

Chapter 14.05

CRITICAL AREAS – ADMINISTRATION, GENERAL PROVISIONS AND DEFINITIONS

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14.05.010 Authority.

A. As provided herein, the Director is given the authority to interpret and apply, and the responsibility to enforce this Title to accomplish the stated purpose.

B. Critical area regulations (Chapters [14.05](#) to [14.12](#) NBMC) ~~is~~**are** adopted under the authority of the Revised Code of Washington (RCW), Chapter [36.70A](#) RCW (the Growth Management Act).

BC. ~~NBMC~~ Chapters [14.05](#) to [14.12](#) ~~NBMC~~, commonly referred to as “critical area regulations,” shall apply concurrently with review under Chapter [14.04](#) RCW, State Environmental Policy Act (SEPA), and Chapter [15.44](#) RCW, Shoreline Management Act (SMA), if applicable.

CD. Compliance with the provisions of these chapters does not constitute compliance with other local, state, or federal regulations and permit requirements.

DE. Chapter [15.40](#) NBMC, Floodplain Management, Chapter [14.10](#) NBMC, Sensitive Areas, and Chapter [14.12](#) NBMC, Native Growth Protection Easements, are hereby repealed and replaced with Chapters [14.05](#) through [14.12](#) NBMC and Figures 1 through 7¹. (Ord. 1243 Exh. B (part), 2006).

14.05.015 Purpose.

The purpose of the critical area (CAO) chapters is to:

A. Protect the public health, safety and welfare by preventing adverse impacts of development;

B. Protect the public and public resources and facilities from injury, loss of life, property damage, or financial loss due to flooding, erosion, landslides, soils subsidence or steep slope failure;

C. Implement the goals, policies, guidelines, and requirements of the city of North Bend comprehensive plan and the Washington State Growth Management Act.

D. Preserve and protect critical areas, with special consideration for the habitat of salmonid fisheries as required by the Washington State Growth Management Act and resident fish habitat as directed by the North Bend comprehensive plan by regulating development within and adjacent to them, while allowing for the reasonable use of private property. (Ord. 1243 Exh. B (part), 2006).

E. Protect existing wetlands and maintain no net loss of their functions and values. (Ord. 1243 Exh. B (part), 2006).

F. Protect groundwater quality and quantity for public water supply and maintain hydrologic functions of aquatic areas. Critical aquifer recharge areas contribute significantly to the replenishment of groundwater and due to their prevailing geologic conditions associated with infiltration rates, have a high potential for contamination of ground water resources. (Ord. 1243 Exh. B (part), 2006).

G. Preserve and protect those areas with which salmonid fish, threatened and endangered species, and species of local importance have a primary association. (Ord. 1243 Exh. B (part), 2006).

14.05.020 Jurisdiction.

A. The city shall regulate all uses, activities, and development within, adjacent to, or likely to affect one or more critical areas, consistent with ~~the provisions of Chapters 14.05 to 14.12 best available science as provided in the Critical Areas Ordinance Update – Gap Analysis and Best Available Science Consistency Review, and consistent with the critical areas provisions of this title.~~ NBMC.

B. Critical areas regulated include:

1. Wetlands~~s~~ areas;

2. Critical aquifer recharge areas;

~~3. Rivers and streams;~~

~~3~~4. Fish and wildlife habitat conservation areas;

~~4~~5. Geologically hazardous areas;

~~5~~6. Frequently flooded areas;

C. All areas within the city meeting the definition of one or more critical areas are subject to the provisions of the critical area regulations. (Ord. 1243 Exh. B (part), 2006).

14.05.025 Designation of critical areas.

A. The city has designated critical areas by defining their characteristics. The applicant shall determine and the city shall verify, on a case-by-case basis, in accordance with the definitions in NBMC 14.05.200, whether a critical area exists and is regulated under this chapter, or whether a critical area is on or in close proximity to the subject property. Critical areas, including wetlands, fish and wildlife habitat conservation areas, and some geologically hazardous areas that also requires a setback or buffer per , as required in the applicable critical area buffer NBMC 14.06, 14.08, and 14.11.

B. The city has prepared a series of critical area maps, which show approximate boundaries for the following critical areas within the city limits: special flood hazard area map, river channel migration hazard map, critical aquifer recharge area map, wetlands ~~area~~ map, erosion/debris flow, ~~rivers and streams, and~~ fish and wildlife habitat areas, and rivers and streams mapped separately from other fish and wildlife habitat areas. Critical areas have been determined by local studies, King County published GIS data, and information provided by other federal or state agencies. These maps provide only approximate boundaries of known features and are not adequate substitutes for more detailed maps and/or studies that could identify alternative locations of known features or additional critical area features not illustrated on the map. Copies of the maps are available for viewing at the North Bend community services department.

C. The city maps and data indicate where some critical areas may exist or do exist based on previous studies completed. These resources may not identify all critical areas and should only be used as a guide. Actual field observations shall supersede information in these resources. (Ord. 1243 Exh. B (part), 2006).

14.05.030 Applicability.

A. The provisions of this title shall apply to all lands, all land uses, and all structures and facilities in the city, whether or not a permit or authorization is required, and shall apply to every person, firm, partnership, corporation, group, governmental agency, or other entity that owns, leases or has other interest in land within the city of North Bend. No person, company, agency, or applicant shall alter a critical area or buffer except as consistent with the purpose and requirements of this title.

B. The city of North Bend shall not approve any development permit or otherwise issue any authorization to alter the condition of any land, water, or vegetation, or to construct or alter any structure or improvement in, over, or on a critical area or associated buffer, without first assuring compliance with the requirements of this title.

C. When sufficient information to evaluate a permit or development proposal is not available, the director shall notify the applicant that a critical area review is required.

D. Approval of a permit or development proposal pursuant to the provisions of this title does not discharge the obligation of the applicant to comply with other provisions of the North Bend Municipal Code. Types of development permits and approvals are defined in NBMC [20.01.004](#). (Ord. 1243 Exh. B (part), 2006).

E. Compliance with the provisions of this title does not constitute compliance with other federal, state, and local regulations and permit requirements that may be required (for example, shoreline substantial development permits, Hydraulic Permit Act (HPA) permits, Section 106 of the National Historic Preservation Act, U.S. Army Corps of Engineers Section 404 permits, and National Pollution Discharge Elimination System permits). The applicant is responsible for complying with these requirements, apart from the process established in this title.

14.05.035 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 as set forth in NBMC [20.02.001](#) to contact the city prior to finalizing development plans and applying for development permits. Early disclosure of critical areas will reduce delays during the permit review process. (Ord. 1243 Exh. B (part), 2006).

14.05.040 Submittal requirements.

In addition to the information required for a development permit, any entity undertaking development activity that is subject to the provisions of the critical area regulations, may be required to submit a critical area report as described under NBMC [14.05.145](#), Critical area reports/studies ~~or floodplain habitat assessment per NMBC 14.12.210~~; provided, that these additional requirements shall not apply to actions exempted in NBMC [14.05.085](#). (Ord. 1243 Exh. B (part), 2006).

14.05.045 ~~Bonds or performance security~~ Financial Assurance.

A. Mitigation Performance Assurance:

1. Prior to issuance of any permit or approval that authorizes site disturbance under the provisions of this title, the city shall require a mitigation performance ~~security assurance~~ to guarantee that all work or actions required by this title 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. Projects outside wetlands, streams, steep slope or erosion soil area and their buffers shall be exempt from a bond or performance security under this title.

2B. The city shall require the applicant to post a mitigation performance ~~bond or other security assurance~~, 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 performance for mitigation projects, to ensure mitigation is fully functional for the duration of the monitoring period.~~

3C. The mitigation performance ~~security assurance~~ shall be in the amount of 125-150 percent of the estimated cost of the completed action ~~or the estimated cost of restoring the functions and values of the critical area at risk, whichever is greater.~~

D4. The mitigation performance ~~security assurance~~ shall be in the form of a security bond, performance bond, assignment of savings account, or an irrevocable letter of credit guaranteed by an acceptable financial institution with terms and conditions acceptable to the city.

5. Bonds or other security authorized for mitigation by this section shall remain in effect until the city determines, in writing, that the bonded standards have been met. Performance bonds or other security for required mitigation projects shall be held by the city for a minimum of five years to ensure that the mitigation project has been fully implemented and demonstrated to function.

6. Two years after completion of 100 percent of the bonded performance measures, the performance bond may be reduced to the amount of 65 percent of the original amount secured under subsection C of this section, less remaining maintenance and monitoring costs, if the city determines in writing that the bonded standards, less remaining maintenance and monitoring, have been met.

7. For structural projects (e.g., compensatory storage) outside of a wetland or stream buffer, security shall be released upon completion and city acceptance of the work. The bond may be held for longer periods upon written finding by the city that it is necessary to continue to hold the bond to ensure the mitigation project has met all elements of the approved mitigation plan.

B. Mitigation Maintenance Assurance:

1. If a development proposal is subject to mitigation, the applicant shall post a mitigation maintenance assurance in a form and amount deemed acceptable by the city to cover long-term monitoring, maintenance, and performance for mitigation projects, to ensure mitigation is fully functional for the duration of the monitoring period.

2. The mitigation maintenance assurance shall be in the amount of 20-30 percent of the estimated cost of the completed action.

~~E. Bonds or other security authorized for mitigation by this section shall remain in effect until the city determines, in writing, that the bonded standards have been met. Performance bonds or other security for required mitigation projects shall be held by the city for a minimum of five years to ensure that the mitigation project has been fully implemented and demonstrated to function. Two years after completion of 100 percent of the bonded performance measures, the performance bond may be reduced to the amount of 65 percent of the original amount secured under subsection C of this section, less remaining maintenance and monitoring costs, if the city determines in writing that the bonded standards, less remaining maintenance and monitoring, have been met. For structural projects (e.g., compensatory storage) outside of a wetland or stream buffer, security shall be released upon completion and city acceptance of the work. The bond may be held for longer periods upon written finding by the city that it is necessary to continue to hold the bond to ensure the mitigation project has met all elements of the approved mitigation plan.~~

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

~~GD.~~ Any failure to satisfy critical area requirements established by law or condition including, but not limited to, the failure to provide a monitoring report within 30 days after it is due or to comply with other provisions of an approved mitigation plan shall constitute a default, and the city may demand payment of any financial guarantees or initiate code compliance per Chapter [20.10](#) NBMC.

~~HE.~~ Any funds recovered pursuant to this section shall be used to complete the required mitigation. (Ord. 1243 Exh. B (part), 2006).

~~14.05.055 Notice on title.~~

~~A. To inform subsequent purchasers of real property of the existence of critical areas excluding soil liquefaction, Category II critical aquifer recharge areas, and floodplain outside of the floodway or channel migration zone. The owner of any real property containing a critical area or buffer on which a development proposal is submitted and approved shall file a notice on title with the records division of King County.~~

~~1. The notice shall run with the property and state the following:~~

~~a. The presence of the critical area or buffer on the property;~~

~~b. That the use of this property is subject to the provisions of this chapter, or subsequent provisions related thereto; and~~

~~e. That limitations on actions in or adjacent to the critical area and buffer may exist.~~

~~2. Exceptions to notice on title:~~

~~a. Where the work on existing structures or uses is not a substantial improvement to the existing structure or use and does not increase the area of impact to the critical area or its buffer, the notice on title will not be required;~~

~~b. Activities within a recorded easement or right of way; or~~

~~e. Where it has been or will be placed in a critical area tract.~~

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

~~1. Within a recorded easement or right of way;~~

~~2. Where the agency or utility has been adjudicated the right to an easement or right of way; or~~

~~3. Where it has been or will be placed in a critical area tract.~~

~~C. The applicant shall submit proof that the notice has been filed for public record prior to issuance of a permit as specified in Chapter 18.38 NBMC. The applicant shall submit proof that the notice will be filed for public record as part of the final plat in the case of subdivisions or lot line adjustments. (Ord. 1243 Exh. B (part), 2006).~~

14.05.060 Inspection and right of entry.

~~The director may inspect any development activity to enforce the provisions of this title. The applicant consents to entry upon the site by the director during regular business hours for the purposes of making reasonable inspections to verify information provided by the applicant and to verify that work is being performed in accordance with the approved plans and permits and requirements of this title. (Ord. 1243 Exh. B (part), 2006).~~

14.05.065 Enforcement.

A. The applicant consents to entry upon the site by the director during regular business hours for the purposes of making reasonable inspections to verify information provided by the applicant and to verify that work is being performed in accordance with the approved plans and permits and requirements of this title. (Ord. 1243 Exh. B (part), 2006).

B. When a critical area or its buffer has been altered in violation of this title, all ongoing development work shall stop and the critical area shall be restored. Consistent with Chapters 1.20 and 19.10, the director shall have the authority to issue a stop work order to cease all ongoing development work, and order restoration, rehabilitation, or replacement measures at the owner's or other responsible party's expense to compensate for violation of the provisions of this title. The director may require work to remain stopped until approval of a restoration plan.

~~The provisions of Chapter 20.10 NBMC shall regulate the enforcement of these critical area regulations. (Ord. 1243 Exh. B (part), 2006).~~

14.05.070 Fees Costs.

A. All costs associated with the filing of a critical area identification form, critical area review processing, and other services provided by the city for critical areas review shall proceed according NMBC 20.09.040.

B. Unless otherwise indicated in this title, the applicant shall be responsible for the initiation, preparation, submission, and expense of all required reports, assessments, studies, plans, reconnaissance, or other work prepared in support of or necessary for the application.

~~The applicant is responsible for the initiation, preparation, submission, and expense of all required reports, assessment(s), studies, plans, reconnaissance(s), peer review by qualified professionals, and other work prepared in support of, or necessary for, the city of North Bend's critical areas review processing.~~

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

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

~~D. The fees, costs, expenses and deposits as may be required for submittals under subsections A, B and C of this section shall be as set forth in the city's taxes, rates and fees schedule, as may be amended from time to time. (Ord. 1341 § 1, 2008; Ord. 1243 Exh. B (part), 2006).~~

14.05.075 Appeals.

Appeals of administrative decisions shall be governed by Chapter [20.06](#) NBMC. (Ord. 1243 Exh. B (part), 2006).

14.05.080 General exemptions.

The following development, activities, and associated uses shall be exempt from the provisions of this title as provided below, provided they are consistent with the provisions of other local, state, and federal laws and requirements:

A. Emergencies.

1. Emergencies that threaten public health, safety, welfare, or risk of damage to private or public property and that require remedial or preventative action in a time frame too short to allow for review of compliance with the requirements of this title ~~may be exempted by written determination of the director.~~ The director shall be notified of the emergency action within 48 hours.

2. Emergencies ~~that create an impact to a critical area or its buffer shall use reasonable methods to address the emergency; in addition, they~~ must have the least possible impact on the critical area and/or its buffer.

3. Within one year after the emergency, the person or agency undertaking the action may be required by the director to shall fully restore and/or mitigate any impacts to ~~the~~ critical area and/or their buffers resulting from the emergency action in accordance with an approved critical area report and mitigation plan prepared in accordance with the procedures outlined in this chapter for a new development permit. Restoration and/or mitigation activities shall be initiated within 90 days of the date of the emergency action.

4. Restoration may be waived by resolution of the city council in the case of natural emergencies where a state of emergency has been declared by the mayor pursuant to the city of North Bend's emergency management plan.

~~B. Vegetation management, including landscaping and gardening revisions, that is part of ongoing maintenance of buildings and facilities and their associated yard areas in existence prior to the city's aerial photographs taken April 3, 2004. Vegetation management is also permitted on public rights-of-way, or utility easements, provided the vegetation management activity does not expand further into the critical area or its buffer. Properties within the floodplain, critical aquifer recharge area or seismic liquefaction area and located outside of other critical areas are exempted from the maintenance area expansion restriction of this provision. Vegetation management can take place in native growth protection easements (NGPE) or tracts; provided only state-listed invasive and noxious weeds and additional aggressive nonnative species identified in NDMC 14.05.085(A)(2)(e) shall be removed or cut, hand removal is the only method utilized, no mechanical or chemical activities are employed, and existing overstory provides shade to 50 percent or more of the site.~~

~~BC. Passive recreation, including, but not limited to, hiking, fishing, river rafting, and wildlife viewing that does not involve the construction of trails.~~

~~CD. Operation, maintenance, or repair of existing structures, infrastructure improvements, utilities, public or private roads, dikes, levees, or drainage systems that do not require construction permits, including existing platted tracts, if the activity does not further alter or increase the impact to, or encroach further within, the critical area or buffer and there is no increased risk to life or property as a result of the proposed operation, maintenance, or repair. Operation and maintenance also includes normal maintenance of vegetation performed in accordance with best management practices; provided, that such management actions are part of regular and ongoing maintenance, do not expand further into the critical area, are not the result of an expansion of the structure or utility, and do not directly impact an endangered or threatened species. Development or developments that have identified the presence of wetland and stream critical areas, their buffers and habitats associated with these areas, and that have been approved for mitigation of the impact to these critical areas, shall not be subject to additional wetland and stream critical area regulations; provided, that no new development shall occur in the buffers or critical areas established at the time of approval. Developments subject to this exemption specifically include, but are not limited to, the following projects to the extent that they are constructed on the effective date of the ordinance codified in this chapter or vested to construct at a future date under the terms of their specific development approval:~~

- ~~• Mountain Valley Shopping Center Master Site Plan (Ord. 953);~~
- ~~• Nintendo of America Phase I Conditions for Issuance of building permit for distribution center (BP No. 90-180);~~
- ~~• South Fork Interchange Properties Binding Site Plan (No. 85-1);~~
- ~~• Wiley Creek (Factory Stores) Voluntary Standards Agreement (King County Recording No. 8612231692);~~
- ~~• Forster Woods Subdivision (Ord. 797 (rezone and approval of preliminary plat for both single and multifamily));~~

- ~~R and R Properties Short Plat (No. 96.058110.11);~~
- ~~Forster Woods Multifamily Master Site Plan (Ord. 887);~~
- ~~Snoqualm Subdivision (Ord. 1176);~~
- ~~Laakso/Scott Short Plat approved November 15, 2004;~~
- ~~Eastside Self Storage Master Site Plan (Ord. 1193);~~
- ~~Miller Business Park Master Site Plan (Ord. 1129);~~
- ~~AF Evans Multifamily Master Site Plan (Ord. 1151);~~

E. Existing and ongoing agriculture as defined in Chapter [18.06](#) NBMC. Such activities shall not allow critical areas or their buffers that are not currently under agricultural use to be converted to agricultural use. Normal and routine maintenance of existing irrigation and drainage ditches, reservoirs, and ponds that do not meet the criteria for being considered a fish and wildlife habitat area shall be exempt ~~except for those ditches used by salmonids~~. Agricultural activities shall not be considered ongoing when the use has become nonconforming as defined in NBMC [14.05.090](#). (Ord. 1243 Exh. B (part), 2006).

14.05.085 Exceptions.

Except as prohibited in shoreline jurisdiction under NBMC [14.20](#), the following are exceptions from the provisions of this chapter when applicable criteria, performance standards, and approvals are met.

A. Administrative Exceptions.

1. The proponent of the activity shall submit a written request for exception from the director that describes the proposed activity and exception that applies.
2. The director shall review the exception requested to verify that it complies with the title and shall approve or deny the exception. Exceptions that may be requested include:
 - a. Determination of nonconforming status per NBMC [14.05.090](#);
 - b. Operation, maintenance or repair of existing structures, infrastructure improvements, existing utilities, public or private roads, dikes, levees, or drainage systems, if the activity does not increase ~~risk-impacts~~ to the critical area functions and values as a result of the proposed operation maintenance or repair;
 - c. Activities within the Improved Right-of-Way. Replacement, modification, installation or construction of utility facilities, lines, pipes, mains, streets, sidewalks, curbs, gutters, equipment or appurtenances, not including substations, when such facilities are located within the improved

portion of the public right-of-way or a city-authorized private roadway, except those activities that alter a wetland or watercourse, such as new culverts or bridges, or result in the transport of sediment, subject to the following:

- i. The activity shall result in the least possible impact and have no practical alternative with less impact on the critical area and/or its buffer;
- ii. An additional, contiguous, and undisturbed critical area buffer shall be provided, equal in area to the disturbed critical area buffer; and
- iii. Retention and replanting of native vegetation shall occur wherever possible along the right-of-way improvement and resulting disturbance.

d. Minor Utility Projects. Utility projects that have minor or short-term impacts to critical areas, as determined by the director in accordance with the criteria below, and that do not significantly impact the functions and values of a critical area(s), such as the placement of a utility pole, anchor, vault, or other small component of a utility facility; provided, that such projects are constructed with best management practices and additional restoration measures are provided. Minor activities shall not ~~result in~~interrupt the transport of sediment. Such exceptions shall meet the following criteria:

- i. There is no practical alternative to the proposed activity with less adverse impacts on critical areas and all attempts have been made first to avoid impacts, next to minimize impacts, and lastly to mitigate unavoidable impacts;
- ii. The activity will not change or diminish the overall critical area hydrology or flood storage capacity;
- iii. The minor utility project shall be designed and constructed to prevent spills and leaks into critical areas;

~~iv. The activity will not reduce the existing functions and values of the affected critical areas;~~

iv. To the maximum extent practicable, utility corridor access for maintenance is at limited access points into the critical area buffer rather than by a parallel access road; and

vi. The site shall be revegetated to at least its former condition.

e. Nonexempt vegetation removal activities, including enhancement and restoration activities. Removal of ~~state-listed~~ invasive and noxious weeds that appear on the Washington State Noxious Weed Control Board, and additional aggressive nonnative species including Japanese knotweed, scotch broom, English ivy, Himalayan blackberry, and evergreen blackberry and enhancement and restoration activities for the purpose of restoring functions and values of critical area(s) that do not require construction permits shall be encouraged by individual property owners. These projects shall use approved, limited-spectrum, water-safe herbicides, hand labor, and light equipment that minimizes disturbance to the critical area and buffer.

Nonexempt vegetation removal and enhancement and restoration activities in wetlands, streams, and wildlife habitat areas and their buffers shall be coordinated with the director to ensure revegetation of the site with native planting that will preserve or enhance the functions and values of the critical area and/or its buffer.

f. Hazard tree removal; provided, that the hazard is documented by a certified arborist or professional forester.

B. Public Agency or Utility Exception. If the application of this title would prohibit a development proposal by a public agency or public utility that is essential to its ability to provide service, the agency or utility may apply for an exception pursuant to this section. After holding a public hearing pursuant to Chapter [20.03](#) NBMC (hearing examiner review and approval), the hearing examiner may approve the exception if the hearing examiner finds that:

1. There is no other practical alternative to the proposed development with less impact on the critical areas, based on the demonstration by the applicant of the following factors:

a. The applicant has considered all reasonably possible construction techniques based on available technology that are feasible for the proposed project and eliminated any that would result in unreasonable risk of impact to the critical area; and

b. The applicant has considered all available sites and alignments within the range of potential sites and alignments that meet the project purpose and for which operating rights are available.

2. The proposal minimizes and mitigates unavoidable impacts to critical areas and/or critical areas buffers.

C. Reasonable Use. If the application of this title would deny all reasonable use of the property, the applicant may apply for an exception pursuant to this section. After holding a public hearing pursuant to Chapter [20.03](#) NBMC (hearing examiner review and approval), the hearing examiner may approve the exception if the hearing examiner finds that:

1. The critical area regulations would otherwise deny all reasonable use of the property;

2. There is no other reasonable use consistent with the underlying zoning of the property that has less adverse impact on the critical area and/or associated buffer;

3. The proposed development does not pose an unreasonable threat to the public health, safety, or welfare on or off the property;

4. ~~Add a~~Any alteration to critical areas is the minimum necessary to allow for reasonable use of the property;

5. The inability of the applicant to derive reasonable use of the property is not the result of actions by the applicant after the effective date of the ordinance codified in this chapter or its predecessor; and

~~6. Impacts to critical areas will be mitigated to the greatest extent feasible to ensure no net loss of critical area functions and values, in accordance with an approved mitigation plan. The applicant has proposed a mitigation plan to ensure no net loss of critical area functions and values either on-site or off-site.~~

7. The applicant may only apply for a reasonable use exception under this subsection if the requested exception provides relief not otherwise available from a variance approval.

~~D. Variance. Where avoidance of the impact in wetlands, streams, fish and wildlife habitat, and critical aquifer recharge areas is not possible, and the proposal does not qualify for any other type of exception, a variance shall be obtained to permit the impact, except where filling an isolated Class IV wetland as allowed in NBMC 14.06.080. The applicant for the variance shall provide a site plan and description for city review and written analysis that shows:~~

~~1. a. The date the applicant acquired or leased the property and the applicable zoning at that time;~~

~~b. All critical areas on or adjacent to the subject property;~~

~~c. Zoning setbacks per NBMC;~~

~~d. The impact on functions and values of critical areas that will result from the proposal, including removal of large trees;~~

~~e. Location of septic drainfield and reserve area, if applicable;~~

~~f. The opportunity for mitigation to minimize or eliminate the adverse impacts of the proposed variance;~~

~~g. An alternative site plan and written analysis of the proposal demonstrating the practicable alternative with the least impact on the critical area and buffer;~~

~~h. An explanation of how the variance request is in compliance with subsections (D)(2)(a) through (g) of this section; and~~

~~i. Any other information determined by the city of North Bend to be reasonably necessary to analyze the proposal.~~

~~2. Variances will be granted on the basis of a finding of consistency with all the criteria listed below. The hearing examiner shall not consider the fact that the property may be utilized more profitably.~~

~~a. That the variance shall not constitute a grant of special privilege inconsistent with the limitation upon uses of other properties in the vicinity and for the subject property;~~

~~b. That such variance is necessary, because of special circumstances and/or conditions relating to the size, shape, topography, critical areas, location, or surroundings of the subject property, to~~

~~provide it with those relative rights and privileges permitted to other properties in the vicinity and in the zone in which the subject property is located. The phrase “relative rights and privileges” is to ensure that the property rights and privileges for the subject property are considered primarily in relation to current city land use regulations;~~

~~e. That the granting of the variance will not be materially detrimental to the public welfare or injurious to the property, neighborhood, or improvements in the vicinity and zone in which subject property is situated;~~

~~d. That alternative development concepts in compliance with applicable codes have been evaluated, and that undue hardship would result if strict adherence to the applicable codes is required;~~

~~e. That special conditions and/or circumstances identified in subsection (D)(2)(b) of this section giving rise to the variance application does not result from the actions of the applicant, property owner, or recent prior owner(s) of the subject property;~~

~~f. That the applicant for a variance from critical area buffer requirements shall demonstrate to the city of North Bend that the proposed variance is the minimum necessary to provide relief to the applicant, as provided in the NBMC. The applicant for the variance shall provide to the city of North Bend for its review an analysis acceptable to the city of North Bend that addresses:~~

~~g. That the granting of the variance will not adversely affect implementation of the comprehensive plan or policies adopted thereto and the general purpose and intent of the zoning title or other applicable regulations;~~

E. Farm Plan. A farm plan exception may be used on public open space lands designated for farm use in an adopted master plan, ~~or~~ on lands that meet the definition of “agricultural land” in Chapter [18.06](#) NBMC, or for existing and ongoing agricultural activities. ~~Farm plans may deviate from the standard of no net loss of function and value for wetlands, streams and wildlife in order to facilitate agricultural activities but shall not be exempt from flood, CARA, or seismic hazard regulations, where applicable. A Farm Plan shall implement USDA Natural Resource Conservation Service (NRCS) Field Office Technical Guide BMPs and a qualified professional shall address potential impacts to critical areas from livestock, nutrient, and farm chemicals, soil erosion, and sediment control and agricultural drainage infrastructure. A qualified professional shall evaluate the impact of proposed agricultural activities, including vegetation management, outlined in a farm plan with the standards established in this title.~~ The King County conservation district and the city must approve a written farm plan.

