applicant may propose innovative site design based on the best available science and pursuant to Section 14.88.298 if the innovative development design will achieve protection equivalent to or better than the standard provisions of this Chapter. Approval of the innovative site design will be considered in combination with criteria listed in Section 14.88.298 if the design achieves the following:

(1) The site design avoids impacts to the critical area; or

(2) The site design increases the functions and/or values of the wetland and buffer with a combination of the following measures:

(i) Improving water quality functions and values of the wetland and buffer by reducing fine sediment and pollutant input in the watershed by increasing hydrologic retention and filtration;

(ii) Improving the hydrologic functions and values of the wetland and buffer by providing increased flood control adjacent to a stream channel or by improving water storage ability in the wetland system to increase groundwater recharge potential; and

(iii) Increasing habitat for aquatic, amphibian and invertebrate species and associated wetland bird and mammal species.

Part IX. Transfer of Development Rights

Attachment A

14.88.900 Definitions.

- (a) "Development rights" are those rights granted to a property owner under a particular zoning district.
- (b) "Transferable rights" include dwelling unit equivalents (density) and commercial/industrial square footage. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.910 Intent and General Regulations of Transferring Development Rights (TDR).

- (a) The purpose in allowing the transfer of density is:
 - (1) To allow for the transfer of development rights out of critical areas into buildable areas; and
 - (2) To allow a property owner to recover a portion of the development value from property that may be used for a public purpose.
- (b) TDR is not a guarantee that full development value can be recovered from a parcel of land designated as a sending area. Certain market forces may limit demand for density transfers including limitations placed on critical area receiving district capacities; particularly where all such districts are built out. Value of development rights shall be determined by the market for said rights and shall in no way be the responsibility of the City of Lake Stevens.
- (c) All transfers must be consistent with the policies of the City's Comprehensive Plan and the provisions of this chapter. In particular, land developed within a critical area receiving district through the transfer of development rights shall comply with all use, dimensional, parking, screening, etc., requirements as set forth in this title.
- (d) Development rights may be transferred out of areas designated as critical area sending districts and only into areas designated as critical area receiving districts. They may be transferred within or across ownership boundaries.
- (e) When development rights are transferred off site, the property owners shall provide and enter into a contract with one another which, at a minimum, shall acknowledge their participation and acceptance. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.920 Qualifications for Designation of Land as a Critical Area Sending or Receiving District.

- (a) All areas classified as a critical area by this chapter shall be considered critical area sending districts. Additionally, land that does not qualify as an critical area but which has been determined by City Council to be land suitable for a public purpose may be designated as critical area sending districts by the Planning and Community Development Director with the concurrence of the majority ownership of the land.
- (b) Any parcel or portion of a parcel on which development can occur per this title may be designated as a critical area receiving district by the Planning and Community Development Director with the concurrence of the majority ownership of the land. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.930 Designation Process.

Attachment A

- (a) Critical area sending or receiving districts are considered overlay zones allowed per Section [14.88.920](#), Qualifications for Designation of Land as a Critical Area Sending or Receiving District. Designation as a critical area sending or receiving district is the equivalent of a rezone and shall be accomplished by the same process as specified in Section [14.16C.090](#).
- (b) Underlying land use and zoning designations may be changed by the legislative authority granted to the City through its normal Comprehensive Plan amendment or rezoning procedures. However, the land will retain the critical area sending district designation until that designation is specifically removed.
- (c) Land designated as a critical area sending or receiving district shall be shown as an overlay district on the Official Zoning Map. The map shall be modified upon each designation or revocation.
- (d) Designation or revocation as a critical area sending or receiving district shall be recorded with the Snohomish County recorder's office and shall run with the land. (Ord. 903, Sec. 55, 2013; Ord. 811, Sec. 74, 2010; Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.940 Designation Revocation.

