

Model Code for Critical Areas

**For the cities of
Duvall, Carnation, Snoqualmie, North Bend**

Produced by the
Snoqualmie Watershed Forum

with assistance from
Adolfson Associates, Inc.

July 20, 2004



Duvall Carnation Snoqualmie North Bend King County

INTRODUCTION

As called for in the Snohomish River Basin Chinook Salmon Near Term Action Agenda (2001), the cities of North Bend, Snoqualmie, Carnation, Duvall and King County reviewed their current and proposed policies, regulations and programs to ensure long-term conservation of salmonid habitat and watershed processes throughout the basin. This coordinated joint review was unique in its cooperative nature affording opportunities for cross-jurisdictional learning, sharing and building support towards implementation.

One of the recommendations of this process was the development of model critical area ordinance language for the four cities in the watershed. It was anticipated that this model ordinance would be used to meet actions recommended in the Near Term Action Agenda as well as requirements under the Washington State Growth Management Act, to develop and update regulations that protect critical areas by December 2004.

This document is a model code for critical areas and is the end result of this collaborative process. It is designed to be used, and adapted as needed, by the four Snoqualmie Watershed cities as they each move forward to comply with Growth Management Act requirements. This model code recognizes and captures the intent of having consistent watershed wide protection standards.

BEST AVAILABLE SCIENCE AND RISK ASSESSMENTS

In 1995, the legislature amended the Growth Management Act's environmental protection goal to require that regulations use Best Available Science (BAS) to implement a "science-based standard" for the protection of critical areas. As part of this joint model development process, a Best Available Science Issues Paper for the Snoqualmie Watershed was produced and used as the basis for creating this model code. The requirement that regulators use best available science is important for two reasons: first, it increases the likelihood that the benefits of a regulation actually exceed its costs, and secondly, it makes the process of regulatory decision-making more predictable.

Local jurisdictions may depart from Best Available Science, but are required to produce a risk assessment. This project scope and budget did not address risk assessment. This is the responsibility of each jurisdiction as it moves towards adoption.

The intent of the joint process was to apply landscape processes and "think like a watershed." In that respect, there was an attempt to align, to the extent applicable, policy direction in this document with that of King County's Critical Area Ordinance update. This was challenging as significant changes and schedule modifications have occurred throughout the King County process, including some movement away from recommended standards set forth by the science. As it pertains to this process, it is important to note King County's published Risk Assessment statement of these departures:

- The reduced, proposed **wetland buffers in urban areas** have been addressed in the King County BAS Risk Assessment, Vol. II, p.2-54. While BAS recommends 300' for Category 1 wetlands, buffers in urban areas are proposed at 100'/50'/50'/25' for Category

1-4. The scientific assessment states: “Wetlands in urban areas will be at high risk for most or all wetland functions even with the enhanced buffer approach with the possible exception of water quality enhancement under unique conditions.” It also states that fixed wetland buffers, while essential are inadequate protections, since they allow wetlands to be completely encircled with development, isolating populations.

- For **aquatic area buffers**, Type S & F waters in King County’s proposed code have proposed buffers of 165/115’ minimums for rural/urban areas. The scientific assessment states: “For all but microclimate functions, the risk to a function is considered low to moderate. The risk that microclimate protection will not be provided is high. For large woody debris recruitment, the risk is considered moderate.” For Type O waters, the 25-foot buffers are not consistent with BAS for many reasons.

The project team developing the joint model code for the Snoqualmie Watershed cities was informed of and considered best available science during the development of this product. Like any planning document, this is a balance of the many Growth Management Act goals the cities must comply with. As the cities move forward to adopt their own Critical Areas Ordinance, departures from science-based recommendations will need to be identified and documented as required under the Growth Management Act (WAC 365-195-195).

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41			

1 **20.05.100 ADMINISTRATION**

2
3
4 20.05.110 AUTHORITY

- 5
6 A. This ordinance is adopted under the authority of the Revised Code of Washington (RCW)
7 Chapter 36.70A (the Growth Management Act).
- 8 B. This Chapter shall apply concurrently with review under the State Environmental Policy
9 Act (SEPA) and Shoreline Management Act (SMA) as locally adopted, if applicable.
- 10 C. Compliance with the provisions of this Chapter does not constitute compliance with other
11 local, state or federal regulations and permit requirements.

12
13 20.05.111 PURPOSE

14
15 The purpose of this chapter is to:

- 16
17 A. Protect the public health, safety and welfare by preventing adverse impacts of
18 development;
- 19 B. Protect the public and public resources and facilities from injury, loss of life, property
20 damage or financial loss due to flooding, erosion, landslides, soils subsidence or steep
21 slope failure;
- 22 C. Implement the goals, policies, guidelines and requirements of the City of _____
23 Comprehensive Plan and the Washington State Growth Management Act.
- 24 D. Preserve and protect critical areas, with special consideration the habitat of anadromous
25 fisheries, as required by the Washington State Growth Management Act by regulating
26 development within and adjacent to them, while allowing for the reasonable use of
27 private property.

28
29 20.05.112 JURISDICTION

- 30
31 A. The City shall regulate all uses, activities, and developments within, adjacent to, or likely
32 to affect, one or more critical areas, consistent with the provisions of this Chapter.
- 33
34 B. Critical areas regulated by this Chapter include:
- 35
36 1. Wetland Areas
- 37 2. Critical Aquifer Recharge Areas
- 38 3. Frequently Flooded Areas

1 4. Fish and Wildlife Conservation Areas

2 5. Geologically Hazardous Areas

3 C. All areas within the City meeting the definition of one or more critical areas are subject to
4 the provisions of this Chapter.

5
6 20.05.113 DESIGNATION OF CRITICAL AREAS

7
8 A. The City has designated critical areas by defining their characteristics. The applicant
9 shall determine and the City shall verify, on a case-by-case basis, in accordance with the
10 definitions in this Section 20.05.100, whether a critical area exists and is regulated under
11 this chapter, on or in close proximity to, the subject property that would require a setback
12 or buffer required under this Chapter.

13
14 B. The following resources will assist in determining the likelihood that a critical area exists.
15 These resources may not identify all critical areas and should only be used as a guide.
16 Actual field observations shall supercede information in these resources. (*City: List*
17 *resources available.*)

18
19 C. Additionally, the City has prepared a series of maps, which approximate boundaries for
20 the following critical areas within the City limits: wetlands, critical aquifer recharge
21 areas, fish and wildlife conservation areas, frequently flooded areas, and geologically
22 hazardous areas. These maps provide only approximate boundaries of known features
23 and are not adequate substitutes for more detailed maps and/or studies that could identify
24 alternative locations of known features or additional critical area features not illustrated
25 on the map. Copies of the maps are available for viewing at the ____City Hall.

26
27 20.05.114 APPLICABILITY

28
29 A. The provisions of this Chapter shall apply to all lands, all land uses and development
30 activity, and all structures and facilities in the city, whether or not a permit or
31 authorization is required, and shall apply to every person, firm, partnership, corporation,
32 group, governmental agency, or other entity that owns or leases land within the City of
33 _____. No person, company, agency, or applicant shall alter a critical area or buffer
34 except as consistent with the purpose and requirements of this Chapter.

35
36 B. The City of _____ shall not approve any development proposal or otherwise issue any
37 authorization to alter the condition of any land, water, or vegetation, or to construct or
38 alter any structure or improvement in, over, or on a critical area or associated buffer,
39 without first assuring compliance with the requirements of this Chapter.

40
41 Development proposals include proposed activity that require any of the following, or
42 any subsequently adopted permits or required approvals not expressly exempted from
43 these regulations:
44

- Building Permit
- Grading Permit
- Shoreline Substantial Development Permit
- Shoreline Conditional Use Permit
- Shoreline Variance
- Right-of-Way Disturbance Permit
- Conditional Use Permit
- Variance Approval
- Unclassified Use Permit
- Subdivision
- Planned Residential Development
- Short Subdivision
- Binding Site Plan
- Accessory Dwelling Unit
- Public Agency or Utility Exception

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C. Approval of a permit or development proposal pursuant to the provisions of this Chapter does not discharge the obligation of the applicant to comply with other provisions of this Chapter.

20.05.115 PREAPPLICATION CONFERENCE

When an applicant knows or suspects that critical areas are located on or near the subject property, the applicant is encouraged and may be required to contact the City prior to finalizing development plans and applying for development permits. Disclosure of critical areas early will reduce delays during the permit review process.

20.05.116 SUBMITTAL REQUIREMENTS

In addition to the information required for a development permit, any development activity which is subject to the provisions of this Chapter, may be required to submit a Critical Areas Report as described under Section 20.05.200 General Provisions, provided that these additional requirements shall not apply for the action exempted in Section 20.05.125.

20.05.117 BONDS OR PERFORMANCE SECURITY

- A. Prior to issuance of any permit or approval which authorizes site disturbance under the provisions of this Chapter, the City shall require performance security to assure that all work or actions required by this Chapter are satisfactorily completed in accordance with the approved plans, specifications, permit or approval conditions, and applicable regulations and to assure that all work or actions not satisfactorily completed will be corrected to comply with approved plans, specifications, requirements, and regulations to eliminate hazardous conditions, to restore environmental damage or degradation, and to protect the health safety and general welfare of the public.
- B. The City shall require the applicant to post a performance bond or other security in a form and amount acceptable to the City for completion of any work required to comply with this code at the time of construction. If the development proposal is subject to mitigation, the applicant shall post a performance bond or other security in a form and amount deemed acceptable by the City to cover long term monitoring, maintenance, and

1 performance for mitigation projects to ensure mitigation is fully functional for the
2 duration of the monitoring period.

3 C. The performance bond shall be in the amount of one hundred and twenty-five percent
4 (125%) of the estimated cost of the completed action, or the estimated cost of restoring
5 the functions and values of the critical area at risk, whichever is greater.
6

7 D. The bond shall be in the form of a surety bond, performance bond, assignment of savings
8 account, or an irrevocable letter of credit guaranteed by an acceptable financial institution
9 with terms and conditions acceptable to the City.
10

11 E. Bonds or other security authorized for mitigation by this Section shall remain in effect
12 until the City determines, in writing, that the standards bonded have been met. Bonds or
13 other security for required mitigation projects shall be held by the City for a minimum of
14 five (5) years to ensure that the mitigation project has been fully implemented and
15 demonstrated to function. The bond may be held for longer periods upon written finding
16 by the City that it is still necessary to hold the bond to ensure the mitigation project has
17 meet all elements of the approved mitigation plan.
18

19 F. Depletion, failure, or collection of bond funds shall not discharge the obligation of an
20 applicant or violator to complete required mitigation, maintenance, monitoring, or
21 restoration.
22

23 G. Any failure to satisfy critical area requirements established by law or condition including,
24 but not limited to, the failure to provide a monitoring report within thirty (30) days after it
25 is due or comply with other provisions of an approved mitigation plan shall constitute a
26 default, and the City may demand payment of any financial guarantees or require other
27 action authorized by XMC XXX.
28

29 H. Any funds recovered pursuant to this Section shall be used to complete the required
30 mitigation.
31
32
33

34 20.05.118 NATIVE GROWTH PROTECTION EASEMENT/CRITICAL AREA TRACT
35

36 A. As part of the implementation of approved development applications and alterations,
37 critical areas and their buffers that remain undeveloped pursuant to this Chapter, in
38 accordance with the Section 20.05.200, General Provisions shall be designated as Native
39 Growth Protection Easements (NGPE). Any critical area and its associated buffer created
40 as compensation for approved alterations shall also be designated as an NGPE.

41 B. When the subject development is a formal subdivision, short subdivision (short plat),
42 binding site plan, site plan/design review, master site plan, or Planned Residential
43 Development (PRD), critical areas and their buffers shall be placed in a critical areas tract

1 in addition to being designated as a NGPE, as described in the Section 20.05.200,
2 General Provisions, of these regulations.
3

4 20.05.119 NOTICE ON TITLE
5

6 A. To inform subsequent purchasers of real property of the existence of critical areas
7 excluding soil liquefaction, and floodplain outside of the floodway or channel migration
8 area, the owner of any real property containing a critical area or buffer on which a
9 development proposal is submitted and approved shall file a notice with the Records
10 Division of King County.

11 The notice shall state:

- 12 1. The presence of the critical area or buffer on the property
- 13 2. The use of this property is subject to the "Title", and
- 14 3. That limitations on actions in or affecting the critical area and/or buffer may exist

15 The notice shall run with the property.

16 Where the work on existing structures or uses is valued at less than 50% of the assessed
17 value of the existing structure or use and does not increase the area of impact to the
18 critical area or it's buffer the notice on title will not be required.
19
20

21 B. This notice on title shall not be required for a development proposal by a public agency
22 or public or private utility:

- 23 1. Within a recorded easement or right-of-way;
- 24
- 25 2. Where the agency or utility has been adjudicated the right to an easement or right-
26 of-way; or
27

28 C. The applicant shall submit proof that the notice has been filed for public record prior to
29 building permit approval or prior to recording of the final plat in the case of subdivisions.
30

31 20.05.120 INSPECTION AND RIGHT OF ENTRY
32

33 The Director may inspect any development activity to enforce the provisions of this Chapter.
34 The applicant consents to entry upon the site by the Director during regular business hours for
35 the purposes of making reasonable inspections to verify information provided by the applicant
36 and to verify that work is being performed in accordance with the approved plans and permits
37 and requirements of this Chapter.
38

39 20.05.121 ENFORCEMENT
40

41 A. The provisions of XMC XX (Enforcement) shall regulate the enforcement of these
42 Critical Areas Regulations.
43

44 B. Adherence to the provisions of this Chapter and/or to the project conditions shall be
45 required throughout the construction of the development. Should the Director determine

1 that a development is not in compliance with the approved plans, a stop work order may
2 be issued for the violation.

3
4 C. When a stop work order has been issued, construction shall not continue until such time
5 as the violation has been corrected and that the same or similar violation is not likely to
6 reoccur.

7
8 D. In the event of a violation of this Chapter, the Director shall have the power to order
9 complete restoration of the critical area by the person or agent responsible for the
10 violation. If such responsible person or agent does not complete such restoration within a
11 reasonable time following the order, the Director shall have the authority to restore the
12 affected critical area to the prior condition wherever possible and the person or agent
13 responsible for the original violation shall be indebted to the City for the cost of
14 restoration.

15
16 20.05.122 FEES

17
18 A. The applicant is responsible for the initiation, preparation, submission, and expense of all
19 required reports, assessment(s), studies, plans, reconnaissance(s), peer review by
20 qualified consultants, and other work prepared in support of, or necessary for, the City of
21 _____critical areas review processing.

22
23 B. The applicant shall also be responsible for monitoring and maintenance of critical areas
24 that may be required as a condition of permit approval. Performance bonds may be
25 withheld until all work is satisfactorily completed, including post-construction mitigation
26 activity.

27
28 C. The applicant shall also be responsible for the city review or peer review of performance
29 as constructed and monitoring and maintenance reports.

30
31
32 20.05.123 APPEALS

33
34 Appeals of administrative decisions shall be governed by Chapter XXX of the _____Municipal
35 Code.

36
37 20.05.124 GENERAL EXEMPTIONS

38
39 The following developments, activities, and associated uses shall be exempt from the provisions
40 of this Chapter, provided they are consistent with the provisions of other local, state, and federal
41 laws and requirements:

42
43 A. Emergencies.

- 1 1. Emergency activities that threaten public health, safety, welfare, or risk of damage
2 to private property and that require remedial or preventative action in a time
3 frame too short to allow for review of compliance with the requirements of this
4 Chapter may be exempted by written determination of the director

 - 5 2. Emergency actions that create an impact to a critical area or its buffer shall use
6 reasonable methods to address the emergency; in addition, they must have the
7 least possible impact to the critical area and/or its buffer.

 - 8 3. After the emergency, the person or agency undertaking the action shall fully
9 restore and/or mitigate any impacts to the critical area and buffers resulting from
10 the emergency action in accordance with the approved critical area report and
11 mitigation plan prepared in accordance with the procedures outlined in this
12 chapter for a new development permit.
- 13 B. Minimal vegetation management that is part of ongoing maintenance of facilities,
14 infrastructure, public right-of-ways, or utilities, provided the vegetation management
15 activity does not expand further into the critical area or it's buffer. Properties within the
16 floodplain outside of other critical areas are exempted from this provision.
- 17
- 18 C. Passive recreation such as hiking, fishing, and wildlife viewing that does not involve the
19 construction of trails.