F. Mitigation Required. Any authorized alteration to a wetland or ~~stream or its associated buffer, or alteration to a~~ fish and wildlife habitat conservation area or its associated buffer, as approved under subsections B, ~~or C, or D~~ of this section, shall be subject to conditions established by the city and shall require mitigation under an approved mitigation plan per [NBMC 14.05.165](#). (Ord. 1243 Exh. B (part), 2006).

14.05.XX Variance

D. Variance. Where avoidance of the impact in wetlands, streams, fish and wildlife habitat, and critical aquifer recharge areas is not possible, and the proposal does not qualify for any other type of exception, a variance shall be obtained to permit the impact, except where filling an isolated Class IV wetland as allowed in NBMC 14.06.080. The applicant for the variance shall provide a site plan and description for city review and written analysis that shows:

A1. 1a. The date the applicant acquired or leased the property and the applicable zoning at that time;

2b. All critical areas on or adjacent to the subject property;

3e. Zoning setbacks per NBMC;

4d. The impact on functions and values of critical areas that will result from the proposal, including removal of large trees;

5e. Location of septic drainfield and reserve area, if applicable;

6f. The opportunity for mitigation to minimize or eliminate the adverse impacts of the proposed variance;

7g. An alternative site plan and written analysis of the proposal demonstrating the practicable alternative with the least impact on the critical area and buffer;

8h. That such variance is necessary, because of special circumstances and/or conditions relating to the size, shape, topography, critical areas, location, or surroundings of the subject property, to provide it with those relative rights and privileges permitted to other properties in the vicinity and in the zone in which the subject property is located. The phrase “relative rights and privileges” is to ensure that the property rights and privileges for the subject property are considered primarily in relation to current city land-use regulations;

9. That the granting of the variance will not be materially detrimental to the public welfare or injurious to the property, neighborhood, or improvements in the vicinity and zone in which subject property is situated;

10. That the applicant for a variance from critical area buffer requirements shall demonstrate to the city of North Bend that the proposed variance is the minimum necessary to provide relief to the applicant, as provided in the NBMC. The applicant for the variance shall provide to the city of North Bend for its review an analysis acceptable to the city of North Bend that addresses:

11. An explanation of how the variance request is in compliance with subsections (D)(2)(a) through (g) of this section; and

12i. Any other information determined by the city of North Bend to be reasonably necessary to analyze the proposal.

2B. Variances will be granted on the basis of a finding of consistency with all the criteria the minimum reasonable use for a residence in a residentially zoned area defined by the lesser of (a) forty percent of the area of the lot, or (b) two thousand five hundred fifty square feet.

1. Included in the total allowed area for a residence is (a) the area of the first floor of the residence, (b) the area of any covered or uncovered decks or patios proposed, except for the area of landings at entrances of a minimum size to meet building code requirements, (c) the area of roof overhangs greater than two feet, and (d) the area of any living space or decks on any floor other than the first floor that extend beyond the walls of the first floor unless its area is already included in (b) or (c) above, and (d) the area of any accessory structure. The area should be the same as the area covered by structures as seen in a birds-eye view of the site looking directly down, with the exceptions of not counting the roof overhangs of not more than two feet and of not counting the landings at entrances of a minimum size to meet building code requirements.

2. This provision does not allow wetlands or fish and wildlife habitat conservation areas or their buffers to be converted to lawn or residential landscaping.

listed below. The hearing examiner shall not consider the fact that the property may be utilized more profitably.

a. That the variance shall not constitute a grant of special privilege inconsistent with the limitation upon uses of other properties in the vicinity and for the subject property;

b. That such variance is necessary, because of special circumstances and/or conditions relating to the size, shape, topography, critical areas, location, or surroundings of the subject property, to provide it with those relative rights and privileges permitted to other properties in the vicinity and in the zone in which the subject property is located. The phrase “relative rights and privileges” is to ensure that the property rights and privileges for the subject property are considered primarily in relation to current city land-use regulations;

c. That the granting of the variance will not be materially detrimental to the public welfare or injurious to the property, neighborhood, or improvements in the vicinity and zone in which subject property is situated;

d. That alternative development concepts in compliance with applicable codes have been evaluated, and that undue hardship would result if strict adherence to the applicable codes is required;

e. That special conditions and/or circumstances identified in subsection (D)(2)(b) of this section giving rise to the variance application does not result from the actions of the applicant, property owner, or recent prior owner(s) of the subject property;

~~f. That the applicant for a variance from critical area buffer requirements shall demonstrate to the city of North Bend that the proposed variance is the minimum necessary to provide relief to the applicant, as provided in the NBMC. The applicant for the variance shall provide to the city of North Bend for its review an analysis acceptable to the city of North Bend that addresses:~~

~~g. That the granting of the variance will not adversely affect implementation of the comprehensive plan or policies adopted thereto and the general purpose and intent of the zoning title or other applicable regulations.~~

14.05.090 Nonconforming uses and structures.

~~A. Purpose.~~ This section establishes the terms and conditions for continuing nonconforming uses, structures and lots near or in critical areas, which are lawfully established prior to the effective date of the ordinance codified in this title. For those areas outside critical area regulation, Chapter [18.30](#) NBMC applies.

~~B.A.~~ Establishing Status.

1. A legally established nonconforming lot, use, or structure may be continued, transferred or conveyed and/or used as if conforming.
2. The burden of establishing that any nonconforming lot, use, or structure lawfully existed as of the effective date of the ordinance codified in this chapter shall, in all cases, rest with the owner and not with the city.
3. A nonconforming lot, use, or structure may be deemed legally nonconforming by providing documentation that the use in question occurred prior to the CAO in 1993 or was permitted ~~under the CAO regulations from 1993 to 2005~~ prior to the effective date of this title, from one of the following:
 - a. Local agency permit;
 - b. Orthophoto, aerial photo or planimetric mapping recognized as legitimate by the agency; or
 - c. Tax record.

~~CB.~~ Maintenance and Repair of Nonconforming Structures. Normal maintenance and incidental repair of legal nonconforming structures shall be permitted; provided, that:

1. The maintenance shall not increase the degree of nonconformity; and
2. The cumulative cost of such maintenance or repair within any 180-day period shall not exceed 50 percent of the assessed valuation of such building, structure, or land (as applicable) at the time such maintenance is completed.

DC. Reconstruction or Replacement. Reconstruction, restoration, remodeling or repair of a legal nonconforming structure damaged by fire, flood, earthquake, falling trees or limbs, or other disasters shall be permitted except where prohibited or conditioned in NBMC [14.12.170](#) and [14.12.180](#); provided, that such reconstruction shall not result in the expansion of the nonconforming structure into or towards the critical area or its buffer, or in a manner that increases the potential impact to the critical area or risk of harm to public safety. Legal nonconforming status will be lost if a building permit is not secured within one year of the date damage is incurred. See applicable critical area performance standards, such as NBMC [14.12.200](#) for structures in a floodway.

DE. Expansion of Nonconforming Use or Structure. Within a critical area or its buffer, no legal nonconforming use or structure may be expanded, enlarged, extended, or intensified in any way (including extension of hours of operation) unless such modification is in full compliance with this title or the terms and conditions of approved permits pursuant to this title, or is allowed as provided below, or is considered an exception as provided in NBMC [14.05.085](#). Approved expansions must be consistent with standards of the zoning code in which such building, structure, or land use lies and with limitations set forth in NBMC [14.12.170](#) and [14.12.180](#). In no case shall any prohibited uses as designated under NBMC [18.10.030](#) be permitted to enlarge or expand. The following legal nonconforming expansions or uses are allowed:

1. Vegetation management, including landscaping or gardening revisions on lawfully established and maintained portions of a critical area or its buffer.
2. Fences, decks, and accessory structures that are exempt from a building permit can be established or expanded on lawfully established and maintained portions of a critical area or its buffer without demonstrating full compliance with this title.
3. Building modifications or additions that are not considered substantial improvements.
4. Single-family residential building permits are exempt from the requirements of the critical area regulations when the development proposal involves any of the above activities and:
 - a. Structural modifications to or replacement of an existing single-family residential structure with a new residential structure where construction and associated disturbance do not increase the footprint of any existing structure; and
 - b. The structure is not located closer to the critical area; and
 - c. The existing impervious surface within the critical area or buffer is not expanded.

EF. Discontinuance of Nonconforming Use or Structure. All legal nonconforming uses shall be encouraged to convert to a conforming use whenever possible. Conformance shall be required when:

1. A change of use is proposed;

2. The use is terminated or discontinued for more than one year, or the structure(s) that houses the use is vacated for more than one year; or
3. The structure(s) or activity that occur on the land in which the use is conducted is proposed for relocation. (Ord. 1606 § 1, 2016: Ord. 1243 Exh. B (part), 2006).

14.05.095 Administrative rules.

The department of community and economic development shall have the authority to adopt administrative rules not inconsistent with this chapter as necessary to implement the provisions of this chapter. (Ord. 1464 § 1 (Exh. A (part)), 2012: Ord. 1243 Exh. B (part), 2006).

~~14.05.100 General provisions.~~

~~The city of North Bend will use the following general methods and mechanisms to accomplish the purposes of the critical area regulations. This section shall be applied to all approved development applications and alterations when action is taken to implement the proposed action. (Ord. 1464 § 1 (Exh. A (part)), 2012: Ord. 1243 Exh. B (part), 2006).~~

~~14.05.110 General approach.~~

~~Protection of critical areas shall observe the following sequence, unless part of a restoration plan for a significantly degraded wetland or stream buffer, which is described below:~~

~~A. Avoid the impact by refraining from certain actions or parts of an action;~~

~~B. Where impact to critical areas or their buffers will not be avoided the applicant shall demonstrate that the impact meets the criteria for granting a variance or other applicable exception as set forth in NBMC 14.05.080 and 14.05.085;~~

~~C. Minimize the impacts by limiting the degree or magnitude of the action, by using affirmative steps to avoid or reduce impacts, or by using appropriate technology;~~

~~D. Rectify the impact by repairing, rehabilitating, or restoring the affected environment;~~

~~E. Reduce or eliminate the impact over time by preservation and maintenance operations;~~

~~F. Compensate for the impacts by creating, replacing, enhancing, or providing substitute resources or environments. (Ord. 1243 Exh. B (part), 2006).~~

~~14.05.115 Buffers.~~

~~A. Measurement of Buffers. All buffers shall be measured from the critical area boundary as surveyed in the field. The width of the buffer shall be determined according to the category of the critical area and the proposed land use.~~

~~B. Standard Buffers. The standard buffer widths presume the existence of a relatively intact native vegetation community in the buffer zone adequate to protect the critical area functions and values at the time of the proposed activity. If a critical area report determines the vegetation or protection area is inadequate, the city may require an increase in the buffer width or additional native plantings within the standard buffer width. Provisions to reduce or average buffer widths to obtain optimal habitat value are provided under the development standards for each critical area.~~

~~C. Significantly Degraded Streams, Wetlands, and Associated Buffers. In areas where the functions of the stream or wetland and stream or wetland buffer are already significantly degraded, restoration may be more beneficial than preservation of degraded areas. Certain expanded uses shall be allowed at the discretion of the director where the applicant demonstrates through a critical area report that greater habitat functions can be obtained in the affected subdrainage basin as a result of mitigation.~~

~~D. Averaging Buffers. The director will consider the allowance of wetland or stream buffer averaging only when the buffer area width after averaging will not adversely impact the critical area and/or buffer functions and values.~~

~~At a minimum, any proposed buffer averaging shall meet the following criteria:~~

~~1. The buffer area after averaging is no less than that which would be contained within the standard buffer;~~

~~2. The buffer width shall not be reduced by more than 25 percent at any one point as a result of the buffer averaging;~~

~~3. The additional buffer area shall be enhanced if necessary, to achieve no net loss of the critical areas functions and values;~~

~~4. The additional buffer is contiguous with the standard buffer;~~

~~5. Encroachment into the buffer does not occur waterward of the top of an associated steep slope or into a channel migration zone;~~

~~6. Encroachment does not occur into the buffer of an associated wetland except as otherwise allowed.~~

~~E. Additional Buffers. The director may require increased buffer sizes when a critical area report shows that it is necessary to protect the function and value of the critical areas when either the critical area is particularly critical to disturbance or the development poses unusual impacts. Examples of circumstances that may require buffers beyond minimum requirements include, but are not limited to:~~

~~1. Unclassified uses;~~

~~2. The critical area is a fish and wildlife habitat area for spawning or rearing as determined by the Washington State Department of Fish and Wildlife;~~

~~3. Land located within the development proposal that is adjacent to the critical area and its associated buffer is classified as an erosion hazard area; or~~

~~4. A trail or utility corridor in excess of 10 percent of the buffer width is proposed for inclusion in the buffer.~~

~~F. Reducing Buffers. The director may reduce up to 25 percent of the critical area buffer requirement only if sufficient information is available showing the following in a critical area study:~~

~~1. The applicant has demonstrated that mitigation sequencing efforts have been appropriately utilized: first avoid, second minimize, and lastly mitigate;~~

~~2. The proposed buffer reduction shall be accompanied by a mitigation plan per NBMC 14.05.165 that includes enhancement of the reduced buffer area as necessary to maintain function and value;~~

~~3. The reduction will not adversely affect water quality;~~

~~4. The reduction will not destroy, damage, or disrupt a significant habitat area; and~~

~~5. The reduction is necessary for reasonable development of the subject property.~~

~~6. Where an existing legally established roadway transects the buffer, the minimum buffer width may be reduced to the prism of the roadway improvement if the part of the buffer sought to be reduced:~~

~~a. Does not provide additional protection to the proposed development or the stream; and~~

~~b. Is enhanced in another area where buffer averaging is permitted. (Ord. 1243 Exh. B (part), 2006).~~

14.05.120 Building setback line (BSBL).

A BSBL is established to reduce conflict with hazardous trees and vegetation buffers, to enhance wildfire safety, and to prevent construction intrusions into certain buffer areas as follows. A minimum BSBL of 15 feet is required from the edge of any fish and wildlife buffer, stream or wetland buffer, or erosion and landslide buffer. The setback shall be identified on the site plan, which is filed as an attachment to the notice on title required by [NBMC 14.05.055](#). (Ord. 1243 Exh. B (part), 2006).

14.05.125 Land segregation.

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

A. Land that is wholly within a wetland or stream critical area or associated buffer may not be subdivided except as approved under a reasonable use exception.

B. Land that is partially within a wetland or stream critical area or associated buffer area may be subdivided or the boundary line adjusted; provided, that an accessible and contiguous portion of each new or adjusted lot is:

1. Located outside the critical area and buffer; and
2. Large enough to accommodate the intended use.

C. Accessory roads and utilities serving the proposed subdivision may be permitted within the wetland or stream critical area and associated buffer only if the city determines that no other feasible alternative exists as determined by securing an exception as provided in NBMC [14.05.085](#). (Ord. 1243 Exh. B (part), 2006).

14.05.055 Notice on title.

A. Purpose: To inform subsequent purchasers of real property of the ~~existence~~ of critical areas excluding soil liquefaction, Category II critical aquifer recharge areas, and floodplains outside of the floodway or channel migration zone. The owner of any real property containing an ~~existing~~ critical area or buffer on which a development proposal is submitted and approved shall file a notice on title with the records division of King County.

1. The notice shall run with the property and state the following:

a. The presence of the critical area or buffer on the property;

b. That the use of this property is subject to the provisions of this chapter, or subsequent provisions related thereto; and

c. That limitations on actions in or adjacent to the critical area and buffer may exist.

2. Exceptions to notice on title:

a. Where the work on existing structures or uses is not a substantial improvement to the existing structure or use and does not increase the area of impact to the critical area or its buffer, the notice on title will not be required;

b. Activities within a recorded easement or right-of-way; or

c. Where it has been or will be placed in a critical area tract.

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

1. Within a recorded easement or right-of-way;

2. Where the agency or utility has been adjudicated the right to an easement or right-of-way; or

3. Where it has been or will be placed in a critical area tract.

C. The applicant shall submit proof that the notice has been filed for public record prior to issuance of a permit as specified in Chapter 18.38 NBMC. The applicant shall submit proof that the notice will be filed for public record as part of the final plat in the case of subdivisions or lot line adjustments. (Ord. 1243 Exh. B (part), 2006).

14.05.130 Native growth protection easements.

A. As part of the implementation of approved development applications and alterations, critical areas and their buffers (except soil liquefaction seismic hazard areas, floodplains including floodways, and Category II critical aquifer recharge areas) shall remain undeveloped and shall be designated as native growth protection easements (NGPE).

B. The native growth protection easement (NGPE) is an easement granted to the city for the protection of a critical area and/or its associated buffer. NGPEs shall be required as specified in these rules and shall be recorded on final development permits and all documents of title and with the county recorder at the applicant's expense. The required language is as follows:

Dedication of a Native Growth Protection Easement (NGPE) conveys to the public a beneficial interest in the land within the easement. This interest includes the preservation of existing vegetation for all purposes that benefit the public health, safety, and welfare, including control of surface water and erosion, maintenance of slope stability, visual and aural buffering, and protection of plant and animal habitat. The NGPE imposes upon all present and future owners and occupiers of land subject to the easement the obligation, enforceable on behalf of the public of the city of North Bend, to leave undisturbed all trees and other vegetation within the easement. The vegetation in the easement may not be cut, pruned, covered by fill, removed, or damaged without express written permission from the city of North Bend.

C. When the subject development is a formal subdivision, short subdivision (short plat), binding site plan, contract rezone, master site plan, site plan/design review, or planned residential development (PRD), the critical area and its buffers shall be placed in a critical area tract and designated as an NGPE, as described below. (Ord. 1243 Exh. B (part), 2006).

D. In addition to the requirements specified in the sections A-C, the following shall also apply for fish and wildlife habitat conservation areas:

1. An NGPE shall be designated for Type S, F and N streams, unless the director has waived the NGPE requirements for Type N streams (see below). 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. Public and private trails may be allowed within all critical area buffers where it can be demonstrated in a critical area report that the buffer functions and values will not be degraded by trail construction or use. Trail planning, construction, and maintenance shall adhere to the criteria outlined in NBMC 14.06.050.

14.05.135 Critical area tracts.

Critical area tracts are legally created nonbuilding land areas containing critical areas and their buffers that shall remain undeveloped pursuant to the critical area regulations. Separate critical area tracts are not an integral part of the lot in which they are created; are not intended for sale, lease or transfer; and shall be incorporated in the area of the parent lot for purposes of subdivision and method of allocation and minimum lot size. The following development proposals shall identify such areas as separate tracts:

- A. Subdivisions;
- B. Short subdivisions;
- C. Planned residential developments;
- D. Contract rezones;
- E. Binding site improvement plans;
- F. Master site plans.

Responsibility for maintaining tracts shall be held by a homeowners association, adjacent lot owners (in an undivided interest), the permit applicant or designee, or other appropriate entity as approved by the city of North Bend.

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

NOTE: All lots adjoining separate tracts identified as native growth protection easements are jointly and severally responsible for the maintenance and protection of the tracts. Maintenance includes ensuring that no alteration occurs within the separate tract and that vegetation remains undisturbed unless the express written permission of the city of North Bend has been received.

(Ord. 1243 Exh. B (part), 2006).

14.05.140 Marking and/or fencing.

A. Temporary Markers. The outer perimeter of a wetland, stream, fish and wildlife conservation area, steep slope and its associated buffer, and the limits of these areas to be disturbed pursuant to an approved permit or authorization shall be marked in the field in a manner approved by the city so no unauthorized intrusion will occur. Markers or fencing are subject to inspection by the director or his designee prior to the commencement of permitted activities. This temporary marking shall be maintained throughout construction and shall not be removed until directed by the director, or until permanent signs and/or fencing, if required, are in place.

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

CRITICAL AREA BOUNDARY

Protection of this natural area is in your care. Alteration or disturbance is prohibited. Please call the city of North Bend for more information. Removal of this sign is prohibited.

The director shall approve sign locations during review of the development proposal. Along residential boundaries, the signs shall be at least four inches by six inches in size and spaced one per centerline of lot or every 75 feet for lots whose boundaries exceed 150 feet. At road endings, crossings, and other areas where public access to the critical area is allowed, the sign shall be a minimum of 18 inches by 24 inches in size and spaced one every 75 feet.

C. Permanent Fencing. The director shall require permanent fencing where the development proposal creates a substantial likelihood of intrusion into the critical area. Permanent fencing shall be required around a wetland, stream, or buffer when domestic grazing animals are present or may be introduced. Fencing shall be designed so as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes impacts to the wetland and associated habitat. The director shall also require such fencing when, subsequent to approval of the development proposal, other intrusions threaten conservation of critical areas. The director may use any appropriate enforcement actions including, but not limited, to fines, abatement, or permit denial to ensure compliance. ~~The fencing may provide limited access to the stream or wetland for stock watering purposes, but shall minimize bank disturbance consistent with best management practices (BMPs) for livestock watering.~~ (Ord. 1243 Exh. B (part), 2006).

14.05.145 Critical area reports/studies.

A. Timing of Studies. When an applicant submits an application for any development proposal, it shall indicate whether any critical area or buffers are located on or could be adjacent to the site. The presence of critical areas may require additional studies and time for review. However, disclosure of critical areas early will reduce delays during the permit review process. If the

applicant should disclose that there are no known critical areas, further studies may be required for verification.

B. Studies Required.

1. When sufficient information to evaluate a proposal is not available, the director shall notify the applicant that a critical area study and report is required.
2. If a critical area report is required, the director may retain independent qualified professionals, at the applicant's expense, to assist in review of studies that are outside the range of staff expertise.
3. A qualified professional, as defined in NBMC [14.05.200](#), shall prepare critical area reports. A critical area report shall include all information required pursuant to subsection C of this section. A monitoring and maintenance program shall be required to evaluate the effectiveness of mitigating measures.
4. Studies generated as part of an expanded SEPA environmental checklist or an environmental impact statement may qualify as a critical area report if the project is developed in enough detail to have provided an evaluation of site-specific impacts and mitigation measures.

C. General Critical Area Report Requirements.

1. A critical area report shall have three components: (a) a site analysis, (b) an impact analysis, and (c) proposed mitigation measures. More or less detail may be required for each component depending on the size of the project, severity, and potential impacts. The director may waive the requirement of any component when adequate information is otherwise available.
2. In addition to the specific requirements specified under each critical area [in subsections xx and xx](#), all studies shall contain, [at a minimum](#), the following information unless it is already available in the permit application:

~~xiv~~[a. Description of local, state, and federal regulations and permit requirements. \(Ord. 1243 Exh. B \(part\), 2006\).](#)

~~ab. Site map of the project area at a 1:10 or 1:20 scale, or as directed, including:~~

~~A site map should displaying all of the following features:~~

~~i. All critical areas;~~

~~ii. Critical area buffers;~~

~~iii. Standard and proposed widths (if different);~~

~~iv. Existing and proposed easements, rights-of-way, trail corridors, and structures;~~

v. Reference streets and property lines;

vi. Proposed development;

vii. Any areas to be cleared or altered; and

viii. Topography of site. i. Reference streets and property lines;

ii. Existing and proposed easements, rights-of-way, trail corridors, and structures;

iii. Contour intervals (two feet); steep-slope areas to be highlighted;

iv. The edge of the 100-year floodplain, and edge of the floodway if appropriate;

v. Channel migration zone boundaries if appropriate;

vi. Shoreline management program environmental designation and zone, if appropriate;

vii. Hydrology: Show surface water features both on and adjacent to the site; show any water movement into, through, and off the project area; show stream and wetlands classifications, show seeps, springs, and saturated soil zones;

viii. Identification of all site preparation, grading activities, and dimensioned location of proposed structures, roads, stormwater facilities, impervious surfaces, and landscaping proposed in or near critical area(s);

ix. All drainage plans for discharge of stormwater runoff from developed areas;

x. Location of buffer and building setback lines (if required or proposed);

xi. Location of critical area tract and/or easement.

bc. Written report detailing details:

i. A copy of the site plan for the development proposal, including a description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations;

ii. How, when, and by whom the report was performed The dates, names, and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site; (including methodology and techniques);

iii. Weather conditions during and prior to any field studies if relevant to conclusions and recommendations;

iii. Description of the project site and its existing condition, including degraded critical areas;

~~iii.v. Description-Identification and characterization of all existing critical areas and buffers adjacent to the proposed project area-functions and values;~~

~~v. Description of habitat features present and determination of actual use of the critical area by any endangered, threatened, rare, sensitive, or unique species of plants or wildlife as listed by the federal government or state of Washington;~~

~~vi. The total acreage of the site in each type of critical area(s) and associated buffers;~~

~~vii. A description of the proposalThe proposed action; including, but not limited to, description of filling, dredging, modification for stormwater detention or discharge, clearing, grading, restoring, enhancing, grazing, or other physical activities that change the existing vegetation, hydrology, soils or habitat;~~

~~viii. An assessment of the probably cumulative impacts to critical areas resulting from development of the site and the proposed development; When alteration to a critical area or its buffer is proposed, an explanation why the impact is unavoidable and how it meets the criteria for a defined exception;~~

~~viii.x. Description of potential environmental impact of the proposed project to the critical area(s); Description of reasonable efforts to apply demonstration of mitigation sequencing approach to avoid, minimize, and mitigation impacts to critical areas~~

~~viii. Plans for , and description of any proposed mitigation measures, as needed, to offset any impacts, in accordance with Mitigation plan requirements per NBMC 14.05.165, including but not limited to:~~

~~1. The impacts of any proposed development within or adjacent to a critical area or buffer on the critical area; and~~

~~2. The impacts of any proposed alteration of a critical area or buffer on the development proposal, other properties and the environment;~~

~~ix. A discussion of performance standards applicable to the critical area and proposed activity;~~

~~x. Financial guarantees to ensure compliance~~

~~x. Habitat and native vegetation conservation strategy that addresses methods to protect and enhance on-site habitat and critical area functions;~~

~~xi. The mitigation measures proposed to avoid or lessen the project impacts (during construction and permanently);~~

~~xii. When alteration to the critical area or its buffer is proposed, a mitigation plan as specified;~~

~~xiii. A discussion of ongoing management practices that will protect habitat after the project site has been developed, including proposed monitoring and maintenance programs; and~~

~~xiv. Description of local, state, and federal regulations and permit requirements. (Ord. 1243 Exh. B (part), 2006).~~

D. Wetland Critical Area Report Requirements. In addition to the general requirements for critical area reports provided in sections A-C, the following are required for a wetland critical area report:

1. Wetland delineation/classification survey teams shall include qualified wildlife professionals when the area in question is identified by the city of North Bend as being a potential or known fish and wildlife habitat area. Such wildlife surveys shall be undertaken during suitable times of the year for the documentation of seasonal wildlife occurrences and critical life history stages.