- (a) Land that has been designated as a critical area sending district shall retain its designation:
 - (1) Until all development rights calculated for that parcel have been transferred; or
 - (2) For a period of three years, whereby the designation may be reviewed for reconsideration. The designation may be continued upon all of the following findings being met:
 - (i) The property retains the same characteristics that qualified it as a critical area receiving district in the first place.
 - (ii) The owner(s) of the property desire a continuation of the designation.
 - (iii) It is still in the public interest to continue the designation.
- (b) Land that has been designated a critical area receiving district shall retain its designation until the property has yielded its development potential.
- (c) The Council may reconsider designation revocation of a noncritical area when it determines that the property is no longer suitable for public use.
- (d) Revocation of a critical area sending or receiving district designation shall not affect the underlying land use designation or zone. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

14.88.950 Calculating Transferable Development Rights.

- (a) Maximum transferable development rights shall be calculated for each parcel or portion of a parcel by calculating the theoretical development capacity were the land not classified as a critical area. Theoretical development capacity is calculated based on the requirements of this title, in particular Chapter [14.48](#), Density and Dimensional Regulations, but also taking into account the requirements of all other chapters (e.g., parking, screening, fire code, building code, etc.).
- (b) Only like development rights may be transferred, and may only be transferred to a zone allowing a similar use, e.g., commercial square footage may be transferred out of a commercial district and into

Attachment A

another commercial district or an industrial district that allows commercial uses. (Ord. 773, Sec. 2, 2008; Ord. 741, Sec. 2, 2007)

Part X. Mitigation Plan Requirements

14.88.960 Criteria.

Repealed by Ord. 741. (Ord. 468, 1995)

DRAFT

City	CA and Buffer Areas Credited	Minimum Buildable Lot Area	Exclusions from lot area calculations	CA tracts or Easements Included in Calculation	Minimum project site size for Density Transfer Eligibility
Mill Creek	100% of Category IV wetlands and buffers only	None	Category I, II, and III wetlands, Geohazardous Areas, Streams and buffers, Fish and wildlife habitat areas	Category IV wetlands and buffers only	None
Stanwood	0	N/A	N/A	N/A	N/A
Everett	100%	4,000 sf	Land submerged under OHWM of Lakes or Type F streams cannot be included in calculation of lot area	Yes	Commerical - over 12,000 sf; Multi-family based on percent of lot in buildable area
Marysville	100%	Bulk and dimensional standards of next higher zoning classification may be used to accommodate density transfer	Stream channels excluded	Yes	None
Snohomish	100% under a PRD process	4,000 sf with min 40 ft width	None	Yes	None, but additional open space provisions required
Arlington	0	N/A	N/A	N/A	N/A
Issaquah	Density Credit Formula applied	Lot must be sufficient for on-site septic if sewer not available	None	Yes	None
Sammamish	TDR credits transferred from sending to receiving areas only	N/A	N/A	N/A	N/A
Poulsbo	0	N/A	N/A	N/A	N/A
Bonney Lake	0	N/A	N/A	N/A	N/A

Attachment C

The distribution of categories of reference wetlands in the updated rating system

Data were collected at 122 wetlands to calibrate the rating system in 2004. Data from 111 of these could be used to re-calibrate the scoring for this update. Some wetlands were lost through natural and human alterations and some could not be re-located.

The range of scores for wetland categories based on functions in this update is between 9-27 rather than the 0-100 possible in the 2004 version. This change was necessary because a statistical analysis of data collected in the last decade indicated that rapid methods such as these are not scientifically accurate beyond a qualitative rating of High, Medium, or Low (unpublished data collected at reference sites during the calibration and field testing of the method).

Choosing the score at which we separate levels of functioning is a decision that is based on best professional judgment in rapid methods such as these. For example, in the 2004 Rating System we chose to call wetlands with a very high level of function (Category I) those with a score of 70 or more, while those with a high level of function (Category II) scored between 51 – 69, those with a moderate level of function (Category III) scored between 30 – 50, and those with a low level of function (Category IV) scored less than 30 points. These divisions were based on the judgment of the teams of wetland experts that developed the rating system in 2004. It reflects the teams' scientific consensus on what is meant by very high, high, moderate, and low levels of functions after visiting the reference sites. The divisions also reflected the teams' observations that most reference wetlands function at high or moderate levels and there are fewer that function at very high or low levels.