20

21 20.05.125 EXCEPTIONS

22

23 *[This section is dependent on the type of land use decision system the City uses. Generally*
24 *decisions are based on Types I, II, III, etc. Where Type I is an administrative decision made by*
25 *the Director and not appealable, such as a Building Permit or ROW permit; Type II are*
26 *generally discretionary decisions, such as conditional uses and variances, made by the Director*
27 *that are appealable to a Hearing Examiner; Type III are generally made by a Hearing Examiner*
28 *after conducting an open record hearing, not subject to administrative appeal; Type IV and V*
29 *decisions are Council land use decisions, IV being quasi judicial based on Hearing Examiner*
30 *recommendations; Type V are legislative decisions to establish policy and manage public lands.*
31 *The following language is based on the assumption that the exceptions from CAO are generally*
32 *Type I and II decisions, but the City will need to tailor this discussion to fit their particular*
33 *system in place.]*

34

35 A. Administrative Exceptions

36

- 37 1. The proponent of the activity shall submit a written request for exception from the
38 Director that describes the proposed activity and exception that applies

- 39 2. The Director shall review the exception requested to verify that it complies with
40 the Chapter and approve or deny the exception. Exceptions that may be requested
41 include:
42

- 1 a. Single family residential building permits are exempt from the requirements
2 of this Chapter when the development proposal involves:
3 1. Structural modifications to or replacement of an existing single-family
4 residential structure or construction of a new residential structure where
5 construction and associated disturbance does not increase the footprint
6 of any existing structure.
7 2. The structure is not located closer to the critical area.
8 3. The existing impervious surface within the critical area or buffer is not
9 expanded.
- 10 b. Operation, maintenance or repair of existing structures, infrastructure
11 improvements, existing utilities, public or private roads, dikes, levees, or
12 drainage systems, including routine vegetation management activities when
13 performed in accordance with approved best management practices, if the
14 activity does not increase risk to life or property as a result of the proposed
15 operation maintenance or repair.
- 16 c. Activities within the improved right-of-way. Replacement, modification,
17 installation or construction of utility facilities, lines, pipes, mains, equipment
18 or appurtenances, not including substations, when such facilities are located
19 within the improved portion of the public right-of-way or a city-authorized
20 private roadway, except those activities that alter a wetland or watercourse,
21 such as culverts or bridges, or result in the transport of sediment or increased
22 stormwater, subject to the following:
- 23 i. The activity shall result in the least possible impact and have no
24 practical alternative with less impact on the critical area and/or its
25 buffer;
26 ii. An additional, contiguous and undisturbed critical area buffer shall be
27 provided, equal in area to the disturbed critical area buffer; and
28 iii. Retention and replanting of native vegetation shall occur wherever
29 possible along the right-of-way improvement and resulting disturbance.
- 30 d. Minor utility projects. Utility projects which have minor or short-term
31 impacts to critical areas, as determined by the Director in accordance with the
32 criteria below, and which do not significantly impact the functions and values
33 of a critical area(s), such as the placement of a utility pole, street sign, anchor,
34 vault, or other small component of a utility facility; provided that such
35 projects are constructed with best management practices and additional
36 restoration measures are provided. Minor activities shall not result in the
37 transport of sediment or increased stormwater runoff. Such exceptions shall
38 meet the following criteria:
- 39 i. There is no practical alternative to the proposed activity with less
40 adverse impacts on critical areas and all attempts have been made to first
41 avoid impacts, minimize impacts, and lastly mitigate unavoidable
42 impacts;
43 ii. The activity will not change or diminish the overall critical area
44 hydrology or flood storage capacity;

- 1 iii. The minor utility project shall be designed and constructed to prevent
- 2 spills and leaks into critical areas;
- 3 iv. The activity will not reduce the existing functions and values of the
- 4 affected critical areas;
- 5 v. To the maximum extent practicable, utility corridor access for
- 6 maintenance is at limited access point into the critical area buffer rather
- 7 than by a parallel access road; and
- 8 vi. Unavoidable impacts will be mitigated pursuant to an approved
- 9 mitigation plan.
- 10 e. Select vegetation removal activities. Removal of state listed invasive and
- 11 noxious weeds, and additional aggressive non-native species including
- 12 Japanese knotweed, scotch broom, English ivy, Himalayan blackberry, and
- 13 Evergreen blackberry, utilizing hand labor and light equipment that minimizes
- 14 disturbance to the critical area and buffer.
- 15 f. Hazard tree removal provided that the hazard is documented by a certified
- 16 arborist or professional forester.
- 17 g. Enhancement and restoration activities for the purpose of restoring functions
- 18 and values of critical area(s) that do not require construction permits.
- 19

20 B. Public Agency or Utility Exception. If the application of this Chapter would prohibit a
21 development proposal by a public agency or public utility that is essential to its ability to
22 provide service, the agency or utility may apply for an exception pursuant to this section.
23 After holding a public hearing pursuant to XMC XX.XX.XXX (Hearing Examiner
24 review and approval), the hearing examiner may approve the exception if the hearing
25 examiner finds that:

- 26
- 27 1. There is no other practical alternative to the proposed development with less
- 28 impact on the critical areas, based on the demonstration by the applicant of the
- 29 following factors:
 - 30 a. The applicant has considered all reasonably possible construction techniques
 - 31 based on available technology that are feasible for the proposed project and
 - 32 eliminated any that would result in unreasonable risk of impact to the critical
 - 33 area; and
 - 34 b. The applicant has considered all available sites and alignments within the
 - 35 range of potential sites and alignments that meet the project purpose and for
 - 36 which operating rights are available.
 - 37
- 38 2. The proposal minimizes and mitigates unavoidable impacts to critical areas and/or
- 39 critical areas buffers.
- 40

41 C. Reasonable Use. If the application of this Chapter would deny all reasonable use of the
42 property, the applicant may apply for an exception pursuant to this section. After holding
43 a public hearing pursuant to XMC XX.XX.XXX (Hearing Examiner review and

1 approval), the hearing examiner may approve the exception if the hearing examiner finds
2 that:

- 3
- 4 1. This Chapter would otherwise deny all reasonable use of the property;
- 5 2. There is no other reasonable use consistent with the underlying zoning of the
6 property that has less adverse impact on the critical area and/or associated buffer;
- 7 3. The proposed development does not pose an unreasonable threat to the public
8 health, safety or welfare on or off the property;
- 9 4. Any alteration is the minimum necessary to allow for reasonable use of the
10 property;
- 11 5. The inability of the applicant to derive reasonable use of the property is not the
12 result of actions by the applicant after the effective date of this chapter or its
13 predecessor; and
- 14 6. The applicant may only apply for a reasonable use exception under this subsection
15 if the requested exception provides relief not otherwise available from a variance
16 approval.

17
18 D. Variance. Where avoidance of the impact in wetlands, streams, fish and wildlife habitat
19 and critical aquifer recharge areas is not possible, a variance shall be obtained to permit
20 the impact. Variances will be granted on the basis of a finding of consistency with all the
21 criteria listed below. The hearing examiner shall not consider the fact the property may
22 be utilized more profitably.

- 23
- 24 1. The variance shall not constitute a grant of special privilege inconsistent with the
25 limitation on use of other properties similarly affected by the code provision for
26 which a variance is requested;
- 27 2. That such variance is necessary, because of special circumstances and/or
28 conditions relating to the size, shape, topography, sensitive areas, location, or
29 surroundings of the subject property, to provide it with those relative rights and
30 privileges permitted to other properties in the vicinity and in the zone in which the
31 subject property is located. The phrase “relative rights and privileges” is to ensure
32 that the property rights and privileges for the subject property are considered
33 primarily in relation to current City land-use regulations;
- 34 3. That the special conditions and/or circumstances identified in subsection 2 of this
35 section giving rise to the variance application do not result from the actions of the
36 applicant, property owner, or recent prior owner(s) of the subject property;

- 1 4. That the granting of the variance will not be materially detrimental to the public
2 welfare or injurious to the property, neighborhood, or improvements in the
3 vicinity and zone in which subject property is situated;
- 4 5. That the reasons set forth in the application and the official record justify the
5 granting of the variance, and that the variance is the minimum variance necessary
6 to grant relief to the applicant;
- 7 6. That alternative development concepts in compliance with applicable codes have
8 been evaluated, and that undue hardship would result if strict adherence to the
9 applicable codes is required; and
- 10 7. That the granting of the variance will not adversely affect implementation of the
11 comprehensive plan or policies adopted thereto and the general purpose and intent
12 of the zoning title or other applicable regulations.

13 E. Mitigation Required

14 Any authorized alteration to a wetland or stream or its associated buffer, or alteration to a fish
15 and wildlife habitat conservation area, as approved under sections A, B, C, or D of this section,
16 shall be subject to conditions established by the City and shall require mitigation under an
17 approved mitigation plan per 20.05.200(L).

18
19 20.05.126 NON-CONFORMING USES AND STRUCTURES

20
21 **A. PURPOSE**

22
23 The purpose of this section establishes the terms and conditions for continuing non-
24 conforming uses, structures and lots which are lawfully established prior to the effective
25 date of this title.

26
27 **B. ESTABLISHING STATUS**

- 28
29 1. A legally established non-conforming lot, use or structure may be continued,
30 transferred or conveyed and/or used as if conforming.
- 31 2. The burden of establishing that any non-conforming lot, use or structure lawfully
32 existed as of the effective date of this chapter shall, in all cases, rest with the
33 owner and not with the City.
- 34 3. A non conforming lot, use, or structure may be deemed legally non-conforming
35 by providing documentation from two of the following:
36 a) Local agency permit;
37 b) Orthophoto, aerial photo or planimetric mapping recognized as legitimate by the
38 agency;
- 39

1 **C. MAINTENANCE AND REPAIR OF NON-CONFORMING STRUCTURES**

2
3 Normal maintenance and incidental repair of legal non-conforming structures shall be
4 permitted, provided that it complies with all the sections of this Chapter and other
5 pertinent chapters of the ____ Municipal Code.
6

7 **D. RECONSTRUCTION**

8
9 Reconstruction, restoration or repair (and remodeling) of a legal non-conforming
10 structure damaged by fire, flood, earthquake, falling trees or limbs, or other disasters,
11 shall be permitted; provided that such reconstruction shall not result in the expansion of
12 the non-conforming structure into or towards the critical area, or in a manner that
13 increases the potential impact to the critical area or risk of harm to public safety. Legal
14 non-conforming status will be lost if a building permit is not secured within one year of
15 the date damage is incurred.
16

17 **E. EXPANSION OF NON-CONFORMING USE OR STRUCTURE**

18
19 No legal non-conforming use or structure may be expanded, enlarged, extended, or
20 intensified in any way (including extension of hours of operation) unless such
21 modification is in full compliance with this chapter or the terms and conditions of
22 approved permits pursuant to this chapter.
23

24 **F. DISCONTINUANCE OF NON-CONFORMING USE OR STRUCTURE**

25
26 All legal non-conforming uses shall be encouraged to convert to a conforming use
27 whenever possible. Conformance shall be required when:
28

- 29 1. A change of use is proposed;
- 30 2. The use is terminated or discontinued for more than one (1) year, or the
31 structure(s) which houses the use is vacated for more than one (1) year; or
- 32 3. The structure(s) or area in which the use is conducted is proposed for relocation.

33 **20.05.200 GENERAL PROVISIONS**

34
35 The City of _____ will use the following general methods and mechanisms to accomplish the
36 purposes of the Critical Areas Regulations. This section shall be applied to all approved
37 development applications and alterations when action is taken to implement the proposed action.
38

39 **A. GENERAL APPROACH**

1 Protection of critical areas shall observe the following sequence, unless part of a
2 restoration plan for a significantly degraded wetland or stream buffer, described under
3 section B.3, below:
4

- 5 1. Avoid the impact by refraining from certain actions or parts of an action;
- 6 2. Where impact to critical areas or their buffers will not be avoided the applicant
7 shall demonstrate that the impact meets the criteria for granting a variance or
8 other applicable exception as set forth in Section 20.05.124 and 125;
- 9 3. Minimize the impacts by limiting the degree or magnitude of the action by using
10 affirmative steps to avoid or reduce impacts or by using appropriate technology;
- 11 4. Rectify the impact by repairing, rehabilitating, or restoring the affected
12 environment;
- 13 5. Reduce or eliminate the impact over time by preservation and maintenance
14 operations;
- 15 6. Compensate for the impacts by creating, replacing, enhancing, or providing
16 substitute resources or environments.

17 B. BUFFERS
18

- 19 1. Measurement of Buffers. All buffers shall be measured from the critical area
20 boundary as surveyed in the field. The width of the buffer shall be determined
21 according to the category of the critical area and the proposed land use.
22
- 23 2. Standard Buffers. The standard buffer widths presume the existence of a
24 relatively intact native vegetation community in the buffer zone adequate to
25 protect the critical area functions and values at the time of the proposed activity.
26 If the vegetation or protection area is inadequate, the City may require an increase
27 in the buffer width or additional native plantings within the standard buffer width.
28 Provisions to reduce or average buffer widths to obtain optimal habitat value are
29 provided under the development standards for each critical area.
30
- 31 3. Significantly Degraded Streams, Wetlands, and Associated Buffers. In areas
32 where the functions of the stream or wetland and stream or wetland buffer are
33 already significantly degraded, restoration may be more beneficial than
34 preservation of degraded areas. Certain expanded uses shall be allowed at the
35 discretion of the Director where the applicant demonstrates through a Critical
36 Areas Report that greater habitat functions can be obtained in the affected sub-
37 drainage basin as a result of mitigation.
38

- 1 4. Averaging Buffers. The Director will consider the allowance of wetland or
2 stream buffer averaging only when the buffer area width after averaging will not
3 adversely impact the critical area and/or buffer functions and values.
4 a. At a minimum, any proposed buffer averaging shall meet the following
5 criteria:
6 i. The buffer area after averaging is no less than that which would be
7 contained within the standard buffer;
8 ii. The buffer width shall not be reduced by more than twenty-five percent
9 (25%) at any one point as a result of the buffer averaging;
10 iii. The buffer area shall be enhanced where the buffer is averaged;
11 iv. The additional buffer is contiguous with the standard buffer;
12 v. Encroachment into the buffer does not occur waterward of the top of an
13 associated steep slope or into a channel migration zone;
14 vi. Encroachment does not occur into the buffer of an associated wetland
15 except as otherwise allowed.
16
17 5. Additional Buffers. The Director may require increased buffer sizes as necessary
18 to protect critical areas when either the critical area is particularly sensitive to
19 disturbance or the development poses unusual impacts. Examples of
20 circumstances that may require buffers beyond minimum requirements include,
21 but are not limited to:
22 a. Unclassified uses;
23 b. The critical area is in a critical drainage basin or documented salmonid
24 spawning or rearing habitat;
25 c. The critical area is a critical fish habitat for spawning or rearing as determined
26 by the Washington Department of Fish and Wildlife;
27 d. The area serves a critical ground water recharge area as determined by a
28 Ground Water Management Plan;
29 e. The land adjacent to the critical area and its associated buffer, and located
30 within the development proposal, is classified as an erosion hazard area; or
31 f. A trail or utility corridor in excess of ten percent (10%) of the buffer width is
32 proposed for inclusion in the buffer.
33
34 6. Reducing Buffers. The Director may reduce up to twenty-five percent (25%) of
35 the critical area buffer requirement only if sufficient information is available
36 showing the following in a critical area study:
37 a. The applicant has demonstrated that mitigation sequencing efforts have been
38 appropriately utilized: avoid, minimize, and lastly mitigate;
39 b. The proposed buffer reduction shall be accompanied by a mitigation plan per
40 20.05.200(L) that includes enhancement of the reduced buffer area;
41 c. The reduction will not adversely affect water quality;
42 d. The reduction will not destroy, damage, or disrupt a significant habitat area;
43 and
44 e. The reduction is necessary for reasonable development of the subject
45 property.

- 1 f. Where a legally established roadway transects the buffer, the minimum buffer
2 width may be reduced to the edge of the roadway if the part of the buffer
3 sought to be reduced:
4 i. Does not provide additional protection to the proposed development or
5 the stream; and
6 ii. Does not perform any biological, geological, or hydrological buffer
7 functions to undisturbed portions of the streams or its buffer.
8

9 C. BUILDING SET BACK LINE (BSBL)

10 Unless otherwise specified, a minimum BSBL of fifteen (15) feet is required from the
11 edge of any buffer, NGPE, or separate critical area tract, which ever is greater. *(City*
12 *option: consider BSBL equal to height of the significant trees in the buffer.)*
13
14

15 D. LAND SEGREGATION

16 Subdivisions, short subdivisions, boundary line adjustments and planned residential
17 developments of land in critical areas and associated buffers are subject to the following:
18
19

- 20 1. Land that is wholly within a wetland or stream critical area or associated buffer
21 may not be subdivided or the boundary line adjusted except as approved under a
22 Reasonable Use Exception
23
24 2. Land that is partially within a wetland or stream critical area or associated buffer
25 area may be subdivided or the boundary line adjusted provided that an accessible
26 and contiguous portion of each new or adjusted lot is:
27 a. Located outside the critical area and buffer; and
28 b. Large enough to accommodate the intended use.
29
30 3. Accessory roads and utilities serving the proposed subdivision may be permitted
31 within the wetland or stream critical area and associated buffer only if the City
32 determines that no other feasible alternative exists as determined by securing an
33 exception and consistent with Section 20.05.125 of this Chapter.
34

35 E. NATIVE GROWTH PROTECTION EASEMENTS

- 36
37 1. As part of the implementation of approved development applications and
38 alterations, critical areas and their buffers shall remain undeveloped and shall be
39 designated as Native Growth Protection Easements (NGPE). Where a critical area
40 or its buffer has been altered on the site prior to approval of the development
41 proposal, the area altered shall be restored using native plants and materials.
42
43 2. The Native Growth Protection Easement (NGPE) is an easement granted to the
44 City for the protection of a critical area and/or its associated buffer. NGPE's shall
45 be required as specified in these rules and shall be recorded on final development

1 permits and all documents of title and with the county Recorder at the applicant's
2 expense. The required language is as follows:

3
4 "Dedication of a Native Growth Protection Easement (NGPE) conveys
5 to the public a beneficial interest in the land within the easement. This
6 interest includes the preservation of existing vegetation for all purposes
7 that benefit the public health, safety and welfare, including control of
8 surface water and erosion, maintenance of slope stability, visual and
9 aural buffering, and protection of plant and animal habitat. The NGPE
10 imposes upon all present and future owners and occupiers of land
11 subject to the easement the obligation, enforceable on behalf of the
12 public of the City of _____, to leave undisturbed all trees and other
13 vegetation within the easement. The vegetation in the easement may
14 not be cut, pruned, covered by fill, removed, or damaged without
15 express permission from the City of _____, which permission must be
16 obtained in writing.
17

- 18
19 3. When the subject development is a formal subdivision, short subdivision (short
20 plat), binding site plan, contract rezone, Master Site Plan, site plan/design Review,
21 or Planned Residential Development (PRD), the critical area and its buffers shall
22 be placed in a Critical Areas Tract and designated as a NGPE, as described below.
23

24 F. CRITICAL AREA TRACTS
25

26 Critical areas tracts are legally created non-building lots containing critical areas and their
27 buffers that shall remain undeveloped pursuant to the Critical Areas Regulations.
28 Separate critical area tracts are not an integral part of the lot in which they are created;
29 are not intended for sale, lease or transfer; and shall be incorporated in the area of the
30 parent lot for purposes of subdivision and method of allocation and minimum lot size.
31 The following development proposals shall identify such areas as separate tracts:
32

- 33 1. Subdivisions
34
35 2. Short subdivisions
36
37 3. Planned Residential Developments
38
39 4. Contract Rezones
40
41 5. Binding Site Improvement Plans
42
43 6. Master Site Plans
44
45 7. Site Plan/Design Review
46

1 Responsibility for maintaining tracts shall be held by a homeowners association, adjacent
2 lot owners, the permit applicant or designee, or other appropriate entity as approved by
3 the City of _____.