2. On the site map:

a. The edge of the wetland as flagged and surveyed in the field using the currently approved federal manual and supplement (Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coasts), as required by RCW 36.70A.175;

b. The location of standard buffer widths and reduced buffer widths (if proposed);

c. The location of all areas of proposed mitigation; and

d. The location of all proposed buffer impact areas.

3. In the report:

a. Description of the wetland by classification per the Washington State Wetland Rating System for Western Washington, 2014 Update (Ecology Publication No. 14-06-030 or as revised);

b. General condition of wetland;

c. Description of vegetation species and community types present in the wetland and surrounding buffer;

d. List of priority species and habitats within the vicinity of the wetland in question;

e. Description of soil types within the wetland and the surrounding buffer using the USDA Soil Conservation Service soil classification system; and

f. Description of hydrologic regime and findings. (Ord. 1243 Exh. B (part), 2006).

D. Fish and Wildlife Conservation Area Critical Area Report Requirements. In addition to the general requirements for critical area reports provided in sections A-C, the following are required for a FWHCA critical area report:

1. An assessment of habitats including the following site and proposal related information;

2. Description of any species of local importance, priority species, or endangered, threatened, critical, or candidate species that have a primary association with habitat on or within 300 feet of the project area, and assessment of potential project impacts to the use of the site by the species; and

3. 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.

4. On the site map:

a. The location of the ordinary high water mark;

b. The toe of any slope 15 percent or greater within 25 feet of the ordinary high water mark; and

c. The location of any proposed or existing stream crossing.

6. In the report:

a. Characterization of riparian (streamside) vegetation species, composition, and habitat function;

b. Description of the soil types adjacent to and underlying the stream, using the Soil Conservation Service soil classification system;

c. Determination of the presence or absence of fish, and reference sources; and

d. When stream alteration is proposed, include stream width and flow, stability of the channel including erosion or aggradation potential, type of substratum, discussions of infiltration capacity and biofiltration as compared to the stream prior to alteration, presence of hydrologically linked wetlands, analysis of fish and wildlife habitat, and proposed floodplain limits. (Ord. 1243 Exh. B (part), 2006).

E. Geologically Hazardous Areas Critical Area Report Requirements. In addition to the general requirements for critical area reports provided in sections A-C, the following are required for a geologically hazardous areas critical area report:

1. When required, a critical area report for a geologically hazardous area shall be prepared by an engineer or geologist, licensed in the state of Washington, with experience analyzing geologic, hydrogeologic, and ground water flow systems, and who has experience preparing reports for the relevant type of hazard.

2. On the site map:

a. All geologically hazardous areas within or adjacent to the project area or that have potential to be affected by the proposal;

b. The top and toe of slope (note: these should be located and flagged in the field subject to city staff review).

3. In the report:

a. A geological description of the site;

b. A discussion of any evidence of existing or historic instability, significant erosion or seepage on the slope;

c. A discussion of the depth of weathered or loosened soil on the site and the nature of the weathered and underlying basement soils;

d. An estimate of load capacity, including surface and ground water conditions, public and private sewage disposal system, fill and excavations, and all structural development;

e. Recommendations for building limitations, structural foundations, and an estimate of foundation settlement;

f. A complete discussion of the potential impacts of seismic activity on the site;

g. Recommendations for management of stormwater for any development above the top of slope;

h. A description of the nature and extent of any colluviums or slope debris near the toe of the slope in the vicinity of any proposed development; and

i. Recommendations for appropriate building setbacks, grading restrictions, and vegetation management and erosion control for any proposed development in the vicinity of the geologically hazardous areas. (Ord. 1243 Exh. B (part), 2006).

F. Floodplain Management Critical Area Report Requirements. The director may waive a critical area report when existing mapping and flood insurance study is determined to be adequate. When a critical area report is required the following provisions shall apply in addition to the general requirements for critical area reports provided in sections A-C:

1. A critical area report for flood hazard areas shall be prepared by an engineer or hydrogeologist, licensed in the state of Washington, with expertise analyzing geologic, hydrogeologic and surface and ground water flow systems, and who has experience preparing reports for the relevant type of hazard.

2. On the site map:

a. The dimensioned location of all proposed development in the floodplain;

b. Identification of all proposed structures and grading within the floodplain.

3. In the report:

a. Identify how the boundaries of the floodways and floodplain were determined; and

b. Establish the elevation of the lowest floor of all new or substantially improved structures proposed in the existing floodplain, utilizing the North American Vertical Datum of 1988. (Ord. 1606 § 5 (part), 2016; Ord. 1594 § 1 (part), 2016; Ord. 1464 § 1 (Exh. A (part)), 2012; Ord. 1243 Exh. B (part), 2006. Formerly 14.12.060).

14.05.150 General mitigation requirements

The following section provides general mitigation requirements applicable to alteration of critical areas. Additional specific mitigation requirements specific to each type of critical area are found under the sections in subsections xx to xx for the particular type of critical area.

A. Mitigation ~~timing~~sequencing.

Protection of critical areas shall observe the following sequence, unless part of a restoration plan for a significantly degraded wetland or stream buffer, which is described below:

~~A~~1. Avoid the impact by refraining from certain actions or parts of an action;

~~B~~2. Where impact to critical areas or their buffers will not be avoided the applicant shall demonstrate that the impact meets the criteria for granting a variance or other applicable exception as set forth in NBMC 14.05.080 and 14.05.085;

~~C~~3. Minimize the impacts by limiting the degree or magnitude of the action, by using affirmative steps to avoid or reduce impacts, or by using appropriate technology;

~~D~~4. Rectify the impact by repairing, rehabilitating, or restoring the affected environment;

~~E~~5. Reduce or eliminate the impact over time by preservation and maintenance operations;

~~F~~6. Compensate for the impacts by creating, replacing, enhancing, or providing substitute resources or environments. (Ord. 1243 Exh. B (part), 2006).

B. The buffer for a created, restored, or enhanced critical area proposed as compensation for approved alterations shall be the same as the buffer required for the category of the created,

restored, or enhanced critical area. For the purposes of restoration, creation, or enhancement, buffers shall be fully vegetated and shall not include lawns, walkways, driveways, and other mowed or paved areas. Mitigation shall be completed immediately following disturbances and prior to use or occupancy of the activity or development, or when seasonally appropriate. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and water quality. (Ord. 1243 Exh. B (part), 2006).

14.05.155 General mitigation requirements.

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

AC. Restoration/rehabilitation is required when a critical area or its buffers have been altered on a site in violation of city regulations prior to development approval, and as a consequence its functions and values have been degraded. Restoration is also required when the alteration occurs in violation of city regulations during the construction of an approved development proposal. At a minimum, all impacted areas shall be restored to their previous condition pursuant to an approved mitigation plan.

BD. ~~Re-establishment~~restoration/rehabilitation is required when the critical area or its buffers will be temporarily altered during the construction of an approved development proposal. At a minimum, all impacted areas shall be restored to their previous condition pursuant to an approved mitigation plan.

CE. ~~Compensation~~Compensatory Mitigation. The goal of compensation is no net loss of critical area and/or buffer functions on a development site. Compensation includes creation, restoration (or re-establishment, rehabilitation), replacement or enhancement, and preservation of the critical area or its buffer depending on the scope of the approved alteration and what is needed to maintain or improve the critical area and/or buffer functions. Compensation for approved critical area or buffer alterations shall meet the following minimum performance standards and shall occur pursuant to an approved mitigation plan:

1. The buffer for a created, restored, or enhanced critical area proposed as compensation for approved alterations shall be the same as the buffer required for the existing critical area. For the purposes of restoration, creation, or enhancement, buffers shall be fully vegetated and shall not include lawns, walkways, driveways, and other mowed or paved areas.
2. On-Site and In-Kind. Except as noted below or otherwise approved, all critical area impacts shall be compensated for through restoration or creation of replacement areas that are in-kind, on-site, and of similar or better critical area category. The preferred mitigation for impacts to Class IV wetlands and Type Ns streams shall be off-site and in-kind. Mitigation shall be timed prior to or concurrent with the approved alteration and shall have a high probability of success.
3. Off-Site and In-Kind. The director may consider and approve off-site compensation where the applicant demonstrates that greater biological and hydrological functions and values will be

achieved. The preferred location for off-site mitigation is areas within or adjoining designated fish and wildlife habitat corridors. The compensation may include restoration, creation, or enhancement of critical areas. The compensation ratios specified under the “on-site” compensation section for each critical area shall apply for off-site compensation as well. The director may request contractual linkage to the off-site parcel to ensure its availability and landowner willingness.

4. Increased Replacement Ratios. The director may increase the ratios under the following circumstances:

- a. Uncertainty exists as to the probable success of the proposed restoration or creation due to an unproven methodology or proponent; or
- b. A significant period will elapse between impact and replication of wetland functions; or
- c. The impact was unauthorized.

5. Decreased Replacement Ratios. The director may decrease the ratios required in the “on-site” ratios specified under the compensation section of each critical area when all the following criteria are met:

- a. A minimum replacement ratio of 1:1 will be maintained;
- b. Documentation by a qualified professional demonstrates that the proposed mitigation actions have a very high rate of success;
- c. Documentation by a qualified professional demonstrates that the proposed mitigation actions will provide functions and values that are significantly greater than the critical area being impacted; and
- d. The proposed mitigation actions are conducted in advance of the impact and have been shown to be successful.

6. Critical Area Enhancement as Mitigation.

a. Impacts to wetland and stream functions may be mitigated by enhancement of existing significantly degraded areas. Applicants proposing to use enhancement must produce a critical area report that identifies how enhancement will increase the functions of the degraded resource and how this increase will adequately mitigate for the loss of critical area and its function at the impact site. An enhancement proposal must also show whether existing critical area functions will be reduced by the enhancement actions.

b. At a minimum, enhancement acreage shall be double the acreage required for creation acreage under the “on-site” compensation section specified under each critical area. The ratios shall be greater than double the required acreage when the enhancement proposal would result in minimal gain in the performance of critical area functions currently provided in the critical area.

c. Mitigation ratios for enhancement in combination with other forms of mitigation shall range from 6:1 to 3:1. Off-site enhancement as mitigation shall be preferred in Class IV wetlands and Type Ns streams.

~~D~~F. Mitigation shall be completed immediately following disturbances and prior to use or occupancy of the activity or development, or as soon as seasonally appropriate. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, water quality, and vegetation. (Ord. 1243 Exh. B (part), 2006).

G. Wetland Mitigation Requirements. In addition to the requirements in sections A-F, the following mitigation measures to minimize and reduce wetland impacts shall be required:

1.14.06.070 Wetland mitigation requirements.

No net loss of wetland functions and values shall occur as a result of the overall project. If a wetland alteration is allowed, then the associated impacts will be considered unavoidable. In addition to the requirements in Chapter 14.05 NBMC, the following mitigation measures to minimize and reduce wetland impacts shall be required:

A2. Mitigation shall achieve equivalent or greater biological functions. Mitigation plans shall be consistent with the *Wetland Mitigation in Washington State-Part 2: Developing Mitigation Plans-Version 1* (Ecology Publication #06-06-011b, or as revised) and *Selecting Wetland Mitigation Sites Using a Watershed Approach, Western Washington* (Ecology Publication #09-06-32). *State Department of Ecology Guidelines for Developing Freshwater Wetland Mitigation Plans and Proposals, 1994, or as revised. If Class 4 wetlands are not in or adjoining a designated wildlife habitat area, greater biological functions and values may be achieved by mitigating impacts off-site. See NBMC 14.05.155(C)(6) for enhancement as mitigation options.*

B3. Approaches to Compensatory Mitigation. Preference of Mitigation Actions. Mitigation for lost or diminished wetland and buffer functions shall rely on the approaches listed below. Mitigation actions that require compensation shall occur in the following order of preference:

1a. Wetland mitigation banks. Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the mitigation bank instrument. Use of credits from a wetland mitigation bank certified under Chapter 173-700 WAC is allowed if:

i. The approval authority determines that it would provide appropriate compensation for the proposed impacts; and

ii. The impact site is located in the service area of the bank.

iii. The proposed use of credits is consistent with the terms and conditions of the certified mitigation bank instrument.

iv. Replacement ratios for projects using bank credits is consistent with replacement ratios specified in the certified mitigation bank instrument.

b. In-Lieu Fee Mitigation: Credits from an approved in-lieu-fee program may be used when all of the following apply:

i. The approval authority determines that it would provide environmentally appropriate compensation for the proposed impacts.

ii. The proposed use of credits is consistent with the terms and conditions of the approved in-lieu-fee program instrument.

iii. Projects using in-lieu-fee credits shall have debits associated with the proposed impacts calculated by the applicant's qualified wetland professional using the credit assessment method specified in the approved instrument for the in-lieu-fee program.

iv. The impacts are located within the service area specified in the approved in-lieu-fee instrument.

c. Permittee-responsible mitigation. In this situation, the permittee performs the mitigation after the permit is issued and is ultimately responsible for implementation and success of the mitigation. Permittee-responsible mitigation may occur at the site of the permitted impacts or at an off-site location within the same watershed. Permittee-responsible mitigation shall be used only if the applicant's qualified wetland professional demonstrates to the approval authority's satisfaction that the proposed approach is ecologically preferable to use of a bank or ILF program, consistent with the criteria in this section

4. Preference of Mitigation Actions. Compensatory wetland mitigation shall occur in the following order of preference:

a. Restoration - The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former or degraded wetland. For the purpose of tracking net gains in wetland acres, restoration is divided into:

i. Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former wetland. Re-establishment results in a gain in wetland acres (and functions). Activities could include removing fill material, plugging ditches, or breaking drain tiles.

ii. Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural or historic functions of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain or return tidal influence to a wetland.

Restoring wetlands on upland sites that were formerly wetlands, except that the preferred location for Class IV mitigation shall be off site in or adjoining a designated wildlife habitat area. The off site mitigation ratio for Category IV wetlands shall be 1:1 when applicants choose to mitigate in or adjacent to fish and wildlife habitat areas.

2b. Establishment (Creation): The manipulation of the physical, chemical, or biological characteristics of a site to develop a wetland on an upland or deepwater site where a wetland did not previously exist. Establishment results in a gain in wetland acres. Activities typically involve excavation of upland soils to elevations that will produce a wetland hydroperiod, create hydric soils, and support the growth of hydrophytic plant species.

a. If a site is not available for wetland restoration to compensate for expected wetland and/or buffer impacts, the approval authority may authorize creation of a wetland and buffer upon demonstration by the applicant's qualified wetland professional that:

i. The hydrology and soil conditions at the proposed mitigation site are conducive for sustaining the proposed wetland and that creation of a wetland at the site will not likely cause hydrologic problems elsewhere;

ii. Adjacent land uses and site conditions do not jeopardize the viability of the proposed wetland and buffer (e.g., due to the presence of invasive plants or noxious weeds, stormwater runoff, noise, light, or other impacts); and

iii. The proposed wetland and buffer will eventually be self-sustaining with little or no long-term maintenance. ~~Creating wetlands on disturbed upland sites such as those with vegetation cover consisting primarily of nonnative introduced species. This should only be attempted when there is a consistent source of hydrology and it can be shown that the surface and subsurface hydrologic regime is conducive for the wetland community that is designed.~~

c. Enhancement. The manipulation of the physical, chemical, or biological characteristics of a wetland site to heighten, intensify, or improve specific function(s) or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for specified purposes such as water quality improvement, flood water retention, or wildlife habitat. Enhancement results in a change in some wetland functions and can lead to a decline in other wetland functions, but does not result in a gain in wetland acres. Activities typically consist of planting vegetation, controlling non-native or invasive species, modifying site elevations or the proportion of open water to influence hydroperiods, or some combination of these activities. Applicants proposing to enhance wetlands or associated buffers shall demonstrate how the proposed enhancement will increase the wetland's/buffer's functions, how this increase in function will adequately compensate for the impacts, and how existing wetland functions at the mitigation site will be protected.

d. Protection/Maintenance (Preservation). Removing a threat to, or preventing the decline of, wetland conditions by an action in or near a wetland. This includes the purchase of land or easements, or repairing water control structures or fences. This term also includes activities

commonly associated with the term *preservation*. Preservation does not result in a gain of wetland acres. Permanent protection of a Category I or II wetland and associated buffer at risk of degradation can be used only if:

i. The approval authority determines that the proposed preservation is the best mitigation option;

ii. The proposed preservation site is under threat of undesirable ecological change due to permitted, planned, or likely actions that will not be adequately mitigated under existing regulations;

iii. The area proposed for preservation is of high quality or critical for the health of the watershed or basin due to its location. Some of the following features may be indicative of high-quality sites:

1. Category I or II wetland rating (using the wetland rating system for western Washington)

2. Rare or irreplaceable wetland type (for example, bogs, mature forested wetlands, estuarine wetlands) or aquatic habitat that is rare or a limited resource in the area;

3. The presence of habitat for priority or locally important wildlife species; or also list has provides biological and/or hydrological connectivity;

4. Provides biological and/or hydrological connectivity;

5. Priority sites in an adopted watershed plan.

iv. Permanent preservation of the wetland and buffer will be provided through a conservation easement or tract held by an appropriate natural land resource manager, such as a land trust.

v. The approval authority may approve other legal and administrative mechanisms in lieu of a conservation easement if it determines they are adequate to protect the site.

vi. Ratios for preservation in combination with other forms of mitigation generally range from 10:1 to 20:1, as determined on a case-by-case basis, depending on the quality of the wetlands being impacted and the quality of the wetlands being preserved. Ratios for preservation as the sole means of mitigation generally start at 20:1.

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

C4. On-Site and Off-Site Mitigation. Unless otherwise approved, all wetland impacts shall be compensated for through restoration or creation of replacement wetlands that are in-kind, on-site or off-site, and of similar or better wetland category. Mitigation shall be timed prior to or concurrent with the approved alteration and shall have a high probability of success. The following ratios shall apply to wetland restoration and creation for mitigation: **Wetland Mitigation Ratios:**

<u>Category and Type of Wetland</u>	<u>Creation or Re-establishment</u>	<u>Rehabilitation</u>	<u>Enhancement</u>
<u>Category I: Bog, Natural Heritage site</u>	<u>Not considered possible</u>	<u>Case by case</u>	<u>Case by case</u>
<u>Category I: Mature Forested</u>	<u>6:1</u>	<u>12:1</u>	<u>24:1</u>
<u>Category I: Based on functions</u>	<u>4:1</u>	<u>8:1</u>	<u>16:1</u>
<u>Category II</u>	<u>3:1</u>	<u>6:1</u>	<u>12:1</u>
<u>Category III</u>	<u>2:1</u>	<u>4:1</u>	<u>8:1</u>
<u>Category IV</u>	<u>1.5:1</u>	<u>3:1</u>	<u>6:1</u>

1. Category I on a 6:1 area basis with equal or greater functions and values.

2. Category II on a 3:1 area basis with equal or greater functions and values.

3. Category III on a 2:1 area basis with equal or greater functions and values.

4. Category IV on a 1.5:1 area basis with equal or greater functions and values.

5. Credit/Debit Method. To more fully protect functions and values, and as an alternative to the mitigation ratios found in the joint guidance *Wetland Mitigation in Washington State Parts I and II* (Ecology Publication #06-06-01 1a-b, Olympia, WA, March 2006), the administrator may allow mitigation based on the “credit/debit” method developed by the Department of Ecology in *Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report*, (Ecology Publication #10-06-011, Olympia, WA, March 2012, or as revised).

D. Exemption from Mitigation. Category IV wetlands less than 1,000 square feet shall be exempt from critical area regulations where it has been shown by the applicant that the following conditions have been met:

1. Wetland is not associated with a riparian corridor;

2. Wetland is not associated with other wetlands; and

3. Wetlands do not contain habitat identified as essential for local populations of priority species identified by the Washington State Department of Fish and Wildlife.

E. Exemption for Avoidance. The requirement to avoid impacts, specifically including the following exceptions, public agency/utility, reasonable use, variance, farm plan, or master plan, may be dropped for Category III and IV wetlands less than 4,356 square feet that meet all of the following criteria:

1. Wetland is not associated with a riparian corridor;

2. Wetland is not associated with other wetlands; and

3. Wetlands do not contain habitat identified as essential for local populations of priority species identified by the Washington State Department of Fish and Wildlife. (Ord. 1243 Exh. B (part), 2006).

H. Fish and Wildlife Habitat Conservation Area Mitigation Requirements. In addition to the requirements in sections A-F, the following minimum performance standards shall occur for alterations to fish and wildlife habitat conservation area:

1. Achieve equivalent or greater functions, including, but not limited to habitat functions and hydrologic functions.

2. Maintain or improve stream channel dimensions, including depth, length, and gradient.

3. Restore disturbed stream buffer areas with native vegetation.

4. Create an equivalent or improved channel bed.

5. Create equivalent or improved biofiltration.

6. Replace disturbed stream and stream buffer habitat features and areas.

7. Unless it is demonstrated that a higher level of stream function would result from an alternate mitigation approach, compensatory mitigation should be either in-kind and on-site, or in-kind and within the same stream reach or drainage subbasin of the stream. Mitigation actions should be conducted on-site and within the drainage subbasin of the affected stream, except when:

a. There are no reasonable on-site or drainage subbasin opportunities in the affected stream with a high likelihood of success;

b. Off-site mitigation has a greater likelihood of providing equal or improved functions; and

c. Established watershed goals for water quality, flood, conveyance, habitat, or other functions, including priorities and recommendations outlined in the WRIA 7 Salmon Conservation Plan, justify location of mitigation at another site.

8. For temporary alterations to a stream buffer permitted by administrative exception (NBMC 14.05.085(A)), altered areas shall be restored. Restoration of other on-site areas is allowable at a 1: 1 ratio if desired.

9. Restoration or enhancement including illegal alterations must attain the following ratios of area of mitigation to area of alteration for stream channel impacts:

a. For mitigation on-site:

- i. Two-to-one ratio for a Type S or F stream; and
- ii. One-and-one-half to one ratio for a Type N stream.

b. For mitigation off-site:

- i. Three-to-one ratio for a Type S or F stream; and
- ii. Two-to-one ratio for a Type N stream.

10. “On-site mitigation” means within the same drainage subbasin of the stream as the alteration site and within one-half mile upstream or downstream.

11. “Off-site mitigation” means within the same drainage subbasin of the stream as the proposed alteration site and beyond one-half mile upstream or downstream. The preferred location for off-site mitigation shall be in or adjacent to a designated fish and wildlife habitat area and shall be limited to Type S, F, and Np streams.

14.05.160 Mitigation banking

The city of North Bend encourages the pursuit of mitigation banking in the upper Snoqualmie Valley as form of compensatory mitigation of all wetland and fish and wildlife habitat conservation area impacts. Mitigation banks and in-lieu-fee (ILF) programs are preferred over permittee-responsible mitigation, if alterations fall within the service area of an existing bank of ILF program.

14.05.160 Best available science.

Any approval of mitigation to compensate for impacts to a critical area or its buffer shall be supported by the best available science as defined in NBMC 14.05.200. (Ord. 1243 Exh. B (part), 2006).

14.05.165 Mitigation plans.

~~A. Mitigation or alterations to critical areas shall achieve equivalent or greater biological functions and shall include mitigation for adverse impacts upstream and downstream of the development proposal site. Mitigation sites for wetlands, streams, and fish and wildlife habitat conservation areas shall be located to achieve contiguous habitat corridors in accordance with a mitigation plan that is part of an approved critical area report to minimize the isolating effects of development on habitat areas. Mitigation of aquatic habitat shall be located within the same aquatic ecosystem as the area disturbed. Mitigation for floodplain impacts shall be located in the~~

~~same drainage subbasin as the area disturbed. Mitigation shall address each function affected by the alteration to achieve functional equivalency or improvement on a per function basis.~~

BA. The scope and content of a mitigation plan shall be decided on a case-by-case basis; as the impacts to the critical area increase, the mitigation measures to offset these impacts will increase in number and complexity. The city of North Bend shall determine during the review of the requested studies which of the components listed in subsection C of this section shall be required as part of the mitigation plan. Key factors in this determination shall be the size and nature of the development proposal, the nature of the impacted critical areas, and the degree of cumulative impacts on the critical area from other development proposals.