The divisions between wetland categories based on levels of function in this update were chosen to match as closely as possible the distribution of ratings found for the 111 reference sites when rated using the 2004 method. However, given that the range of possible scores was reduced, it was not possible to get the exact same distribution. The number of Category I and IV wetlands are about the same (see table below) but the number of Category II and III wetlands differs. In the 2004 method 47% of the 111 sites were Category II whereas in this update only 40% of the sites are Category II. On the other hand, only 35% of the sites were Category III in 2004 while 44% are Category III in this update. Lowering the score between Category II and III wetlands by one point would have created an even bigger discrepancy in the other direction when using the updated method (58 % of the sites would be Category II and only 26% would be Category III).

Number of Wetlands in Each Category Based on Their Score for Functions

Category	2004 Rating System	Updated Rating System
I	13	11
II	52	44
III	39	49
IV	7	7



Memorandum

To: Amy Lucas, Associate Planner, City of Lake Stevens
From: Jason Walker, PLA, PWS, Environmental Planning Manager, Perteet, Inc.
Date: January 15, 2016
Re: Results Comparison between 2004 and 2014 Ecology Wetland Rating System for Western Washington

PROJECT DESCRIPTION

This memo provides a comparison of wetland rating scores between the 2004 Rating System (Washington State Wetland Rating System for Western Washington: 2004 Version, Annotated 2006, and updated with WDFW Priority Habitat definitions in 2008) and the recently updated 2014 Rating System (Washington State Wetland Rating System for Western Washington: 2014 Update, effective for Ecology use as of January 2015). The following wetlands associated with recent land use actions in the City of Lake Stevens were rated with both the 2004 and 2014 Rating Systems for City consideration of pending updates to Chapter 14.88 (Critical Areas) of the Lake Stevens Municipal Code:

1. McKay Subdivision, Wetland A
2. S&G Plat, Wetland A
3. 20th Street SE Phase II, Wetlands 3, 4, 5, and 6
4. Grade Road Site, Wetlands A, B, C/D, E, F, and H

DOCUMENTS REVIEWED

Skagit Wetlands & Critical Areas. 2014. Wetland Delineation Report for 7508 10th St SE Lake Stevens, WA 98258 (McKay Subdivision). August 25, 2014

Bredberg and Associates, Inc. 2013. Wetland Study for Strootman and 99th Plat (S&G Plat). September 9, 2013.

Gresham, Doug. 2013. Wetland Rating Form for Wetland A (S&G Plat). October 2, 2013. (Prepared by Doug Gresham).

Perteet Inc. 2015. Lake Stevens Grade Road Site Wetland Delineation Report. August 31, 2015

Perteet Inc. 2015. Lake Stevens 20th Street SE Phase II: Wetland Delineation and Conceptual Mitigation Plan. November 11, 2015

FINDINGS

The following wetland ratings scores are summarized for project wetland in tables for the 2004 Rating System followed by the rating of the same wetland using the 2014 Rating System. Wetland ratings are also appended if more information is desired regarding the wetland characteristics.



Memorandum

I. McKay Subdivision Wetland A

McKay Subdivision Wetland A – 2004 Rating System Results

Wetland A, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
1.25 Acres	PFO	Depressional	10	5	20	III (35)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PFO= Palustrine Forested
- Hydrogeomorphic (HGM) classification according to Brinson (1993)
- Ecology rating according to Hruby (2004, 2008)

McKay Subdivision Wetland A – 2014 Rating System Results

Wetland A Function	Improving Water Quality	Hydrologic Function	Habitat Function	Total
Site Potential	Low	Low	Medium	IV (15) ^a
Landscape Potential	Low	Medium	High	
Value	Low	Low	High	
Score Based on Ratings	3	4	8	

Notes:

- Ecology rating according to Hruby (2014)

2. S&G Plat Wetland A

S&G Wetland A – 2004 Rating System Results

Wetland A, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
0.06 Acres	PEM	Depressional	10	7	14	III (31)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PEM= Palustrine Emergent
- Hydrogeomorphic (HGM) classification according to Brinson (1993)
- Ecology rating according to Hruby (2004, 2008)