4
5 The following note shall appear on the face of all plats, PRD's, binding site improvement
6 plans, master site plans, site plan/design review, or contract rezones and shall be recorded
7 on the title for all affected lots:

8
9 “NOTE: All lots adjoining separate tracts identified as Native Growth Protection
10 Easements are jointly and severally responsible for the maintenance and
11 protection of the tracts. Maintenance includes ensuring that no alteration occurs
12 within the separate tract and that vegetation remains undisturbed unless the
13 express written permission of the City of _____ has been received.”

14
15 G. MARKING AND/OR FENCING

16
17 1. Temporary markers. The outer perimeter of a wetland, stream, fish and wildlife
18 conservation areas, steep slopes and their associated buffer and the limits of these
19 areas to be disturbed pursuant to an approved permit or authorization shall be
20 marked in the field in a manner approved by the City so no unauthorized intrusion
21 will occur. Markers or fencing are subject to inspection by the Director or his
22 designee prior to the commencement of permitted activities. This temporary
23 marking shall be maintained throughout construction and shall not be removed
24 until directed by the Director, or until permanent signs and/or fencing, if required,
25 are in place.

26
27 2. Permanent markers. Following the implementation of an approved development
28 plan or alteration, the outer perimeter of the critical area or buffer that is not
29 disturbed shall be permanently identified. This identification shall include
30 permanent wood or metal signs on treated wood or metal posts. Signs shall be
31 worded as follows:

32
33 CRITICAL AREA BOUNDARY

34 “Protection of this natural area is in your care. Alteration or
35 disturbance is prohibited. Please call the City of _____ for
36 more information. Removal of this sign is prohibited.”

37
38 The Director shall approve sign locations during review of the development
39 proposal. Along residential boundaries, the signs shall be at least 4” X 6” in size
40 and spaced one per centerline of lot or every seventy five (75) feet for lots whose
41 boundaries exceed one-hundred-fifty (150) feet. At road endings, crossings, and
42 other areas where public access to the critical area is allowed, the sign shall be a
43 minimum of 18” X 24” in size and spaced one every seventy (75) feet.

44
45 4. Permanent Fencing. The Director shall require permanent fencing where there is a
46 substantial likelihood of the intrusion into the critical area with the development
47 proposal. The Director shall also require such fencing when, subsequent to approval

1 of the development proposal; intrusions threaten conservation of critical areas. The
2 Director may use any appropriate enforcement actions including, but not limited, to
3 fines, abatement, or permit denial to ensure compliance. The fencing may provide
4 limited access to the stream or wetland for stock watering purposes, but shall
5 minimize bank disturbance.
6

7 5. *[LOOK AT KC FARM PLAN PLACE CITY PLACE HOLDER]*
8

9 H. CRITICAL AREAS REPORTS/ STUDIES
10

11 1. Timing of Studies.

12 When an applicant submits an application for any development proposal, it shall
13 indicate whether any critical areas or buffers are located on or could be adjacent
14 to the site. The presence of critical areas may require additional studies and time
15 for review. However, disclosure of critical areas early will reduce delays during
16 the permit review process. If the applicant should disclose there are no known
17 critical areas, further studies may be required for verification.
18

19 2. Studies Required.

- 20 a. When sufficient information to evaluate a proposal is not available, the
21 Director shall notify the applicant that a critical areas study and report is
22 required. The Director may hire an independent qualified professional to
23 verify that a critical areas report is necessary.
24 b. If a critical area report is required, the Director may retain independent
25 qualified consultants, at the applicant's expense, to assist in review of studies
26 that are outside the range of staff expertise.
27

28 *[Cities may want to consider a way that pre authorized consultants may be used*
29 *instead of city review by a consultant.]*
30

31 c. Critical area reports shall be written by a qualified professional, as defined in
32 the definitions section of this Chapter. A critical areas report shall include all
33 information required pursuant to Section 20.05.200.H.3, below. A monitoring
34 and maintenance program shall be required to evaluate the effectiveness of
35 mitigating measures.

36 d. Studies generated as part of an expanded SEPA environmental checklist or an
37 environmental impact statement may qualify as a critical areas report if the
38 project is developed in enough detail to have provided an evaluation of site-
39 specific impacts and mitigation measures.
40

41 3. General Critical Areas Report Requirements.

- 42 a. A critical areas report shall have three components: a) a site analysis, b) an
43 impact analysis, and c) proposed mitigation measures. More or less detail
44 may be required for each component depending on the size of the project,

1 severity, and potential impacts. The Director may waive the requirement of
2 any component when adequate information is otherwise available.

3 b. In addition to the specific requirements specified under each critical area, all
4 studies shall contain the following information unless it is already available in
5 the permit application.

6 i. Site map of the project area at a 1:20 or larger scale dimensioned,
7 including:

8 a) Reference streets and property lines.

9 b) Existing and proposed easements, right-of-ways, trail corridors and
10 structures.

11 c) Contour intervals (2 feet); steep slope areas to be highlighted.

12 d) The edge of the 100-year floodplain, and edge of the floodway if
13 appropriate.

14 i) Channel Migration Zone boundaries if appropriate.

15 ii) Shoreline Management Program environmental designation and
16 zone, if appropriate.

17 iii) Hydrology: show surface water features both on and adjacent to
18 the site; show any water movement into, through, and off the
19 project area; show stream and wetlands classifications, show
20 seeps, springs, and saturated soil zones; label wetlands not found
21 on the City inventory maps as un-inventoried.

22 iv) Identification of all site preparation, grading activities and
23 dimensioned location of proposed structures, roads, stormwater
24 facilities, impervious surfaces, and landscaping to critical areas.

25 v) All drainage plans for discharge of stormwater runoff from
26 developed areas.

27 vi) Location of buffer and building setback lines (if required or
28 proposed).

29 vii) Location of sensitive area tract and/or easement.

30 ii. Written report detailing:

31 a) How, when, and by whom the report was performed (including
32 methodology and techniques);

33 b) Weather conditions during and prior to any field studies if relevant to
34 conclusions and recommendations;

35 c) Description of the project site and its existing condition including
36 degraded critical areas;

37 d) Description of existing critical area and buffer functions and values;

38 e) Description of habitat features present and determination of actual use
39 of the critical area by any endangered, threatened, rare, sensitive, or
40 unique species of plants or wildlife as listed by the federal government
41 or state of Washington;

42 f) The total acreage of the site in each type of critical area(s) and
43 associated buffers;

44 g) The proposed action; including but not limited to description of filling,
45 dredging, modification for storm water detention or discharge,

1 clearing, grading, restoring, enhancing, grazing or other physical
2 activities that change the existing vegetation, hydrology, soils or
3 habitat;

- 4 h) When alteration to a critical area or its buffer is proposed provide an
5 explanation why the impact is unavoidable and how it meets the
6 criteria for a defined exception;
- 7 i) Description of potential environmental impact of the proposed project
8 to the critical area(s) and demonstration of mitigation sequencing
9 approach, and description of any proposed mitigation measures;
- 10 j) Habitat and native vegetation conservation strategy that addresses
11 methods to protect and enhance on-site habitat and critical area
12 functions;
- 13 k) The mitigation measures proposed to avoid or lessen the project
14 impacts (during construction and permanently);
- 15 l) When alteration to the critical area or its buffer is proposed, include a
16 mitigation plan as specified by this Chapter;
- 17 m) A discussion of ongoing management practices that will protect habitat
18 after the project site has been developed; including proposed
19 monitoring and maintenance programs.
- 20 n) Description of local, state, and federal regulations and permit
21 requirements.

22 23 I. MITIGATION TIMING

- 24
25 1. The buffer for a created, restored, or enhanced critical area as compensation for
26 approved alterations shall be the same as the buffer required for the category of
27 the created, restored, or enhanced critical area. For the purposes of restoration,
28 creation, or enhancement, buffers shall be fully vegetated and shall not include
29 lawns, walkways, driveways and other mowed or paved areas. Mitigation shall be
30 completed immediately following disturbances and prior to use or occupancy of
31 the activity or development, or when seasonally appropriate. Construction of
32 mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife,
33 and water quality.

34 35 J. GENERAL MITIGATION REQUIREMENTS

36 The following section provides general mitigation requirements applicable to alteration of
37 critical areas. Additional specific mitigation requirements are found under the sections for the
38 particular type of critical area.

- 39
40 1. Restoration/rehabilitation is required when a critical area or its buffers has been
41 altered on the site in violation of City regulations prior to development approval
42 and as a consequence its functions and values have been degraded. Restoration is
43 also required when the alteration occurs in violation of City regulations during the
44 construction of an approved development proposal. At a minimum, all impacted

1 areas shall be restored to their previous condition pursuant to an approved
2 mitigation plan.

3
4 2. Restoration/rehabilitation is required when the critical area or its buffers will be
5 temporarily altered during the construction of an approved development proposal.
6 At a minimum, all impacted areas shall be restored to their previous condition
7 pursuant to an approved mitigation plan.
8

9 3. Compensation. The goal of compensation is no net loss of critical area/or buffer
10 functions on a development site. Compensation includes replacement or
11 enhancement of the critical area or its buffer depending on the scope of the
12 approved alteration and what is needed to maintain or improve the critical area
13 and/or buffer functions. Compensation for approved critical area or buffer
14 alterations shall meet the following minimum performance standards and shall
15 occur pursuant to an approved mitigation plan:

16 a. The buffer for a created, restored, or enhanced critical area as compensation
17 for approved alterations shall be the same as the buffer required for the
18 category of the created, restored, or enhanced critical area. For the purposes of
19 restoration, creation, or enhancement, buffers shall be fully vegetated and
20 shall not include lawns, walkways, driveways and other mowed or paved
21 areas.

22 b. On-site and In-kind. Unless otherwise approved, all critical area impacts shall
23 be compensated for through restoration or creation of replacement areas that
24 are in-kind, on-site, and of similar or better critical area category. Mitigation
25 shall be timed prior to or concurrent with the approved alteration and shall
26 have a high probability of success

27 c. Off-site and In-kind. The Director may consider and approve off-site
28 compensation where the applicant demonstrates that greater biological and
29 hydrological functions and values will be achieved. The compensation may
30 include restoration, creation, or enhancement of critical areas. The
31 compensation ratios specified under the “on-site” compensation section for
32 each critical area shall apply for off-site compensation as well.

33 d. Increased Replacement Ratios. The Director may increase the ratios under the
34 following circumstances:

35 i. Uncertainty exists as to the probable success of the proposed restoration
36 or creation due to an unproven methodology or proponent; or

37 ii. A significant period will elapse between impact and replication of
38 wetland functions; or

39 iii. The impact was unauthorized.

40 e. Decreased Replacement Ratios. The Director may decrease the ratios
41 required in the “on-site” ratios specified under the compensation section of
42 each critical area, when all the following criteria are met:

43 i. A minimum replacement ratio of 1:1 will be maintained;

44 ii. Documentation by a qualified specialist demonstrates that the proposed
45 mitigation actions have a very high rate of success;

- 1 iii. Documentation by a qualified specialist demonstrates that the proposed
2 mitigation actions will provide functions and values that are significantly
3 greater than the critical area being impacted; and
4 iv. The proposed mitigation actions are conducted in advance of the impact
5 and have been shown to be successful
6 f. Critical Area Enhancement as Mitigation.
7 i. Impacts to critical areas may be mitigated by enhancement of existing
8 significantly degraded critical areas only after a 1:1 minimum acreage
9 replacement ratio has been satisfied. Applicants proposing to enhance
10 critical areas must produce a critical areas report that identifies how
11 enhancement will increase the functions and values of the degraded
12 critical areas and how this increase will adequately mitigate for the loss
13 of critical area function at the impact site.
14 ii. At a minimum, enhancement acreage shall be double the acreage
15 required for creation acreage under the “on-site” compensation section
16 specified under each critical area. The ratios shall be greater than double
17 the required acreage when the enhancement proposal would result in
18 minimal gain in the performance of critical area functions currently
19 provided in the critical area.
20
21 4. Mitigation shall be completed immediately following disturbances and prior to
22 use or occupancy of the activity or development, or when seasonally appropriate.
23 Construction of mitigation projects shall be timed to reduce impacts to existing
24 fisheries, wildlife, water quality, and vegetation.
25

26 K. BEST AVAILABLE SCIENCE

27
28 Any approval of mitigation to compensate for impacts to a critical area or its buffer shall
29 be supported by the best available science.
30

31 L. MITIGATION PLANS

- 32
33 1. Mitigation or alterations to critical areas shall achieve equivalent or greater
34 biological functions and shall include mitigation for adverse impacts upstream
35 and downstream of the development proposal site. Mitigation sites for wetlands,
36 streams, and fish and wildlife habitat conservation critical areas shall be located to
37 achieve contiguous habitat corridors in accordance with a mitigation plan that is
38 part of an approved critical areas report to minimize the isolating effects of
39 development on habitat areas. Mitigation of aquatic habitat shall be located within
40 the same aquatic ecosystem as the area disturbed. Mitigation shall address each
41 function affected by the alteration to achieve functional equivalency or
42 improvement on a per function basis.
43
44 2. The scope and content of a mitigation plan shall be decided on a case-by-case
45 basis: as the impacts to the critical area increase, the mitigation measures to offset

1 these impacts will increase in number and complexity. The City of _____ shall
2 determine during the review of the requested studies which of the above
3 components listed in section 3, below shall be required as part of the mitigation
4 plan. Key factors in this determination shall be the size and nature of the
5 development proposal, the nature of the impacted critical areas, and the degree of
6 cumulative impacts on the critical area from other development proposals.
7

8 3. At a minimum, the following components shall be included in a complete
9 mitigation plan:

- 10 a. Baseline Information. Provide existing conditions information for both the
11 impacted critical areas and the proposed mitigation site as described in
12 “General critical area report requirements” and “Additional report
13 requirements” for each critical area.”
- 14 b. Environmental Goals and Objectives. The mitigation plan shall include a
15 written report identifying environmental goals and objectives of the
16 compensation proposed and including:
- 17 i. A description of the anticipated impacts to the critical areas, the
18 mitigating actions proposed, and the purposes of the compensation
19 measures, including the site selection criteria, identification of
20 compensation goals, identification of resource functions, and dates for
21 beginning and completing site compensation construction activities. The
22 goals and objectives shall be related to the functions and values of the
23 impacted critical area; and
- 24 ii. A review of the best available science supporting the proposed
25 mitigation.
- 26 c. Performance Standards. The mitigation plan shall include measurable specific
27 criteria for evaluating whether or not the goals and objectives of the mitigation
28 project have been successfully attained and whether or not the requirements of
29 this Chapter have been met. They may include water quality standards,
30 species richness and diversity targets, habitat diversity indices, or other
31 ecological, geological, or hydrological criteria.
- 32 d. Detailed Construction Plan. These are the written specifications and
33 descriptions of mitigation technique. This plan should include the proposed
34 construction sequencing, grading and excavation details, erosion and
35 sedimentation control features, a native planting plan, and detailed site
36 diagrams and any other drawings appropriate to show construction techniques
37 or anticipated final outcome.
- 38 e. Monitoring and/or Evaluation Program. The mitigation plan shall include a
39 program for monitoring construction of the compensation project, and for
40 assessing a completed project, as detailed under **section M, below**.
- 41 f. Contingency Plan. This section identifies potential courses of action, and any
42 corrective measures to be taken when monitoring or evaluation indicates
43 projected performance standards have not been met.
44

1 M. MONITORING

- 2
- 3 1. The City will require long-term monitoring of development proposals where
- 4 alteration of critical areas or their buffers are approved. Such monitoring shall be
- 5 an element of the required mitigation plan and shall document and track impacts
- 6 of development on the functions and values of critical areas, and the success and
- 7 failure of mitigation requirements. Monitoring may include, but is not limited to:
- 8 a. Establishing vegetation transects or plots to track changes in plant species
- 9 composition over time;
- 10 b. Using aerial or other photography to evaluate vegetation community response;
- 11 c. Sampling surface and ground waters to determine pollutant loading;
- 12 d. Measuring base flow rates and stormwater runoff to model and evaluate water
- 13 quantity predictions;
- 14 e. Measuring sedimentation rates; and
- 15 f. Sampling fish and wildlife populations to determine habitat utilization, species
- 16 abundance, and diversity;
- 17 g. Sampling of water temperatures for wetlands and streams.
- 18
- 19 2. The property owner will be required to submit monitoring data and reports to the
- 20 City on an annual basis or other schedule as required by the Director. Monitoring
- 21 shall continue for a minimum period of five (5) years or for a longer period if
- 22 necessary to establish that the mitigation performance standards have been met.
- 23
- 24 3. Performance Bond. Prior to issuance of any permit or approval, which authorizes
- 25 site disturbance under this Chapter, the Director shall require performance
- 26 security as specified in Section 20.05.100, Administration.
- 27

28 N. CONTINGENCIES/ADAPTIVE MANAGEMENT

29

30 When monitoring reveals a significant deviation from predicted impacts or a failure of

31 mitigation measures, the applicant shall be responsible for appropriate corrective action.