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

1. Baseline Information. Provide existing conditions information for both the impacted critical areas and/or buffers, and the proposed mitigation site as described in NBMC [14.05.145\(C\)](#) and provide additional report requirements for each critical area as required by NBMC [14.06.060](#), [14.09.090](#), [14.11.090](#) and [14.12.220](#).

2. Environmental Goals and Objectives. The mitigation plan shall include a written report identifying environmental goals and objectives of the compensation proposed and including:

a. A description of the anticipated impacts to the critical areas, the mitigating actions proposed, and the purposes of the compensation measures, including the site selection criteria, identification of compensation goals, identification of resource functions, and dates for beginning and completing site compensation construction activities. The goals and objectives shall be related to the functions and values of the impacted critical area; ~~and~~

~~b. A description of how the project design has been modified to avoid, minimize, or reduce adverse impacts to wetlands; and~~

~~cb~~. A review of the best available science supporting the proposed mitigation.

3. Performance Standards. The mitigation plan shall include measurable specific criteria for evaluating whether or not the goals and objectives of the mitigation project have been successfully attained and whether or not the requirements of this title have been met. They may include water quality standards, species richness and diversity targets, habitat diversity indices, or other ecological, geological, or hydrological criteria.

4. Detailed Construction Plan. These are the written specifications and descriptions of mitigation technique. This plan should include the proposed construction sequencing, grading and excavation details, erosion and sedimentation control features, a native planting plan, detailed site diagrams, and any other drawings appropriate to show construction techniques or anticipated final outcome.

5. Monitoring and/or Evaluation Program. The mitigation plan shall include a program for monitoring construction of the compensation project and for assessing a completed project, as detailed under NBMC [14.05.170](#).

6. Contingency Plan. This section identifies potential courses of action, and any corrective measures to be taken, when monitoring or evaluation indicates projected performance standards have not been met. (Ord. 1606 § 2, 2016; Ord. 1243 Exh. B (part), 2006).

14.05.170 Monitoring.

A. The city requires long-term monitoring of development proposals, unless otherwise accepted in NBMC [14.05.045](#)(E), where alteration of critical areas or their buffers are approved. Such monitoring shall be an element of the required mitigation plan and shall be required for a period necessary to establish that performance standards have been met, but generally not for a period of less than five years and on an annual basis. ~~document and track impacts of development on the functions and values of critical areas, and the success and failure of mitigation requirements.~~

Monitoring may include, but is not limited to:

1. Establishing vegetation transects or plots to track changes in plant species composition over time;
2. Using aerial or other photography to evaluate vegetation community response;
3. Sampling surface and ground waters to determine pollutant loading;
4. Measuring base flow rates and stormwater runoff to model and evaluate water quantity predictions;
5. Measuring sedimentation rates;
6. Sampling fish and wildlife populations to determine habitat utilization, species abundance, and diversity; and
7. Sampling of water temperatures for wetlands and streams.

B. The city may require that a qualified professional, at the direction of the city and at the applicant's expense, monitor the development proposal site during construction and for a sufficient period of time after construction to ensure satisfactory mitigation of impacts on the critical area. The qualified professional shall monitor per the provisions outlined in the approved mitigation plan based on the conditions or restrictions imposed by the city and such administrative rules as the planning official shall prescribe.

~~C. Performance Bond. Prior to issuance of any permit or approval that authorizes site disturbance, the director shall require performance security as specified in NBMC [14.05.045](#), Bonds or performance security. (Ord. 1243 Exh. B (part), 2006).~~

14.05.175 Contingencies/adaptive management.

When monitoring reveals a significant deviation from predicted impacts or a failure of mitigation measures, the applicant shall be responsible for appropriate corrective action. Contingency plans developed as part of the original mitigation plan shall apply, but may be modified to address a specific deviation or failure. Contingency plan measures shall be subject to the monitoring requirement to the same extent as the original mitigation measures. (Ord. 1243 Exh. B (part), 2006).

~~14.05.180 Habitat management plans.~~

~~A. A habitat management plan may be required by the director when the critical area review of a development proposal determines that the proposed activity will have an adverse impact on a fish and wildlife habitat conservation area.~~

~~B. A habitat management plan, prepared by a qualified biologist in consultation with the Washington State Department of Fish and Wildlife (WDFW), shall address the following mitigation measures:~~

- ~~1. Reduction or limitation of development activities within the critical area and buffers;~~
- ~~2. Use of low impact development techniques or clustering of development on the subject property to locate structures in a manner that preserves and minimizes the adverse effects to habitat areas;~~
- ~~3. Seasonal restrictions on construction activities on the subject property;~~
- ~~4. Preservation and retention of habitat and vegetation on the subject property in contiguous blocks or with connection to other habitats that have a primary association with a listed species;~~
- ~~5. Establishment of expanded buffers around the critical area;~~
- ~~6. Limitation of access to the critical area and buffer; and~~
- ~~7. The creation or restoration of habitat area for listed species. (Ord. 1243 Exh. B (part), 2006).~~

14.05.185 Limited density transfer (on-site).

A. Density Credit of Critical Areas.

1. An owner of property containing a critical area may be permitted to transfer the unusable density in the critical area to another portion of the same site or property that does not contain a critical area, subject to the limitations of this section.

2. Up to 25 percent of the density that could be achieved on the critical area and buffer portion of the site can be transferred to a portion of the site not containing a critical area, subject to the following:

- a. The density limitation of the underlying zoning classification;
- b. The minimum lot size of the underlying zoning classification may be reduced approximately 25 percent in order to accommodate the transfer in densities;
- c. Applicable bulk and dimensional standards established in Table 18.10.040 of the North Bend Municipal Code shall be reviewed by the director and may be modified and subject to approval of an administrative adjustment to standards (AATs) per Table 18.10.040(1); and
- d. The area to which density is transferred shall not be constrained by other critical areas regulation. (Ord. 1243 Exh. B (part), 2006).

14.05.190 Transfer of development rights (off-site).

North Bend has created a transfer of development rights voluntary program (Chapter [18.36](#) NBMC) to aid in the preservation of lots with critical areas. Development rights may be transferred off-site so that the applicant may realize property rights from critical areas. (Ord. 1243 Exh. B (part), 2006).

14.05.200 Definitions.

A. "A" Definitions.

1. "Active fault" means 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. "Addition" means an extension or increase in floor area or height of a building or structure.
3. "Adjacent" means 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.
4. "Alteration" means any human-induced 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 stormwater management, relocating, or other activities that change the existing landform, vegetation, hydrology, wildlife, or habitat value, of critical areas.

5. “Anadromous fish” means fish that spawn in fresh water and mature in the marine environment.

6. “Appeal” means a request for a review of the city director’s interpretation of any provision of the critical area regulations or a request for a variance.

7. “Applicant” means 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.

8. “Aquifer recharge area” means an area that, due to the presence of certain soils, geology, and surface water, acts to recharge ground water by percolation.

9. “Area of shallow flooding” means a designated AO or AH zone on the flood insurance rate map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident.

10. “Area of special flood hazard” means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.

11. “Assessed value” means assessed valuation shall be as established by the King County assessor’s office, unless otherwise provided by a market appraisal institute (MAI) appraisal.

B. “B” Definitions.

1. “Base flood” means a flood having a one percent chance of being equaled or exceeded in any given year. Also referred to as the “100-year flood.” Designated on flood insurance rate maps with the letters A or V.

2. “Base flood elevation” means the water surface elevation of the base flood. It shall be referenced to the North American Vertical Datum of 1988 (NAVD).

3. “Basement” means any area of a building having its floor subgrade (below ground level) on all sides.

4. “Best available science” means 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 [365-195-925](#).

5. “Best management practices” means conservation practices or systems of practice and management measures that:

- a. Control soil loss and reduce water quality degradation caused by high concentrations of nutrients, animal waste, toxics, and sediment;
 - b. Minimize adverse impacts to surface water and ground water flow, circulation patterns, and the chemical, physical, and biological characteristics of wetlands;
 - c. Protect trees and vegetation designated to be retained during and following site construction; and
 - d. Provide standards for proper use of chemical herbicides within critical areas.
6. “Buffer” means the zone contiguous with a critical area that is required for the continued maintenance, function, and structural stability of the critical area.
 7. “Building setback line (BSBL)” means a line beyond which the foundation of a structure shall not extend.

C. “C” Definitions.

1. “Channel migration zone (CMZ)” means the lateral extent of likely movement along a stream or river during the next 100 years as determined by evidence of active stream channel migration movement over the past 100 years.
2. “City” means the city of North Bend.
3. “Clearing” means the cutting, killing, grubbing, or removing of vegetation or other organic material by physical, mechanical, chemical, or any other similar means.
4. “Compensation project” means actions specifically designed to replace project-induced critical area and buffer losses. Compensation project design elements may include, but are not limited to, land acquisition, planning, construction plans, monitoring, and contingency actions.
5. “Compensatory mitigation” means types of mitigation used to replace project-induced critical area and buffer losses or impacts.
6. “Concentrated animal feeding operation (CAFO)” means the Department of Ecology regulates and permits CAFO’s areas where animals (other than aquatic animals) have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period. The CAFO permit does not automatically kick in until a facility has a certain number of nonaquatic animals (i.e., 1,000 cattle or 700 dairy cows). Smaller facilities may also be regulated if they are discharging to a waterbody.
7. “Critical aquifer recharge area (CARA)” means areas designated by WAC [365-190-080\(2\)](#) that are determined to have critical recharging effect on aquifers used for potable water as defined by WAC [365-190-030\(2\)](#).

8. “Critical areas” means any of the following areas or ecosystems: wetlands, critical aquifer recharge areas, streams, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas as defined by the Growth Management Act (RCW [36.70A.170](#)).

9. “Critical facility” means a facility for which even a slight chance of flooding, inundation, or impact from a hazard event might be too great. Critical facilities include, but are not limited to, schools, nursing homes, hospitals, police, fire and emergency installations, and installations that produce, use, or store hazardous materials or hazardous waste.

D. “D” Definitions.

1. “Designated floodway” means the regulatory floodway that has been delineated on the city’s flood insurance rate map (FIRM).

2. “Developable area” means a site or portion of a site that may be utilized as the location of development, in accordance with the rules of this chapter.

3. “Development” means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, storage of equipment and materials and subdivision of land. For properties within the floodplain, development also includes the removal of more than five percent of the native vegetation on the property, or alteration of natural site characteristics.

4. “Development permit” means any permit issued by the city of North Bend, or other authorized agency, for construction, land use, or the alteration of land.

5. “Director” refers to the community services director for the city of North Bend.

E. “E” Definitions.

1. “Elevation certificate” means the official form (FEMA Form 81-31) used to track development, provide elevation information necessary to ensure compliance with community floodplain management ordinances, and determine proper insurance premium rate.

2. “Erosion” means the process by which soil particles are mobilized and transported by natural agents such as wind, rain, frost action, or stream flow.

3. “Erosion hazard area” means those areas that, because of natural characteristics including vegetative cover, soil texture, slope gradient, and rainfall patterns, or human-induced changes to such characteristics, are vulnerable to erosion.

F. “F” Definitions.

1. “FEMA – Federal Emergency Management Agency” means the agency that oversees the administration of the National Flood Insurance Program ([44 CFR](#)).

2. “Fish and wildlife habitat conservation areas” means land management for maintaining populations of species in suitable habitats within their natural geographic distribution so that the habitat available is sufficient to support viable populations over the long term and isolated subpopulations are not created. This does not mean maintaining all individuals of all species at all times, but it does mean not degrading or reducing populations or habitats so that they are no longer viable over the long term areas necessary for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created as designated by (WAC ~~365-190-080~~365-190-130(~~5~~1)). These areas include:

a. Areas with which state or federally designated endangered, threatened, and ~~critical-sensitive~~ species have a primary association;

b. Habitats of local importance, including, but not limited to, areas designated as priority habitat by the Washington State Department of Fish and Wildlife;

c. Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish ~~and or~~ wildlife habitat;

d. Waters of the state, including: lakes, ~~rivers,~~ ponds, streams, ~~and rivers planted with game fish by a governmental or tribal entity~~(~~and their associated wetlands~~), ~~inland waters, underground waters, salt waters and all other surface water and watercourses within the jurisdiction of the state of Washington;~~

~~e. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;~~

~~f.~~ State natural area preserves and natural resource conservation areas; and

~~g.~~ Land essential for preserving connections between habitat blocks and open spaces.

3. “Flood” or “flooding” means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters and/or the unusual and rapid accumulation of runoff or surface waters from any source.

4. “Flood hazard area” means any area subject to inundation by the base flood or risk from channel migration including, but not limited to, an aquatic area, wetland, or closed depression.

5. “Flood Insurance Rate Map (FIRM)” means the official map on which the Federal Insurance Administration has delineated both the areas of special flood hazard and the risk premium zones applicable to the community (44 CFR Part 59).

6. “Flood Insurance Study (FIS)” means the official report provided by the Federal Insurance Administration that includes the flood profiles, the FIRM, and the water surface elevation of the base flood (44 CFR Part 59).

7. “Flood protection elevation” means the elevation at which structures and uses regulated by Chapter 14.12 NBMC are required to be elevated or floodproofed.

8. “Floodplain” means any land area susceptible to being inundated by floodwaters from any source.

9. “Floodproofing” means adaptations that ensure a structure is substantially resistant to the passage of water below the flood protection elevation and resists hydrostatic and hydrodynamic loads and effects of buoyancy.

10. “Floodway” means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

11. “Floodway-dependent structure” means structures that are floodway-dependent including, but not limited to, dams, levees and pump stations, stream bank stabilization, boat launches and related recreational structures, bridge piers and abutments, and fisheries enhancement or stream restoration projects.

12. “Formation” means an assemblage of earth materials grouped together into a unit that is convenient for description or mapping.

13. “Formation, confining” means the relatively impermeable formation immediately overlaying a confined aquifer.

14. “Frequently flooded areas” means lands in the floodplain subject to a one percent or greater chance of flooding in any given year and those lands that provide important flood storage, conveyance, and attenuation functions, as determined by the director, in accordance with WAC [365-190-080](#)(3). Classifications of frequently flooded areas include, at a minimum, the 100-year floodplain designations of the Federal Emergency Management Agency (FEMA) and National Flood Insurance Program (NFIP).

15. “Functions” and “values” mean the beneficial roles served by critical areas, including, but not limited to, water quality protection and enhancement, fish and wildlife habitat, food chain support, flood storage, conveyance and attenuation, ground water recharge and discharge, erosion control, and recreation. “Functions” and “values” may be considered independently, with functions being measured indicators such as water quality, hydrologic functions, and habitat functions and values being nonmeasured indicators such as local importance, potential qualities, or recreational benefits.

G. “G” Definitions.

1. “Geologically hazardous areas” means areas that may not be suited to development consistent with public health, safety or environmental standards, because of their susceptibility to erosion, sliding, earthquake, or other geological events as designated by WAC [365-190-080](#)(4). Types of geologically hazardous areas include erosion, landslide, seismic, volcanic hazards, and mine.

2. “Grading” means any excavation, clearing, filling, leveling, or contouring of the ground surface by human or mechanical means.

H. “H” Definitions.

1. “Hazard areas” means areas designated as frequently flooded or geologically hazardous areas due to potential for erosion, landslide, seismic activity, mine collapse, or other geologically hazardous conditions, including steep slopes.

2. “Hazardous substance(s)” means:

a. A hazardous substance as defined by Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any substance designated pursuant to Section 311(b)(2)(A) of the Clean Water Act (CWA); any hazardous waste having the characteristics identified under or listed pursuant to Section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by act of Congress); any toxic pollutant listed under Section 307(a) of the CWA; or any imminently hazardous chemical substance or mixture with respect to which the United States Environmental Protection Agency has taken action pursuant to Section 7 of the Toxic Substances Control Act;

b. Hazardous substances that include any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical, or biological properties described in WAC [173-303-090](#), [173-303-102](#), or [173-303-103](#).

3. “High-intensity land use” means land uses consisting of commercial, urban, industrial, institutional, retail, residential with more than one unit per acre, agricultural (dairies, nurseries, raising and harvesting crops, requiring annual tilling, raising and maintaining animals), high-intensity recreation (golf courses, ball fields), and hobby farms.

4. “Heavy equipment” means such construction machinery as backhoes, treaded tractors, dump trucks, and front-end loaders.

5. “Hydraulic project approval (HPA)” means a permit issued by the state of Washington’s Department of Fish and Wildlife for modification to waters of the state in accordance with Chapter [75.20](#) RCW.

I. “I” Definitions.

1. “Impervious surface area” means A non-vegetated surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A non-vegetated surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for the purposes of determining whether the thresholds for application of Minimum

~~Requirements are exceeded. Open, uncovered retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling. any nonvertical surface artificially covered or hardened so as to prevent or impede the percolation of water into the soil mantle including, but not limited to, roof tops, swimming pools, paved or graveled roads and walkways or parking areas, and excluding landscaping and surface water retention/detention facilities.~~

2. “Isolated wetland” means those wetlands and their buffers that are outside of the following critical areas and their buffers, where applicable: 100-year floodplain, lake, river, stream, or wetland. Isolated wetlands have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water.

J. “J” Definitions. Reserved.

K. “K” Definitions. Reserved.

L. “L” Definitions.

1. “Lake” means an area permanently inundated by water in excess of two meters deep and greater than 20 acres in size measured at the ordinary high water mark.

2. “Landslide” means episodic down slope movement of a mass of soil or rock that includes, but is not limited to, rock falls, slumps, mudflows, and earth flows.

3. “Landslide hazard areas” means areas that are potentially subject to risk of mass movement due to a combination of geologic, topographic, and hydrologic factors.

4. “Low-intensity land use” includes, but is not limited to, forestry and open space (such as passive recreation and natural resources preservation).

5. “Lowest floor” means the lowest floor of the lowest enclosed area (including basement) of a structure. An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered a building’s lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of these critical areas regulations found in NBMC [14.12.130](#) (i.e., provided there are adequate flood ventilation openings).

M. “M” Definitions.

1. “Manufactured home” means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term “manufactured home” does not include a “recreational vehicle.”

2. “Mobile home park,” “manufactured housing community,” or “manufactured/mobile home community” means any real property which is rented or held out for rent to others for the placement of two or more mobile homes, manufactured homes, or park models for the primary

purpose of income, except where such real property is rented or held out for rent for seasonal recreational purpose only and is not intended for year-round occupancy.

3. “Minor utility project” means the placement of a utility pole, street sign, anchor, vault, or other small component of a utility facility, where the disturbance of an area is less than 75 square feet.

4. “Mitigation” means the process of minimizing or compensating for adverse environmental impact(s) of a proposal on a critical area.

5. “Mobile home” means a structure that is transportable in one or more sections, built on a permanent chassis, and designed to be used with or without a permanent foundation when connected to the required utilities. A mobile home is also included within the definition of manufactured homes; however, the standards relating to mobile homes shall take precedence over the standards relating to manufactured homes where such standards are more stringent.

6. “Moderate-intensity land use” includes, but is not limited to, residential at a density of up to one dwelling unit per acre, moderate intensity open space (parks), agriculture (moderate intensity land uses such as orchards and hay fields).

7. “Monitoring” means the collection of data by various methods for the purpose of understanding natural systems and features, evaluating the impact of development proposals on such systems, and/or assessing the performance of mitigation measures imposed as conditions of development.

N. “N” Definitions.

1. “Native growth protection easement (NGPE)” means an easement granted to the city of North Bend for the protection of native vegetation within a critical area or its associated buffer.

2. “Native vegetation” means plant species that are indigenous to the region.

3. “New construction” means structures for which the start of construction commenced on or after the effective date of the ordinance codified in this chapter.

O. “O” Definitions.

1. “Ordinary high water mark” means, on all lakes, streams, and tidal waters, the biological vegetation mark that- will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the department indicates the “ordinary” high water level(WAC [173-22-030\(511\)](#)).

P. “P” Definitions.

1. “Practical alternative” means an alternative that is available and capable of being carried out after taking into consideration cost, existing technology, and logistics in light of overall project purposes, and having less impact to critical areas.
2. “Priority habitat” means habitat types or elements with unique or significant value to one or more species as classified by the State Department of Fish and Wildlife.
3. “Public agency” means every city, county, state, or federal office, every officer, every institution, whether educational, correctional, or other, and every department, division, board, and commission that provides services or recommendations to the public or other such agencies.
4. “Public utility” means a public service corporation performing some public service subject to special governmental regulations, or a governmental agency performing similar public services, either of which are paid for directly by the recipients thereof. Such services shall include, but are not limited to, water supply, electric power, gas, and transportation for persons and freight.

Q. “Q” Definitions.

1. “Qualified professional” means a person with experience and training in the pertinent scientific discipline, and who is a qualified expert with expertise appropriate for the relevant critical area subject in accordance with WAC [365-195-905\(4\)](#). A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, engineering, environmental sciences, fisheries, geomorphology, or related field, and two years of related work experience.
 - a. A qualified professional for habitats or wetlands must have a degree in wildlife or wetland biology or a related environmental science and professional experience in Washington State related to the subject.
 - b. A qualified professional for a geological hazard must be a professional engineer or geologist, licensed in the state of Washington.
 - c. A qualified professional for critical aquifer recharge areas must be a hydrologist, geologist, engineer, or other scientist with experience in preparing hydrological assessments, with recent experience in Washington State.
 - d. A qualified professional with flood and CMZ expertise must be a hydrologist.

R. “R” Definitions.

1. “Reasonable use” means a legal concept articulated by federal and state courts in regulatory taking cases.
2. “Recreational vehicle” means a vehicle that is built on a single chassis; and 400 square feet or less when measured at the largest horizontal projection; and designed to be self-propelled or permanently towable by an automobile or light duty truck; and designed primarily for use as

temporary living quarters for recreational, camping, travel, or seasonal use, not as a permanent dwelling.

3. “Riparian habitat” means areas adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems that mutually influence each other.

S. “S” Definitions.

1. “Salmonid” means a member of the fish family Salmonidae. In King County, chinook, coho, chum, sockeye, and pink salmon; cutthroat, brook, brown, rainbow, and steelhead trout; kokanee; and native char (bull trout and Dolly Varden).

2. “Section 404 permit” means a permit issued by the Army Corps of Engineers for the placement of dredge or fill material waterward of the ordinary high water mark or clearing in waters of the United States, including wetlands, in accordance with [33](#) United States Code (USC) Section [1344](#).

3. “Seismic hazard areas” means areas that are subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, or soil liquefaction.

4. “Special flood hazard area (SFHA)” means an area subject to a base or 100-year flood; areas of special flood hazard are shown on the flood insurance rate maps as Zone A, AO, AE, AH.

5. “Species and habitats of local importance” means those species that may not be endangered, threatened, or critical from a state-wide perspective, but are of local concern due to their population status, sensitivity to habitat manipulation, or other educational, cultural, or historic attributes. These species may be priority habitats, priority species, and those habitats and species identified in the critical areas code as having local importance (e.g., elk).

6. “Species, threatened and endangered” means those native species that are listed by the State Department of Fish and Wildlife pursuant to RCW [77.12.070](#) as threatened (WAC [232-12-011](#)) or endangered (WAC [232-12-014](#)), or that are listed as threatened or endangered under the Federal Endangered Species Act ([16](#) U.S.C. [1533](#)).

7. “Start of construction” means and includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within 180 days of the permit issuance date. For cumulative tracking, the permit may extend beyond the specified time frame to the time of permit completion. The “actual start” means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation, or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling, nor does it include the installation of streets and/or walkways, nor does it include excavation for a basement, footings, piers, or foundation or the erection of temporary forms, nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main

structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

8. “Steep slopes” means those slopes (excluding city-approved geotechnical engineered slopes) 40 percent or steeper within a vertical elevation change of at least 10 feet. A slope is defined by establishing its toe and top and is measured by averaging the inclination over at least 10 feet of vertical relief.

9. “Structure” means a walled and roofed building including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

10. “Stream” means any portion of a watercourse, either perennial or intermittent, where the surface water flow is sufficient to produce a defined channel or bed. Streams also include natural watercourses modified by humans. Streams do not include irrigation ditches, canals, stormwater runoff facilities, or other entirely artificial watercourses.

11. “Substantial damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

12. “Substantial improvement” means any repair, reconstruction, rehabilitation, remodel, addition, or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement or repair is started. This term includes structures that have incurred “substantial damage,” regardless of the actual repair work performed. The term excludes:

a. Any project for improvement of a structure to correct ~~pre-cited~~ existing violations of state or local health, sanitary, or safety code specifications ~~that have~~which have been ~~previously~~ identified by the local code enforcement ~~or building~~ official and which are the minimum necessary to assure safe living conditions; and

~~b. Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places; provided, that the alteration will not preclude the structure’s continued designation of a historic structure.~~

T. “T” Definitions.

1. “Topping” means the severing of main trunks or stems of vegetation at any place above 25 percent of the vegetation height.

2. “Trees” mean any living woody plant characterized by one main stem or trunk and many branches and having a diameter of four inches or more measured 24 inches above ground level.

U. “U” Definitions.

1. “Unavoidable” means adverse impacts that remain after all appropriate and practicable avoidance and minimization have been achieved.
2. “Understory” means the vegetation layer of a forest that includes shrubs, herbs, grasses, and grass-like plants, and tree saplings having a diameter of four inches or less measured 24 inches above ground level, but excludes trees as defined in this section.
3. “Utility” means a service and/or facility that produces, transmits, carries, stores, processes, or disposes of electrical power, gas, potable water, stormwater, communications (including, but not limited to, telephone and cable), sewage, oil, and the like.

V. “V” Definitions.

1. “Variance” means a grant of relief from the requirements of this chapter that permits construction in a manner that would otherwise be prohibited by this chapter.
2. “Vegetation” means plant life growing below, at, and above the soil surface.
3. “Vegetation alteration” means any clearing, grading, cutting, topping, limbing, or pruning of vegetation.