Memorandum

S&G Wetland A – 2014 Rating System Results

Wetland A Function	Improving Water Quality	Hydrologic Function	Habitat Function	Total
Site Potential	Medium	Medium	Low	
Landscape Potential	Low	Medium	High	
Value	Low	Low	Low	
Score Based on Ratings	4	5	5	

Notes:

- Ecology rating according to Hruby (2014)

3. 20th Street SE Phase II, Wetlands 3, 4, 5, and 6

20th Street SE Phase II Wetland 3 (Also Tackitt/Trestle Station Wetland A) – 2004 Rating System Results

Wetland 3, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
3.23 Acres	PEM	Depressional	10	12	14	III (36)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PEM= Palustrine Emergent
- Hydrogeomorphic (HGM) classification according to Brinson (1993)
- Ecology rating according to Hruby (2004, 2008)

20th Street SE Phase II Wetland 3 (Also Tackitt/Trestle Station Wetland A) – 2014 Rating System Results

Wetland 3 Function	Improving Water Quality	Hydrologic Function	Habitat Function	Total
Site Potential	Low	High	Medium	
Landscape Potential	Medium	High	High	
Value	Low	Low	Medium	
Score Based on Ratings	4	7	7	

Notes:

- Ecology rating according to Hruby (2014)



Memorandum

20th Street SE Phase II Wetland 4 – 2004 Rating System Results

Wetland 4, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
0.56 Acres	PFO	Depressional	22	6	15	III (43)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PFO = Palustrine Forested
- Hydrogeomorphic (HGM) classification according to Brinson (1993)
- Ecology rating according to Hruby (2004, 2008)

20th Street SE Phase II Wetland 4 – 2014 Rating System Results

Wetland 4 Function	Improving Water Quality	Hydrologic Function	Habitat Function	Total
Site Potential	Medium	Medium	Medium	
Landscape Potential	Medium	High	Medium	
Value	Low	Low	Medium	
Score Based on Ratings	5	6	6	

Notes:

- Ecology rating according to Hruby (2014)

20th Street SE Phase II Wetland 5 – 2004 Rating System Result

Wetland 5, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
0.11 Acres	PFO	Depressional	18	5	12	III (35)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PFO = Palustrine Forested
- Hydrogeomorphic (HGM) classification according to Brinson (1993)
- Ecology rating according to Hruby (2004, 2008)



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20th Street SE Phase II Wetland 5 – 2014 Rating System Results

Wetland 5 Function	Improving Water Quality	Hydrologic Function	Habitat Function	Total
Site Potential	Medium	Medium	Medium	
Landscape Potential	High	High	Medium	
Value	Low	Low	Low	
Score Based on Ratings	6	6	5	

Notes:

- Ecology rating according to Hruby (2014)

20th Street SE Phase II Wetland 7 Rating System Results

Wetland 7, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
0.09 Acres	PFO	Depressional	22	3	12	III (37)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PFO = Palustrine Forested
- Hydrogeomorphic (HGM) classification according to Brinson (1993)
- Ecology rating according to Hruby (2004, 2008)

20th Street SE Phase II Wetland 7 Rating System Results

Wetland 7 Function	Improving Water Quality	Hydrologic Function	Habitat Function	Total
Site Potential	Medium	Medium	Medium	
Landscape Potential	High	High	Medium	
Value	Low	Low	Low	
Score Based on Ratings	6	6	5	

Notes:

- Ecology rating according to Hruby (2014).



Memorandum

4. Grade Road Site, Wetlands A, B, C/D, E, F, and H

Grade Road Wetland A – 2004 Wetland Rating System

Wetland A, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
0.18 Acres	PEM	Depressional	6	8	14	IV (28)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PEM= Palustrine Emergent
- Hydrogeomorphic (HGM) classification according to Brinson (1993)
- Ecology rating according to Hruby (2004, 2008)

Grade Road Wetland A – 2014 Wetland Rating System

Wetland A	Improving Water Quality	Hydrologic Function	Habitat Function	Total
Site Potential	Medium	Low	Low	IV (14) ^a
Landscape Potential	Low	Low	Medium	
Value	Medium	Medium	Medium	
Score Based on Ratings	5	4	5	

Notes:

- Ecology rating according to Hruby (2014).