32 Contingency plans developed as part of the original mitigation plan shall apply, but may

33 be modified to address a specific deviation or failure. Contingency plan measures shall

34 be subject to the monitoring requirement to the same extent as the original mitigation

35 measures.

36

37 [*Cities may want to consider adding stronger language.*]

38

39 O. HABITAT MANAGEMENT PLANS

- 40
- 41 1. A Habitat Management Plan shall be required by the Director when the critical
- 42 area review of a development proposal determines that the proposed activity will
- 43 have an adverse impact on wetland, stream, and fish and wildlife habitat
- 44 conservation area critical areas.
- 45

- 1 2. A Habitat Management Plan, prepared by a qualified biologist in consultation
2 with WDFW, shall address the following mitigation measures:
3 a. Reduction or limitation of development activities within the critical area and
4 buffers;
5 b. Use of low impact development techniques or clustering of development on
6 the subject property to locate structures in a manner that preserves and
7 minimizes the adverse effects to habitat areas;
8 c. Seasonal restrictions on construction activities on the subject property;
9 d. Preservation and retention of habitat and vegetation on the subject property in
10 contiguous blocks or with connection to other habitats that have a primary
11 association with a listed species;
12 e. Establishment of expanded buffers around the critical area;
13 f. Limitation of access to the critical area and buffer; and
14 g. The creation or restoration of habitat area for listed species.

15
16 P. LIMITED DENSITY TRANSFER

17
18 Density Credit of Critical Areas.

- 19 1. An owner of property containing a critical area may be permitted to transfer the
20 density attributed to the critical area to another, not containing a critical area(s)
21 portion of the same site or property, subject to the limitations of this section.
22
23 2. Up to twenty-five percent (25%) of the density that could be achieved on the
24 critical area and buffer portion of the site can be transferred to a portion of the site
25 not containing a critical area, subject to:
26 a. The density limitation of the underlying zoning classification;
27 b. The minimum lot size of the underlying zoning classification may be reduced
28 to _____ square feet (*or City option as revised by the Planned Residential*
29 *Development standards*) in order to accommodate the transfer in densities;
30 c. All other applicable lot performance standards established by XMC (including
31 zoning lot area, lot coverage, and setback requirements) shall be met; and
32 d. The area to which density is transferred shall not be constrained by other
33 critical areas regulation.

34
35
36 Q. TRANSFER OF DEVELOPMENT RIGHTS

37
38 **PLACEHOLDER** – SEE NBMC Chapter 18.36 for model small city program
39 fashioned after Redmond and King County programs.
40 *[EXPLORE POSSIBILITY OF A MULTI-JURISDICTION OR WATERSHED-WIDE TDR*
41 *PROGRAM, POTENTIALLY IN COORDINATION WITH KING COUNTY.]*

42
43 R. DENSITY BONUSES AND STREAMLINED PERMITTING

44
45 **PLACEHOLDER**

4 **20.05.300 WETLAND CRITICAL AREAS**

5
6 A. PURPOSE

7
8 The purpose of the wetland critical areas provisions is to protect existing wetlands and
9 maintain no net loss of their functions and values.
10

11 B. DESIGNATION

12
13 Determination of wetland ratings will be based on the entire extent of wetlands, unrelated
14 to property lines or ownership patterns. For the purpose of categorization, wetlands shall
15 be designated according to the Washington State Wetland Rating System for Western
16 Washington (Ecology Publication #04-XX) or as revised: Wetlands shall be designated
17 as follows:
18

- 19 1. Category I – are those wetlands that meet any of the following criteria:
20 a. Wetlands that score 70 or more points (out of 100) in the Washington State
21 Wetland Ratings System for Western Washington; or
22 b. Relatively undisturbed estuarine wetlands larger than 1 acre; or
23 c. Wetlands identified by scientists of the Washington Natural Heritage
24 Program/DNR as high quality wetlands; or
25 d. Bogs larger than 1/2 acre; or
26 e. Mature and old growth forested wetlands larger than 1 acre; or
27 f. Wetlands in coastal lagoons.
28
- 29 2. Category II – are those wetlands that meet any of the following criteria:
30 a. Wetlands that score between 51 and 69 points in the Washington State
31 Wetland Ratings System for Western Washington; or
32 b. Estuarine wetlands smaller than 1 acre, or disturbed estuarine wetlands larger
33 than 1 acre in size.
34 c. A wetland identified by the State Department of Natural Resources as
35 containing "sensitive" plant species; or
36 d. A bog between 1/4 and 1/2 acre in size; or
37 e. An interdunal wetland larger than 1 acre.
38
- 39 3. Category III – are those wetlands that meet any of the following criteria:
40 a. Wetlands that score between 30 and 50 points in the Washington State
41 Wetland Ratings System for Western Washington; or
42 b. Interdunal wetlands between 0.1 and 1 acre in size.
43

1 4. Category IV – are those wetlands that score less than 30 points in the Washington
2 State Wetland Ratings System for Western Washington.
3

4 C. BUFFERS
5

6 The standard buffer widths presume the existence of a relatively intact native vegetation
7 community in the buffer zone adequate to protect the wetland functions and values at the
8 time of the proposed activity. If the vegetation is inadequate, then the buffer width shall
9 be increased or the buffer should be planted to maintain the standard width. Required
10 standard wetland buffers, based on wetland category and land use intensity, are as
11 follows:
12

13 1. Category I

- | | |
|---|----------|
| 14 a. Adjacent to High Intensity Uses | 300 feet |
| 15 b. Adjacent to Moderate Intensity Uses | 225feet |
| 16 c. Adjacent to Low Intensity Uses | 150feet |

17
18 2. Category II

- | | |
|---|----------|
| 19 b. Adjacent to High Intensity Uses | 200 feet |
| 20 c. Adjacent to Moderate Intensity Uses | 150feet |
| 21 d. Adjacent to Low Intensity Uses | 100feet |

22
23 3. Category III

- | | |
|---|----------|
| 24 a. Adjacent to High Intensity Uses | 100 feet |
| 25 b. Adjacent to Moderate Intensity Uses | 110feet |
| 26 c. Adjacent to Low Intensity Uses | 75feet |

27
28 4. Category IV

- | | |
|---|---------|
| 29 a. Adjacent to High Intensity Uses | 50 feet |
| 30 b. Adjacent to Medium Intensity Uses | 40feet |
| 31 c. Adjacent to Low Intensity Uses | 25feet |

32
33 5. Any wetland created as compensation for approved wetland alteration shall have
34 the standard buffer required for the new classification of the created wetland. Wetlands to
35 be created shall be located such that the new associated wetland buffer does not cross
36 onto adjacent property, unless the same property owner owns the adjacent property.
37

38 6. Un-inventoried wetlands shall be assigned a rating based on the wetland report
39 and field verification, and the appropriate buffer shall apply.
40

41 D. GENERAL PERFORMANCE STANDARDS
42

43 The requirements provided in this section supplement those identified in Section
44 20.05.200 General Provisions. Activities and uses shall be prohibited from wetlands and
45 wetland buffers, except as provided by this Chapter.

1
2 E. PERMITTED ALTERATIONS
3

4 The following activities may only be permitted in a wetland or wetland buffer if the
5 applicant can demonstrate that the activity will not degrade the functions and values of
6 the wetland and other critical areas. The Director may require the preparation of a critical
7 area report to confirm compliance with the requirements of this Chapter.
8

- 9 1. Conservation or preservation activities that improve the function of the existing
10 wetland.
11
12 2. Modifications to existing structures where no further alteration or increase in
13 footprint will occur.
14
15 3. Trails. Public and private trails may be allowed within all wetland buffers where
16 it can be demonstrated in a critical areas report that the wetland and wetland
17 buffer functions and values will not be degraded by trail construction or use.
18 Trail planning, construction, and maintenance shall adhere to the following
19 criteria:
20 a. Trail alignment shall follow a path beyond a distance from the wetland edge
21 equal to seventy-five percent (75%) of the buffer width except as needed to
22 access viewing platforms. Trails may be placed on existing levees or railroad
23 grades within these limits;
24 b. Trails and associated viewing platforms shall be constructed of pervious
25 materials, unless necessary for conformance to the Americans with
26 Disabilities Act. The trail surface shall meet all other requirements, including
27 water quality standards set forth in the Washington State Department of
28 Ecology *Stormwater Management Manual for Western Washington*, August
29 2001 or as revised;
30 c. Trail alignment shall avoid trees in excess of six inches in diameter of any tree
31 trunk at a height of four and a half (4.5) feet above the ground on the upslope
32 side of the tree;
33 d. Trail construction and maintenance shall follow the U.S. Forest Service *Trails*
34 *Management Handbook* (FSH 2309.18, June 1987) and *Standard*
35 *Specifications for Construction of Trails* (EM-7720-102, June 1984 or as
36 revised);
37 e. Access trails to viewing platforms within the wetland may be provided. Trail
38 access and platforms shall be aligned and constructed to minimize disturbance
39 to valuable functions of the wetland or its buffer and still provide enjoyment
40 of the resource.
41 f. Buffer widths shall be increased, where possible, equal to the width of the trail
42 corridor, including disturbed areas; and
43 g. Equestrian trails shall be located or measures provided to assure that runoff
44 from the trail does not directly discharge to the wetland.
45

- 1 4. Stormwater Management Facilities. Stormwater management facilities are not
2 allowed in Category I and II wetlands and buffers. Category I and II, III, and IV
3 wetlands may receive clean runoff from sources such as roof drains and footing
4 drains when such runoff is demonstrated as beneficial to wetland functions.
5 Category III and IV wetland buffers may be used for detention/retention areas
6 where the applicant can demonstrate no practical alternative and that such use is
7 beneficial to wetland functions. Enhanced treatment is required prior to discharge
8 to such wetlands, and a stormwater facility maintenance plan shall be submitted.
9
- 10 5. Public Roads and Utilities. Footprint expansion of public roads and utilities may
11 occur to maintain locally established levels of service, and to provide for and
12 protect public safety when no lesser impacting option is feasible and the width of
13 the corridor is minimized to the maximum extent possible. Public and private
14 utility corridors may be allowed within wetland buffers for Category II, III, and
15 IV wetlands when no lesser impacting alternative alignment is feasible, and
16 wetland and wetland buffer functions and values will not be degraded. Utilities,
17 whenever possible, shall be constructed in existing, improved roads, drivable
18 surface or shoulder, subject to compliance with road maintenance BMP's, or
19 within an existing utility corridor. Otherwise, corridor alignment, construction,
20 restoration and maintenance shall adhere to the following criteria:
21 a. Corridor alignment shall follow a path beyond a distance from the wetland
22 edge equal to seventy-five percent (75%) of the buffer width, except when
23 crossing a Category IV wetland and its buffer;
24 b. Corridor construction and maintenance shall maintain and protect the
25 hydrologic and hydraulic functions of the wetland and the buffer;
26 c. Corridors shall be fully revegetated with appropriate native vegetation upon
27 completion of construction; and
28 d. Utilities requiring maintenance roads shall be prohibited in wetland buffers
29 unless the following criteria are met:
30 i. There are no lesser impacting alternatives;
31 ii. Any required maintenance roads shall be no greater than fifteen (15) feet
32 wide. Roads shall closely approximate the location of the utility to
33 minimize disturbances; and
34 iii. The maintenance road shall be constructed of pervious materials and
35 designed to maintain and protect the hydrologic functions of the wetland
36 and its buffer.
37
- 38 6. Category IV wetlands. Allowable uses and activities shall include all uses and
39 activities identified in Section 20.05.200.E.1-E.5 above. In addition, activities and
40 uses that result in unavoidable and necessary impacts may be permitted in Category
41 IV wetlands and associated buffers in accordance with an approved critical areas
42 report and mitigation plan, and only if the proposed activity is the only reasonable
43 alternative that will accomplish the applicant's objective.
44

1 F. CRITICAL AREAS REPORT/STUDY

2
3 In addition to the general requirements for Critical Areas Reports provided under Section
4 20.05.200, General Provisions, wetland critical area reports shall include the following:

- 5
6 1. On the site map:
- 7 a. The edge of the wetland as flagged and surveyed in the field using the
 - 8 *Washington State Wetland Identification and Delineation Manual*, as required
 - 9 by RCW 36.70A.157;
 - 10 b. The location of any proposed wetland area(s) to be created through mitigation
 - 11 measures; and
 - 12 c. The location of any proposed wetland alteration or fill.
- 13
- 14 2. In the report:
- 15
 - 16 a. Description of the wetland by classification per the Washington State Wetland
 - 17 Rating System for Western Washington (Ecology Publication #04-XX or as
 - 18 revised;
 - 19 b. General condition of wetland;
 - 20 c. Description of vegetation species and community types present in the wetland
 - 21 and surrounding buffer;
 - 22 d. Description of soil types within the wetland and the surrounding buffer using
 - 23 the USDA Soil Conservation Service soil classification system;
 - 24 e. Description of hydrologic regime and findings.
- 25
26

27 G. WETLAND MITIGATION REQUIREMENTS

28
29 No net loss of wetland functions and values shall occur as a result of the overall project.
30 If a wetland alteration is allowed, then the associated impacts will be considered
31 unavoidable. In addition to the requirements in Section 25.05.200, General Provisions,
32 the following mitigation measures to minimize and reduce wetland impacts shall be
33 required:

- 34
- 35 1. Mitigation shall achieve equivalent or greater biological functions. Mitigation
 - 36 plans shall be consistent with the state Department of Ecology *Guidelines for*
 - 37 *Developing Freshwater Wetland Mitigation Plans and Proposals*, 1994, as
 - 38 revised.
 - 39
 - 40 2. Preference of mitigation actions. Mitigation actions that require compensation
 - 41 shall occur in the following order of preference:
 - 42 a. Restoring wetlands on upland sites that were formerly wetlands.
 - 43 b. Creating wetlands on disturbed upland sites such as those with vegetation
 - 44 cover consisting primarily of non-native introduced species. This should only
 - 45 be attempted when there is a consistent source of hydrology and it can be

1 shown that the surface and subsurface hydrologic regime is conducive for the
2 wetland community that is designed.

3 c. Enhancing significantly degraded wetlands only after a minimum 1:1
4 replacement ratio has been met.

- 5
6 3. On-site and off-site Mitigation. Unless otherwise approved, all wetland impacts
7 shall be compensated for through restoration or creation of replacement wetlands
8 that are in-kind, on-site, and of similar or better wetland category. Mitigation
9 shall be timed prior to or concurrent with the approved alteration and shall have a
10 high probability of success. The following ratios shall apply to wetland
11 restoration and creation for mitigation:
- 12 a. Category I on a 6:1 area basis with equal or greater functions and values.
 - 13 b. Category II on a 3:1 area basis with equal or greater functions and values.
 - 14 c. Category III on a 2:1 area basis with equal or greater functions and values.
 - 15 d. Category IV on a 1.5:1 area basis with equal or greater functions and values.

16
17 H. FEE-IN-LIEU MITIGATION

18
19 For Category IV wetlands of 1,000 square feet or less, mitigation may be accomplished
20 by compensating for wetland loss through a fee-in-lieu based on a 1:1 ratio, where
21 allowed by the Shoreline Regulations and the Corps of Engineers. Fee-in-lieu shall be
22 based on the cost to replace the wetland at an offsite location, including land costs,
23 wetland construction, and monitoring.

24
25 I. WETLAND MITIGATION BANK

26
27 **PLACE HOLDER FOR CITY'S**

28
29
30 **20.05.400 CRITICAL AQUIFER RECHARGE AREAS**

31
32 A. PURPOSE

33
34 To protect groundwater quality and quantity for public water supply and to maintain
35 hydrologic functions of aquatic areas. Critical Aquifer Recharge Areas (CARA's)
36 contribute significantly to the replenishment of groundwater and due to their prevailing
37 geologic conditions associated with infiltration rates have a high potential for
38 contamination of ground water resources.