W. “W” Definitions.

1. “Water dependent activities” means a use or portion of a use that cannot exist in a location that is not adjacent to the water, but is dependent on the water by reason of the intrinsic nature of its operations. A use that can be carried out only on, in, or adjacent to water. Examples of water dependent uses include fishing, marinas, moorage, and boat launching facilities; aquaculture; surface water intake; and sanitary sewer and storm drain outfalls.
2. “Water resources inventory area (WRIA)” means one of 62 watersheds in the state of Washington, each composed of the drainage areas of a stream or streams, as established in Chapter [173-500](#) WAC as it existed on January 1, 1997.
3. “Water typing system” means the system used to classify freshwater surface water systems. Current regulations establish “interim” water typing (1 through 5) until fish habitat water type maps are available for permanent water typing (S, F, Np, Ns) (WAC [222-16-031](#)).
4. “Wetland” means, as defined by Chapter [36.70](#) RCW or as hereafter amended, those areas that are inundated or saturated by ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.
 - a. Wetlands do not include those artificial wetlands intentionally created from non_wetland sites, including, but not limited to, swalesirrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or

those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway.

b. Wetlands may include those artificial wetlands intentionally created from nonwetlands ~~areas~~ to mitigate conversion of wetlands.

5. Wetlands Rating System. Wetlands shall be rated according to the Washington State Wetland Rating System for Western Washington, Department of Ecology, Publication No. 04-06-025, or as revised.

X. "X" Definitions. Reserved.

Y. "Y" Definitions. Reserved.

Z. "Z" Definitions. Reserved. (Ord. 1606 § 3, 2016; Ord. 1464 § 1 (Exh. A (part)), 2012; Ord. 1243 Exh. B (part), 2006).

Chapter 14.06

WETLAND CRITICAL AREAS

Sections:

~~[14.06.010 Purpose.](#)~~

[14.06.020](#) Designation.

[14.06.030](#) Buffers.

~~[14.06.040 General performance standards.](#)~~

[14.06.050](#) Permitted alterations.

~~[14.06.060 Critical area report/study.](#)~~

~~[14.06.070 Wetland mitigation requirements.](#)~~

~~[14.06.080 Fee in lieu mitigation.](#)~~

~~[14.06.090 Wetland mitigation bank.](#)~~

[14.06.010 Purpose.](#)

~~The purpose of the wetland critical areas provisions is to protect existing wetlands and maintain no net loss of their functions and values. (Ord. 1243 Exh. B (part), 2006).~~

14.06.020 Designation.

Identification of wetlands and delineation of their boundaries pursuant to this chapter shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplement per RCW 36.70A.175. All areas within the city of North Bend meeting the wetland designation criteria in that procedure are hereby designated critical areas and are subject to the provisions in this chapter.

~~Wetlands areas identified by the city of North Bend and King County are shown on Figure 1, Wetlands Area Map¹. The map may be periodically revised by the city to add or remove areas based on additional information. The map is not a comprehensive map of all wetlands in North Bend and is to be used as a guide for the city of North Bend, project applicants, and/or property owners. It is a reference and does not provide a final critical area designation.~~

~~Determination of wetland ratings will be based on the entire extent of wetlands, unrelated to property lines or ownership patterns. For the purpose of categorization, wetlands shall be designated-rated according to the Washington Department of Ecology wetland rating system, as set forth in the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Ecology Publication No. 04-06-02514-06-029) or as revised and approved by Ecology, which contains the definitions and methods for determining whether the criteria below are met. Wetlands shall be designated as follows:~~

~~A. Category I. (1) relatively undisturbed estuarine wetlands larger than 1 acre; (2) wetlands of high conservation value that are identified by scientists of the Washington Natural Heritage Program/DNR; (3) bogs; (4) mature and old-growth forested wetlands larger than 1 acre; (5) wetlands in coastal lagoons; (6) interdunal wetlands that score 8 or 9 habitat points and are larger than 1 acre; and (7) wetlands that perform many functions well (scoring 23 points or more). These wetlands: (1) represent unique or rare wetland types; (2) are more sensitive to disturbance than most wetlands; (3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or (4) provide a high level of functions. are those wetlands that meet any of the following criteria:~~

~~1. Wetlands that score 70 or more points (out of 100) in the Washington State Wetland Ratings System for Western Washington; or~~

~~2. Bogs larger than one-half acre; or~~

~~3. Mature and old-growth forested wetlands larger than one acre.~~

~~B. Category II. Category II wetlands are: (1) estuarine wetlands smaller than 1 acre, or disturbed estuarine wetlands larger than 1 acre; (2) interdunal wetlands larger than 1 acre or those found in a mosaic of wetlands; or (3) wetlands with a moderately high level of functions (scoring between 20 and 22 points) are those wetlands that meet any of the following criteria:~~

1. Wetlands that score between 51 and 69 points in the Washington State Wetland Ratings System for Western Washington; or

2. A wetland identified by the State Department of Natural Resources as containing “sensitive” plant species; or

3. A bog between one-quarter and one-half acre in size.

C. Category III. ~~Category III wetlands are: (1) wetlands with a moderate level of functions (scoring between 16 and 19 points); (2) can often be adequately replaced with a well-planned mitigation project; and (3) interdunal wetlands between 0.1 and 1 acre. Wetlands scoring between 16 and 19 points generally have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands. are those wetlands that score between 30 and 50 points in the Washington State Wetland Ratings System for Western Washington.~~

D. Category IV. ~~Category IV wetlands have the lowest levels of functions (scoring fewer than 16 points) and are often heavily disturbed. These are wetlands that we should be able to replace, or in some cases to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions, and should be protected to some degree. are those wetlands that score less than 30 points in the Washington State Wetland Ratings System for Western Washington. (Ord. 1243 Exh. B (part), 2006).~~

14.06.030 Buffers.

~~A. Measurement of Buffers. All buffers shall be measured from the critical area boundary as surveyed in the field. The width of the buffer shall be determined according to the category of the critical area and the proposed land use.~~

~~B. Standard Buffers. The standard buffer widths presume the existence of a relatively intact native vegetation community in the buffer zone adequate to protect the critical area functions and values at the time of the proposed activity. If a critical area report determines the vegetation or protection area is inadequate, the city may require an increase in the buffer width or additional native plantings within the standard buffer width. Provisions to reduce or average buffer widths to obtain optimal habitat value are provided under the development standards for each critical area.~~

~~C. Significantly Degraded Streams, Wetlands, and Associated Buffers. In areas where the functions of the stream or wetland and stream or wetland buffer are already significantly degraded, restoration may be more beneficial than preservation of degraded areas. Certain expanded uses shall be allowed at the discretion of the director where the applicant demonstrates through a critical area report that greater habitat functions can be obtained in the affected subdrainage basin as a result of mitigation.~~

D. Averaging Buffers. The director will consider the allowance of wetland or stream buffer averaging only when the buffer area width after averaging will not adversely impact the critical area and/or buffer functions and values.

At a minimum, any proposed buffer averaging shall meet the following criteria:

1. The buffer area after averaging is no less than that which would be contained within the standard buffer;

2. The buffer width shall not be reduced by more than 25 percent at any one point as a result of the buffer averaging;

3. The additional buffer area shall be enhanced if necessary, to achieve no net loss of the critical areas functions and values;

4. The additional buffer is contiguous with the standard buffer;

5. Encroachment into the buffer does not occur waterward of the top of an associated steep slope or into a channel migration zone;

6. Encroachment does not occur into the buffer of an associated wetland except as otherwise allowed.

E. Additional Buffers. The director may require increased buffer sizes when a critical area report shows that it is necessary to protect the function and value of the critical areas when either the critical area is particularly critical to disturbance or the development poses unusual impacts. Examples of circumstances that may require buffers beyond minimum requirements include, but are not limited to:

1. Unclassified uses;

2. The critical area is a fish and wildlife habitat area for spawning or rearing as determined by the Washington State Department of Fish and Wildlife;

3. Land located within the development proposal that is adjacent to the critical area and its associated buffer is classified as an erosion hazard area; or

4. A trail or utility corridor in excess of 10 percent of the buffer width is proposed for inclusion in the buffer.

F. Reducing Buffers. The director may reduce up to 25 percent of the critical area buffer requirement only if sufficient information is available showing the following in a critical area study:

1. The applicant has demonstrated that mitigation sequencing efforts have been appropriately utilized: first avoid, second minimize, and lastly mitigate;

2. The proposed buffer reduction shall be accompanied by a mitigation plan per NBMC 14.05.165 that includes enhancement of the reduced buffer area as necessary to maintain function and value;

3. The reduction will not adversely affect water quality;

4. The reduction will not destroy, damage, or disrupt a significant habitat area; and

5. The reduction is necessary for reasonable development of the subject property.

6. Where an existing legally established roadway transects the buffer, the minimum buffer width may be reduced to the prism of the roadway improvement if the part of the buffer sought to be reduced:

a. Does not provide additional protection to the proposed development or the stream; and

b. Is enhanced in another area where buffer averaging is permitted. (Ord. 1243 Exh. B (part), 2006).

~~The s~~Standard buffer widths presume the existence of a relatively intact native vegetation community in the buffer zone adequate to protect the wetland functions and values at the time of the proposed activity. If the vegetation is inadequate, then the buffer width shall be increased or the buffer should be enhanced by planting or other means to maintain the standard functions and values for the required width. The following buffer widths have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the Washington State Wetland Rating System for Western Washington: 2014 Update (Ecology Publication #14-06- 029, or as revised and approved by Ecology). The adjacent land use intensity is assumed to be high. Required standard wetland buffers, based on wetland category and land use intensity, are as follows:

A. For all wetlands that score 6 points or more for habitat function, the buffers in Table XX.1 can be used only when all of the measures in Table XX.2 are implemented, where applicable and feasible, to minimize the impacts of the adjacent land uses.

B. If an applicant chooses not to apply the mitigation measures in Table XX.2 to the extent determined reasonable and necessary by the City, then a twenty-five percent (25%) increase in the standard buffers provided in in XX.1 may be required.

C. The buffer widths in Table XX.1 assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.

Table xx.1 Wetland Buffer Requirements for Western Washington if Table xx.2 is Implemented and Corridor Provided

	<u>Buffer width (in feet) based on habitat score</u>		
<u>Wetland Category</u>	<u>3-5</u>	<u>6-7</u>	<u>8-9</u>
<u>Category I: Based on total score</u>	<u>75</u>	<u>110</u>	<u>225</u>
<u>Category I: Bogs and Wetlands of High Conservation Value</u>	<u>190</u>		<u>225</u>
<u>Category I: Forested</u>	<u>75</u>	<u>110</u>	<u>225</u>
<u>Category II: Based on score</u>	<u>75</u>	<u>110</u>	<u>225</u>
<u>Category III (all)</u>	<u>60</u>	<u>110</u>	<u>225</u>
<u>Category IV (all)</u>	<u>40</u>		

Table xx.2 Require measures to minimize impacts to wetlands

<u>Disturbance</u>	<u>Required Measures to Minimize Impacts</u>
<u>Lights</u>	<ul style="list-style-type: none"> • <u>Direct lights away from wetland</u>
<u>Noise</u>	<ul style="list-style-type: none"> • <u>Locate activity that generates noise away from wetland</u> • <u>If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source</u> • <u>immediately adjacent to the out wetland buffer</u>
<u>Toxic runoff</u>	<ul style="list-style-type: none"> • <u>Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered</u> • <u>Establish covenants limiting use of pesticides within 150 feet of wetlands</u> • <u>Apply integrated pest management</u>
<u>Stormwater runoff</u>	<ul style="list-style-type: none"> • <u>Retrofit stormwater detention and treatment for roads and existing adjacent development</u> • <u>Prevent channelized flow from lawns that directly enters the buffer</u> • <u>Use Low Impact Development techniques (per PSAT publication on LID techniques)</u>
<u>Change in water regime</u>	<ul style="list-style-type: none"> • <u>Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns</u>

<u>Disturbance</u>	<u>Required Measures to Minimize Impacts</u>
<u>Pets and human disturbance</u>	<ul style="list-style-type: none"> • <u>Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion</u> • <u>Place wetland and its buffer in a separate tract or protect with a conservation easement</u>
<u>Dust</u>	<ul style="list-style-type: none"> • <u>Use best management practices to control dust</u>
<u>Disruption of corridors or connections</u>	<ul style="list-style-type: none"> • <u>Maintain connections to offsite areas that are undisturbed</u> • <u>Restore corridors or connections to offsite habitats by replanting</u> • <u>Where other Priority Habitats as defined by the Washington State Department of Fish and Wildlife are located on the site or immediately off-site, a relatively undisturbed, vegetated corridor at least 100 feet wide is protected between the wetland and the other Priority Habitat (required for wetlands with 6 or more points for habitat functions; encourage for all other wetlands).</u>

~~A. Category I: 200 feet.~~

~~B. Category II.~~

~~1. Adjacent to high intensity uses: 100 feet.~~

~~2. Adjacent to low intensity uses: 75 feet.~~

~~C. Category III.~~

~~1. Adjacent to high intensity uses: 75 feet.~~

~~2. Adjacent to low intensity uses: 50 feet.~~

~~D. Category IV.~~

~~1. Adjacent to high intensity uses: 50 feet.~~

~~2. Adjacent to low intensity uses: 35 feet.~~

~~E. Any wetland created as compensation for an approved wetland alteration shall have the standard buffer required for the new classification of the created wetland. Wetlands to be created shall be located such that the new associated wetland buffer does not cross onto adjacent~~

~~property, unless the same property owner owns the adjacent property or secures an NGPE for the buffer on the adjoining property.~~

~~F. Wetlands shall be assigned a rating based on the wetland report and field verification, and the appropriate buffer shall apply. (Ord. 1243-Exh. B (part), 2006).~~E. Measurement of Buffers. All buffers shall be measured from the critical area boundary as surveyed in the field. The width of the buffer shall be determined according to the category of the wetland rating and habitat score.

~~F. Any wetland created as compensation for an approved wetland alteration shall have the standard buffer required for the new classification of the created wetland. Wetlands to be created shall be located such that the new associated wetland buffer does not cross onto adjacent property, unless the same property owner owns the adjacent property or secures an NGPE for the buffer on the adjoining property.~~

G. Averaging Buffers. The director will consider the allowance of wetland buffer averaging only when the buffer area width after averaging will not adversely impact the critical area and/or buffer functions and values. At a minimum, any proposed buffer averaging shall meet the following criteria:

1. The buffer area after averaging is no less than that which would be contained within the standard buffer;
2. The buffer width shall not be reduced by more than 25 percent at any one point as a result of the buffer averaging;
3. The additional buffer area shall be enhanced if necessary, to achieve no net loss of the critical areas functions and values;
4. The additional buffer is contiguous with the standard buffer;
5. Encroachment into the buffer does not occur waterward of the top of an associated steep slope or into a channel migration zone;
6. Encroachment does not occur into the buffer of an associated wetland except as otherwise allowed.

H. Increased Buffers. The director may require increased buffer sizes when a critical area report shows that it is necessary to protect the function and value of the critical areas when either the critical area is particularly critical to disturbance or the development poses unusual impacts. Examples of circumstances that may require buffers beyond minimum requirements include, but are not limited to:

1. Unclassified uses;

2. The critical area is a fish and wildlife habitat area for spawning or rearing as determined by the Washington State Department of Fish and Wildlife;

3. Land located within the development proposal that is adjacent to the critical area and its associated buffer is classified as an erosion hazard area; or

4. A trail or utility corridor in excess of 10 percent of the buffer width is proposed for inclusion in the buffer.

14.06.040 General performance standards.

~~The requirements provided in this section supplement those identified in Chapter 14.05 NBMC. Activities and uses shall be prohibited from wetlands and wetland buffers, except as provided by this chapter. (Ord. 1243 Exh. B (part), 2006).~~

14.06.050 Permitted alterations.

~~The requirements provided in this section supplement those identified in Chapter 14.05 NBMC. Activities and uses shall be prohibited from wetlands and wetland buffers, except as provided by this chapter. (Ord. 1243 Exh. B (part), 2006).~~

~~Where the~~ following activities may ~~only~~ be permitted ~~only in a wetland or wetland buffer~~ if the applicant can demonstrate that the activity will not degrade the functions and values of the wetland and other critical areas. The director may require the preparation of a critical area report to confirm compliance with the requirements of this chapter.

A. Conservation or preservation ~~activities that~~ will not change the structure or improve the functions of the existing wetland.

B. Modifications to existing structures where no further alteration or increase in footprint will occur.

C. Trails. Public and private trails may be allowed within wetland buffers where it can be demonstrated in a critical area report that the wetland and wetland buffer functions and values will not be degraded by trail construction or use. Trail planning, construction, and maintenance shall adhere to the following criteria:

1. Permeable surface trail alignment shall be generally parallel to the perimeter of the wetland, located only in the outer 50-25 percent of a the wetland buffer width area, except as needed to access viewing platforms or to cross the wetland. Trails may be placed on existing levees, railroad grades, or road grades within these limits. Raised boardwalks utilizing non-treated pilings may be acceptable.;

2. Trails and associated viewing platforms shall be constructed of pervious materials no more than five (5) feet in width for pedestrian use only, unless impervious surfaces are necessary for conformance to the Americans with Disabilities Act. The trail surface shall be limited to minor crossings having no adverse impact on water quality and meet all other requirements, including water quality standards set forth in the King County Surface Water Design Manual, ~~1998~~2016, or as revised;

3. Trail alignment shall avoid removal of significant trees in excess of six inches in diameter of any tree trunk at a height of four and one-half feet above the ground on the upslope side of the tree, where feasible;

4. ~~Trail construction and maintenance shall follow the U.S. Forest Service Trails Management Handbook (FSH 2309.18, June 1987) and Standard Specifications for Construction of Trails (EM 7720-102, June 1984, or as revised);~~

5. ~~Access trails to viewing platforms within the wetland may be provided. Trail access and platforms shall be aligned and constructed to minimize disturbance to valuable functions of the wetland or its buffer and other habitat elements, and still provide enjoyment of the resource; and~~

6. ~~Buffer widths shall be increased, where possible, equal to the width of the trail corridor, including disturbed areas.~~

D. Stormwater Management Facilities. A wetland or its buffer can be physically or hydrologically altered to meet the requirements of an LID, Runoff Treatment or Flow Control BMP if all of the following criteria are met:

1. The wetland is classified as a Category IV or a Category III wetland with a habitat score of 3-4 points, and

2. There will be “no net loss” of functions and values of the wetland, and

3. The wetland does not contain a breeding population of any native amphibian species, and

4. The hydrologic functions of the wetland can be improved as outlined in questions 3, 4, 5 of Chart 4 and questions 2, 3, 4 of Chart 5 in the “Guide for Selecting Mitigation Sites Using a Watershed Approach,” (available here: <http://www.ecy.wa.gov/biblio/0906032.html>); or the wetland is part of a priority restoration plan that achieves restoration goals identified in a Shoreline Master Program or other local or regional watershed plan, and

5. The wetland lies in the natural routing of the runoff, and the discharge follows the natural routing, and

6. All regulations regarding stormwater and wetland management are followed, including but not limited to local and state wetland and stormwater codes, manuals, and permits, and

7. Modifications that alter the structure of a wetland or its soils will require permits. Existing functions and values that are lost would have to be compensated/replaced.

~~All wetland categories may receive clean runoff from sources such as roof drains and footing drains when such runoff is demonstrated as beneficial to wetland functions. Stormwater management facilities are not allowed in Category I and II wetlands and buffers. The outer 50 feet of Category III and all portions of Category IV wetland buffers may be used for detention/retention areas where the applicant can demonstrate no practical alternative and that such use is beneficial to wetland functions. Enhanced treatment is required prior to discharge to such wetlands, and a stormwater facility maintenance plan shall be submitted.~~

E. Public Roads and Utilities. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way, provided that the maintenance or repair does not expand the footprint of the facility or right-of-way.

~~Footprint expansion of public roads and utilities may occur to maintain locally established levels of service, and to provide for and protect public safety when no lesser impacting option is feasible, and the width of the corridor is minimized to the maximum extent possible. Public and private utility corridors may be allowed within wetland buffers for Category II, III, and IV wetlands when no lesser impacting alternative alignment is feasible, and wetland buffer functions and values will not be degraded. Utilities, whenever possible, shall be constructed in existing, improved roads, drivable surface or shoulder, subject to compliance with road maintenance BMPs, or within an existing utility corridor. Otherwise, corridor alignment, construction, restoration, and maintenance shall adhere to the following criteria:~~

~~1. Corridor alignment shall follow a path beyond a distance from the wetland edge equal to 75 percent of the buffer width, except when crossing a Category IV wetland and its buffer;~~

~~2. Corridor construction and maintenance shall maintain and protect the hydrologic and hydraulic functions of the wetland and the buffer;~~

~~3. Corridors shall be fully revegetated with appropriate native vegetation upon completion of construction; and~~

~~4. Utilities requiring maintenance roads shall be prohibited in wetland buffers unless the following criteria are met:~~

~~a. There are no lesser impacting alternatives;~~

~~b. Any required maintenance roads shall be no greater than 15 feet wide. Roads shall closely approximate the location of the utility to minimize disturbances; and~~

~~c. The maintenance road shall be constructed of pervious materials and designed to maintain and protect the hydrologic functions of the wetland and its buffer.~~

~~FB. ~~Vegetation management~~Ongoing maintenance, including ~~L~~andscaping and gardening revisions, that is part of ongoing maintenance of buildings and facilities and their associated yard areas in existence prior to the city's aerial photographs taken April 3, 2004. ~~Vegetation management~~Ongoing maintenance is also permitted on public rights-of-way, or utility~~

easements, provided the ~~vegetation management~~ activity does not expand further into the critical area or its buffer. Properties within the floodplain, critical aquifer recharge area or seismic liquefaction area and located outside of other critical areas are exempted from the maintenance area expansion restriction of this provision. ~~Vegetation management~~ **Ongoing maintenance** can take place in native growth protection easements (NGPE) or tracts; provided only state-listed invasive and noxious weeds and additional aggressive nonnative species identified in NBMC 14.05.085(A)(2)(e) shall be removed or cut, hand removal is the only method utilized, no mechanical or chemical activities are employed, ~~and shall minimize disturbance to the critical area and/or buffer, does not involve the use of hazardous substances, and is associated with subsequent enhancement, restoration, or ongoing maintenance activities. existing overstory provides shade to 50 percent or more of the site.~~ All removed plant material shall be taken away from the site and appropriately disposed of.

GF. ~~Category IV Wetlands.~~ The following wetlands may be exempt from the requirement to avoid impacts, and they may be filled if the impacts are fully mitigated for. In order to verify the following conditions, a critical area report for wetlands meeting the requirements in NBMC 14.05.145 must be submitted.

~~Allowable uses and activities shall include all uses and activities identified in subsections A through E of this section. In addition, activities and uses that result in unavoidable and necessary impacts may be permitted in Category IV wetlands and associated buffers in accordance with an approved critical area report and mitigation plan, and only if the proposed activity is the only reasonable alternative that will accomplish the applicant's objective. (Ord. 1243-Exh. B (part), 2006).~~ 1. All isolated Category IV wetlands less than 4,000 square feet that:

a. Are not associated with riparian areas or their buffers

b. Are not associated with shorelines of the state or their associated buffers

c. Are not part of a wetland mosaic

d. Do not score 5 or more points for habitat function based on the 2014 update to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Ecology Publication #14-06-029, or as revised and approved by Ecology)

e. Do not contain a Priority Habitat or a Priority Area for a Priority Species identified by the Washington Department of Fish and Wildlife, do not contain federally listed species or their critical habitat, or species of local importance identified in Chapter XX.XX

2. Wetlands less than 1,000 square feet that meet the above criteria and do not contain federally listed species or their critical habitat are exempt from the buffer provisions contained in this Chapter

14.06.060 Critical area report/study.

~~Wetland delineation/classification survey teams shall include qualified wildlife professionals when the area in question is identified by the city of North Bend as being a potential or known fish and wildlife habitat area. Such wildlife surveys shall be undertaken during suitable times of the year for the documentation of seasonal wildlife occurrences and critical life history stages. In addition to the general requirements for critical area reports provided under Chapter 14.05 NBMC, wetland critical area reports shall include the following:~~

~~A. On the site map:~~

- ~~1. The edge of the wetland as flagged and surveyed in the field using the Washington State Wetland Identification and Delineation Manual, as required by RCW 36.70A.157;~~
- ~~2. The location of any proposed wetland area(s) to be created through mitigation measures; and~~
- ~~3. The location of any proposed wetland alteration or fill.~~

~~B. In the report:~~

- ~~1. Description of the wetland by classification per the Washington State Wetland Rating System for Western Washington (Ecology Publication No. 04-06-025 or as revised);~~
- ~~2. General condition of wetland;~~
- ~~3. Description of vegetation species and community types present in the wetland and surrounding buffer;~~
- ~~4. List of priority species and habitats within the vicinity of the wetland in question;~~
- ~~5. Description of soil types within the wetland and the surrounding buffer using the USDA Soil Conservation Service soil classification system; and~~
- ~~6. Description of hydrologic regime and findings. (Ord. 1243 Exh. B (part), 2006).~~

~~**14.06.070 Wetland mitigation requirements.**~~

~~No net loss of wetland functions and values shall occur as a result of the overall project. If a wetland alteration is allowed, then the associated impacts will be considered unavoidable. In addition to the requirements in Chapter 14.05 NBMC, the following mitigation measures to minimize and reduce wetland impacts shall be required:~~

~~A. Mitigation shall achieve equivalent or greater biological functions. Mitigation plans shall be consistent with the State Department of Ecology Guidelines for Developing Freshwater Wetland Mitigation Plans and Proposals, 1994, or as revised. If Class 4 wetlands are not in or adjoining a designated wildlife habitat area, greater biological functions and values may be achieved by mitigating impacts off-site. See NBMC 14.05.155(C)(6) for enhancement as mitigation options.~~

~~B. Preference of Mitigation Actions. Mitigation actions that require compensation shall occur in the following order of preference:~~

~~1. Restoring wetlands on upland sites that were formerly wetlands, except that the preferred location for Class IV mitigation shall be off-site in or adjoining a designated wildlife habitat area. The off-site mitigation ratio for Category IV wetlands shall be 1:1 when applicants choose to mitigate in or adjacent to fish and wildlife habitat areas.~~

~~2. Creating wetlands on disturbed upland sites such as those with vegetation cover consisting primarily of nonnative introduced species. This should only be attempted when there is a consistent source of hydrology and it can be shown that the surface and subsurface hydrologic regime is conducive for the wetland community that is designed.~~

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

~~C. On-Site and Off-Site Mitigation. Unless otherwise approved, all wetland impacts shall be compensated for through restoration or creation of replacement wetlands that are in-kind, on-site or off-site, and of similar or better wetland category. Mitigation shall be timed prior to or concurrent with the approved alteration and shall have a high probability of success. The following ratios shall apply to wetland restoration and creation for mitigation:~~

~~1. Category I on a 6:1 area basis with equal or greater functions and values.~~

~~2. Category II on a 3:1 area basis with equal or greater functions and values.~~

~~3. Category III on a 2:1 area basis with equal or greater functions and values.~~

~~4. Category IV on a 1.5:1 area basis with equal or greater functions and values.~~

~~D. Exemption from Mitigation. Category IV wetlands less than 1,000 square feet shall be exempt from critical area regulations where it has been shown by the applicant that the following conditions have been met:~~

~~1. Wetland is not associated with a riparian corridor;~~

~~2. Wetland is not associated with other wetlands; and~~

~~3. Wetlands do not contain habitat identified as essential for local populations of priority species identified by the Washington State Department of Fish and Wildlife.~~

~~E. Exemption for Avoidance. The requirement to avoid impacts, specifically including the following exceptions, public agency/utility, reasonable use, variance, farm plan, or master plan, may be dropped for Category III and IV wetlands less than 4,356 square feet that meet all of the following criteria:~~

~~1. Wetland is not associated with a riparian corridor;~~

~~2. Wetland is not associated with other wetlands; and~~

~~3. Wetlands do not contain habitat identified as essential for local populations of priority species identified by the Washington State Department of Fish and Wildlife. (Ord. 1243 Exh. B (part), 2006).~~

14.06.080 Fee-in-lieu mitigation.

For Category IV isolated wetlands of 4,356 square feet or less, mitigation may be accomplished by compensating for wetland loss through a fee-in-lieu based on a 1:1 ratio. In addition to critical areas approval for fill of these wetlands, the applicant must demonstrate compliance with the city's shoreline regulations, the Department of Ecology, and where applicable, the Corps of Engineers (CORPS). The applicant must obtain a jurisdictional determination from the agencies and show proof of permit approval, if applicable. Fee-in-lieu shall be based on the cost to replace the wetland at an off-site location in or adjoining a designated wildlife habitat area, including land costs, wetland construction, and monitoring.