Grade Road Wetland B – 2004 Wetland Rating System

Wetland B, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
0.61 Acres	PEM	Depressional	20	8	10	III (38)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PEM= Palustrine Emergent
- Hydrogeomorphic (HGM) classification according to Brinson (1993)
- Ecology rating according to Hruby (2004, 2008)



Memorandum

Grade Road Wetland B – 2014 Wetland Rating System and Functional Assessment

Wetland B	Improving Water Quality Function	Hydrologic Function	Habitat Function	Rating and Total Score
Site Potential	Medium	Low	Low	
Landscape Potential	Medium	Medium	Medium	
Value	Medium	Medium	Low	
Score Based on Ratings	6	5	4	IV (15) ^a

Notes:

- Ecology rating according to Hruby (2014).

Grade Road Wetland C/D –2004 Wetland Rating System

Wetland C/D, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
2.16 Acres	PEM	Depressional	12	8	12	III (32)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PEM= Palustrine Emergent.
- Hydrogeomorphic (HGM) classification according to Brinson (1993).
- Ecology rating according to Hruby (2004, 2008).

Grade Road Wetland C/D –2014 Wetland Rating System

Wetland C/D	Improving Water Quality Function	Hydrologic Function	Habitat Function	Rating and Total Score
Site Potential	Medium	Low	Low	
Landscape Potential	Medium	Low	Medium	
Value	Medium	Medium	Medium	
Score Based on Ratings	6	4	5	IV (15) ^a

Notes:

- Ecology rating according to Hruby (2014)



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Grade Road Wetland E – 2004 Wetland Rating System

Wetland E, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
1.59 Acres	PEM	Depressional	12	8	13	III (33)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PEM= Palustrine Emergent.
- Hydrogeomorphic (HGM) classification according to Brinson (1993).
- Ecology rating according to Hruby (2004, 2008).

Grade Road Wetland E3 –2014 Wetland Rating System

Wetland E	Improving Water Quality Function	Hydrologic Function	Habitat Function	Rating and Total Score
Site Potential	Medium	Low	Low	
Landscape Potential	Medium	Low	Medium	
Value	Medium	Medium	Medium	
Score Based on Ratings	6	4	5	

Notes:

- Ecology rating according to Hruby (2014).

Grade Road Wetland F –2004 Wetland Rating System

Wetland F, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
0.31 Acres	PEM	Depressional	6	8	13	IV (27)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PEM= Palustrine Emergent.
- Hydrogeomorphic (HGM) classification according to Brinson (1993).
- Ecology rating according to Hruby (2004, 2008).



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Grade Road Wetland F –2014 Wetland Rating System

Wetland F	Improving Water Quality Function	Hydrologic Function	Habitat Function	Rating and Total Score
Site Potential	Medium	Low	Low	
Landscape Potential	Low	Low	Medium	
Value	Medium	Medium	Medium	
Score Based on Ratings	4	4	5	IV (13) ^a

Notes:

- Ecology rating according to Hraby (2014)

Grade Road Wetland H –2004 Wetland Rating System

Wetland H, Size	Cowardin ^a	HGM ^b	Water Quality Score ^c	Hydrology Score ^c	Habitat Score ^c	2004 Ecology Rating ^c
0.17 Acres	PEM	Depressional	12	8	13	III (33)

Notes:

- Cowardin et al. (1979) classification based on vegetation where PEM= Palustrine Emergent
- Hydrogeomorphic (HGM) classification according to Brinson (1993)
- Ecology rating according to Hraby (2004, 2008)

Grade Road Wetland H –2014 Wetland Rating System

Wetland H	Improving Water Quality Function	Hydrologic Function	Habitat Function	Rating and Total Score
Site Potential	Medium	Low	Low	
Landscape Potential	Medium	Low	Medium	
Value	Medium	Medium	Medium	
Score Based on Ratings	6	4	5	IV (15) ^A

Notes:

- Ecology rating according to Hraby (2014)

END OF MEMORANDUM