1 B. DESIGNATION

2
3 Critical Aquifer Recharge Areas (CARA's) are those areas with a critical recharging
4 effect on aquifers used for potable water as defined by WAC 365-190-030(2).
5

- 6 1. The map entitled King County Critical Recharge Areas attached to this ordinance
7 as Exhibit X is hereby adopted as the designation of critical aquifer recharge areas
8 in the City of _____. The map may be revised by the City to add or remove areas
9 based on additional information.
10
- 11 2. Critical aquifer recharge areas are categorized as follows:
12 a. Category I critical aquifer recharge areas include those areas designated on the
13 critical aquifer recharge area map as highly susceptible to groundwater
14 contamination and that are located within a sole source aquifer or wellhead
15 protection area.
16 b. Category II critical aquifer recharge areas include those mapped areas
17 designated that:
18 i. Have a medium susceptibility to groundwater contamination and are
19 located in a sole source aquifer or wellhead protection area; or
20 ii. Are highly susceptible to groundwater contamination and are not located
21 in a sole source aquifer or wellhead protection area.
22
- 23 3. An applicant can request that the City declassify a specific area included in the
24 map adopted under XMC XXX. The application must be supported by a critical
25 areas report that includes a hydrogeologic assessment. The application to
26 declassify an area shall be reviewed by the City and a determination made to
27 amend the map as appropriate.
28

29 C. PROHIBITED USES AND ACTIVITIES

- 30
- 31 1. The following new uses or activities are not allowed in Category I critical aquifer
32 recharge areas:
33 a. Hazardous liquid transmission pipelines;
34 b. Sand and gravel, and hard rock mining on land that is not zoned for mining as
35 of the effective date of this ordinance;
36 c. Mining of any type below the groundwater table;
37 d. Processing, storage, and disposal of radioactive wastes;
38 e. Hydrocarbon extraction;
39 f. Commercial wood treatment facilities on permeable surfaces;
40 g. Golf courses;
41 h. Cemeteries;
42 i. Wrecking yards;
43 j. Landfills for hazardous waste, municipal solid waste, or special waste, and

1 k. On-site septic systems on lots smaller than one acre without a treatment
2 system that results in effluent nitrate-nitrogen concentrations below ten (10)
3 milligrams per liter.
4

- 5 2. The following new uses and activities are not allowed in a Category II critical
6 aquifer recharge area:
7 a. Mining of any type below the water table;
8 b. Processing, storage, and disposal of radioactive substances;
9 c. Hydrocarbon extraction;
10 d. Commercial wood treatment facilities on permeable surfaces;
11 e. Wrecking yards;
12 f. Landfills for hazardous waste, municipal solid waste, or special waste; and
13 g. On-site septic systems on lots smaller than one acre without a treatment
14 system that results in effluent nitrate-nitrogen concentrations below ten (10)
15 milligrams per liter.
16

17 D. PERFORMANCE STANDARDS
18

19 For all other development proposals, the Director may require preparation of a critical
20 areas report as specified in 20.05.200. In addition the following standards will apply:

- 21 1. Containment. Every development proposal involving hazardous substance
22 processing or handling which is located in or adjacent to a critical recharge area
23 shall provide containment devices adequate in size to contain on-site any
24 unauthorized release of hazardous substances from any area where these
25 substances are either stored, handled, treated, used, or produced. Containment
26 devices shall prevent such substances from penetrating into the ground. This
27 provision also applies to releases that may mix with storm runoff.
- 28 2. Hazardous Substances Management Plan. Every development proposal involving
29 hazardous substance processing or handling which is located in or adjacent to a
30 critical recharge area shall prepare a plan containing procedures to be followed to
31 prevent, control, collect, and dispose of any unauthorized release of a hazardous
32 substance.
- 33 3. Storage Tanks
- 34 a. All storage tanks proposed to be located in a critical aquifer recharge area
35 must comply with local building code requirements and must conform to
36 the 2003 International Fire Code requirements for secondary containment.
- 37 b. Underground Tanks. All new underground tanks located in or adjacent to a
38 critical recharge area shall be designed and constructed so as to:
- 39 i. Prevent releases due to corrosion or structural failure for the
40 operational life of the tank;

- 1 ii. Be protected against corrosion, constructed of non-corrosive
2 material, steel clad with a noncorrosive material, or designed to
3 include a secondary containment system to prevent the release or
4 threatened release of any stored substance; and
- 5 iii. Use material in the construction or lining of the tank, which is
6 compatible with the substance to be stored.
- 7 c. Aboveground Tanks. No new aboveground storage tank located in or
8 adjacent to a critical recharge area shall be installed, used or maintained in
9 any manner which may allow the release or a hazardous substance to the
10 ground, ground waters, or surface water.
- 11 4. Agriculture. Agricultural activities in or adjacent to a critical recharge area shall
12 use best management practices to prevent ground quality degradation from
13 livestock waste.
- 14 5. Sewage Disposal. All residential, commercial or industrial development proposals
15 located in or adjacent to a critical recharge area and within 150 feet of a public
16 sewer system shall be connected to the sewer system.
- 17 6. Golf Courses. Golf course operations proposed in or adjacent to a critical recharge
18 area shall be subject to a golf course maintenance plan using best management
19 practices to protect ground water quality. The plan shall detail the proposed use of
20 fertilizers, herbicides, pesticides, fungicides, or other maintenance agents, with
21 projected application methods and schedules and measures to prevent pollution of
22 ground water.
- 23 7. Commercial Vehicle Repair and Servicing. Commercial vehicle repair and
24 servicing must be conducted over impermeable pads and within a covered
25 structure capable of withstanding normally expected weather conditions.
26 Chemicals used in the process of vehicle repair and servicing must be stored in a
27 manner that protects them from weather and provides containment should leaks
28 occur. No dry wells shall be allowed in critical aquifer recharge areas on sites
29 used for vehicle repair and servicing. Dry wells existing on the site prior to
30 facility development must be abandoned using techniques approved by the
31 Washington State Department of Ecology prior to commencement of the proposed
32 activity.
- 33 8. The uses listed in the table below shall be conditioned in accordance with the
34 applicable state and federal regulations as necessary to protect critical aquifer
35 recharge areas:

36 **Statutes, Regulations, and Guidance Pertaining to Ground Water**
37 **Impacting Activities**
38

Activity	Statute - Regulation - Guidance
----------	---------------------------------

Activity	Statute - Regulation - Guidance
Above Ground Storage Tanks	Chapter 173-303 -640 WAC
Animal Feedlots	Chapter 173-216 WAC, Chapter 173-220 WAC
Automobile Washers	Chapter 173-216 WAC, Best Management Practices for Vehicle and Equipment Discharges (WDOE WQ-R-95-56)
Chemical Treatment Storage and Disposal Facilities	Chapter 173-303-182 WAC
Hazardous Waste Generator (<i>Boat Repair Shops, Biological Research Facility, Dry Cleaners, Furniture Stripping, Motor Vehicle Service Garages, Photographic Processing, Printing and Publishing Shops, etc.</i>)	Chapter 173-303 WAC
Injection Wells	Federal 40 CFR Parts 144 and 146, Chapter 173-218 WAC
Junk Yards and Salvage Yards	Chapter 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Vehicles Recycler Facilities (WDOE 94-146)
Oil and Gas Drilling	Chapter 332-12-450 WAC, WAC, Chapter 173-218 WAC
On-Site Sewage Systems (Large Scale)	Chapter 173-240 WAC
On-Site Sewage Systems (< 14,500 gal/day)	Chapter 246-272 WAC, Local Health Ordinances
Pesticide Storage and Use	Chapter 15.54 RCW, Chapter 17.21 RCW
Sawmills	Chapter 173-303 WAC, 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Log Yards (WDOE 95-53)
Solid Waste Handling and Recycling Facilities	Chapter 173-304 WAC
Surface Mining	Chapter 332-18-015 WAC
Underground Storage Tanks	Chapter 173-360 WAC
Waste Water Application to Land Surface	Chapter 173-216 WAC, Chapter 173-200 WAC, WDOE Land Application Guidelines, Best Management Practices for Irrigated Agriculture

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20.05.500 FISH AND WILDLIFE HABITAT CONSERVATION AREAS

A. PURPOSE

The purpose of the fish and wildlife habitat conservation areas is to preserve and protect those areas with which anadromous fish, threatened and endangered species, and species of local importance have a primary association.

B. DESIGNATION

1. For purposes of these regulations fish and wildlife conservation areas are those habitat areas that meet any of the following criteria:
 - a. Documented presence of species listed by the federal government or the State of Washington as endangered, threatened, and sensitive species; or
 - b. Sites containing bald eagle habitat as mapped by WDFW; or
 - c. Sites containing heron rookeries or active nesting trees; or
 - d. All streams which meet the criteria for streams set forth in WAC 222-16-030 and based on the interim water typing system in WAC 222-16-031

- 1 2. All areas within the City meeting one or more of the above criteria, regardless of
2 any formal identification, are designated critical areas and are subject to the
3 provisions of this Chapter. The approximate location and extent of known fish
4 and wildlife habitat conservation areas are shown on the critical area maps
5 adopted by the City, as most recently updated.
6

7 C. BUFFERS
8

9 1. Riparian Habitat

10 The following buffers are the minimum requirements for streams. All buffers
11 shall be measured from the ordinary high water mark (OHWM).
12

13 Water Type Conversion Table
14

15 Permanent Water Typing	Interim Water Typing
16 Type "S"	Type 1 Water
17 Type "F"	Type 2 and 3 Water
18 Type "Np"	Type 4 Water
19 Type "Ns"	Type 5 Water

20

- 21 a. Types S and F streams shall have a one-hundred-fifty-foot 115' buffer on each
22 side of the channel.
23 b. Type Np streams shall have a sixty-five-foot (65') buffer on each side of the
24 channel.
25 c. Type Ns streams, within a quarter mile of a stream with salmonids shall have
26 a buffer of twenty-five-foot (25') on each side of the channel.
27

28 2. Wildlife and Other Habitat
29

30 Buffer widths and setbacks for the protection of listed species outside of streams
31 and stream buffers will be determined on a site-specific basis through the
32 approval of a Critical Areas Report.
33

34 D. GENERAL PERFORMANCE STANDARDS
35

36 The requirements provided in this section supplement those identified in Section
37 20.05.200 General Provisions. Fish and wildlife habitat conservation areas may be
38 altered only if the proposed alteration of the habitat or the mitigation proposed does not
39 degrade the qualitative functions and values of the habitat. All new structures and land
40 alterations shall be prohibited from habitat conservation areas, except in accordance with
41 this Chapter. Additional standards follow:
42

- 43 1. No development shall be allowed within a habitat conservation area or any
44 associated buffer with which state or federally endangered, threatened, or
45 sensitive species have a primary association.

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2. Whenever development is proposed adjacent to a fish and wildlife habitat conservation area with which state or federally endangered, threatened, or sensitive species have a primary association, such areas shall be protected through the application of protection measures in accordance with a critical areas report prepared by a qualified professional and approved by the Director.
 3. Habitat Study. Development proposals or alterations in or adjacent to a fish and wildlife habitat conservation area shall prepare, and submit, as part of its Critical Areas Study, a habitat study which identifies which, if any, listed species are using that fish and wildlife habitat conservation area. If one or more listed species are using the fish and wildlife habitat conservation area, the following additional requirements shall apply:
 - a. The applicant shall include in its Critical Areas Study a Habitat Management Plan which identifies the qualities that are essential to maintain feeding, breeding, and nesting of listed species using the fish and wildlife habitat conservation area and which identifies measures to minimize the impact on these ecological processes from proposed activities. The applicant shall be guided by the document Management Recommendations for Washington's Priority Habitats and Species, issued by the Washington Department of Wildlife, May 1991, and as may be amended, and by any recovery and management plans prepared by the Washington Department of Wildlife for the listed species pursuant to WAC 232-12-297(11).
 - b. Conditions shall be imposed, as necessary, based on the measures identified in the habitat management plan.
 4. Approval of alteration of land adjacent to the habitat conservation area, buffer or any associated setback zone shall not occur prior to consultation with the state Department of Fish and Wildlife and the appropriate federal agency, if applicable.
 5. No plant, wildlife, or fish species not indigenous to the region shall be introduced into a habitat conservation area unless authorized by a state or federal permit or approval.
 6. Alteration of natural watercourses shall be avoided, if feasible. If unavoidable, the following provisions shall apply to the alteration:
 - a. Watercourse alteration projects shall not result in blockage of side channels. Known fish barriers into side channels shall be removed as part of an approved watercourse alteration project.
 - b. Removal of Large Woody Debris (LWD) and vegetation, including salvage logging, shall be avoided or minimized unless it is demonstrated that the LWD poses an imminent safety hazard to the public, property or structures, or when it is part of a larger restoration project. Any removal that is unavoidable shall be mitigated by replanting with native vegetation and by augmenting lost

1 LWD where LWD can be anchored in such a way to provide fisheries,
2 riparian or shoreline erosion benefits; and to avoid safety hazards where
3 recreational boating and swimming are expected.

- 4 c. The applicant shall maintain the altered or relocated portion of the
5 watercourse to ensure that the flood carrying capacity is not diminished.
6 Maintenance shall be bonded for a period of five years and be in accordance
7 with an approved maintenance program.
8

- 9 7. The Director shall condition approval of activities allowed within a fish and
10 wildlife habitat conservation area or its buffer, as necessary, per the approved
11 critical area report and habitat management plan to minimize or mitigate any
12 potential adverse impacts. Conditions may include:
13 a. Establishment of buffer zones outside of the required stream and wetland
14 buffers, on a case-by-case basis, as may be necessary to retain adequate
15 natural habitat for listed species;
16 b. Preservation of critically important vegetation and/or habitat features (e.g.
17 snags);
18 c. Limitation of access to the habitat area, including fencing (on a case-by-case
19 basis) to deter unauthorized access (note fencing shall not create a barrier to
20 habitat function);
21 d. Seasonal restrictions of construction activities;
22 e. Establishment of a duration and timetable for periodic review of mitigation
23 activities; and
24 f. Requirement of a performance bond, when necessary, to ensure successful
25 completion.
26

27 E. SPECIAL PROVISIONS - STREAMS
28

- 29 1. The requirements provided in this section supplement those identified in Section
30 20.05.200 General Provisions. Activities may only be permitted in a stream or
31 stream buffer if the applicant can show that the proposed activity will not degrade
32 the functions and values of the stream, stream buffer, or other critical area.
33
34 2. Type S and F Streams. Activities and uses shall be prohibited in Type S and F
35 streams except as provided for in Sections 25.05.100 Administration, and the
36 allowable activities and uses listed below.
37 a. Stream Crossings. Stream crossing shall be minimized, but when necessary
38 they shall conform to the following standards as well as other applicable laws
39 (see the state Department of Fish and Wildlife, or Ecology).
40 i. The stream crossing is the only reasonable alternative that has the least
41 impact;
42 ii. It has been shown in the critical areas report that the proposed crossing
43 will not decrease the stream and associated buffer functions and values;

- 1 iii. The stream crossing shall use bridges instead of culverts unless it can be
2 demonstrated that a culvert would result in equal or less ecological
3 impacts;
- 4 iv. All stream crossings using culverts shall use super span or oversized
5 culverts with appropriate fish enhancement measures. Culverts shall not
6 obstruct fish passage;
- 7 v. Stream crossings shall be designed according to the Washington
8 Department of *Fish and Wildlife Fish Passage Design at Road Culverts*,
9 1999, and the National Marine Fisheries Service *Guidelines for*
10 *Salmonid Passage at Stream Crossings*, 2000;
- 11 vi. All stream crossings shall be constructed during the summer low flow
12 period between June 15th and September 15th or as specified by the state
13 Department of Fish and Wildlife in the Hydraulic Project Approval;
- 14 vii. Stream crossings shall not occur through salmonid spawning areas
15 unless no other feasible crossing site exists;
- 16 viii. Bridge piers or abutments shall not be placed in either the floodway or
17 between the ordinary high water marks unless no other feasible
18 alternative placement exists;
- 19 ix. Stream crossings shall not diminish the flood carrying capacity of the
20 stream;
- 21 x. Stream crossings shall minimize interruption of downstream movement
22 of wood and gravel;
- 23 xi. Stream crossings shall provide for maintenance of culverts and bridges;
24 and
- 25 xii. Stream crossings shall be minimized by serving multiple properties
26 whenever possible.
- 27 b. Trails. The criteria for alignment, construction, and maintenance of trails
28 within wetlands and their buffers shall apply to trails within stream buffers.
- 29 c. Utilities. The criteria for alignment, construction, and maintenance within the
30 wetland buffers shall apply to utility corridors within stream buffers. In
31 addition, corridors shall not be aligned parallel with any stream channel unless
32 the corridor is outside the buffer, and crossings shall be minimized.
33 Installation shall be accomplished by boring beneath the scour depth and
34 hyporheic zone of the water body where feasible. Crossings shall be contained
35 within the existing footprint of an existing road or utility crossing where
36 possible. Otherwise, crossings shall be at an angle greater than sixty degrees
37 to the centerline of the channel. The criteria for stream crossing shall also
38 apply.
- 39 d. Stormwater facilities provided that they are located in the outer 25 percent of
40 the buffer and are located in the buffer only when no practicable alternative
41 exists outside buffer. Stormwater facilities should be planted with native
42 plantings where feasible to provide habitat, and/or less intrusive facilities
43 should be used Detention/retention ponds should not be located in the buffer.

- 1 e. Floodway Dependent Structures. Floodway dependent structures or
2 installations may be permitted within streams if allowed or approved by other
3 ordinances or other agencies with jurisdiction.
- 4 f. New septic systems are prohibited in buffers unless no other feasible
5 alternative exists. If the proponent has demonstrated to the satisfaction of the
6 City that there is no feasible alternative, the septic system must be located in
7 the outer 25 percent of the buffer, meet vegetation retention and site clearing
8 limits, and be accessory to development otherwise allowed by regulation.
9 Repairs to septic systems should be accomplished by the least impacting
10 method (connection to sanitary sewer, replacement with new system located
11 outside the buffer, or repairs to existing system).
- 12 g. Stream bank stabilization shall only be allowed when it is shown, through a
13 stream bank stability assessment conducted by a qualified fluvial
14 geomorphologist or hydraulic engineer, that such stabilization is required for
15 public safety reasons, that no other less intrusive actions are possible, and that
16 the stabilization will not degrade in-stream or downstream channel stability.
17 Stream bank stabilization shall utilize bioengineering or soft armoring
18 techniques unless other wise demonstrated. Stream bank stabilization shall
19 conform to the *Integrated Streambank Protection Guidelines* developed by the
20 Washington State Department of Fish and Wildlife, 2002 or as revised.
21 Stabilization measures must demonstrate the following:
- 22 i. Natural shoreline processes will be maintained. The project will not
23 result in increased erosion or alterations to, or loss of, shoreline substrate
24 within ¼ mile of the project area;
- 25 ii. The stabilization measures will not degrade fish or wildlife habitat
26 conservation areas or associated wetlands;
- 27 iii. Adequate mitigation measures ensure that there is no net loss of the
28 functions or values of riparian habitat;
- 29 h. Maintenance of lawfully-established existing bank stabilization is allowed
30 provided it does not increase the height or linear amount of bank and does not
31 expand waterward or into aquatic habitat landward.

- 32
33 3. Type N Streams. Activities and uses that result in unavoidable and necessary
34 impacts may be permitted in Type N streams and buffers in accordance with an
35 approved critical areas report and mitigation plan, and only if the proposed
36 activity is the only reasonable alternative that will accomplish the applicant's
37 objectives.