Where the Corps has jurisdiction over wetlands, Ecology issues a Section 401 Water Quality Certification and the Corps issues a permit for wetland fill (33 CFR Parts 320 through 330) under Section 404 of the federal Clean Water Act. Nationwide permits under Section 404 generally authorize fill of one-half acre or less in nontidal wetlands that are not adjacent to streams where average annual flow is five cubic feet or more per second. The Corps requires individual permits for larger impacts and for all wetlands in floodplains or adjacent to larger streams and rivers. The Corps normally does not have jurisdiction over hydrologically isolated wetlands and prior converted croplands that otherwise meet wetland criteria. Under the State Water Pollution Control Act (Chapter 90.48 RCW), the Washington State Department of Ecology (Ecology) has authority to regulate impacts to such wetlands via administrative order. (Ord. 1243 Exh. B (part), 2006).

14.06.090 Wetland mitigation bank.

The city of North Bend encourages the pursuit of wetland mitigation banking in the upper Snoqualmie Valley. Wetland banking options should not include nonwetland areas of the central meadow open spaces of Meadowbrook and Tollgate farms, unless otherwise approved by the city council. Feasibility studies should first identify successful sites where wetlands currently exist or could be enhanced through off-site mitigation requirements. (Ord. 1243 Exh. B (part), 2006).

Chapter 14.07 CRITICAL AQUIFER RECHARGE AREAS

Sections:

~~14.07.010 Purpose.~~

[14.07.020](#) Designation.

[14.07.030](#) Prohibited uses and activities.

[14.07.040](#) Performance standards.

14.07.010 Purpose.

~~To protect groundwater quality and quantity for public water supply and to maintain hydrologic functions of aquatic areas. Critical aquifer recharge areas contribute significantly to the replenishment of groundwater and due to their prevailing geologic conditions associated with infiltration rates, have a high potential for contamination of ground water resources. (Ord. 1243 Exh. B (part), 2006).~~

14.07.020 Designation.

Critical aquifer recharge areas (CARAs) are those areas with a critical recharging effect on aquifers used for potable water are areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water, as defined by WAC 365-190-030(32). Figure 2, Critical Aquifer Recharge Area and Wellhead Protection Area Map¹ designates CARAs in North Bend according to King County's analysis. The map may be periodically revised by the city to add or remove areas based on additional information.

A. Critical aquifer recharge areas are categorized in the city of North Bend as follows:

1. Category I critical aquifer recharge areas include those areas designated on the critical aquifer recharge area map as highly susceptible to groundwater contamination and that are located within a sole source aquifer or wellhead protection area.

2. Category II critical aquifer recharge areas include those mapped areas designated that:

a. Have a medium susceptibility to groundwater contamination and are located in a sole source aquifer or wellhead protection area; or

b. Are highly susceptible to groundwater contamination and are not located in a sole source aquifer or wellhead protection area.

B. An applicant can request that the city declassify a specific area included in the map. The application must be supported by a critical area report that includes a hydrogeologic assessment demonstrating that the designation is not warranted based on the physical character of the aquifer. The application to declassify an area shall be reviewed by the city and a determination made to amend the map as appropriate. (Ord. 1243 Exh. B (part), 2006).

14.07.030 Prohibited uses and activities.

A. The following new uses or activities are not allowed in Category I critical aquifer recharge areas:

1. Hazardous liquid transmission pipelines;
2. Sand, gravel, and hard rock mining on land that is not zoned for mining as of the effective date of the ordinance codified in this chapter;
3. Mining of any type below the groundwater table;
4. Processing, storage, and disposal of radioactive wastes;
5. Hydrocarbon extraction (unless part of an approved decommissioning plan);
6. Commercial wood treatment facilities on permeable surfaces;
7. Wrecking yards;
8. Landfills for hazardous waste, municipal solid waste, or special waste, except Class A biosolids when applied pursuant to WSDOE standards.

B. The following new uses and activities are not allowed in a Category II critical aquifer recharge area:

1. Mining of any type below the water table;
2. Processing, storage, and disposal of radioactive substances;
3. Hydrocarbon extraction (unless part of an approved decommissioning plan);
4. Commercial wood treatment facilities on permeable surfaces;
5. Wrecking yards;
6. Landfills for hazardous waste, municipal solid waste, or special waste, except Class A biosolids when applied pursuant to WSDOE standards.

C. The activities listed below may be conditioned or allowed pending further evaluation to determine if measurable degradation in the quality of groundwater (in a critical aquifer recharge area) will occur. Development proposals or alterations involving the following types of uses or land activities shall prepare and submit, as part of their critical area study, a hydrogeologic assessment of the proposed site to determine if the development proposal or alteration will cause contaminants to enter a critical aquifer recharge area:

1. Golf courses;
2. Cemeteries;
3. Asphalt and concrete facilities;
4. Concentrated animal feeding operations;

~~5. Any other similar activity that the planning official, in his or her discretion, determines does not have the potential to threaten the quality of groundwater in a critical aquifer recharge area. (Ord. 1243 Exh. B (part), 2006).~~

14.07.040 Performance standards.

For all other development proposals, the director may require preparation of a critical area report as specified in NBMC [14.05.100](#). In addition the following standards will apply:

A. Containment. Every development proposal involving hazardous substance processing or handling that is located in or adjacent to a critical recharge area shall provide on-site containment devices adequate in size to contain any unauthorized release of hazardous substances from any area where these substances are either stored, handled, treated, used, or produced. Containment devices shall prevent such substances from penetrating into the ground. This provision also applies to releases that may mix with storm runoff.

B. Hazardous Substances Management Plan. Every development proposal involving hazardous substance processing or handling that is located in or adjacent to a critical recharge area shall prepare a spill plan containing procedures to be followed to prevent, control, collect, and dispose of any unauthorized release of a hazardous substance. Individual hazardous substance waste and typical retail waste will typically not require a spill plan. A spill plan may be required for businesses holding or disposing of either bulk chemicals such as oil, anti-freeze, etc., or truly hazardous chemicals such as acids or other corrosive substances. The plan must ensure the development can maintain spill clean-up of materials in a quantity sufficient to capture the largest container if spilled.

C. Hazardous Substance Storage Tanks.

1. All hazardous substance storage tanks containing hazardous substances proposed to be located in a critical aquifer recharge area must comply with local building code requirements and must conform to the 2003 International Fire Code requirements for secondary containment.

2. Underground Tanks. No new underground storage tanks with hazardous substances shall be allowed in Category I CARAs. All new underground hazardous substance tanks located in a Category II CARA or adjacent to a critical recharge area shall be designed and constructed so as to:

- a. Prevent releases due to corrosion or structural failure for the operational life of the tank;

b. Be protected against corrosion, constructed of noncorrosive material, steel clad with a noncorrosive material, or designed to include a secondary containment system to prevent the release or threatened release of any stored substance; and

c. Use material in the construction or lining of the tank that is compatible with the substance to be stored.

3. Aboveground Tanks. No new aboveground storage tank for hazardous substances located in or adjacent to a critical recharge area shall be installed, used or maintained in any manner that may allow the release of a hazardous substance to the ground, ground waters, or surface water.

D. Agriculture. Agricultural activities in or adjacent to a critical recharge area shall use Natural Resources Conservation Service (NRCS) best management practices to prevent ground quality degradation from livestock waste.

E. Sewage Disposal. All lots of residential, commercial, or industrial development proposals located in or adjacent to a critical recharge area and within ~~200~~150 feet of a public sewer system shall be connected to the sewer system.

F. Golf Courses. Golf course operations proposed in or adjacent to a critical recharge area shall be subject to a golf course maintenance plan using best management practices to protect ground water quality. The plan shall detail the proposed use of fertilizers, herbicides, pesticides, fungicides, or other maintenance agents, with projected application methods and schedules and measures to prevent pollution of ground water.

G. Commercial Vehicle Repair and Servicing. Commercial vehicle repair and servicing must be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing must be stored in a manner that protects them from weather and provides containment should leaks occur. Proper capture and treatment of runoff per the King County Surface Water Design Manual should occur prior to discharge either off-site or into infiltration systems.

H. The uses listed in the table below shall be conditioned in accordance with the applicable state and federal regulations as necessary to protect critical aquifer recharge areas:

Statutes, Regulations, and Guidance Pertaining to Ground Water Impacting Activities	
Activity	Statute – Regulation – Guidance
Aboveground Storage Tanks	WAC 173-303-640
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	WAC 173-303-182
Hazardous Waste Generator (Boat Repair Shops, Biological Research Facility, Dry Cleaners, Furniture Stripping, Motor Vehicle Service Garages, Photographic Processing, Printing and Publishing Shops, etc.)	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	WAC 332-12-450, 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, Chapter 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	WAC 332-18-015
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
Class A Biosolids	Ecology Publication Number 05-07-008, February 2005

(Ord. 1243 Exh. B (part), 2006).

Chapter 14.08

STREAMS

Sections:

~~14.08.010 Purpose.~~

~~14.08.020 Classification.~~

~~14.08.030 Buffers.~~

~~14.08.040 Development provisions.~~

~~14.08.050 Stream mitigation.~~

~~14.08.060 Mitigation plans for alteration to streams and stream buffers.~~

14.08.010 Purpose.

~~The purpose of the stream conservation areas is to preserve and protect those areas with which salmonid fish, threatened and endangered species, and salmonid species of local importance have a primary association. (Ord. 1243 Exh. B (part), 2006).~~

14.08.020 Classification.

~~As defined in WAC 222-16-030, maps will be updated to the following water typing system:~~

~~Type S (shorelines): All waters, within their bankfull width, as inventoried as “Shorelines of the State” (rivers over 20 cfs, marine shorelines and lakes over 20 acres) under Chapter 90.58 RCW and the rules promulgated pursuant to Chapter 90.58 RCW, including periodically inundated areas of their associated wetlands. “Bankfull width” is the measurement of the lateral extent of the water surface elevation perpendicular to the channel at bankfull depth.~~

~~Type F (fish): Segments of natural waters other than Type S waters that are within the bankfull widths of defined channels and periodically inundated areas of their associated wetlands, or within lakes, ponds, or impoundments having a surface area of one-half acre or greater at seasonal low water that in any case contain fish habitat or are described by one of the four categories in WAC 222-16-030(2).~~

~~Type Np (non-fish perennial): All segments of natural waters within the bankfull width of defined channels that are perennial non-fish-habitat streams. Perennial streams are waters that do not go dry at any time during a year of normal rainfall. However, for the purpose of water typing, Type Np waters include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.~~

~~Type Ns (non-fish seasonal): All segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np waters. These are seasonal, non-fish-habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from any stream reach that is a Type Np water. Ns waters must be physically connected by an aboveground channel system to Type S, F, or Np waters.~~

~~Type C (conveyance): As defined by the city of North Bend, Type C waters are those natural open ephemeral drainage courses (including where bridged, piped or culverted) that are not Type S, F, Np or Ns waters, which contain flow only during or immediately after periods of precipitation, and which flow generally less than 30 days per year.~~

~~Figure 3, River and Stream Map⁺, identifies rivers and streams in the North Bend vicinity. Where possible, streams will be converted according to WAC 222-16-031. Those streams that have not been classified will be typed according to the new system summarized above. The map may be periodically revised by the city to add or remove areas based on additional information. (Ord. 1354 § 1 Exh. A (part), 2009; Ord. 1243 Exh. B (part), 2006).~~

~~14.08.030 Buffers.~~

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

~~A. Types S and F streams shall have a 100-foot buffer on each side of the channel. Seventy-five feet of this buffer shall be considered the “inner buffer” and 25 feet of this buffer shall be considered the “outer buffer.”~~

~~B. Type Np streams shall have a 50-foot buffer on each side of the channel.~~

~~C. Type Ns streams shall have a 25-foot buffer on each side of the channel.~~

~~D. Type C water shall have no buffer. (Ord. 1243 Exh. B (part), 2006).~~

14.08.040 Development provisions.

A. Applicability—No Degradation. The requirements provided in this section supplement those identified in Chapter 14.05 NBMC. Activities may only be permitted in a stream or stream buffer if the applicant can show that the proposed activity will not degrade the functions and values of the stream, stream buffer, or other critical area.

B. Inner Buffer Development Provisions—Type S and F Streams. Except as provided in this subsection B, all activities and uses shall be prohibited in inner buffers of Type S and F streams. Allowable activities and uses are:

1. Stream Crossings. Stream crossings shall be minimized, but when necessary they shall conform to the following standards as well as other applicable laws (see the State Department of Fish and Wildlife, or the State Department of Ecology):

- a. ~~The stream crossing is the only reasonable alternative that has the least impact;~~
 - b. ~~It has been shown in the critical area report that the proposed crossing will not decrease the stream and associated buffer functions and values;~~
 - c. ~~The stream crossing shall use bridges instead of pipe or box culverts unless it can be demonstrated that a pipe or box culvert would result in equal or less ecological impacts;~~
 - d. ~~All stream crossings using pipe culverts shall use super span or oversized culverts with appropriate fish enhancement measures. Culverts shall not obstruct fish passage;~~
 - e. ~~Stream crossings shall be designed according to the Washington Department of Fish and Wildlife Fish Passage Design at Road Culverts, 1999, and the National Marine Fisheries Service Guidelines for Salmonid Passage at Stream Crossings, 2000;~~
 - f. ~~All stream crossings shall be constructed during the summer low flow period between June 15th and September 15th or as specified by the State Department of Fish and Wildlife in the hydraulic project approval;~~
 - g. ~~Stream crossings shall not occur through salmonid spawning areas unless no other feasible crossing site exists;~~
 - h. ~~Bridge piers or abutments shall not be placed in either the floodway or between the ordinary high water marks unless no other feasible alternative placement exists;~~
 - i. ~~The natural drainage pattern and discharges of the upstream drainage basin, up to the runoff event having an exceedance probability of 0.01, shall not be altered or diminished by a stream crossing;~~
 - j. ~~Stream crossings shall minimize interruption of downstream movement of wood and gravel;~~
 - k. ~~Stream crossings shall be designed to facilitate routine maintenance of culverts and bridges; and~~
 - l. ~~Stream crossings shall be minimized by serving multiple properties when ever possible.~~
2. ~~Trails. The criteria for alignment, construction, and maintenance of trails within wetlands and their buffers shall apply to trails within stream buffers. Fishing platforms or docks shall be included in the list of permitted trail improvements for streams, subject to shoreline regulations.~~
 3. ~~Utilities. The criteria for alignment, construction, and maintenance within the wetland buffers shall apply to utility corridors within stream buffers. In addition, corridors shall not be aligned parallel with any stream channel unless the corridor is outside the buffer, and crossings shall be minimized. Installation shall be accomplished by boring beneath the scour depth and hyporheic zone of the water body where feasible. Crossings shall be contained within the existing footprint of an existing or new road or utility crossing where possible. Otherwise, crossings shall be at an~~

~~angle greater than 60 degrees to the centerline of the channel. The criteria for stream crossing shall also apply.~~

~~4. Stormwater conveyance facilities; provided, that they are only located in the buffer when no practicable alternative exists outside the buffer. Stormwater facilities shall be planted with native plantings where feasible to provide habitat, and/or less intrusive facilities should be used.~~

~~5. Floodway Dependent Structures. Floodway dependent structures or installations may be permitted within streams or their buffers if allowed or approved by other ordinances or other agencies with jurisdiction. See Chapter 14.12 NBMC for more information on allowed uses and activities within flood hazard areas.~~

~~6. Septic Systems. New septic systems are prohibited in the inner stream buffers.~~

~~7. Stream bank stabilization shall only be allowed when it is shown, through a stream bank stability assessment conducted by a qualified fluvial geomorphologist or hydraulic engineer, that such stabilization is required for public safety reasons, that no other less intrusive actions are possible, and that the stabilization will not degrade instream or downstream channel stability. Stream bank stabilization shall utilize bioengineering or soft armoring techniques unless otherwise demonstrated. Stream bank stabilization shall conform to the Integrated Streambank Protection Guidelines developed by the Washington State Department of Fish and Wildlife, 2002, or as revised. Stabilization measures must demonstrate the following:~~

~~a. Natural shoreline processes will be maintained. The project will not result in increased erosion or alterations to, or loss of, shoreline substrate within one quarter mile of the project area;~~

~~b. The stabilization measures will not degrade fish or wildlife habitat conservation areas or associated wetlands; and~~

~~c. Adequate mitigation measures ensure that there is no net loss of the functions or values of riparian habitat.~~

~~8. Maintenance, repair, or replacement of lawfully established existing bank stabilization is allowed, provided it does not increase the height or linear amount of bank and does not expand waterward or into aquatic habitat landward.~~

~~9. Activities and uses allowed under Chapter 14.05 NBMC.~~

~~C. Type Np and Ns Streams. Activities and uses that result in unavoidable and necessary impacts may be permitted in Type Np and Ns streams and buffers in accordance with an approved critical area report and mitigation plan, and only if the proposed activity is the only reasonable alternative that will accomplish the applicant's objectives.~~

~~D. Type C Waters. Type C waters are regulated for the values they provide for conveyance, infiltration, water quality treatment, and flow attenuation of surface waters. It is encouraged that Type C waters be maintained in their existing natural channels to provide these functions.~~

However, subject to conformance to all floodplain management regulations, such channel courses may be altered, piped or realigned, so long as sufficient mitigation is provided that maintains:

1. One hundred-year conveyance capacity;
2. Infiltration capacity equivalent to that provided by the original channel either within the altered, piped or realigned system or together with other infiltration accomplished elsewhere on the site; and
3. Comparable water quality treatment per the King County Surface Water Design Manual (as now in effect or subsequently amended) either within the altered, piped or realigned system or together with other above-ground water quality measures provided for the on-site development that are accomplished elsewhere on the site. (Ord. 1606 § 4, 2016; Ord. 1464 § 1 (Exh. A (part)), 2012; Ord. 1354 § 1 Exh. A (part), 2009; Ord. 1243 Exh. B (part), 2006).

~~14.08.050 Stream mitigation.~~

~~No net loss of stream functions and values shall occur as a result of the overall project. The mitigation requirements for stream alterations, in addition to the requirements in Chapter 14.05 NBMC, shall meet the following minimum performance standards and shall occur pursuant to an approved mitigation plan:~~

- ~~A. Achieve equivalent or greater functions, including, but not limited to habitat functions and hydrologic functions.~~
- ~~B. Maintain or improve stream channel dimensions, including depth, length, and gradient.~~
- ~~C. Restore disturbed stream buffer areas with native vegetation.~~
- ~~D. Create an equivalent or improved channel bed.~~
- ~~E. Create equivalent or improved biofiltration.~~
- ~~F. Replace disturbed stream and stream buffer habitat features and areas.~~
- ~~G. Unless it is demonstrated that a higher level of stream function would result from an alternate mitigation approach, compensatory mitigation should be either in-kind and on-site, or in-kind and within the same stream reach or drainage subbasin of the stream. Mitigation actions should be conducted on-site and within the drainage subbasin of the affected stream, except when:
 1. There are no reasonable on-site or drainage subbasin opportunities in the affected stream with a high likelihood of success;
 2. Off-site mitigation has a greater likelihood of providing equal or improved functions; and~~

~~3. Established watershed goals for water quality, flood, conveyance, habitat, or other functions, including priorities and recommendations outlined in the WRIA 7 Salmon Conservation Plan, justify location of mitigation at another site.~~

~~H. For temporary alterations to a stream buffer permitted by administrative exception (NBMC 14.05.085(A)) alteration, repair, rehabilitation, or restoration must be on-site at a 1:1 ratio of area of mitigation to area of alteration.~~

~~I. Restoration or enhancement including illegal alterations must attain the following ratios of area of mitigation to area of alteration:~~

~~1. For mitigation on-site:~~

~~a. Two to one ratio for a Type S or F stream; and~~

~~b. One and one half to one ratio for a Type N stream.~~

~~2. For mitigation off-site:~~

~~a. Three to one ratio for a Type S or F stream; and~~

~~b. Two to one ratio for a Type N stream.~~

~~J. "On-site mitigation" means within the same drainage subbasin of the stream as the alteration site and within one-half mile upstream or downstream.~~

~~K. "Off-site mitigation" means within the same drainage subbasin of the stream as the proposed alteration site and beyond one-half mile upstream or downstream. The preferred location for off-site mitigation shall be in or adjacent to a designated fish and wildlife habitat area and shall be limited to Type Ns streams.~~

~~L. The requirements in this section may be modified at the director's direction if the applicant demonstrates that, with respect to each stream area function, greater functions can be obtained in the affected drainage subbasin through alternative mitigation. (Ord. 1243 Exh. B (part), 2006).~~

14.08.060 Mitigation plans for alteration to streams and stream buffers.

~~The scope and content of a mitigation plan to alter stream and stream buffers shall be decided on a case-by-case basis. As the impacts to the critical area increase, the mitigation measures to offset these impacts will increase in number and complexity. Refer to provisions in Chapter 14.05 NBMC. (Ord. 1243 Exh. B (part), 2006).~~

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Chapter 14.09

FISH AND WILDLIFE HABITAT CONSERVATION AREAS

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14.09.010 Purpose.

~~The purpose of the fish and wildlife habitat conservation areas is to preserve and protect those areas with which salmonid fish, threatened and endangered species, and species of local importance have a primary association. (Ord. 1243 Exh. B (part), 2006).~~

14.09.020 Designation.

A. For purposes of these regulations, fish and wildlife conservation areas are those habitat areas that meet any of the following criteria:

1. Areas with which state or federally designated endangered, threatened, priority, or **critical sensitive** species have a primary association;

2. Habitats of local importance, limited to areas designated as priority habitat by the Department of Fish and Wildlife;

3. Naturally occurring ponds under 20 acres and their submerged aquatic beds that provide fish and wildlife habitat;
4. Waters of the state, including lakes, rivers, ponds, streams (and their associated wetlands), inland waters, underground waters, salt waters, and all other surface water and watercourses within the jurisdiction of the state of Washington;
5. Lakes, ponds, streams, and rivers planted with game fish by a governmental or tribal entity;
6. State natural area preserves and natural resources conservation areas; and
7. Land essential for preserving connections between habitat blocks and open spaces.

B. All areas within the city meeting one or more of the above criteria, regardless of any formal identification, are designated critical areas and are subject to the provisions of this chapter. The approximate location and extent of known fish and wildlife habitat conservation areas are shown on Figure 4, Fish and Wildlife Habitat Conservation Areas¹. These mapped areas are comprised of Type S and F streams and their buffers, and associated wetlands. Associated wetlands may be partially or fully within a neighboring wetland, stream, and their buffers, or adjacent to designated fish and wildlife habitat areas. The map may be periodically revised by the city to add or remove areas based on additional information. (Ord. 1243 Exh. B (part), 2006).

14.09.030 Stream Typing.

Streams within the city shall be classified by the following stream typing system, as defined in WAC 222-16-030, maps will be updated to the following water typing system:

Type S (shorelines): All waters, within their bankfull width, as inventoried designated as “Shorelines of the State” (rivers over 20 cfs, marine shorelines and lakes over 20 acres) under Chapter 90.58 RCW and the rules promulgated pursuant to Chapter 90.58 RCW, including periodically inundated areas of their associated wetlands. “Bankfull width” is the measurement of the lateral extent of the water surface elevation perpendicular to the channel at bankfull depth according to NBMC 14.20 Shoreline Regulations.