38
39 F. SPECIAL PROVISIONS - ANADROMOUS FISH

- 40
41 1. Activities, uses, and alterations proposed to be located in water bodies used by
42 anadromous fish or in areas that affect such water bodies shall give special
43 consideration to the preservation and enhancement of anadromous fish habitat,
44 including, but not limited to, the following:

- a. Activities shall be timed to occur only during the allowable work window as designated by the state Department of Fish and Wildlife;
- b. An alternative alignment or location for the activity is not feasible;
- c. The activity is designed so that it will minimize the degradation of the functions or values of the fish habitat or other critical areas; and
- d. Any impact to the functions and values of the habitat conservation area are mitigated in accordance with an approved critical areas report.

- 2. Structures that prevent the migration of salmonids shall not be allowed in the portion of water bodies currently or historically used by anadromous fish. Fish bypass facilities shall be provided that allow the upstream migration of adult fish and shall prevent juveniles migrating downstream from being trapped or harmed.
- 3. Fills, when authorized, shall minimize the adverse impacts to anadromous fish and their habitat, shall mitigate any unavoidable impacts, and shall only be allowed for water-dependent uses.

G. SPECIAL PROVISIONS- WILDLIFE

Bald eagle habitat shall be protected pursuant to the Washington State Bald Eagle Protection Rules (WAC 232-12-292);

H. NATIVE GROWTH PROTECTION EASEMENT/CRITICAL AREA TRACT

- 1. As part of the implementation of approved development applications and alterations, fish and wildlife conservation areas and any associated buffers that remain undeveloped pursuant to the Critical Areas Regulations, shall be designated as Native Growth Protection Easements (NGPE). In addition to the requirements specified in Section 20.05.200, General Provisions the following shall apply:
 - a. An NGPE shall be designated for Type S and F streams when located within one-quarter (0.25) mile of a stream with salmonids, unless the Director has waived the NGPE requirements (see below), or where the alteration section expressly exempts Type N streams, when beyond one-quarter (0.25) mile of a stream with salmonids, from an NGPE. Where a stream or its buffer has been altered on the site prior to approval of the development proposal as a result of the development proposal, the area altered shall be restored using native plants and materials. The restoration work shall be done pursuant to an approved mitigation plan.
- 2. The Director may waive the NGPE requirements on Type N streams, when located beyond one-quarter (0.25) mile of a stream with salmonids if all the following criteria are met:
 - a. All buffer, building setback line, and flood plain distances are identified on the appropriate documents of title;

- b. The stream channel and buffer are maintained as a vegetated open swale without altering the channel dimensions or alignment and are recorded in a drainage easement to the City of _____ that requires that the channel remain open and vegetated for water quality and hydrologic purposes;
- c. All clearing proposed within the stream and its buffer shall occur between April 1 and September 1, or as further restricted by timing limits established by the State Department of Fish and Wildlife, and shall meet all erosion and sedimentation requirements of the City;
- d. There are no downstream flooding or erosion problems within one-half (0.5) mile of the site;
- e. The stream is not within an erosion hazard area; and
- f. No existing water wells are within or adjacent to the stream.

- 3. When the subject development is a formal subdivision, short subdivision (short plat), binding site plan, master site plan, contract rezone, site plan/design review, or Planned Residential Development (PRD), the fish and wildlife habitat conservation areas shall be placed in a critical areas tract and designated as a NGPE, as described in Section 20.05.200, General Provisions of this Chapter.

I. CRITICAL AREAS REPORT

- 1. A critical areas report for fish and wildlife habitat conservation areas shall be prepared by a qualified biologist with experience analyzing aquatic and/or wildlife habitat and who has experience preparing reports for the relevant type of critical area.
- 2. In addition to the requirements of Section 20.05.200, General Provisions, Critical Area Reports for wildlife habitat areas shall include the following additional information:
 - a. An assessment of habitats including the following site and proposal related information;
 - b. Identification of any species of local importance; priority species; or endangered, threatened, sensitive or candidate species that have a primary association with habitat on or adjacent to the project area, and assessment of potential project impacts to the use of the site by the species;
 - c. A discussion of any federal, state, or local species management recommendations, including the state Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitat located on or adjacent to the project area.
- 3. A critical areas report for streams shall include the following information:
 - a. On the site map:
 - i. The location of the ordinary high water mark;
 - ii. The toe of any slope twenty-five percent (25%) or greater within twenty-five (25) feet of the ordinary high water mark;
 - iii. The location of any proposed or existing stream crossing,

- 1 b. In the report:
2 i. Characterization of riparian (streamside) vegetation species,
3 composition, and habitat function;
4 ii. Description of the soil types adjacent to and underlying the stream, using
5 the Soil Conservation Service soil classification system;
6 iii. Determination of the presence or absence of fish, and reference sources;
7 and
8 iv. When stream alteration is proposed, include stream width and flow,
9 stability of the channel including erosion or aggradation potential, type
10 of substratum, discussions of infiltration capacity and biofiltration as
11 compared to the stream prior to alteration, presence of hydrologically
12 linked wetlands, analysis of fish and wildlife habitat, and proposed
13 floodplain limits.

14
15 J. STREAM MITIGATION

16
17 No net loss of stream functions and values shall occur as a result of the overall project.
18 The mitigation requirements for stream alterations, in addition to the requirements in
19 Section 20.05.200, General Provisions, shall meet the following minimum performance
20 standards and shall occur pursuant to an approved mitigation plan:
21

- 22 1. Achieve equivalent or greater functions, including, but not limited to, habitat
23 functions and hydrologic functions.
24
25 2. Maintain or improve stream channel dimensions, including depth, length, and
26 gradient.
27
28 3. Restore disturbed stream buffer areas with native vegetation.
29
30 4. Create an equivalent or improved channel bed.
31
32 5. Create equivalent or improved biofiltration.
33
34 6. Replace disturbed stream and stream buffer habitat features and areas.
35
36 7. Unless it is demonstrated that a higher level of stream function would result from
37 an alternate mitigation approach, compensatory mitigation should be either in-
38 kind and on-site, or in-kind and within the same stream reach or sub-basin.
39 Mitigation actions should be conducted within the same stream reach or sub-
40 drainage basin and on-site except when:
41 a. There are no reasonable on-site or in-sub-drainage basin opportunities with a
42 high likelihood of success;
43 b. Off-site mitigation has a greater likelihood of providing equal or improved
44 functions;
45 c. Established watershed goals for water quality, flood or conveyance, habitat, or

1 other functions, including priorities and recommendations outlined in the
2 WRIA 7 Salmon Conservation Plan, justify location of mitigation at another
3 site.
4

- 5 8. For temporary alterations to stream buffer or for rectifying illegal alteration,
6 repair, rehabilitation or restoration must be on-site at a 1:1 ratio or area of
7 mitigation to area of alteration.
8
- 9 9. Restoration or enhancement must attain the following ratios of area of mitigation
10 or area of alteration:
11 a. For mitigation on site;
12 i. 2:1 ratio for a type S or F stream; and
13 ii. 1.5:1 ratio for a type N stream; and
14 b. For mitigation off site;
15 i. 3:1 ratio for a type S or F stream; and
16 ii. 2:1 for a type N stream.
17
- 18 10. “On-site mitigation” means within the same stream drainage subbasin as the
19 alteration site and within one-half mile upstream or downstream.
20
- 21 11. “Off-site mitigation” means within the same stream drainage subbasin as the
22 proposed alteration site and beyond one half mile upstream or downstream.
23
- 24 12. The requirements in this section may be modified at the director’s direction if the
25 applicant demonstrates that, with respect to each stream area function, greater
26 functions can be obtained in the affected drainage subbasin through alterative
27 mitigation.
28

29 **K. MITIGATION PLANS FOR ALTERATION TO STREAMS AND STREAM BUFFERS**
30

31 The scope and content of a mitigation plan to alter stream and stream buffers shall be
32 decided on a case-by-case basis. As the impacts to the critical area increase, the
33 mitigation measures to offset these impacts will increase in number and complexity.
34 Refer to provisions in Section 20.05.200, General Provisions.

35 **20.05.600 FREQUENTLY FLOODED AREAS AND**
36 **CHANNEL MIGRATION ZONES**
37

38
39 **A. PURPOSE**
40

41 To protect public health, safety and welfare from harm caused by flooding and to
42 maintain important hydrologic functions of aquatic habitats.
43

1 B. LANDS TO WHICH THIS CHAPTER APPLIES

2
3 1. Flood Hazard Areas

- 4 a. This chapter shall apply to special flood hazard areas identified by the Federal
5 Insurance Administration in a scientific and engineering report entitled The
6 Flood Insurance Study for _____City, dated XXXX, XXX with an
7 accompanying flood insurance map(s) and any revisions.
8 b. Those areas identified by the City based on review of base flood elevation and
9 floodway data available from federal, state, county or other valid sources
10 when base flood elevation data has not been provided.

11
12 2. Channel Migration Zones

- 13 a. Channel migration zones shall be based on King County's channel migration
14 area maps.
15 b. A channel migration area shall be designated as severe hazard when it lies
16 within the area of the channel's probable migration over the next one hundred
17 years as measured for fifty years in either direction from the edge of the
18 existing channel; and
19 c. A channel migration area shall be designated as moderate hazard when it lies
20 between the area designated as severe and the boundaries of the channel
21 migration area.

22
23 C. PERFORMANCE STANDARDS – FLOOD HAZARD AREAS

24
25 The following standards apply to development proposals and alterations on sites within
26 flood hazard areas:

- 27
28 1. A development proposal shall not increase the base flood elevation unless
29 revisions to the FIRM are approved by FEMA in accordance with 44 CFR 70; and
30 appropriate legal arrangements have been made and documents filed.
31
32 2. The following circumstances are presumed to produce no increase in base flood
33 heights and shall not require special studies to establish this fact:
34 a. Areas of proposed structure on the nonconforming lots is less than 2,000
35 square feet; or
36 b. Reconstruction or remodeling of existing structures in the floodway where the
37 structure's footprint is not increased.
38
39 3. The cumulative effect of any proposed development, where combined with all
40 other existing and anticipated development, shall not increase the water surface
41 elevation of the base flood more than one foot at any point.
42
43 4. When fill is proposed to achieve elevated construction, a critical area report is
44 required demonstrating that the proposal will not increase the base flood
45 elevation.

1
2 5. If grading or other activity will displace any effective flood storage volume,
3 compensatory storage shall be created on the site in equivalent volume at
4 equivalent elevations to that being displaced. Compensatory storage areas must be
5 hydraulically connected to the source of flooding.
6

7 *(City Option: or alternatively if feasible, provide side channel habitat as mitigation for*
8 *floodway alterations.)*
9

10 6. Construction of new residential or nonresidential structures is prohibited within
11 the floodway except developments that are vested according to the City's Flood
12 Hazard Ordinance. New construction in nonconforming developments shall meet
13 the construction standards set forth in this Chapter.
14

15 7. Reconstruction of existing structures within the floodway shall be subject to the
16 requirements of 173-158-170 WAC; provided that reconstruction of existing
17 residential structures between the floodway defined in 173-158-030(8) WAC and
18 the floodway defined in this Chapter need only meet the standards for new
19 residential construction set forth in this Chapter.
20

21 8. No structures shall be allowed which would be at risk due to stream bank
22 destabilization associated with channel location (meandering).
23

24 9. Approved alterations shall not block side channel habitats.
25

26 10. All construction elevated by pilings must be designed and certified by a
27 professional structural engineer registered in the state of Washington and
28 approved by the City building official prior to construction.
29

30 11. Along streams, when the floodway is not identified by the applicant in the special
31 studies, the entire floodplain of the site shall be treated as the floodway.
32

33 12. An analysis of bioengineering and/or vegetation enhancements will be required
34 when existing levees or dikes are proposed to be repaired or renovated as
35 specified in King County's *Guidelines for Bank Stabilization*.
36

37 13. Construction materials for residential and non residential structures shall meet the
38 following criteria:

- 39 a. All new, substantially reconstructed buildings and substantially remodeled
40 structures shall be constructed with materials and utility equipment resistant to
41 flood damage, using methods and products that minimize flood damage;
42 b. Electrical, heating, ventilation, plumbing, air conditioning equipment, and
43 other service facilities shall be flood-proofed to the flood protection elevation
44 on all new, substantially reconstructed and substantially remolded buildings.
45

1 14. All new construction shall be anchored to prevent flotation, collapse, or lateral
2 movement of the structure.

3
4 15. For all mobile/manufactured homes, all standards for flood hazard protection for
5 residential construction shall apply. All mobile/manufactured homes must be
6 anchored and shall be installed using methods and practices that minimize flood
7 damage. For existing mobile/manufactured homes where the repair/reconstruction
8 of the utilities and pad equals or exceeds fifty percent (50%) of the value of
9 utilities and pad before the repair/reconstruction has commenced, all standards for
10 flood hazard protection applicable for residential construction shall apply to the
11 mobile/manufactured home.

12
13 D. ALLOWED USES AND ACTIVITIES - FLOOD HAZARD AREAS

14
15 The Director may require the preparation of a critical areas report as specified in
16 20.50.600. G. For any of the uses and activities described below:

- 17
18 1. Floodway Dependent Structures. Installations or structures that are floodway
19 dependent may be located within the floodway provided that the development
20 proposal receives approval from all other agencies with jurisdiction. Such
21 installations include but are not limited to:
- 22 a. Dams or diversions for water supply, flood control, hydroelectric production,
23 irrigation or fisheries enhancement;
 - 24 b. Flood damage reduction facilities such as dikes, levees and pumping stations
25 when necessary to protect the public from an imminent hazard;
 - 26 c. Stream bank stabilization structures are allowed only if no feasible alternative
27 exists for protecting structures, public roadways, and flood protection
28 facilities or sole access routes. Bank stabilization projects shall be consistent
29 with WDFW and NMFS guidelines and applicable sections of this Chapter,
30 and shall use bioengineering to the maximum extent possible;
 - 31 d. Surface water conveyance facilities subject to the requirements of the
32 development standards for streams and wetlands;
 - 33 e. Boat launches and related recreation structures;
 - 34 f. Bridge piers and abutments when no reasonable alternative is available; and
 - 35 g. Approved aquatic area or wetland restoration projects to improve natural
36 functions including, but not limited to, fisheries enhancement projects.
- 37
38 2. Subdivisions, short subdivisions, master site plans, contract rezones, site
39 plan/design review; PRD's and Binding Site Plans shall follow these
40 requirements:
- 41 a. New buildable lots shall contain five thousand square feet or more or
42 buildable land outside the floodway;
 - 43 b. Locate and construct all utilities and their facilities in a manner that minimize
44 flood damage;

- c. Provide adequate drainage to reduce exposure to flood damage; base flood data and flood hazard notes shall be shown on the face of the recorded plat, this may include, the floodwater depth, required flood elevations, and the boundary of the base flood and floodway as deemed appropriate by the City; and the following note shall appear on the face recorded documents and shall be recorded on the title of record for all affected lots;
- d. Base flood data and flood hazard notes shall be shown on the face of the recorded plat; this may include the floodwater depth, required flood elevations, and the boundary of the base flood and floodway as deemed appropriated by the City;
- e. The following note shall appear on the face of the recorded documents and shall be recorded on the title of records for all affected lots:

“Note: Lots and structures located within flood hazard areas may be inaccessible to emergency vehicles during flood events. Residents and property owners should take appropriate advance precautions to provide access.”

- 3. Utilities and on-site sewage facilities shall meet the following criteria:
 - a. All new and replacement utilities including sewage treatment facilities shall be flood-proofed to the flood protection elevation.
 - b. New on-site sewage disposal systems shall be, to the extent possible, located outside the limits of the floodway and may be installed in the flood fringe if no feasible alternative site is available. On-site sewage disposal systems that are located within the flood hazard areas must be sited to avoid impairment of the system during flooding and to avoid contamination from the system during flooding;
 - c. Sewage and manure waste storage facilities shall be flood-proofed to the flood protection elevation.
 - d. Aboveground utility transmission lines, other than electric transmission lines, shall only be allowed for the transportation of non-hazardous substances.
 - e. Buried utility transmission lines transporting hazardous substances (as defined by the Washington State Hazardous Waste Management Act in RCW 70.105.005) shall be buried a minimum of four (4) feet beneath the maximum depth of scour of the base flood for the entire width of the floodway and shall achieve sufficient negative buoyancy so that any potential for flotation or upward migration is eliminated.
 - f. Above-ground utility transmission lines, not including electrical transmission lines, shall only be allowed in the floodway for the transportation of non-hazardous materials, as defined by the state Department of Ecology, where a bridge or other structure is capable of transporting the line.
- 4. Critical facilities include, but are not limited to, schools, hospitals, police, fire and emergency response installations, nursing homes, and hazardous materials production. Construction of new critical facilities shall only be allowed within the floodway when no reasonable alternative site is available. Critical facilities

1 constructed within the floodway shall have the lowest floor elevated to three (3)
2 or more feet above the level of the base flood elevation. Flood-proofing and
3 sealing measures must be taken to ensure toxic or hazardous substances will not
4 be displaced by or released into floodwaters. Access routes elevated to or above
5 the level of the 100-year frequency flood shall be provided to all critical facilities
6 to the extent possible.
7

- 8 5. New residential construction shall meet the following criteria:
- 9 a. The lowest floor shall be elevated to the flood protection elevation;
 - 10 b. Fully enclosed areas below the lowest floor that are subject to flooding are
11 prohibited. The area and rooms below the lowest floor shall be designated to
12 automatically equalize hydrostatic flood forces on exterior walls by allowing
13 for the entry and exit of floodwaters. Designs for meeting this requirement
14 must meet or exceed the following minimum criteria:
 - 15 i. A minimum of two (2) openings shall be provided on opposite walls
16 having a total new area of not less than one (1) square inch for every
17 square foot of enclosed area subject to flooding.
 - 18 ii. The bottom of all openings shall be no higher than one (1) foot above
19 grade.
 - 20 iii. Openings may be equipped with screens, louvers, or other coverings or
21 devices provided that they permit the unrestricted entry and exit of
22 floodwaters.
- 23
- 24 6. New nonresidential construction and substantial improvements of any existing
25 commercial, industrial, or other non-residential structure shall either elevate the
26 lowest floor, including the basement, to the flood protection elevation or flood-
27 proof the structure to the same elevation. If the structure is flood-proofed, the
28 following criteria are required:
- 29 a. The flood-proofing must be certified by a professional civil or structural
30 engineer registered in the state of Washington stating that the flood-proofing
31 methods are adequate to withstand the flood-depths, pressures, velocities,
32 impacts, uplift forces, and other factors associated with the base flood. After
33 construction, the engineer shall certify that the permitted work conforms to the
34 approved plans and specifications;
 - 35 b. Approved building permits for flood-proofed nonresidential buildings shall
36 contain a statement to notify applicants that flood insurance premiums will be
37 based upon rates for structures that are one (1) foot below the flood-proofed
38 level.
- 39
- 40 7. New nonresidential construction and substantial improvements of any existing
41 commercial, industrial, or other non-residential structure shall not reduce the
42 effective base flood storage volume of the floodplain. A development proposal
43 shall provide compensatory storage if grading or other activity displaces any
44 effective flood storage volume. Compensatory storage shall:
- 45 a. Provide equivalent volume at equivalent elevations to that being displaced;

- b. Hydraulically connect to the source of flooding;
- c. The Director may approve equivalent compensatory storage off the site if legal arrangements, acceptable to the department, are made to assure that the effective compensatory storage volume will be preserved over time.

E. PERFORMANCE STANDARDS–CHANNEL MIGRATION ZONES

- 1. The Director may require the preparation of a critical areas report as specified in 20.50.600.G for any of the activities proposed in the channel migration zone.
- 2. Development proposals and alterations on sites containing a channel migration zone located within an aquatic area buffer shall comply with the critical area buffer standards in the applicable sections of this Chapter.
- 3. The following standards apply to development proposals and alterations within the severe channel migration hazard area:
 - a. Maintenance, repair, structural modification or addition to any existing critical facility or building used as a place of employment, place of public assembly, dwelling unit, accessory dwelling unit or accessory living quarters is allowed, provided that there is no increase of the footprint of any existing structure.
 - b. Maintenance, repair, structural modification or addition to existing accessory structures, provided that:
 - i. There is no increase of the footprint of any existing structure;
 - ii. The footprint is not expanded towards any source of channel migration hazard.
- 4. The following standards apply to development proposals and alterations within the moderate channel migration hazard area:
 - a. Maintenance, repair or expansion of any use of structure is allowed provided the existing structure’s footprint is not expanded towards any source of channel migration hazard;
 - b. New primary dwelling units, accessory dwelling units or accessory living quarters, and required infrastructure, are allowed provided that no feasible alternative location outside of the channel migration hazards area is available on-site and the structure is located the farthest practical distance from any source of hazards.
 - c. New accessory dwelling units are allowed if no feasible alternative location exists and the structure is located the farthest practical distance from the migrating channel;
 - d. The subdivision of property is allowed within the portion of a moderate channel migration hazard areas located outside an aquatic areas buffer only if:
 - i. All resulting lots contain five thousand square feet or more of buildable land outside of the moderate channel migration hazard area;
 - ii. Access to all resulting lots does not cross the moderate channel migration hazard area; and

- 1 iii. All infrastructure is located outside the moderate channel migration
2 hazard area except that the septic system may be placed in the moderate
3 channel migration hazard area if;
4 a) No feasible location is available on-site; and
5 b) The septic system is located the farthest practical distance from the
6 migrating channel.
7

8 F. **CRITICAL AREAS REPORT**
9

- 10 1. A critical areas report for flood hazard areas or channel migration zones shall be
11 prepared by an engineer or hydrogeologist, licensed in the state of Washington,
12 with expertise analyzing geologic, hydrogeologic and surface and ground water
13 flow system, and who has experience preparing reports for the relevant type of
14 hazard.
15
16 2. In addition to the requirements of Section 20.50.200, General Provisions, critical
17 area reports required for flood hazard areas or channel migration zones shall
18 include the following information:
19
20 3. On the site map:
21 a. The dimensioned location of all proposed development in the floodplain;
22 b. The location of the floodway where it has been delineated on the most recent
23 Flood Insurance Study map (FIRM);
24 c. Where basin plans have been completed and adopted, the location of the
25 floodplain and floodways shall be based upon the hydrologic and hydraulic
26 analysis;
27 d. Identification of all proposed structures and grading within the floodplain.
28
29 4. In the report:
30 a. Identify how the boundaries of the floodways and floodplain were determined;
31 b. Record the elevation of National Geodetic Vertical Datum (NGVD) of the
32 lowest floor of all new or substantially improved structures proposed in the
33 existing floodplain.
34
35

36 **20.05.700 GEOLOGICALLY HAZARDOUS AREAS**
37

38 A. **PURPOSE**
39

40 To prevent incompatible development activity to be conducted in or near geologically
41 hazardous areas in order to reduce the risk to public health and safety.
42

1 B. DESIGNATION
2

3 Geologically hazardous areas include areas susceptible to erosion, sliding, earthquake, or
4 other geological events. They pose a threat to the health and safety of citizens when
5 incompatible development is sited in areas of significant hazard. Such incompatible
6 development may not only place itself at risk, but may also increase the hazard to
7 surrounding development and uses. Areas susceptible to one or more of the following
8 types of hazards shall be designated as geologically hazardous areas:
9

- 10 1. Erosion hazard;
11
12 2. Landslide hazard (including steep slopes);
13
14 3. Seismic hazard; and
15
16 4. Other geological events including, mass wasting, debris flows, rock falls, and
17 differential settlement.
18

19 C. DESIGNATION OF SPECIFIC GEOLOGIC HAZARD AREAS
20

- 21 1. The adopted critical areas maps include:
22

23 [*City Option: The approximate location and extent of geologically hazardous areas are*
24 *shown on the City adopted critical areas map.*]
25

- 26 a. U.S. Geological Survey (USGS) landslide hazard, seismic hazard, and
27 volcanic hazard maps;
28 b. Washington Department of Natural Resources (WDNR) seismic hazard maps
29 of Western Washington, as they are available;
30 c. WDNR slope stability maps, as they are available;
31 d. Federal Emergency Management Administration (FEMA) flood insurance
32 maps; and
33 e. Local geologic hazard maps, as adopted.
34
35 2. These maps are to be used as a guide for the City of _____, project applicants,
36 and/or property owners, and may be continuously updated as new critical areas
37 are identified. They are a reference and do not provide a final critical area
38 designation.
39
40 3. Erosion hazard areas. Erosion hazard areas are at least those areas identified by
41 the U.S. Department of Agriculture's Natural Resources Conservation Service
42 (NRCS) as having "severe" or "very severe" rill and inter-rill erosion hazard.
43
44 4. Landslide hazard areas. Landslide hazard areas are areas potentially subject to
45 landslides based on a combination of geologic, topographic, and hydrologic

1 factors. They include areas susceptible because of any combination of bedrock,
2 soil, slope (gradient), slope aspect, structure, hydrology, or other factors.
3 Examples of these may include, but are not limited to, the following:

- 4 a. Areas of historic failure, such as:
 - 5 i. Those areas delineated by the NRCS as having a “severe” limitation for
6 building site development; or
 - 7 ii. Areas designated as quaternary slumps, earth flows, mudflows, lahars, or
8 landslides on maps published by the USGS or WDNR.
- 9 b. Areas with all three of the following characteristics:
 - 10 i. Slopes steeper than fifteen percent (15%); and
 - 11 ii. Hillsides intersecting geologic contacts with a relatively permeable
12 sediment overlaying a relatively impermeable sediment or bedrock; and
 - 13 iii. Springs or groundwater seepage.
- 14 c. Areas that have shown movement during the Holocene epoch (from ten
15 thousand years ago to the present) or that are underlain or covered by mass
16 wastage debris of that epoch;
- 17 d. Slopes that are parallel or sub-parallel to planes of weakness (such as bedding
18 planes, joint systems, and faults) in subsurface materials;
- 19 e. Slopes having a gradient steeper than eighty percent (80%) subject to rock fall
20 during seismic shaking;
- 21 f. Areas potentially unstable because of rapid stream incision, stream bank
22 erosion, and undercutting by wave action;
- 23 g. Areas located in a canyon or on an active alluvial fan, presently or potentially
24 subject to inundation by debris flows or catastrophic flooding; and
- 25 h. Any area with a slope of forty percent (40%) or steeper and with a vertical
26 relief of ten (10) or more feet except areas composed of consolidated rock. A
27 slope delineated by establishing its toe and top and measured by averaging the
28 inclination over at least ten (10) feet of vertical relief.

- 29
- 30 5. Seismic hazard areas. Seismic hazard areas are subject to severe risk of damage
31 as a result of earthquake-induced ground shaking, slope failure, settlement, soil
32 liquefaction, lateral spreading, or surface failure. The strength of ground shaking
33 is primarily affected by:
 - 34 a. The magnitude of an earthquake;
 - 35 b. The distance from the source of an earthquake;
 - 36 c. The type and thickness of geologic materials at the surface; and
 - 37 d. The type of subsurface geological structure.
- 38

1 D. PROHIBITED DEVELOPMENT AND ACTIVITIES

- 2
- 3 1. On-site sewage disposal systems, including drain fields, shall be prohibited within
- 4 erosion and landslide hazard areas and associated buffers.
- 5
- 6 2. Pipelines containing hazardous substances (i.e. petroleum) are prohibited in
- 7 geologically hazardous areas.
- 8

9 E. PERFORMANCE STANDARDS

- 10
- 11 1. All projects shall be evaluated to determine whether the project is proposed to be
- 12 located in a geologically hazardous area, the project's potential impact on the
- 13 geologically hazardous area, and the potential impact on the proposed project.
- 14 The Director may require the preparation of a critical area report to determine the
- 15 project's ability to meet the performance standards.
- 16
- 17 2. Alterations of geologically hazardous areas or associated buffers may only occur
- 18 for activities that:
- 19 a. Will not increase the threat of the geological hazard to adjacent properties
- 20 beyond pre-development conditions;
- 21 b. Will not adversely impact other critical areas;
- 22 c. Are designed so that the hazard to the project is eliminated or mitigated to a
- 23 level equal to or less than pre-development conditions; and
- 24 d. Are certified as safe as designed and under anticipated conditions by a
- 25 qualified geotechnical engineer or geologist, licensed in the state of
- 26 Washington.
- 27
- 28 3. Vegetation shall be retained unless it can be shown that the removal will not
- 29 increase the geologic hazards, and a vegetation management plan is submitted
- 30 with the request.
- 31
- 32 4. Approved clearing shall only be allowed from May 1st to October 1st of each year
- 33 provided that the City may extend or shorten the dry season on a case-by-case
- 34 basis depending on the actual weather conditions, except that timber harvest, not
- 35 including brush clearing or stump removal, may be allowed pursuant to an
- 36 approved forest practices permit issued by WDNR.
- 37
- 38 5. Access roads and utilities may be permitted within the erosion or landslide hazard
- 39 area and associated buffers if the City determines that no other feasible alternative
- 40 exists.
- 41
- 42 6. Utility lines and pipes shall be permitted in the erosion and landslide hazard areas
- 43 only when the applicant demonstrates that no other practical alternative is
- 44 available. The line or pipe shall be located above ground and be properly
- 45 anchored and/or designed so that it will continue to function in the event of an

1 underlying slide. Stormwater conveyance shall be allowed only through a high-
2 density polyethylene pipe with fuse-welded joints, or similar product that is
3 technically equal or superior.

4 7. Point discharges from surface water facilities and roof drains onto or upstream
5 from an erosion or landslide hazard area shall be prohibited except that
6 conveyance is allowed via continuous storm pipe downslope to a point where
7 there are no erosion hazard areas downstream from the discharge.
8

9 8. The division of land in erosion or landslide hazard areas and associated buffers is
10 subject to provisions established for all critical areas in Section 20.05.200 General
11 Provisions.
12

13 F. SPECIAL PROVISIONS – EROSION AND LANDSLIDE AREAS

14
15 Activities on sites containing erosion or landslide hazards shall meet the following
16 requirements:
17

18 1. Buffers required. A buffer shall be established for all edges of erosion or
19 landslide hazard areas. The size of the buffer shall be determined by the Director
20 to eliminate or minimize the risk of property damage, death, or injury resulting
21 from erosion and landslides caused in whole or part by the development, based
22 upon review of and concurrence with a critical areas report prepared by a
23 qualified professional.

24 2. Minimum buffers. The minimum buffer shall be equal to the height of the slope,
25 or fifty (50) feet, whichever is greater.

26 3. Buffer reduction. The buffer may be reduced to a minimum of ten (10) feet when
27 a qualified professional demonstrates to the Director's satisfaction that the
28 reduction will adequately protect the proposed development, adjacent
29 developments and, uses and the subject critical area.

30 4. Increased buffer. The buffer may be increased when the Director determines a
31 larger buffer is necessary to prevent risk of damage to proposed and existing
32 development.

33 5. Alterations. Alterations of an erosion or landslide hazard area and/or buffer may
34 only occur for activities for which a geotechnical analysis is submitted and
35 certifies that:

- 36 a. The development will not increase surface water discharge or sedimentation to
37 adjacent properties beyond the pre-development condition;
- 38 b. The development will not decrease slope stability on adjacent properties; and
- 39 c. Such alteration will not adversely impact other critical areas.
40

1 G. DESIGN STANDARDS – EROSION AND LANDSLIDE HAZARD AREAS

2
3 Development within an erosion or landslide hazard area and/or buffer shall be designed
4 to meet the following basic requirements unless it can be demonstrated that an alternative
5 design that deviates from one or more of these standards provides greater long-term slope
6 stability while meeting all other provisions of this Chapter. The requirements for long-
7 term slope stability shall exclude designs that require regular and periodic maintenance to
8 maintain their level of function. The basic development design standards are:
9

- 10 1. Structures and improvements shall be clustered to avoid geologically hazardous
11 areas and other critical areas;
- 12
13 2. Structures and improvements shall minimize alterations to the natural contours of
14 the slope and foundations shall be tiered where possible to conform to existing
15 topography;
- 16
17 3. Structures and improvements shall be located to preserve the most critical portion
18 of the site and its natural landforms and vegetation;
- 19
20 4. The proposed development shall not result in greater risk or a need for increased
21 buffers on neighboring properties;
- 22
23 5. The use of a retaining wall that allows the maintenance of existing natural slopes
24 are preferred over graded artificial slopes; and
- 25
26 6. Development shall be designed to minimize impervious lot coverage.

27
28 H. NATIVE GROWTH PROTECTION EASEMENT/CRITICAL AREA TRACT

- 29
30 1. As part of the implementation of approved development applications and
31 alterations, geologically hazardous areas and any associated buffers that remain
32 undeveloped pursuant to the Critical Areas Regulations, in accordance Section
33 20.05.200, General Provisions, shall be designated as Native Growth Protection
34 Easements (NGPE).
- 35
36 2. When the subject development is a formal subdivision, short subdivision (short
37 plat), binding site plan, master site plan, contract rezone, site plan/design review,
38 or Planned Residential Development (PRD), the geologically hazardous area(s)
39 and any buffers shall be placed in a critical areas tract and designated as a NGPE,
40 as described in Section 20.05.200, General Provisions.