Type F (fish): Segments of natural waters other than Type S waters that are within the bankfull widths of defined channels and periodically inundated areas of their associated wetlands, or within lakes, ponds, or impoundments having a surface area of one-half acre or greater at seasonal low water that in any case contain fish habitat or are described by one of the four categories in WAC 222-16-030(2).

Type Np (non-fish perennial): All segments of natural waters within the bankfull width of defined channels that are perennial non-fish-habitat streams. Perennial streams are waters that do not go dry at any time during a year of normal rainfall. However, for the purpose of water typing, Type Np waters include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.

Type Ns (non-fish seasonal): All segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np waters. These are seasonal, non-fish-habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from any stream reach that is a Type Np water. Ns waters must be physically connected by an aboveground channel system to Type S, F, or Np waters.

Type C (conveyance): As defined by the city of North Bend, Type C waters are those natural open ephemeral drainage courses (including where bridged, piped or culverted) that are not Type S, F, Np or Ns waters, which contain flow only during or immediately after periods of precipitation, and which flow generally less than 30 days per year.

Figure 3, River and Stream Map¹, identifies the approximate locations of rivers and streams in the North Bend vicinity and is intended to be used as a guide. Where possible, streams will be converted according to WAC 222-16-031. Those streams that have not been classified will be typed according to the new system summarized above based on the characteristics observed in the field. The map may be periodically revised by the city to add or remove areas based on additional information. (Ord. 1354 § 1 Exh. A (part), 2009; Ord. 1243 Exh. B (part), 2006).

14.09.030 Buffers.

14.08.030 Buffers.

The following buffers are the minimum requirements for streams. All buffers shall be measured from the ordinary high water mark (OHWM) as surveyed in the field.

A. Aquatic Buffers

~~A.1. Buffers for Types S and F streams shall be determined according to NBMC 14.20.~~

2. Type F streams shall have a 100-foot buffer on each side of the channel. Seventy-five feet of this buffer shall be considered the “inner buffer” and 25 feet of this buffer shall be considered the “outer buffer.”

3B. Type Np streams shall have a 50-foot buffer on each side of the channel.

4C. Type Ns streams shall have a 25-foot buffer on each side of the channel.

D. Type C water shall have no buffer. (Ord. 1243 Exh. B (part), 2006).

B. Terrestrial Buffers~~A. Riparian Habitat. The following buffers are the minimum requirements for streams. Where associated wetlands exist, the buffer may extend to wetland standard buffers, as provided under NBMC 14.06.030. Stream buffers shall be measured from the ordinary high water mark (OHWM) as provided in NBMC 14.08.030. (Ord. 1243 Exh. B (part), 2006).~~

14.09.040 Wildlife and other habitat.

Buffer widths and setbacks for the protection of listed species outside of streams and stream buffers will be determined on a site-specific basis. Appropriate buffers shall be documented in an approved habitat management plan through the approval of a critical area report. (Ord. 1243 Exh. B (part), 2006).

C. Averaging Buffers. The director will consider the allowance of stream buffer averaging only when the buffer area width after averaging will not adversely impact the critical area and/or buffer functions and values. At a minimum, any proposed buffer averaging shall meet the following criteria:

1. The buffer area after averaging is no less than that which would be contained within the standard buffer;

2. The buffer width shall not be reduced by more than 25 percent at any one point as a result of the buffer averaging;

3. The additional buffer area shall be enhanced if necessary, to achieve no net loss of the critical areas functions and values;

4. The additional buffer is contiguous with the standard buffer;

5. Encroachment into the buffer does not occur waterward of the top of an associated steep slope or into a channel migration zone;

H. Increased Buffers. The director may require increased buffer sizes when a critical area report shows that it is necessary to protect the function and value of the critical areas when either the critical area is particularly critical to disturbance or the development poses unusual impacts. Examples of circumstances that may require buffers beyond minimum requirements include, but are not limited to:

1. Unclassified uses;

2. The critical area is a fish and wildlife habitat area for spawning or rearing as determined by the Washington State Department of Fish and Wildlife;

3. Land located within the development proposal that is adjacent to the critical area and its associated buffer is classified as an erosion hazard area; or

4. A trail or utility corridor in excess of 10 percent of the buffer width is proposed for inclusion in the buffer.

14.08.040 Permitted alterations.

A. Applicability – No Degradation. The requirements provided in this section supplement those identified in Chapter 14.05 NBMC. The following activities or uses may be permitted in streams and/or their buffers when the mitigation sequencing requirements of DMC 14.05.150 are followed, and the applicant can show that the proposed activity will not degrade the functions and values of the stream, stream buffer, or other critical area.

1. Stream Crossings. Stream crossings shall be minimized, but when necessary they shall conform to the following standards as well as other applicable laws (see WDFW *Water Crossing Design Guidelines* and/or NMFS's *Anadromous Salmonid Passage Facility Design*:

a. The stream crossing is the only reasonable alternative that has the least impact;

b. It has been shown in the critical area report that the proposed crossing will not decrease the stream and associated buffer functions and values;

c. The stream crossing shall use bridges instead of pipe or box culverts unless it can be demonstrated that a pipe or box culvert would result in equal or less ecological impacts;

d. All stream crossings using pipe culverts shall use super span or oversized culverts with appropriate fish enhancement measures. Culverts shall not obstruct fish passage;

e. Stream crossings shall be designed according to the Washington Department of Fish and Wildlife *Fish Passage Design at Road Culverts, 1999*, and the National Marine Fisheries Service *Guidelines for Salmonid Passage at Stream Crossings, 2000*;

f. All stream crossings shall be constructed during the summer low flow period between June 15th and September 15th or as specified by the State Department of Fish and Wildlife in the hydraulic project approval;

g. Stream crossings shall not occur through salmonid spawning areas unless no other feasible crossing site exists;

h. Bridge piers or abutments shall not be placed in either the floodway or between the ordinary high water marks unless no other feasible alternative placement exists;

i. The natural drainage pattern and discharges of the upstream drainage basin, up to the runoff event having an exceedance probability of 0.01, shall not be altered or diminished by a stream crossing;

j. Stream crossings shall minimize interruption of downstream movement of wood and gravel;

k. Stream crossings shall be designed to facilitate routine maintenance of culverts and bridges; and

l. Stream crossings shall be minimized by serving multiple properties when-ever possible.

2. Trails. The criteria for alignment, construction, and maintenance of trails within wetlands and their buffers shall apply to trails within stream buffers. Fishing platforms or docks shall be included in the list of permitted trail improvements for streams, subject to shoreline regulations.

3. Utilities. The criteria for alignment, construction, and maintenance within wetland buffers shall apply to utility corridors within stream buffers. In addition, corridors shall not be aligned parallel with any stream channel unless the corridor is outside the buffer, and crossings shall be minimized. Installation shall be accomplished by boring beneath the scour depth and hyporheic zone of the water body where feasible. Crossings shall be contained within the existing footprint of an existing or new road or utility crossing where possible. Otherwise, crossings shall be at an angle greater than 60 degrees to the centerline of the channel. The criteria for stream crossing shall also apply.

4. Stormwater conveyance facilities; provided, that they are only located in the buffer when no practicable alternative exists outside the buffer. Stormwater facilities shall be planted with native plantings where feasible to provide habitat, and/or less intrusive facilities should be used.

5. Septic Systems. New septic systems are prohibited in the inner stream buffers.

6. Stream bank stabilization shall only be allowed when it is shown, through a stream bank stability assessment conducted by a qualified fluvial geomorphologist or hydraulic engineer, that such stabilization is required for public safety reasons, that no other less intrusive actions are possible, and that the stabilization will not degrade instream or downstream channel stability. Stream bank stabilization shall utilize bioengineering or soft armoring techniques unless otherwise demonstrated. Stream bank stabilization shall conform to the Integrated Streambank Protection Guidelines developed by the Washington State Department of Fish and Wildlife, 2002, or as revised. Stabilization measures must demonstrate the following:

a. Natural shoreline processes will be maintained. The project will not result in increased erosion or alterations to, or loss of, shoreline substrate within one-quarter mile of the project area;

b. The stabilization measures will not degrade fish or wildlife habitat conservation areas or associated wetlands; and

c. Adequate mitigation measures ensure that there is no net loss of the functions or values of riparian habitat.

7. Maintenance, repair, or replacement of lawfully established existing bank stabilization is allowed, provided it does not increase the height or linear amount of bank and does not expand waterward or into aquatic habitat landward.

8. Activities and uses allowed under Chapter 14.05 NBMC.

C. Type Np and Ns Streams. Activities and uses that result in unavoidable and necessary impacts may be permitted in Type Np and Ns streams and buffers in accordance with an approved critical

area report and mitigation plan, and only if the proposed activity is the only reasonable alternative that will accomplish the applicant's objectives.

D. Ongoing maintenance. Landscaping and gardening revisions, that is part of ongoing maintenance of buildings and facilities and their associated yard areas in existence prior to the city's aerial photographs taken April 3, 2004. Ongoing maintenance is also permitted on public rights-of-way, or utility easements, provided the activity does not expand further into the critical area or its buffer. Properties within the floodplain, critical aquifer recharge area or seismic liquefaction area and located outside of other critical areas are exempted from the maintenance area expansion restriction of this provision. Ongoing maintenance can take place in native growth protection easements (NGPE) or tracts; provided only state-listed invasive and noxious weeds and additional aggressive nonnative species identified in NBMC 14.05.085(A)(2)(e) shall be removed or cut, hand removal is the only method utilized, no mechanical or chemical activities are employed, shall minimize disturbance to the critical area and/or buffer, does not involve the use of hazardous substances, and is associated with subsequent enhancement, restoration, or ongoing maintenance activities. . All removed plant material shall be taken away from the site and appropriately disposed of.

14.09.050 General performance standards.

The requirements provided in this section supplement those identified in Chapter [14.05](#) NBMC and NBMC [14.06.060](#), Critical area report/study. Fish and wildlife habitat conservation areas may be altered only if the proposed alteration of the habitat or the mitigation proposed does not degrade the qualitative functions and values of the habitat. All new structures and land alterations shall be prohibited from habitat conservation areas, except in accordance with this chapter. Additional standards follow:

A. No development shall be allowed within a habitat conservation area or any associated buffer with which state or federally endangered, threatened, priority, or critical species have a primary association.

B. Whenever development is proposed adjacent to a fish and wildlife habitat conservation area with which state or federally endangered, threatened, or critical species have a primary association, such areas shall be protected through the application of protection measures in accordance with a critical area report prepared by a qualified professional and approved by the director.

C. Habitat StudyAssessment. 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 that 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:

1. The applicant shall include in its critical area study a habitat management plan that identifies the qualities that are essential to maintain feeding, breeding, and nesting of listed species using the fish and wildlife habitat conservation area and that 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 State Department of Wildlife, May 1991, and as may be amended, and by any recovery and management plans prepared by the Washington State Department of Fish and Wildlife for the listed species pursuant to WAC 232-12-297(11).

2. Conditions shall be imposed, as necessary, based on the measures identified in the habitat management plan.

D. Consultation with the State Department of Fish and Wildlife and the appropriate federal agency for a Approval of alteration of land in habitat conservation areas, buffers, or any associated setback zones is encouraged and required only in specific circumstances at the discretion of the director. ~~shall not occur prior to consultation with the State Department of Fish and Wildlife and the appropriate federal agency, if applicable.~~

E. 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.

F. Alteration of natural watercourses shall be avoided, if feasible. If unavoidable, the following provisions shall apply to the alteration:

1. 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.

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

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

G. The director shall condition approval of activities allowed within a fish and wildlife habitat conservation area or its buffer, as necessary, per the approved critical area report and habitat management plan to minimize or mitigate any potential adverse impacts. Conditions may include:

1. Establishment of buffer zones outside of the required stream and wetland buffers, on a case-by-case basis, as may be necessary to retain adequate natural habitat for listed species;

2. Preservation of critical, important vegetation and/or habitat features (e.g., snags);

3. Limitation of access to the habitat area, including fencing (on a case-by-case basis) to deter unauthorized access (note: fencing shall not create a barrier to habitat function);
4. Seasonal restrictions of construction activities;
5. Establishment of a duration and timetable for periodic review of mitigation activities; and
6. Requirement of a performance bond, when necessary, to ensure successful completion. (Ord. 1243 Exh. B (part), 2006).

14.09.060 Special provisions – Salmonid.

A. Activities, uses, and alterations proposed to be located in water bodies used by salmonids or in areas that affect such water bodies shall give special consideration to the preservation and enhancement of salmonid habitat, including, but not limited to, the following:

1. Activities shall be timed to occur only during the allowable work window as designated by the State Department of Fish and Wildlife;
2. An alternative alignment or location for the activity is not feasible;
3. 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
4. Any impact to the functions and values of the habitat conservation area are mitigated in accordance with an approved critical area report.

B. Structures that prevent the migration of salmonids shall not be allowed in the portion of water bodies currently or historically used by salmonids. 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.

C. Fills, when authorized, shall minimize the adverse impacts to salmonids and their habitat, shall mitigate any unavoidable impacts, and shall only be allowed for water-dependent uses. (Ord. 1243 Exh. B (part), 2006).

14.09.070 Special provisions – Wildlife.

~~Project applicants shall certify that development proposals are in compliance with federal bald eagle guidelines as a condition of local permit approval. Bald eagle habitat shall be protected pursuant to the Washington State Bald Eagle Protection Rules (WAC 232-12-292). (Ord. 1243 Exh. B (part), 2006).~~

~~14.09.080 Native growth protection easement/critical area tract.~~

~~A. 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 area regulations shall be designated as native growth protection easements (NGPE). In addition to the requirements specified in Chapter 14.05 NBMC, the following shall apply:~~

~~1. An NGPE shall be designated for Type S, F and N streams, unless the director has waived the NGPE requirements for Type N streams (see below). 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. Public and private trails may be allowed within all critical area buffers where it can be demonstrated in a critical area report that the buffer functions and values will not be degraded by trail construction or use. Trail planning, construction, and maintenance shall adhere to the criteria outlined in NBMC 14.06.050.~~

~~B. The director may waive the NGPE requirements on Type N streams, when located beyond one-quarter mile of a stream with salmonids if all of the following criteria are met:~~

~~1. All buffer, building setback line, and flood plain distances are identified on the appropriate documents of title;~~

~~2. 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 North Bend that requires that the channel remain open and vegetated for water quality and hydrologic purposes;~~

~~3. All clearing proposed within the stream and its buffer shall occur between April 1st and September 1st, 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;~~

~~4. There are no downstream flooding or erosion problems within one-half mile of the site;~~

~~5. The stream is not within an erosion hazard area; and~~

~~6. No existing water wells are within or adjacent to the stream buffers.~~

~~C. 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 area tract and designated as an NGPE, as described in NBMC 14.05.100, General provisions. (Ord. 1243 Exh. B (part), 2006).~~

14.09.090 Critical area report.

~~A. A critical area 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.~~

~~B. In addition to the requirements of Chapter 14.05 NBMC, critical area reports for wildlife habitat areas shall include the following additional information:~~

- ~~1. An assessment of habitats including the following site and proposal related information;~~
- ~~2. Identification of any species of local importance, priority species, or endangered, threatened, critical, 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; and~~
- ~~3. 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.~~

~~C. A critical area report for streams shall include the following information:~~

~~1. On the site map:~~

- ~~a. The location of the ordinary high water mark;~~
- ~~b. The toe of any slope 25 percent or greater within 25 feet of the ordinary high water mark; and~~
- ~~c. The location of any proposed or existing stream crossing.~~

~~2. In the report:~~

- ~~a. Characterization of riparian (streamside) vegetation species, composition, and habitat function;~~
- ~~b. Description of the soil types adjacent to and underlying the stream, using the Soil Conservation Service soil classification system;~~
- ~~c. Determination of the presence or absence of fish, and reference sources; and~~
- ~~d. When stream alteration is proposed, include stream width and flow, stability of the channel including erosion or aggradation potential, type of substratum, discussions of infiltration capacity and biofiltration as compared to the stream prior to alteration, presence of hydrologically linked wetlands, analysis of fish and wildlife habitat, and proposed floodplain limits. (Ord. 1243 Exh. B (part), 2006).~~

14.05.180 Habitat management plans.

A. A habitat management plan may be required by the director when the critical area review of a development proposal determines that the proposed activity will have an adverse impact on a fish and wildlife habitat conservation area.

B. A habitat management plan; shall be prepared by ~~Washington State Department of Fish and Wildlife (WDFW) or prepared by a qualified biologist~~ consistent with WDFW management recommendations. The director may require consultation with WDFW to evaluate habitat management plans for complicated or controversial projects.

A habitat management plan in consultation with the Washington State Department of Fish and Wildlife (WDFW), shall address the following mitigation measures:

1. Reduction or limitation of development activities within the critical area and buffers;
2. Use of low impact development techniques or clustering of development on the subject property to locate structures in a manner that preserves and minimizes the adverse effects to habitat areas;
3. Seasonal restrictions on construction activities on the subject property;
4. Preservation and retention of habitat and vegetation on the subject property in contiguous blocks or with connection to other habitats that have a primary association with a listed species;
5. Establishment of expanded buffers around the critical area;
6. Limitation of access to the critical area and buffer; and
7. The creation or restoration of habitat area for listed species. (Ord. 1243 Exh. B (part), 2006).

Chapter 14.10

CHANNEL MIGRATION ZONES¹

14.10.010 Purpose.

Channel migration zones are identified by King County to reduce the risk of property or casualty loss due to stream bank destabilization, rapid stream incision, stream bank erosion, and shifts in location of stream channels. Figure 5, Special Flood Hazard Map² identifies channel migration zones in the North Bend area. The city of North Bend does not regulate these channel migration zone areas. The city's decision not to regulate the channel migration zones is based on the following facts:

The channel migration zones of the Middle Fork of the Snoqualmie River are identified as "avulsion" hazard channel migration areas associated with catastrophic flooding events by the

1996 King County Three Forks Snoqualmie River Channel Migration study. As such the potential channel migration would only occur in conjunction with a major flood event. In 2005, the flood insurance rate map was revised to incorporate and regulate the same general channel migration areas as floodways. The flood regulations provide substantially similar health and safety protection for the “avulsion” hazard channel migration areas, and the creation of duplicate, overlapping regulatory standards was not found to be in the best public interest by the city council.

The majority of the existing Silver Creek neighborhood affected by the channel migration zones of the Middle Fork of the Snoqualmie River is already developed in public open space ownership, or protected by existing public roadways that will likely be restored if ever damaged by a major flood event, including a channel migration by “avulsion.”

The remaining large parcels of land that may be developed in the Silver Creek neighborhood are likely to be reviewed under the SEPA process, and any channel migration zones of the Middle Fork of the Snoqualmie River identified as “avulsion” hazard channel migration areas that are not regulated by the flood regulations can be addressed and mitigated in the SEPA process.

The channel migration zones of the South Fork of the Snoqualmie River are identified as lateral migration hazard areas in the 1996 King County Three Forks Snoqualmie River Channel Migration study. The areas at risk are wholly located in the Tollgate Farm public open space purchased in part to protect them from development because of the risk associated with the critical areas on the property. As with the Silver Creek residential areas, the floodways on the 2005 FIRM cover similar areas to the channel migration areas and if any development was proposed on the public open space it likely would be reviewed under the SEPA process. In the SEPA process any avulsion channel migration zones of the South Fork or Middle Fork of the Snoqualmie River that are not regulated by the flood regulations could be addressed and mitigated. (Ord. 1243 Exh. B (part), 2006).

Prior legislation: Ords. 912, 929, 1048, 1053, 1088, 1166, 1171 and 1172.

Chapter 14.11 GEOLOGICALLY HAZARDOUS AREAS

Sections:

14.11.010 Purpose.

14.11.020 Designation.

14.11.030 Designation of specific geologic hazard areas.

14.11.050 Performance standards.

14.11.060 Special provisions – Erosion and landslide areas.

14.11.070 Design standards – Erosion and landslide hazard areas.

~~14.11.080—Native growth protection easement/critical area tract.~~

~~14.11.090—Critical area report.~~

14.11.010 Purpose.

To prevent incompatible development activity from being conducted in or near geologically hazardous areas in order to reduce the risk to public health and safety. (Ord. 1243 Exh. B (part), 2006).

14.11.020 Designation.

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

- A. Erosion hazard;
- B. Landslide hazard (including steep slopes);
- C. Seismic hazard; and
- D. Other geological events including mass wasting, debris flows, rock falls, and differential settlement.

Figure 6, Seismic Hazards¹ depicts areas subject to soil liquefaction in an earthquake and Figure 7, Erosion and Debris Flow² identifies geologically hazardous areas in the North Bend area. These maps may be periodically revised by the city to add or remove areas based on additional information. (Ord. 1243 Exh. B (part), 2006).

14.11.030 Designation of specific geologic hazard areas.

- A. The adopted critical areas maps include:
 1. U.S. Geological Survey (USGS) landslide hazard, seismic hazard, and volcanic hazard maps;
 2. Washington State Department of Natural Resources (WDNR) seismic hazard maps of Western Washington, as they are available;
 3. WDNR slope stability maps, as they are available; and

4. Local geologic hazard maps, as adopted.

These maps are to be used as a guide for the city of North Bend, project applicants, and/or property owners, and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation.

B. Other geologic hazardous areas regulated by this chapter include:

1. Erosion Hazard Areas. Erosion hazard areas are at least those areas identified by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) as having "severe" or "very severe" rill and inter-rill erosion hazard.

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

a. Areas of historic failure, such as:

i. Those areas delineated by the NRCS as having a "severe" limitation for building site development; or

ii. Areas designated as quaternary slumps, earth flows, mudflows, debris flow, or landslides on maps published by the USGS, WDNR, or the city of North Bend;

b. Areas with all three of the following characteristics:

i. Slopes steeper than 15 percent; and

ii. Hillsides intersecting geologic contacts with a relatively permeable sediment overlaying a relatively impermeable sediment or bedrock; and

iii. Springs or groundwater seepage;

c. Areas that have shown movement during the Holocene epoch (from 10,000 years ago to the present) or that are underlain or covered by mass wastage debris of that epoch;

d. Slopes that are parallel or sub-parallel to planes of weakness (such as bedding planes, joint systems, and faults) in subsurface materials;

e. Slopes having a gradient steeper than 80 percent subject to rock fall during seismic shaking;

f. Areas potentially unstable because of rapid stream incision, stream bank erosion, and undercutting by water action;

g. Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding; and

h. Any area with a slope of 40 percent or steeper and with a vertical relief of 10 or more feet except areas composed of consolidated rock. A slope delineated by establishing its toe and top and measured by averaging the inclination over at least 10 feet of vertical relief.

3. Seismic Hazard Areas. Seismic hazard areas are subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface failure. The strength of ground shaking is primarily affected by:

a. The magnitude of an earthquake;

b. The distance from the source of an earthquake;

c. The type and thickness of geologic materials at the surface; and

d. The type of subsurface geological structure. (Ord. 1243 Exh. B (part), 2006).

14.11.050 Performance standards.

A. All projects shall be evaluated to determine whether the project is proposed to be located in a geologically hazardous area, the project's potential impact on the geologically hazardous area, and the potential impact of the proposed project. The director may require the preparation of a critical area report to determine the project's ability to meet the performance standards.

B. Alterations to erosion or landslide hazardous areas or associated buffers may only occur for activities that:

1. Will not increase the threat of the geological hazard to adjacent properties beyond predevelopment conditions;

2. Will not adversely impact other critical areas;

3. Are designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than predevelopment conditions; and

4. Are certified as safe as designed and under anticipated conditions by a qualified geotechnical engineer or geologist, licensed in the state of Washington.

C. Vegetation in erosion or landslide hazardous areas shall be retained unless it can be shown that the removal will not increase the geologic hazards and a vegetation management plan is submitted with the request.

D. Approved clearing and grading in erosion and landslide hazardous areas shall only be allowed from May 1st to October 1st of each year; provided, that the city may extend or shorten the dry season on a case-by-case basis depending on the actual weather conditions, except that timber harvest, not including brush clearing or stump removal, may be allowed pursuant to an approved forest practices permit issued by WDNR.

E. Access roads and utilities may be permitted within the erosion or landslide hazard area and associated buffers if the city determines that no other feasible alternative exists.

F. Utility lines and pipes shall be permitted in the erosion or landslide hazard areas only when the applicant demonstrates that no other practical alternative is available. The line or pipe shall be located above ground and be properly anchored and/or designed so that it will continue to function in the event of an underlying slide. Stormwater conveyance shall be allowed only through a high-density polyethylene pipe with fuse-welded joints, or similar product that is technically equal or superior.

G. Sheet flow discharges from impervious surfaces and point discharges from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area shall be prohibited except that conveyance is allowed via continuous storm pipe downslope to a point where there are no erosion hazard areas downstream from the discharge.

H. The division of land in erosion or landslide hazard areas and associated buffers is subject to provisions established for all critical areas in Chapter 14.05 NBMC. (Ord. 1243 Exh. B (part), 2006).

14.11.060 Special provisions – Erosion and landslide areas.

Activities on sites containing erosion or landslide hazards shall meet the following requirements:

A. **Buffers Required.** A buffer shall be established for all edges of erosion or landslide hazard areas. The size of the buffer shall be determined by the director, based on the recommendations of the critical areas study, to eliminate or minimize the risk of property damage, death, or injury resulting from erosion and landslides caused in whole or in part by the development, based upon review of and concurrence with a critical area report prepared by a qualified professional.

B. **Minimum Buffers.** The typical buffer for landslide hazard areas is the height of the slope or 50 feet, whichever is greater. The buffer may be reduced or enlarged depending upon site-specific conditions and the nature of the hazard, as analyzed by a qualified geologist. There is no minimum buffer for erosion areas. Erosion protection shall be based on site-specific analysis to achieve no net loss or impact to the erosion area. Best management practices (BMPs), mitigation, monitoring, and where necessary an erosion and control plan.

C. Buffer Reduction. The buffer may be reduced to zero when a qualified professional demonstrates to the director's satisfaction that the reduction will adequately protect the proposed development, adjacent developments and uses, and the subject critical area.

D. Increased Buffer. The buffer may be increased when the director determines a larger buffer is necessary to prevent risk of damage to proposed and existing development.

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

1. The development will not increase the surface water discharge rate or sedimentation to adjacent properties beyond the predevelopment condition;
2. The development will not decrease slope stability on adjacent properties; and
3. Such alteration will not adversely impact other critical areas. (Ord. 1243 Exh. B (part), 2006).

14.11.070 Design standards – Erosion and landslide hazard areas.

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

A. Structures and improvements shall be clustered to avoid geologically hazardous areas and other critical areas;

B. Structures and improvements shall minimize alterations to the natural contours of the slope and foundations shall be tiered where possible to conform to existing topography;

C. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;

D. The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;

E. The use of a retaining wall that allows the maintenance of existing natural slopes are preferred over graded artificial slopes; and

F. Development shall be designed to minimize impervious lot coverage. (Ord. 1243 Exh. B (part), 2006).

14.11.080 ~~Native growth protection easement/critical area tract.~~

~~A. As part of the implementation of approved development applications and alterations, geologically hazardous areas and any associated buffers that remain undeveloped pursuant to the critical area regulations, in accordance with Chapter 14.05 NBMC, shall be designated as native growth protection easements (NGPE).~~

~~B. 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 geologically hazardous area(s) and any buffers shall be placed in a critical area tract and designated as an NGPE, as described in Chapter 14.05 NBMC. (Ord. 1243 Exh. B (part), 2006).~~

14.11.090 ~~Critical area report.~~

~~A. When required, a critical area report for a geologically hazardous area shall be prepared by an engineer or geologist, licensed in the state of Washington, with experience analyzing geologic, hydrogeologic, and ground water flow systems, and who has experience preparing reports for the relevant type of hazard.~~

~~B. In addition to the requirements of Chapter 14.05 NBMC, critical area reports are required for geologically hazardous areas and shall include the following additional information:~~

~~1. On the site map:~~

~~a. All geologically hazardous areas within or adjacent to the project area or that have potential to be affected by the proposal;~~

~~b. The top and toe of slope (note: these should be located and flagged in the field subject to city staff review).~~

~~2. In the report:~~

~~a. A geological description of the site;~~

~~b. A discussion of any evidence of existing or historic instability, significant erosion or seepage on the slope;~~

~~c. A discussion of the depth of weathered or loosened soil on the site and the nature of the weathered and underlying basement soils;~~

~~d. An estimate of load capacity, including surface and ground water conditions, public and private sewage disposal system, fill and excavations, and all structural development;~~

- ~~e. Recommendations for building limitations, structural foundations, and an estimate of foundation settlement;~~
- ~~f. A complete discussion of the potential impacts of seismic activity on the site;~~
- ~~g. Recommendations for management of stormwater for any development above the top of slope;~~
- ~~h. A description of the nature and extent of any colluviums or slope debris near the toe of the slope in the vicinity of any proposed development; and~~
- ~~i. Recommendations for appropriate building setbacks, grading restrictions, and vegetation management and erosion control for any proposed development in the vicinity of the geologically hazardous areas. (Ord. 1243 Exh. B (part), 2006).~~

Chapter 14.12

FLOODPLAIN MANAGEMENT¹

Sections:

- [14.12.010](#) Applicability.
- [14.12.020](#) Severability.
- [14.12.030](#) Floodplain development permit.
- [14.12.040](#) Review of building permits.
- [14.12.050](#) Information to be obtained and maintained.
- [14.12.060](#) Alteration of watercourses.
- [14.12.070](#) Performance standards – Flood hazard areas.
- [14.12.080](#) Construction materials and methods.
- [14.12.090](#) Utilities.
- [14.12.100](#) Subdivision and development proposals.
- [14.12.110](#) Residential construction.
- [14.12.120](#) Accessory structures.
- [14.12.130](#) Nonresidential construction.

[14.12.140](#) Mobile and manufactured homes.

[14.12.150](#) Recreational vehicles.

[14.12.160](#) Shallow flooding areas.

[14.12.170](#) Substantial improvement.

[14.12.180](#) Additions.

[14.12.190](#) Critical facilities.

[14.12.200](#) Floodways.

[14.12.205](#) Hazardous materials.

[14.12.210](#) Floodplain habitat assessment.

~~[14.12.220](#) Critical area report.~~

14.12.010 Applicability.

This chapter shall apply to all areas of special flood hazards (also referred to as “special flood hazard areas” or “SFHA”) within the city. Special flood hazard areas shall have the meaning ascribed in NBMC [14.05.200\(S\)\(4\)](#), which areas shall be determined by consideration of the following:

A. Special flood hazard areas identified by the Federal Insurance Administration in a scientific and engineering report entitled “The Flood Insurance Study for King County, Washington, and Incorporated Areas” dated April 19, 2005, and any revisions thereto, with an accompanying Flood Insurance Rate Map (FIRM), and any revisions thereto, which are hereby adopted by reference as though fully set forth. The Flood Insurance Study (FIS) and the FIRM are on file at North Bend City Hall. The best available information for flood hazard area identification as outlined in subsection B of this section shall be the basis for regulation until a new FIRM is issued that incorporates data utilized under subsection B of this section; and

B. When base flood elevation data has not been provided by the FIS or FIRM, the city shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from federal, state, county, or other valid sources.

C. In the event of a conflict, the more restrictive provision shall apply. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016: Ord. 1243 Exh. B (part), 2006)

14.12.020 Severability.

If any provision of this chapter is held to be invalid or unconstitutional by any court of competent jurisdiction, such holding shall not affect the validity of the remaining provisions of this chapter. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.030 Floodplain development permit.

A. A floodplain development permit shall be obtained before new construction, substantial improvement, or development begins within any SFHA. The permit shall be for all structures, including mobile and manufactured homes or nonlicensed recreational vehicles on site for more than 180 days, as set forth in NBMC [14.12.140](#) and [14.12.150](#), and for all other development including fill and other activities as defined in NBMC [14.05.200](#).

B. The fee and/or review cost for a floodplain development permit shall be as set forth in the city's taxes, rates and fees schedule, as now adopted or as may be amended from time to time.

C. The fee and/or review cost for a floodplain development permit shall be waived by the city when the permit is for a structure under 200 square feet in size.

D. The fee and/or review cost for a floodplain development permit shall be waived by the city when the permit is associated with a building permit for any of the following improvements:

1. Electrical repairs;
2. Furnace repairs or replacements;
3. Water heater or boiler repairs or replacements;
4. Air conditioner repairs or replacements;
5. Re-roofs;
6. Re-siding;
7. Insulation or simple weatherization or energy efficiency upgrades;
8. Roof-mounted or existing structure mounted solar collectors;
9. Window and door replacements; or
10. Renovation or remodel projects that cost less than \$750.00;

provided, that waiver under this subsection D shall not apply if the project includes other improvements that are not listed above, increases the structure's floor area or footprint, causes a floodplain encroachment, or constitutes a substantial improvement under NBMC [14.12.170](#).

The cost of improvements that qualify for a waiver under this subsection D shall not be included in the cumulative calculation required by NBMC [14.12.170](#), unless the improvements are part of a substantial damage calculation or estimate.

E. Permit Application. Application for a floodplain development permit shall be made on forms furnished by the director. Required application materials may include:

1. Plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question, existing or proposed structures, fill, storage of materials, drainage facilities, and other information as identified on the application information sheet. These documents shall be maintained by the city for inspection of all records pertaining to the provisions of these critical areas regulations.

2. A critical areas report, which, when required, shall include:

a. The base flood elevation in relation to the lowest floor (including basement) of all structures located in the AE zone or within the AO zone. Identify the highest adjacent natural grade next to the building prior to construction;

b. Proposed floodproofing elevation in relation to the base flood elevation or highest adjacent natural grade next to the building prior to construction;

c. Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in NBMC [14.12.130](#);

d. A description of the extent to which a watercourse will be altered or relocated as a result of a proposed development;

e. The accuracy of said elevation as proposed and as built shall be certified by a licensed professional engineer and/or a professional land surveyor; and

f. All development permits for the site must be reviewed to ensure all necessary permits have been obtained from those federal, state, or local governmental agencies from which prior approval is required. (Ord. 1606 § 5 (part), 2016; Ord. 1594 § 1 (part), 2016; Ord. 1464 § 1 (Exh. A (part)), 2012; Ord. 1353 § 1 Exh. A (part), 2009; Ord. 1243 Exh. B (part), 2006. Formerly 14.12.050).

14.12.040 Review of building permits.

Where base flood elevation data is not available either through the Flood Insurance Study, FIRM, or from another authoritative source identified within NBMC [14.12.010](#)(B), applications for building permits shall be reviewed to assure that proposed construction will be reasonably safe from flooding; provided, that the elevation of the lowest floor (including basement) shall be at least two feet above the highest adjacent grade in those zones. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. (Ord. 1606 § 5 (part), 2016; Ord. 1594 § 1 (part), 2016).

14.12.050 Information to be obtained and maintained.

A. Where base flood elevation data is provided through the Flood Insurance Study, FIRM, or other source in accordance with NBMC [14.12.010](#), the applicant shall obtain and record the actual (as-built) elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.

B. For all new or substantially improved floodproofed nonresidential structures where base flood elevation data is provided through the FIS, FIRM, or other source in accordance with NBMC [14.12.010](#):

1. The applicant shall obtain and record the elevation (in relation to mean sea level) to which the structure was floodproofed; and

2. The city shall maintain the floodproofing certifications required in NBMC [14.12.130](#).

C. The city shall maintain for public inspection all records pertaining to the provision of this chapter. (Ord. 1606 § 5 (part), 2016; Ord. 1594 § 1 (part), 2016).

14.12.060 Alteration of watercourses.

Adjacent communities and the Department of Ecology must be notified prior to any alteration or relocation of a watercourse, and evidence of such notification must be submitted to the Federal Insurance Administration. (Ord. 1606 § 5 (part), 2016; Ord. 1594 § 1 (part), 2016).

14.12.070 Performance standards – Flood hazard areas.

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

A. A development proposal shall not increase the base flood elevation unless revisions to the FIRM are approved by FEMA in accordance with [44 CFR 70](#), and appropriate legal arrangements have been made and documents filed prior to issuance of a construction permit.

B. The following circumstances are presumed to produce no increase in base flood elevation and shall not require special studies to establish this fact:

1. Reconstruction or remodeling of existing structures in the floodway where the structure's footprint is not increased;

2. Development of new residential structures outside the FEMA floodway on lots in existence before November 17, 1998;

3. Substantial improvements to existing residential structures in the floodplain but outside the FEMA floodway;

4. New development or substantial improvement in the area identified in the downtown commercial zoning district which is within the AO-1, AO-2, AO-3 or AE (outside the floodway) flood zone; provided, that in the AE flood zone the difference between the highest adjacent grade of the site and the base flood elevation as measured on the Flood Insurance Rate Map is no greater than two feet; and/or

5. Minor accessory structures exempt from building permits under the International Building Code.

C. The cumulative effect of any proposed development, where combined with all other existing and anticipated development on the site, shall not reduce the effective base flood storage volume of the floodplain. Except as exempted in subsection B of this section, grading or other activity that would reduce the effective storage volume shall be mitigated by creating compensatory storage on site, or off site if legal arrangements can be made, to assure that the effective compensatory storage volume will be preserved over time; provided, however, that no increased upstream or downstream flood hazard shall be created by any fill authorized in the floodplain by this chapter or other applicable chapters.

D. If a lot has buildable site out of the special flood hazard area, all new structures shall be located there, when feasible. If the lot is fully in the floodplain, structures must be located to have the least impact on riparian habitat and listed species.

E. If the proposed project will create new impervious surfaces so that more than 10 percent of the portion of the lot in the regulatory floodplain is covered by impervious surface, the applicant shall demonstrate that there will be no net increase in the rate and volume of the stormwater surface runoff that leaves the site or that the adverse impact is mitigated per the approved habitat mitigation assessment.

F. When fill is proposed to achieve elevated construction, a report by a registered professional engineer is required demonstrating that the proposal will not increase the base flood elevation.

G. If grading or other activity will displace any effective flood storage volume, compensatory storage shall be created on site, or off site if legal arrangements can be made, to assure that the effective compensatory storage volume will be preserved over time, in equivalent volume, at equivalent elevations to that being displaced. Compensatory storage areas must be hydraulically connected to the source of flooding. Alternatively, if feasible, the applicant may provide an increase in side channel habitat as mitigation for floodway alterations.

H. Approved alterations shall not block side channel habitats.

I. An analysis of bioengineering and/or vegetation enhancements will be required when existing levees or dikes are proposed to be repaired or renovated as specified in King County's Guidelines for Bank Stabilization. (Ord. 1606 § 5 (part), 2016; Ord. 1594 § 1 (part), 2016; Ord. 1464 § 1 (Exh. A (part)), 2012; Ord. 1353 § 1 Exh. A (part), 2009; Ord. 1272 § 1, 2007; Ord. 1243 Exh. B (part), 2006. Formerly 14.12.020).

14.12.080 Construction materials and methods.

Construction materials and methods for residential and nonresidential structures shall meet the following criteria:

- A. All construction elevated by pilings must be designed and certified by a professional structural engineer registered in the state of Washington and approved by the city building official;
- B. All new or substantially improved buildings and structures shall be constructed with materials and utility equipment resistant to flood damage, using methods and products that minimize flood damage;
- C. Electrical, mechanical, plumbing, heating, ventilation and air conditioning and other service facilities shall be elevated or floodproofed to the flood protection elevation so as to prevent water from entering or accumulating within the components during conditions of flooding; and
- D. All new construction shall be anchored to prevent flotation, collapse, or lateral movement of the structure. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.090 Utilities.

Utilities and on-site sewage facilities shall meet the following criteria:

- A. All new and replacement utilities including sewage treatment facilities shall be floodproofed to the flood protection elevation;
- B. New on-site sewage disposal systems shall be located outside the limits of the floodway and may be installed in the floodplain 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, if allowed, shall be floodproofed to the flood protection elevation;
- D. Buried utility transmission lines transporting hazardous substances (as defined by the Washington State Hazardous Waste Management Act in RCW [70.105.010](#)) shall be buried a minimum of four 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;
- E. Aboveground utility transmission lines, not including electrical transmission lines, shall only be allowed in the floodway for the transportation of nonhazardous materials, as defined by the Washington State Department of Ecology, where a bridge or other structure is capable of transporting the line; and

F. Water wells shall be located on high ground that is not in the floodway. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.100 Subdivision and development proposals.

Subdivisions, short subdivisions, master site plans, contract rezones, site plan/design review, planned residential developments, and binding site plans shall follow these requirements:

A. New buildable lots shall contain 5,000 square feet or more of buildable land outside the floodway;

B. Locate and construct all utilities and their facilities in a manner that minimizes flood damage;

C. Provide adequate drainage to reduce exposure to flood damage;

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 appropriate by the city;

E. Where base flood elevation data has not been provided or is not available from another authorized source, it shall be generated for subdivision proposals and other proposed developments that contain at least 50 lots or five acres (whichever is less); and

F. 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 special flood hazard areas may be inaccessible to emergency vehicles during flood events. Residents and property owners should take appropriate advance precautions to provide access.

(Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.110 Residential construction.

New residential construction and substantial improvements within the SFHA shall meet the following criteria:

A. The lowest floor, including basement, shall be elevated two feet or more above base flood elevation.

B. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited. The area and rooms below the lowest floor shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must meet or exceed the following minimum criteria:

1. A minimum of two openings shall be provided on two different walls having a total new area of not less than one square inch for every square foot of enclosed area subject to flooding;
2. The bottom of all openings shall be no higher than one foot above grade; and
3. Openings may be equipped with screens, louvers, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwaters.

C. Portions of the building below the base flood elevation must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the crawlspace used to elevate the building, but also any joists, insulation, or other materials that extend below the base flood elevation.

D. The elevation of the interior crawlspace grade must be at or above the lowest elevation of the exterior grade; provided, that below-grade crawlspace foundations may be allowed when all of the following conditions are met:

1. The interior grade of the crawlspace below the base flood elevation is no more than two feet below the lowest adjacent exterior grade; and
2. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall, does not exceed four feet at any point; and
3. The crawlspace contains an adequate drainage system that removes floodwaters from the interior of the crawlspace, such as natural drainage through porous, well-drained soils, and/or constructed drainage systems such as perforated pipes, drainage tiles or gravel or crushed stone drainage by gravity or mechanical means; and
4. Any building utility systems within the crawlspace are elevated to the flood protection elevation or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. In particular, all ductwork is elevated above the design flood elevation or sealed from floodwaters; and
5. The velocity of floodwaters at the site does not exceed five feet per second for any crawlspace; and
6. All other minimum criteria set forth in this section are satisfied. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.120 Accessory structures.

This provision applies to accessory structures that are used for parking or storage only, such as garages or small storage sheds. The following standards shall apply in the SFHA:

- A. Accessory structures shall be designed to have low flood damage potential;

- B. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;
- C. Accessory structures shall be firmly anchored to prevent flotation that may result in damage to other structures;
- D. Service facilities such as electrical equipment shall be floodproofed or elevated above the base flood elevation;
- E. Floodway encroachment standards must be met;
- F. The portions of accessory structures located below the base flood elevation must be constructed of flood-resistant materials; and
- G. Accessory structures must be designed to allow for the automatic entry of flood waters as described in NBMC [14.12.110](#)(B), unless the floor is elevated above the base flood elevation. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.130 Nonresidential construction.

New construction and substantial improvements of any existing commercial, industrial, or other nonresidential structure shall either:

- A. Elevate the lowest floor, including the basement, a minimum of two feet or more above base flood elevation and meet the same standards for space below the lowest floor as described in NBMC [14.12.110](#); or
- B. Floodproof the structure to the same elevation. If the structure is floodproofed, the following criteria are required:
 - 1. The floodproofing must be certified by a professional engineer or architect registered in the state of Washington stating that the floodproofing methods are adequate to withstand the flood-depths, pressures, velocities, impacts, uplift forces, and other factors associated with the base flood. The certification shall be provided to the official as set forth in NBMC [14.12.050](#).
 - 2. Approved building permits for floodproofed nonresidential buildings shall contain a statement to notify applicants that flood insurance premiums will be based upon rates that are one foot below the floodproofed level. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.140 Mobile and manufactured homes.

For all mobile and manufactured homes, all standards for flood hazard protection for residential construction shall apply. All mobile and manufactured homes must be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. For existing mobile and manufactured homes where the value of the repair or reconstruction of the utilities and pad equals or exceeds 50 percent of the value of utilities and pad before the repair or

reconstruction has commenced, all standards for flood hazard protection applicable for residential construction shall apply. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.150 Recreational vehicles.

Recreational vehicles placed on sites in the SFHA are required to either:

- A. Be on the site for fewer than 180 consecutive days; or
- B. Be fully licensed and ready for highway use, on wheels or jacking system, attached to the site only by quick disconnect type utilities and security devices, and have no permanently attached additions; or
- C. Meet the manufactured home elevation and anchoring requirements. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.160 Shallow flooding areas.

Shallow flooding zones appear on FIRMs as AO zones with depth designations. The base flood depths in these zones range from one to three feet above ground where a clearly defined channel does not exist, or where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is usually characterized as sheet flow. In these areas, the following provisions apply:

- A. Residential Structures. New construction and substantial improvements of residential structures within AO zones shall have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, two feet or more above the depth number specified on the FIRM (at least two feet if no depth number is specified);
- B. Nonresidential Structures. New construction and substantial improvements of nonresidential structures that require a building permit within AO zones shall either:
 - 1. Have the lowest floor (including basement) elevated above the highest adjacent grade of the building site, one foot or more above the depth number specified on the FIRM (at least two feet if no depth number is specified); or
 - 2. Together with attendant utility and sanitary facilities, be completely floodproofed to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. If this method is used, compliance shall be certified by a registered professional engineer or architect as defined under qualified professional. Where hazardous velocities were noted on the FIRM, consideration shall be given to mitigating the effects of these velocities through proper construction techniques and methods; or

C. Drainage for Residential and Nonresidential Structures. Adequate drainage paths around structures on slopes are required to guide floodwaters around and away from proposed structures. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016: Ord. 1243 Exh. B (part), 2006. Formerly 14.12.040).

14.12.170 Substantial improvement.

A project is considered a substantial improvement when the cost of any repairs, reconstruction, rehabilitation, addition, or improvement of a building or other structure equals or exceeds 50 percent of the market value of the structure (1) before the improvement or repair is started; or (2) if the structure has been damaged and is being restored, before the damage occurred. Substantial improvements are calculated on a cumulative basis, beginning with improvements commenced five years prior to the date of the current building permit application. When the total cost of all improvements within the five-year period equals or exceeds 50 percent of the market value of the structure, the project is considered a substantial improvement and the structure must be brought into compliance with this chapter. The cumulative calculation provision does not include tenant improvements of commercial structures, exclusions listed in NBMC [14.05.200\(S\)\(12\)](#), or improvements that qualify for waiver under NBMC [14.12.030\(D\)](#). (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.180 Additions.

A. Except as provided in subsection B of this section, additions to existing buildings or structures must comply with all floodplain regulations as set forth in this chapter.

B. Additions that meet the following criteria shall not be required to elevate, but must be flood resistant to a minimum of two feet above the base flood elevation:

1. Expansion of existing building or structure does not exceed 500 square feet; and
2. Expansion of existing building or structure does not increase the building footprint by more than 25 percent; and
3. The addition shares a common wall (one full side) with the primary structure; and
4. The addition does not constitute a substantial improvement under NBMC [14.12.170](#). (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.190 Critical facilities.

Critical facilities include, but are not limited to, schools, hospitals, police, fire and emergency response installations, nursing homes, wastewater treatment plants, potable water and sanitary sewer system components, and hazardous materials production. Construction of new critical facilities shall only be allowed within the floodplain when no reasonable alternative site is available. Critical facilities constructed within the floodplain shall have the lowest floor elevated to three or more feet above the level of the base flood elevation, except that factory assembled

portable school classrooms shall have the lowest floor elevated to two feet or more above the base flood elevation. Floodproofing and sealing measures must be taken to ensure toxic or hazardous substances will not be displaced by or released into floodwaters. Access routes elevated to or above the level of the 100-year frequency flood shall be provided to all critical facilities to the extent possible. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.200 Floodways.

Floodways are special flood hazard areas as determined in NBMC [14.12.010](#) due to the velocity of floodwaters that can actually carry debris and increase erosion potential. The following provisions apply in all designated floodways within the city:

A. Construction of new residential, commercial or industrial structures is prohibited within the floodway.

B. Encroachments, including fill, new construction, substantial improvements or other developments, are prohibited unless certification by a registered professional engineer is provided demonstrating, through hydrologic and hydraulic analyses performed in accordance with standard engineering practice, that the proposed encroachment would not result in any increase in flood levels during the occurrence of the base flood discharge.

C. Construction or reconstruction of residential structures is prohibited within the floodway, except for:

1. Repairs, reconstruction, or improvements to a structure which do not increase the ground floor area; and

2. Repairs, reconstruction, or improvements to a structure, which are not considered a substantial improvement as defined in NBMC [14.20.190](#).

D. Any new construction and substantial improvement permitted under subsection B of this section shall comply with all other applicable flood hazard reduction standards of this chapter. (Ord. 1631 § 1, 2017: Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016).

14.12.205 Hazardous materials.

The storage or processing of chemicals, petroleum products or by-products, fertilizers, insecticides, pesticides, lime, cement, or other materials that, when inundated, will constitute a hazard to life, health and safety, or adversely affect the quality of surface waters is prohibited at or below three feet above the base flood elevation within the SFHA. (Ord. 1606 § 5 (part), 2016).

14.12.210 Floodplain habitat assessment.

A. Assessment Required. A floodplain habitat assessment and mitigation plan shall be required for all new construction or substantial improvement within the special flood hazard area unless exempted under subsection B of this section, or unless the CED director makes and documents a

determination of no adverse effect on any species listed under the Endangered Species Act. If required, the habitat assessment and mitigation plan shall be prepared at the applicant's sole expense by a qualified consultant in accordance with the requirements of the Floodplain Habitat Assessment and Mitigation Regional Guidance 2013 prepared by FEMA Region X, or any successor guidance document approved by FEMA for habitat assessment and mitigation. The city's actual costs of review of applicant's habitat assessment and mitigation plan shall be paid by the applicant per the adopted taxes, rates and fee schedule.

B. Exemptions. Any of the following activities do not require the preparation of a floodplain habitat assessment or consideration of associated mitigation measures, even if they may require a floodplain permit:

1. Nondevelopment activities.
2. Development activities that are fully contained within the footprint of an existing building and do not involve any site clearing or grading.
3. Critical area habitat enhancement and restoration projects that are exempt from critical areas review pursuant to NBMC [14.05.085\(A\)\(2\)](#). (Ord. 1606 § 5 (part), 2016; Ord. 1594 § 1 (part), 2016).

~~14.12.220 Critical area report.~~

~~The director may waive a critical area report when existing mapping and flood insurance study is determined to be adequate. When a critical area report is required the following provisions shall apply:~~

~~A. A critical area report for flood hazard areas shall be prepared by an engineer or hydrogeologist, licensed in the state of Washington, with expertise analyzing geologic, hydrogeologic and surface and ground water flow systems, and who has experience preparing reports for the relevant type of hazard.~~

~~B. In addition to the requirements of Chapter 14.05 NBMC, critical area reports required for special flood hazard areas shall include the following information:~~

~~1. On the site map:~~

- ~~a. The dimensioned location of all proposed development in the floodplain;~~
- ~~b. Identification of all proposed structures and grading within the floodplain.~~

~~2. In the report:~~

- ~~a. Identify how the boundaries of the floodways and floodplain were determined; and~~

~~b. Establish the elevation of the lowest floor of all new or substantially improved structures proposed in the existing floodplain, utilizing the North American Vertical Datum of 1988. (Ord. 1606 § 5 (part), 2016: Ord. 1594 § 1 (part), 2016: Ord. 1464 § 1 (Exh. A (part)), 2012: Ord. 1243 Exh. B (part), 2006. Formerly 14.12.060).~~