41 I. CRITICAL AREAS REPORT

- 42
43 1. When required, a critical areas report for a geologically hazardous area shall be
44 prepared by an engineer or geologist, licensed in the state of Washington, with

1 experience analyzing geologic, hydrogeologic, and ground water flow systems,
2 and who has experience preparing reports for the relevant type of hazard.
3

4 2. In addition to the requirements of Section 20.05.200, General Provisions, critical
5 area reports are required for geologically hazardous areas shall include the
6 following additional information:

7 a. On the site map:

- 8 i. All geologically hazardous areas within or adjacent to the project area or
9 that have potential to be affected by the proposal;
- 10 ii. The top and toe of slope (Note: these should be located and flagged in
11 the field subject to City staff review);

12 b. In the report:

- 13 i. A geological description of the site;
- 14 ii. A discussion of any evidence of existing or historic instability,
15 significant erosion or seepage on the slope;
- 16 iii. A discussion of the depth of weathered or loosened soil on the site and
17 the nature of the weathered and underlying basement soils;
- 18 iv. An estimate of load capacity, including surface and ground water
19 conditions, public and private sewage disposal system, fill and
20 excavations, and all structural development;
- 21 v. Recommendations for building limitations, structural foundations, and
22 an estimate of foundation settlement;
- 23 vi. A complete discussion of the potential impacts of seismic activity on the
24 site;
- 25 vii. Recommendations for management of stormwater for any development
26 above the top of slope;
- 27 viii. A description of the nature and extent of any colluviums or slope debris
28 near the toe of slope in the vicinity of any proposed development; and
- 29 ix. Recommendations for appropriate building setbacks, grading
30 restrictions, and vegetation management and erosion control for any
31 proposed development in the vicinity of the geologically hazardous
32 areas.
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20.05.800 DEFINITIONS

1. Active fault – A fault that is considered likely to undergo renewed movement within a period of concern to humans. Faults are commonly considered to be active if the fault has moved one or more times in the last 10,000 years.
2. Adjacent – Immediately adjoining (in contact with the boundary of the influence area) or within a distance less than that needed to separate activities from critical areas to ensure protection of the functions and values of the critical areas. Adjacent shall mean any activity or development located:
 - a. On site immediately adjoining a critical area; or
 - b. A distance equal to or less than the required critical area buffer width and building setback.
3. Alteration – Any human-induced [*City Option: anthropogenic*] change in an existing condition of a critical area or its buffer. Alterations include, but are not limited to: grading, filling, dredging, channelizing, clearing (vegetation), applying pesticides, discharging waste, construction, compaction, excavation, modifying for storm water management, relocating, or other activities that change the existing landform, vegetation, hydrology, wildlife, or habitat value, of critical areas.
4. Anadromous fish – Fish that spawn in fresh water and mature in the marine environment.
5. Applicant – A person who files an application for a permit under this chapter and who is either the owner of the land on which that proposed activity would be located, a contract purchaser, or the authorized agent of such a person.
6. Aquifer recharge area – An area that, due to the presence of certain soils, geology, and surface water, acts to recharge ground water by percolation.
7. Base Flood – A flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the “100-year flood.”
8. Base Flood Elevation – The water surface elevation of the base flood. It shall be referenced to the National Geodetic Vertical Datum of 1929 (NGVD).
9. Best Available Science – Current scientific information used in the process to designate, protect, or restore critical areas, that is derived from a valid scientific process as defined by WAC 365-195-900 through WAC 365-195-925.
10. Best Management Practices – Conservation practices or systems of practice and management measures that:

- 1 a. Control soil loss and reduce water quality degradation caused by high concentrations
2 of nutrients, animal waste, toxics, and sediment;
- 3 b. Minimize adverse impacts to surface water and ground water flow, circulation
4 patterns, and the chemical, physical, and biological characteristics of wetlands;
- 5 c. Protect trees and vegetation designated to be retained during and following site
6 construction; and
- 7 d. Provides standards for proper use of chemical herbicides within critical areas.
8
- 9 11. Buffer – The zone contiguous with a critical area that is required for the continued
10 maintenance, function, and structural stability of the critical area.
11
- 12 12. Building Setback Line (BSBL) – A line beyond which the foundation of a structure shall
13 not extend.
14
- 15 13. Channel Migration Zone (CMZ) – The lateral extent of likely movement along a stream
16 or river during the next one hundred years as determined by evidence of active stream
17 channel migration movement over the past one hundred years.
18
- 19 14. City – The City of _____
20
- 21 15. Clearing – The removal of vegetation by any means and includes cutting or grubbing
22 vegetation.
23
- 24 16. Compensation project – Actions specifically designed to replace project-induced critical
25 area and buffer losses. Compensation project design elements may include, but are not
26 limited to, land acquisition, planning, construction plans, monitoring, and contingency
27 actions.
28
- 29 17. Compensatory mitigation – Types of mitigation used to replace project-induced critical
30 area and buffer losses or impacts.
31
- 32 18. Critical Aquifer Recharge Area – Areas designated by WAC 365-190-080(2) that are
33 determined to have critical recharging effect on aquifers used for potable water as defined
34 by WAC 365-190-030(2).
35
- 36 19. Critical Areas – Any of the following areas or ecosystems: wetlands, critical aquifer
37 recharge areas, streams, fish and wildlife habitat conservation areas, frequently flooded
38 areas, and geologically hazardous areas as defined by the Growth Management Act
39 (RCW 36.70A.170).
40
- 41 20. Critical Facility – A facility for which even a slight chance of flooding, inundation, or
42 impact from a hazard event might be too great. Critical facilities include, but are not
43 limited to, schools, nursing homes, hospitals, police, fire and emergency installations, and
44 installations that produce, use or store hazardous materials or hazardous waste.
45

- 1 21. Developable Area – A site or portion of a site that may be utilized as the location of
2 development, in accordance with the rules of this Chapter.
3
- 4 22. Development Permit – Any permit issued by the City of _____, or other authorized
5 agency, for construction, land use, or the alteration of land.
6
- 7 23. Director – Refers to the Community Development Director for the City of _____.
8
- 9 24. Erosion – The process by which soil particles are mobilized and transported by natural
10 agents such as wind, rain, frost action, or stream flow.
11
- 12 25. Erosion Hazard Area – Those areas that because of natural characteristics, including
13 vegetative cover, soil texture, slope gradient, and rainfall patterns, or human-induced
14 changes to such characteristics, are vulnerable to erosion.
15
- 16 26. FEMA - Federal Emergency Management Agency. The agency that, oversees the
17 administration of the National Flood Insurance Program (44 CFR).
18
- 19 27. Fish and Wildlife Habitat Conservation Areas – Areas necessary for maintaining species
20 in suitable habitats within their natural geographic distribution so that isolated
21 subpopulations are not created as designated by WAC 365-190-080(5). These areas
22 include:
23
- 24 a. Areas with which state or federally designated endangered, threatened, and sensitive
 - 25 species have a primary association;
 - 26 b. Habitats of local importance, including, but not limited to, areas designated as priority
 - 27 habitat by the Department of Fish and Wildlife;
 - 28 c. Naturally occurring ponds under twenty acres and their submerged aquatic beds that
 - 29 provide fish and wildlife habitat;
 - 30 d. Waters of the state, including lakes, rivers, ponds, streams, inland waters,
 - 31 underground waters, salt waters and all other surface water and watercourses within
 - 32 the jurisdiction of the state of Washington;
 - 33 e. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal
 - 34 entity;
 - 35 f. State natural area preserves and natural resources conservation areas; and
 - 36 g. Land essential for preserving connections between habitat blocks and open spaces.
37
- 38 28. Flood or flooding – A general and temporary condition of partial or complete inundation
39 of normally dry land areas from the overflow of inland waters and/or the unusual and
40 rapid accumulation of runoff or surface waters from any source.
41
- 42 29. Floodplain – Any land area susceptible to being inundated by floodwaters from any
43 source.
44

- 1 30. Floodway Dependent Structure – Structures that are floodway dependent include, but are
2 not limited to, dams, levees and pump stations, stream bank stabilization, boat launches
3 and related recreational structures, bridge piers and abutments, and fisheries enhancement
4 or stream restoration projects.
5
- 6 31. Flood Hazard Area – any area subject to inundation by the base flood or risk from
7 channel migration including but not limited to an aquatic area, wetland, or closed
8 depression.
9
- 10 32. Flood Insurance Rate Map (FIRM) – The official map on which the Federal Insurance
11 Administration has delineated many areas of flood hazard, floodways, and the risk
12 premium zones (CFR44 Part 59).
13
- 14 33. Flood Insurance Study – The official report provided by the Federal Insurance
15 Administration that includes the flood profiles and the FIRM (CFR44 Part 59).
16
- 17 34. Flood Proofing – Adaptations that ensure a structure is substantially resistant to the
18 passage of water below the flood protection elevation and resists hydrostatic and
19 hydrodynamic loads and effects of buoyancy.
20
- 21 35. Flood Protection Elevation – An elevation that is one (1) foot above the base flood
22 elevation.
23
- 24 36. Formation – An assemblage of earth materials grouped together into a unit that is
25 convenient for description or mapping.
26
- 27 37. Formation, confining – The relatively impermeable formation immediately overlaying a
28 confined aquifer.
29
- 30 38. Frequently Flooded Areas – Lands in the floodplain subject to a one percent (1%) or
31 greater chance of flooding in any given year and those lands that provide important flood
32 storage, conveyance, and attenuation functions, as determined by the Director, in
33 accordance with WAC 365-190-080(3). Classifications of frequently flooded areas
34 include, at a minimum, the 100-year floodplain designations of the Federal Emergency
35 Management Agency (FEMA) and National Flood Insurance Protection (NFIP).
36
- 37 39. Functions and Values – The beneficial roles served by critical areas, including, but not
38 limited to, water quality protection and enhancement, fish and wildlife habitat, food chain
39 support, flood storage, conveyance and attenuation, ground water recharge and discharge,
40 erosion control, and recreation. This should be divided in to “functions” and also
41 “values”.
42
- 43 40. Geologically Hazardous Areas – Areas that may not be suited to development consistent
44 with public health, safety or environmental standards, because of their susceptibility to
45 erosion, sliding, earthquake, or other geological events as designated by WAC 365-190-

- 1 080(4). Types of geologically hazardous areas include erosion, landslide, seismic,
2 volcanic hazards, and mine.
3
- 4 41. Grading – Any excavation, clearing, filling, leveling, or contouring of the ground surface
5 by human or mechanical means.
6
- 7 42. Hazard areas – Areas designated as frequently flooded or geologically hazardous areas
8 due to potential for erosion, landslide, seismic activity, mine collapse, or other
9 geologically hazardous conditions, including steep slopes.
10
- 11 43. High-intensity Land Use-. Land uses consisting of commercial, urban, industrial,
12 institutional, retail, residential with more than one unit per acre, agricultural (dairies,
13 nurseries, raising and harvesting crops, requiring annual tilling, raising and maintaining
14 animals), high-intensity recreation (golf courses, ball fields), and hobby farms.
15
- 16 44. Heavy Equipment – Such construction machinery as backhoes, treaded tractor, dump
17 trucks, and front-end loaders.
18
- 19 45. Hydraulic Project Approval (HPA) – A permit issued by the State of Washington’s
20 Department of Fish and Wildlife for modification to waters of the state in accordance
21 with RCW Chapter 75.20.
22
- 23 46. Impervious Surface Area- means any non-vertical surface artificially covered or hardened
24 so as to prevent or impede the percolation of water into the soil mantle including, but not
25 limited to, roof tops swimming pools, paved or graveled roads and walkways or parking
26 areas and excluding landscaping and surface water retention/detention facilities.
27
- 28 47. Isolated Wetland – Those wetlands that are outside of and not contiguous to any 100-year
29 floodplain, lake, river, or stream and have no contiguous hydric soil or hydrophytic
30 vegetation between the wetland and any surface water.
31
- 32 48. Lake – An area permanently inundated by water in excess of two meters deep and greater
33 than twenty (20) acres in size measured at the ordinary high water mark.
34
- 35 49. Landslide – Episodic down slope movement of a mass of soil or rock that includes, but is
36 not limited to, rock falls, slumps, mudflows, and earth flows.
37
- 38 50. Landslide Hazard Areas – Areas that are potentially subject to risk of mass movement
39 due to a combination of geologic, topographic, and hydrologic factors.
40
- 41 51. Low-intensity Land Use -. Includes, but is not limited to, forestry, open space (such as
42 passive recreation and natural resources preservation).
43
- 44 52. Lowest Floor – The lowest enclosed area (including basement) of a structure. An area
45 used solely for parking of vehicles, building access, or storage, in an area other than a

1 basement area, is not considered a building's lowest point, provided that the enclosed
2 area meets all of the structural requirements of the flood hazard development standards.
3

4 53. Minor Utility Project - The placement of a utility pole, street sign, anchor, vault, or other
5 small component of a utility facility, where the disturbance of an area is less than
6 seventy-five (75) square feet.
7

8 54. Mitigation - The process of minimizing or compensating for adverse environmental
9 impact(s) of a proposal on a critical area.
10

11 55. Moderate Density- Includes, but is not limited to, residential at a density of 1/unit/acre or
12 less, moderate intensity open space (parks), agriculture (moderate intensity such as
13 orchards and hay fields).
14

15 56. Monitoring – The collection of data by various methods for the purpose of understanding
16 natural systems and features, evaluating the impact of development proposals on such
17 systems, and/or assessing the performance of mitigation measures imposed as conditions
18 of development.
19

20 57. Native Vegetation – Plant species that are indigenous to the region.
21

22 58. Native Growth Protection Easement (NGPE) – An easement granted to the City of
23 _____ for the protection of native vegetation within a critical area or its associated
24 buffer.
25

26 59. Ordinary High Water Mark – on all lakes, streams, and tidal waters, the biological
27 vegetation mark that indicates the “ordinary” high water level (WAC 173-22-030
28 (11)).
29

30 60. Practical Alternative – An alternative that is available and capable of being carried out
31 after taking into consideration cost, existing technology, and logistics in light of overall
32 project purposes, and having less impact to critical areas.
33

34 61. Priority Habitat – Habitat types or elements with unique or significant value to one or
35 more species as classified by the State Department of Fish and Wildlife.
36

37 62. Qualified Professional – A person with experience and training in the pertinent scientific
38 discipline, and who is a qualified expert with expertise appropriate for the relevant
39 critical area subject in accordance with WAC 365-195-905(4). A qualified professional
40 must have obtained a B.S. or B.A. or equivalent degree in biology, engineering,
41 environmental sciences, fisheries, geomorphology or related field, and two years of
42 related work experience.
43

44 a. A qualified professional for habitats or wetlands must have a degree in biology or a
45 related environmental science and professional experience related to the subject.

- 1 b. A qualified professional for a geological hazard must be a professional engineer or
2 geologist, licensed in the state of Washington.
- 3 c. A qualified professional for critical aquifer recharge areas must be a hydrologist,
4 geologist, engineer, or other scientist with experience in preparing hydrological
5 assessments.
- 6
- 7 63. Reasonable Use – A legal concept articulated by federal and state courts in regulatory
8 taking cases.
- 9
- 10 64. Riparian Habitat – Areas adjacent to aquatic systems with flowing water that contains
11 elements of both aquatic and terrestrial ecosystems that mutually influence each other.
- 12
- 13 65. Salmonid – A member of the fish family Salmonidae. In King County, chinook, coho,
14 chum, sockeye, and pink salmon; cutthroat, brook, brown, rainbow, and steelhead trout;
15 kokanee; and native char (bull trout and Dolly Varden).
- 16
- 17 66. Section 404 Permit – A permit issued by the Army Corp of Engineers for the placement
18 of dredge or fill material waterward of the ordinary high water mark or clearing in waters
19 of the United States, including wetlands, in accordance with 33 United State Code (USC)
20 Section 1344.
- 21
- 22 67. Seismic Hazard Areas – Area that are subject to severe risk of damage as a result of
23 earthquake-induced ground shaking, slope failure, settlement, or soil liquefaction.
- 24
- 25 68. Significantly Degraded Buffer -
- 26
- 27 69. Species, Threatened and Endangered – Those native species that are listed in rule by the
28 State Department of Fish and Wildlife pursuant to RCW 77.12.070 as threatened (WAC
29 232-12-011) or endangered (WAC 232-12-014), or that are listed as threatened and
30 endangered under the federal Endangered Species Act (16 U.S.C. 1533).
- 31
- 32 70. Steep Slopes – Those slopes forty percent (40%) or steeper within a vertical elevation
33 change of at least ten (10) feet. A slope is defined by establishing its toe and top and is
34 measured by averaging the inclination over at least ten (10) feet of vertical relief.
- 35
- 36 71. Stream – Any portion of a watercourse, either perennial or intermittent, where the surface
37 water flow is sufficient to produce a defined channel or bed. Streams also include natural
38 watercourses modified by humans. Streams do not include irrigation ditches, canals,
39 stormwater run-off facilities, or other entirely artificial watercourses.
- 40
- 41 72. Topping – The severing of main trunks or stems of vegetation at any place above twenty-
42 five percent (25%) of the vegetation height.
- 43
- 44 73. Unavoidable – Adverse impacts that remain after all appropriate and practicable
45 avoidance and minimization have been achieved.

- 1
- 2 74. Understory – The vegetation layer of a forest that includes shrubs, herbs, grasses, and
- 3 grass-like plants, but excludes trees.
- 4
- 5 75. Utility – A service and/or facility that produces, transmits, carries, stores, processes, or
- 6 disposes of electrical power, gas, potable water, stormwater, communications (including,
- 7 but not limited to, telephone and cable), sewage, oil and the like.
- 8
- 9 76. Vegetation –Plant life growing below, at, and above the soil surface.
- 10
- 11 77. Vegetation Alteration – Any clearing, grading, cutting, topping, limbing, or pruning of
- 12 vegetation.
- 13
- 14 78. Water Dependant Activities. A use or portion of a use that cannot exist in a location that
- 15 is not adjacent to the water, but is dependent on the water by reason of the intrinsic nature
- 16 of its operations. A use that can be carried out only on, in, or adjacent to water. Examples
- 17 of water dependent uses include; fishing, marinas, moorage, and boat launching facilities;
- 18 aquaculture; surface water intake; and sanitary sewer and storm drain outfalls.
- 19
- 20 79. Water Resources Inventory Area (WRIA) – One of sixty-two (62) watersheds in the state
- 21 of Washington, each composed of the drainage areas of a stream or streams, as
- 22 established in Chapter 173-500 WAC as it existed on January 1, 1997.
- 23
- 24 80. Water Typing System – The system used to classify freshwater surface water systems.
- 25 Current regulations establish “interim” water typing (1-5) until fish habitat water type
- 26 maps are available for permanent water typing (S, F, Np, Ns) (WAC 222-16-031).
- 27
- 28 81. Wetland – As defined by RCW 36.70 or as here after amended, those areas that are
- 29 inundated or saturated by ground or surface water at a frequency and duration sufficient
- 30 to support, and that under normal circumstances do support, a prevalence of vegetation
- 31 adapted for life in saturated soil conditions. Wetlands generally include swamps,
- 32 marshes, bogs, and similar areas.
- 33
- 34 Wetlands do not include those artificial wetlands intentionally created from non-wetland
- 35 sites, including, but not limited to, swales, canals, detention facilities, wastewater
- 36 treatment facilities, farm ponds, and landscape amenities, or those wetlands created after
- 37 July 1, 1990, that were unintentionally created as a result of the construction of a road,
- 38 street, or highway.
- 39
- 40 Wetlands may include those artificial wetlands intentionally created from non-wetland
- 41 areas to mitigate conversion of wetlands.
- 42
- 43 82. Wetlands Rating System – Wetlands shall be rated according to the *Washington State*
- 44 *Wetland Rating System for Western Washington*, Department of Ecology, Publication
- 45 #93-74, or as revised.

